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**REVISED DRAFT ENVIRONMENTAL IMPACT REPORT**  
FOR THE  
**LAGUNA RIDGE SPECIFIC PLAN**

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***PREPARED BY:***

**CITY OF ELK GROVE**  
DEVELOPMENT SERVICES,  
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SCH: 2000082139

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# **1.0 INTRODUCTION**

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This Revised Draft Environmental Impact Report (RDEIR) was prepared in accordance with the California Environmental Quality Act of 1970 (CEQA) and the CEQA Guidelines. The City of Elk Grove is the lead agency for the environmental review of the Laguna Ridge Specific Plan Area (proposed project) evaluated herein and has the principal responsibility for approving the project. As required by Section 15165 of the CEQA Guidelines, this DEIR assesses the expected environmental impacts resulting from approval, construction, and operation of the proposed Laguna Ridge Specific Plan, and identifies feasible means of minimizing potential adverse environmental impacts.

### 1.1 PURPOSE OF THE EIR

The City of Elk Grove (City) has prepared this Revised Draft EIR to provide the public and responsible trustee agencies with information about the potential environmental effects of the proposed Laguna Ridge Specific Plan project. As described in the CEQA Guidelines Section 15121(a), an EIR is a public informational document that assesses potential environmental effects of the proposed project, as well as identifies mitigation measures and alternatives to the proposed project that could reduce or avoid its adverse environmental impacts. Public agencies are charged with the duty to consider and minimize environmental impacts of proposed development where feasible, and have an obligation to balance a variety of public objectives, including economic, environmental, and social factors.

CEQA requires the preparation of an environmental impact report prior to approving any project, which may have a significant effect on the environment. For the purposes of CEQA, the term "project" refers to the whole of an action, which has the potential for resulting in a direct physical change or a reasonably foreseeable indirect physical change in the environment (CEQA Guidelines Section 15378[a]). With respect to the Laguna Ridge Specific Plan, the City has determined that the proposed plan is a "project" within the definition of CEQA.

In accordance with CEQA, the Original Draft EIR was prepared for the Laguna Ridge Specific Plan in 2001. In June 2002, the project applicants submitted a revised land use diagram. Because the City determined that the revised Specific Plan differed substantially from the initial plan for which the Original Draft EIR was prepared, a Revised Draft EIR has been prepared to address the new plan. Copies of the Original Draft EIR are available for review at the City Hall, located at 8400 Laguna Palms Way, Elk Grove.

### 1.2 LEAD AGENCY

The City of Elk Grove is the lead agency under CEQA for the preparation of this EIR. In a project proposed by a non-governmental agency, CEQA states in California Public Resources Code Section 15051(b):

*(b) If the project is to be carried out by a nongovernmental person or entity, the lead agency shall be the public agency with the greatest responsibility for supervising or approving the project as a whole.*

The City of Elk Grove is the agency with the greatest responsibility for approving the project, and accordingly is the lead agency for the proposed project.

### 1.3 KNOWN RESPONSIBLE AND TRUSTEE AGENCIES

"Responsible Agency" means a public agency that proposes to carry out or approve a project, for which a Lead Agency is preparing or has prepared an EIR or Negative Declaration. For the purpose of

## 1.0 INTRODUCTION

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CEQA, the term “Responsible Agency” includes all public agencies other than the Lead Agency that have discretionary approval power over the project or an aspect of the project. The following agencies are identified as potential Responsible Agencies:

- Elk Grove Unified School District
- Sacramento County Water Agency
- Sacramento Metropolitan Air Quality Management District
- California Regional Water Quality Control Board
- California Department of Transportation
- Elk Grove Community Service District
- Sacramento County Regional Sanitation District
- Sacramento County Sanitation District No. 1
- Sacramento Municipal Utility District (SMUD)
- United States Fish & Wildlife Service
- United States Army Corps of Engineers
- Sacramento Regional Transit District

“Trustee Agency” means a state agency having jurisdiction by law over natural resources affected by a project, which are held in trust for the people of the State of California. The only known trustee agency is the California Department of Fish and Game.

### 1.4 TYPE OF DOCUMENT

The CEQA Guidelines identify several types of EIRs, each applicable to different project circumstances. This EIR has been prepared as a Program EIR pursuant to CEQA Guidelines Section 15168. Program EIRs are defined by the CEQA Guidelines (Section 15168) as:

*A program EIR is an EIR which may be prepared on a series of actions that can be characterized as one large project and are related either:*

- (1) *Geographically,*
- (2) *As logical parts in the chain of contemplated actions,*
- (3) *In connection with issuance of rules, regulations, plans or other general criteria to govern the conduct of a continuing program, or*
- (4) *As individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar environmental effects which can be mitigated in similar ways.*

This EIR will be used to evaluate subsequent projects under the Laguna Ridge Specific Plan (if approved). Additional environmental review under CEQA, including, but not limited to, exemptions, negative declarations, addenda and supplemental or subsequent EIRs, may be required based on the subsequent project’s consistency with the Specific Plan and the analysis in this EIR. This would specifically apply to plan area properties designated with the “Reserve” overlay designation.

### 1.5 INTENDED USES OF THE EIR

This EIR is intended to evaluate the environmental impacts of the project to the greatest extent possible. This EIR, in accordance with CEQA Guidelines Section 15126, should be used as the primary environmental document to evaluate all subsequent planning and permitting actions associated with the project. Subsequent actions include, but are not limited to, the following:

- Adoption of the Laguna Ridge Specific Plan;
- Approval of financing plans and programs for the plan area;
- Approval of the rezone of the plan area;
- Approval of subsequent tentative and final maps;
- Completion of any responsible agency permitting;
- Improvement plans;
- Grading plans; and
- Building permits.

## **1.6 RELATIONSHIP TO THE CITY OF ELK GROVE DRAFT GENERAL PLAN**

At the time the City of Elk Grove incorporated in 2000, the City Council adopted the Sacramento County General Plan to serve as the City's overall guide for the physical use of its resources. The General Plan policies that pertained to Elk Grove were used to express the development goals of the community and to serve as the foundation upon which all land use decisions were made. Since that time, the City has been developing its own General Plan. Section 65360 of the Government Code requires newly incorporated cities to adopt a general plan within 30 months following its incorporation. On October 16, 2002, the City Council adopted Resolution No. 2002-185, which established the draft General Plan Land Use Policy Map and draft General Plan elements as the interim land use policy document for the City. The General Plan is anticipated to be formally adopted by the City in 2003.

The proposed Laguna Ridge Specific Plan land use diagram is consistent with the draft General Plan Land Use Policy Map.

## **1.7 ORGANIZATION AND SCOPE**

Sections 15122 through 15132 of the CEQA Guidelines identify the content requirements for Draft and Final EIRs. An EIR must include a description of the environmental setting, an environmental impact analysis, mitigation measures, alternatives, significant irreversible environmental changes, growth-inducing impacts, and cumulative impacts. The environmental issues addressed in the Draft EIR were established through review of environmental documentation developed for the site, environmental documentation for nearby projects, and public agency responses to the Notice of Preparation. Based upon these comments, agency consultation and review of the project application, the City determined the scope for this EIR.

This revised Draft EIR has been revised by the City and is being recirculated for public review and comment. CEQA Guidelines Section 15088.5(g), when recirculating a Revised Draft EIR, requires that the lead agency summarize the revisions made in the Revised Draft EIR to the Original Draft EIR. The Revised Draft EIR consists of a complete revision of the entire Original Draft EIR and includes revisions associated with the consideration of comments received on the Original Draft EIR, revision and expansion of the environmental setting and impact analyses based on changes in the project design as well as changes in the existing setting conditions.

This Revised Draft EIR is organized in the following manner:

### **SECTION 1.0 – INTRODUCTION**

Section 1.0 provides an introduction and overview describing the intended use of the EIR and the review and certification process.

## **1.0 INTRODUCTION**

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### **SECTION 2.0 - EXECUTIVE SUMMARY**

This section summarizes the characteristics of the proposed project and provides a concise summary matrix of the project's environmental impacts and associated mitigation measures.

### **SECTION 3.0 - PROJECT DESCRIPTION**

This section provides a detailed description of the proposed project, including intended objectives, background information, and physical and technical characteristics.

### **SECTION 4.0 - ENVIRONMENTAL SETTING, IMPACTS AND MITIGATION MEASURES**

Section 4.0 contains an analysis of environmental topic areas as identified below. Each subsection contains a description of the existing setting of the project area, identifies project-related impacts, and recommends mitigation measures.

The following major environmental topics are addressed in this section:

- Land Use/ Population, Employment and Housing
- Agricultural Resources
- Hazards and Hazardous Materials
- Transportation and Circulation
- Noise
- Air Quality
- Hydrology and Water Quality
- Geology and Geotechnical Hazards
- Biological Resources
- Cultural Resources
- Public Services and Utilities
- Visual Resources

### **SECTION 5.0 - CUMULATIVE IMPACTS SUMMARY**

This section discusses the cumulative impacts associated with the proposed project. As required by CEQA Section 15130, an EIR shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable.

### **SECTION 6.0 - ALTERNATIVES TO THE PROJECT**

CEQA Guidelines Section 15126.6 requires that an EIR describe a range of reasonable alternatives to the project, which could feasibly attain the basic objectives of the project and avoid and/or lessen the environmental effects of the project. This alternatives analysis provides a comparative analysis between the project and the selected alternatives.

### **SECTION 7.0 - LONG-TERM IMPLICATIONS OF THE PROJECT**

This section contains discussions and analysis of various topical issues mandated by CEQA. These include significant environmental effects that cannot be avoided if the project is implemented and growth-inducing impacts.

## SECTION 8.0 - REPORT PREPARERS AND REFERENCES

This section lists all authors and agencies that assisted in the preparation of the report by name, title, and company or agency affiliation.

## APPENDICES

This section includes all notices and other procedural documents pertinent to the EIR, as well as all technical material prepared to support the analysis.

## 1.8 ENVIRONMENTAL REVIEW PROCESS

The review and certification process for the EIR will involve the following procedural steps:

### NOTICE OF PREPARATION AND INITIAL STUDY

In accordance with Section 15082 of the CEQA Guidelines, the City prepared a Notice of Preparation (NOP) of an EIR for the project on August 31, 2000. The City was identified as the Lead Agency for the proposed project. This notice was circulated to the public, local, state, and federal agencies, and other interested parties to solicit comments on the proposed project. Concerns raised in response to the NOP were considered during preparation of the Draft EIR. The NOP and responses by interested parties are presented in **Appendix 1.0**. Also, an Initial Study for the project was prepared and released for public review along with the NOP. Its conclusions supported preparation of an EIR for the project. The Initial Study is included in **Appendix 1.0**.

### ORIGINAL DRAFT EIR

The original Draft EIR was prepared in October 2001 and circulated for public review. Written comments were solicited and received on this document.

### REVISED DRAFT EIR

This document constitutes the Revised Draft EIR. The Revised Draft EIR contains a description of the project, description of the environmental setting, identification of project impacts, and mitigation measures for impacts found to be significant, as well as an analysis of project alternatives. Upon completion of the Revised Draft EIR, the City will file a Notice of Completion (NOC) with the State Office of Planning and Research to begin the public review period (Public Resources Code, Section 21161).

### PUBLIC NOTICE/PUBLIC REVIEW

Concurrent with the NOC, the City will provide public notice of the availability of the Draft EIR for public review, and invite comment from the general public, agencies, organizations, and other interested parties. This public notice of availability is issued to comply with CEQA Guidelines Section 15088.5(d), which states that recirculation of an EIR requires notice pursuant to CEQA Guidelines Section 15087. Section 15088.5(d) also states that recirculation requires consultation with other agencies pursuant to CEQA Guidelines Section 15086. The public review and comment period should be no less than thirty (30) days and no longer than sixty (60) days. The review period in this case is scheduled for the same as the Original Draft EIR review period, i.e. forty-five (45) days. Public comment on the Revised Draft EIR will be accepted both in written form and orally at public hearings.

## 1.0 INTRODUCTION

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Although no public hearings to accept comments on the EIR are required by CEQA, the City expects to hold a public comment meeting during the forty-five (45) day review period prior to EIR certification. Notice of the time and location of the hearing will be published prior to the hearing. All comments or questions regarding the Revised Draft EIR should be addressed to:

Patrick Angell  
City of Elk Grove Development Services  
8400 Laguna Palms Way  
Elk Grove, CA 95758

CEQA Guidelines Section 15088.5(f) acknowledges that comments on a recirculated EIR can result in the lead agency receiving more than one set of comments from reviewers. It recommends ways in which the lead agency may identify the set of comments to which it will respond. For this EIR, the City will request that commentors limit their comments to the new and/or revised portions of the EIR, in order to avoid duplication of the previous EIR effort. The Revised Draft EIR is a recirculation of the Original Draft EIR in its entirety and commentors are requested to submit new comments on the Revised Draft EIR. Comments received on the Original Draft EIR will not be responded to in the Final EIR, but will be part of the administrative record of proceedings for the Final EIR.

### RESPONSE TO COMMENTS/FINAL EIR

Following the public review period, a Final EIR will be prepared. The Final EIR will respond to written comments received during the public review period and to oral comments made at any public hearing.

### CERTIFICATION OF THE EIR/PROJECT CONSIDERATION

The Elk Grove Planning Commission will review and consider the Final EIR. If the Planning Commission finds that the Final EIR is "adequate and complete", the Commission may recommend that the Elk Grove City Council certify the Final EIR. The City Council will take all final actions on the project and the Final EIR and will take into account recommendations of the Planning Commission. The rule of adequacy generally holds that the EIR can be certified if 1) it shows a good faith effort at full disclosure of environmental information, and 2) provides sufficient analysis to allow decisions to be made regarding the project in contemplation of its environmental consequences.

Upon review and consideration of the Final EIR, the City Council may take action to approve, revise, or reject the project. A decision to approve the project would be accompanied by written findings in accordance with CEQA Guidelines Section 15091 and, if applicable, Section 15093. A Mitigation Monitoring Program, as described below, would also be adopted for mitigation measures that have been incorporated into or imposed upon the project to reduce or avoid significant effects on the environment. This Mitigation Monitoring Program will be designed to ensure that these measures are carried out during project implementation.

### MITIGATION MONITORING

CEQA Section 21081.6(a) requires lead agencies to adopt a reporting and mitigation monitoring program to describe measures that have been adopted or made a condition of project approval in order to mitigate or avoid significant effects on the environment. The specific "reporting or monitoring" program required by CEQA is not required to be included in the EIR, however it will be presented to the City Council for adoption. Throughout the EIR, however, mitigation measures have

been clearly identified and presented in language that will facilitate establishment of a monitoring and reporting program. Any mitigation measures adopted by the City as conditions for approval of the project will be included in a Mitigation Monitoring and Reporting Program to verify compliance.

## **1.9 SCOPE OF THE EIR**

Pursuant to the State CEQA Guidelines, the scope of this DEIR includes specific issues and concerns identified as potentially significant physical effects on the environment. Based on both the Initial Study and the NOP comments, this EIR addresses the following topics in depth:

Environmental issue areas identified for study in this EIR include:

- Agriculture Resources
- Transportation and Circulation
- Air Quality
- Noise
- Hazards and Hazardous Materials
- Public Services and Utilities
- Hydrology and Water Quality
- Biological Resources
- Geology and Geotechnical Hazards
- Cultural Resources
- Visual Resources
- Land Use/Population, Employment, and Housing
- Growth Inducement

Potential impacts to mineral resources were determined in the Notice of Preparation (NOP) to result in either no significant impact or less-than-significant impacts. The complete text of the NOP is contained in **Appendix 1.0**.

The City of Elk Grove determined that the preparation of an EIR was appropriate due to potentially significant environmental impacts that could be caused by implementing the proposed Specific Plan. This DEIR evaluates the existing environmental resources in the vicinity of the plan area, analyzes potential impacts on those resources due to the proposed project, and identifies mitigation measures that could avoid or reduce the magnitude of those impacts. This EIR provides a general review of the environmental effects of development of the Specific Plan area based on proposed Specific Plan land use diagram and estimated public service demands. This EIR will be used to evaluate the environmental effects of subsequent development allowed under the Specific Plan (e.g., residential subdivisions, rezones, commercial structures, park sites, infrastructure improvement). General development of the non-participating properties is evaluated in this EIR.

## **1.10 COMMENTS RECEIVED ON THE NOTICE OF PREPARATION**

The City of Elk Grove received several comment letters on the Notice of Preparation for the Laguna Ridge Specific Plan DEIR. A copy of each letter is provided in **Appendix 1.0** of this RDEIR. The City received letters from the following federal, state and local agencies and interested parties.

- State of California Department of Conservation
- Sacramento Regional Transit District (RT)
- Elk Grove Community Services District
- State of California Department of Fish and Game (DFG)



## 1.0 INTRODUCTION

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- Sacramento County Sanitation District 1 (CSD-1)
- Sacramento County Department of Water Resources
- Paul and Roxanne Hill
- Sacramento County Public Works Agency
- Michael Moriarty
- Herbert Brushders
- Sacramento County Planning and Community Development Department
- Sacramento Area Bicycle Advocates
- Melvyn M. Rosales
- California Regional Water Quality Control Board
- State Department of Transportation (Caltrans)
- Sacramento County Public Works Agency
- Sacramento Municipal Utilities District (SMUD)
- United States Department of Interior
  - Sacramento Metropolitan Air Quality Management District (SMAQMD)

The following summarizes the concerns in these letters.

- The cumulative loss of agriculture land should be addressed. Also, the issue of agriculture preserves, such as Williamson Act lands, should be discussed.
- The proposed project would induce population growth in the area.
- Transit services, including the South Light Rail extension, should be addressed. If there are any construction impacts due to the extension of transit services, they also need to be addressed.
- Bicycling issues should be addressed.
- The water table for existing wells may decrease if this water is used for the project.
- The project may have an impact on storm water quality.
- The impact from the project on wastewater treatment should be discussed.
- The EIR should discuss the off-site impacts from the proposed project. This includes impacts to, and maintenance of wildlife corridor/movement areas, including access to undisturbed habitat in adjacent areas, and inadvertent wildlife-human interactions.
- The potential for changes in surface water hydrology and water quality resulting in impacts to the aquatic resource, permanent streams, intermittent drainages and wetlands within the watershed of the subject project should be evaluated and mitigated in the EIR. The DFG is particularly concerned with the cumulative project impacts on nearby vernal pools. It is important that the post-project hydrologic regime allow for the continued viability of the aquatic resource, while addressing increased runoff from the project.
- A tree preservation program should be identified because there are several oak trees on site.
- The Swainson's hawk mitigation measures which were included with East Franklin should be included in the DEIR.
- SMAQMD recommends construction related air quality impact mitigation measures.

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## **2.0 EXECUTIVE SUMMARY**

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## 2.0 EXECUTIVE SUMMARY

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It is the intent of the Executive Summary to provide the reader with a clear and simple description of the proposed project and its potential environmental impacts. Section 15123 of the CEQA Guidelines requires that the summary identify each significant effect, recommended mitigation measure(s), and alternatives that would minimize or avoid potential significant impacts. The summary is also required to identify areas of controversy known to the lead agency, including issues raised by agencies and the public and issues to be resolved, including the choice among alternatives and whether or how to mitigate significant effects. This section focuses on the major areas of the proposed project that are important to decision-makers and utilizes non-technical language to promote understanding.

### 2.1 SITE LOCATION AND DESCRIPTION

#### PROJECT LOCATION

The Laguna Ridge Specific Plan area is located in the southern portion of the City of Elk Grove, south of Elk Grove Boulevard. The plan area is directly west of State Route 99 (SR 99) and east of the approved East Franklin Specific Plan. The project boundaries are Bruceville Road in the west, SR 99 in the east, Elk Grove Boulevard in the north, and Bilby Road to the south (see **Figure 3.0-1**).

#### PROJECT COMPONENTS

The proposed project includes the development of a mix of land uses, including low to medium density residential, neighborhood and community commercial, parks, open space, schools and infrastructure. **Table 3.0-1**, provides a summary of the planned uses based on the proposed Laguna Ridge Specific Plan land use diagram.

In addition to the above proposed land uses, the proposed Specific Plan also includes master plans for water supply, wastewater service and drainage that identify the ultimate facilities required to serve buildout of the plan area.

### 2.2 PROJECT ALTERNATIVES SUMMARY

In response to the significant impacts created by the project, the following four on-site alternatives to the project have been defined and analyzed in Section 6.0 (Alternatives Analysis) in this DEIR:

- Alternative 1 - No Project Alternative, including the No Project, No Development Alternative (Alternative 1a), and the Zoning Code Alternative (Alternative 1b);
- Alternative 2 – Agricultural Preservation Alternative;
- Alternative 3 – Reduced Density Alternative; and
- Alternative 4 - Office Development Alternative.

### 2.3 TOPICS OF KNOWN CONCERN

To determine which environmental topics should be addressed in this EIR, the City of Elk Grove prepared an Initial Study, and circulated it along with a Notice of Preparation (NOP) in order to receive input from interested public agencies and private parties. Copies of these planning documents, as well as copies of all written responses to the NOP, are presented in appendices

## 2.0 EXECUTIVE SUMMARY

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to this EIR. Based on both the Initial Study and the NOP comments, this EIR addresses the following topics in depth:

- Agricultural Resources
- Transportation and Circulation
- Air Quality
- Noise
- Hazards and Hazardous Materials
- Public Services and Utilities
- Hydrology and Water Quality
- Biological Resources
- Geology and Geotechnical Hazards
- Cultural Resources
- Visual Resources
- Land Use/Population, Employment and Housing
- Growth Inducement

Based on both the Initial Study and the NOP, the following topic was found to result in either no significant impact or less-than-significant impacts and is, therefore, not discussed in detail in this EIR:

- Mineral Resources

## 2.4 TOPICS RAISED BY THE NOTICE OF PREPARATION

The Notice of Preparation (NOP) was released on August 31, 2000. Comment letters were received from a variety of state agencies and other groups. These letters are attached in **Appendix 1.0** and summarized in Section 1.0 (Introduction).

## 2.5 SUMMARY OF ENVIRONMENTAL IMPACTS

**Table 2.0-2** presents a summary of project impacts and proposed mitigation measures that would avoid or minimize potential impacts. In the table, the level of significance of each environmental impact is indicated both before and after the application of the recommended mitigation measure(s).

For detailed discussions of all project impacts and mitigation measures, the reader is referred to the topical environmental analysis sections in Section 4.0.

TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
<b>Agricultural Resources</b>			
<p><b>Impact 4.1.1</b> Implementation of the proposed project would result in the conversion of approximately 1,851 acres of productive agricultural land, which includes 52.8 acres of Prime Farmland, and 1,576.3 acres of Farmland of Statewide Importance.</p>	Significant	None available.	Significant and Unavoidable
<p><b>Impact 4.1.2</b> Implementation of the proposed project would place urban uses adjacent to a primarily agricultural area, which may impair agricultural production and result in land use compatibility conflicts.</p>	Potentially Significant	<p><b>MM 4.1.2a</b> All of the landscape corridors directly adjacent to the project area that are located between existing agricultural operations or agriculturally zoned properties and the project area shall be fully improved and functional prior to the occupancy of any residence that adjoins the subject corridor.</p> <p><i>Timing/Implementation:</i>                      <i>Prior to issuance of occupancy permits</i></p> <p><i>Enforcement/Monitoring:</i>                      <i>City of Elk Grove Development Services</i></p> <p><b>MM 4.1.2b</b> Disclose to all prospective buyers of residential property within 500 feet of any active farming operations through notification in the public report, that they could experience inconvenience or discomfort resulting from accepted farming activities pursuant to the provisions of the City Right-to-Farm Ordinance.</p> <p><i>Timing/Implementation:</i>                      <i>Prior to the sale to prospective buyers</i></p> <p><i>Enforcement/Monitoring:</i>                      <i>City of Elk Grove</i></p>	Less Than Significant

2.0 EXECUTIVE SUMMARY

TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
<i>Development Services</i>			
<p><b>Impact 4.1.3</b> The project would convert important farmland areas to urban uses. This loss would contribute to the cumulative loss of farmland in the region.</p>	Cumulative Significant	None available.	Significant & Unavoidable
<p><b>Impact 4.1.4</b> Cumulative projects could result in impairment to agricultural productivity and land use compatibility impacts.</p>	Cumulative Significant	Implement mitigation measures MM 4.1.2a and b.	Less Than Significant
<b>Transportation and Circulation</b>			
<p><b>Impact 4.2.1</b> The projected daily volume on the existing sections of Elk Grove Boulevard from Bruceville Road to Auto Center Drive, Elk Grove Boulevard from East Stockton Boulevard to Elk Grove-Florin Road, Grant Line Road between SR 99 and Waterman Road, Poppy Ridge Road from Bruceville Road to West Stockton Boulevard, West Stockton Boulevard between Kammerer Road and Poppy Ridge Road, and West Stockton Boulevard from Poppy Ridge Road to the+ Auto Mall Access, with the development of Laguna Ridge Specific Plan would exceed the City's thresholds for roadway segment operations.</p>	Significant	<p><b>MM 4.2.1a</b> Elk Grove Boulevard shall be widened between Bruceville Road and Auto Center Drive to three lanes in each direction.</p> <p>Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program to include this improvement and by the annexation of the Laguna Ridge Specific Plan into the LSPFFP. Project public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations and consistent with the Specific Plan's infrastructure phasing provisions.</p> <p><i>Timing/Implementation:</i>                      <i>Prior to approval of subsequent development projects.</i></p> <p><i>Enforcement/Monitoring:</i>                      <i>City of Elk Grove Development Services.</i></p>	<p>Less Than Significant for the Following Road Segments:</p> <p>Elk Grove Blvd – Bruceville Road to Auto Center Drive</p> <p>Grant Line Road – SR 99 to Waterman Road</p> <p>Poppy Ridge Road – Bruceville Road to West Stockton Blvd</p> <p>West Stockton Blvd – Kammerer Road to Poppy Ridge Road</p>

**TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES**

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		<p><b>MM 4.2.1b</b> Elk Grove Boulevard between East Stockton Boulevard and Elk Grove-Florin Road shall be widened from two to three lanes in each direction.</p> <p>If the additional right-of-way necessary for the improvement cannot be obtained, the project applicant shall pay their fair-share of the estimated cost of the improvement and cost of the right-of-way into the future City's Traffic Impact Fund.</p> <p><i>Timing/Implementation:</i>                      <i>Prior to approval of subsequent development projects</i></p> <p><i>Enforcement/Monitoring:</i>                      <i>City of Elk Grove Development Services</i></p> <p><b>MM 4.2.1c</b> Grant Line Road between SR 99 and Waterman Road shall be widened from one to two lanes in each direction.</p> <p>Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the inclusion of this improvement in the LSPFFP and the annexation of the Laguna Ridge Specific Plan into the LSPFFP. Project and/or public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations.</p> <p><i>Timing/Implementation:</i>                      <i>Prior to approval of subsequent development</i></p>	<p>Ridge Road</p> <p>West Stockton Blvd – Poppy Ridge Road to Auto Mall Access</p> <p>Significant and Unavoidable for the Following Road Segment:</p> <p>Elk Grove Boulevard – East Stockton Blvd to Elk Grove-Florin Road</p>

2.0 EXECUTIVE SUMMARY

TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		<p style="text-align: right;"><i>projects</i></p> <p><i>Enforcement/Monitoring: City of Elk Grove Development Services</i></p> <p><b>MM 4.2.1d</b> Poppy Ridge Road between Bruceville Road and West Stockton Boulevard shall be reconstructed to provide 12-foot travel lanes and minimum 6-foot paved shoulder.</p> <p>Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP. Project public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations and consistent with the Specific Plan's infrastructure phasing provisions.</p> <p><i>Timing/Implementation: Prior to approval of subsequent development projects</i></p> <p><i>Enforcement/Monitoring: City of Elk Grove Development Services</i></p> <p><b>MM 4.2.1e</b> West Stockton Boulevard between Kammerer Road and Poppy Ridge Road shall be reconstructed to provide 12-foot travel lanes and minimum 6-foot paved shoulder.</p> <p>Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South</p>	



**TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES**

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		<p>Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP. Project and/or public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations and consistent with the Specific Plan's infrastructure phasing provisions.</p> <p><i>Timing/Implementation:</i>                      <i>Prior to approval of subsequent development projects</i></p> <p><i>Enforcement/Monitoring:</i>                      <i>City of Elk Grove Development Services</i></p> <p><b>MM 4.2.1f</b> West Stockton Boulevard between Poppy Ridge Road and the Auto Mall Access to provide 12-foot travel lanes and minimum 6-foot paved shoulder.</p> <p>Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP. Project public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations and consistent with the Specific Plan's infrastructure phasing provisions.</p> <p><i>Timing/Implementation:</i>                      <i>Prior to approval of subsequent development projects</i></p> <p><i>Enforcement/Monitoring:</i>                      <i>City of Elk Grove</i></p>	

2.0 EXECUTIVE SUMMARY

TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		<i>Development Services</i>	
<p><b>Impact 4.2.2</b> The addition of project traffic would cause LOS F operations at the Elk Grove Boulevard/Bruceville Road intersection during the a.m. and p.m. peak hours; LOS F operations at the Elk Grove Boulevard/Big Horn Road intersection during the a.m. and p.m. peak hours; LOS F operations at the Elk Grove Boulevard/Auto Center Drive intersection during the a.m. and p.m. peak hours; LOS F operations at the Elk Grove Boulevard/SR-99 SB Ramps intersection during the a.m. and p.m. peak hours; LOS F operations at the Poppy Ridge Road/Bruceville Road intersection during a.m. and p.m. peak hours; and LOS F operations at the Elk Grove Boulevard intersection during the p.m. peak hour. This would result in a <b>potentially significant</b> impact.</p>	Significant	<p><b>MM 4.2.2a</b> The following lane configurations shall be provided at the Elk Grove Boulevard/Bruceville Road intersection.</p> <ul style="list-style-type: none"> <li>• One shared through/right-turn lane, one through lane, and one left-turn lane on the northbound approach.</li> <li>• One right-turn lane, two through lanes, and two left-turn lanes on the southbound approach.</li> <li>• One right-turn lane, two through lanes, and one left-turn lane on the westbound approach.</li> </ul> <p>Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP. Project public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations and consistent with the Specific Plan's infrastructure phasing provisions.</p> <p><i>Timing/Implementation:</i>                      <i>Prior to approval of subsequent development projects</i></p> <p><i>Enforcement/Monitoring:</i>                      <i>City of Elk Grove Development Services</i></p> <p><b>MM 4.2.2b</b> The following lane configurations shall be provided at the Elk</p>	<p style="text-align: center;">Less Than Significant for the Following Intersections:</p> <p style="text-align: center;">Elk Grove Blvd/ Bruceville Road</p> <p style="text-align: center;">Elk Grove Blvd/Big Horn Blvd</p> <p style="text-align: center;">Elk Grove Blvd/ West Laguna Springs Drive</p> <p style="text-align: center;">Elk Grove Blvd/ Waterman Road</p> <p style="text-align: center;">Poppy Ridge Road/ Bruceville Road</p> <p style="text-align: center;">Grant Line Road/ West Stockton Blvd</p> <p style="text-align: center;">Grant Line Road/ East Stockton Blvd</p>

**TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES**

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		<p>Grove Boulevard/Big Horn Boulevard intersection.</p> <ul style="list-style-type: none"> <li>• One right-turn lane, two through lanes, and one left-turn lane on the northbound approach.</li> <li>• One right-turn lane, two through lanes, and two left-turn lanes on the southbound approach.</li> <li>• One shared through/right-turn lane, two through lanes, and two left-turn lanes on the eastbound approach.</li> <li>• One shared through/right-turn lane, two through lanes, and two left-turn lanes on the westbound approach.</li> </ul> <p>Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP. Project public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations and consistent with the Specific Plan's infrastructure phasing provisions.</p> <p><i>Timing/Implementation:</i>                      <i>Prior to approval of subsequent development projects</i></p> <p><i>Enforcement/Monitoring:</i>                      <i>City of Elk Grove Development Services</i></p> <p><b>MM 4.2.2c</b> The following lane configurations shall be provided at the Elk</p>	<p>Stockton Blvd</p> <p>SR 99 Northbound Ramps/East Stockton Blvd</p> <p>SR 99 Southbound Ramps/West Stockton Blvd</p> <p>Laguna Blvd/ Franklin Blvd</p> <p>Laguna Blvd/ Big Horn Blvd</p> <p>Significant and Unavoidable for the Following Intersections:</p> <p>Elk Grove Blvd/SR 99 Southbound Ramp</p> <p>Elk Grove Blvd/ Auto Center Drive</p> <p>Elk Grove Blvd/Elk</p>

2.0 EXECUTIVE SUMMARY

TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		<p>Grove Boulevard/West Laguna Springs Drive intersection.</p> <ul style="list-style-type: none"> <li>• Two right-turn lanes, two through lanes, and one left-turn lane on the northbound approach.</li> <li>• One right-turn lane, one through lanes, and two left-turn lanes on the southbound approach.</li> <li>• One right-turn lane, three through lanes, and two left-turn lanes on the eastbound approach.</li> <li>• One right-turn lane, three through lanes, and two left-turn lanes on the westbound approach.</li> <li>• Right-turn overlap phasing for the northbound right-turn lane at the Elk Grove Boulevard/West Laguna Springs Drive intersection.</li> </ul> <p>Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP. Project public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations and consistent with the Specific Plan's infrastructure phasing provisions.</p> <p><i>Timing/Implementation: Prior to approval of subsequent development projects</i></p> <p><i>Enforcement/Monitoring: City of Elk Grove Development Services</i></p>	Grove-Florin Road

**TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES**

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		<p><b>MM 4.2.2d</b>                      Right-turn overlap phasing for the northbound right-turn movement shall be provided at the Elk Grove Boulevard/Auto Center Drive intersection. This improvement would require modification of the existing signal equipment and signal phasing.</p> <p>Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP. Project and/or public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations.</p> <p><i>Timing/Implementation:                      Prior to approval of subsequent development projects</i></p> <p><i>Enforcement/Monitoring:                      City of Elk Grove Development Services</i></p> <p><b>MM 4.2.2e</b>                      The following lane configurations shall be provided at the Elk Grove Boulevard/SR 99 Southbound Ramps intersection.</p> <ul style="list-style-type: none"> <li>• Two right-turn lanes, a shared through/left-turn lane, and an exclusive left-turn lane on the southbound approach.</li> <li>• One right-turn lane and three through lanes on the eastbound approach.</li> </ul>	

2.0 EXECUTIVE SUMMARY

TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		<ul style="list-style-type: none"> <li>• Three through lanes on the westbound approach.</li> <li>• In addition, construct a loop on-ramp in the northwest quadrant of the interchange to replace the westbound left-turn movement.</li> </ul> <p>These improvements will require coordination and approval of Caltrans as well as incorporation into the Laguna South Public Facilities Fee Program. If the additional right-of-way necessary for the improvement cannot be obtained, the project applicant shall pay their fair-share of the estimated cost of the improvement and cost of the right-of-way into the City's future Traffic Impact Fund.</p> <p><i>Timing/Implementation: Prior to approval of subsequent development projects</i></p> <p><i>Enforcement/Monitoring: City of Elk Grove Development Services and Caltrans</i></p> <p><b>MM 4.2.2f</b> Install traffic signal and provide the following lane configurations at the Elk Grove Boulevard/Waterman Road intersection.</p> <ul style="list-style-type: none"> <li>• A shared through/right-turn lane and an exclusive left-turn lane on all approaches.</li> </ul> <p>Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP and the inclusion</p>	

**TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES**

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		<p>of this improvement in the LSPFFP. Project and/or public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations.</p> <p><i>Timing/Implementation:</i>                      <i>Prior to approval of subsequent development projects</i></p> <p><i>Enforcement/Monitoring:</i>                      <i>City of Elk Grove Development Services</i></p> <p><b>MM 4.2.2g</b> Install a traffic signal and provide the following lane configurations at the Poppy Ridge Road/Bruceville Road intersection.</p> <ul style="list-style-type: none"> <li>• A shared through/right-turn lane and an exclusive left-turn lane on the northbound, southbound, and eastbound approaches.</li> <li>• One right-turn lane, one through lane, and one left-turn lane on the westbound approach.</li> </ul> <p>Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program to include this improvement and by the annexation of the Laguna Ridge Specific Plan into the LSPFFP. Project public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations and consistent with the Specific Plan's infrastructure phasing provisions.</p> <p><i>Timing/Implementation:</i>                      <i>Prior to approval of</i></p>	

2.0 EXECUTIVE SUMMARY

TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		<p style="text-align: right;"><i>subsequent development projects</i></p> <p><i>Enforcement/Monitoring: City of Elk Grove Development Services</i></p> <p><b>MM 4.2.2h</b> The applicant shall participate in the Laguna South Public Facilities Fee Program, which includes reconstruction of the SR 99/Grant Line Road interchange. Fair-share funding for the SR 99/Grant Line Road improvement project shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP.</p> <p><i>Timing/Implementation: Prior to approval of subsequent development projects</i></p> <p><i>Enforcement/Monitoring: City of Elk Grove Development Services</i></p> <p><b>MM 4.2.2i</b> Right-turn overlap phasing for the southbound right-turn movement shall be provided at the Laguna Boulevard/Franklin Boulevard intersection.</p> <p>Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program to include this improvement and by the annexation of the Laguna Ridge Specific Plan into the LSPFFP. Project and/or public facility financing plans and/or programs shall establish the timing of this</p>	



TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		<p>improvement to ensure it is in place prior to LOS E operations.</p> <p><i>Timing/Implementation:</i>                      <i>Prior to approval of subsequent development projects</i></p> <p><i>Enforcement/Monitoring:</i>                      <i>City of Elk Grove Development Services</i></p> <p><b>MM 4.2.2j</b> Right-turn overlap phasing shall be provided for the northbound right-turn movement at the intersection of Laguna Boulevard with Big Horn Boulevard.</p> <p>Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program to include this improvement and by the annexation of the Laguna Ridge Specific Plan into the LSPFFP. Project and/or public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations.</p> <p><i>Timing/Implementation:</i>                      <i>Prior to approval of subsequent development projects</i></p> <p><i>Enforcement/Monitoring:</i>                      <i>City of Elk Grove Development Services</i></p> <p><b>MM 4.2.2k</b> The following lane configurations shall be provided at the Elk</p>	

2.0 EXECUTIVE SUMMARY

TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		<p>Grove Boulevard/Elk Grove-Florin Road intersection.</p> <ul style="list-style-type: none"> <li>• A shared through/right-turn lane, one through lane, and two left-turn lanes on the northbound approach.</li> <li>• In addition, provide protected left-turn phasing on the northbound and southbound approaches.</li> </ul> <p>Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program to include this improvement and by the annexation of the Laguna Ridge Specific Plan into the LSPFFP. Project and/or public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations.</p> <p>If the additional right-of-way necessary for the improvement cannot be obtained, the project applicant shall pay their fair-share of the estimated cost of the improvement and cost of the right-of-way into the City's future Traffic Impact Fund.</p> <p><i>Timing/Implementation:</i>                      <i>Prior to approval of subsequent development projects</i></p> <p><i>Enforcement/Monitoring:</i>                      <i>City of Elk Grove Development Services</i></p>	
<p><b>Impact 4.2.3</b> The projected daily volume on the sections of Laguna Boulevard from Bruceville Road</p>	<p>Significant</p>	<p><b>MM 4.2.3a</b> The section of Laguna Boulevard between Bruceville Road and SR 99 shall be widened from three to four lanes in each</p>	<p>Less Than Significant for the Following Road</p>

TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
<p>to SR 99, Laguna Boulevard from Franklin Road to Bruceville Road, Elk Grove Boulevard between Bruceville Road and Auto Center Drive, Elk Grove Boulevard from East Stockton Boulevard to Elk Grove-Florin Road, Bruceville Road from Elk Grove Boulevard to Laguna Boulevard, and Bruceville Road north of Laguna Boulevard, with the development of Laguna Ridge Specific Plan, would exceed the City's thresholds for roadway segment operations.</p>		<p>direction.</p> <p>If the additional right-of-way necessary for the improvement cannot be obtained, the project applicant shall pay their fair-share of the estimated cost of the improvement and cost of the right-of-way into the City's future Traffic Impact Fund.</p> <p><i>Timing/Implementation:</i>                      <i>Prior to approval of subsequent development projects</i></p> <p><i>Enforcement/Monitoring:</i>                      <i>City of Elk Grove Development Services</i></p> <p><b>MM 4.2.3b</b> The section of Elk Grove Boulevard between Bruceville Road and Auto Center Drive shall be widened from three to four lanes in each direction.</p> <p>If the additional right-of-way necessary for the improvement cannot be obtained, the project applicant shall pay their fair-share of the estimated cost of the improvement and cost of the right-of-way into the City's future Traffic Impact Fund.</p> <p><i>Timing/Implementation:</i>                      <i>Prior to approval of subsequent development projects.</i></p> <p><i>Enforcement/Monitoring:</i>                      <i>City of Elk Grove Development Services.</i></p>	<p>Segments:</p> <p>Bruceville Road – Elk Grove Blvd to Laguna Blvd</p> <p>Significant &amp; Unavoidable for the Following Road Segments:</p> <p>Laguna Blvd – Bruceville Road to SR 99</p> <p>Elk Grove Blvd – Bruceville Road to Auto Center Drive</p> <p>Elk Grove Blvd – East Stockton Blvd to Elk Grove-Florin Road</p> <p>Laguna Blvd – Franklin Blvd to Bruceville Road</p> <p>Bruceville Road – North of Laguna Blvd</p>

2.0 EXECUTIVE SUMMARY

TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		<p><b>MM 4.2.3c</b> Widen the section of Elk Grove Boulevard between East Stockton Boulevard and Elk Grove-Florin Road from two to three lanes in each direction.</p> <p>If the additional right-of-way necessary for the improvement cannot be obtained, the project applicant shall pay their fair-share of the estimated cost of the improvement and cost of the right-of-way into the City's Traffic Impact Fund.</p> <p><i>Timing/Implementation:</i>                      <i>Prior to approval of subsequent development projects</i></p> <p><i>Enforcement/Monitoring:</i>                      <i>City of Elk Grove Development Services</i></p> <p><b>MM 4.2.3d</b> Bruceville Road between Elk Grove Boulevard and Laguna Boulevard shall be widened from two to three lanes in each direction.</p> <p>Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the inclusion of this improvement in the LSPFFP and by the annexation of the Laguna Ridge Specific Plan into the LSPFFP. Project and/or public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations.</p> <p><i>Timing/Implementation:</i>                      <i>Prior to approval of subsequent development</i></p>	

TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		<p style="text-align: right;"><i>projects</i></p> <p><i>Enforcement/Monitoring: City of Elk Grove Development Services</i></p> <p><b>MM 4.2.3e</b> Laguna Boulevard between Franklin Boulevard and Bruceville Road shall be widened from three to four lanes in each direction.</p> <p>If the additional right-of-way necessary for the improvement cannot be obtained, the project applicant shall pay their fair-share of the estimated cost of the improvement and cost of the right-of-way into the City's future Traffic Impact Fund.</p> <p><i>Timing/Implementation: Prior to approval of subsequent development projects</i></p> <p><i>Enforcement/Monitoring: City of Elk Grove Development Services</i></p> <p><b>MM 4.2.3f</b> Widen the section of Bruceville Road between Laguna Boulevard and Big Horn Boulevard from two to three lanes in each direction.</p> <p>If the additional right-of-way necessary for the improvement cannot be obtained, the project applicant shall pay their fair-share of the estimated cost of the improvement and cost of the right-of-way into the City's future Traffic Impact</p>	

2.0 EXECUTIVE SUMMARY

TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		Fund.  <i>Timing/Implementation:</i> <i>Prior to approval of subsequent development projects</i>  <i>Enforcement/Monitoring:</i> <i>City of Elk Grove Development Services</i>	
<p><b>Impact 4.2.4</b> The projected traffic volume on the section of Laguna Springs Drive from Elk Grove Boulevard to Laguna Ridge Drive Southbound would exceed the City's thresholds for traffic operations.</p>	<p>Significant</p>	<p><b>MM 4.2.4a</b> Laguna Springs Drive shall be widened to an ultimate 6-lane width or other traffic improvements shall be provided to maintain acceptable operations (LOS D or better). This requirement shall be incorporated into the Specific Plan.</p> <p><i>Timing/Implementation:</i>                      <i>As part of final approval of the Specific Plan</i></p> <p><i>Enforcement/Monitoring:</i>                      <i>City of Elk Grove Development Services</i></p> <p><b>MM 4.2.4b</b> All internal intersections shall be designed to meet City Level of Service Standards (LOS D or better). This requirement shall be incorporated into the Specific Plan.</p> <p><i>Timing/Implementation:</i>                      <i>As part of final Specific Plan approval</i></p> <p><i>Enforcement/Monitoring:</i>                      <i>City of Elk Grove Development Services</i></p>	<p>Less Than Significant</p>

TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
<p><b>Impact 4.2.5</b> Implementation of the proposed project would degrade operations at the Laguna Boulevard/Franklin Boulevard, Elk Grove Boulevard/Big Horn Boulevard, Elk Grove Boulevard/West Laguna Springs Drive, Elk Grove Boulevard/Auto Center Drive, Elk Grove Boulevard/SR 99 Southbound Ramps, Elk Grove Boulevard/East Stockton Boulevard, Elk Grove Boulevard/Elk Grove-Florin Road, Elk Grove-Florin Road/East Stockton Boulevard, Hood-Franklin Road/I-5 Southbound Ramps, Hood-Franklin Road/I-5 Northbound Ramps, Grant Line Road/West Stockton Boulevard, Grant Line Road/Waterman Road, Laguna Boulevard/Big Horn Boulevard, Laguna Boulevard/West Laguna Springs Drive, Elk Grove Boulevard/Franklin Boulevard, Elk Grove Boulevard/Bruceville Road, and Grant Line Road/Bradshaw Road intersections to unacceptable LOS conditions.</p>	<p>Cumulative Significant</p>	<p><b>MM 4.2.5a</b> Right-turn overlap phasing for the southbound right-turn movement at the Laguna Boulevard/Franklin Boulevard intersection.</p> <p>Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program to include this improvement and by the annexation of the Laguna Ridge Specific Plan into the LSPFFP. Project and/or public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations.</p> <p><i>Timing/Implementation: Prior to approval of subsequent development projects</i></p> <p><i>Enforcement/Monitoring: City of Elk Grove Development Services</i></p> <p><b>MM 4.2.5b</b> The following lane configurations shall be provided at the Elk Grove Boulevard/Big Horn Boulevard intersection.</p> <ul style="list-style-type: none"> <li>• One right-turn lane, two through lanes, and two left-turn lanes on the northbound approach.</li> <li>• One right-turn lane, two through lanes, and two left-turn lanes on the southbound approach.</li> <li>• One right-turn lane, three through lanes, and two left-turn lanes on the eastbound approach.</li> </ul>	<p>Less Than Significant for the Following intersections:</p> <p>Laguna Blvd/ Franklin Blvd</p> <p>Elk Grove Blvd/ East Stockton Blvd</p> <p>Grant Line Rd/ West Stockton Blvd</p> <p>Grant Line Road/ Waterman Road</p> <p>Laguna Blvd/West Laguna Springs Drive</p> <p>Elk Grove Blvd/ Franklin Blvd</p> <p>Grant Line Road/ Bradshaw Road</p>

2.0 EXECUTIVE SUMMARY

TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		<p>left-turn lanes on the eastbound approach.</p> <ul style="list-style-type: none"> <li>• One right-turn lane, three through lanes, and two left-turn lanes on the westbound approach.</li> <li>• Right-turn overlap phasing on all approaches to the intersection, which would require modification of the existing signal equipment and signal phasing.</li> </ul> <p>Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP. Project public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations and consistent with the Specific Plan's infrastructure phasing provisions.</p> <p><i>Timing/Implementation:</i>                      <i>Prior to approval of subsequent development projects</i></p> <p><i>Enforcement/Monitoring:</i>                      <i>City of Elk Grove Development Services</i></p> <p><b>MM 4.2.5c</b> The following lane configurations shall be provided at the Elk Grove Boulevard/West Laguna Springs Drive intersection.</p> <ul style="list-style-type: none"> <li>• One right-turn lane, two through lanes, and one left-turn lane on the southbound approach.</li> <li>• Two right-turn lanes, two through lanes and one left-</li> </ul>	<p>Significant and Unavoidable for the following intersections:</p> <p>Elk Grove Blvd/ Big Horn Blvd</p> <p>Elk Grove Blvd/ Bruceville Road</p> <p>Elk Grove Blvd/ West Laguna Springs Drive</p> <p>Elk Grove Blvd/ Auto Center Drive</p> <p>Elk Grove Blvd/ SR 99 Southbound Ramp</p> <p>Elk Grove Blvd/ Elk Grove-Florin Road</p> <p>Elk Grove-Florin/ East Stockton Blvd</p> <p>Hood-Franklin Road/I-5 Northbound Ramps</p>



**TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES**

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		<p>turn lane on the northbound approach.</p> <ul style="list-style-type: none"> <li>• One right-turn lane, three through lanes, and two left-turn lanes on the westbound approach.</li> <li>• One right-turn lane, three through lanes, and one left-turn lane on the eastbound approach.</li> <li>• Protected left-turn phasing for the north and southbound left-turn movements.</li> <li>• Provide right-turn overlap phasing on the northbound and southbound approaches, which would require modification of the existing signal equipment and signal phasing.</li> </ul> <p>Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP. Project public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations and consistent with the Specific Plan's infrastructure phasing provisions.</p> <p><i>Timing/Implementation: Prior to approval of subsequent development projects</i></p> <p><i>Enforcement/Monitoring: City of Elk Grove Development Services</i></p>	<p>Hood-Franklin Road/I-5 Southbound Ramps</p>

2.0 EXECUTIVE SUMMARY

TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		<p><b>MM 4.2.5d</b> The following lane configurations shall be provided at the Elk Grove Boulevard/Auto Center Drive intersection.</p> <ul style="list-style-type: none"> <li>• Two right-turn lanes, one through lane, and one left-turn lane on the northbound approach.</li> <li>• Provide protected left-turn phasing on the northbound and southbound approaches.</li> <li>• Provide right-turn overlap phasing on the northbound approach. Right-turn overlap phasing would require modification of the existing signal equipment and signal phasing.</li> </ul> <p>Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP. Project and/or public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations.</p> <p><i>Timing/Implementation:</i>                      <i>Prior to approval of subsequent development projects</i></p> <p><i>Enforcement/Monitoring:</i>                      <i>City of Elk Grove Development Services</i></p>	

**TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES**

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		<p><b>MM 4.2.5e</b> The following lane configurations shall be provided at the Elk Grove Boulevard/SR 99 Southbound Ramps intersection.</p> <ul style="list-style-type: none"> <li>• One right-turn lane and three through lanes on the eastbound approach.</li> <li>• Three through lanes on the westbound approach.</li> <li>• Construct a loop on-ramp in the northwest quadrant of the interchange to replace the westbound left-turn movement.</li> </ul> <p>This improvement will require coordination and approval from Caltrans. Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP.</p> <p><i>Timing/Implementation:</i>                      <i>Prior to approval of subsequent development projects</i></p> <p><i>Enforcement/Monitoring:</i>                      <i>City of Elk Grove Development Services and Caltrans</i></p> <p><b>MM 4.2.5f</b> The following lane configurations shall be provided at the Elk Grove Boulevard/East Stockton Boulevard intersection.</p> <ul style="list-style-type: none"> <li>• One right-turn lane, one through lane, and one left-</li> </ul>	

2.0 EXECUTIVE SUMMARY

TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		<p>turn lanes on the southbound approach.</p> <ul style="list-style-type: none"> <li>• A shared through/right-turn lane and two left-turn lanes on the northbound approach.</li> <li>• Provide protected left-turn phasing on the northbound and southbound approaches.</li> </ul> <p>Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP. Project and/or public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations.</p> <p><i>Timing/Implementation: Prior to approval of subsequent development projects</i></p> <p><i>Enforcement/Monitoring: City of Elk Grove Development Services.</i></p> <p><b>MM 4.2.5g</b> The following lane configurations shall be provided at the Elk Grove Boulevard/Bruceville Road intersection.</p> <ul style="list-style-type: none"> <li>• One right-turn lane on the westbound approach.</li> </ul> <p>Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP. Project public</p>	

**TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES**

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		<p>facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations.</p> <p><i>Timing/Implementation:</i>                      <i>Prior to approval of subsequent development projects</i></p> <p><i>Enforcement/Monitoring:</i>                      <i>City of Elk Grove Development Services</i></p> <p><b>MM 4.2.5h</b> The following lane configurations shall be provided at the Elk Grove Boulevard/Elk Grove-Florin Road intersection.</p> <ul style="list-style-type: none"> <li>• A shared through/right-turn lane, one through lane, and one left-turn lane on the northbound approach.</li> <li>• In addition, provide protected left-turn phasing on the northbound and southbound approaches.</li> </ul> <p>Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program to include this improvement and by the annexation of the Laguna Ridge Specific Plan into the LSPFFP. Project and/or public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations.</p> <p><i>Timing/Implementation:</i>                      <i>Prior to approval of subsequent development</i></p>	

2.0 EXECUTIVE SUMMARY

TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		<p style="text-align: right;"><i>projects</i></p> <p><i>Enforcement/Monitoring: City of Elk Grove Development Services</i></p> <p><b>MM 4.2.5i</b> A traffic signal shall be installed and the following lane configurations shall be provided at the Elk Grove-Florin Road/East Stockton Boulevard intersection.</p> <ul style="list-style-type: none"> <li>• One through lane and one left-turn lane on the southbound approach.</li> <li>• One right-turn lane and two left-turn lanes on the westbound approach.</li> <li>• One right-turn lane and one through lane on the northbound approach.</li> <li>• This improvement would require 3-phase signal operation.</li> </ul> <p>Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP and to include this improvement. Project and/or public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations.</p> <p><i>Timing/Implementation: Prior to approval of subsequent development</i></p>	

**TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES**

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		<p style="text-align: right;"><i>projects</i></p> <p><i>Enforcement/Monitoring: City of Elk Grove Development Services</i></p> <p><b>MM 4.2.5j</b> Install a traffic signal and coordinate it with the Hood-Franklin Road/I-5 Northbound Ramps intersection.</p> <p>This improvement will require coordination and approval from Caltrans and Sacramento County. Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program to include this improvement and by the annexation of the Laguna Ridge Specific Plan into the LSPFFP.</p> <p><i>Timing/Implementation: Prior to approval of subsequent development projects</i></p> <p><i>Enforcement/Monitoring: City of Elk Grove Development Services, Sacramento County and Caltrans</i></p> <p><b>MM 4.2.5k</b> Install a traffic signal and coordinate it with the Hood-Franklin Road/I-5 Southbound Ramps intersection.</p> <p>This improvement will require coordination and approval from Caltrans and Sacramento County. Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee</p>	

2.0 EXECUTIVE SUMMARY

TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		<p>Program to include this improvement and by the annexation of the Laguna Ridge Specific Plan into the LSPFFP.</p> <p><i>Timing/Implementation:</i>                      <i>Prior to approval of subsequent development projects</i></p> <p><i>Enforcement/Monitoring:</i>                      <i>City of Elk Grove Development Services, Sacramento County and Caltrans</i></p> <p><b>MM 4.2.5I</b> Right-turn overlap phasing shall be provided for the southbound right-turn movement at the intersection of Grant Line Road and Waterman Road.</p> <p>Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP. Project and/or public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations.</p> <p><i>Timing/Implementation:</i>                      <i>Prior to approval of subsequent development projects</i></p> <p><i>Enforcement/Monitoring:</i>                      <i>City of Elk Grove Development Services</i></p>	



**TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES**

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		<p><b>MM 4.2.5m</b> Right-turn overlap phasing shall be provided for the northbound right-turn movement at the intersection of Laguna Boulevard with West Laguna Springs Drive.</p> <p>Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program to include this improvement and by the annexation of the Laguna Ridge Specific Plan into the LSPFFP. Project and/or public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations.</p> <p><i>Timing/Implementation:                      Prior to approval of subsequent development projects</i></p> <p><i>Enforcement/Monitoring:                      City of Elk Grove Development Services</i></p> <p><b>MM 4.2.5n</b> Right-turn overlap phasing shall be provided for the southbound right-turn movement at the intersection of Elk Grove and Franklin Boulevards.</p> <p>Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP. Project and/or public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to</p>	

2.0 EXECUTIVE SUMMARY

TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		<p>LOS E operations.</p> <p><i>Timing/Implementation:</i>                      <i>Prior to approval of subsequent development projects</i></p> <p><i>Enforcement/Monitoring:</i>                      <i>City of Elk Grove Development Services</i></p> <p><b>MM 4.2.5o</b> Right-turn overlap phasing shall be provided for the southbound right-turn movement at the Grant Line Road/Bradshaw Road intersection.</p> <p>Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program to include this improvement and by the annexation of the Laguna Ridge Specific Plan into the LSPFFP. Project and/or public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations.</p> <p><i>Timing/Implementation:</i>                      <i>Prior to approval of subsequent development projects</i></p> <p><i>Enforcement/Monitoring:</i>                      <i>City of Elk Grove Development Services</i></p>	

TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
<p><b>Impact 4.2.6</b> Under cumulative plus project conditions, the section of SR-99 north of the Laguna Boulevard interchange would operate at LOS F during the a.m. peak hour (northbound) and LOS F during the p.m. peak hour (southbound) and the section of I-5 north of the Elk Grove Boulevard interchange would operate at LOS E during the a.m. peak hour (northbound).</p>	<p>Cumulative Significant</p>	<p><b>MM 4.2.6a</b> The project shall contribute to the following improvement to I-5:</p> <ul style="list-style-type: none"> <li>• Construction of one lane northbound between Hood Franklin Road and Elk Grove Boulevard.</li> </ul> <p>This improvement will require coordination and approval from Caltrans. Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP as well as through the project's financing program and/or plan.</p> <p><i>Timing/Implementation: Prior to approval of subsequent development projects</i></p> <p><i>Enforcement/Monitoring: City of Elk Grove Development Services and Caltrans</i></p> <p><b>MM 4.2.6b</b> The project shall contribute to the following improvement to I-5:</p> <ul style="list-style-type: none"> <li>• Construction of one lane southbound between Hood Franklin Road and Elk Grove Boulevard.</li> </ul> <p>This improvement will require coordination and approval from Caltrans. Fair-share funding for the above roadway improvement shall be determined by the modification of the</p>	<p>Significant &amp; Unavoidable</p>

2.0 EXECUTIVE SUMMARY

TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		<p>Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP as well as through the project's financing program and/or plan.</p> <p><i>Timing/Implementation:</i>                      <i>Prior to approval of subsequent development projects</i></p> <p><i>Enforcement/Monitoring:</i>                      <i>City of Elk Grove Development Services and Caltrans</i></p> <p><b>MM 4.2.6c</b> The project shall contribute to the following improvement to I-5:</p> <ul style="list-style-type: none"> <li>• Construction of one lane northbound between Laguna Boulevard and Pocket Road.</li> </ul> <p>This improvement will require coordination and approval from Caltrans. Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP as well as through the project's financing program and/or plan.</p> <p><i>Timing/Implementation:</i>                      <i>Prior to approval of subsequent development projects</i></p> <p><i>Enforcement/Monitoring:</i>                      <i>City of Elk Grove</i></p>	

**TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES**

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		<p style="text-align: right;"><i>Development Services and Caltrans</i></p> <p><b>MM 4.2.6d</b> The project shall contribute to the following improvement to I-5:</p> <ul style="list-style-type: none"> <li>• Construction of one lane southbound between Laguna Boulevard and Pocket Road.</li> </ul> <p>This improvement will require coordination and approval from Caltrans. Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP as well as through the project's financing program and/or plan.</p> <p><i>Timing/Implementation:                      Prior to approval of subsequent development projects</i></p> <p><i>Enforcement/Monitoring:                      City of Elk Grove Development Services and Caltrans</i></p> <p><b>MM 4.2.6e</b> The project shall contribute to the following improvement to I-5:</p> <ul style="list-style-type: none"> <li>• Construction one lane northbound (approximately</li> </ul>	

2.0 EXECUTIVE SUMMARY

TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		<p>0.25 miles) south of Hood Franklin Road.</p> <p>This improvement will require coordination and approval from Caltrans. Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP as well as through the project's financing program and/or plan.</p> <p><i>Timing/Implementation:</i>                      <i>Prior to approval of subsequent development projects</i></p> <p><i>Enforcement/Monitoring:</i>                      <i>City of Elk Grove Development Services and Caltrans</i></p> <p><b>MM 4.2.6f</b> The project shall contribute to the following improvement to I-5:</p> <ul style="list-style-type: none"> <li>• Construction one lane southbound (approximately 0.25 miles) south of Hood Franklin Road.</li> </ul> <p>This improvement will require coordination and approval from Caltrans. Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP as well as through the project's financing program and/or plan.</p>	

**TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES**

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		<p><i>Timing/Implementation:</i>                      <i>Prior to approval of subsequent development projects</i></p> <p><i>Enforcement/Monitoring:</i>                      <i>City of Elk Grove Development Services and Caltrans</i></p> <p><b>MM 4.2.6g</b> The project shall contribute to the following improvement to I-5:</p> <ul style="list-style-type: none"> <li>• Construction of one lane northbound between Elk Grove Boulevard and Laguna Boulevard.</li> </ul> <p>This improvement will require coordination and approval from Caltrans. Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP as well as through the project's financing program and/or plan.</p> <p><i>Timing/Implementation:</i>                      <i>Prior to approval of subsequent development projects</i></p> <p><i>Enforcement/Monitoring:</i>                      <i>City of Elk Grove Development Service and Caltrans</i></p>	

2.0 EXECUTIVE SUMMARY

TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		<p><b>MM 4.2.6h</b> The project shall contribute to the following improvement to I-5:</p> <ul style="list-style-type: none"> <li>• Construction of one lane southbound between Elk Grove Boulevard and Laguna Boulevard.</li> </ul> <p>This improvement will require coordination and approval from Caltrans. Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP as well as through the project's financing program and/or plan.</p> <p><i>Timing/Implementation: Prior to approval of subsequent development projects</i></p> <p><i>Enforcement/Monitoring: City of Elk Grove Development Services and Caltrans</i></p>	
<p><b>Impact 4.2.7</b> Implementation of the proposed project would cause operations on the SR-99 northbound on-ramp junction from Laguna Boulevard to deteriorate from LOS D to F during the a.m. peak hour; on the SR-99 southbound off-ramp junction to Laguna Boulevard to deteriorate from LOS D to F during the p.m. peak hour; on the SR-99 southbound loop on-ramp junction from</p>	<p>Cumulative Significant</p>	<p><b>MM 4.2.7a</b> The project shall contribute to the following improvement to I-5:</p> <ul style="list-style-type: none"> <li>• Construction of one lane southbound between Hood Franklin Road and Elk Grove Boulevard.</li> </ul> <p>This improvement will require coordination and approval from Caltrans. Fair-share funding for the above roadway improvement shall be determined by the modification of the</p>	<p>Significant &amp; Unavoidable</p>



TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
<p>Grant Line Road to operate at LOS F during the p.m. peak hour; on the I-5 northbound off-ramp to Hood Franklin Road to operate at LOS E during the a.m. peak hour; on the I-5 northbound on-ramp from Hood Franklin Road to operate at LOS E during the a.m. peak hour; the I-5 southbound off-ramp to Hood Franklin Road to operate at LOS E during the p.m. peak hour; the I-5 northbound off-ramp to Elk Grove Boulevard to operate at LOS E during the a.m. peak hour and the I-5 northbound on-ramp from Elk Grove Boulevard to operate at LOS F during the a.m. peak hour.</p>		<p>improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP as well as through the project's financing program and/or plan.</p> <p><i>Timing/Implementation:</i>                      <i>Prior to approval of subsequent development projects</i></p> <p><i>Enforcement/Monitoring:</i>                      <i>City of Elk Grove Development Services and Caltrans</i></p> <p><b>MM 4.2.7b</b> The project shall contribute to the following improvement to I-5:</p> <ul style="list-style-type: none"> <li>• Construction of one lane southbound from the southbound off-ramp at Hood Franklin Road approximately 0.25 miles south of Hood-Franklin Road.</li> </ul> <p>This improvement will require coordination and approval from Caltrans. Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP as well as through the project's financing program and/or plan.</p> <p><i>Timing/Implementation:</i>                      <i>Prior to approval of subsequent development</i></p>	

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TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		<p style="text-align: right;"><i>projects</i></p> <p><i>Enforcement/Monitoring: City of Elk Grove Development Services and Caltrans</i></p>	
<p><b>Impact 4.2.8</b> The proposed project would contribute to a cumulative demand for transit services and facilities.</p>	<p>Potentially Significant</p>	<p><b>MM 4.2.8</b> Prior to the approval of tentative subdivision and parcel maps associated with land areas along Big Horn Blvd and Bruceville Road right-of-way for future light rail stations and lines at locations along either Big Horn Boulevard or Bruceville Road shall be dedicated based on consultation with the City of Elk Grove and Sacramento Regional Transit.</p> <p><i>Timing/Implementation: Prior to approval of tentative subdivision and parcel maps.</i></p> <p><i>Enforcement/Monitoring: City of Elk Grove Development Services and Sacramento Regional Transit</i></p>	<p>Less Than Significant</p>
<b>Air Quality</b>			
<p><b>Impact 4.3.1</b> Construction activities associated with the development of the proposed specific plan area would contribute to regional pollutants, such as ROG, NO<sub>x</sub>, and PM<sub>10</sub>.</p>	<p>Significant</p>	<p><b>MM 4.3.1a</b> The project applicant shall require that the contractors water all exposed surfaces, graded areas, storage piles and haul roads at least twice daily during construction. This requirement shall be included as a note in all project construction plans.</p> <p><i>Timing/Implementation: During all grading and construction phases of the</i></p>	<p>Significant &amp; Unavoidable</p>

TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		<p style="text-align: right;"><i>project.</i></p> <p><i>Enforcement/Monitoring:</i> City of Elk Grove Development Services and SMAQMD.</p> <p><b>MM 4.3.1b</b> The project applicant shall require that the contractor minimize the amount of material actively worked, the amount of disturbed area, and the amount of material stockpiled. This requirement shall be included as a note in all project construction plans.</p> <p><i>Timing/Implementation:</i> During all grading and construction phases of the project.</p> <p><i>Enforcement/Monitoring:</i> City of Elk Grove Development Services and SMAQMD.</p> <p><b>MM 4.3.1c</b> The project applicant shall require that the contractor limit vehicle speed for onsite construction vehicles to 15 mph when winds exceed 20 miles per hour. This requirement shall be included as a note in all project construction plans.</p> <p><i>Timing/Implementation:</i> During all grading and construction phases of the project.</p> <p><i>Enforcement/Monitoring:</i> City of Elk Grove Development Services</p>	

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TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		<p style="text-align: right;"><i>and SMAQMD.</i></p> <p><b>MM 4.3.1d</b> The project applicant shall require paved streets adjacent to construction sites to be washed or swept daily to remove accumulated dust. This requirement shall be included as a note in all project construction plans.</p> <p><i>Timing/Implementation:</i>                      <i>During all grading and construction phases of the project.</i></p> <p><i>Enforcement/Monitoring:</i>                      <i>City of Elk Grove Development Services and SMAQMD.</i></p> <p><b>MM 4.3.1e</b> The project applicant shall require that, when transporting soil or other materials by truck during construction, two feet of freeboard shall be maintained by the contractor, and that the materials be covered. This requirement shall be included as a note in all project construction plans.</p> <p><i>Timing/Implementation:</i>                      <i>During all grading and construction phases of the project.</i></p> <p><i>Enforcement/Monitoring:</i>                      <i>City of Elk Grove Development Services and SMAQMD.</i></p>	

**TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES**

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		<p><b>MM 4.3.1f</b> This mitigation measure shall be implemented by all subsequent projects within the Laguna Ridge Specific Plan. An individual project may be exempt from the following mitigation if it is less than 20 acres in size <u>and</u> will generate less than 400 pounds per day of NO<sub>x</sub>. All other projects (not meeting the two exemption criteria) will be required to implement the following measures.</p> <p>(a) <u>Category 1: Reducing NO<sub>x</sub> emissions from off-road diesel powered equipment.</u></p> <p>The prime contractor shall provide a plan for approval by the City of Elk Grove and SMAQMD demonstrating that the heavy-duty (&gt;50 horsepower) off-road vehicles to be used in the construction project, and operated by either the prime contractor or any subcontractor, will achieve a fleet-averaged 20 percent NO<sub>x</sub> reduction and a 45 percent particulate reduction compared to the most recent CARB fleet average. The prime contractor shall submit to the City of Elk Grove and SMAQMD a comprehensive inventory of all off-road construction equipment, equal to or greater than 50 horsepower, that will be used an aggregate of 40 or more hours during the construction project. The inventory shall include the horsepower rating, engine production year, and hours of use or fuel throughput for each piece of equipment. The inventory shall be updated and submitted monthly throughout the duration of the project, except that an inventory shall not be required for any 30-day period in which no construction activity occurs; and,</p> <p>(b) <u>Category 2: Controlling visible emissions from off-road diesel powered equipment.</u></p>	

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**TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES**

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		<p>The prime contractor shall ensure that emissions from all off-road diesel powered equipment used on the Specific Plan area do not exceed 40 percent opacity for more than three minutes in any one hour. Any equipment found to exceed 40 percent opacity shall be repaired immediately, and the City of Elk Grove and SMAQMD shall be notified within 48 hours of identification of non-compliant equipment. A visual survey of all in-operation equipment shall be made at least weekly, and a month summary of the visual results shall be submitted to the City and SMAQMD throughout the duration of the project, except that the monthly summary shall not be required for any 30-day period in which no construction activity occurs. The monthly summary shall include the quantity and type of vehicles surveyed as well as the dates of each survey. The SMAQMD and/or other officials may conduct periodic site inspections to determine compliance. Nothing in this section shall supersede other SMAQMD or state rules or regulation.</p> <p>In the event construction equipment meeting the requirements set forth above is determined not to be available, the project applicant shall notify the City and SMAQMD. Upon verification that required low-emission construction equipment is not available, the City may waive this measure. This requirement shall be included as a note in all project construction plans.</p> <p><i>Timing/Implementation:</i> Prior to and during construction activities.</p> <p><i>Enforcement/Monitoring:</i> City of Elk Grove Development Services and SMAQMD.</p>	

**TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES**

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		<p><b>MM 4.3.1g</b> The project applicant shall require contractors to implement ridesharing programs for construction employees traveling to and from the site. This requirement shall be included as a note in all project construction plans.</p> <p><i>Timing/Implementation:</i>                      <i>During all grading and construction phases of the project.</i></p> <p><i>Enforcement/Monitoring:</i>                      <i>City of Elk Grove Development Services and SMAQMD.</i></p>	
<p><b>Impact 4.3.2</b> Project emissions from mobile and area sources, such as natural gas combustion, fireplaces, and other consumer products, exceed SMAQMD's significance threshold.</p>	Significant	<p><b>MM 4.3.2</b> The project applicant shall implement all measures proposed in the AQ-15 Plan provided in Appendix 4.3 of the Draft EIR for each subsequent project to reduce the emissions from both mobile and stationary sources. Each subsequent development project shall be checked for compliance with the AQ-15 Plan.</p> <p><i>Timing/Implementation:</i>                      <i>During all planning and development phases of the project.</i></p> <p><i>Enforcement/Monitoring:</i>                      <i>City of Elk Grove Development Services and SMAQMD.</i></p>	Significant & Unavoidable
<p><b>Impact 4.3.8</b> Development of project in combination with cumulative projects would result in</p>	Cumulative Significant	Implement mitigation measures MM 4.3.1a through MM 4.3.1g.	Significant and Unavoidable

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TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
emissions that exceed SMAQMD thresholds.			
<p><b>Impact 4.3.9</b> Proposed project would exceed SMAQMD thresholds for cumulative impacts.</p>	Cumulative Significant	Implement Mitigation Measure MM 4.3.2.	Significant and Unavoidable
<b>Noise</b>			
<p><b>Impact 4.4.1</b> The on-site and off-site noise impacts associated with construction for the Laguna Ridge Specific Plan may exceed Elk Grove City Standards.</p>	Potentially Significant	<p><b>MM 4.4.1a</b> Site preparation and construction activities shall be limited to between the hours of 6:00 A.M. to 8:00 P.M., Monday through Friday, and 7:00 A.M. to 8:00 P.M. on Saturday and Sunday (City of Elk Grove Noise Control Ordinance, Section #6.68.090). Furthermore, construction equipment maintenance shall be limited to the same hours. This requirement shall be included as a note in all project construction plans.</p> <p><i>Timing/Implementation:</i>                      <i>During all construction phases of the project</i></p> <p><i>Enforcement/Monitoring:</i>                      <i>City of Elk Grove Development Services</i></p> <p><b>MM 4.4.1b</b> All construction equipment shall be equipped with appropriate mufflers in good working condition. This requirement shall be included as a note in all project construction plans.</p> <p><i>Timing/Implementation:</i>                      <i>During all construction phases of the project</i></p> <p><i>Enforcement/Monitoring:</i>                      <i>City of Elk Grove Development Services</i></p>	Significant & Unavoidable



**TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES**

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		<p><b>MM 4.4.1c</b> Construction staging areas shall be located as far from noise-sensitive uses as is feasible. This requirement shall be included as a note in all project construction plans.</p> <p><i>Timing/Implementation:</i>                      <i>During all construction phases of the project</i></p> <p><i>Enforcement/Monitoring:</i>                      <i>City of Elk Grove Development Services</i></p> <p><b>MM 4.4.1d</b> Stationary construction equipment shall be located as far from noise sensitive uses as feasible, and temporary or portable acoustic barriers shall be installed around the equipment/work area when within 100 feet or less of residential properties or other sensitive uses. This requirement shall be included as a note in all project construction plans.</p> <p><i>Timing/Implementation:</i>                      <i>During all construction phases of the project</i></p> <p><i>Enforcement/Monitoring:</i>                      <i>City of Elk Grove Development Services</i></p> <p><b>MM 4.4.1e</b> Construction hours, allowable workdays, and the phone number of the job superintendent shall be clearly posted on a sign no larger than 4 foot by 8 foot at all construction entrances to allow for surrounding and onsite property owners to contact the job superintendent. If the City or the job superintendent receives a complaint, the superintendent shall investigate, take appropriate corrective action, and report the action taken to the reporting party. This</p>	

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TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		requirement shall be included as a note in all project construction plans.  <i>Timing/Implementation:</i> <i>During all construction phases of the project</i>  <i>Enforcement/Monitoring:</i> <i>City of Elk Grove Development Services</i>	
<b>Impact 4.4.2</b> Vibration associated with construction activities due to pile driving would affect nearby sensitive land uses.	Potentially Significant	<b>MM 4.4.2</b> Prior to the commencement of pile driver operations in proximity to residential areas, an assessment of vibrations induced by pile driving at the site shall be completed. During indicator pile driving, vibrations should be measured at regular intervals to determine the levels of vibration at various distances from pile driving equipment. The indicator piles shall be driven at locations at least 400 feet from any existing residents. After monitoring, methods of reducing the peak ground velocities to less than 0.4 inches/second shall be determined and implemented during production pile driving. Methods to reduce vibrations, if needed, could include cut-off trenches, and the use of smaller hammers. The vibration reduction techniques to be used should be described in a note attached to the construction plans for the project to be reviewed and approved by the appropriate City regulatory agency prior to issuance of building permits. This requirement shall be included as a note in all project construction plans.  <i>Timing/Implementation:</i> <i>Prior to any pile driving activities</i>  <i>Enforcement/Monitoring:</i> <i>City of Elk Grove</i>	Less Than Significant

TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		<i>Development Services</i>	
<p><b>Impact 4.4.3</b> Noise impacts associated with development of noise-producing uses within the proposed plan area would exceed City of Elk Grove noise standards.</p>	Potentially Significant	<p><b>MM 4.4.3a</b> When residential tentative subdivision maps include and/or are located adjacent to school and park sites, the residential subdivisions shall be designed to meet City noise standards set forth in Table 4.4-6 of the Draft EIR. If the noise levels from the school and park facilities is expected to exceed the applicable standard, the project applicant shall implement appropriate mitigation measures. Appropriate mitigation measures include walls, berms, and buffers that would ensure compliance with applicable standards, as determined through the adopted Design Review procedures. Evidence of compliance shall be provided to the City.</p> <p><i>Timing/Implementation:</i>                      <i>Prior to approval of residential tentative subdivision maps</i></p> <p><i>Enforcement/Monitoring:</i>                      <i>City of Elk Grove Development Services, Elk Grove Unified School District, and Elk Grove Community Services District</i></p> <p><b>MM 4.4.3b</b> Prior to approval of a non-residential use that will abut a residential use and has the potential to generate noise, the project applicant shall demonstrate compliance with City noise standards set forth in Table 4.4-6 of the Draft EIR. If the noise levels from the facility exceed the applicable</p>	Less Than Significant

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TABLE 2.0-1  
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Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		<p>standard, the project applicant shall implement appropriate mitigation measures. Appropriate mitigation measures include walls, berms, and buffers that would ensure compliance with applicable standards, as determined through the adopted Design Review procedures.</p> <p><i>Timing/Implementation:</i>                      <i>Prior to approval of permits and/or plans for non-residential uses adjacent to existing or planned residential uses</i></p> <p><i>Enforcement/Monitoring:</i>                      <i>City of Elk Grove Development Services</i></p>	
<p><b>Impact 4.4.4</b> Noise levels from agriculture operations that currently exist within and adjacent to the proposed plan area would exceed City of Elk Grove Noise Level Standards.</p>	<p>Significant</p>	<p><b>MM 4.4.4</b> The project proponent shall ensure that a disclosure statement shall recorded against the property and be provided to all prospective buyers of properties within the proposed plan area notifying such persons of the presence of existing and future noise-producing agricultural-related activities in the immediate Specific Plan area. The disclosure statement shall be reviewed and approved by City of Elk Grove Development Services.</p> <p><i>Timing/Implementation:</i>                      <i>Prior to each final subdivision map approval</i></p> <p><i>Enforcement/Monitoring:</i>                      <i>City of Elk Grove Development Services</i></p>	<p>Significant &amp; Unavoidable</p>

**TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES**

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
<p><b>Impact 4.4.5</b> Implementation of the Laguna Ridge Specific Plan in combination with approved and planned urban development in the region would increase traffic volumes within and adjacent to the plan area, which would increase transportation-related noise levels in excess of the City of Elk Grove noise standards.</p>	<p>Cumulative Significant</p>	<p><b>MM 4.4.5</b> Prior to development of any noise-sensitive uses (as defined by the City of Elk Grove Noise Element) along Elk Grove Boulevard, Big Horn Road and Poppy Ridge Road, the project applicant shall identify specific noise mitigation measures for areas that would be located within the 60 dB Ldn traffic noise contours shown in <b>Table 4.4-12</b> of the Draft EIR that would attenuate noise levels in compliance with City noise standards for traffic noise as shown in <b>Table 4.4-9</b> of the Draft EIR. Potential design features for noise attenuation are listed below.</p> <ul style="list-style-type: none"> <li>a. <u>Setbacks</u> (i.e., open space, frontage roads, recreational areas, and storage yards) typically reduce noise attenuation by 4 to 6 dB per doubling of distance from the source.</li> <li>b. <u>Barriers</u> (i.e., walls, berms, or structures) to achieve a noise reduction ranging from 5 to 15 dB. Earth berms provide approximately 3 dB more attenuation than a wall.</li> <li>c. <u>Site design</u> (i.e., building location) to reduce noise levels.</li> <li>d. <u>Building design</u> (i.e., location of noise-sensitive uses within a building) to reduce the impact of noises on inhabitants.</li> <li>e. <u>Building façades</u> (i.e., utilizing all features of the building façade including the closed windows) to reduce noise.</li> <li>f. <u>Vegetation</u> (i.e., trees and other vegetation) 100 feet of dense foliage can achieve a 5 dB attenuation of traffic noise.</li> </ul>	<p>Less Than Significant</p>

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Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		<p>g. <u>Noise-reducing paving materials</u> (i.e., rubberized asphalt) reduce traffic noise by approximately 4 dB.</p> <p><i>Timing/Implementation:</i> Prior to approval of tentative subdivision maps and development projects along Elk Grove Boulevard, Big Horn Road and Poppy Ridge Road.</p> <p><i>Enforcement/Monitoring:</i> City of Elk Grove Development Services</p>	
<p><b>Impact 4.4.6</b> Development within the Laguna Ridge Specific Plan area concurrent with development in other adjacent or nearby development areas could result in a cumulative increase in ambient noise levels due to combined construction activities.</p>	<p>Cumulative Significant</p>	<p>Implement mitigation measures 4.4.1a through e.</p>	<p>Significant &amp; Unavoidable</p>
<p><b>Hazards and Hazardous Materials</b></p>			
<p><b>Impact 4.5.1</b> Development within the Laguna Ridge Specific Plan area may expose residents or construction workers to past herbicide or pesticide applications.</p>	<p>Potentially Significant</p>	<p><b>MM 4.5.1</b> Soil sampling shall be conducted within the areas of potential herbicide/pesticide contamination as identified in <b>Figure 4.5-3</b> of the Draft EIR. The soil samples shall be taken to assess the potential for persistent pesticide or herbicide residuals. If substances are detected at concentrations that could pose a health hazard and/or violate local, State, or Federal health standards, remediation of the affected areas shall be undertaken in accordance with the requirements of the City of Elk Grove and the Sacramento County</p>	<p>Less Than Significant</p>

**TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES**

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		<p>Environmental Management Department. Development of the site shall not commence until the site is deemed remediated and clear for development by the City in consultation with the Sacramento County Environmental Management Department.</p> <p><i>Timing/Implementation:</i>                      <i>Prior to approval of improvement plans and/or grading plans for areas shown on Figure 4.5-4 of the Draft EIR.</i></p> <p><i>Enforcement/Monitoring:</i>                      <i>City of Elk Grove Development Services and Sacramento Environmental Management Department.</i></p>	
<p><b>Impact 4.5.2</b> Development of the Laguna Ridge Specific Plan area may expose residents and construction workers to asbestos.</p>	<p>Potentially Significant</p>	<p><b>MM 4.5.2</b> Prior to the issuance of demolition permits for existing onsite structures, asbestos material sampling shall be conducted to determine if materials are present. Any identified asbestos containing building materials present in each of the structures to be dismantled shall be removed under acceptable engineering methods and work practices by a licensed asbestos abatement contractor prior to removal. These practices include, but are not limited to: containment of the area by plastic, negative air filtration, wet removal techniques and personal respiratory protection and decontamination. The process shall be designed and monitored by a California Certified Asbestos Consultant. The abatement and monitoring plan shall be developed and</p>	<p>Less Than Significant</p>

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TABLE 2.0-1  
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Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		<p>submitted for review and approval by the appropriate regulatory agency (the Sacramento Metropolitan Air Pollution Management District).</p> <p><i>Timing/Implementation:</i> Prior to the issuance of demolition permits</p> <p><i>Enforcement/Monitoring:</i> Sacramento Metropolitan APMD, City of Elk Grove Development Services</p>	
<p><b>Impact 4.5.3</b> Historic chemical or burn dump areas may exist within the Laguna Ridge Specific Plan area.</p>	<p>Potentially Significant</p>	<p><b>MM 4.5.3a</b> As part of the applications for rezone request to remove the "Reserve" overlay designation, the project applicant shall provide the City with a Phase I Site Assessment to determine whether ash or a former burn site is present on the subject property.</p> <p><i>Timing/Implementation:</i> Prior to acceptance of an application for a rezone request to remove the "Reserve" overlay designation as complete.</p> <p><i>Enforcement/Monitoring:</i> City of Elk Grove Development Services</p> <p><b>MM 4.5.3b</b> Prior to approval of improvement plans and/or a grading permit, a detailed surface investigation shall be conducted to determine if former burn dumps, chemical dumps or ash are present within each subsequent project site. If any ash or burn sites are identified, surface and subsurface soil</p>	<p>Less Than Significant</p>



**TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES**

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		<p>sampling shall be conducted to determine if contamination exists. If substances are detected at concentrations that could pose a health hazard and/or violate local, State, or Federal health standards, remediation of the affected areas shall be undertaken in accordance with the requirements of the City of Elk Grove and the Sacramento County Environmental Management Department. Development of the site shall not commence until the site is deemed remediated and clear for development by the City in consultation with the Sacramento County Environmental Management Department.</p> <p><i>Timing/Implementation: Prior to approval of improvement plans and/or grading plans.</i></p> <p><i>Enforcement/Monitoring: City of Elk Grove Development Services and Sacramento County Environmental Management Department.</i></p>	
<p><b>Impact 4.5.4</b> During removal and construction activities, construction within the Specific Plan area could result in the disturbance of lead paint materials and expose persons to airborne material.</p>	<p>Potentially Significant</p>	<p><b>MM 4.5.4a</b> Prior to the issuance of demolition permits for existing onsite structures, all loose and peeling paint shall be removed and disposed of by a licensed and certified lead paint removal contractor, in accordance with local, state, and federal regulations.</p> <p><i>Timing/Implementation: Prior to issuance of demolition permits.</i></p>	<p>Less Than Significant</p>

2.0 EXECUTIVE SUMMARY

TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		<p><i>Enforcement/Monitoring:</i> City of Elk Grove Development Services</p> <p><b>MM 4.5.4b</b> The demolition contractor shall be informed that all paint on the buildings shall be considered as containing lead. The contractor shall take appropriate precautions to protect his/her workers, the surrounding community, and to dispose of construction waste containing lead paint in accordance with local, state, and federal regulations.</p> <p><i>Timing/Implementation:</i> Prior to issuance of demolition permits and included in construction contracts.</p> <p><i>Enforcement/Monitoring:</i> City of Elk Grove Development Services</p>	
<b>Public Services and Utilities</b>			
<p><b>Impact 4.6.1.1</b> The estimated water demands of the proposed project would increase demand for water supply to the project area, including new systems, supplies, and facilities.</p>	Potentially Significant	<p><b>MM 4.6.1.1a</b> Prior to each tentative subdivision and/or parcel map approval, the project applicant shall submit to the City, information documenting adequate availability of water supplies and associated infrastructure facilities for the proposed development consistent with facilities and phasing set forth in the Laguna Ridge Specific Plan water study (Wood-Rogers, 2000). Subsequent project applications shall not be approved by the City until proof has been provided that water supplies are available and approval from SCWA has been received.</p> <p><i>Timing/Implementation:</i> Prior to tentative</p>	Less Than Significant

**TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES**

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		<p align="right"><i>subdivision and/or parcel map approval</i></p> <p><i>Enforcement/Monitoring: City of Elk Grove Development Services and Sacramento County Water Agency</i></p> <p><b>MM 4.6.1.1b</b> As a condition of subsequent development applications, uses constructed on the property shall incorporate into the building plans water conservation measures including drought tolerant landscaping with low fuel potential, low-flow toilets, urinals, shower heads, lavatory faucets, and sink faucets, as well as insulation to reduce water uses before hot water reaches equipment or fixtures.</p> <p><i>Timing/Implementation: Prior to issuance of each building permit</i></p> <p><i>Enforcement/Monitoring: City of Elk Grove Development Services</i></p>	
<p><b>Impact 4.6.1.2</b></p> <p>The project, when considered with other development projects in the area, would result in a cumulative demand for water supply and could impact flows along the Cosumnes River.</p>	<p>Cumulative Significant</p>	<p>None available.</p>	<p>Significant and Unavoidable</p>

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TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
<p><b>Impact 4.6.2.1</b> The project could potentially impact the existing sewer network if construction of project improvements would not occur consistent with need, and if the proposed system was not properly designed and constructed.</p>	<p>Potentially Significant</p>	<p><b>MM 4.6.2.1</b> Prior to each tentative subdivision or parcel map, the project applicant shall be required to demonstrate that the permanent sewer system, consistent with the Preliminary Sewer Master Plan for the Laguna Ridge Specific Plan (Wood-Rodgers, 2002) adequately serves the subsequent project. This demonstration may take the form of plans and/or reports, which shall be reviewed and approved by the City consistent with the Specific Plan infrastructure phasing provisions. The project applicant shall also pay the required sewer connection and capacity fees that are used to fund expansion of trunk and interceptor facilities.</p> <p><i>Timing/Implementation:</i>                      <i>Prior to the approval of each tentative subdivision or parcel map</i></p> <p><i>Enforcement/Monitoring:</i>                      <i>City of Elk Grove Development Service, Sacramento Regional County Sanitation District and County Sanitation District.</i></p>	<p>Less Than Significant</p>
<p><b>Impact 4.6.2.2</b> Use of the existing sewer facilities, north of Elk Grove Boulevard as an interim connection to the sanitary sewer network may exceed capacity of the existing system.</p>	<p>Potentially Significant</p>	<p><b>MM 4.6.2.2</b> Prior to approval of each tentative subdivision or parcel map that would utilize the interim sewer facilities, the project applicant shall be required to demonstrate that there is adequate sewer capacity to support the proposed project. This will include confirmation from Sacramento Regional County Sanitation District and County Sanitation District-1 on the availability of sewer capacity.</p>	<p>Less Than Significant</p>

**TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES**

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		<p><i>Timing/Implementation:</i> Prior to approval of each tentative subdivision and parcel map</p> <p><i>Enforcement/Monitoring:</i> City of Elk Grove Development Services, Sacramento Regional County Sanitation District, and County Sanitation District-1</p>	
<p><b>Impact 4.6.4.1</b> Emergency crews responding to a call for service at the construction site may not arrive within the minimum response time of five minutes considered acceptable by the EGCSO.</p>	<p>Potentially Significant</p>	<p><b>MM 4.6.4.1</b> As a condition of subsequent development entitlements, uses constructed in the Plan area shall meet the minimum necessary fire flow and other standard fire protection and life safety requirements identified in the Uniform Fire Code, Uniform Building Code, and other applicable state regulations. Construction sites shall ensure adequate on-site water supply and all-weather access for fire-fighting equipment and emergency vehicles before framing can occur. The applicant shall also pay the Fire Protection Development Fee in effect at the time of building permit issuance. These requirements shall be noted on all construction plans.</p> <p><i>Timing/Implementation:</i> During construction activities and prior to improvement plan approval</p> <p><i>Enforcement/Monitoring:</i> EGCSO and City of Elk Grove Development</p>	<p>Less Than Significant</p>

2.0 EXECUTIVE SUMMARY

TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		<i>Services</i>	
<p><b>Impact 4.6.4.2</b> Project operation may significantly impact fire department response times during the period between project opening and construction of a new station within the LRSP area.</p>	Potentially Significant	<p><b>MM 4.6.4.2a</b> The project applicant shall provide a permanent fire station within the plan area and sufficient funds to purchase associated facilities including an aerial truck, and urban interface engine. These improvements and facilities, included in the Laguna South Public Facilities Fee Program, shall be provided to the satisfaction of the Elk Grove Community Services District Fire Department (EGCSDFD).</p> <p>Fair-share funding for the above fire facilities and services improvements shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the Fee Program. Project public facility financing plans and/or programs shall establish the timing of these improvements to ensure they are in place to the satisfaction of the EGCSDFD. Establishment of the financing plans and/or programs shall occur prior to the approval of any subsequent development project. Development may occur prior to approval of the project's financing plans and/or programs if the project applicant constructs the EGCSDFD required improvement and purchases associated facilities concurrent with the development of their specific project.</p> <p><i>Timing/Implementation: Prior to approval of the Project Financing Program and/or Plan</i></p> <p><i>Enforcement/Monitoring: EGCSD and City of Elk Grove Development Services</i></p>	Less Than Significant

**TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES**

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		<p><b>MM 4.6.4.2b</b> All signalized intersections installed by the project developer shall be equipped with traffic pre-emption devices at the time of installation.</p> <p><i>Timing/Implementation:</i>                      <i>Prior to improvement plan approval</i></p> <p><i>Enforcement/Monitoring:</i>                      <i>EGCSD and City of Elk Grove Development Services</i></p> <p><b>MM 4.6.4.2c</b> Prior to approval of individual subdivision improvement plans, the water supply system plans for the subdivisions shall be reviewed by the City to ensure adequate fire flows for the project as specified by the EGCSD Fire Department.</p> <p><i>Timing/Implementation:</i>                      <i>Prior to improvement plan approval</i></p> <p><i>Enforcement/Monitoring:</i>                      <i>EGCSD and City of Elk Grove Development Services</i></p> <p><b>MM 4.6.4.2d</b> All dead-end streets in excess of 150 feet in the Laguna Ridge Specific Plan area shall have emergency vehicle turn-arounds approved by the Elk Grove Community Services District Fire Department.</p> <p><i>Timing/Implementation:</i>                      <i>Prior to improvement plan approval</i></p>	

2.0 EXECUTIVE SUMMARY

TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		<p><i>Enforcement/Monitoring:</i> EGCS&amp;D and City of Elk Grove Development Services</p> <p><b>MM 4.6.4.2e</b> Prior to approval of individual subdivision improvement plans, the project applicant shall demonstrate that all required roadways, water mains, fire hydrants, and fire flow necessary to serve the subdivision shall be provided prior to the existence of any combustible construction of storage and that the installation of on-site or off-site fire protection equipment, including fire hydrants and water mains, meets the standards of the EGCS&amp;DFD and the water purveyor. The roadways shall be constructed to a 20-foot minimum width with an impervious surface to the satisfaction of the Elk Grove CSD and shall have good drainage.</p> <p><i>Timing/Implementation:</i> Prior to improvement plan approval</p> <p><i>Enforcement/Monitoring:</i> EGCS&amp;D and City of Elk Grove Development Services</p> <p><b>MM 4.6.4.2f</b> Within the Specific Plan Area, the following requirements will be met:</p> <ol style="list-style-type: none"> <li>1. Non-combustible fences shall be provided along all developed areas adjacent to wetlands/creeks/open spaces.</li> <li>2. Access shall be provided to all wetland corridors at the end of cul-de-sacs via rolled curbs and gates to</li> </ol>	



**TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES**

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		<p>the satisfaction of the EGCSDFD. Bike lanes adjacent to creeks shall be a minimum of 10 feet wide with a turning radius of not less than 35 feet inside and 45 feet outside. All bike paths shall be paved with 2 inches of AC over 4 inches of AB compacts to 95 percent.</p> <p>3. Any bridges over creeks or wetland areas shall be capable of supporting 65,000 GVW.</p> <p>4. At least 10 feet of greenbelt or other defensible space between noncombustible fences and the creek/wetland areas shall be provided.</p> <p><i>Timing/Implementation:</i> Prior to improvement plan approval</p> <p><i>Enforcement/Monitoring:</i> EGCSD and City of Elk Grove Development Services</p>	
<p><b>Impact 4.6.5.1</b> Project operation may significantly impact law enforcement services in the City of Elk Grove.</p>	<p>Potentially Significant</p>	<p><b>MM 4.6.5.1</b> The project's general financing program and/or plan shall demonstrate that there are sufficient sources of funding to provide adequate law enforcement facilities and equipment for new officers required to maintain the one officer per 1,000 residents ratio with the addition of the project.</p> <p><i>Timing/Implementation:</i> Prior to approval of the Project Financing Program and/or Plan</p> <p><i>Enforcement/Monitoring:</i> Elk Grove Police Department and City of</p>	<p>Less Than Significant</p>

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PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		<i>Elk Grove Development Services</i>	
<p><b>Impact 4.6.7.1</b> The proposed project has insufficient recreational facilities for the projected total population at full buildout.</p>	Potentially Significant	<p><b>MM 4.6.7.1</b> The project applicant shall meet the parkland requirement to provide for 5.0 acres of parkland per 1,000 people through parkland dedications within the LRSP area and/or the payment of in-lieu fees.</p> <p><i>Timing/Implementation: Prior to issuance of building permits</i></p> <p><i>Enforcement/Monitoring: City of Elk Grove Development Services, Elk Grove Community Services District</i></p>	Less Than Significant
<b>Hydrology and Water Quality</b>			
<p><b>Impact 4.7.1</b> Construction activities associated with the development under the Laguna Ridge Specific Plan and of off-site infrastructure and improvement may result in short-term water quality degradation.</p>	Significant	<p><b>MM 4.7.1</b> The project applicant shall submit to the City of Elk Grove proof that a Storm Water Pollution Prevention Plan (SWPPP) has been submitted to the California Regional Water Quality Control Board, Central Valley Region. The SWPPP shall be administered throughout all phases of grading and project construction. The SWPPP shall be included with all subsequent project improvement and grading plans and shall incorporate Best Management Practices (BMPs) to ensure that potential water quality impacts during construction phases are minimized. Examples of BMPs that may be implemented during site grading and construction could include inlet filters, filter barriers, silt fences, and sedimentation basins. The SWPPP shall be consistent with the</p>	Less Than Significant

**TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES**

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		<p>City's NPDES permit (NPDES No. CAS082597).</p> <p><i>Timing/Implementation:</i>                      <i>Prior to the approval of subsequent improvement plans and grading plans and noted on plans</i></p> <p><i>Enforcement/Monitoring:</i>                      <i>City of Elk Grove Public Works, and RWQCB</i></p>	
<p><b>Impact 4.7.2</b> Implementation of the Laguna Ridge Specific Plan would increase drainage rates in the plan area and may result in on-site and downstream drainage and flooding impacts.</p>	<p>Potentially Significant</p>	<p><b>MM 4.7.2</b> Prior to the approval of each subsequent tentative subdivision map, the project applicant shall be required to demonstrate that drainage facilities, consistent with the Storm Drainage Master Plan for Laguna Ridge Specific Plan (Wood-Rogers, 2002), will adequately serve the subsequent project, consistent with City standards and off-site flooding impacts would not result, and that such facilities are either available or will be available upon site development. This demonstration may take the form of plans and/or reports, which shall be reviewed and approved by the City consistent with the Specific Plan infrastructure phasing provisions.</p> <p><i>Timing/Implementation:</i>                      <i>Prior to the approval of each subsequent tentative parcel and/or subdivision map</i></p> <p><i>Enforcement/Monitoring:</i>                      <i>City of Elk Grove Public Works</i></p>	<p>Less Than Significant</p>

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TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
<p><b>Impact 4.7.3</b> Implementation of the Laguna Ridge Specific Plan may degrade long-term water quality due to the deposition of pollutants generated by motor vehicle uses on project roadways, parking lot areas, and other surfaces both on and offsite, as well as the maintenance and operation of landscape areas.</p>	<p>Potentially Significant</p>	<p><b>MM 4.7.3a</b> Biofilter swales and vegetated strips shall be placed in the bottom of channel areas and be designed to provide biofiltration of pollutants in project runoff. The project engineer shall consult with the City when designing these areas, and the developer shall submit designs of the areas to the City for review and approval prior to approval of the improvement plans. Water quality control features shall be consistent with the City's NPDES permit (NPDES No. CAS082597).</p> <p><i>Timing/Implementation: Prior to approval of improvement plans for each water quality facility</i></p> <p><i>Enforcement/Monitoring: City of Elk Grove Public Works, and CVRWQCB</i></p> <p><b>MM 4.7.3b</b> Subsequent non-residential projects shall be required to locate all storage areas away from any drainage features and provide water quality control measures in storm drainage facilities such as grease and sediment traps, vegetative filters, and containment structures for hazardous materials. This requirement shall be reflected on site plans and improvement plans. Water quality control features shall be consistent with the City's NPDES permit (NPDES No. CAS082597).</p> <p><i>Timing/Implementation: Prior to approval of subsequent non-residential projects.</i></p>	<p>Less Than Significant</p>

**TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES**

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		<p><i>Enforcement/Monitoring:</i> City of Elk Grove Public Works and Development Services</p> <p><b>MM 4.7.3c</b> All plan area storm drains shall provide a permanent storm drain message "No Dumping - Flows to Creek" or other approved message at each storm drain inlet. This may be accomplished with a stamped concrete impression (for curbs) or manufactured colored tiles, which are epoxied in place, adjacent to the inlet (for parking lots and areas without curbs).</p> <p><i>Timing/Implementation:</i> Prior to improvement plan approval for drainage facilities</p> <p><i>Enforcement/Monitoring:</i> City of Elk Grove Public Works</p>	
<p><b>Impact 4.7.4</b> Implementation of the Laguna Ridge Specific Plan in combination with existing, approved and proposed development in the area may degrade water quality due to the deposition of pollutants generated from construction and operation of the projects.</p>	Cumulative Significant	Implement mitigation measures MM 4.7.1 and MM 4.7.3a through c.	Less Than Significant
<b>Biological Resources</b>			
<p><b>Impact 4.8.1</b> Development under the Laguna Ridge Specific Plan would result in the loss of landmark-sized trees and protected tree</p>	Potentially Significant	<p><b>MM 4.8.1a</b> A tree survey shall be conducted by an arborist certified by the International Society of Arboriculture (ISA) to enumerate and evaluate all trees on the site that meet the standards in</p>	Less Than Significant

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PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
<p>species, which would conflict with the City's Tree Preservation Ordinance.</p>		<p>the City Tree Ordinance (as amended).</p> <p>All tree locations shall be mapped onto all subsequent improvement and construction plans, tentative subdivision maps, and maps associated with development projects and rezones. Direct loss of protected trees shall be clearly identified on all subsequent maps and plans.</p> <p><i>Timing/Implementation</i>                      <i>As part of the subsequent development application submittals and prior to construction activities</i></p> <p><i>Enforcement/Monitoring</i>                      <i>City of Elk Grove Development Services</i></p> <p><b>MM 4.8.1b</b> Unless identified for removal as described in MM 4.8.1, all trees that meet the following criteria shall be avoided by construction and protected during all construction activity:</p> <ul style="list-style-type: none"> <li>• Native and Non-Native Oak Trees with a trunk at least six inches (6") in diameter at a height of 4.5 feet. The removal of trees with a trunk diameter of twelve inches (12") or more is discouraged.</li> <li>• All other trees with a trunk diameter of twelve inches (12") at a height of 4.5 feet. The removal of trees with a trunk diameter of twenty-four inches (24") or more is discouraged.</li> </ul> <p>Trees to be retained shall be protected by implementation</p>	

**TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES**

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		<p>of the following measures:</p> <ol style="list-style-type: none"> <li>1. Before initiating any construction activity near protected trees, install chain link fencing or a similar protective barrier at least one foot outside the dripline of each tree or as far as possible from the tree trunk where the existing road is within the tree dripline. The barrier fencing will remain in place for the duration of construction activity.</li> <li>2. Any required pruning of oak trees shall be conducted before construction activity begins. Oak trees that require pruning of branches larger than two inches in diameter shall be pruned by a certified arborist. No pruning of the six-foot-diameter tree will be permitted.</li> <li>3. No signs, ropes, cables (except cable that may be installed by a certified arborist or other professional tree expert), or other items shall be attached to the oak trees.</li> <li>4. No vehicles, construction equipment, mobile home/office, supplies, materials, or facilities shall be driven, parked, stockpiled, or located within the driplines of oak trees.</li> <li>5. No grading shall be allowed within the driplines of oak trees except where paved roadway already exists and where it can be demonstrated that the health of the tree will not be significantly impacted. Removal of pavement and grading within the driplines of oak trees shall be conducted in the presence of a certified arborist to ensure that damage and stress to any oak tree is minimized.</li> </ol>	

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**TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES**

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		<p>6. Any work necessary within the driplines shall be conducted by hand.</p> <p>7. Paving within the driplines of oak trees shall be stringently minimized. When paving is absolutely necessary, porous material shall be used or a piped aeration system shall be installed under the supervision of a certified arborist.</p> <p>8. Landscaping beneath oak trees may include non-plant material such as boulders, cobbles, and wood chips. The only plant species that shall be planted within the driplines of oak trees are those that are tolerant of the natural semi-arid environs of the trees. Limited drip irrigation approximately twice per summer is recommended for understory plants.</p> <p>9. No sprinkler system shall be installed in such a manner that it irrigates within the driplines of oak trees.</p> <p>Trees that are subject to protection and which cannot be protected shall be replaced with in-kind species in accordance with established tree planting specifications, the combined diameter of which shall equal the combined diameter of the trees removed.</p> <p>If trees cannot be preserved or replaced onsite, off-site mitigation or the payment of an in-lieu fee shall be provided in accordance with the provisions of the City Tree Preservation Ordinance (as amended).</p> <p>The above requirements shall be implemented prior to and during construction activities for all subsequent public and private projects. Improvement and construction plans shall</p>	



**TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES**

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		<p>specifically note this measure.</p> <p><i>Timing/Implementation:</i>                      <i>As part of the subsequent development application submittals and prior to and during construction activities</i></p> <p><i>Enforcement/Monitoring:</i>                      <i>City of Elk Grove Development Services</i></p> <p><b>MM 4.8.1c</b> For trees that are planned to be removed and which meet the criteria contained in the City’s Tree Preservation Ordinance (as amended) and the City of Elk Grove Draft General Plan Conservation and Air Quality Element, a tree mitigation plan shall be submitted to the City of Elk Grove in accordance with City requirements. Protected trees shall be replaced on a no-net-loss basis.</p> <p>Tree mapping required under mitigation measure MM 4.8.1a will delineate all protected trees planned to be removed. Mitigation areas, if needed, shall be within the plan area limits in landscape corridors and designated open space areas, if feasible. However, if the applicant demonstrates that onsite mitigation is not feasible, offsite mitigation within the city limits will be acceptable. Should the applicant contract with an organization for offsite tree mitigation, the City of Elk Grove shall review and may approve the contract if it meets the no-net-loss requirement and is otherwise deemed appropriate. The mitigation plan shall include the following components:</p>	

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TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		<ol style="list-style-type: none"> <li>1. Number, location, size, and species of the replacement trees to be planted;</li> <li>2. Methods of irrigation for planted trees;</li> <li>3. Planting and maintenance schedule; and</li> <li>4. Plan for care of planted trees for a three-year establishment period and replacement of any planted trees that do not survive.</li> </ol> <p><i>Timing/Implementation: Prior to issuance of grading permit</i></p> <p><i>Enforcement/Monitoring: City of Elk Grove Development Services</i></p>	
<p><b>Impact 4.8.2</b> Project implementation could remove potential habitat for Sanford’s arrowhead, a special-status plant species.</p>	<p>Potentially Significant</p>	<p><b>MM 4.8.2a</b> Prior to approval of site plans and/or tentative subdivision maps for each parcel proposed for development within 50 feet of the perennial marsh shown in <b>Figure 4.8-1</b> of the Draft EIR, a focused plant survey for Sanford’s arrowhead is required to determine the presence/absence of this species. The surveys shall be conducted by a qualified botanist retained by the City and funded by the project applicant during the blooming period (May-August) for this species.</p> <p><i>Timing/Implementation: Prior to approval of site plans and/or tentative subdivision map for parcels proposed for development within 50 feet of the perennial marsh.</i></p>	<p>Less Than Significant</p>

TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		<p><i>Enforcement/Monitoring:</i> City of Elk Grove Development Services</p> <p><b>MM 4.8.2b</b> If this species is not found onsite, no further measures are required. However, if Sanford's arrowhead is found, each population shall be mapped and technical assistance from CNPS and the U.S. Fish and Wildlife Service shall be requested. To the maximum extent feasible, plant populations shall be preserved within open space non-disturbance areas. However, if these areas cannot be avoided, land supporting populations of the impacted species shall be purchased and shall be permanently protected. Under the direction of CNPS and the U.S. Fish and Wildlife Service, preservation strategies shall be implemented, which may include seed and soil collection or plant transplant. At a minimum, mitigation shall occur at a 1:1 ratio (one plant preserved for every plant impacted). A detailed mitigation plan that includes species, habitat, preserve management, and monitoring strategies shall be developed in consultation with the U.S. Fish and Wildlife Service.</p> <p><i>Timing/Implementation:</i> Prior to approval of site plans and/or tentative subdivision maps for parcels proposed for development within 50 feet of the perennial marsh.</p> <p><i>Enforcement/Monitoring:</i> City of Elk Grove Development Services</p>	

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TABLE 2.0-1  
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Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		<i>and U.S. Fish and Wildlife Service</i>	
<p><b>Impact 4.8.3</b> Development under the Laguna Ridge Specific Plan could result in the filling of jurisdictional wetlands and waters of the U.S.</p>	Significant	<p><b>MM 4.8.3</b> As part of each subsequent project application submittal to the City, the project applicant shall identify all potential wetland resources that occur on-site for City review (such as those identified in Figure 4.8-1 of the Draft EIR. If wetland resources are proposed to be impacted, the project applicant shall do the following:</p> <ol style="list-style-type: none"> <li>1. The applicant shall delineate the extent of jurisdictional waters of the U.S. to be impacted by the proposed project and, if required, apply for a Section 404 permit from the U.S. Army Corps of Engineers (Corps). Wetland areas that would be lost or disturbed shall be replaced or rehabilitated on a "no-net-loss" basis. Onsite creation of wetland habitat is preferred to offsite mitigation. Habitat restoration, rehabilitation, and/or replacement shall be at a location and by methods agreeable to the Corps and City.</li> <li>2. The applicant shall obtain a Section 401 water quality waiver of certification from the RWQCB.</li> <li>3. A mitigation plan shall be implemented that includes <u>one</u> of the following:               <ol style="list-style-type: none"> <li>(a) Completion of an onsite Mitigation and Monitoring Plan that includes onsite creation/preservation of the wetlands.</li> <li>(b) Credits may be obtained at an approved</li> </ol> </li> </ol>	Less Than Significant

**TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES**

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		<p style="text-align: center;">mitigation bank.</p> <p>The project applicant shall provide written evidence to the City from the Corps and the RWQCB that this measure has been complied with prior to recordation of final maps.</p> <p><i>Timing/Implementation</i>                      <i>A part of subsequent tentative map applications and completed prior to final map recordation.</i></p> <p><i>Enforcement/Monitoring</i>                      <i>City of Elk Grove Development Services, Corps, and RWQCB.</i></p>	
<p><b>Impact 4.8.4</b> Construction activities associated with the Laguna Ridge Specific Plan may result in the direct loss of giant garter snakes.</p>	<p>Potentially Significant</p>	<p><b>MM 4.8.4a</b> Within 30 days prior to commencement of construction activities, a pre-construction survey of land within 200 feet of all wetlands, channels, ponds, and other such waterways within the plan area shall be conducted by a qualified biologist retained by the City and funded by the project applicant who is approved by the Service's Sacramento Fish and Wildlife Office. In order to protect snakes, de-watering of areas within the site shall not occur prior to completion of the pre-construction surveys. The biologist will provide the Service with a field report form documenting the monitoring efforts within 24-hours of commencement of construction activities. The monitoring biologist shall be retained by the City and funded by the project applicant to routinely monitor construction activities. If a snake is encountered during construction activities, the monitoring biologist shall contact the City Development Services and will have the</p>	<p>Less Than Significant</p>

2.0 EXECUTIVE SUMMARY

TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		<p>authority to stop construction activities until appropriate corrective measures have been completed or it is determined that the snake will not be harmed.</p> <p>Giant garter snakes encountered during construction activities should be allowed to move away from construction activities on their own. Capture and relocation of trapped or injured individuals can only be attempted by personnel or individuals with current Service recovery permits pursuant to Section 10(a) 1(A) of the Act. The biologist shall be required to report any incidental take to the Service immediately by telephone at (916) 979-2725 and by written letter addressed to the Chief, Endangered Species Division, within one working day. The project area shall be re-inspected whenever a lapse in construction activity of two weeks or greater has occurred.</p> <p>This mitigation measure does not apply to land areas where surveys within the active period of the snake have been conducted and no snakes were found.</p> <p><i>Timing/Implementation:</i> 30 days prior to grading and commencement of construction activities</p> <p><i>Enforcement/Monitoring:</i> USFWS and City of Elk Grove Development Services</p> <p><b>MM 4.8.4b</b> If a giant garter snake is identified within the plan area either during pre-construction surveys or during construction, the</p>	

**TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES**

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		<p>following shall occur:</p> <ol style="list-style-type: none"> <li>1. The City of Elk Grove shall be notified;</li> <li>2. The City shall suspend all construction activities on the site of the sighting and along any water feature within the plan area that is hydrologically connected to the site of the sighting;</li> <li>3. Protocol surveys shall be conducted by qualified biologists retained by the City and funded by the project applicant who are approved by the Service's Sacramento Fish and Wildlife Office;</li> <li>4. The project applicant shall consult with the USFWS and CDFG to determine appropriate mitigation for the species and habitat loss, possibly including Section 10 consultation with the USFWS and Section 2081 consultation with the CDFG; and,</li> <li>5. The project applicant shall provide the City with proof of the consultation and compliance with USFWS and CDFG mitigation requirements before construction activities may resume.</li> </ol> <p>This mitigation measure does not apply to land areas where surveys within the active period of the snake have been conducted and no snakes were found.</p> <p><i>Timing/Implementation:</i>                      <i>Prior to and during construction activities</i></p> <p><i>Enforcement/Monitoring:</i>                      <i>City of Elk Grove Development Services,</i></p>	

**TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES**

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		<p align="center"><i>CDFG and USFWS.</i></p> <p><b>MM 4.8.4c</b> No grading or other construction activities shall be conducted from October 1 to April 30, which is the inactive period of the giant garter snake. More danger is posed to snakes during their inactive period, because they are occupying underground burrows or crevices and are more susceptible to direct effects, especially during excavation. A "no grading" period from October 1 to April 30 will apply to portions of the plan area located within 1,000 feet of ditches, canals, ponds, wetlands or other such areas. This mitigation measure does not apply to land areas where surveys within the active period of the snake have been conducted and no snakes have been found.</p> <p><i>Timing/Implementation:                      Prior to project grading and during construction activity</i></p> <p><i>Enforcement/Monitoring:                      City of Elk Grove Development Services</i></p> <p><b>MM 4.8.4d</b> Dewatering of ponds, ditches, canals and other such areas may begin any time after November 1, but no later than April 1 of the following year, once the absence of the species is determined or implementation of Mitigation Measure 4.8.4b has been completed. All water must be removed by April 15, or as soon thereafter as weather permits, and the habitat must remain dry without any standing water for 15 consecutive days after April 15 and prior to excavating or filling the dewatered habitat.</p>	



**TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES**

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		<p>This mitigation measure does not apply to land areas where surveys within the active period of the snake have been conducted and no snakes were found.</p> <p><i>Timing/Implementation:</i>                      <i>Prior to and during construction activity</i></p> <p><i>Enforcement/Monitoring:</i>                      <i>City of Elk Grove Development Services and CDFG.</i></p> <p><b>MM 4.8.4e</b>            Construction personnel shall participate in a Service-approved worker environmental awareness program. Under this program, workers shall be informed about the presence of giant garter snakes and habitat associated with the species and that unlawful take of the animal or destruction of its habitat is a violation of the Act. Prior to construction activities, a qualified biologist approved by the Service shall instruct all construction personnel about: (1) the life history of the giant garter snake; (2) the importance of irrigation canals, marshes/wetlands, and seasonally flooded areas, such as rice fields, to the giant garter snake; and (3) the terms and conditions of the biological opinion. Proof of this instruction shall be submitted to the City and the Sacramento U.S. Fish and Wildlife Office.</p> <p>This mitigation measure does not apply to land areas where surveys within the active period of the snake have been conducted and no snakes were found.</p> <p><i>Timing/Implementation:</i>                      <i>Prior to project grading and construction</i></p>	

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TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		<i>Enforcement/Monitoring: U.S. Fish and Wildlife Service and City of Elk Grove Development Services</i>	
<p><b>Impact 4.8.5</b> Implementation of the Laguna Ridge Specific Plan may result in the loss of potential valley elderberry longhorn beetle habitat.</p>	<p>Potentially Significant</p>	<p><b>MM 4.8.5</b> The project applicant shall design the subsequent public and private projects within the plan area to avoid impacts to potential habitat for VELB (elderberry shrubs; see Figure 4.8-1 of the Draft EIR), if feasible. If project development is required in areas that may impact elderberry shrubs containing stems measuring 1.0 inch or greater in diameter at ground level (development within 100 feet of shrub dripline), the project applicant shall perform one of the following measures:</p> <ol style="list-style-type: none"> <li>1. Fence and flag all areas to be avoided during construction activities. In areas where encroachment on the 100-foot buffer has been approved by the USFWS, provide a minimum setback of at least 20 feet from the dripline of each elderberry plant.</li> <li>2. Brief contractors on the need to avoid damaging the elderberry plants and the possible penalties for not complying with these requirements.</li> <li>3. Erect signs every 50 feet along the edge of the avoidance area with the following information: "This area is habitat of the valley elderberry longhorn beetle, a threatened species, and must not be disturbed. This species is protected by the Endangered Species Act of 1973, as amended. Violators are subject to prosecution, fines and</li> </ol>	<p>Less Than Significant</p>

**TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES**

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		<p>imprisonment.” The signs should be clearly readable from a distance of 20 feet and must be maintained for the duration of construction.</p> <p>4. Instruct work crews about the status of the beetle and the need to protect its elderberry host plant.</p> <p><u>Restoration and Maintenance</u></p> <p>1. Restore any damage done to the buffer area (area within 100 feet of elderberry plants) during construction. Provide erosion control and re-vegetate with appropriate native plants.</p> <p>2. Buffer areas must continue to be protected after construction from adverse effects of the project. Measures such as fencing, signs, weeding and trash removal are usually appropriate.</p> <p>3. No insecticides, herbicides, fertilizers or other chemicals that might harm the beetle or its host plant should be used in the buffer areas, or within 100 feet of any elderberry plant with one or more stems measuring 1.0 inch or greater in diameter at ground level.</p> <p>4. The applicant must provide a written description of how the buffer areas are to be restored, protected and maintained after construction is completed.</p> <p>5. Mowing of grasses/ground cover may occur from July through April to reduce fire hazard. No mowing should occur within five feet of elderberry plant stems. Mowing must be done in a manner that avoids damaging plants (e.g., striping away bark through careless use of mowing/trimming</p>	

2.0 EXECUTIVE SUMMARY

TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		<p>equipment).</p> <p>If the shrub cannot be avoided, then a mitigation plan shall be developed and implemented in consultation with USFWS consistent with the conservation guidelines for the valley elderberry longhorn beetle, which likely includes one or more of the following:</p> <ul style="list-style-type: none"> <li>• Obtain credits at an approved mitigation bank; or</li> <li>• Implement an onsite mitigation and monitoring plan that includes transplantation of the shrub and planting of elderberry seedlings.</li> </ul> <p>The mitigation plan shall be approved by the USFWS prior to acceptance by the City. Any required onsite mitigation shall be incorporated into subsequent improvement and construction plans.</p> <p><i>Timing/Implementation: Prior to approval of subsequent development and prior to and during construction activities</i></p> <p><i>Enforcement/Monitoring: U.S. Fish and Wildlife Service and City of Elk Grove Development Services</i></p>	
<p><b>Impact 4.8.6</b> Implementation of the Laguna Ridge Specific Plan may remove potential habitat for vernal pool fairy shrimp (<i>Branchinecta lynchi</i>) and vernal pool tadpole shrimp</p>	<p>Potentially Significant</p>	<p><b>MM 4.8.6</b> The project applicant shall design the subsequent public and private projects within the plan area to avoid impacts to potential habitat for vernal pool invertebrates by providing an appropriate setback from the edge of each</p>	<p>Less Than Significant</p>

**TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES**

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
(Lepidurus packardi).		<p>pool, as determined by the City in consultation with the U.S. Fish and Wildlife Service, if feasible. If pools impacted cannot be avoided, the project proponent shall implement the following measures:</p> <ol style="list-style-type: none"> <li>1. Completion of an onsite mitigation and monitoring plan that includes onsite creation/preservation of the pools. Mitigation shall be to the satisfaction of the U.S. Fish and Wildlife Service, the U.S. Army Corps of Engineers (as part of Section 404 permitting), and the City, or</li> <li>2. Credits may be obtained at an approved mitigation bank.</li> </ol> <p><i>Timing/Implementation</i>                      <i>Prior to the approval of subsequent development and prior to construction activities</i></p> <p><i>Enforcement/Monitoring</i>                      <i>U.S. Fish and Wildlife Service, U.S. Army Corps of Engineers, and City of Elk Grove Development Services</i></p>	
<p><b>Impact 4.8.7</b> Implementation of the Laguna Ridge Specific Plan may remove Swainson’s hawk nesting and foraging habitat.</p>	<p>Potentially Significant</p>	<p><b>MM 4.8.7a</b> Prior to the approval of subsequent development (i.e., approval of improvement and construction plans), including offsite improvements, under the Plan, the City of Elk Grove shall ensure that the following mitigation measures are fulfilled:</p> <ul style="list-style-type: none"> <li>• Based on the results of the survey identified in</li> </ul>	<p>Less Than Significant</p>

2.0 EXECUTIVE SUMMARY

TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		<p>Mitigation Measure MM 4.8.8b, the project applicant shall mitigate the loss of Swainson’s hawk foraging habitat by participating in the City of Elk Grove Swainson’s Hawk Impact Mitigation Fees Ordinance or other methods determined acceptable to CDFG, if active nests are identified between one and ten miles of the project site. If active nests are identified within one mile of the project site, the project applicant and City shall consult with CDFG regarding the appropriate amount of acreage compensation, which may include participation in the City of Elk Grove Swainson’s Hawk Impact Mitigation Fees Ordinance and/or additional foraging habitat preservation requirements.</p> <p><i>Timing/Implementation:</i>                      <i>Prior to approval of improvement and construction plans</i></p> <p><i>Enforcement/Monitoring:</i>                      <i>City of Elk Grove Development Services and CDFG</i></p> <p><b>MM 4.8.7b</b> Prior to any subsequent construction activities in the plan area, a Swainson’s hawk nest survey shall be conducted within 30 days of construction activities for a one-mile radius. If active Swainson’s hawks nests are found within ½ mile of a construction site, the applicant shall consult with the Department of Fish and Game and a qualified biologist shall be retained by the City and funded by the project applicant and clearing and construction shall be postponed or halted until additional nesting attempts no longer occur. If a nest</p>	

**TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES**

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		<p>tree is found on the subsequent project site prior to construction and is proposed for removal, then appropriate permits from CDFG shall be obtained and mitigation implemented pursuant to CDFG guidelines.</p> <p><i>Timing/Implementation: Prior to construction activities</i></p> <p><i>Enforcement/Monitoring: City of Elk Grove Development Services and CDFG</i></p>	
<p><b>Impact 4.8.8</b> Implementation of the Laguna Ridge Specific Plan could result in disturbance to bats, nesting raptors and other migratory birds, including burrowing owl and tricolored blackbird.</p>	<p>Potentially Significant</p>	<p><b>MM 4.8.8a</b> If construction is proposed during the raptor breeding season (February–August), a focused survey for raptors (including burrowing owls), migratory bird nests, and bat roosts shall be conducted within 30 days prior to the beginning of construction activities by a qualified biologist in order to identify active nests onsite. If active nests are found, no construction activities shall take place within 500 feet of the nest until the young have fledged. This 500-foot construction prohibition zone may be reduced based on consultation and approval by the California Department of Fish and Game. Trees containing nests, or burrows that must be removed as a result of project implementation shall be removed during the non-breeding season (late September to March). If no active nests are found during the focused survey, no further mitigation will be required. This mitigation measure <u>does not</u> apply to a Swainson’s hawk nest. Because the Swainson’s hawk is Federally protected and a State threatened species, the removal of any tree containing an occupied hawk nest could severely affect nesting raptors, fledgling and/or eggs. Therefore, if an</p>	<p>Less Than Significant</p>

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TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		<p>occupied Swainson’s hawk nest tree is found on the subsequent project site prior to construction and is proposed for removal, then appropriate permits from CDFG shall be obtained pursuant to CDFG guidelines.</p> <p><i>Timing/Implementation:</i>                      <i>Prior to construction activities</i></p> <p><i>Enforcement/Monitoring:</i>                      <i>City of Elk Grove Development Services and CDFG</i></p> <p><b>MM 4.8.8b</b>                      Within 30 days prior to the onset of construction activities outside of the breeding season (September–January), a qualified biologist shall conduct a burrow survey to determine if burrowing owls are present in the plan area. If burrowing owls are observed on the site, measures shall be implemented to ensure that no owls or active burrows are inadvertently buried during construction. Such measures include: flagging the burrow and avoiding disturbance; securing and preserving suitable habitat offsite; passive relocation and/or active relocation to move owls from the site. All measures shall be determined by a qualified biologist and approved by the CDFG.</p> <p>All burrowing owl surveys shall be conducted according to CDFG protocol. The protocol requires, at a minimum, four field surveys of the entire site and areas within 500 feet of the site by walking transects close enough that the entire site is visible. The survey shall be at least three hours in length, either from one hour before sunrise to two hours after or two hours before sunset to one hour after. Surveys shall not be conducted during inclement weather, when burrowing owls</p>	



**TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES**

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		<p>are typically less active and visible.</p> <p><i>Timing/Implementation</i>                      <i>Prior to construction activities.</i></p> <p><i>Enforcement/Monitoring</i>                      <i>City of Elk Grove Development Services and CDFG</i></p> <p><b>MM 4.8.8c</b> Pursuant to the Migratory Bird Treaty Act and the California Fish and Game Code, if active songbird nests or active owl burrows are found within the survey area, clearing and construction within a minimum of 250 feet for owls and 100 feet for songbirds, or as determined by a qualified biologist to ensure disturbance to the nest will be minimized, shall be postponed or halted. Construction will not resume within the buffer until the nest is vacated and juveniles have fledged, as determined by the biologist, and there is no evidence of a second attempt at nesting. The perimeter of the protected area shall be indicated by bright orange temporary fencing. No construction activities or personnel shall enter the protected area, except with approval of the biologist.</p> <p><i>Timing/Implementation:</i>                      <i>Thirty days prior to construction activities occurring between September 1 through January 31</i></p> <p><i>Enforcement/Monitoring:</i>                      <i>City of Elk Grove Development Services</i></p>	

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TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		<i>and CDFG</i>	
<p><b>Impact 4.8.10</b> The development of this project would contribute cumulatively to the loss of biological resources in the region and the ongoing urbanization in southern Sacramento County.</p>	Cumulative Significant	Implement mitigation measures MM 4.8.1a through c, MM 4.8.2a through c, MM 4.8.3, MM 4.8.4a through f, MM 4.8.5a and b, MM 4.8.6a and b, MM 4.8.7a and b and MM 4.8.8a through c.	Significant and Unavoidable
<b>Geology and Geotechnical Hazards</b>			
<p><b>Impact 4.9.1</b> Development of the Laguna Ridge Specific Plan area and off-site improvements may result in increased soil erosion, wind and water erosion, and siltation of local drainage during and after construction from excavation and grading activities.</p>	Potentially Significant	<p><b>MM 4.9.1</b> Prior to issuance of a grading permit for each subsequent project, the project applicant shall submit to the City an erosion control plan which will utilize best construction practices to limit the erosion effects of the proposed project. Measures shall include, but are not limited to, the following:</p> <ul style="list-style-type: none"> <li>• Hydro-seeding</li> <li>• Placement of loose straw and/or straw bales within drainageways and ahead of drop inlets;</li> <li>• The temporary lining (during construction activities) of drop inlets with "filter fabric" (a specific type of geotextile fabric);</li> <li>• The placement of straw wattles along slope contours;</li> <li>• Directing subcontractors to a single designation "wash-out" location (as opposed to allowing them to washout wherever they feel like); and</li> <li>• The use of siltation fences.</li> </ul> <p><i>Timing/Implementation: Prior to the issue of grading permit and during</i></p>	Less Than Significant

TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		<p style="text-align: right;"><i>construction.</i></p> <p><i>Enforcement/Monitoring:</i>      <i>City of Elk Grove Development Services, Public Works.</i></p>	
<b>Cultural Resources</b>			
<p><b>Impact 4.10.1</b> Implementation of the Laguna Ridge Specific Plan could, during construction and excavation activities, uncover unidentified cultural resources.</p>	<p>Potentially Significant</p>	<p><b>MM 4.10.1a</b> Prior to the approval of any rezone request to remove the "Reserve" overlay designation from any property, a detailed cultural resources field survey of the subject property shall be conducted by the City and funded by the project applicant. The cultural resources field survey shall identify any cultural resource finds and will set out measures to mitigate any impacts to any significant resources as defined by CEQA, California Register of Historic Resources and/or National Historic Preservation Act. Mitigation methods to be employed include, but are not limited to, the following:</p> <ul style="list-style-type: none"> <li>• Redesign of the subsequent development project to avoid the resource. The resource site shall be deeded to a non-profit agency to be approved by the City for maintenance of the site.</li> <li>• If avoidance is determined infeasible by the City, then the resource shall be mapped, stabilized, and capped pursuant to appropriate standards.</li> <li>• If capping is determined infeasible by the City, then the resource shall be excavated and recorded to appropriate standards.</li> </ul> <p><i>Timing/Implementation:</i>      <i>Prior to approval of rezone request</i></p>	<p>Less Than Significant</p>

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TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		<p><i>Enforcement/Monitoring:</i> City of Elk Grove Development Services</p> <p><b>MM 4.10.1b</b>                      In the event that any historic surface or subsurface archaeological features or deposits, including locally darkened soil indicative of an archaeological midden that could conceal cultural deposits, animal bone, shell, obsidian, mortars, or human remains, are uncovered during on-site or off-site construction, all work within 100 feet of the find shall cease and Development Services shall be notified. An archaeologist who meets the Secretary of the Interior’s Professional Qualifications Standards shall be contacted to determine if the resource is significant and to determine appropriate mitigation. Any artifacts uncovered shall be recorded and removed to a location to be determined by the archaeologist. The discovery of human remains shall also be reported to the County Coroner in accordance with Section 7050.5 the California Health and Safety Code, and the Native American Commission for further investigation. If the remains are determined to be Native American, the Native American Commission shall inform the most likely descendent and will determine the appropriate disposition of the remains and grave goods.</p> <p><i>Timing/Implementation:</i> During construction activities</p> <p><i>Enforcement/Monitoring:</i> City of Elk Grove Development Services</p>	

**TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES**

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
<p><b>Impact 4.10.2</b> Development under the Laguna Ridge Specific Plan may cause existing, potentially historically significant structures to be damaged or demolished.</p>	Potentially Significant	<p><b>MM 4.10.2</b> Prior to the approval of any rezone request to remove the "Reserve" overlay designation on the properties that include the buildings at 8533 and 8551 Poppy Ridge Road, a detailed evaluation of the historical significance of the structures at the two sites listed above shall be conducted by the City and funded by the project applicant. If the evaluation is negative (i.e., not historically significant), no further mitigation is required.</p> <p>If the evaluation determines that the two sites are historically significant, the subsequent development project shall be redesigned to avoid the building site(s). The building site(s) will be deeded to a non-profit agency to be approved by the City for the maintenance of the site(s). If avoidance is determined to be infeasible by the City, all required documentation (in addition to the items above) shall be conducted in accordance with appropriate standards:</p> <ul style="list-style-type: none"> <li>• The development of a site-specific history and appropriate contextual information regarding the particular resource; in addition to archival research and comparative studies, this task could involve limited oral history collection;</li> <li>• Accurate mapping of the noted resources, scaled to indicate size and proportion of the structures;</li> <li>• Architectural description of affected structures;</li> <li>• Photo documentation of the designated resources, both in still and video format;</li> <li>• Recordation of measured architectural drawings, in the case of specifically designated buildings of higher architectural merit; and</li> </ul>	Less Than Significant

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TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		<ul style="list-style-type: none"> <li>Any historical significant artifacts within buildings and the surrounding area shall be recorded and deposited with the appropriate museum.</li> </ul> <p>These buildings shall be preserved and relocated off-site.</p> <p><i>Timing/Implementation:</i> Prior to approval of a rezone request for properties associated with 8533 and 8551 Poppy Ridge Road</p> <p><i>Enforcement/Monitoring:</i> City of Elk Grove Development Services</p>	
<b>Visual Resources</b>			
<p><b>Impact 4.11.1</b> Implementation of the Laguna Ridge Specific Plan would alter the plan area's visual character from a rural area to a suburban environment. Views of open areas would be replaced by views of residential and commercial uses.</p>	Significant	None available.	Significant and Unavoidable
<p><b>Impact 4.11.2</b> Implementation of the Laguna Ridge Specific Plan would introduce new sources of light and glare in and around the plan area.</p>	Significant	<p><b>MM 4.11.2a</b> A lighting plan shall be developed and provided with improvement plans for each subsequent non-residential project to ensure that parking lot pole lights and streetlights shall be fully hooded and back shielded to reduce the light "spillage" and glare, prohibit the illumination from breaking the horizontal plane, and ensure that lighting not exceed the standard illumination of two-foot candles along the</p>	Significant and Unavoidable

TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		<p>property lines of adjoining land uses. The two-foot candle lighting standard shall also apply to all park and school facilities where stadium lighting may be installed and used.</p> <p><i>Timing/Implementation:</i> Prior to approval of improvement plans for all subsequent public and private projects.</p> <p><i>Enforcement/Monitoring:</i> City of Elk Grove Development Services, Elk Grove Community Services District and Elk Grove Unified School District.</p> <p><b>MM 4.11.2b</b> Non-glare glass shall be used in all non-residential buildings to minimize and reduce impacts from glare. Office and commercial buildings, which are allowed to use semi-reflective glass, must be oriented so that the reflection of sunlight is minimized. This requirement shall be incorporated into the Specific Plan and reflected in subsequent development applications.</p> <p><i>Timing/Implementation:</i> Types of non-glare glass shall be specified on final development plans for subsequent commercial and office projects, and installed prior to building occupancy</p> <p><i>Enforcement/Monitoring:</i> City of Elk Grove</p>	

**2.0 EXECUTIVE SUMMARY**

**TABLE 2.0-1  
PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES**

Impact	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
		<i>Development Services</i>	
<p><b>Impact 4.11.3</b> The Laguna Ridge Specific Plan would change the visual character of the plan area from rural residential to suburban mixed-use along scenic corridor SR-99.</p>	Significant	None available.	Significant and Unavoidable
<p><b>Impact 4.11.4</b> Implementation of the Laguna Ridge Specific Plan in combination with other projects would introduce new development into an agricultural area and increase nighttime lighting and glare.</p>	Cumulative Significant	Implement mitigation measures MM 4.11.2a and MM 4.11.2b.	Significant and Unavoidable



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## **3.0 PROJECT DESCRIPTION**

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## 3.0 PROJECT DESCRIPTION

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The purpose of the Project Description is to describe the project in a way that will be meaningful to the public, reviewing agencies and decision-makers. As described in Section 15124 of the CEQA Guidelines, a complete Project Description shall contain the following information: (1) the location of the proposed project; (2) a statement of project objectives; (3) a general description of the project's characteristics; and (4) a statement describing the intended uses of the EIR. The CEQA Guidelines state that a Project Description need not be exhaustive, but should provide the level of detail needed for the evaluation and review of potential environmental impacts.

### 3.1 PROJECT LOCATION AND SETTING

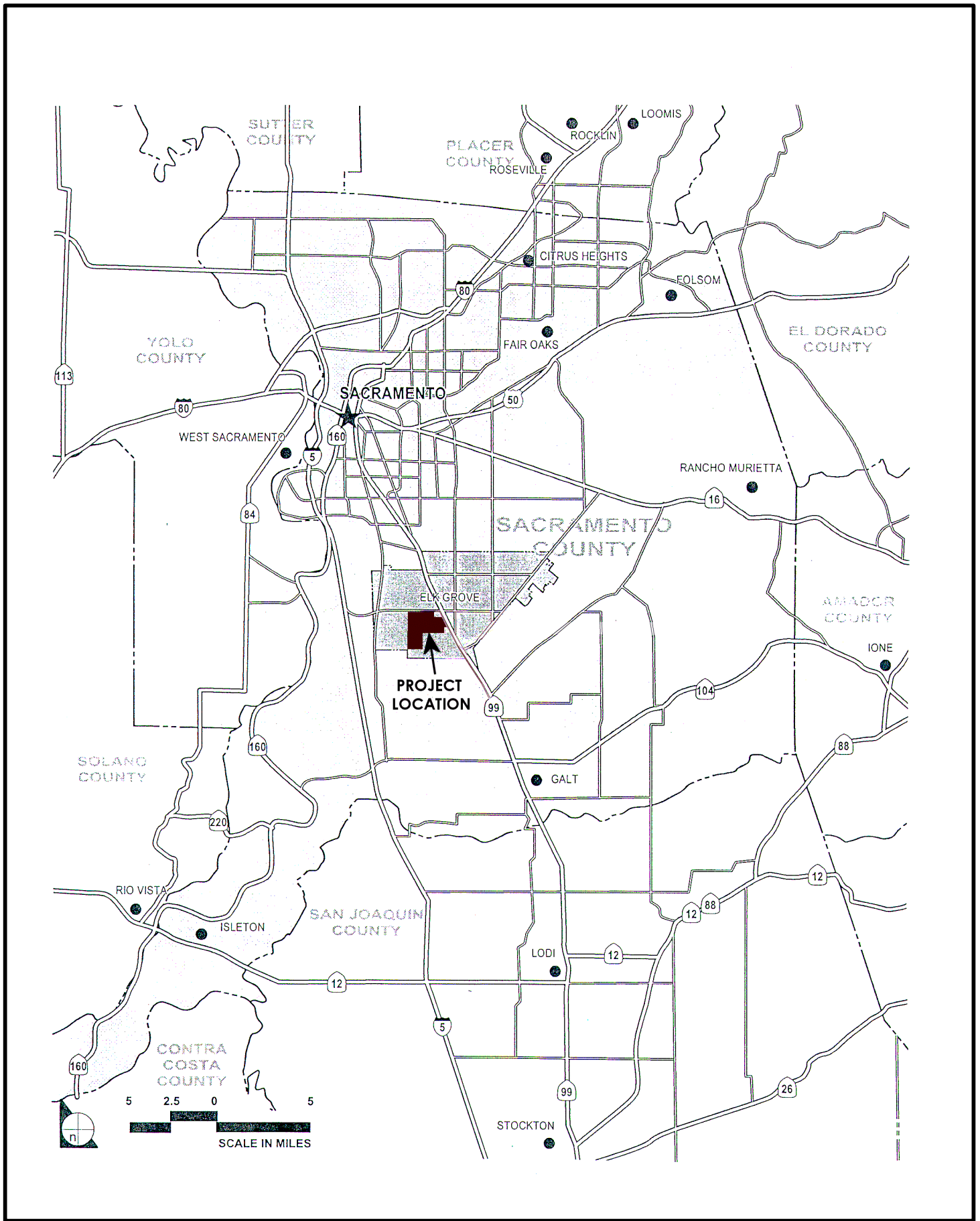
As illustrated in **Figure 3.0-1**, the Laguna Ridge Specific Plan area (plan area) is located on approximately 1,900± acres within the City of Elk Grove, south of Elk Grove Boulevard. The plan area is generally bounded by Elk Grove Boulevard to the north; Poppy Ridge Road and Bilby Road to the south; Bruceville Road to the west and State Route 99 (SR-99) to the east (see **Figure 3.0-2**). Surrounding land uses include agricultural, residential and commercial.

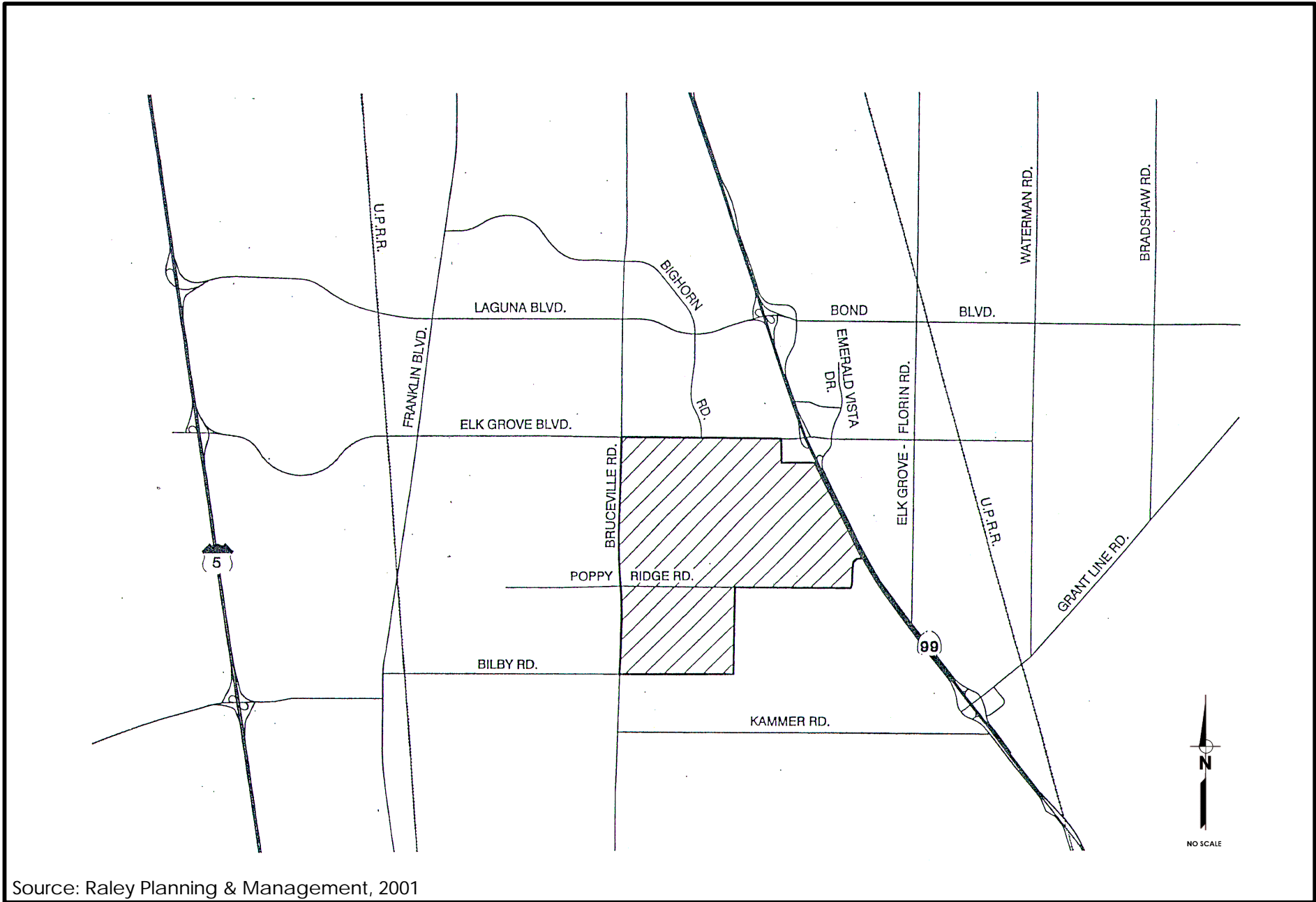
The plan area is located within a portion of the City previously planned for, and currently experiencing, urban growth and development. Approved projects in the area include the East Franklin Specific Plan (immediately west of the plan area), the Lent Ranch Marketplace project (southeast of the plan area), and the Elk Grove Auto Mall expansion, which encompasses approximately 72 acres at the northeast corner of the proposed Laguna Ridge Specific Plan area. Proposed projects in the area include the South Pointe project and the Grant Line Road/SR-99 Interchange Improvements project.

#### CURRENT PLAN AREA CONDITIONS

Current land uses within the plan area include a variety of agricultural activities, which generally consist of irrigated and non-irrigated pastureland, residential land uses and industrial uses. Historic agricultural uses have disturbed and altered the natural features of the plan area. The plan area is relatively flat with natural features limited to isolated stands of valley oak, interior live oak, coast live oak, blue oak, oracle oak, California black walnut, California sycamore and two significant groves of blue gum eucalyptus. On-site water features consist of perennial marsh and open water (irrigation canals and stock ponds) conditions.

The City of Elk Grove Draft General Plan establishes several Land Use Policy Areas, including Laguna Ridge. Implementation of General Plan policies related to the Laguna Ridge Policy Area is intended to be accomplished through the development of the plan area in accordance with the provisions of the Specific Plan. South of the plan area, the County of Sacramento General Plan designates its Urban Services Boundary (USB) along the southern city limit line, as delineated by the alignment of Kammerer Road. The County designated the USB to describe the ultimate boundary of urban development, which will not be expanded except for extraordinary circumstances.





### 3.0 PROJECT DESCRIPTION

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#### 3.2 PROJECT BACKGROUND

In 1993, the Sacramento County Board of Supervisors adopted the updated Sacramento County General Plan and approved an expansion of the Urban Services Boundary (USB). This expansion added approximately 5,500 acres, including the East Franklin, Lent Ranch, and Laguna Ridge areas, to the area planned for urban development, within the County's USB.

Initially, Sacramento County was the lead agency for the proposed project. Based on a request by several property owners in the project area, the Board of Supervisors initiated the specific plan process for the Laguna Ridge area on October 11, 1995. The initial plan area included approximately 1,223 acres. The specific plan and community plan process for Laguna Ridge was reinitiated in July of 1997, and the proposed plan area was expanded to include an additional 647 acres. On August 27, 1997, the Board approved the funding agreement and appointed the Citizens Advisory Committee (CAC) for the Laguna Ridge area. The CAC held a series of meetings in January 1998 with a favorable recommendation for a land plan very similar to the one contained in this Revised Draft Environmental Impact Report (RDEIR) and recommended of adoption of several guiding principles.

In March of 2000, the community of Elk Grove voted to incorporate into the City of Elk Grove. The incorporation became final on July 1, 2000. At that time, the City of Elk Grove assumed jurisdiction over the proposed project and the City became the lead agency in the environmental process. Section 65360 of the Government Code requires newly incorporated cities to adopt a general plan within 30 months following its incorporation. As part of the City's efforts to establish its own General Plan as required, the Elk Grove City Council adopted a new Land Use Policy Map on June 5, 2002, which included the Laguna Ridge Specific Plan area as proposed. In the event that a city cannot complete the process of adopting its general plan within the timeframe established by Section 65360, an extension may be granted by the Director of the Office of Planning and Research (OPR). The Elk Grove City Council adopted a resolution requesting that such an extension be granted, which was approved by OPR in January 2003.

The first Draft Environmental Impact Report (DEIR) for the Laguna Ridge Specific Plan was prepared and released for public review in October 2001. The Elk Grove Planning Commission conducted a meeting to receive public comments on the proposed plan in November 2001. The applicant submitted for administrative review a revised Specific Plan in January, draft Design Guidelines/Development Standards in February and a Public Facilities Financing Plan in April 2002. In response to comments provided by various agencies, the applicant further revised the Specific Plan in June 2002. Because the City determined that the revised Specific Plan differed substantially from the initial plan for which the initial Draft EIR was prepared, this new RDEIR has been prepared to address the new plan. The preparation of this document has considered all of the comments previously received on the initial DEIR and, where the City deemed appropriate under CEQA, has incorporated revisions, corrections and mitigation measures accordingly.

#### 3.3 PROJECT OBJECTIVES

The project applicant has identified the following project objectives for the Laguna Ridge Specific Plan:

- Provide housing to accommodate the employees of the major employment centers in the City of Elk Grove;
- Provide a variety of housing opportunities for a wide range of social, economic and age groups;

- Comply with all applicable policies of the City General Plan;
- Foster a strong sense of community place and human scale;
- Provide for the development of employment centers that offer job opportunities to improve the jobs/housing balance;
- Engender high quality urban design;
- Provide a community that is resource efficient;
- Provide flexibility to respond to changes in economic and social factors; and
- Provide for the location of neighborhood-serving commercial projects.

### 3.4 PROJECT CHARACTERISTICS

The proposed project would involve the adoption of the Laguna Ridge Specific Plan, which would provide specific land use development standards and patterns, provide master planning of infrastructure facilities in the plan area, and establish a financing plan or program for plan area infrastructure needs. The following is a description of the proposed land uses, Specific Plan document and proposed infrastructure facilities to serve the plan area.

#### PROPOSED LAGUNA RIDGE SPECIFIC PLAN LAND USE DIAGRAM

The proposed Laguna Ridge Specific Plan, involves the development of residential, commercial, park, public school and mixed-use land uses within the 1,900-acre site. **Figure 3.0-3** illustrates the proposed layout of the Laguna Ridge Specific Plan land use diagram. This land use plan would comply with the Draft General Plan Land Use Element, which designates the plan area as the Laguna Ridge Policy Area. The Laguna Ridge Specific Plan would also provide land use regulations, development standards and design guidelines, supplementing the provisions of the City's Zoning Ordinance. The proposed land use diagram, as shown in **Figure 3.0-3**, would comply with the land use designations identified in the Draft General Plan, including residential, mixed use and public uses. **Table 3.0-1** specifies the acreage for each of the proposed uses.

The general definitions for each the land use categories proposed for Laguna Ridge Specific Plan Area are provided below:

- **Single-Family Residential:** The single-family residential land uses (RD-4, RD-5, RD-6, RD-7 and RD-10) would provide a mix of housing types and intensities ranging from large lot single family residential to smaller lot single family residential. Single-family residential uses total 1,184.1 acres and would accommodate up to 6,326 dwelling units. The density range would allow substantial flexibility in selecting dwelling unit types and parcel configurations to suit particular site conditions and housing needs. The type of dwelling units anticipated in this density range includes small lots and clustered lots as well as conventional large lot detached residences. The intent is to provide flexibility in the plan area by allowing individual neighborhoods to establish a mix of dwelling unit types and character determined by the individual site conditions and market conditions.

The RD-6 land use designation would apply to a special area of age-restrictive housing. Encompassing approximately 111.7 acres, which would allow for 670 units, this age-restricted community is currently anticipated to be developed as a Del Webb community. The impacts of age-restricted housing are typically less than the equivalent conventional single-family unit

### 3.0 PROJECT DESCRIPTION

due to a reduced household size, occupancy restrictions on children and different driving tendencies.

**TABLE 3.0-1  
PROJECT LAND USE SUMMARY**

Land Use	Acres	Units	Square feet
Single Family RD-4 (4.0 D.U./Ac.)	168.1	672	
Single Family RD-5 (5.0 D.U./Ac.)	737.6	3,688	
Single Family RD-6 (6.0 D.U./Ac.)	111.7	670	
Single Family RD-7 (7.0 D.U./Ac.)	123.6	865	
Single Family RD-10 (10.0 D.U./Ac.)	43.1	431	
Multi-Family RD-20 (20.0 D.U./Ac.)	75.0	1,500	
<b>Total Residential Development</b>	<b>1,259.1</b>	<b>7,826</b>	
SC Shopping Commercial <sup>1</sup>	133.1		1,449,459
CCMU Community Commercial-Mixed Use <sup>2</sup>	128.7		1,681,852
MP Office Park <sup>3</sup>	20.2		307,969
Civic Center <sup>1</sup>	23.6		257,004
Parks/Parkways	132.2		
Schools	100.0		
Fire Station	2.0		
Infrastructure (Water Treatment & Water Quality Ponds)	27.6		
Major Roadways	73.7		
<b>Total Non-residential Development</b>	<b>641.1</b>		<b>3,696,284</b>
<b>Total Project Area</b>	<b>1,900.2</b>	<b>7,826</b>	<b>3,696,284</b>

<sup>1</sup> Potential maximum development based on Specific Plan proposed floor area ratio of 0.25.

<sup>2</sup> Potential maximum development based on Specific Plan proposed floor area ratio of 0.30.

<sup>3</sup> Potential maximum development based on Specific Plan proposed floor area ratio of 0.35.

**Note:** 408.2 acres of the above land uses would be included in the proposed "Reserve" overlay designation.

(Source: Laguna Ridge Specific Plan Land Use Diagram dated June 25, 2002)

- **Multi-Family Residential:** The multi-family residential use (RD-20) includes multi-family apartment style housing. The proposed land use diagram illustrates six multi-family density residential sites. These sites total 75 acres and account for 1,500 dwelling units.
- **Shopping Commercial:** The Shopping Commercial (SC) designation encompasses 133.1 acres dispersed along the Major Arterial roadways on the perimeter of the plan area and on the Minor Arterial that extends east/west through the center of the project referred to as New Poppy Ridge Road. The purpose of the SC designation is to accommodate major neighborhood shopping centers, service commercial and office uses dependent upon vehicular access and visibility from arterial streets. The combined floor area of all uses in a

single parcel would not exceed a floor area ratio (FAR) of 0.25 for a maximum of approximately 1.45 million square feet of commercial floor area.

- **Community Commercial Mixed Use:** The CCMU is designated on 128.7 acres located primarily along West Stockton Boulevard/ SR 99. CCMU would allow a variety of employment-based and retail-type of uses as well as community oriented and highway oriented commercial uses. The CCMU land area would be permitted to be allocated for multi-family residential uses; however, the proposed land use diagram does not allocate any residential units to the CCMU areas. The Community Commercial Mixed Use designation allows for a maximum FAR of 0.30, which would yield a total of approximately 1.68 million square feet of non-residential development.
- **Industrial/Office Park:** The Office Park designation (MP) provides 20.2 acres of employment-oriented uses, including professional offices, medical facilities, research and development operations, and other businesses located within a landscaped, campus-like setting. A FAR of 0.35 would be allowed within the Industrial/Office Park designated areas, which would result in a total of 307,969 square feet of building floor space.
- **Civic Center:** The plan designates 22 net acres of land at the southeast corner of Elk Grove Boulevard and the extension of Big Horn Boulevard. The plan envisions city administrative offices, meeting halls, gathering areas and other civic facilities within a park-like setting.
- **Fire Station:** A Fire Station has been identified east of Big Horn Boulevard on the north side of Old Poppy Ridge Road. The plan provides a two-acre (net) site to accommodate a station to serve the area.
- **Water Treatment Facilities/ Water Quality Ponds:** The plan identifies three water treatment facilities within the plan area: one 6-acre site at Bruceville Road and Poppy Ridge Road, a 6-acre site located north of Poppy Ridge Road between Big Horn Boulevard and SR-99, and a third site shown south of Elk Grove Boulevard between the extension of Big Horn Boulevard and Laguna Springs Drive. A 10-acre (net) water quality pond is designated on the north side of Bilby Road between Bruceville Road and Big Horn Boulevard. This facility is intended for the removal and/or filtration of pollutants accumulated from stormwater runoff in and around the plan area.
- **Schools:** The plan designates ten acres (net) for each of three elementary schools and 70-acre site for a combined middle school and high school. A total of 100 acres would be provided for the construction of school facilities.
- **Parks and Parkway Linkages:** The Specific Plan includes three neighborhood parks totaling approximately 33.6 acres (net); six local parks totaling approximately 10 acres (net), and a large community park approximately 36.7 acres (net) in area. Neighborhood parks would be located near the center of a neighborhood quadrant for easy access by residents and would be sized to accommodate sports activities such as baseball, soccer and tennis. The community park would be located next to a projected high school near the center of the entire project. The neighborhood parks would be located adjacent to the elementary schools. A wide parkway extends east-west along the north side of the New Poppy Ridge Road alignment, allowing for a potential connection to the Elk Grove Regional Park via an over-crossing at SR 99, however an over-crossing is not proposed as part of this project.



### 3.0 PROJECT DESCRIPTION

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North-south extending parkways are located off-street and connect Neighborhood and Local parks in the Western portion of the plan area.

- **Reserve Overlay:** Several properties in the plan area (approximately 408.2 acres) include a “Reserve” overlay designation. This designation denotes properties that are not currently participating the Specific Plan process and have not had site-specific field review of their properties. Removal of the “Reserve” overlay designation and subsequent environmental review would be required prior to approval of any development on these properties.

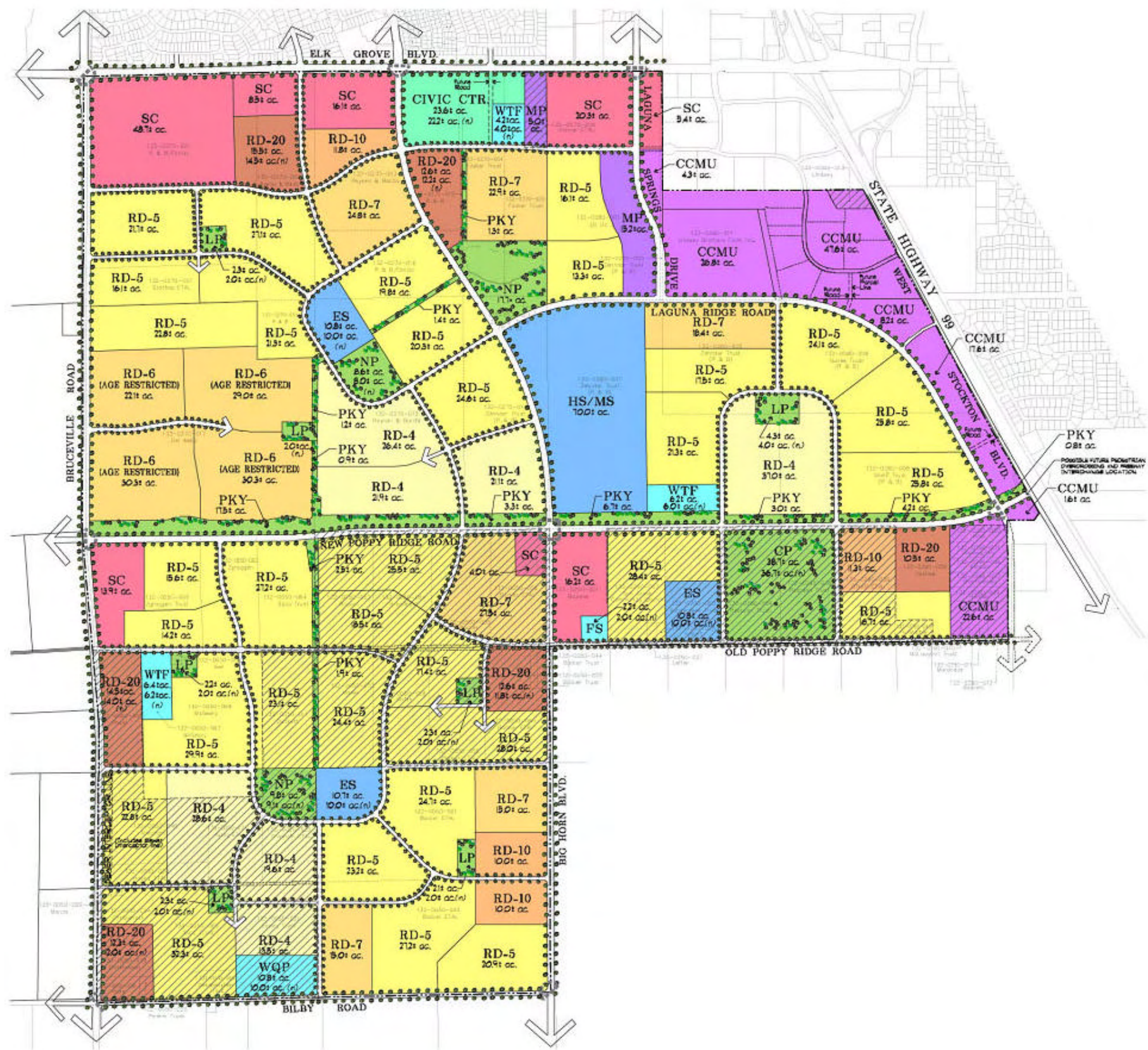
#### PROPOSED LAGUNA RIDGE SPECIFIC PLAN DOCUMENT

The proposed Laguna Ridge Specific Plan document includes policies, development standards and design guidelines that are intended to guide urban development and land use within the plan area. State law requires that the Specific Plan be consistent with the City’s General Plan. To ensure consistency, the Draft General Plan has incorporated the Laguna Ridge Policy Area into its Land Use Element and City Design Guidelines. In addition, the Specific Plan is accompanied by the Laguna Ridge Design Guidelines and Development Standards (LRDGDS), which provide detailed design criteria, and performance standards pertaining to landscape corridors, streetscape improvements, architectural elements and other specialized areas throughout the plan area. These standards and guidelines are intended to supersede the provisions of the City Zoning Code, except where the specific plan does not address a particular regulation, standard or guideline, in which case the Zoning Code would prevail.

Major public infrastructure improvements are to be financed through the Laguna South Public Facilities Fee Program, which allocates the cost of necessary public infrastructure improvements to land uses that benefit from them. The Fee Program encompasses several large planning areas, also included as Policy Areas in the Draft General Plan, including the Laguna Ridge Specific Plan area. The City Council established this Fee Program with the adoption of Ordinance 09-2001 and Resolution 2001-41, along with the Laguna South Public Facilities Fee Program Nexus Study, which established the required nexus between the projected development in the Laguna South area and the necessary public facilities to be funded by development impact fees, pursuant to Government Code Section 66000 *et seq.*

#### VEHICULAR/PEDESTRIAN CIRCULATION

The proposed Laguna Ridge Specific Plan identifies several on-site roadway improvements. These improvements include the widening of Bruceville Road to Major Arterial standards (up to 4 to 6 lanes); the extension of Big Horn Boulevard south of Elk Grove Boulevard as a Minor Arterial roadway (up to 4 lanes); the realignment of Poppy Ridge Road as a Minor Arterial roadway (up to 4 lanes); the alignment of a Laguna Ridge Road as a Minor Arterial roadway (up to 4 lanes) connecting Big Horn Boulevard east to New Poppy Ridge Road near State Route 99; and the extension of Laguna Springs Road south of Elk Grove Boulevard to Laguna Ridge Road, also as a Minor Arterial roadway (up to four lanes). The proposed Specific Plan also includes the designation of a potential highway interchange facility at New Poppy Ridge Road and SR-99; however, it should be noted that the City currently has no formal plans for developing an interchange at this location. The plan would be required to be revised to accommodate future right of way at this location. In addition to these major roadway improvements, the project proposes to provide on-street bikeways within the plan area as well as the development of a pedestrian/bike trail along the proposed open space corridor north of New Poppy Ridge Road.



LAND USE SUMMARY				
SYMBOL	LAND USE	DENSITY DU/AC	ACRES	UNITS
[Yellow Box]	SINGLE-FAMILY RESIDENTIAL	4.0 DU/AC	168.1	472
[Light Yellow Box]	SINGLE-FAMILY RESIDENTIAL	5.0 DU/AC	747.4	2,468
[Orange Box]	SINGLE-FAMILY RESIDENTIAL (AGE RESTRICTED)	6.0 DU/AC	111.7	670
[Light Orange Box]	SINGLE-FAMILY RESIDENTIAL	7.0 DU/AC	128.5	858
[Dark Orange Box]	SINGLE-FAMILY RESIDENTIAL	10.0 DU/AC	43.1	431
[Red Box]	MULTI-FAMILY RESIDENTIAL	20.0 DU/AC	75.0	1,500
[Pink Box]	COMMUNITY COMMERCIAL MIXED USE		124.7	
[Light Pink Box]	SHOPPING CENTER		144.1	
[Purple Box]	INDUSTRIAL/OFFICE PARK		30.2	
[Blue Box]	SCHOOLS		100.0	
[Light Blue Box]	WATER TREATMENT FACILITY/WATER QUALITY POND, FIRE STATION		25.4	
[Green Box]	CIVIC CENTER		25.6	
[Light Green Box]	PARKS, COMMUNITY NEIGHBORHOOD, LOCAL PARKWAY (PARKS PARTICIPATING IN COA, TRAILS AND PLAYWAYS TO BE DEVELOPED)		192.2	
[Dotted Box]	MAJOR ROADWAYS		75.7	
<b>TOTAL</b>			<b>1,400.2</b>	<b>7,826 D.U.</b>

[Hatched Box] DENOTES AREAS SUBJECT TO OVERLAY ZONING DESIGNATION "RESERVE" (NON-PARTICIPATING OWNERS) TOTAL OF 382.5 ACRES  
 [Dashed Circle] PRIMARY ENTRY FEATURE  
 [Dotted Circle] CROSSROADS DESIGN FEATURE

NOTE: FOR CONCEPTUAL PLANNING PURPOSES ONLY. ACTUAL DIMENSIONS, ROAD ALIGNMENTS, AREAS AND YIELDS WILL VARY WITH MORE ACCURATE MAPPING AND DESIGN.

Source: Wood Rogers, 2002



City of Elk Grove Planning

Figure 3.0-3  
Laguna Ridge  
Specific Plan Land Use Diagram

### PHASING PLAN

An infrastructure phasing plan has been developed for the plan area. This plan includes a comprehensive, planned infrastructure system that coordinates the phasing and construction of facilities so that each phase of development is served adequately and roadways are completed when necessary. The phasing of infrastructure is planned to be concurrent with development. The phasing plan also outlines three development sub-areas, which outline the follow the projected development pattern – from Elk Grove Boulevard (north to south) and from Bruceville Road (west to east). The sub-areas are not designated to determine time of infrastructure placement, but are designed to identify the necessary infrastructure and roadway improvements necessary for each project area.

### PUBLIC SERVICES AND UTILITIES

#### Fire Protection Services

As identified in **Figure 3.0-3**, the proposed land use diagram includes the potential establishment of a fire station within the plan area at the intersection of Poppy Ridge Road and Big Horn Road. Ultimate acceptance and design of this facility would be subject to review and approval of the Fire Department of the Elk Grove Community Services District. In addition to the proposed fire station, the project is anticipated to provide adequate water distribution facilities in order to accommodate adequate fire flows. A detailed description of fire protection services is provided in Section 4.6 (Public Services and Utilities).

#### Telephone, Electrical and Natural Gas

Telephone service would be provided by Frontier, a Citizen's Communications company. Electricity would be provided to the project site by the Sacramento Municipal Utility District (SMUD) and natural gas by Pacific Gas and Electric (PG&E). Project development would connect to extensions of the existing service lines, with the ultimate configuration to be approved by the services providers (i.e., SMUD and PG&E). The on-site service lines would be sized to meet the demands of the project and the applicant would dedicate all public utility easements for underground facilities.

#### Water Supply

The plan area would obtain water service from the Sacramento County Water Agency (SCWA). The SCWA would serve as water wholesaler and retailer, providing adequate supplies of treated water for municipal and industrial (M&I) use. As described in Section 4.6 (Public Services and Utilities), the project would be subject to Draft General Plan Policy PF-3 and is expected to be served by a combination of groundwater and surface water sources as well as by reclaimed water for landscape irrigation.

A water supply master plan has been developed for the plan area and is provided in **Appendix 4.6**. The master plan provides for phasing of the water supply system, including development of treatment plants. **Figure 3.0-3** identifies the general location of three water treatment plant sites to be located within the plan area. One of the water treatment plant sites would be located north of New Poppy Ridge Road, east of Big Horn Boulevard, and would consist of approximately 6.2 acres. Another site is located south of the Old Poppy Ridge Road alignment, just east of Bruceville Road, consisting of approximately 6.4 acres. Each of these plant sites could accommodate up to six on-site wells for groundwater production. The third water treatment plant site would be located just south of Elk

### 3.0 PROJECT DESCRIPTION

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Grove Boulevard and would be located on approximately 4.2 acres. This treatment plant site would be used to treat water supplies anticipated to contain elevated levels of arsenic and would not be a production plant (i.e., no groundwater wells). No off-site new/unplanned water facilities are anticipated to be required to serve the plan area. A detailed description of ultimate water production and distribution facilities is provided in Section 4.6 (Public Services and Utilities). The water supply master plan anticipates providing service to the East Franklin Specific Plan area, existing development to the north of the plan area, Lent Ranch, and the proposed South Pointe development.

#### **Wastewater Service**

The Laguna Ridge Plan Area would obtain wastewater conveyance and treatment service from the Sacramento County Sanitation District No. 1 (CSD-1) and the Sacramento Regional County Sanitation District (SRCSD). CSD-1 and SRCSD own and operate the Sacramento Regional Wastewater Treatment Plant (SRWTP) and trunk and interceptor sewer systems throughout the City of Elk Grove.

A wastewater master plan has been developed for the plan area is provided in **Appendix 4.6**. The master plan identifies ultimate wastewater conveyance facilities required to serve the plan area as well as interim wastewater facilities to provide service until permanent facilities are available. Interim facilities are anticipated to be placed within Bruceville Road and connect into existing facilities north of the plan area. A detailed description of proposed wastewater conveyance facilities is provided in Section 4.6 (Public Services and Utilities).

#### **Storm Drainage**

The Laguna Ridge Specific Plan (LRSP) area has been historically used for agriculture. Existing drainage facilities consist of narrow ditches that are not well defined. A drainage master plan has been developed that identifies ultimate drainage facilities required to serve the plan area.

The Drainage Master Plan for Laguna Ridge Specific Plan identifies two alternatives to the design of on-site drainage facilities as shown in **Figure 4.7-4** and **4.7-5**. The difference in these drainage facility designs are additional piping and reduction of the proposed channel in Local Drainage Area B. Under both alternatives, drainage facilities consist of varying sized storm drainage pipelines, drainage channels, a detention basin along Bilby Road and a 40-foot wide off-site drainage channel extending from Bilby Road to an existing agricultural drainage channel north of Kammerer Road. Proposed drainage facilities would also utilize planned drainage facilities in the East Franklin Specific Plan area. A detailed description of proposed drainage facilities is provided in Section 4.7 (Hydrology and Water Quality).

### 3.5 REQUIRED DISCRETIONARY ACTION/ENTITLEMENTS

The project site is under jurisdiction of the City of Elk Grove. Actions that would be required from the City Council, Planning Commission and/or City staff include, but are not limited to the following:

1. **Adoption of the Laguna Ridge Specific Plan;**
2. **Approval of Infrastructure Finance and Phasing Plans or Programs;**
3. **Approval of Subsequent Projects (Tentative Subdivision Maps, Rezones, Improvement Plans, Building Permits); and**

#### 4. Any Other Necessary Approvals for the Proposed Project.

Other discretionary approvals that may be required by other governmental agencies may include, but are not limited to, the following:

- Take permits from the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Game (CDFG) under the Federal and State Endangered Species Acts
- Water quality permitting (NPDES and water quality certifications) under the Clean Water Act by the Central Valley Regional Water Quality Control Board
- Wetland fill permits under Section 404 of the Clean Water Act by the U.S. Army Corps of Engineers
- Approval of infrastructure details for water supply facilities by the Sacramento County Water Agency
- Approval of infrastructure details for wastewater conveyance facilities by Sacramento County Sanitation District No. 1 (CSD-1)
- Approval of school site acquisition and site plans by the Elk Grove Unified School District
- Approval of park site acquisition and site plans and roadway landscape corridor plans by the Elk Grove Community Services District
- Approval of any encroachment permits into state right-of-way by Caltrans
- Acceptance and approval of fire station design by the Fire Department of the Elk Grove Community Services District

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## **4.0 ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION MEASURES**

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**SECTION 4.1**  
**AGRICULTURAL RESOURCES**

## 4.1 AGRICULTURAL RESOURCES

This section describes the agricultural resources in the area and the policies pertaining to these resources. Sources utilized in this section to assess impacts of the project included the City of Elk Grove Agricultural Element Conservation and Air Quality Element of the General Plan, General Plan Update EIR, the California Department of Conservation Farmland Conversion Report 1998 – 2000 (2002), the California Department of Conservation Important Farmlands Map, and the Soil Survey of Sacramento County, California (April 1993). In addition, this section is based on conversations with staff from the Sacramento County Farm Bureau and Agricultural Commissioner’s Office.

### 4.1.1 SETTING

#### FARMLAND CLASSIFICATIONS

There are two systems used by the United States Department of Agriculture (USDA), Natural Resource Conservation Service (NRCS) to determine a soil’s agricultural productivity: the Soil Capability Classification and the Storie Index Rating System. The “prime” soil classifications of both systems indicate the absence of soil limitations, which if present, would require the application of management techniques (e.g., drainage, leveling, special fertilizing practices) to enhance production.

#### Soil Capability Classification

The Soil Capability Classification System takes into consideration soil limitations, the risk of damage when the soils are used, and the way in which soils respond to treatment. Capability classes range from Class I soils, which have few limitations for agriculture, to Class VIII soils, which are unsuitable for agriculture. Generally, as the ratings of the capability classification system increase, the yields and profits are more difficult to obtain. A general description of soil classification, as defined by the NRCS, is provided in **Table 4.1-1**.

**TABLE 4.1-1**  
**SOIL CAPABILITY CLASSIFICATION**

Class	Definition
I	Soils have few limitations that restrict their use.
II	Soils have moderate limitations that reduce the choice of plants, or that require special conservation practices.
III	Soils have severe limitations that reduce the choice of plants, require conservation practices, or both.
IV	Soils have very severe limitations that reduce the choice of plants, require very careful management, or both.
V	Soils are not likely to erode but have other limitations; impractical to remove that limit their use largely to pasture or range, woodland, or wildlife habitat.
VI	Soils have severe limitations that make them generally unsuited to cultivation and limit their use largely to pasture, or range, woodland, or wildlife habitat.
VII	Soils have very severe limitations that make them unsuited to cultivation and that restrict their use largely to pasture or range, woodland, or wildlife habitat.



## 4.1 AGRICULTURAL RESOURCES

Class	Definition
VIII	Soils and landforms have limitation that preclude their use for commercial plant production and restrict their use to recreation, wildlife habitat, or water supply, or to aesthetic purposes.

Source: USDA Soil Conservation Service, Soil Survey of Sacramento County, April 1993.

### Storie Index Rating System

The Storie Index Rating system ranks soil characteristics according to their suitability for agriculture from Grade 1 soils (80 to 100 rating), which have few or no limitations for agricultural production to Grade 6 soils (less than 10), which are not suitable for agriculture. Under this system, soils deemed less than prime can function as prime soils when limitations such as poor drainage, slopes, or soil nutrient deficiencies are partially or entirely removed. The six grades, index ratings, and definition of grades, as defined by the NRCS, are shown in **Table 4.1-2** below.

**TABLE 4.1-2  
STORIE INDEX RATING SYSTEM**

Grade	Index Rating	Definition
1 – Excellent	80 through 100	Soils are well suited to intensive use for growing irrigated crops that are climatically suited to the region.
2 – Good	60 through 79	Soils are good agricultural soils, although they may not be so desirable as Grade 1 because of moderately coarse, coarse, or gravelly surface soil texture; somewhat less permeable subsoil; lower plant available water holding capacity, fair fertility; less well drained conditions, or slight to moderate flood hazards, all acting separately or in combination.
3 – Fair	40 through 59	Soils are only fairly well suited to general agricultural use and are limited in their use because of moderate slopes; moderate soil depths; less permeable subsoil; fine, moderately fine or gravelly surface soil textures; poor drainage; moderate flood hazards; or fair to poor fertility levels, all acting alone or in combination.
4 – Poor	20 through 39	Soils are poorly suited. They are severely limited in their agricultural potential because of shallow soil depths; less permeable subsoil; steeper slope; or more clayey or gravelly surface soil textures than Grade 3 soils, as well as poor drainage; greater flood hazards; hummocky micro-relief; salinity; or fair to poor fertility levels, all acting alone or in combination.
5 – Very Poor	10 through 19	Soils are very poorly suited for agriculture, are seldom cultivated and are more commonly used for range, pasture, or woodland.
6 – Nonagricultural	Less than 10	Soils are not suited for agriculture at all due to very severe to extreme physical limitations, or because of urbanization.

Source: USDA Soil Conservation Service, Soil Survey of Sacramento County, April 1993.

### Farmland Mapping and Monitoring Program

The Farmland Mapping and Monitoring Program (FMMP) was established in 1982 to continue the Important Farmland mapping efforts begun in 1975 by the U.S. Department of Agriculture, Soil Conservation Service (USDA-SCS). The intent of the USDA-SCS was to produce agricultural resource maps based on soil quality and land use across the nation. As part of the nationwide agricultural land use mapping effort, the USDA-SCS developed a series of definitions known as Land Inventory and Monitoring (LIM) criteria. The LIM criteria classified the land's suitability for agricultural production; suitability included both the physical and chemical characteristics of soils and the actual land use. Important Farmland Maps are derived from the USDA-SCS soil survey maps using the LIM criteria.

Since 1980, the State of California has assisted the USDA-SCS with completing its mapping in the state. The FMMP was created within the State Department of Conservation (DOC) to carry on the mapping activity on a continuing basis, and with a greater level of detail. The DOC applied a greater level of detail by modifying the LIM criteria for use in California. The LIM criteria in California utilize the SCS and Storie Index Rating systems, but also consider physical conditions such as a dependable water supply for agricultural production, soil temperature range, depth of the ground water table, flooding potential, rock fragment content, and rooting depth.

Important Farmland Maps for California are compiled using the modified LIM criteria (described above) and current land use information. The minimum mapping unit is 10 acres unless otherwise specified. Units of land smaller than 10 acres are incorporated into the surrounding classification. The Important Farmland Maps identify five agriculture-related categories: prime farmland, farmland of statewide importance, unique farmland, farmland of local importance, and grazing land. Each is summarized below, based on *A Guide to the Farmland Mapping and Monitoring Program (1994)*, prepared by the Department of Conservation. **Figure 4.1-1** indicates the locations of the various types of farmland in the plan area.

#### Prime Farmland

Prime farmland is land with the best combination of physical and chemical features able to sustain the long-term production of agricultural crops. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. The land must have been used for the production of irrigated crops at some time during the two update cycles (a cycle is equivalent to 2 years) prior to the mapping date of 1998 (or since 1994).

#### Farmland of Statewide Importance

Farmland of statewide importance is land similar to prime farmland, but with minor shortcomings, such as greater slopes or with less ability to hold and store moisture. The land must have been used for the production of irrigated crops at some time during the two update cycles prior to the mapping date (or since 1994).

#### Unique Farmland

Unique farmland is land of lesser quality soils used for the production of the State's leading agricultural crops. This land is usually irrigated, but may include non-irrigated orchards or vineyards, as found in some climatic zones in California. The land must have been cultivated at some time during the two update cycles prior to the mapping date (or since 1994).

## 4.1 AGRICULTURAL RESOURCES

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### Farmland of Local Importance

Farmland of local importance is land of importance to the local agricultural economy, as determined by each County's Board of Supervisors and a local advisory committee. Farmland of local importance in Sacramento County includes lands which do not qualify as Prime, Statewide, or Unique designation, but are currently irrigated crops or pasture or non-irrigated crops; lands that would meet the Prime or Statewide designation and have been improved for irrigation, but are now idle; and lands that currently support confined livestock, poultry operations and aquaculture.<sup>1</sup>

### Grazing Land

Grazing land is land on which the existing vegetation, whether grown naturally or through management, is suited to the grazing of livestock. The minimum mapping unit for this category is 40 acres.

### Urban and Built-Up Land

Urban and built-up land is occupied with structures with a building density of at least one unit to one-half acre. Uses may include, but are not limited to, residential, industrial, commercial, construction, institutional, public administration purposes, railroad yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment plants, water control structures, and other development purposes. Highways, railroads, and other transportation facilities are mapped as part of this unit, if they are part of a surrounding urban area.

### Other Land

Other land is land that is not included in any other mapping categories. The following uses are generally included: rural development, brush, timber, government land, strip mines, borrow pits, and a variety of other rural land uses.

## CONTRIBUTION OF AGRICULTURE TO THE SACRAMENTO COUNTY ECONOMY

Sacramento County ranked twenty-sixth in agricultural production out of fifty-eight counties in the State, with gross revenues from the sales of agricultural commodities of \$285.6 million in 2000. The leading farm commodities included wine grapes, milk, nursery stock, pears, and field corn. Revenue generated in the County due to agriculture employed approximately 2,200 individuals with jobs ranging from crop production to processing, shipping, and other related industries. In comparison, there were approximately 587,086 total jobs in the County in 2000.

## SACRAMENTO COUNTY FARMLAND CONVERSION

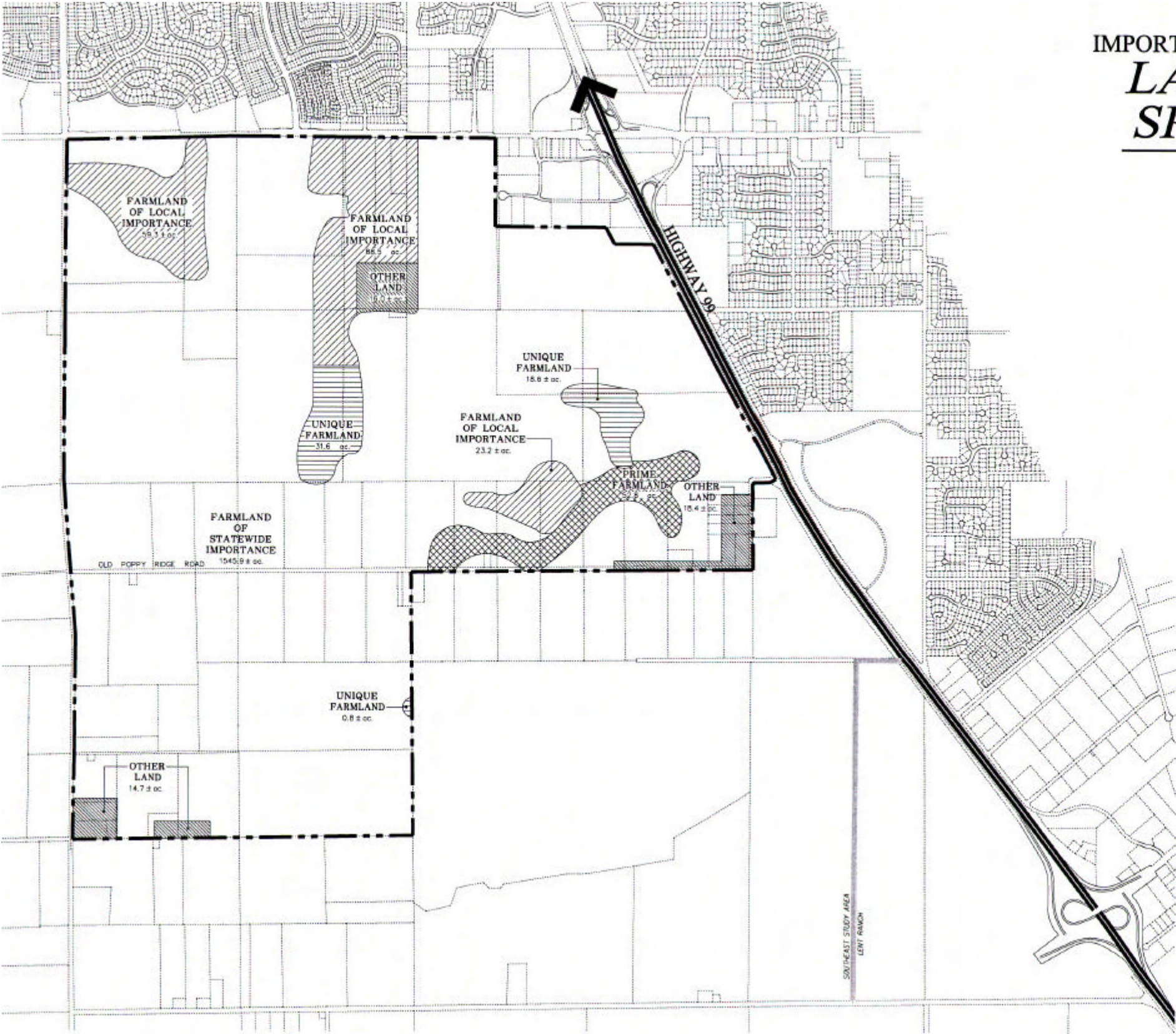
One of the basic underlying premises of agricultural conversion is that the proximity of agricultural land to urban uses increases the value of the agricultural land either directly through formal purchase offers, or indirectly through recent sales in the vicinity, and through the extension of utilities and other urban infrastructure into productive agricultural areas. This premise is evidenced in the fact that property values, as measured by the County Assessor's

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<sup>1</sup> California Department of Conservation, *Farmland of Local Importance Definitions*, 2001.

SACRAMENTO COUNTY  
 IMPORTANT FARMLAND DELINEATION  
**LAGUNA RIDGE  
 SPECIFIC PLAN**

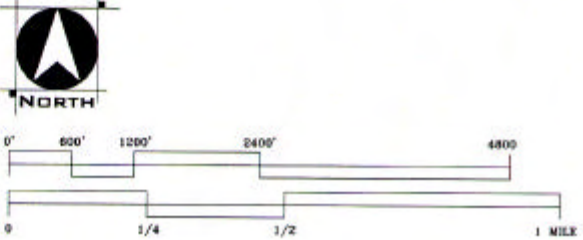
City of Elk Grove, California



**LAND USE LEGEND**

SYMBOL	LAND USE	Average Density Du/Ac	Acres
	PRIME FARMLAND		52.8
	FARMLAND OF STATEWIDE IMPORTANCE		1545.9
	UNIQUE FARMLAND		51.0
	FARMLAND OF LOCAL IMPORTANCE		171.0
	OTHER LAND		49.1
<b>Total</b>			<b>1869.8</b>

SOURCE:  
 DIGITIZED FROM CALIFORNIA DEPT. OF CONSERVATION SACRAMENTO COUNTY  
 IMPORTANT FARMLAND 2000 MAP



Source: Wood Rogers, 2002



Figure 4.1-1  
 Farmland Summary

## 4.1 AGRICULTURAL RESOURCES

office, are higher adjacent to the urban fringe. The conversion of Important Farmlands in Sacramento County from 1992 to 2000 is presented in **Table 4.1-3**.

In Sacramento County, there has been an increase in the acreage of Unique Farmland and Farmland of Local Importance; this increase is explained by the redistribution of categories in 1994 and 1998, as well as the conversion of fallow land to irrigated cropland after a long drought. Nevertheless, as presented in **Table 4.1-3**, the total amount of important agricultural land within the County decreased by approximately 2 percent during the eight-year period from 1992 to 2000. This decrease equates to an average loss of approximately 677 acres of Important Farmlands annually, which includes land both in and out of production. A portion of this farmland is being lost due to economic incentives to convert land to developed uses.

**TABLE 4.1-3  
ACRES OF IMPORTANT FARMLANDS - SACRAMENTO COUNTY (1992 TO 2000)**

Year	Acres Present by Type				
	Prime Farmland	Farmland of Statewide Importance	Unique Farmland	Farmland of Local Importance	Total Important Farmlands
1992	123,414	76,923	11,607	27,592	239,536
1994	123,201	76,217	11,306	28,259	238,983
1996	123,104	74,276	11,389	28,426	237,175
1998	121,974	67,713	13,521	33,732	236,940
2000	116,116	62,650	15,609	39,745	234,120
8 Year Difference	-7,298	-14,273	+4,002	+12,153	-5,416
Annual Average Difference	-912	-1,784	+500	+1,519	-677
8 Year Percent Difference	-6%	-23%	+26%	+31%	-2%

Source: California Department of Conservation, Farmland Conversion Reports 1992 to 1994, 1996 to 1998, and 1998 to 2000, July 2002.

### PLAN AREA CHARACTERISTICS

#### Production and Soil Conditions

The plan area contains a variety of agricultural uses. Several parcels that make up the plan area are currently in agricultural production and truck farming. However, a majority of the plan area is used as grazing land. Past agricultural activities in the plan area have included dairy operations, orchards, grazing land, and both irrigated and dry farming involving little to no row crops. Approximately 155 acres of the plan area has been used for dairy farming; however, no dairy farming currently occurs.

## 4.1 AGRICULTURAL RESOURCES

The 2000 Sacramento County Crop and Livestock Report prepared by the office of the Sacramento County Agricultural Commissioner provides the following field crop production values: \$60 per acre for barley, \$77 per acre for grain hay, \$54 per acre for oats, \$87 per acre for wheat, and \$125 for irrigated pasture.

Soils in the plan area consist of the San Joaquin silt loam complex (0 to 1 and 0 to 3 percent slopes), Galt clay complex (0 to 1 percent slope), Durixeralfs (0 to 2 percent slopes), Madera-Galt complex (0 to 2 percent slopes), Bruella sandy loam (0 to 2 percent slopes), San Joaquin-Durixeralfs complex (0 to 1 and 0 to 2 percent slopes), San Joaquin-Xerarents complex (0 to 1 percent slopes), and San Joaquin-Galt complex (0 to 1 and 0 to 3 percent slopes). The soil capability classification, Storie Index rating and grade, and designation if soil is Prime Farmland or Farmland of Statewide importance is presented for each of these soils in **Table 4.1-4**.

**TABLE 4.1-4  
ON-SITE SOIL CAPABILITY CLASSIFICATION AND STORIE INDEX RATING**

Soil Map Symbol and Name	Soil Capability Classification	Storie Index Rating	Storie Index Grade	Prime or Statewide Importance Farmlands
111 Bruella sandy loam, 0 to 2 percent slopes	III/1 <sup>1</sup>	68	1 – Good	Prime
137 Durixeralfs, 0 to 2 percent slopes	IV	12	5 – Very Poor	N/A
151 Galt clay complex, 0 to 1 percent slopes	III	15	5 – Very Poor	Statewide
152 Galt clay, leveled, 0 to 1 percent slopes	III	14	5 – Very Poor	Statewide
176 Madera-Galt complex, 0 to 2 percent slopes	IV/III <sup>1</sup>	20/14	4 – Poor/ 5 – Very Poor	N/A
213 San Joaquin silt loam complex, leveled, 0 to 1 percent slopes	III	28	4 – Poor	Statewide
214 San Joaquin silt loam complex, 0 to 3 percent slopes	III	28	4 – Poor	Statewide
216 San Joaquin-Durixeralfs complex, 0 to 1 percent slopes	IV	28/12	4 – Poor/ 5 – Very Poor	N/A
217 San Joaquin-Galt complex, leveled, 0 to 1 percent slopes	III	19/28	4 – Poor/ 5 - Very Poor	Statewide
218 San Joaquin-Galt complex, 0 to 3 percent slopes	III	19/28	4 – Poor/ 5 - Very Poor	Statewide

## 4.1 AGRICULTURAL RESOURCES

Soil Map Symbol and Name	Soil Capability Classification	Storie Index Rating	Storie Index Grade	Prime or Statewide Importance Farmlands
221 San Joaquin-Xerarent complex, leveled, 0 to 3 percent slopes	III/VII <sup>1</sup>	28/34	4 - Poor	N/A

<sup>1</sup>Irrigated/Nonirrigated

Source: Storie Index, U.S. Department of Agriculture, Natural Resources Conservation Service, 2001; Land Capability Classification, *ibid.*; Soil Candidate Listing for Prime Farmland and Farmland of Statewide Importance, California Department of Conservation, 1993.

As shown, project soils have either a Class III or IV soil capability classification and with the exception of one soil that is graded Good, all soils have a Storie Index Grade of Poor or Very Poor. However, of the eleven soil types on the site, six are classified as Farmlands of Statewide Importance and one is classified as Prime Farmland.

### Important Farmland Map

The plan area contains approximately 52.8 acres of Prime Farmland as designated on the Important Farmland Map for Sacramento County. This map also designates the majority of the plan area (approximately 1,576.3 acres) as Farmlands of Statewide Importance. Other important farmland designations on the site include Unique Farmland, which encompasses approximately 51.0 acres, and Farmland of Local Importance, which accounts for approximately 171.0 acres (see **Figure 4.1-1**). The remaining 49.1 acres are identified as Other Land.

### Williamson Act Contracts

Two of the properties within the plan area have been subject to Williamson Act contracts. Requests for non-renewal were filed on both properties, the terms of which have now expired; Contract number 77-AP-006 expired in 1997 and contract number 74-AP-031 expired in 2000. Adjacent to the plan area, within the East Franklin Specific Plan area, the owners of the Machado Dairy filed a Notice of Non-Renewal and Cancellation for contracts 73-AP-071 and 73-AP-072 was scheduled for City Council review on December 18, 2002.

### Surrounding Land Uses

A variety of land uses surround the plan area. Generally, all of the land to the north and east either has been or is planned to be developed primarily for residential uses with lesser amounts of support commercial; no agricultural operations remain in these areas. To the west, agricultural operations have ceased and approximately 2,474 acres are being developed in accordance with the approved East Franklin Specific Plan. Agricultural operations continue to the south and southeast of the plan area, but the City's Draft General Plan designates the area for urban development. These areas are described in greater detail below.

### North

North of the plan area, across Elk Grove Boulevard, low density residential development extends approximately 0.6 miles from Bruceville Road to the east. A commercial site encompasses approximately six acres at the northwest corner of Elk Grove Boulevard and Big Horn Boulevard. High-density residential development occupies the northeast corner. Developed low-density

## 4.1 AGRICULTURAL RESOURCES

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residential and undeveloped agricultural/residential properties extend east to Laguna Springs Road. Further east is the "Laguna-99 Shopping Center" adjacent to SR 99 frontage.

Limited Commercial uses also occupy the south side of Elk Grove Boulevard adjacent to SR 99. A gas station and small retail/office complex is located between Elk Grove Boulevard and the Elk Grove Auto Mall to the south. The first phase of the Auto Mall occupies 48.7 acres. The site adjoins West Stockton Boulevard, which parallels SR 99. This commercial development encompasses 44.0 acres directly south of the first phase, which was formerly occupied by the Lindsay Dairy and is adjacent to the northeast corner of the plan area.

### East

West Stockton Boulevard serves as the easternmost boundary of the plan area, parallel to SR 99. Established residential development exists on the east side of SR-99. Elk Grove Regional Park is also located directly across SR-99, between East Stockton Boulevard and Elk Grove-Florin Road. Elk Grove High School adjoins this 127-acre park facility to the north. South of the park, manufacturing and industrial zoning extends to Grant Line Road. The Draft General Plan designates this area as Light and Heavy Industrial.

### West

Bruceville Road is the western border of the project area and the eastern boundary of the East Franklin Specific Plan Area (EFSP). The EFSP was adopted by the Sacramento County Board of Supervisors in April, 2000. The EFSP is bounded by Elk Grove Boulevard to the north, Franklin Boulevard to the west, Bilby Road to the south, and Bruceville Road to the east. A drainage ditch approximately one mile south of Elk Grove Boulevard continues west and eventually drains across Franklin Boulevard. The current land use designations for the EFSP Area are Low Density Residential, Medium Density Residential, Recreation, and Commercial/Office.

The Machado Dairy is located at the northwest corner of Bruceville Road and Bilby Road, within the East Elk Grove Specific Plan area. The owners have ceased the dairy operations and have filed for a non-renewal and cancellation of the Williamson Act contract. The Souza Dairy is located south of the project site, west of the proposed South Pointe subdivision. The owners have also submitted notice of non-renewal of the existing Williamson Act contract, which expires February 2012.

### South

Old Poppy Ridge Road delineates the southern plan area boundary east of the Big Horn Boulevard extension. Properties located along the south side of Old Poppy Ridge Road are zoned AG-20, where parcel are at least 20 acres in size, and are occupied by single residences with ancillary agricultural buildings and livestock holding pens. Single residences, agricultural buildings and holding pens similarly occupy properties that are located at the proposed southeast corner of Big Horn Road Old Poppy Ridge Road, but quickly transition to large fields south to Bilby Road. Historically, these fields were used for grazing livestock or growing crops, activities that diminished over the years. No intensive agricultural activities are in operation, other than raising hay and other feed crops. Parcels in this area are zoned both AG-20 and AG-80, and appear to be consolidated into larger 40 and 80 acre parcels. Similar rural residential uses and agricultural operations are located along the south side of the Bilby Road alignment in the vicinity of its intersection with Bruceville Road at the southwest corner of the plan area. The Bilby Road alignment forms the southernmost boundary of the plan area.



## 4.1 AGRICULTURAL RESOURCES

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The City of Elk Grove Draft General Plan designates the Southeast Policy Area directly south of the Laguna Ridge Specific Plan area, north of the South Pointe Policy Area and the approved Lent Ranch Marketplace. Land uses within the Southeast Policy Area are intended to include a mix of residential densities, commercial, and office uses. Development in the area is contingent upon the preparation and approval of a comprehensive master plan, which includes (but is not limited to) the detailed designation of land uses, a master plan of infrastructure and financing, and the phasing of infrastructure for the entire area. No portion of the Southeast Policy Area may be planned as a separate project prior to the completion of a comprehensive master plan, which may be in the form of a Specific Plan, a Special Planning Area, or similar comprehensive plan for the entire area.

### **Agricultural Buffer Zones**

Conflicts may occur between urban land uses and agricultural operations where residential development is located directly adjacent to farmland. Noise, dust, and odors generated by agricultural activities, as well as the release of agricultural chemicals and pesticides into the environment, traffic hazards caused by trucks and farm equipment, and other similar impacts can adversely affect surrounding residences and other sensitive land uses such as schools, hospitals and care facilities. Conversely, residential development can adversely affect farmlands and related agricultural operations through the introduction of erosion and urban stormwater runoff, litter, pests, illegal dumping, trespassing, vandalism and theft, resulting in increased liability, greater restrictions on operations and loss of profit. In order to reduce or avoid the conflicts that can arise where agriculture and urban development are adjacent, many jurisdictions are requiring agricultural buffer zones.

While agricultural buffers are being imposed more frequently, there are no established criteria to determine what constitutes an effective buffer. Various jurisdictions within the state have established building setback distances ranging from as little as 20 feet to as much as 800 feet (Handel, 1997). A recent study on agricultural buffers states that, "the marked variation in setback distances from one jurisdiction to another suggests that the distances selected by various counties have been arbitrarily selected and that there is a need for better efficacy data. (Great Valley Center, 2002)." The study further states, "There are two general classifications for the various types of agricultural/urban buffers. The first classification includes wide areas of natural vegetation or, or large geographical barriers that are used to separate the urban zone from the agricultural zone. The second classification includes constructed or installed buffers, providing physical barriers and open space in an urban setting. Such a buffer would include residential development that directly adjoins agricultural uses, but which incorporates such design elements as solid walls, street improvements with landscaped center medians, building setbacks, landscaped corridors or a combination of these elements."

The majority of policies and regulations that designate agricultural buffers are established by county agencies, where agricultural operations are more prevalent than in cities and are more likely to remain in operation well into the future. According to the *Farmland Protection Guide*, prepared by the Institute for Self Government:

"There are two basic methods of creating buffers. The first is to create space or place a physical barrier between the agricultural operation and the residential use. The second is to use traditional zoning techniques to ensure that the uses on the boundary are generally compatible. An ideal buffer would be located along a permanent boundary between agricultural and urban uses...a buffer may be as narrow as a stand of trees or a county road, or as large as 1,000 feet or more."

## 4.1 AGRICULTURAL RESOURCES

It is noted that land uses on all sides of the plan area are within the jurisdiction of the City, which acknowledges that agricultural uses will be phased out over time, as set forth in the City's Draft General Plan. Therefore, the boundary between agricultural and urban uses would not be considered permanent.

### 4.1.2 REGULATORY FRAMEWORK

The following plans, policies, and regulations pertain to agricultural resources in the project region.

#### WILLIAMSON ACT

The California Land Conservation Act, also known as the Williamson Act, was adopted in 1965 in order to encourage the preservation of the state's agricultural lands and to prevent their premature conversion to urban uses. In order to preserve these uses, the Act established an agricultural preserve contract procedure by which any county or city within the state taxes landowners at a lower rate, using a scale based on the actual use of the land for agricultural purposes, as opposed to its unrestricted market value. In return, the owners guarantee that these properties will remain under agricultural production for at least a ten-year period. The contract is renewed automatically on an annual basis unless the owner files a notice of non-renewal. In this manner, each agricultural preserve contract (at any given date) is always operable at least nine years into the future. Currently, approximately 70 percent of the state's prime agricultural land is protected under this Act.<sup>2</sup> Prime farmland under the Williamson Act includes land that qualifies as Class I and II in the SCS classification or land that qualifies for rating 80 to 100 in the Storie Index Rating.

#### CITY OF ELK GROVE DRAFT GENERAL PLAN

Agricultural preservation and conversion issues are addressed in the Conservation and Air Quality Element of the Draft General Plan. **Table 4.1-5** identifies the General Plan agricultural policies that are directly applicable to the proposed project, and presents an evaluation of the consistency of the project with these statements as required by CEQA. While the EIR analyzes the project's consistency with the General Plan, the final authority for interpretation of these policy statements, and determination of the project's consistency, rests with the City Council.

**TABLE 4.1-5  
DRAFT GENERAL PLAN CONSERVATION AND AIR QUALITY ELEMENT POLICY CONSISTENCY**

Draft General Plan Policies	Consistency with General Plan	Analysis
<p><b>CAQ-2:</b> The loss of agricultural productivity on lands designated for urban uses within the city limits as of January 2002 is accepted as a consequence of the development</p>	<p>Yes</p>	<p>Properties on all sides of the plan area are within the jurisdiction of the City, which acknowledges that agricultural uses will be phased out over time. Therefore, the boundary between agricultural and urban uses would not be considered permanent.</p>

<sup>2</sup> California Department of Conservation: *Facts approximately the Williamson Act*. No date.

## 4.1 AGRICULTURAL RESOURCES

Draft General Plan Policies	Consistency with General Plan	Analysis
<p>consequence of the development of Elk Grove. As discussed in the Land Use Element, the City's land use concept for the Planning Area outside the 2002 city limits anticipates the retention of significant areas of agricultural production outside the current city limits.</p>		
<p><b>CAQ-3:</b></p> <p>The City of Elk Grove considers the only mitigation for the loss of agricultural land to consist of the creation of <i>new</i> agricultural land in the Sacramento region equal in area, productivity, and other characteristics to the area, which would be lost due to development. The protection of <i>existing</i> agricultural land through the purchase of fee title or easements is not considered by the City to provide mitigation, since programs of this type result in a net loss of farmland.</p>	Yes	<p>The City of Elk Grove acknowledges that no new agricultural land would be created as part of this plan. Accordingly, the loss of project area agricultural land (designated prime and of statewide importance) is considered to be a significant and unavoidable impact.</p>
<p><b>CAQ-4</b></p> <p>While agricultural uses are anticipated to be phased out within the city limits (as of January 2002), the City recognizes the right of these uses to continue as long as individual owners/farmers desire. The City shall not require buffers between farmland and urban uses, relying instead on the following actions to address the impacts of farming on urban uses:</p>	Yes	<p>Although the Draft General Plan prohibits the City from requiring buffers between farmland and urban uses, the Laguna Ridge Specific Plan would provide building setbacks and landscaped corridors along all roadways located between proposed residential areas and active agricultural operations. The most active agricultural operations occur east of the proposed extension of Big Horn Boulevard south of Poppy Ridge Road. The roadway width in this location is 72 feet including a 12-foot landscaped median. An additional 25 feet is proposed for a landscaped easement containing a solid masonry wall, which extends to the property lot line. With the inclusion of rear yard setbacks, the separation between agricultural and urban uses would be more than 100 feet in width, which substantially exceeds the width of</p>

## 4.1 AGRICULTURAL RESOURCES

Draft General Plan Policies	Consistency with General Plan	Analysis
		agricultural buffers established by many other jurisdictions.

### CITY OF ELK GROVE RIGHT-TO-FARM ORDINANCE

The Sacramento County Board of Supervisors passed the "Right-to-Farm" Ordinance on July 10, 1990. This Ordinance was subsequently adopted upon the incorporation of the City of Elk Grove in June 2000. This ordinance was established to ensure that agricultural operations that are operated in a manner consistent with proper and accepted customs and standards would be allowed to continue. It is also designed to allow accepted farming activities to occur twenty-four hours a day without complaints from nearby residents. Those residents that choose to reside adjacent to these uses shall be prepared to accept such inconveniences when they occur. If there is an agricultural production that does not appear to be consistent with accepted practices, then any person may file a complaint with the Agricultural Commissioner.

### 4.1.3 IMPACTS AND MITIGATION MEASURES

#### STANDARDS OF SIGNIFICANCE

For purposes of this EIR, the following criteria were used in determining whether the implementation of the proposed project would result in a significant impact:

1. Conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use.
2. Conflict with existing zoning for agricultural use, or a Williamson Act contract.
3. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use.

In addition, any non-agricultural land use or development which, by its nature, may pose substantial land use incompatibilities with adjacent property currently in, or suitable for, agricultural production would be considered as having a significant impact.

Implementation of the Laguna Ridge Specific Plan would result in the conversion of important farmland to a mix of residential, commercial, and other uses. According to the California State Department of Conservation Important Farmland Map (2000), 175 acres of Prime Farmland existed within the City limits along with 5,893 acres of Farmland of Statewide Importance and 3,997 acres of Farmland of Local Importance. Since the last update of this data by the Department of Conservation in 2000, there has been substantial development occurring in Elk Grove. A vast majority of this acreage would be lost as a result of the development of approved projects such as the East Franklin Policy Area (1,425-acre loss of Prime Farmland). Additional acreage would be lost as a result of the approval of the proposed Laguna Ridge Specific Plan (52.8 acres of Prime Farmland, 1576.3 acres of Farmland of Statewide Importance, 171 acres of Farmland of Local Importance, and 51 acres of Unique Farmland).

### METHODOLOGY

Evaluation of potential agricultural impacts of the proposed Laguna Ridge Specific Plan was based on review of the City of Elk Grove General Plan, the City of Elk Grove Zoning Ordinance, and field review of the project and surrounding area. The agricultural analysis is based on information gathered from the City of Elk Grove Agricultural Element and Conservation Element to the General Plan, General Plan Update EIR, the California Department of Conservation Farmland Conversion Report 1998 – 2000 (2002), the California Department of Conservation Important Farmlands Map, the Soil Survey of Sacramento County, California (April 1993), and conversations with staff from the Sacramento County Farm Bureau and Agricultural Commissioner's Office. The proposed project is then compared to the existing conditions to determine the impacts due to loss of agricultural resources. The reader is referred to Section 7.0 regarding the project's growth inducement potential to further impact agricultural resources.

### PROJECT IMPACTS AND MITIGATION MEASURES

#### Agricultural Conversion

**Impact 4.1.1** Implementation of the proposed project would result in the conversion of approximately 1,851 acres of productive agricultural land, which includes 52.8 acres of Prime Farmland, and 1,545.9 acres of Farmland of Statewide Importance. This would constitute the loss of an irreplaceable resource and result in a **significant** impact.

The project would allow for the conversion to urban uses of approximately 52.8 acres of Prime Farmland, 1,545.9 acres of Farmland of Statewide Importance, 51.0 acres of Unique Farmland, and 171.0 acres of Farmland of Local Importance for the development of the project. In addition to site development, construction of the proposed off-site drainage channel south of Bilby Road would result in the loss of additional Farmland of Statewide Importance.

The conversion of the plan area from farmland to urban uses would reduce the amount of Important Farmland (Prime Farmland, Farmland of Statewide Importance, Unique Farmland, and Farmland of Local Importance) by approximately 3.3 percent within Sacramento County. **Table 4.1-6** illustrates the total amount of each specific type of Important Farmland within Sacramento County and the loss if the project is approved.

The Draft General Plan acknowledges that the loss of agricultural land is a consequence of the development of Elk Grove will ultimately be phased out within the city limits. As discussed in the Land Use Element, the City's land use concept for the Planning Area outside the 2002 city limits anticipates the retention of significant areas of agricultural production outside the current city limits.

## 4.1 AGRICULTURAL RESOURCES

TABLE 4.1-6  
ACRES OF IMPORTANT FARMLANDS AND LOSS FROM PROJECT

Type of Farmland	Total Acres within Sacramento County	Total Acres Lost From Project	Percentage Loss from Project Approval
Prime Farmland	116,116	52.8	0.04%
Farmland of Statewide Importance	62,650	1,545.9	2.5%
Unique Farmland	15,609	51.0	0.33%
Farmland of Local Importance	39,745	171.0	0.43%
TOTAL	234,120	1,851.1	3.3%

Source: California Department of Conservation, Farmland Conversion Reports 1992 to 1994, 1996 to 1998 and 1998-2000 and mapping (2002); Laguna Ridge Specific Plan, 2002

The City's Draft General Plan Policy CAQ-2 states that the loss of agricultural productivity on lands designated for urban uses within the city limits as of January 2002 is accepted as a consequence of the development of Elk Grove. City Draft General Plan Policy CAQ-3 indicates that the only mitigation for the loss of existing agricultural land is the creation of *new* agricultural land equal in area, productivity and other characteristics to the area, which would be lost due to development. The protection of *existing* agricultural land through the purchase of fee title or easements is not considered by the City to provide true or equivalent mitigation, since programs of this type result in a net loss of farmland. City Draft General Plan Policy CAQ-4 states that, while agricultural uses are anticipated to be phased out within the city limits, the City recognizes the right of these uses to continue as long as individual owners/farmers desire. The Policy Actions of the Draft General Plan require the City to implement the City's "Right to Farm" ordinance (CAQ-4-Action 1), and that prospective buyers of property adjacent to agricultural land shall be notified through the title report that they could be subject to inconvenience or discomfort resulting from accepted farming activities as per provisions of the City's right-to-farm ordinance (CAQ-4-Action 2).

Section 21060.1 of the California Environmental Quality Act (CEQA) defines "Agricultural land" as prime farmland, farmland of statewide importance, or unique farmland as defined by the United States Department of Agriculture (USDA). As previously discussed, the USDA Natural Resource Conservation Service (NRCS) relies on the Soil Capability Classification and the Storie Index Rating System to determine a soil's agricultural productivity. As shown in **Table 4.1-4**, project soils have either a Class III or IV soil capability classification and with the exception of one soil that is graded 'Good', all soils have a Storie Index Grade of Poor or Very Poor. However, of the eleven soil types on the site, six are classified as Farmlands of Statewide Importance and one is classified as Prime Farmland. This would constitute a net loss of an irreplaceable resource and result in a **significant** impact.

### Mitigation Measure

Potential mitigation measure options for this impact include the following:

**Development of an agricultural land mitigation program to protect existing farmland within the City or in the region associated with land and/or easement purchases:** This mitigation approach would consist of requiring the project to either acquire fee title, easements or pay fees to the City for the protection of existing agricultural land in order to preserve it from conversion at a predetermined ratio (farmland acreage lost to existing farmland to be protected). This mitigation approach is similar to the policy guidance under Sacramento County General Plan Policy AG-5 and the mitigation program developed by Sacramento County for the East Franklin Specific Plan. This mitigation approach would not fully or partially mitigate the direct loss of important farmlands associated with the implementation of the project. The definition of "mitigation" in CEQA Guidelines 15370 is described below, as well as an analysis of why this mitigation option does not meet the definition set forth in CEQA:

*Avoiding the impact altogether by not taking a certain action or parts of an action.* – Protection of existing farmland would not result in any avoidance of the expected significant conversion of important farmland in the City.

*Minimizing impacts by limiting the degree or magnitude of the action and its implementation.* – Protection of existing farmland would not limit the extent of the expected significant conversion of important farmland in the City.

*Rectifying the impact by repairing, rehabilitating, or restoring the impacted environment.* – Protection of existing farmland would not involve repairing, rehabilitating or restoring the important farmland expected to be converted by the project in the City.

*Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.* – Protection of existing farmland would not result in any avoidance of the expected significant conversion of important farmland in the City.

*Compensating for the impact by replacing or providing substitute resources or environments.* – Protection of existing farmland would not result in any compensation of the expected significant conversion of important farmland in the City. This important farmland would still be lost in its entirety even with this mitigation option, since it would not provide any offset associated with this loss.

**Preservation of existing important farmland areas within the City:** Implementation of this mitigation option would not result in any avoidance of the project's expected conversion of important farmland in the City. However, this mitigation option is considered infeasible, since it would conflict with City Draft General Plan Guiding Goals 1 and 2, Focused Goals 1-6, 1-9, 2-1 through 2-4, and Housing Goals 1, 2, and 5, which consist of the general intent of the proposed General Plan.

**Creation of new and/or improved farmland to offset project impacts:** Implementation of this mitigation option would not limit the extent of the project's conversion of important farmland in the City. This mitigation option would involve improvements to existing land areas (e.g., the provision of irrigation) that would improve its agricultural capability beyond existing conditions. As a result of the amount of important farmland expected to be lost within the plan area and the Draft General Plan Land Use Policy Map, creation of improved farmland would need to occur outside of the City limits in the unincorporated portion of the County. Given the extensive amount of improved farmland that would need to be created and the fact that this farmland

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would need to be provided outside of the jurisdiction of the City, this mitigation option is not considered feasible.

Based on the analysis provided above, no feasible mitigation measures are available to reduce the net loss of important farmland due to the implementation of the project. This impact is considered **significant and unavoidable**.

### Impairment to Productivity/Land Use Compatibility

**Impact 4.1.2** Implementation of the proposed project would place urban uses adjacent to a primarily agricultural area, which may impair agricultural production and result in land use compatibility conflicts. This would result in a **potentially significant** impact.

The plan area is adjacent to existing agricultural uses to the west and south. Existing agricultural uses are also located east of the portion of the project that is south of Poppy Ridge Road. Agricultural lands west of the project are approved for development under the East Franklin Specific Plan, with some areas currently under development. Land to the southeast is also approved for mixed use development within the Lent Ranch Marketplace and is planned for residential development in the South Pointe subdivision; however, these projects are separated from the proposed project by agricultural land located east of Big Horn Boulevard and south of Poppy Ridge Road, generally west and north of the proposed South Pointe project.

Agricultural lands adjacent to the project across Bruceville Road to the west are planned and approved for urban development. North of the plan area across Elk Grove Boulevard are predominantly existing residential and commercial land uses. The southern and eastern boundaries of the project are adjacent agricultural lands that are not planned or approved for development and are, therefore, the focus of this discussion.

A project's compatibility with surrounding uses is largely based on the interaction of the proposed uses and the extent to which adjacent land uses would be affected by this interaction. The primary areas of concern associated with this project are the residential-agricultural interface that would be created along Bilby Road on the southern project boundary, between Bruceville Road and the proposed extension of Big Horn Boulevard; on the eastern project boundary along the proposed extension of Big Horn Boulevard south of Poppy Ridge Road; and on the southern project boundary along Old Poppy Ridge Road east of Big Horn Boulevard, where residential, commercial, educational and civic uses are proposed.

Overall, potential land use conflicts can be evaluated from the perspective of the farmer and from the perspective of those who would use the proposed land uses. From the farmer's perspective, agricultural production can be adversely affected as a result of restrictions on pesticide, herbicide and fungicide use; trespassing and pilferage; increased personal injury liability as a result of trespassers hurting themselves; and littering of fields. The Sacramento County Department of Agriculture and Measurements regulates and imposes limitations on the use of all restricted materials as part of the conditions for obtaining a permit for use. In light of the 'Right to Farm' Ordinance and the restrictions on agricultural practices, the potential impacts would be minimized. Project development would tend to facilitate increased access to field areas by both humans and domestic animals.

From the perspective of the occupants within developed areas, adjacent agricultural land uses may result in a number of nuisances and perceived hazards, such as concern over pesticide,



## 4.1 AGRICULTURAL RESOURCES

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herbicide and fungicide use on adjacent properties, odors, dust, and slow moving vehicles. These potential land use interface conflicts can individually or cumulatively decrease the efficiency of farming operations, which can cause production costs to rise, and make farming operations less sustainable. The increase in production cost can eventually force the farmer to convert the land to non-agricultural uses. The project may result in significant impacts due to the impairment of productivity and land use conflicts.

Agricultural properties in proximity to the proposed project site would be protected against nuisance complaints per the City's and/or County's 'Right-to-Farm' Ordinance, provided that farming activities are properly conducted in accordance with applicable standards. As long as the farmer follows applicable laws and/or City policies, such as those established for pesticide applications, no formal complaint would be taken or enforced. The presence of such ordinances would not, however, be expected to eliminate entirely all of the conflicts addressed in this section.

The majority of property surrounding the project area on its south and east, south of Poppy Ridge Road, boundaries is zoned AG-20, which is intended for permanent agriculture with associated residential uses allowed on parcels of land at least 20 acres in size. Development in the area is sparse, with residences on only three parcels south of the project east of Bruceville Road, and approximately eleven parcels on Old Poppy Ridge Road west of West Stockton Boulevard.

Major roadway improvements are proposed along the approximately one-mile long boundaries on the south and east sides of the project. Big Horn Boulevard is proposed as a Minor Arterial street with a 12-foot wide landscape median in the center of the street and 25-foot wide landscape corridors on each side of the street. Bilby Road is proposed as a Collector street with no center landscape median and 15-foot wide landscape corridors on each side of the street. Old Poppy Ridge Road is proposed as a Primary Residential street with a 10-foot wide, landscaped pedestrian easement on each side of the street.

New development would not directly abut any existing uses. The construction of roadways around the perimeter of the project would separate the new development areas from the existing agricultural and residential uses in the area. Landscape corridors and medians would further provide visual screening and a certain level of sound attenuation from the new development areas. However, the roadways would also serve to connect and extend the circulation system of the City, resulting in more traffic noise and affecting air quality in the area (See subsequent sections for further analysis).

### Mitigation Measure

**MM 4.1.2a** All of the landscape corridors directly adjacent to the project area that are located between existing agricultural operations or agriculturally zoned properties and the project area shall be fully improved and functional prior to the occupancy of any residence that adjoins the subject corridor.

*Timing/Implementation:* Prior to issuance of occupancy permits  
*Enforcement/Monitoring:* City of Elk Grove Development Services

**MM 4.1.2b** Disclose to all prospective buyers of residential property within 500 feet of any active farming operations, through notification in the public report, that they could experience inconvenience or discomfort resulting from accepted farming activities pursuant to the provisions of the City Right-to-Farm Ordinance.

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<i>Timing/Implementation:</i>	<i>Prior to the sale to prospective buyers</i>
<i>Enforcement/Monitoring:</i>	<i>City of Elk Grove Development Services</i>

Because land use conflicts between the project and surrounding agricultural uses can be minimized through the implementation of the mitigation measures described above, impacts associated with the viable use of surrounding agricultural land is considered to be **less than significant**.

### 4.1.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

#### CUMULATIVE SETTING

The proposed project is located in a primarily agricultural area in the southern portion of the City of Elk Grove. The City's Draft General Plan identifies the project area and surrounding areas as Urban Study Areas, envisioned as areas in which urbanization, to some extent, could occur. Portions of these areas are either currently used or were previously used for agricultural operations, which the Draft General Plan acknowledges will be phased out over time. Other projects in the area with the potential to urbanize and affect agricultural lands include the approved Lent Ranch Marketplace, the approved East Franklin Specific Plan, and the proposed South Pointe project. In addition to these local development projects, there are several urban development projects in Sacramento County and throughout the Central Valley that are contributing to the cumulative loss of agricultural resources.

#### CUMULATIVE IMPACTS AND MITIGATION MEASURES

**Impact 4.1.3** The project would convert important farmland areas to urban uses. This loss would contribute to the cumulative loss of farmland in the region. The loss of such farmland from the Laguna Ridge Specific Plan project would contribute to a **cumulative significant** impact.

According to the Draft General Plan policies, conversion of the Southeast Policy Area as identified in the Draft General Plan Land Use Map would convert farmland to urban uses over the planning period covered by the new General Plan. This impact is identified as significant and unavoidable in the EIR prepared for the General Plan Update. The project would convert approximately 52.8 acres of Prime Farmland and 1,545.9 acres of Farmland of Statewide Importance to urban uses. To the extent that other projects in the County would affect Prime Farmland and Farmland of Statewide Importance, the loss of such farmland from the Laguna Ridge Specific Plan project would contribute to a cumulative significant impact.

#### Mitigation Measure

Mitigation measure options outlined in Impact 4.1.1 would not reduce the impact related to loss of agricultural lands nor would any of the options reduce the project impact as it relates to cumulative development. A permanent, irreplaceable loss of farmland would occur and the project's contribution to this impact is considered **significant and unavoidable**.

**Impact 4.1.4** Cumulative projects could result in impairment to agricultural productivity and land use compatibility impacts. This would result in a **cumulative significant** impact.

## 4.1 AGRICULTURAL RESOURCES

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Development of the proposed Laguna Ridge Specific Plan, the approved East Franklin Specific Plan, and the approved Lent Ranch Marketplace, could occur during the same general time period. The potential exists for these projects either individually or cumulatively to result in significant cumulative impacts to the productivity of adjacent agricultural land and land use compatibility, as previously described under Impact 4.1.2

### Mitigation Measure

Implementation of mitigation measures MM 4.1.2 a and b would minimize potential conflicts, therefore, the conflict between agricultural land uses to the south of the project and the urban uses proposed under the project would be considered **less than significant**.

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**SECTION 4.2**  
**TRANSPORTATION AND CIRCULATION**

## 4.2 TRANSPORTATION AND CIRCULATION

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This section addresses transportation impacts associated with the implementation of the Laguna Ridge Specific Plan and is based on the Traffic Impact Study for Laguna Ridge Specific Plan prepared by Fehr & Peers Associates (November 2002) provided in **Appendix 4.2**.

### 4.2.1 EXISTING CONDITIONS

#### EXISTING TRANSPORTATION CONDITIONS

The existing transportation system in the vicinity of the plan area is heavily dependent on the roadway system for the movement of people and goods. Automobiles are the primary travel mode for most trips in this area, although limited bus transit is provided within the study area. To a much lesser degree, the area is served by bicycle and pedestrian facilities. Each of the potentially affected travel modes is discussed in this section.

#### Study Area

Detailed traffic analyses were performed for the following intersections, roadway segments and freeway facilities, as depicted on **Figure 4.2-1**. **Figure 4.2-2** shows the existing number of lanes on the roadway segments in the study area. The on-site street system consists of a network of two-lane collector and local streets supported by four-lane east-west arterial roadways that provide access to the major north-south arterial roadways (i.e., Franklin Boulevard and Bruceville Road).

#### Intersections

1. Laguna Boulevard/Franklin Boulevard
2. Laguna Boulevard/Bruceville Road
3. Laguna Boulevard/Big Horn Boulevard
4. Laguna Boulevard/West Laguna Springs Drive
5. Laguna Boulevard/State Route (SR) 99 Southbound Ramps
6. Laguna Boulevard/SR 99 Northbound Ramps
7. Elk Grove Boulevard/Interstate 5 (I-5) Southbound Ramps
8. Elk Grove Boulevard/I-5 Northbound Ramps
9. Elk Grove Boulevard/Franklin Boulevard
10. Elk Grove Boulevard/Bruceville Road
11. Elk Grove Boulevard/Big Horn Boulevard
12. Elk Grove Boulevard/West Laguna Spring Drive
13. Elk Grove Boulevard/West Stockton Boulevard
14. Elk Grove Boulevard/SR 99 Southbound Ramps
15. Elk Grove Boulevard/SR 99 Northbound On-ramp
16. Elk Grove Boulevard/East Stockton Boulevard
17. Elk Grove Boulevard/Elk Grove-Florin Road
18. Elk Grove Boulevard/Waterman Road
19. Elk Grove Boulevard/Bradshaw Road
20. Elk Grove Boulevard/Grant Line Road
21. Poppy Ridge Road/Bruceville Road
22. Poppy Ridge Road/West Stockton Boulevard
23. Elk Grove-Florin Road/East Stockton Boulevard
24. Hood Franklin Road/I-5 Southbound Ramps
25. Hood Franklin Road/I-5 Northbound Ramps
26. Hood Franklin Road/Franklin Boulevard

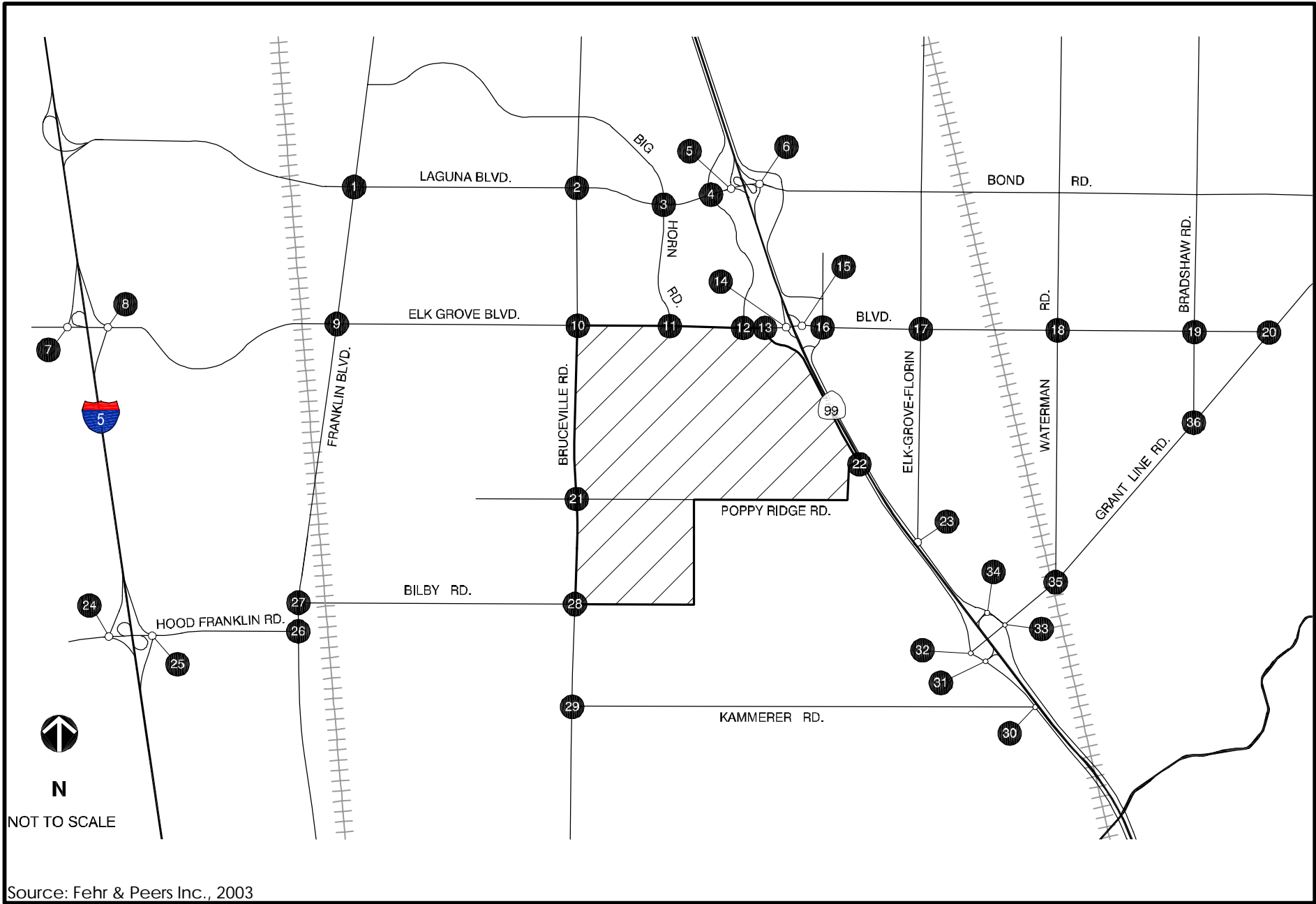
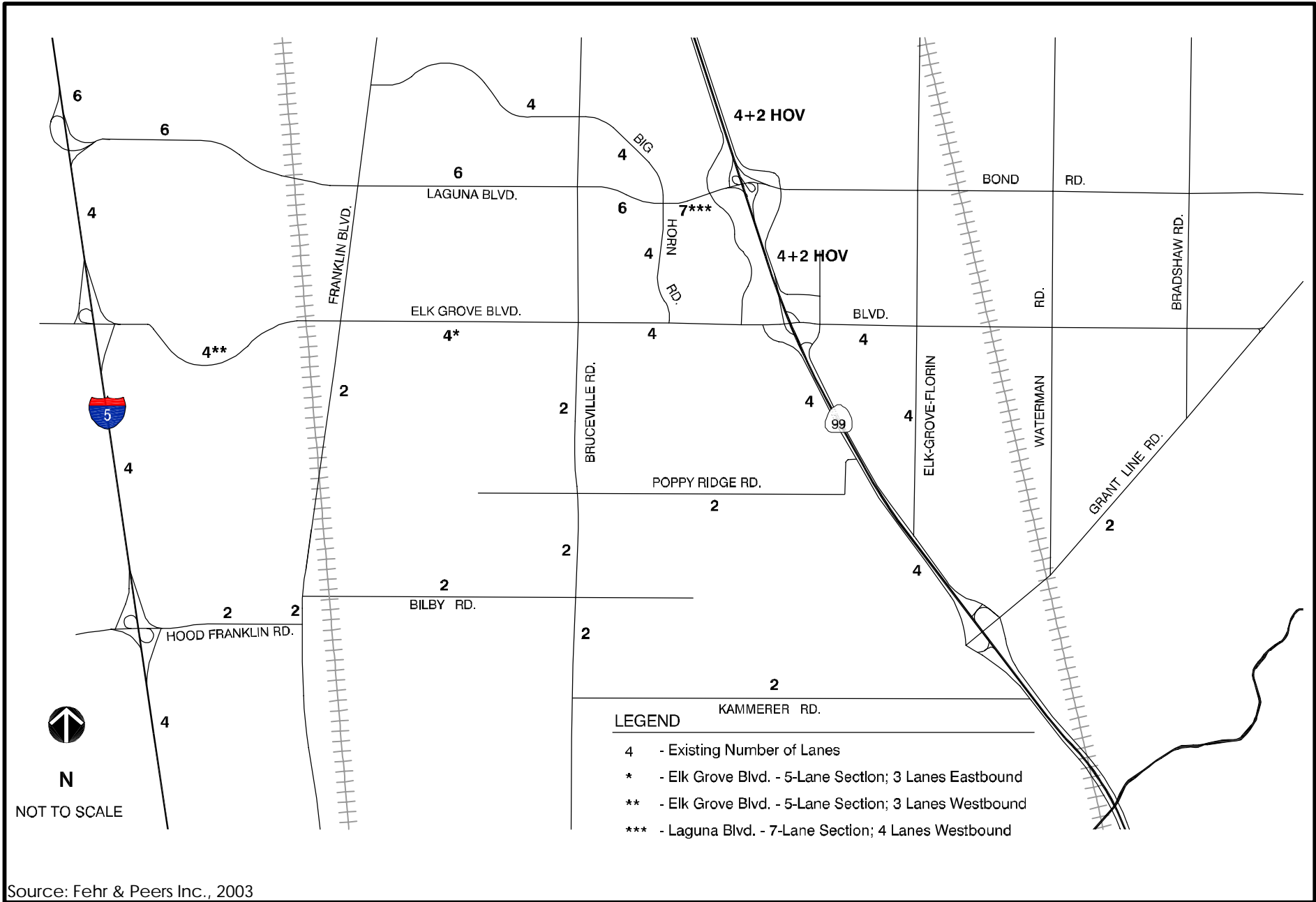


Figure 4.2-1  
Study Area Intersections  
Existing Conditions



## 4.2 TRANSPORTATION AND CIRCULATION

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26. Bilby Road/Franklin Boulevard
27. Bilby Road/Bruceville Road
28. Kammerer Road/Bruceville Road
29. Kammerer Road/West Stockton Boulevard
30. SR 99 Southbound Ramps/West Stockton Boulevard (at Grant Line Interchange)
31. Grant Line Road/West Stockton Boulevard
32. Grant Line Road/East Stockton Boulevard
33. SR 99 Northbound Ramp/East Stockton Boulevard (at Grant Line Interchange)
34. Grant Line Road/Waterman Road
35. Grant Line Road/Bradshaw Road

### Roadways

1. Laguna Boulevard – I-5 to Franklin Boulevard
2. Laguna Boulevard – Franklin Boulevard to Bruceville Road
3. Laguna Boulevard – Bruceville Road to SR 99
4. Elk Grove Boulevard – I-5 to Franklin Boulevard
5. Elk Grove Boulevard – Franklin Boulevard to Bruceville Road
6. Elk Grove Boulevard – Bruceville Road to West Stockton Boulevard
7. Elk Grove Boulevard – East Stockton Boulevard to Elk Grove-Florin Road
8. Elk Grove Boulevard – Elk Grove-Florin Road to Grant Line Road
9. Hood Franklin Road – I-5 to Franklin Boulevard
10. Bilby Road – Franklin Boulevard to Bruceville Road
11. Kammerer Road – Bruceville Road to West Stockton Boulevard
12. Grant Line Road – SR 99 to Waterman Road
13. Grant Line Road – Waterman Road to Elk Grove Boulevard
14. Franklin Boulevard – Hood Franklin Road to Bilby Road
15. Franklin Boulevard – Bilby Road to Elk Grove Boulevard
16. Franklin Boulevard – Elk Grove Boulevard to Laguna Boulevard
17. Franklin Boulevard – North of Laguna Boulevard
18. Big Horn Road – Franklin Boulevard to Bruceville Road
19. Bruceville Road – Bilby Road to Poppy Ridge Road
20. Bruceville Road – Poppy Ridge Road to Elk Grove Boulevard
21. Bruceville Road – Elk Grove Boulevard to Laguna Boulevard
22. Bruceville Road – North of Laguna Boulevard
23. Poppy Ridge Road – Bruceville Road to West Stockton Boulevard
24. West Stockton Boulevard – Kammerer Road to Lent Ranch Access
25. West Stockton Boulevard –Lent Ranch Access to Poppy Ridge Road
26. West Stockton Boulevard – Poppy Ridge Road to Elk Grove Boulevard

### Freeways

1. SR 99 – South of the Grant Line Road interchange to north of Laguna Boulevard interchange
2. I-5 - South of the Hood-Franklin Road interchange to north of Laguna Boulevard interchange

Although significant development and subsequent road widenings have occurred north of Elk Grove Boulevard, most of the existing roads serving the plan area are two-lane roadways. These facilities have narrow shoulders and speed limits of 35 to 55 miles per hour. These roads provide



## 4.2 TRANSPORTATION AND CIRCULATION

access to the agricultural and residential uses in the vicinity of the plan area through stop controlled collectors and driveways. Several roadway segments do not currently meet the City of Elk Grove’s standards or the standards presented in *A Policy on Geometric Design of Highways and Streets* (1994) published by the American Association of State Highway and Transportation Officials (AASHTO). The AASHTO standards for cross-sections require 12-foot travel lanes and 6-foot usable shoulders. The following roadway segments are considered substandard roadway cross-sections and do not meet the AASHTO minimum roadway cross-section standards:

- West Stockton Boulevard – Kammerer Road to Elk Grove Boulevard;
- Kammerer Road – West Stockton Boulevard to Bruceville Road;
- Bilby Road – Kammerer Road to Franklin Boulevard; and
- Poppy Ridge Road – West Stockton Boulevard to Bruceville Road.

### TRAFFIC OPERATIONS CRITERIA

Study roadway segments, intersections, freeway segments and ramps were analyzed for their level of service. Level of service (LOS) is a term that describes the operating performance, based on the effect of various factors, including speed, driver comfort, travel time, and safety, of an intersection or roadway. LOS is measured quantitatively and reported on a scale from “A” to “F”, with “A” representing the best performance and “F” the worst. The City of Elk Grove has identified LOS D as the acceptable Level of Service.

### Roadway Segments

Roadway segments were analyzed by comparing average daily traffic volumes to capacity thresholds presented in the City of Elk Grove Traffic Impact Analysis Guidelines. These thresholds are used as guidelines to master plan the transportation network by projecting the need for new or upgraded facilities. Based on Draft General Plan criteria, roadway segments are considered to operate acceptably at LOS D or better.

According to the Draft General Plan Transportation Plan Map, most of the streets within the study area are ultimately planned to be moderate-access roadways, with two to four intersections per mile, a limited number of driveways, and speed limits between 35 and 55 miles per hour. For these types of facilities, the daily roadway capacities are summarized in **Table 4.2-1** for two-lane, four-lane, and six-lane roadways.

**TABLE 4.2-1  
ROADWAY LEVEL OF SERVICE CRITERIA**

Number of Lanes	Maximum Daily Volume				
	LOS A	LOS B	LOS C	LOS D	LOS E
2	10,800	12,600	14,400	16,200	18,000
4	21,600	25,200	28,800	32,400	36,000
6	32,400	37,800	43,200	48,600	54,000

*Source: City of Elk Grove Traffic Impact Analysis Guidelines, July 2000.  
<sup>1</sup>Level of service criteria based on a moderate access control facility.*

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### Substandard Roadway Cross-Sections

The level of service criterion for substandard roadway cross-sections roadway segments is summarized in **Table 4.2-2**. The capacity of such roadways is 11,000 vehicles per day, and was developed using the 1994 Highway Capacity Manual methodologies, accounting for the roadways' substandard features, including the narrow travel lanes and shoulder widths. The 11,000 vehicles per day capacity of the two-lane rural roadway is 7,000 vehicles per day less than the capacity (18,000 vehicles per day) of a two-lane roadway with 12-foot travel lanes and usable shoulders six feet or more in width.

**TABLE 4.2-2  
TWO-LANE SUBSTANDARD ROADWAY LEVEL OF SERVICE CRITERIA**

Maximum Daily Volume				
LOS A	LOS B	LOS C	LOS D	LOS E
1,300	2,600	4,300	6,800	11,000

Source: Roadway capacity is based on 1994 Highway Capacity Manual (August, 1995).

### Intersections

Operations analyses for study intersections were conducted using the Synchro 5 software, which utilizes procedures and methodologies contained in the *Highway Capacity Manual* (HCM), Transportation Research Board, 2000. Intersections are considered to operate acceptably at LOS D, based on Draft General Plan criteria. **Tables 4.2-3** and **4.2-4** summarize LOS definitions and criteria for signalized and unsignalized study intersections, respectively.

**TABLE 4.2-3  
SIGNALIZED INTERSECTION LEVEL OF SERVICE DEFINITIONS AND CRITERIA**

Level of Service	Description (Signalized)	Signalized Intersections
		Average Control Delay (Seconds/Vehicle)
A	Progression is extremely favorable; short cycle lengths; most vehicles arrive during the green phase; many vehicles do not stop at all.	$\leq 10$
B	Generally good progression; short cycle lengths; more vehicle stops.	$> 10$ and $\leq 20$
C	Fair progression; individual cycle failures begin to occur; significant numbers of vehicles stop although many pass through intersection without stopping.	$> 20$ and $\leq 35$

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Level of Service	Description (Signalized)	Signalized Intersections
		Average Control Delay (Seconds/Vehicle)
D	Noticeable congestion; longer delays due to unfavorable progression; long cycle lengths or high volume-to-capacity ratio; many vehicles stop	> 35 and ≤ 55
E	High delays due to poor progression, long cycle lengths and high volume-to-capacity ratio; individual cycle failures are frequent.	> 55 and ≤ 80
F	High delays that are unacceptable to most drivers; arrival flow rates exceed capacity; long cycle lengths and poor progression	> 80

Source: *Highway Capacity Manual (Transportation Research Board, 2000)*

**TABLE 4.2-4  
UNIGNALIZED INTERSECTION LEVEL OF SERVICE DEFINITIONS AND CRITERIA**

Level of Service	Description (Unsignalized)	Unsignalized Intersections
		Average Control Delay (Seconds/Vehicle)
A	Progression is extremely favorable; short cycle lengths; most vehicles arrive during the green phase; many vehicles do not stop at all.	≤ 10
B	Generally good progression; short cycle lengths; more vehicle stops.	> 10 and ≤ 15
C	Fair progression; individual cycle failures begin to occur; significant numbers of vehicles stop although many pass through intersection without stopping.	> 15 and ≤ 25
D	Noticeable congestion; longer delays due to unfavorable progression; long cycle lengths or high volume-to-capacity ratio; many vehicles stop	> 25 and ≤ 35
E	High delays due to poor progression, long cycle lengths and high volume-to-capacity ratio; individual cycle failures are frequent.	> 35 and ≤ 50

## 4.2 TRANSPORTATION AND CIRCULATION

Level of Service	Description (Unsignalized)	Unsignalized Intersections
		Average Control Delay (Seconds/Vehicle)
F	High delays that are unacceptable to most drivers; arrival flow rates exceed capacity; long cycle lengths and poor progression	> 50

Source: *Highway Capacity Manual (Transportation Research Board, 2000)*

### Freeways

For Caltrans facilities, LOS thresholds are identified in route concept reports. The minimum LOS thresholds are different from route to route and can vary along the same route. Caltrans has identified LOS D as the minimum acceptable threshold for I-5 in *Route Concept and Development Report: Route 5* (Caltrans District 3, 1986). This concept LOS was used for the freeway mainline and ramp junctions on I-5. Caltrans has identified LOS D as the minimum acceptable threshold for SR 99 south of Elk Grove Boulevard and LOS F as the minimum acceptable threshold for SR 99 north of Elk Grove Boulevard in *Draft Transportation Concept Report: State Route 99* (Caltrans District 3, August 2002). These concept LOS thresholds were used for the freeway mainline and ramp junctions on SR 99.

### Freeway Segments

The methodology described in the *HCM2000* was used to determine the LOS on SR-99 and I-5 freeway segments. **Table 4.2-5** shows the LOS definitions based on the per lane peak hour density of the freeway.

**TABLE 4.2-5  
FREEWAY SEGMENT LEVEL OF SERVICE CRITERIA**

LOS	Maximum Density (pc/mi/ln) <sup>1</sup>	Description
A	≤11	Free-flow operations.
B	11-18	Reasonably free-flow operations and free-flow speed is maintained.
C	18-26	Speeds at or near free-flow speed, freedom to maneuver is noticeably restricted.
D	26-35	Speeds begin to decline slightly with increased flows and density, and driver experiences reduced physical and psychological comfort levels.
E	35-45	Operations at capacity, with speeds above 50 mph.
F	>45	Breakdowns in vehicular flow when flow rate exceeds capacity.

Source: *Highway Capacity Manual (HCM) – Special Report 209, Third Edition, Transportation Research Board, 2000.*

<sup>1</sup>Maximum Density (pc/mi/ln) = Passenger cars per mile per lane

Freeway Ramps

The methodology described in the *HCM 2000* was used to determine the LOS at the freeway ramp junctions. **Table 4.2-6** shows the LOS definitions based on the per lane peak hour density of the freeway ramp junction.

**TABLE 4.2-6  
FREEWAY RAMP JUNCTION LEVEL OF SERVICE CRITERIA**

LOS	<sup>1</sup> Maximum Density (pc/mi/ln)	Description
A	≤10	Unrestricted operation. Merging and diverging vehicles have little effect on other freeway flows.
B	10-20	Merging and diverging maneuvers become noticeable to through drivers, and minimal levels of turbulence exist.
C	20-28	Average speed within the ramp influence area begins to decline as the level of merging or diverging turbulence becomes noticeable.
D	28-35	Turbulence levels become intrusive, and virtually all vehicles slow to accommodate merging or diverging maneuvers.
E	>35	Represents condition approaching and reaching capacity operation. Speeds reduce to the low 40s (mph), and the turbulence of merging and diverging maneuvers becomes intrusive to all drivers in the influence area.
F	*	Represents saturated conditions. At this level, approach demand flow exceeds the discharge capacity of the downstream freeway (and ramp, in the case of diverge areas).

Source: *Highway Capacity Manual (HCM) - Special Report 209, Third Edition, Transportation Research Board, 1994.*

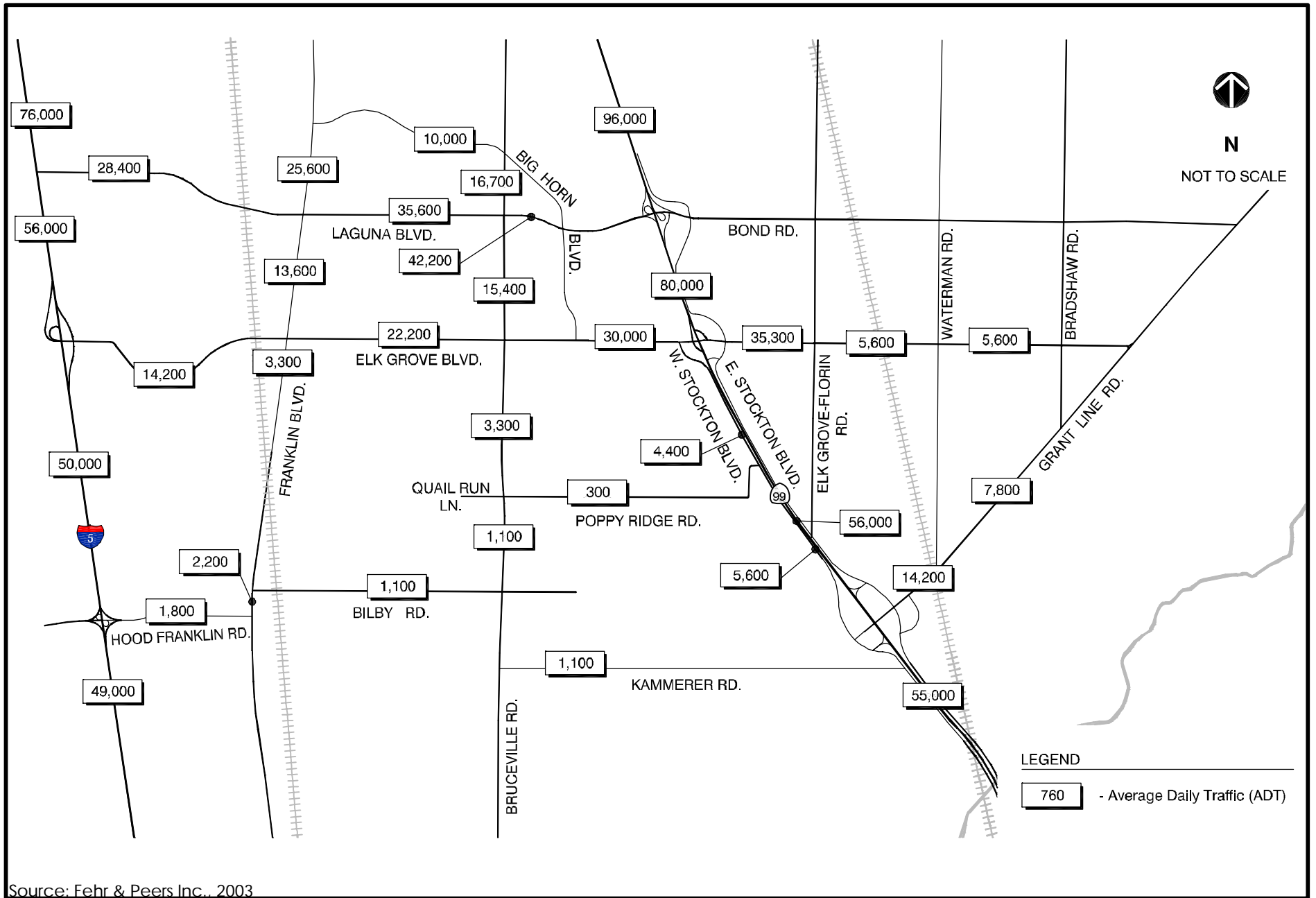
<sup>1</sup>Maximum Density (pc/mi/ln) = Passenger cars per mile per lane

\*Demand flow exceeds capacity.

**Existing Traffic Volumes**

Average daily traffic (ADT) volumes were obtained from count data compiled by Fehr & Peers Associates, Inc. (Fehr & Peers) during the third quarter of 2002. Existing count data for the freeway mainline sections of I-5 and SR-99 was obtained from the *2001 Traffic Volumes* book prepared by the California Department of Transportation (Caltrans). Daily volumes on all the study roadway segments are shown on **Figure 4.2-3**.

Daily traffic volumes for low volume roadways, such as Kammerer Road and Bilby Road, were developed by factoring peak hour intersection turning movement counts. Existing peak hour volumes and lane configurations at each intersection are presented on **Figure 4.2-4**.

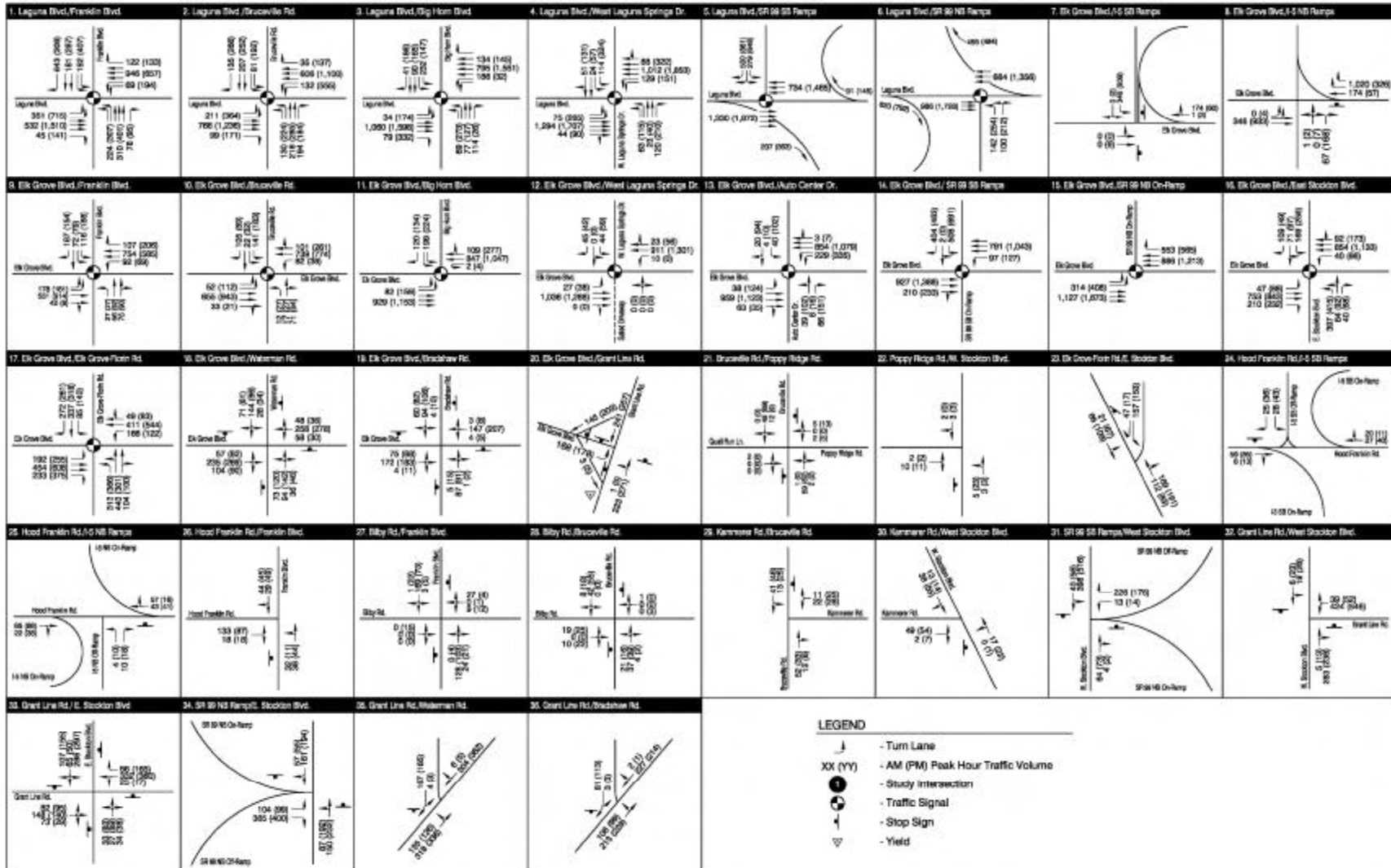


Source: Fehr & Peers Inc., 2003



City of Elk Grove Planning

**Figure 4.2-3**  
**Average Daily Traffic Volumes-**  
**Existing Conditions**



Source: Fehr & Peers Inc., 2003



City of Elk Grove Planning

Figure 4.2-4  
Peak Hour Traffic Volumes and Lane Configurations-  
Existing Conditions

## 4.2 TRANSPORTATION AND CIRCULATION

### Existing Traffic Operations

#### Arterial Roadway Segments

Operation of study roadway segments is shown in **Table 4.2-7**. All segments are operating acceptably, with the exception of Elk Grove Boulevard between East Stockton Boulevard and Elk Grove-Florin Road.

**TABLE 4.2-7**  
**ARTERIAL ROADWAY LEVEL OF SERVICE - EXISTING CONDITIONS**

Roadway Segment	Existing Conditions			
	Lanes	Vol	V/C	LOS
Laguna Blvd. - I-5 to Franklin Blvd.	6	28,400	0.53	A
Laguna Blvd. - Franklin Blvd. to Bruceville Rd.	6	35,600	0.66	B
Laguna Blvd. - Bruceville Rd. – SR-99	6	42,200	0.78	C
Elk Grove Blvd. - I-5 to Franklin Blvd.	5 <sup>2</sup>	14,200	0.32	A
Elk Grove Blvd. - Franklin Blvd. to Bruceville Rd.	5	22,200	0.49	A
Elk Grove Blvd. – Bruceville Rd. to Auto Center Drive	5	30,000	0.67	A
Elk Grove Blvd. - E. Stockton Blvd. to Elk Grove-Florin Rd.	4	35,300	0.98	E
Elk Grove Blvd. - Elk Grove-Florin Rd. to Grant Line Rd.	2	5,600	0.31	A
Hood Franklin Rd. - I-5 to Franklin Blvd.	2	1,800	0.10	A
Bilby Rd. - Franklin Blvd. to Bruceville Rd. <sup>1</sup>	2	1,100	0.06	A
Kammerer Rd. – Bruceville Rd. to SR 99 <sup>1</sup>	2	1,100	0.06	A
Grant Line Rd. – SR 99 to Waterman Rd.	2	14,200	0.79	C
Grant Line Rd. – Waterman Rd. to Bradshaw Rd.	2	10,000	0.56	A
Franklin Blvd. – Hood Franklin Rd. to Bilby Rd.	2	2,200	0.12	A
Franklin Blvd. - Bilby Rd. to Elk Grove Blvd.	2	3,300	0.18	A
Franklin Blvd. - Elk Grove Blvd. to Laguna Blvd	4	13,600	0.38	A
Franklin Blvd. - North of Laguna Blvd.	4	25,600	0.71	C
Big Horn Rd. - Franklin Blvd. to Bruceville	4	10,000	0.28	A
Bruceville Rd. - Bilby Rd. to Poppy Ridge Rd. <sup>1</sup>	2	1,100	0.06	A
Bruceville Rd. - Poppy Ridge Rd. to Elk Grove Blvd.	2	3,300	0.18	A
Bruceville Rd. - Elk Grove Blvd. to Laguna Blvd.	4	15,400	0.43	A
Bruceville Rd. - North of Laguna Blvd.	4	16,700	0.46	A



## 4.2 TRANSPORTATION AND CIRCULATION

	Existing Conditions			
Poppy Ridge Rd. – Bruceville Rd. to W. Stockton Blvd. <sup>1</sup>	2	300	0.03	A
W. Stockton Blvd. – Kammerer Rd. to Lent Ranch Access. <sup>1</sup>	2	5,600	0.51	D
W. Stockton Blvd. – Lent Ranch Access to Poppy Ridge Rd. <sup>1</sup>	2	5,600	0.51	D
W. Stockton Blvd. – Poppy Ridge Rd. to Auto Mall Access <sup>1</sup>	2	4,400	0.40	D
W. Stockton Blvd. – Auto Mall Access to Elk Grove Blvd.	2	4,400	0.24	A

Notes: <sup>1</sup> Roadway segment was analyzed using the level of service criteria for rural two-lane roadways with substandard cross-sections, summarized in Table 2.

<sup>2</sup> The capacity of a 5-lane roadway is 45,000 vehicles per day.

*Bolded areas indicate deficient operations under existing conditions.*

Source: Fehr & Peers, 2003

### Study Intersections

Existing peak hour traffic volumes shown on **Figure 4.2-4** were used to calculate levels of service at the study intersections. Intersection LOS for each location is presented in **Table 4.2-8**. All study intersections operate at acceptable levels during both a.m. and p.m. peak hours under existing conditions, with the exception of the Laguna Boulevard/Franklin Boulevard, Grant Line Road/West Stockton Boulevard, Grant Line Road/East Stockton Boulevard, and the SR 99 Northbound Ramps/East Stockton Boulevard intersections.

**TABLE 4.2-8**  
**INTERSECTION LEVEL OF SERVICE - EXISTING CONDITIONS**

Intersection	Control	AM Peak	PM Peak
1. Laguna Boulevard/Franklin Boulevard	Signalized	56.1 <b>(E)</b>	42.1 (D)
2. Laguna Boulevard/Bruceville Road	Signalized	29.6 (C)	40.8 (D)
3. Laguna Boulevard/Big Horn Boulevard	Signalized	20.0 (B)	19.2 (B)
4. Laguna Boulevard/West Laguna Springs Drive	Signalized	17.8 (B)	29.6 (C)
5. Laguna Boulevard/SR 99 Southbound Ramps	Signalized	18.1 (B)	24.1 (C)
6. Laguna Boulevard/SR 99 Northbound Ramps	Signalized	12.1 (B)	14.0 (B)
7. Elk Grove Boulevard/I-5 Southbound Ramps	Side-street Stop	0.0 (A)	0.0 (A)
8. Elk Grove Boulevard/I-5 Northbound Ramps	Side-street Stop	9.7 (A)	13.8 (B)
9. Elk Grove Boulevard/Franklin Boulevard	Signalized	31.4 (C)	24.5 (C)
10. Elk Grove Boulevard/Bruceville Road	Signalized	17.8 (B)	16.3 (B)
11. Elk Grove Boulevard/Big Horn Boulevard	Signalized	11.0 (B)	15.9 (B)

## 4.2 TRANSPORTATION AND CIRCULATION

Intersection	Control	AM Peak	PM Peak
12. Elk Grove Boulevard/West Laguna Springs Drive	Signalized	8.0 (A)	5.2 (A)
13. Elk Grove Boulevard/Auto Center Drive	Signalized	17.4 (B)	26.3 (C)
14. Elk Grove Boulevard/SR 99 Southbound Ramps	Signalized	17.2 (B)	3.9 (A)
15. Elk Grove Boulevard/SR 99 Northbound Ramps	Signalized	3.8 (A)	23.0 (C)
16. Elk Grove Boulevard/East Stockton Boulevard	Signalized	27.8 (C)	28.9 (C)
17. Elk Grove Boulevard/Elk Grove-Florin Road	Signalized	48.2 (D)	44.5 (D)
18. Elk Grove Boulevard/Waterman Road	All-way Stop	31.4 (D)	33.8 (D)
19. Elk Grove Boulevard/Bradshaw Road	All-way Stop	10.2 (B)	11.2 (B)
20. Elk Grove Boulevard/Grant Line Road	All-way Stop	9.9 (A)	11.7 (B)
21. Poppy Ridge Road/Bruceville Road	Side-street Stop	9.5 (A)	9.0 (A)
22. Poppy Ridge Road/West Stockton Boulevard	Side-street Stop	8.4 (A)	8.4 (A)
23. Elk Grove-Florin Road/East Stockton Boulevard	Side-street Stop	11.8 (B)	23.2 (C)
24. Hood-Franklin Road/I-5 Southbound Ramps	Side-street Stop	9.0 (A)	9.2 (A)
25. Hood-Franklin Road/I-5 Northbound Ramps	Side-street Stop	8.9 (A)	9.2 (A)
26. Hood-Franklin Road/Franklin Boulevard	Side-street Stop	10.4 (B)	9.7 (A)
27. Bilby Road/Franklin Boulevard	Side-street Stop	10.8 (B)	10.2 (B)
28. Bilby Road/Bruceville Road	Side-street Stop	9.2 (A)	9.7 (A)
29. Kammerer Road/Bruceville Road	Side-street Stop	9.2 (A)	9.2 (A)
30. Kammerer Road/West Stockton Boulevard	Side-street Stop	9.1 (A)	9.2 (A)
31. SR 99 Southbound Ramps/West Stockton Boulevard	Side-street Stop	16.4 (C)	34.6 (D)
32. Grant Line Road/West Stockton Boulevard	Side-street Stop	> 50.0 (F)	> 50.0 (F)
33. Grant Line Road/East Stockton Boulevard	All-way Stop	36.6 (E)	> 50.0 (F)
34. SR 99 Northbound Ramps/East Stockton Boulevard	Side-street Stop	28.7 (D)	> 50.0 (F)
35. Grant Line Road/Waterman Road	Side-street Stop	13.8 (A)	13.7 (B)
36. Grant Line Road/Bradshaw Road	Side-street Stop	10.9 (A)	11.2 (B)

Notes: <sup>1</sup> Intersection located at Grant Line Road.

Bolded areas indicate deficient operations under existing conditions.

Source: Fehr & Peers, 2003

## 4.2 TRANSPORTATION AND CIRCULATION

### Freeway Mainline Segments

**Table 4.2-9** presents the LOS under existing conditions on the freeway mainline sections based on the 2000 HCM methodology presented in **Table 4.2-5**. All mainline sections operate at LOS D or better during the a.m. and p.m. peak hours under existing conditions.

**TABLE 4.2-9  
FREEWAY MAINLINE LEVEL OF SERVICE AND DENSITY – EXISTING CONDITIONS**

Freeway Mainline	AM Peak		PM Peak	
	Density <sup>1</sup>	LOS <sup>2</sup>	Density	LOS
SR-99 Northbound (north of Laguna Blvd.)	18.1	C	18.7	C
SR-99 Southbound (north of Laguna Blvd.)	12.6	B	22.4	C
SR-99 Northbound (north of Elk Grove Blvd.)	13.4	B	14.2	B
SR-99 Southbound (north of Elk Grove Blvd.)	9.9	A	16.8	C
SR-99 Northbound (south of Elk Grove Blvd.)	16.1	B	15.4	B
SR-99 Southbound (south of Elk Grove Blvd.)	9.8	A	18.8	C
SR-99 Northbound (south of Grant Line Rd.)	18.8	C	17.6	C
SR-99 Southbound (south of Grant Line Rd.)	11.2	B	21.6	C
I-5 Northbound (south of Hood Franklin Rd.)	13.0	B	24.9	D
I-5 Southbound (south of Hood Franklin Rd.)	12.2	B	17.7	C
I-5 Northbound (north of Hood Franklin Rd.)	13.4	B	25.0	D
I-5 Southbound (north of Hood Franklin Rd.)	12.4	B	18.0	C
I-5 Northbound (north of Elk Grove Blvd.)	21.2	C	26.7	D
I-5 Southbound (north of Elk Grove Blvd.)	9.2	A	16.8	C
I-5 Northbound (north of Laguna Blvd.)	27.3	D	16.9	C
I-5 Southbound (north of Laguna Blvd.)	11.9	B	25.3	D

Note: <sup>1</sup> Density in passenger cars per mile per lane.

<sup>2</sup> Level of Service calculations based on the 2000 Highway Capacity Manual (HCM) Procedures.

Source: Fehr & Peers Associates, Inc., 2003

### Freeway Ramps

The freeway ramp junctions were analyzed using the 2000 HCM methodology. The results of the analysis are presented in **Table 4.2-10** below. **Table 4.2-10** shows that all ramp junctions operate at LOS D or better during the a.m. and p.m. peak hours.

## 4.2 TRANSPORTATION AND CIRCULATION

TABLE 4.2-10  
 FREEWAY RAMP JUNCTION LEVEL OF SERVICE – EXISTING CONDITIONS

Freeway Ramp Junction	AM Peak		PM Peak	
	Density <sup>1</sup>	LOS <sup>2</sup>	Density	LOS
Laguna Blvd./SR-99 Northbound Off-ramp	26.3	C	26.3	C
Laguna Blvd./SR-99 Northbound Loop On-ramp	30.7	D	27.9	C
Laguna Blvd./SR-99 Northbound On-ramp	33.7	D	31.1	D
Laguna Blvd./SR-99 Southbound Off-ramp	4.0	A	8.9	A
Laguna Blvd./SR-99 Southbound Loop On-ramp	15.0	B	22.5	C
Laguna Blvd./SR-99 Southbound On-ramp	15.4	B	24.1	C
Elk Grove Blvd./SR-99 Northbound Off-Ramp	17.6	B	17.1	B
Elk Grove Blvd./SR-99 Northbound On-Ramp	18.9	B	19.7	B
Elk Grove Blvd./SR-99 Southbound Off-Ramp	8.5	A	13.7	B
Elk Grove Blvd./SR-99 Southbound On-Ramp	9.9	A	17.4	B
Grant Line Rd./SR-99 Northbound Off-Ramp	23.5	C	22.1	C
Grant Line Rd./SR-99 Northbound On-Ramp	20.6	C	19.9	B
Grant Line Rd./SR-99 Southbound Off-Ramp	13.4	B	23.5	C
Grant Line Rd./SR-99 Southbound On-Ramp	15.3	B	25.7	C
Laguna Blvd./ I-5 Northbound Off-Ramp	28.2	D	31.9	D
Laguna Blvd./ I-5 Northbound On-Ramp	34.9	D	20.6	C
Laguna Blvd./ I-5 Southbound Off-Ramp	18.9	B	34.5	D
Laguna Blvd./ I-5 Southbound Loop On-Ramp	11.8	B	18.0	B
Elk Grove Blvd./I-5 Northbound Off-Ramp	19.3	B	30.8	D
Elk Grove Blvd./I-5 Northbound On-Ramp	23.3	C	27.4	C
Elk Grove Blvd./I-5 Southbound Off-Ramp	19.3	B	31.1	D
Elk Grove Blvd./I-5 Southbound Loop On-Ramp	15.5	B	20.0	B
Hood Franklin Rd./I-5 Northbound Off-Ramp	18.3	B	30.2	D
Hood Franklin Rd./I-5 Northbound Loop On-Ramp	17.8	B	28.4	D
Hood Franklin Rd./I-5 Northbound On-Ramp	16.8	B	27.3	C
Hood Franklin Rd./I-5 Southbound Off-Ramp	17.6	B	19.9	B
Hood Franklin Rd./I-5 Southbound Loop On-Ramp	16.8	B	21.1	C
Hood Franklin Rd./I-5 Southbound On-Ramp	15.6	B	19.9	B

Notes: <sup>1</sup> Density in passenger cars per mile per lane.

<sup>2</sup> Level of Service calculations based on the 2000 Highway Capacity Manual (HCM) Procedures.

Source: Fehr & Peers Associates, Inc., 2003

### TRANSIT SYSTEM

In the greater Sacramento area, including the City of Elk Grove, transit service is provided by Regional Transit (RT). The plan area lies on the outskirts of the urbanized Sacramento area and existing transit service in the plan area is limited. **Figure 4.2-5** shows the routing of existing transit lines within the study area. The nearest service adjacent to the Laguna Ridge Specific Plan area is provided by fixed bus routes (Route 52, 56 and 60) that travel on Elk Grove Boulevard and East Stockton Boulevard. Evening and weekend service is not provided.

RT is extending Light Rail Transit Service (LRT) from downtown Sacramento to Elk Grove. The South Line extension is a two-phase project. The first phase of the South Line extension is a 6.3-mile extension from downtown Sacramento to Meadowview Road. Service is expected to begin in September 2003. Phase 2 will extend LRT from Meadowview Road to Calvine Road at Auberry Road. The Phase 2 extension is currently being studied with service projected to begin in 2006. **Figure 4.2-6** illustrates the proposed Phase 2 alignment and station locations. Additional extensions south into the City are being considered west of SR 99 with potential service to the plan area.

### Bicycle/Pedestrian Facilities

Bicycle and pedestrian trips account for approximately 2.6 percent of all work trips and 4.6 percent of all non-work trips made by residents and employees in suburban areas. This estimate is from the *Pre-Census Travel Behavior Report Analysis of the 2000 SACOG Household Travel Survey*, July 2001. Non-work trips include those to go shopping, drop off or pick up a child at school, or trips to visit a friend or relative.

The California Department of Transportation, *Highway Design Manual* (HDM) Fourth Edition, describes three categories of bikeways:

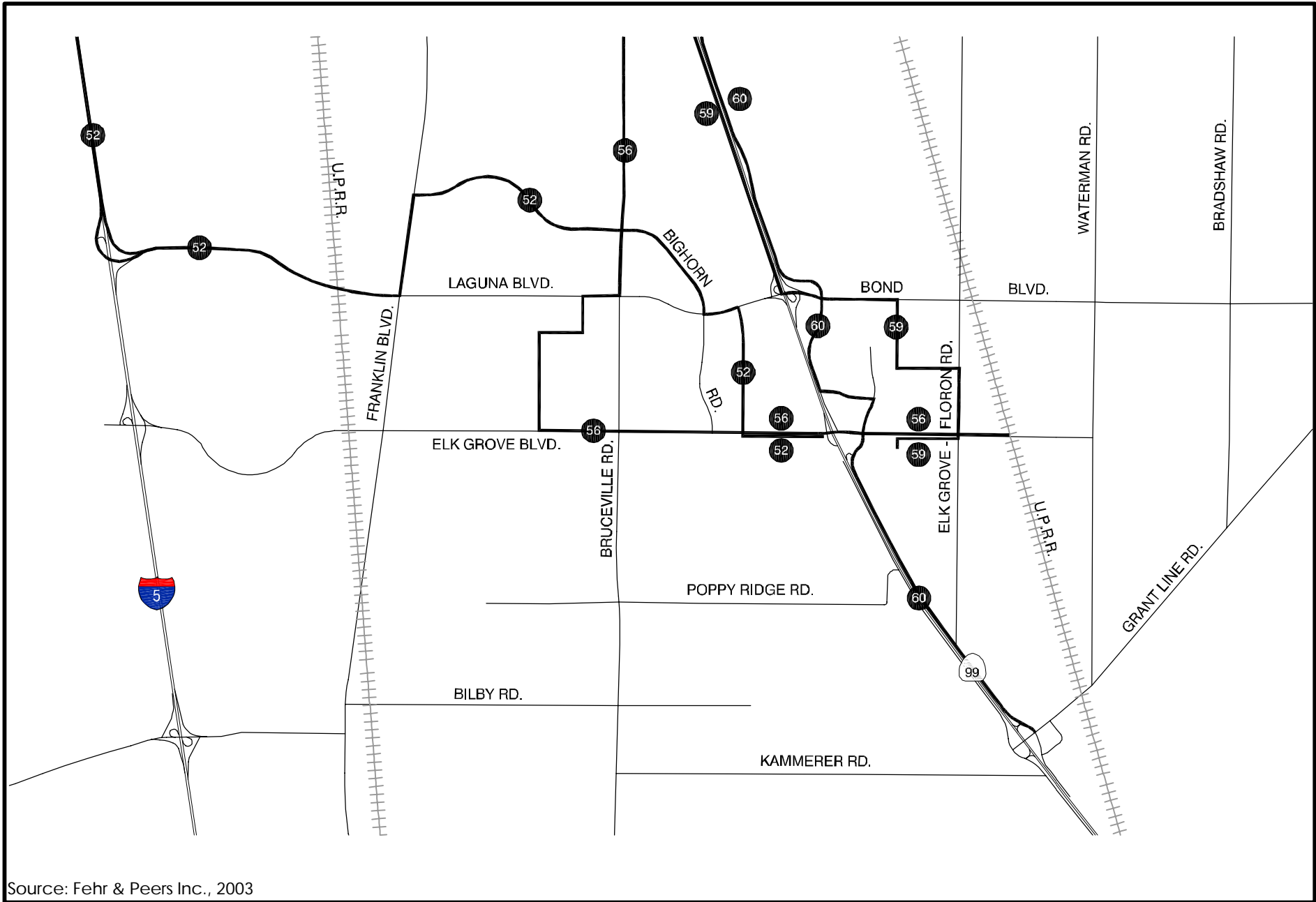
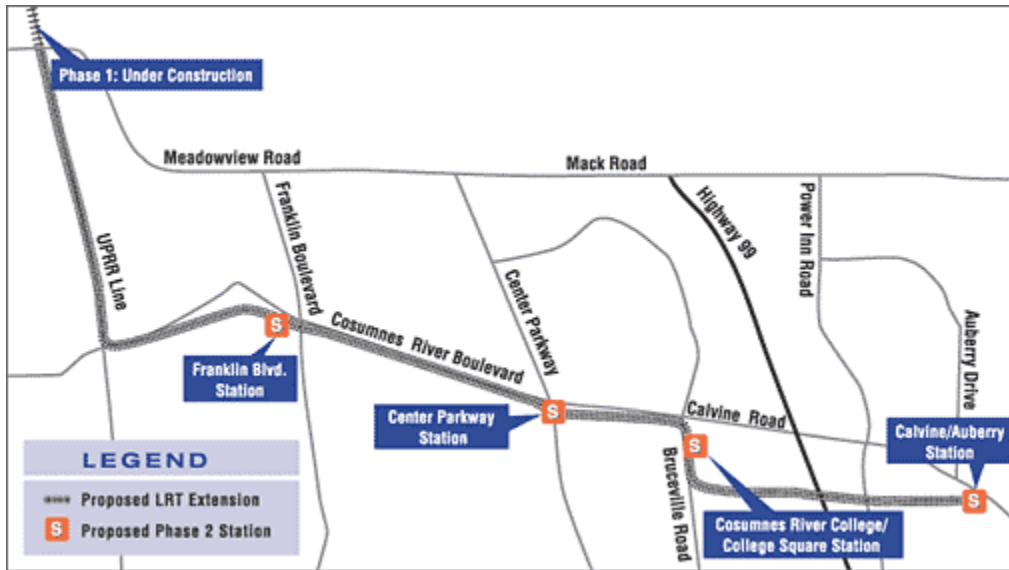


Figure 4.2-5  
Existing Transit Routes

FIGURE 4.2-6  
PROPOSED REGIONAL TRANSIT LIGHT RAIL SERVICE



Source: Fehr & Peers, 2003

Class I Bike Path - Completely separated right-of way for the exclusive use of bicycles and pedestrians with minimal crossflow;

- Class II Bike Lane - Six inch (6") striped lane for one-way bike travel on a street or highway;
- Class III Bike Route - Shared use with pedestrian and motor vehicle traffic, typically identified by signage.

Adjacent to the plan area, bicycling and walking activities rely heavily on the existing roadway system. Existing bicycle and pedestrian facilities adjacent to the plan area are summarized below.

- Elk Grove Boulevard - Elk Grove Boulevard has a Class III bike route on the north and south side. There are no continuous pedestrian facilities on Elk Grove Boulevard adjacent to the plan area.
- Bruceville Road - Bruceville Road between Poppy Ridge Road and Elk Grove Boulevard has Class II bike lanes. There are no continuous pedestrian facilities on Bruceville Road south of Elk Grove Boulevard.
- Poppy Ridge Road - Poppy Ridge Road west of Bruceville Road has Class II bike lanes that extend to Franklin High School. Pedestrian sidewalks are under construction on this segment of Poppy Ridge Road.

## 4.2 TRANSPORTATION AND CIRCULATION

### 4.2.2 REGULATORY FRAMEWORK

#### LAGUNA SOUTH PUBLIC FACILITIES FEE PROGRAM

The Laguna South Public Facilities Fee Program (LSPFFP) was adopted by the City of Elk Grove on July 11, 2001 and is intended to establish development fees for approved and future development projects generally located south of Elk Grove Boulevard, between Franklin Boulevard and State Route 99 (Laguna South area). The LSPFFP establishes the “fair-share” of costs for public infrastructure improvements needed to serve development within the Laguna South area. The proposed Laguna Ridge Specific Plan is located within the Laguna South area and would be added to the LSPFFP if approved.

#### CITY OF ELK GROVE DRAFT GENERAL PLAN

**Table 4.2-11** identifies the Draft General Plan Circulation Element policies that are directly applicable to the proposed project, and presents an evaluation of the consistency of the project with these statements as required by CEQA. The final authority for interpretation of these policy statements, and determination of the project’s consistency with the policies rests with the City Council.

**TABLE 4.2-11  
GENERAL PLAN CIRCULATION ELEMENT POLICY CONSISTENCY**

General Plan Policies	Consistency with General Plan	Analysis
<p><b>Policy CI-3</b> Specific Plans, Special Planning Areas, and development projects shall be designed to promote pedestrian movement through direct, safe, and pleasant routes that connect destinations inside and outside the plan or project area.</p>	<p>Yes</p>	<p>The proposed circulation system includes sidewalks and pedestrian walkways within the Plan area and connects the pedestrian facilities with existing sidewalks adjacent the Plan area. Separated sidewalks are provided along all arterial and primary residential streets within the Plan Area. The Plan area also allows for a future potential connection/freeway over-crossing to Elk Grove Regional Park east of Highway 99.</p> <p>Residents of the Plan area development would be able to walk to various neighborhood-serving amenities, including recreational and commercial uses, within the project. The project would also provide elementary, junior, and high schools within walking or cycling distance of the residents within the Plan area.</p>
<p><b>Policy CI-4</b> The City shall encourage the use of transportation alternatives</p>	<p>Yes</p>	<p>The project is planned to accommodate alternative modes of transportation including public transit and alternative vehicles. The provision of bus turnouts, benches, and bus</p>



## 4.2 TRANSPORTATION AND CIRCULATION

General Plan Policies	Consistency with General Plan	Analysis
which reduce the use of personal motor vehicles.		provision of bus turnouts, benches, and bus shelters in areas planned for bus service. Street designs within the Plan area include adequate travel lanes and a striped bicycle lane. Wide streets are conducive to speeding and are not pedestrian friendly.
<p><b>Policy CI-8</b></p> <p>Light rail service in Elk Grove should be designed to serve major development centers and the regional mall at Kammerer Road/Hwy 99. The City of Elk Grove encourages the development of light rail which will bring workers and shoppers to Elk Grove, while also serving as part of a coordinated, regional transportation network.</p>	Yes, with mitigation	The project proposes sufficient width in Bruceville Road to accommodate future light rail service. The project would be conditioned to provide right-of-way for future service along either Big Horn Boulevard or Bruceville Road. This service would serve the Laguna Ridge Specific Plan and could ultimately be extended to serve the regional mall at Kammerer Road/SR 99. Implementation of the proposed project would not conflict with this policy.
<p><b>Policy CI-9</b></p> <p>The City shall implement the roadway master plan shown in Figure CI-2.</p>	Yes	The roadways improvements depicted in the roadway master plan are consistent with the roadways planned for the project. The project would develop roadways internal to the project and would pay its fair-share for improvements to the Elk Grove Boulevard, Bruceville Road, and SR 99 segments adjoining the Plan area.
<p><b>Policy CI-10</b></p> <p>The City shall require that all roadways in Elk Grove operate at a minimum Level of Service "D" at all times in urban areas and Level of Service "C" at all times in rural areas.</p> <p><b>CEQA Threshold:</b> Any development which causes or contributes to these level of service standards being exceeded shall be considered to have a significant, adverse environmental impact.</p> <p>"Urban" areas shall include all</p>	No	The operation of roadway segments, intersections, freeway ramps, and freeway segments is analyzed in this EIR. Implementation of the mitigation measures identified in this section would mitigate project and cumulative traffic impacts to most local roadways addressed by Policy CI-10 to acceptable LOS. However, additional right-of-way is required to provide an acceptable LOS on Elk Grove Boulevard from Bruceville Road to Auto Center Drive, on Elk Grove Boulevard from East Stockton Boulevard to Elk Grove-Florin Road, the Elk Grove Boulevard/Elk Grove-Florin Road intersection, on Laguna Boulevard from Bruceville Road to SR 99, on Bruceville Road

## 4.2 TRANSPORTATION AND CIRCULATION

General Plan Policies	Consistency with General Plan	Analysis
<p>areas in which the predominant planned land use as shown on the Land Use Policy Map includes any of the following:</p> <ul style="list-style-type: none"> <li>• Any commercial, office, or industrial land use category</li> <li>• The “low density” residential category and any more intensive residential land use category</li> <li>• The East Franklin Policy Area</li> <li>• The Laguna Ridge Policy Area</li> <li>• The East Elk Grove Policy Area</li> </ul> <p><i>Please see the Land Use Element of this General Plan for the location of these land use categories and policy areas.</i></p> <p>“Rural” areas shall include all areas in which the predominant land use as shown on the Land Use Policy Map includes any of the following:</p> <ul style="list-style-type: none"> <li>• The “rural residential” or “estate residential” land use categories</li> <li>• Any agricultural or open space land use category</li> </ul> <p>New development which results in levels of service which are worse than these standards shall not be approved unless traffic impacts are mitigated or fees paid in accordance with this policy.</p> <p>Mitigation shall be completed before the payment of fees shall be permitted, and may be in the form of:</p> <p>1) <u>Capacity improvements to</u></p>		<p>north of Laguna Boulevard, and the Elk Grove Boulevard/East Stockton Boulevard intersection; without the additional right-of-way these intersections would operate at an unacceptable LOS. In addition, even with implementation of mitigation measures, the Elk Grove Boulevard/West Laguna Springs Drive, Elk Grove Boulevard/Auto Center Drive, Elk Grove Boulevard/SR 99 southbound ramps, Elk Grove Boulevard/East Stockton, and Elk Grove-Florin Road/East Stockton Boulevard intersections would continue to operate deficiently.</p>

4.2 TRANSPORTATION AND CIRCULATION

General Plan Policies	Consistency with General Plan	Analysis
<p>either the roadway system, the transit system, or both, or</p> <p>2) <u>Demand reduction measures</u> included in the project design, or operation, or both.</p> <p>If mitigation to achieve the level of service levels cannot be achieved through the methods shown above, the City may require the payment of traffic impact fees which could be used for roadway or other transit-related purposes, such as alternative modes of transportation.</p>		
<p><b>Policy CI-11</b></p> <p>Mitigation which includes capacity improvements (such as new roadway construction or widening) shall provide for the completion of all ultimate improvements in a single phase prior to the operation of the project for which the improvements were constructed.</p>	<p>Yes</p>	<p>Mitigation measures included in this section require the construction of all necessary improvements prior to the deficient operation of roadway segments and intersections, where the City of Elk Grove is the lead agency for the improvements.</p>
<p><b>Policy CI-13</b></p> <p>To the extent possible, major traffic routes for residential areas should be separate from those used by the city's industrial areas, with the purpose of avoiding traffic conflicts and potential safety problems.</p>	<p>Yes</p>	<p>The proposed project would not rely on traffic routes that serve the City's industrial areas and does not propose any arterials planned to serve residential and industrial areas.</p>
<p><b>Policy CI-15</b></p> <p>The City shall discourage the creation of private roadways unless the roadways are:</p> <p>1) Constructed to public roadway standards, or</p> <p>2) Are used in an affordable residential development.</p>	<p>Yes</p>	<p>The proposed project does not currently propose any private roadways.</p>

## 4.2 TRANSPORTATION AND CIRCULATION

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### 4.2.3 PROJECT IMPACTS AND MITIGATION MEASURES

#### THRESHOLDS OF SIGNIFICANCE

Thresholds for roadway segments including operation and substandard cross-section deficiencies; signalized and unsignalized intersection deficiencies; freeway and ramp deficiencies; transit deficiencies; and bicycle and pedestrian deficiencies are addressed above under evaluation criteria. Based on these thresholds, a project could have a significant impact when it would:

- Degrade roadway segment operations from LOS D or better to LOS E or worse or if deficient conditions are exacerbated by increasing the V/C ratio by 0.05 or more.
- Degrade signalized intersection operations from LOS D or better to LOS E or worse, or if deficient conditions are exacerbated by adding five (5) or more seconds to the average control delay.
- Degrade unsignalized intersection operations from LOS D or better to LOS E or worse. For locations operating at LOS E or worse without the project, a project impact is identified if the addition of project traffic increases average total delay by five (5) seconds or more.
- Result in an operational deficiency if the addition of project traffic degrades freeway mainline operations from LOS D or better to LOS E or F, or if the addition of project traffic exacerbates operations on a freeway segment already operating at LOS E or F.
- Result in an operational deficiency if implementation of the project degrades freeway ramp junction operation from LOS D or better to LOS E or F.
- Disrupt, interfere or conflict with existing or planned transit service and facilities.
- Disrupt or interfere with existing or planned bicycle facilities depicted in the Draft General Plan.

#### METHODOLOGY

Methodology for forecasting travel demands for the Plan area and evaluating project impacts for study intersections, roadway segments, freeways, transit facilities, and bicycle/pedestrian facilities were derived primarily from the City's Traffic Impact Analysis Guidelines, Draft General Plan standards, and standards identified in the Route Concept Reports for Caltrans facilities. The standards of significance for project impacts are described above while the methodology is described below.

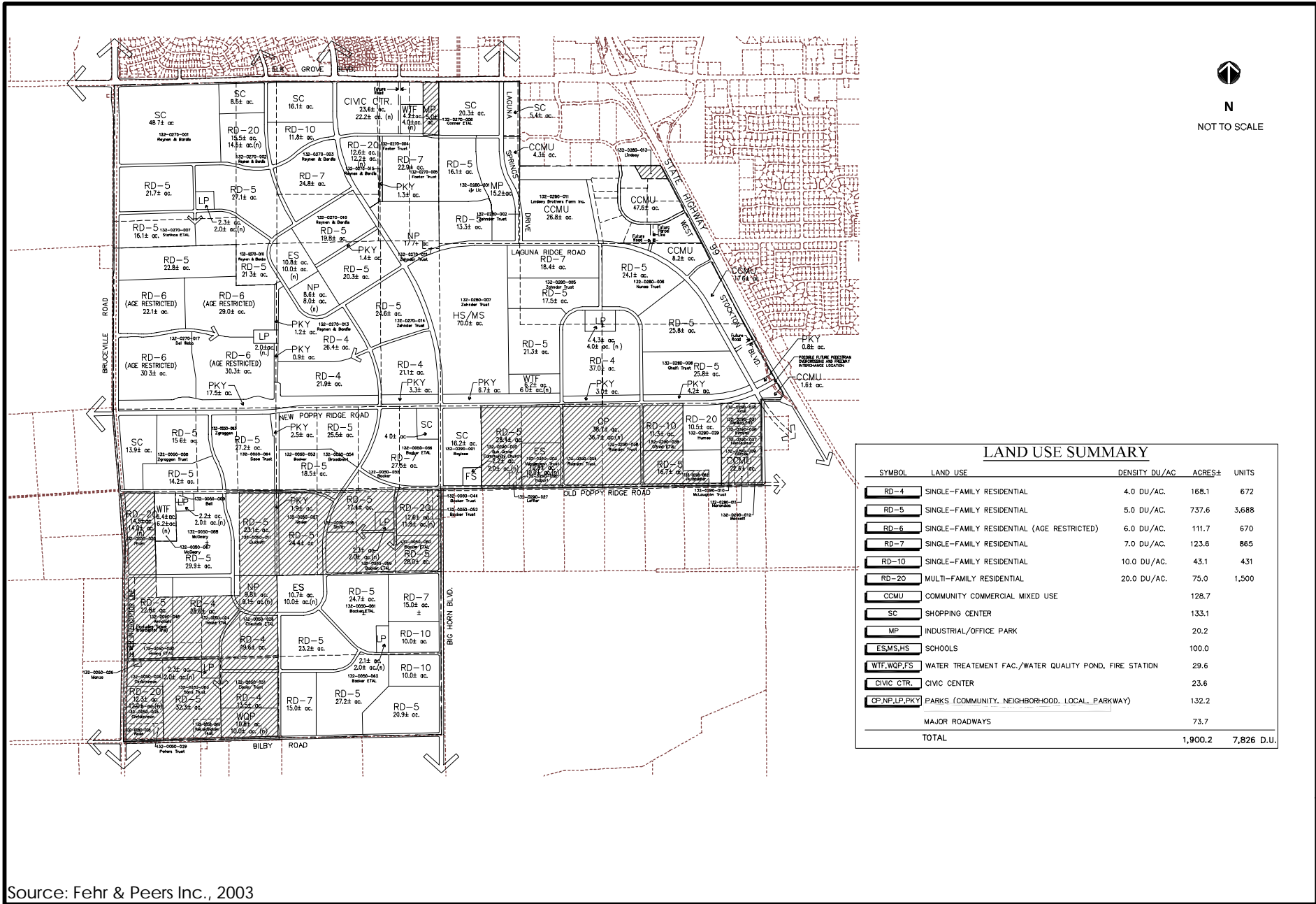
#### Proposed Land Uses and Plan Roadway System

**Table 4.2-12** depicts the proposed land uses associated with the Laguna Ridge Specific Plan and the dwelling units projected for the residential uses. **Figure 4.2-7** shows the proposed Plan area roadway network and summarizes proposed land uses. The Plan area encompasses approximately 1,900 acres and would include up to 7,826 dwelling units. The acreage and dwelling units shown in **Table 4.2-12** are the basis for the traffic impact analysis performed by Fehr & Peers Associates (see **Appendix 4.2**).

## 4.2 TRANSPORTATION AND CIRCULATION

**TABLE 4.2-12  
PROPOSED LAND USE PLAN SUMMARY**

Land Use	Acres	Dwelling Units
Single-Family – 4.0 du/acre	168.1	672
Single-Family – 5.0 du/acre	737.6	3,688
Single-Family – 6.0 du/acre (age restricted)	111.7	670
Single-Family – 7.0 du/acre	123.6	865
Single-Family – 10.0 du/acre	43.1	431
Multi-Family – 20.0 du/acre	75.0	1,500
Community Commercial Mixed Use	128.7	-
Shopping Center	133.1	-
Industrial/Office Park	20.2	-
Schools (ES/MS/HS)	100.0	-
Water Facilities/Fire Station	29.6	-
Civic Center	23.6	-
Parks	132.2	-
Arterial Roadways	73.7	-
<b>Total</b>	<b>1900.2</b>	<b>7,826</b>



### TRAVEL DEMAND FORECASTS

Impacts to the roadway system under existing plus project and cumulative (year 2025) conditions were determined by forecasting the increase in peak hour traffic volumes that would occur with implementation of the proposed project. The 2001 version of the SACMET regional travel demand forecasting (TDF) model was used to develop daily, a.m. peak hour, and p.m. peak hour traffic volume forecasts for the study roadways and intersections. This version of the SACMET TDF model was used in the development of the Sacramento region's Metropolitan Transportation Plan (MTP) for 2025 *A Bold First Step for Mobility in the Sacramento Region*. For this study, the model was used to generate peak hour traffic volume forecasts for the following scenarios.

- Existing (2001 Base Year) Plus Project Conditions - This scenario assumes build-out of the Laguna Ridge Specific Plan.
- Year 2025 No Project Conditions - This scenario assumes year 2025 levels of development regionally (consistent with the 2025 MTP). Specific developments assumed in this scenario include build-out of the East Franklin Specific Plan, the East Elk Grove Specific Plan, the Lent Ranch Marketplace, the South Pointe development, and the urban development north of Kammerer Road south of the proposed Laguna Ridge Specific Plan area.
- Year 2025 Cumulative Conditions - This scenario assumes build-out of the Laguna Ridge Specific Plan and year 2025 levels of development regionally (consistent with the 2025 MTP). Specific developments assumed in this scenario include build-out of the East Franklin Specific Plan, the East Elk Grove Specific Plan, the Lent Ranch Marketplace, the South Pointe development, and the urban development north of Kammerer Road south of the proposed Laguna Ridge Specific Plan area.

Before the TDF model could be used for this study, the land use and roadway network components of the model were modified to accurately reflect each scenario.

#### Land Use Modifications

The land use modifications consisted of adding new traffic analysis zones (TAZs) to the model and disaggregating the project's land uses into these zones. **Figure 4.2-8** shows the proposed project TAZ system boundaries and corresponding specific plan land use.

#### Roadway Network Modifications

Roadway network changes included adding new roads in the project area and creating new connections to the existing and planned roadway systems under existing (2001) and cumulative (2025) conditions.

Specific modifications included adding traffic analysis zone (TAZ) and roadway network detail to the traffic model to provide more accurate loading of vehicle trips on the transportation network. For the cumulative (2025) traffic model, detail was added to reflect new (proposed) development in the East Franklin Specific Plan, the East Elk Grove Specific Plan, the Lent Ranch Marketplace, the South Pointe development, and the urban development north of Kammerer Road south of the proposed Laguna Ridge Specific Plan area.

## 4.2 TRANSPORTATION AND CIRCULATION

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Regional and local roadway improvements are consistent with Tier 1 improvements included in the MTP for 2025. Roadway improvements included in the City’s General Plan were not assumed in the 2025 roadway network use in this analysis (e.g., Bruceville Road is identified as a six-lane facility in the *General Plan*, but only a four-lane facility in the MTP). Consequently, project impacts identified in this study may be over-stated if roadway improvements included in the *General Plan* are built. A summary of the MTP Tier 1 improvements is contained in **Appendix 4.2**.

### Vehicle-Trip Generation Estimates

After the changes described above were completed, the TDF model was run for each analysis scenario. **Table 4.2-13** summarizes the final a.m. peak hour, p.m. peak hour, and daily vehicle-trip estimates for the Specific Plan with build-out of the specific plan land uses.

**TABLE 4.2-13  
PROPOSED PROJECT VEHICLE-TRIP GENERATION SUMMARY**

Total Vehicle Trips <sup>1</sup>		
A.M. Peak Hour	P.M. Peak Hour	Daily
15,600	17,900	189,400

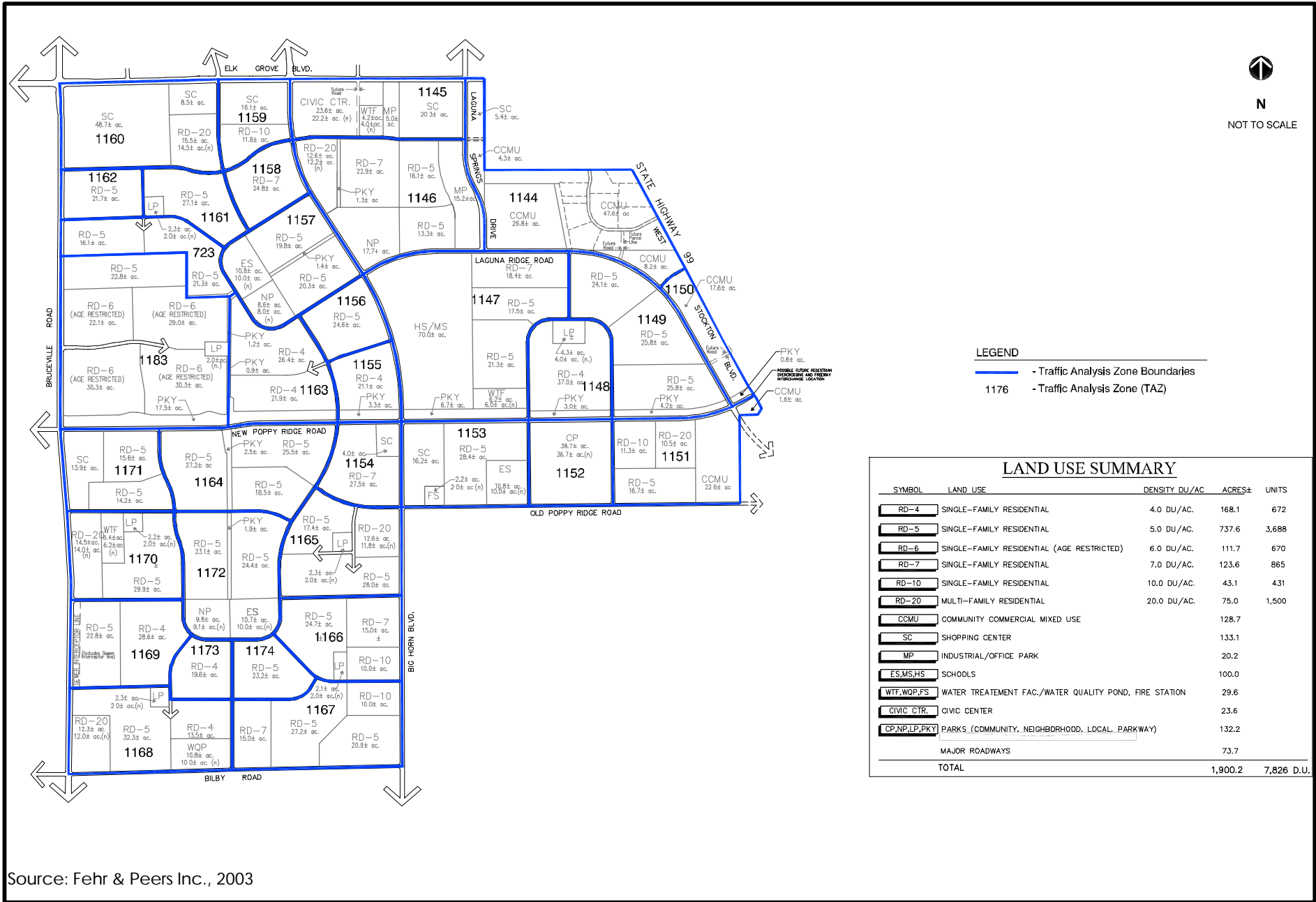
*Notes: <sup>1</sup>Trip summary based on 2001 Version of the SACMET TDF Model. Represents total vehicle trips assigned to the traffic model roadway network and not trips internal to a TAZ.*

*Source: Fehr & Peers Associates, Inc., 2003.*

**Table 4.2-13** shows that the proposed Laguna Ridge Specific Plan would generate about 189,400 vehicle trips per day with 9.5 percent occurring in the p.m. peak hour.

After calculating the final vehicle-trip estimates, the SACMET TDF model produces traffic volume forecasts for roadway segments and intersection turning movements under a.m. peak hour, p.m.





**LEGEND**

— Traffic Analysis Zone Boundaries

1176 - Traffic Analysis Zone (TAZ)

LAND USE SUMMARY				
SYMBOL	LAND USE	DENSITY DU/AC	ACRES±	UNITS
RD-4	SINGLE-FAMILY RESIDENTIAL	4.0 DU/AC.	168.1	672
RD-5	SINGLE-FAMILY RESIDENTIAL	5.0 DU/AC.	737.6	3,688
RD-6	SINGLE-FAMILY RESIDENTIAL (AGE RESTRICTED)	6.0 DU/AC.	111.7	670
RD-7	SINGLE-FAMILY RESIDENTIAL	7.0 DU/AC.	123.6	865
RD-10	SINGLE-FAMILY RESIDENTIAL	10.0 DU/AC.	43.1	431
RD-20	MULTI-FAMILY RESIDENTIAL	20.0 DU/AC.	75.0	1,500
CCMU	COMMUNITY COMMERCIAL MIXED USE		128.7	
SC	SHOPPING CENTER		133.1	
MP	INDUSTRIAL/OFFICE PARK		20.2	
ES,MS,HS	SCHOOLS		100.0	
WTF,WQP,FS	WATER TREATMENT FAC./WATER QUALITY POND, FIRE STATION		29.6	
CIVIC CTR.	CIVIC CENTER		23.6	
CP,NP,LP,PKY	PARKS (COMMUNITY, NEIGHBORHOOD, LOCAL, PARKWAY)		132.2	
	MAJOR ROADWAYS		73.7	
<b>TOTAL</b>			<b>1,900.2</b>	<b>7,826 D.U.</b>



## 4.2 TRANSPORTATION AND CIRCULATION

peak hour, and daily conditions. The discussion below describes this final step in the travel demand forecasting process.

### Intersection Turning Movement Forecasts

The TDF model was used to generate the initial a.m. and p.m. peak hour turning movement forecasts for the study intersections under each of the analysis scenarios listed above. These forecasts were adjusted in a separate refinement process to minimize the potential for model error. The refinement process involved a straightforward adjustment to the forecasts by which the differences between base year and future year projections were calculated and then added to the existing turning movement counts. This adjustment process is used by transportation professionals to minimize model errors associated with initial differences between existing traffic counts and base year traffic volumes forecast by TDF models. The final adjusted a.m. and p.m. peak hour turning movement forecasts are shown in subsequent figures.

## PROJECT IMPACTS AND MITIGATION MEASURES

### Roadway System Operations

#### Existing Arterial Roadway Segments

**Impact 4.2.1** The projected daily volume on the existing sections of Elk Grove Boulevard from Bruceville Road to Auto Center Drive, Elk Grove Boulevard from East Stockton Boulevard to Elk Grove-Florin Road, Grant Line Road between SR 99 and Waterman Road, Poppy Ridge Road from Bruceville Road to West Stockton Boulevard, West Stockton Boulevard between Kammerer Road and Poppy Ridge Road, and West Stockton Boulevard from Poppy Ridge Road to the Auto Mall Access, with the development of Laguna Ridge Specific Plan would exceed the City's thresholds for roadway segment operations. This would result in a **significant** impact.

Daily traffic volumes projected with the development of the proposed project shown on **Figure 4.2-9** were compared to the capacity criteria for existing arterial roadway segments presented in **Tables 4.2-1** and **4.2-2**. This comparison reveals that the operation of several roadway segments would be deficient with the addition of project traffic. Each deficiency under existing plus project conditions is discussed below. **Table 4.2-14** summarizes the arterial roadway analysis. Portions of some of these roadways, including Poppy Ridge Road, West Stockton Boulevard, and Bruceville Road, border the Plan area and would be improved with development of the project.

**TABLE 4.2-14**  
**ARTERIAL ROADWAY LEVEL OF SERVICE - EXISTING PLUS PROJECT CONDITIONS**

Roadway Segment	Existing Conditions				Existing Plus Project Conditions			
	Lanes	Vol	V/C	LOS	Lanes	Vol	V/C	LOS
Laguna Blvd. - I-5 to Franklin Blvd.	6	28,400	0.53	A	6	28,800	0.53	A
Laguna Blvd. - Franklin Blvd. to Bruceville Rd.	6	35,600	0.66	B	6	38,500	0.71	C
Laguna Blvd. - Bruceville Rd. – SR-99	6	42,200	0.78	C	6	47,700	0.88	D

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Roadway Segment	Existing Conditions				Existing Plus Project Conditions			
	Lanes	Vol	V/C	LOS	Lanes	Vol	V/C	LOS
Elk Grove Blvd. - I-5 to Franklin Blvd.	5 <sup>2</sup>	14,200	0.32	A	5	16,500	0.37	A
Elk Grove Blvd. - Franklin Blvd. to Bruceville Rd.	5	22,200	0.49	A	5	29,300	0.65	B
Elk Grove Blvd. – Bruceville Rd. to Auto Center Drive	5	30,000	0.67	B	5	45,300	1.01	<b>F</b>
Elk Grove Blvd. - E. Stockton Blvd. to Elk Grove-Florin Rd.	4	35,300	0.98	E	4	41,600	1.16	<b>F</b>
Elk Grove Blvd. - Elk Grove-Florin Rd. to Waterman Rd.	2	5,600	0.31	A	2	6,100	0.34	A
Elk Grove Blvd. - Waterman Rd. to Grant Line Rd.	2	5,600	0.31	A	2	5,500	0.31	A
Hood Franklin Rd. - I-5 to Franklin Blvd.	2	1,800	0.10	A	2	3,100	0.17	A
Bilby Rd. - Franklin Blvd. to Bruceville Rd. <sup>1</sup>	2	1,100	0.06	A	2	4,000	0.22	C
Kammerer Rd. – Bruceville Rd. to SR 99 <sup>1</sup>	2	1,100	0.06	A	2	1,600	0.09	B
Grant Line Rd. – SR 99 to Waterman Rd.	2	14,200	0.79	C	2	17,100	0.95	<b>E</b>
Grant Line Rd. – Waterman Rd. to Bradshaw Rd.	2	10,000	0.56	A	2	11,400	0.63	A
Franklin Blvd. – Hood Franklin Rd. to Bilby Rd.	2	2,200	0.12	A	2	4,800	0.27	A
Franklin Blvd. - Bilby Rd. to Elk Grove Blvd.	2	3,300	0.18	A	2	3,600	0.20	A
Franklin Blvd. - Elk Grove Blvd. to Laguna Blvd	4	13,600	0.38	A	4	13,600	0.38	A
Franklin Blvd. - North of Laguna Blvd.	4	25,600	0.71	C	5	25,600	0.71	B
Big Horn Rd. - Franklin Blvd. to Bruceville	4	10,000	0.28	A	4	10,300	0.29	A
Bruceville Rd. - Bilby Rd. to Poppy Ridge Rd. <sup>1</sup>	2	1,100	0.06	A	4	5,100	0.28	A
Bruceville Rd. - Poppy Ridge Rd. to Elk Grove Blvd.	2	3,300	0.18	A	4	14,700	0.82	A
Bruceville Rd. - Elk Grove Blvd. to Laguna Blvd.	4	15,400	0.43	A	4	30,300	0.84	D
Bruceville Rd. - North of Laguna Blvd.	4	16,700	0.46	A	4	20,700	0.58	A
Poppy Ridge Rd. – Bruceville Rd. to W. Stockton Blvd. <sup>1</sup>	2	300	0.03	A	2	8,900	0.81	<b>E</b>
W. Stockton Blvd. – Kammerer Rd. to Poppy Ridge Rd. <sup>1</sup>	2	5,600	0.51	D	2	8,900	0.81	<b>E</b>
W. Stockton Blvd. – Poppy Ridge Rd. to Auto Mall Access <sup>1</sup>	2	4,400	0.51	D	2	8,000	0.73	<b>E</b>
W. Stockton Blvd. – Auto Mall Access to Elk Grove Blvd.	2	4,400	0.40	A	2	3,500	0.19	A

Notes: <sup>1</sup> Roadway segment was analyzed using the level of service criteria for rural two-lane roadways with substandard cross-sections, summarized in Table 2.

<sup>2</sup> The capacity of a 5-lane roadway is 45,000 vehicles per day.

*Bolded areas indicate project deficiency.*

Source: Fehr & Peers, 2003

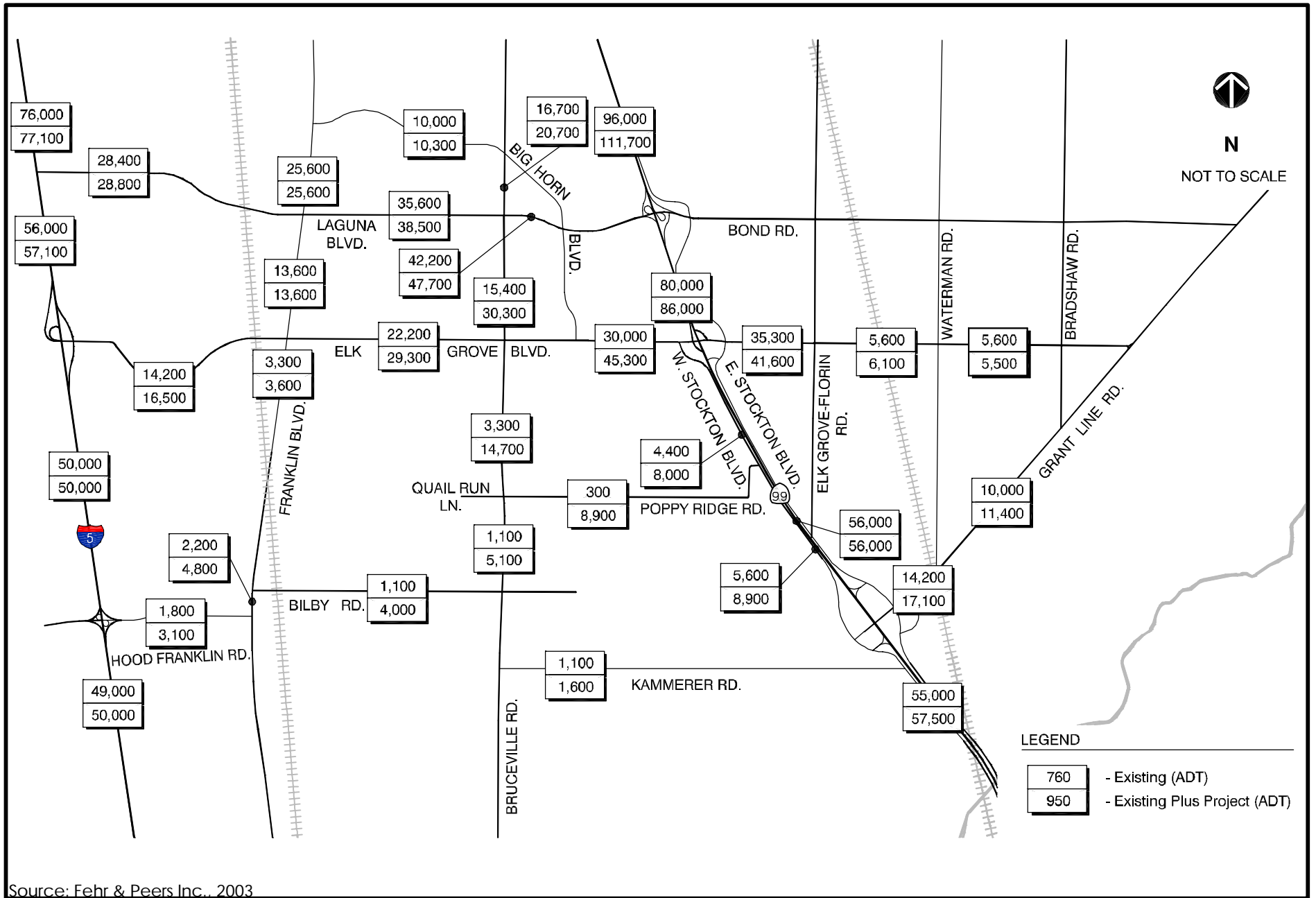


Figure 4.2-9  
Average Daily Traffic Volumes-  
Existing Plus Project Conditions

## 4.2 TRANSPORTATION AND CIRCULATION

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As shown in **Table 4.2-14**, the following roadway segments would operate deficiently with the addition of the plan area traffic.

- Elk Grove Boulevard from Bruceville Road to Auto Center Drive would decline from LOS B to LOS F.
- Elk Grove Boulevard from East Stockton Boulevard to Elk Grove-Florin Road would drop from LOS E to LOS F.
- Grant Line Road from SR 99 to Waterman Road operations would decrease from LOS C to LOS E.
- Poppy Ridge Road between Bruceville Road and West Stockton Boulevard, currently operating at LOS A, would deteriorate to LOS E.
- West Stockton Boulevard from Kammerer Road to Poppy Ridge Road would go from LOS D to LOS E.
- West Stockton Boulevard between Poppy Ridge Road and Auto Mall Access would decline from LOS D to LOS E.

### Mitigation Measures

Mitigation measures are provided below for each roadway segment operating deficiently, as described above, with the implementation of the Laguna Ridge Specific Plan.

#### Elk Grove Blvd. – Bruceville Road to Auto Center Drive

**MM 4.2.1a** Elk Grove Boulevard shall be widened between Bruceville Road and Auto Center Drive to three lanes in each direction.

Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program to include this improvement and by the annexation of the Laguna Ridge Specific Plan into the LSPFFP. Project public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations and consistent with the Specific Plan's infrastructure phasing provisions.

*Timing/Implementation:* Prior to approval of subsequent development projects.

*Enforcement/Monitoring:* City of Elk Grove Development Services.

Implementation of the above improvement would provide sufficient capacity to accommodate the projected daily volume and would provide LOS D operation on Elk Grove Boulevard from Bruceville Road to Auto Center Drive. This improvement is not included in the Laguna South Public Facilities Fee Program, but is planned for in the Draft General Plan Circulation Diagram, and would require the acquisition of additional right-of-way. Environmental impacts associated with implementation of this mitigation measure include potential disturbance to special-status species that may use the vacant land on the south side of Elk Grove Boulevard for foraging or habitat along with temporary air quality, noise, traffic movement, and water quality impacts

## 4.2 TRANSPORTATION AND CIRCULATION

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associated with construction of the improvement. Implementation of this mitigation measure would reduce the impact to **less than significant**.

### Elk Grove Boulevard – East Stockton Boulevard to Elk Grove-Florin Road

**MM 4.2.1b** Elk Grove Boulevard between East Stockton Boulevard and Elk Grove-Florin Road shall be widened from two to three lanes in each direction.

If the additional right-of-way necessary for the improvement cannot be obtained, the project applicant shall pay their fair-share of the estimated cost of the improvement and cost of the right-of-way into the City's Traffic Impact Fund.

*Timing/Implementation:* Prior to approval of subsequent development projects.

*Enforcement/Monitoring:* City of Elk Grove Development Services.

This improvement would provide sufficient capacity to accommodate the projected daily volume and would provide LOS C operation on Elk Grove Boulevard from East Stockton Boulevard to Elk Grove-Florin Road. This improvement is not included in the Laguna South Public Facilities Fee Program and would require the acquisition of additional right-of-way, which would require relocation of existing businesses and uses along Elk Grove Boulevard. Therefore, this improvement is not considered to be feasible. If additional right-of-way is not available, than the LOS would remain at LOS F and the impact would be **significant and unavoidable**.

### Grant Line Road – SR 99 to Waterman Road

**MM 4.2.1c** Grant Line Road between SR 99 and Waterman Road shall be widened from one to two lanes in each direction.

Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the inclusion of this improvement in the LSPFFP and the annexation of the Laguna Ridge Specific Plan into the LSPFFP. Project and/or public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations.

*Timing/Implementation:* Prior to approval of subsequent development projects.

*Enforcement/Monitoring:* City of Elk Grove Development Services.

This improvement is not included in the Laguna South Public Facilities Fee Program, but is anticipated in the Draft General Plan Circulation Diagram. Environmental impacts associated with implementation of this mitigation measure include temporary air quality, noise, traffic movement, and water quality impacts associated with construction of the improvement. This improvement would provide sufficient capacity to provide LOS A operation and would result in a **less than significant** impact.

Poppy Ridge Road – Bruceville Road to West Stockton Boulevard

**MM 4.2.1d** Poppy Ridge Road between Bruceville Road and West Stockton Boulevard shall be reconstructed to provide 12-foot travel lanes and minimum 6-foot paved shoulder.

Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP. Project public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations and consistent with the Specific Plan’s infrastructure phasing provisions.

*Timing/Implementation:* Prior to approval of subsequent development projects.

*Enforcement/Monitoring:* City of Elk Grove Development Services.

This improvement is included in the Laguna South Public Facilities Fee Program and would not require additional right-of-way. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, traffic movement, and water quality impacts, disturbance to special-status species habitat or foraging area in the vicinity of the proposed improvement, and tree removal. This improvement would improve the substandard roadway cross-section and provide sufficient capacity to provide LOS A operation, resulting in a **less than significant** impact.

West Stockton Boulevard – Kammerer Road to Poppy Ridge Road

**MM 4.2.1e** West Stockton Boulevard between Kammerer Road and Poppy Ridge Road shall be reconstructed to provide 12-foot travel lanes and minimum 6-foot paved shoulder.

Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP. Project and/or public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations and consistent with the Specific Plan’s infrastructure phasing provisions.

*Timing/Implementation:* Prior to approval of subsequent development projects.

*Enforcement/Monitoring:* City of Elk Grove Development Services.

This improvement is included in the Laguna South Public Facilities Fee Program and would not require additional right-of-way. This improvement would provide sufficient capacity to provide LOS A operation and improve the substandard roadway cross-section. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, traffic movement, and water quality impacts and disturbance to special-status species habitat or foraging area in the vicinity of the proposed improvement. This improvement would result in a **less than significant** impact.

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### West Stockton Boulevard – Poppy Ridge Road to Auto Mall Access

**MM 4.2.1f** West Stockton Boulevard between Poppy Ridge Road and the Auto Mall Access to provide 12-foot travel lanes and minimum 6-foot paved shoulder.

Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP. Project public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations and consistent with the Specific Plan's phasing provisions.

*Timing/Implementation: Prior to approval of subsequent development projects.*

*Enforcement/Monitoring: City of Elk Grove Development Services.*

This improvement is included in the Laguna South Public Facilities Fee Program and would not require additional right-of-way. This improvement would provide sufficient capacity to provide LOS A operation and would improve the substandard roadway cross-section. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, traffic movement, and water quality impacts and disturbance to special-status species habitat or foraging area in the vicinity of the proposed improvement. This improvement would eliminate the deficiency and reduce the impact to **less than significant**.

### Study Intersections

**Impact 4.2.2** The addition of project traffic would cause LOS F operations at the Elk Grove Boulevard/Bruceville Road intersection during the a.m. and p.m. peak hours; LOS F operations at the Elk Grove Boulevard/Big Horn Road intersection during the a.m. and p.m. peak hours; LOS F operations at the Elk Grove Boulevard/Auto Center Drive intersection during the a.m. and p.m. peak hours; LOS F operations at the Elk Grove Boulevard/SR-99 SB Ramps intersection during the a.m. and p.m. peak hours; LOS F operations at the Poppy Ridge Road/Bruceville Road intersection during a.m. and p.m. peak hours; and LOS F operations at the Elk Grove Boulevard intersection during the p.m. peak hour. This would result in a **potentially significant** impact.

Existing plus project traffic volumes shown on **Figure 4.2-10** were used to calculate peak hour levels of service at the study intersections. Intersection LOS at each location is presented in **Table 4.2-15** and was compared to the capacity criteria for intersections provided in **Tables 4.2-3** and **4.2-4**.

As shown on **Figure 4.2-10**, the existing Elk Grove Boulevard/Bighorn Road intersection would be modified as part of the proposed project. A new northbound approach would be constructed to include a left-turn lane, a through lane, and a right-turn lane.



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**TABLE 4.2-15  
INTERSECTION LEVEL OF SERVICE - EXISTING PLUS PROJECT CONDITIONS**

Intersection	Control	Existing Conditions		Existing Plus Project	
		AM	PM	AM	PM
1. Laguna Boulevard/Franklin Boulevard	Signalized	56.1 (E)	42.1 (D)	50.2 (D)	73.5 (E)
2. Laguna Boulevard/Bruceville Road	Signalized	29.6 (C)	40.8 (D)	29.0 (C)	41.8 (D)
3. Laguna Boulevard/Big Horn Boulevard	Signalized	20.0 (B)	19.2 (B)	49.3 (D)	65.5 (E)
4. Laguna Boulevard/West Laguna Springs Drive	Signalized	17.8 (B)	29.6 (C)	35.7 (D)	37.8 (D)
5. Laguna Boulevard/SR 99 Southbound Ramps	Signalized	18.1 (B)	24.1 (C)	14.3 (B)	17.9 (B)
6. Laguna Boulevard/SR 99 Northbound Ramps	Signalized	12.1 (B)	14.0 (B)	7.1 (A)	8.6 (A)
7. Elk Grove Boulevard/I-5 Southbound Ramps	Side-street Stop	0.0 (A)	0.0 (A)	0.0 (A)	0.0 (A)
8. Elk Grove Boulevard/I-5 Northbound Ramps	Side-street Stop	9.7 (A)	13.8 (B)	9.6 (A)	13.9 (B)
9. Elk Grove Boulevard/Franklin Boulevard	Signalized	31.4 (C)	24.5 (C)	24.6 (C)	23.5 (C)
10. Elk Grove Boulevard/Bruceville Road	Signalized	17.8 (B)	16.3 (B)	>80.0 (F)	>80.0 (F)
11. Elk Grove Boulevard/Big Horn Boulevard	Signalized	11.0 (B)	15.9 (B)	>80.0 (F)	>80.0 (F)
12. Elk Grove Boulevard/West Laguna Springs Drive	Signalized	8.0 (A)	5.2 (A)	62.2 (E)	>80.0 (F)
13. Elk Grove Boulevard/Auto Center Drive	Signalized	17.4 (B)	26.3 (C)	>80.0 (F)	>80.0 (F)
14. Elk Grove Boulevard/SR 99 Southbound Ramps	Signalized	17.2 (B)	3.9 (A)	>80.0 (F)	>80.0 (F)
15. Elk Grove Boulevard/SR 99 Northbound On-ramp	Signalized	3.8 (A)	23.0 (C)	8.9 (A)	7.6 (A)
16. Elk Grove Boulevard/East Stockton Boulevard	Signalized	27.8 (C)	28.9 (C)	27.3 (C)	38.6 (D)
17. Elk Grove Boulevard/Elk Grove-Florin Road	Signalized	48.2 (D)	44.5 (D)	52.2 (D)	59.0 (E)
18. Elk Grove Boulevard/Waterman Road	All-way Stop	40.0 (D)	>50.0 (F)	39.1 (E)	>50.0 (F)
19. Elk Grove Boulevard/Bradshaw Road	All-way Stop	11.2 (B)	11.8 (B)	12.6 (B)	13.1 (B)
20. Elk Grove Boulevard/Grant Line Road	All-way Stop	10.8 (B)	13.3 (B)	10.6 (B)	11.8 (B)
21. Poppy Ridge Road/Bruceville Road	All-way Stop	9.5 (A)	9.0 (A)	>50.0 (F)	>50.0 (F)
22. Poppy Ridge Road/West Stockton Boulevard	Side-street Stop	8.4 (A)	8.4 (A)	8.6 (A)	9.1 (A)
23. Elk Grove-Florin Road/East Stockton Boulevard	Side-street Stop	11.8 (B)	23.2 (C)	12.3 (B)	14.9 (B)
24. Hood-Franklin Road/I-5 Southbound Ramps	Side-street Stop	9.0 (A)	9.2 (A)	9.1 (A)	9.9 (A)
25. Hood-Franklin Road/I-5 Northbound Ramps	Side-street Stop	8.9 (A)	9.2 (A)	9.2 (A)	9.9 (A)

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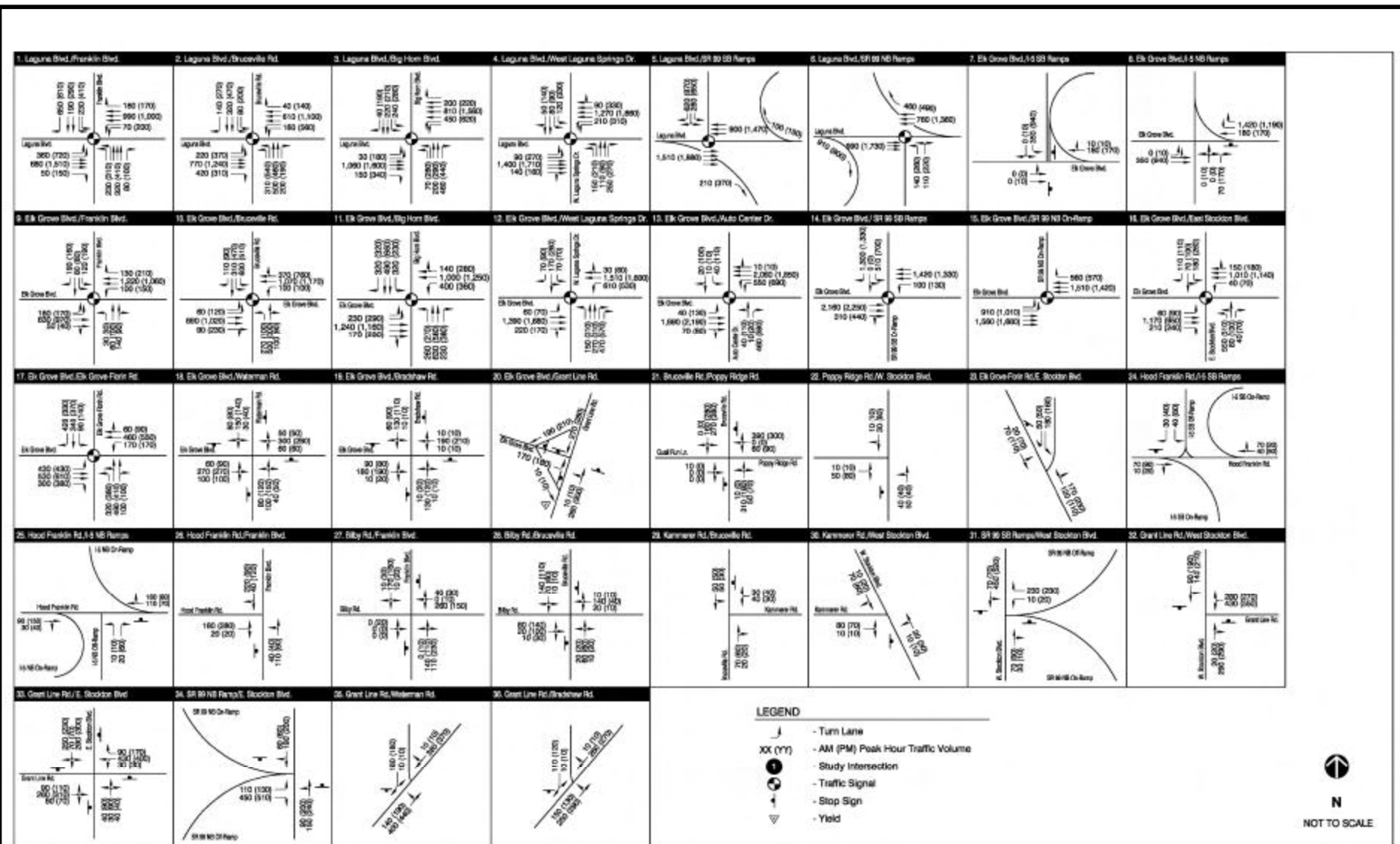
Intersection	Control	Existing Conditions		Existing Plus Project	
		AM	PM	AM	PM
26. Hood-Franklin Road/Franklin Boulevard	Side-street Stop	10.4 (B)	9.7 (A)	13.2 (B)	15.9 (C)
27. Bilby Road/Franklin Boulevard	Side-street Stop	10.8 (B)	10.2 (B)	19.8 (C)	17.1 (C)
28. Bilby Road/Bruceville Road	Side-street Stop	9.2 (A)	9.7 (A)	14.7 (B)	14.7 (B)
29. Kammerer Road/Bruceville Road	Side-street Stop	9.2 (A)	9.2 (A)	9.9 (A)	9.5 (A)
30. Kammerer Road/West Stockton Boulevard	Side-street Stop	9.1 (A)	9.2 (A)	9.4 (A)	9.4 (A)
31. SR 99 Southbound Ramps/West Stockton Boulevard <sup>1</sup>	Side-street Stop	16.4 (C)	34.6 (D)	23.5 (C)	35.3 (E)
32. Grant Line Road/West Stockton Boulevard	Side-street Stop	>50.0 (F)	>50.0 (F)	>50.0 (F)	>50.0 (F)
33. Grant Line Road/East Stockton Boulevard	All-way Stop	47.3 (E)	>50.0 (F)	>50.0 (F)	>50.0 (F)
34. SR 99 Northbound Ramps/East Stockton Boulevard <sup>1</sup>	Side-street Stop	28.7 (D)	> 50.0 (F)	32.9 (D)	>50.0 (F)
35. Grant Line Road/Waterman Road	Side-street Stop	13.8 (A)	13.7 (B)	15.0 (B)	15.6 (C)
36. Grant Line Road/Bradshaw Road	Side-street Stop	10.9 (A)	11.2 (B)	11.8 (B)	10.8 (B)

Notes:

<sup>1</sup> Intersection located at Grant Line Road.  
*Highway Capacity Manual* (Transportation Research Board 2000)

Based on the results shown in **Table 4.2-15**, the following intersections were identified to be deficient with addition of the project traffic:

- Elk Grove Boulevard/Bruceville Road (from LOS B to LOS F in both a.m. and p.m. peak hours)
- Elk Grove Boulevard/Big Horn Boulevard (from LOS B to LOS F in both a.m. and p.m. peak hours)
- Elk Grove Boulevard/West Laguna Springs Drive (from LOS A to LOS E in a.m. peak hour and from LOS A to LOS F in p.m. peak hour)
- Elk Grove Boulevard/Auto Center Drive (from LOS B to LOS F in a.m. peak hour and from LOS C to LOS F in p.m. peak hour)
- Elk Grove Boulevard/SR 99 Southbound Ramps (from LOS B to LOS F in a.m. peak hour and from LOS A to LOS F in p.m. peak hour)
- Elk Grove Boulevard/Waterman Road (from LOS D to LOS E in a.m. peak hour and would increase average delay by more than 5 seconds and remain at LOS F in p.m. peak hour)
- Poppy Ridge Road/Bruceville Road (from LOS A to LOS F in both a.m. and p.m. peak hours)



Source: Fehr & Peers Inc., 2003



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Figure 4.2-10  
Peak Hour Traffic Volumes and Lane Configurations-  
Existing Plus Project Conditions

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- Grant Line Road/West Stockton Boulevard (would increase average delay by more than 5 seconds and remain LOS F in both a.m. and p.m. peak hours)
- Grant Line Road/East Stockton Boulevard (from LOS E to LOS F in a.m. peak hour and would increase V/C by more than 0.05 and remain LOS F in p.m. peak hour)
- SR 99 Northbound Ramps/East Stockton Boulevard (would increase average delay by more than 5 seconds and remain LOS F in p.m. peak hour)
- SR 99 Southbound Ramps/West Stockton Boulevard (LOS D to LOS E in p.m. peak hour)
- Laguna Boulevard/Franklin Boulevard (from LOS D to LOS E in p.m. peak hour)
- Laguna Boulevard/Big Horn Boulevard (from LOS B to LOS E in p.m. peak hour)
- Elk Grove Boulevard/Elk Grove-Florin Road (LOS D to LOS E in p.m. peak hour)

### Mitigation Measures

#### Elk Grove Boulevard/Bruceville Road

**MM 4.2.2a** The following lane configurations shall be provided at the Elk Grove Boulevard/Bruceville Road intersection.

- One shared through/right-turn lane, one through lane, and one left-turn lane on the northbound approach.
- One right-turn lane, two through lanes, and two left-turn lanes on the southbound approach.
- One right-turn lane, two through lanes, and one left-turn lane on the westbound approach.

Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP. Project public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations and consistent with the Specific Plan's infrastructure phasing provisions.

*Timing/Implementation:* Prior to approval of subsequent development projects.

*Enforcement/Monitoring:* City of Elk Grove Development Services.

This improvement is included in the Laguna South Public Facilities Fee Program. The addition of the north and southbound through lanes, and westbound right-turn lane would provide LOS D operation in both the a.m. and p.m. peak hours. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, traffic movement, and water quality impacts and disturbance to special-status species habitat or foraging area in the vicinity of the proposed improvement. This measure would eliminate the deficiency identified and reduce the impact to **less than significant**.

### Elk Grove Boulevard/Big Horn Boulevard

**MM 4.2.2b** The following lane configurations shall be provided at the Elk Grove Boulevard/Big Horn Boulevard intersection.

- One right-turn lane, two through lanes, and one left-turn lane on the northbound approach.
- One right-turn lane, two through lanes, and two left-turn lanes on the southbound approach.
- One shared through/right-turn lane, two through lanes, and two left-turn lanes on the eastbound approach.
- One shared through/right-turn lane, two through lanes, and two left-turn lanes on the westbound approach.

Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP. Project public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations and consistent with the Specific Plan's Infrastructure Phasing Provisions.

*Timing/Implementation:* Prior to approval of subsequent development projects.

*Enforcement/Monitoring:* City of Elk Grove Development Services.

This improvement is included in the Laguna South Public Facilities Fee Program. Implementation of these improvements requires the construction of the northbound approach because it does not currently exist. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, traffic movement, and water quality impacts and disturbance to special-status species habitat or foraging area in the vicinity of the proposed improvement. The implementation of these improvements would provide LOS D operation in both the a.m. and p.m. peak hours and would reduce the impact to **less than significant**.

### Elk Grove Boulevard/West Laguna Springs Drive

**MM 4.2.2c** The following lane configurations shall be provided at the Elk Grove Boulevard/West Laguna Springs Drive intersection.

- Two right-turn lanes, two through lanes, and one left-turn lane on the northbound approach.
- One right-turn lane, one through lanes, and two left-turn lanes on the southbound approach.
- One right-turn lane, three through lanes, and two left-turn lanes on the eastbound approach.

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- One right-turn lane, three through lanes, and two left-turn lanes on the westbound approach.
- Right-turn overlap phasing for the northbound right-turn lane at the Elk Grove Boulevard/West Laguna Springs Drive intersection.

Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP. Project public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations and consistent with the Specific Plan's Infrastructure Phasing Provisions.

*Timing/Implementation:*      *Prior to approval of subsequent development projects.*  
*Enforcement/Monitoring:*      *City of Elk Grove Development Services.*

This improvement is included in the Laguna South Public Facilities Fee Program. The implementation of these improvements would provide LOS C operation in the a.m. peak hour and LOS D operation in the p.m. peak hour. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, traffic movement, and water quality impacts, disturbance to special-status species that may inhabit or forage in the vicinity of the proposed improvement, and tree removal. Implementation of this improvement would reduce the impact to **less than significant**.

### Elk Grove Boulevard/Auto Center Drive

**MM 4.2.2d** Right-turn overlap phasing for the northbound right-turn movement shall be provided at the Elk Grove Boulevard/Auto Center Drive intersection. This improvement would require modification of the existing signal equipment and signal phasing.

Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP. Project and/or public facility financing plans and/or programs shall establish the timing of this improvement, to ensure it is in place prior to LOS E operations and recognizing that improvements would require Caltrans approval.

*Timing/Implementation:*      *Prior to approval of subsequent development projects.*  
*Enforcement/Monitoring:*      *City of Elk Grove Development Services.*

This improvement is included in the Laguna South Public Facilities Fee Program. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, traffic movement, and water quality impacts and tree removal. The implementation of this improvement would provide LOS C and LOS E operation in the a.m. and p.m. peak hours, respectively. While implementation of this mitigation measure would improve traffic operations, it would not eliminate the deficiency identified based on the City's LOS D threshold and no feasible mitigation exists to improve traffic operations to LOS D or better. Therefore, while operations would be improved, the impact to this intersection would be **significant and unavoidable**.

### Elk Grove Boulevard/SR 99 Southbound Ramps

**MM 4.2.2e** The following lane configurations shall be provided at the Elk Grove Boulevard/SR 99 Southbound Ramps intersection.

- Two right-turn lanes, a shared through/left-turn lane, and an exclusive left-turn lane on the southbound approach.
- One right-turn lane and three through lanes on the eastbound approach.
- Three through lanes on the westbound approach.
- In addition, construct a loop on-ramp in the northwest quadrant of the interchange to replace the westbound left-turn movement.

These improvements will require coordination with Caltrans as well as incorporation into the Laguna South Public Facilities Fee Program. If the additional right-of-way necessary for the improvement cannot be obtained, the project applicant shall pay their fair-share of the estimated cost of the improvement and cost of the right-of-way into the City's Traffic Impact Fund.

*Timing/Implementation:* Prior to approval of subsequent development projects.

*Enforcement/Monitoring:* City of Elk Grove Development Services.

Elimination of the westbound left-turn movement would reduce the on signal phases from three to two, which would reduce delay and improve LOS. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, traffic movement, and water quality impacts and tree removal. The addition of the lane configurations identified above and the southbound loop on-ramp would provide LOS C and LOS D operation in the a.m. and p.m. peak hours, respectively. Some of the cost associated with this improvement (i.e., turn lanes) is included in the Laguna South Public Facilities Fee Program. The deficiency identified at the Elk Grove Boulevard/SR-99 SB Ramps intersection is due to insufficient capacity at the SR-99/Elk Grove Boulevard interchange under existing plus project conditions. Additional improvements to the interchange are currently considered economically infeasible due to right-of-way constraints. The addition of the southbound loop on-ramp would require additional right-of-way. Ultimately, improvements to the SR-99 Ramps would require coordination and approval by Caltrans associated with state right-of-way. Therefore, the impact to this intersection is considered **significant and unavoidable**.

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### Elk Grove Boulevard/Waterman Road

**MM 4.2.2f** Install traffic signal and provide the following lane configurations at the Elk Grove Boulevard/Waterman Road intersection.

- A shared through/right-turn lane and an exclusive left-turn lane on all approaches.

Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP and the inclusion of this improvement in the LSPFFP. Project and/or public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations.

*Timing/Implementation:* Prior to approval of subsequent development projects.

*Enforcement/Monitoring:* City of Elk Grove Development Services.

This improvement is not included in the Laguna South Public Facilities Fee Program. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, traffic movement, and water quality impacts, disturbance to special-status species that may inhabit or forage in the vicinity of the proposed improvement, and tree removal. Implementation of this improvement would provide LOS C operation in the p.m. peak hour, eliminating the deficiency identified based on the City's LOS D threshold and resulting in a **less than significant** impact.

### Poppy Ridge Road/Bruceville Road

**MM 4.2.2g** Install a traffic signal and provide the following lane configurations at the Poppy Ridge Road/Bruceville Road intersection.

- A shared through/right-turn lane and an exclusive left-turn lane on the northbound, southbound, and eastbound approaches.
- One right-turn lane, one through lane, and one left-turn lane on the westbound approach.

Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program to include this improvement and by the annexation of the Laguna Ridge Specific Plan into the LSPFFP. Project public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations and consistent with the Specific Plan's Infrastructure Phasing Provisions.

*Timing/Implementation:* Prior to approval of subsequent development projects.

*Enforcement/Monitoring:* City of Elk Grove Development Services.



## 4.2 TRANSPORTATION AND CIRCULATION

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This improvement is not included in the Laguna South Public Facilities Fee Program. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, traffic movement, and water quality impacts, disturbance to special-status species that may inhabit or forage in the vicinity of the proposed improvement, and tree removal. Implementation of this improvement would provide LOS B operation in the p.m. peak hour and would reduce the impact to **less than significant**.

Grant Line Road/West Stockton Boulevard, Grant Line Road/East Stockton Boulevard, SR 99 Northbound Ramps/East Stockton Boulevard, and SR 99 Southbound Ramps/West Stockton Boulevard

**MM 4.2.2h** The applicant shall participate in the Laguna South Public Facilities Fee Program, which includes reconstruction of the SR 99/Grant Line Road interchange. Fair-share funding for the SR 99/Grant Line Road improvement project shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP.

*Timing/Implementation:* Prior to approval of subsequent development projects.

*Enforcement/Monitoring:* City of Elk Grove Development Services.

The deficiencies at Grant Line Road/West Stockton Boulevard, Grant Line Road/East Stockton Boulevard, SR 99 Northbound Ramps/East Stockton Boulevard, and SR 99 Southbound Ramps/West Stockton Boulevard are due to limited capacity at the SR 99/Grant Line Road interchange. Environmental impacts associated with construction of the SR 99/Grant Line Road interchange improvements include temporary air quality, noise, traffic movement, and water quality impacts, changes to drainage patterns, temporary restricted access to facilities resulting from construction activities, potential disturbance to special-status species, loss of special-status species habitat, loss of waters of the U.S., and potential need for remediation associated with potential contamination of existing sites and resulting from underground storage tank removal. The City of Elk Grove is in the process of planning for the Grant Line Road/SR 99 interchange reconstruction. Implementation of this improvement would eliminate the deficiency identified based on the City's LOS D threshold and reduce the impacts to **less than significant**.

Laguna Boulevard/Franklin Boulevard

**MM 4.2.2i** Right-turn overlap phasing for the southbound right-turn movement shall be provided at the Laguna Boulevard/Franklin Boulevard intersection.

Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program to include this improvement and by the annexation of the Laguna Ridge Specific Plan into the LSPFFP. Project and/or public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations.

*Timing/Implementation:* Prior to approval of subsequent development projects.

*Enforcement/Monitoring:* City of Elk Grove Development Services.

## 4.2 TRANSPORTATION AND CIRCULATION

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This improvement is not included in the Laguna South Public Facilities Fee Program. This improvement would require modification of the existing signal equipment and signal phasing. Environmental impacts associated with implementation of this improvement may include temporary air quality and noise impacts. Implementation of this improvement would provide LOS D operation in both the a.m. and p.m. peak hours, resulting in a **less than significant** impact.

### Laguna Boulevard/Big Horn Boulevard

**MM 4.2.2j** Right-turn overlap phasing shall be provided for the northbound right-turn movement at the intersection of Laguna Boulevard with Big Horn Boulevard.

Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program to include this improvement and by the annexation of the Laguna Ridge Specific Plan into the LSPFFP. Project and/or public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations. Establishment of the financing plans and/or programs shall occur prior to the approval of any subsequent development project. Development may occur prior to approval of the project's financing plans and/or programs if the project applicant constructs the above roadway improvements concurrent with the development of their specific project.

*Timing/Implementation:* Prior to approval of subsequent development projects.

*Enforcement/Monitoring:* City of Elk Grove Development Services.

This improvement would require modification of the existing signal equipment and signal phasing. This improvement is not included in the Laguna South Public Facilities Fee Program. Environmental impacts associated with this mitigation measure may include temporary air quality and noise. Implementation of this improvement would provide LOS C operation in the p.m. peak hour and would reduce the impact to **less than significant**.

### Elk Grove Boulevard/Elk Grove-Florin Road

**MM 4.2.2k** The following lane configurations shall be provided at the Elk Grove Boulevard/Elk Grove-Florin Road intersection.

- A shared through/right-turn lane, one through lane, and two left-turn lanes on the northbound approach.
- In addition, provide protected left-turn phasing on the northbound and southbound approaches.

Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program to include this improvement and by the annexation of the Laguna Ridge Specific Plan into the LSPFFP. Project and/or public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations.

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If the additional right-of-way necessary for the improvement cannot be obtained, the project applicant shall pay their fair-share of the estimated cost of the improvement and cost of the right-of-way into the City's Traffic Impact Fund.

*Timing/Implementation:* Prior to approval of subsequent development projects.

*Enforcement/Monitoring:* City of Elk Grove Development Services.

Implementation of this improvement would provide LOS D operation in the p.m. peak hour. This measure would eliminate the deficiency identified based on the City's LOS D threshold. This improvement is not included in the Laguna South Public Facilities Fee Program. Acquisition of additional right-of-way necessary for this improvement may not be feasible due to impacts to existing businesses and uses, therefore, this improvement may not be feasible. However, sufficient right-of-way may exist to construct components of this improvement. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, traffic movement, and water quality impacts. If additional right-of-way were not available, then the LOS would remain at LOS E and the impact would be **significant and unavoidable**.

### Freeway Mainline Segments

The addition of project traffic would not cause deficient operations of the SR 99 or I-5 freeway mainlines when existing plus project conditions are compared with Caltrans Route Concept Reports for I-5 and SR 99. **Table 4.2-16** presents the LOS on the freeway mainline sections under both existing and existing plus project conditions. As shown in **Table 4.2-16**, all of the freeway segments would operate acceptably at LOS D or better under existing plus project conditions. This would be a **less than significant** impact.

**TABLE 4.2-16**  
**FREEWAY MAINLINE LEVEL OF SERVICE AND DENSITY – EXISTING PLUS PROJECT CONDITIONS**

Freeway Mainline	Existing Conditions				Existing Plus Project Conditions			
	AM Peak		PM Peak		AM Peak		PM Peak	
	Density <sup>1</sup>	LOS <sup>2</sup>	Density	LOS	Density	LOS	Density	LOS
SR-99 Northbound north of Laguna Blvd.	18.1	C	18.7	C	19.6	C	18.2	C
SR-99 Southbound north of Laguna Blvd.	12.6	B	22.4	C	11.9	B	20.3	C
SR-99 Northbound north of Elk Grove Blvd.	13.4	B	14.2	B	14.4	B	14.4	B
SR-99 Southbound north of Elk Grove Blvd.	9.9	A	16.8	B	9.2	A	15.7	B
SR-99 Northbound south of Elk Grove Blvd.	16.1	B	15.4	B	15.3	B	15.3	B
SR-99 Southbound	9.8	A	18.8	C	4.9	A	16.2	B

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Freeway Mainline	Existing Conditions				Existing Plus Project Conditions			
	AM Peak		PM Peak		AM Peak		PM Peak	
	Density <sup>1</sup>	LOS <sup>2</sup>	Density	LOS	Density	LOS	Density	LOS
south of Elk Grove Blvd.								
SR-99 Northbound south of Grant Line Rd.	18.8	C	17.6	B	18.8	C	18.5	C
SR-99 Southbound south of Grant Line Rd.	11.2	B	21.6	C	6.9	A	18.6	C
I-5 Northbound south of Hood Franklin Rd.	13.0	B	24.9	C	13.0	B	23.3	C
I-5 Southbound south of Hood Franklin Rd.	12.2	B	17.7	B	12.5	B	21.8	C
I-5 Northbound north of Hood Franklin Rd.	13.4	B	25.0	C	14.3	B	23.7	C
I-5 Southbound north of Hood Franklin Rd.	12.4	B	18.0	B	12.4	B	22.5	C
I-5 Northbound north of Elk Grove Blvd.	14.1	B	17.2	B	16.8	B	21.2	C
I-5 Southbound north of Elk Grove Blvd.	9.2	A	16.8	B	9.2	A	17.5	B
I-5 Northbound north of Laguna Blvd.	27.3	D	16.9	B	29.0	D	24.5	C
I-5 Southbound north of Laguna Blvd.	11.9	B	25.3	C	12.7	B	28.3	D

Note: <sup>1</sup> Density in passenger cars per mile per lane.

<sup>2</sup> Highway Capacity Manual (Transportation Research Board 2000)

### Mitigation Measures

None required.

### **Freeway Ramps**

Implementation of the proposed project would not cause deficient operations at the SR-99 or I-5 on- and off-ramp junctions when existing plus project traffic volumes are compared with the acceptable LOS identified in Caltrans' Route Concept Reports for SR 99 and I-5. Traffic volumes for the freeway ramps within the study area were obtained from the existing plus project intersection volumes shown on **Figure 4.2-10**. **Table 4.2-17** presents the LOS at the freeway ramp junctions under both existing and existing plus project conditions. As shown in **Table 4.2-17**, all

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ramp junctions would operate acceptably under existing plus project conditions. This would result in a **less than significant** impact.

**TABLE 4.2-17  
FREEWAY RAMP JUNCTION LEVEL OF SERVICE AND DENSITY – EXISTING PLUS PROJECT CONDITIONS**

Freeway Ramp Junction	Existing Conditions				Existing Plus Project Conditions			
	AM Peak		PM Peak		AM Peak		PM Peak	
	Density <sup>1</sup>	LOS <sup>2</sup>	Density	LOS	Density	LOS	Density	LOS
Laguna Blvd./SR-99 Northbound Off-Ramp	26.3	C	26.3	C	26.3	C	26.3	C
Laguna Blvd./SR-99 Northbound Loop On-Ramp	30.7	D	27.9	C	30.7	D	27.9	C
Laguna Blvd./SR-99 Northbound On-Ramp	33.7	D	31.1	D	33.7	D	31.1	D
Laguna Blvd./SR-99 Southbound Off-Ramp	4.0	A	8.9	A	10.9	B	11.8	B
Laguna Blvd./SR-99 Southbound Loop On-Ramp	15.0	B	22.5	C	19.4	B	22.3	C
Laguna Blvd./SR-99 Southbound On-Ramp	15.4	B	24.1	C	16.1	B	25.3	C
Elk Grove Blvd./SR-99 Northbound Off-Ramp	17.6	B	17.1	B	16.9	B	16.9	B
Elk Grove Blvd./SR-99 Northbound On-Ramp	18.9	B	19.7	B	25.2	C	25.2	C
Elk Grove Blvd./SR-99 Southbound Off-Ramp	8.5	A	13.7	B	8.8	A	2.6	A
Elk Grove Blvd./SR-99 Southbound On-Ramp	9.9	A	17.4	B	6.5	A	13.0	B
Grant Line Rd./SR-99 Northbound Off-Ramp	23.5	C	22.1	C	23.5	C	23.2	C
Grant Line Rd./SR-99 Northbound On-Ramp	20.6	C	19.9	B	19.8	B	19.7	B
Grant Line Rd./SR-99 Southbound Off-Ramp	13.4	B	23.5	C	7.9	A	20.6	C
Grant Line Rd./SR-99 Southbound On-Ramp	15.3	B	25.7	C	10.9	B	22.7	C
Laguna Blvd./I-5 Northbound Off-ramp	28.2	D	31.9	D	28.2	D	31.9	D
Laguna Blvd./I-5 Northbound On-ramp	34.9	D	20.6	C	34.9	D	20.6	C
Laguna Blvd./I-5 Southbound Off-ramp	18.9	B	34.5	D	18.9	B	34.5	D
Laguna Blvd./I-5 Southbound Loop On-ramp	11.8	B	18.0	B	11.8	B	18.0	B
Elk Grove Blvd./I-5 Northbound Off-Ramp	19.3	B	30.8	D	20.3	C	30.8	D
Elk Grove Blvd./I-5 Northbound On-Ramp	23.3	C	27.4	C	27.4	C	34.7	D

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Freeway Ramp Junction	Existing Conditions				Existing Plus Project Conditions			
	AM Peak		PM Peak		AM Peak		PM Peak	
	Density <sup>1</sup>	LOS <sup>2</sup>	Density	LOS	Density	LOS	Density	LOS
Elk Grove Blvd./I-5 Southbound Off-Ramp	19.3	B	31.1	D	19.3	B	34.3	D
Elk Grove Blvd./I-5 Southbound Loop On-Ramp	15.5	B	20.0	C	15.5	B	26.1	C
Hood Franklin Rd./I-5 Northbound Off-Ramp	18.3	B	30.2	D	18.3	B	30.4	D
Hood Franklin Rd./I-5 Northbound Loop On-Ramp	17.8	B	28.4	D	17.8	B	28.5	D
Hood Franklin Rd./I-5 Northbound On-Ramp	16.8	B	27.3	C	17.7	B	27.8	C
Hood Franklin Rd./I-5 Southbound Off-Ramp	17.6	B	22.5	C	17.6	B	29.6	D
Hood Franklin Rd./I-5 Southbound Loop On-Ramp	16.8	B	21.1	C	17.1	B	27.1	C
Hood Franklin Rd./I-5 Southbound On-Ramp	15.6	B	19.9	B	16.0	B	26.0	C

Note: <sup>1</sup> Density in passenger cars per mile per lane.

<sup>2</sup> *Highway Capacity Manual* (Transportation Research Board 2000)

\* Demand Exceeds Capacity

### Mitigation Measures

None required.

### **Transit System Operations**

Transit system operations under existing plus project conditions were evaluated by considering the potential effects of the project on existing transit services in the vicinity of the project site. RT maintains a 20-year master plan of transit facilities for the Elk Grove region that identifies Elk Grove Boulevard (Franklin Blvd. to Elk Grove-Florin Road), Laguna Blvd. (I-5 to SR 99) and Bruceville Road (Poppy Ridge Road to SR-99) as conceptual transit corridors (transit corridors do not represent specific routes).

All major arterial and collector streets in the vicinity of the plan area are expected to be designed to accommodate transit facilities such as turnouts, bus stops, and shelters. Bus turnouts would be provided on all plan area arterial streets. Consistent with RT improvement standards, the turnouts would be located on the far side of each major intersection. Thus, implementation of the proposed project would not disrupt existing or planned transit operations in the area, and no transit system deficiencies under existing plus project conditions were identified. Therefore, impacts to transit system operations would be **less than significant**.

### Bicycle and Pedestrian System Operations

The Specific Plan includes provisions for bicycle and pedestrian facilities. The planned bicycle facilities identified in the *Final Environmental Impact Report for the 2010 Sacramento City/County Bikeway Master Plan* (July 1993) are shown on **Figure 4.2-11**. Pedestrian sidewalks would be provided on all roadway cross-sections. Major and minor arterials, commercial streets, and primary residential streets would have detached sidewalks separated for the roadway by landscaped planters. Planned sidewalk widths vary from 4 feet to 7 feet. In addition, all street cross-sections would accommodate bicycles. Major and minor arterials and commercial streets are planned to have on-street Class II bike lanes. An off-street Class I bikeway is identified north of New Poppy Ridge Road. The project would provide right-of-way for a future bicycle/pedestrian freeway over-crossing between the Plan area and Elk Grove Regional Park east of Highway 99. In addition to the bicycle facilities shown on **Figure 4.2-11**, the major development proposals within the area (Lent Ranch, East Franklin) would likely include on- and off-street facilities. The proposed project would enhance the existing bicycle and pedestrian facilities adjacent to the plan area. Implementation of the proposed project would not disrupt or interfere with existing or planned bikeways and pedestrian operations in the area. Therefore, no deficiencies under existing plus project conditions are expected and impacts would be **less than significant**.

#### 4.2.4 CUMULATIVE SETTING, IMPACTS AND MITIGATION MEASURES

The purpose of the cumulative analysis is to determine if implementation of the proposed project, in addition to cumulative background growth, would adversely affect the planned transportation system.

Two acceptable approaches to the analysis of cumulative transportation impacts are available to the City. The first approach relies on the build-out assumptions of the Draft General Plan and includes consideration of the planned transportation improvements. This approach relies on the commitment of the City of Elk Grove to plan for, fund, and construct circulation improvements in a timely manner. No assurances are available at this time that all of the improvements are feasible or that financial resources would be available to assure their timely construction. The results of this approach to cumulative impact analysis are contained in **Tables 4.2-18** and **4.2-19**. This approach is consistent with the approach to the City of Elk Grove General Plan EIR and is most appropriate for broad level planning analysis.

The second approach is a more conservative approach which analyzes cumulative traffic conditions, but factors in only the Tier I improvements identified in the MTP for 2025. Tier I improvements are considered to be reasonable foreseeable and likely to be constructed in a timely manner. The City has chosen to analyze this project's cumulative impacts in this manner. While this approach may overstate impacts if Draft General Plan transportation improvements are completed, it is considered a prudent approach to achieving CEQA's objective of disclosure of potential impacts.

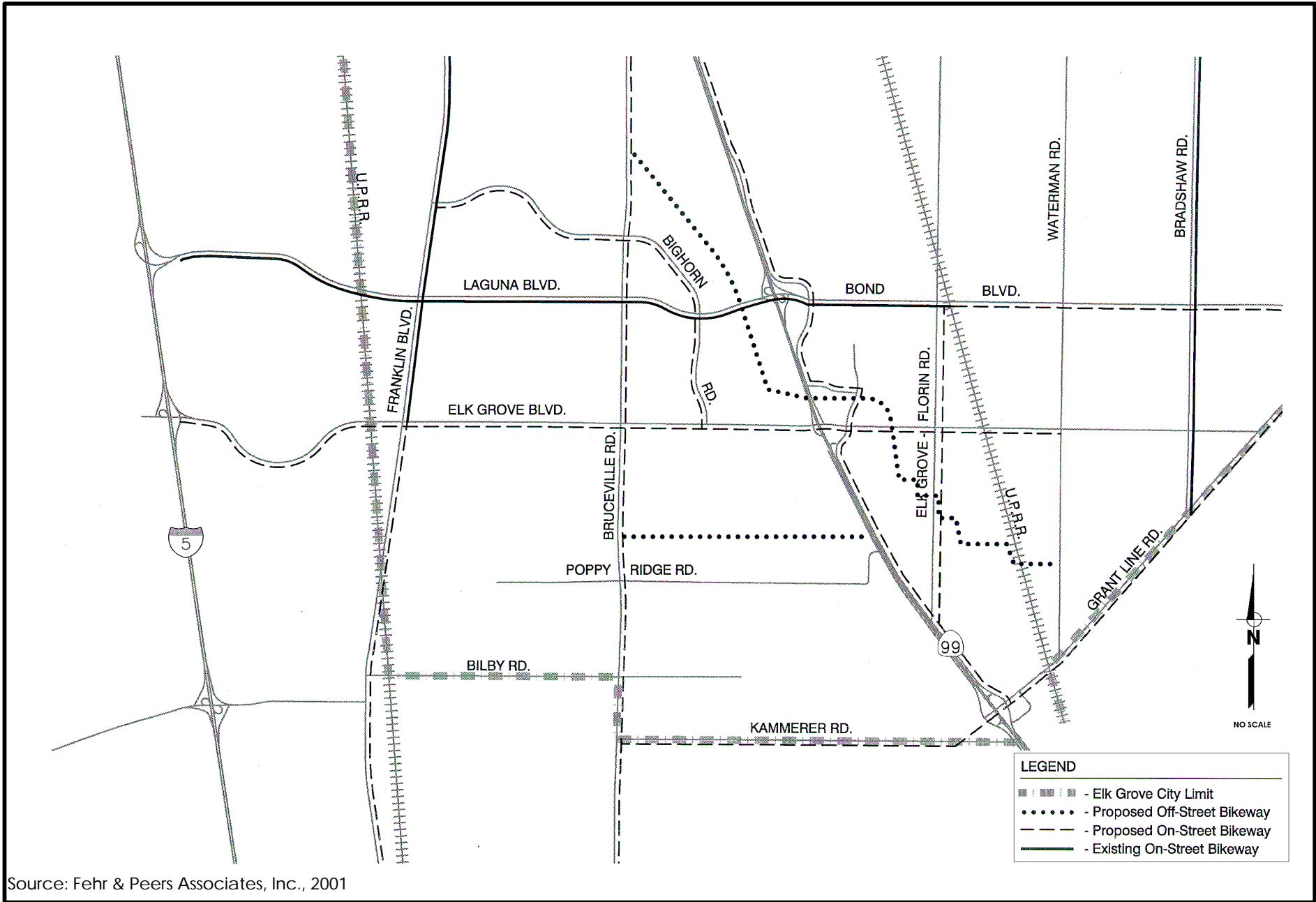


Figure 4.2-11  
Existing and Planned Bikeways



### PLANNED TRANSPORTATION IMPROVEMENTS

#### Roadway Improvements

As outlined previously, cumulative (2025) roadway improvements are consistent with Tier 1 improvements identified in the MTP for 2025. Roadway improvements included in the City's Draft General Plan were not assumed in the 2025 roadway network used in this analysis (e.g., Bruceville Road is identified as a six-lane facility in the Draft General Plan, but only a four-lane facility in the MTP). Consequently, project impacts identified in this study may be over-stated if roadway improvements included in the Draft General Plan are built. Planned roadway improvements, shown on **Figure 4.2-12** include the following:

- Kammerer Road would be extended west from Bruceville Road to I-5 via Hood Franklin Road and would be four lanes. Kammerer Road would be widened to four lanes between SR 99 and Bruceville Road and realigned with Grant Line Road in the east. The roadway extension would include a new grade-separated crossing of the existing Union Pacific Railroad. The cumulative analysis assumed an improved Kammerer Road/Grant Line Road interchange at SR 99. The preliminary plan shows an L-9 type configuration with both loop on-ramps and diagonal on-ramps. West and East Stockton Boulevards would be realigned to provide sufficient spacing from the ramp terminal intersection.
- Franklin Boulevard would be built as four lanes south of Elk Grove Boulevard to the planned Kammerer Road extension and realigned east of the existing Union Pacific Railroad.
- Bruceville Road would be widened to four lanes from Elk Grove Boulevard to Kammerer Road.

The LSPFFP will likely provide funding for most of the improvements listed above. Other funding sources may include other developer fees and public sources. Public funds will be necessary for a fair share contribution to improvements that eliminate existing deficiencies. It is anticipated that an update to the LSPFFP would be necessary based on the results of this analysis.

#### Other Improvements Planned As Part of the Project

- Provisions for transit facilities and services would be integrated as part of the Laguna Ridge Specific Plan and would include facilities such as bus stops, waiting shelters, and turnouts.
- The planned facilities in the vicinity of the plan area would include on-street bike lanes and pedestrian sidewalks as described below. A pedestrian and bicycle trail is planned along the parkway/drainage corridor that parallels New Poppy Ridge Road and a future bicycle/pedestrian freeway over-crossing is planned between the Plan area and Elk Grove Regional Park east of Highway 99.

### ROADWAY SYSTEM OPERATIONS

The following summarizes traffic operations under cumulative (2025) conditions with the addition of the Laguna Ridge Specific Plan. **Figure 4.2-13** displays the project study intersections.

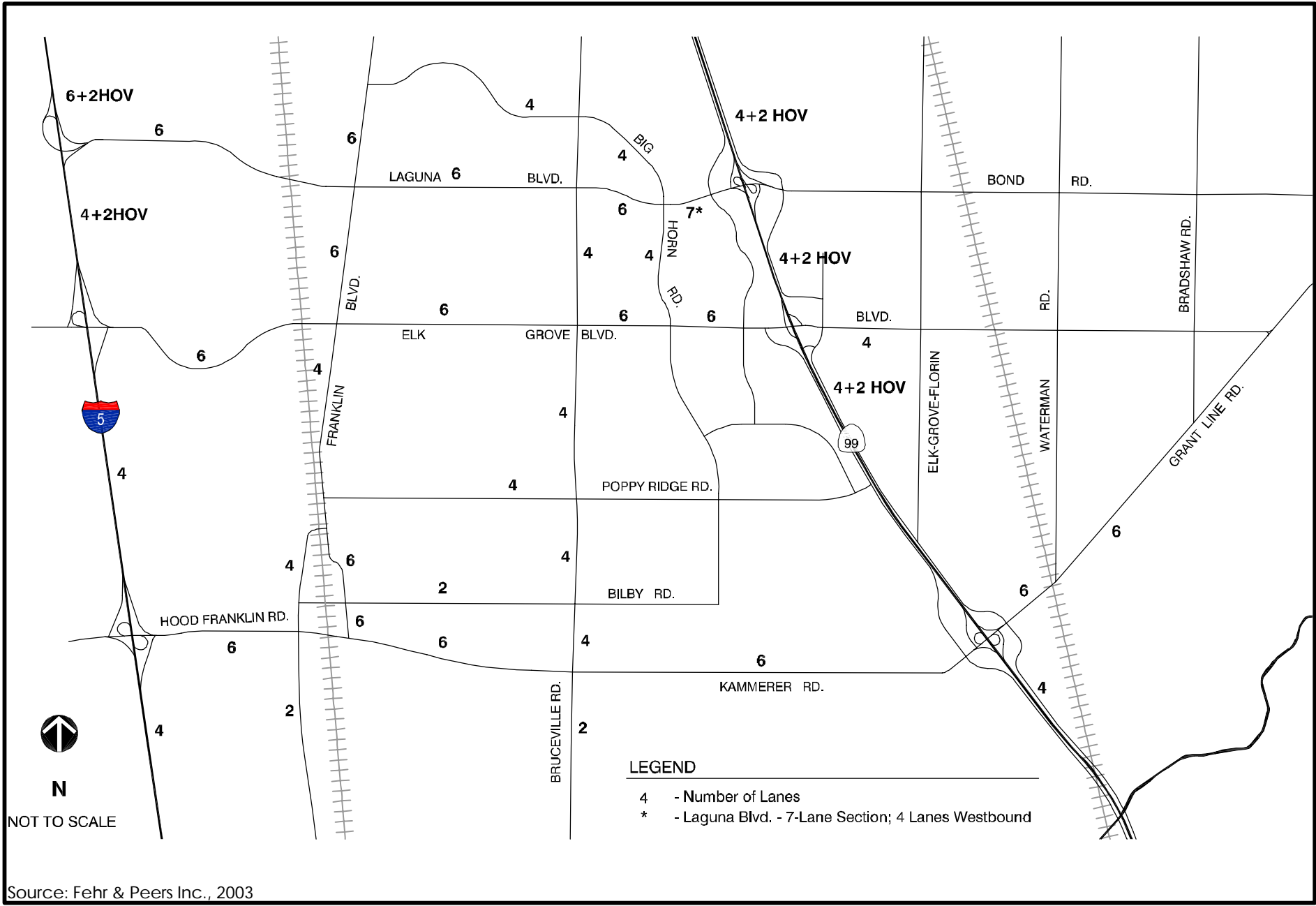
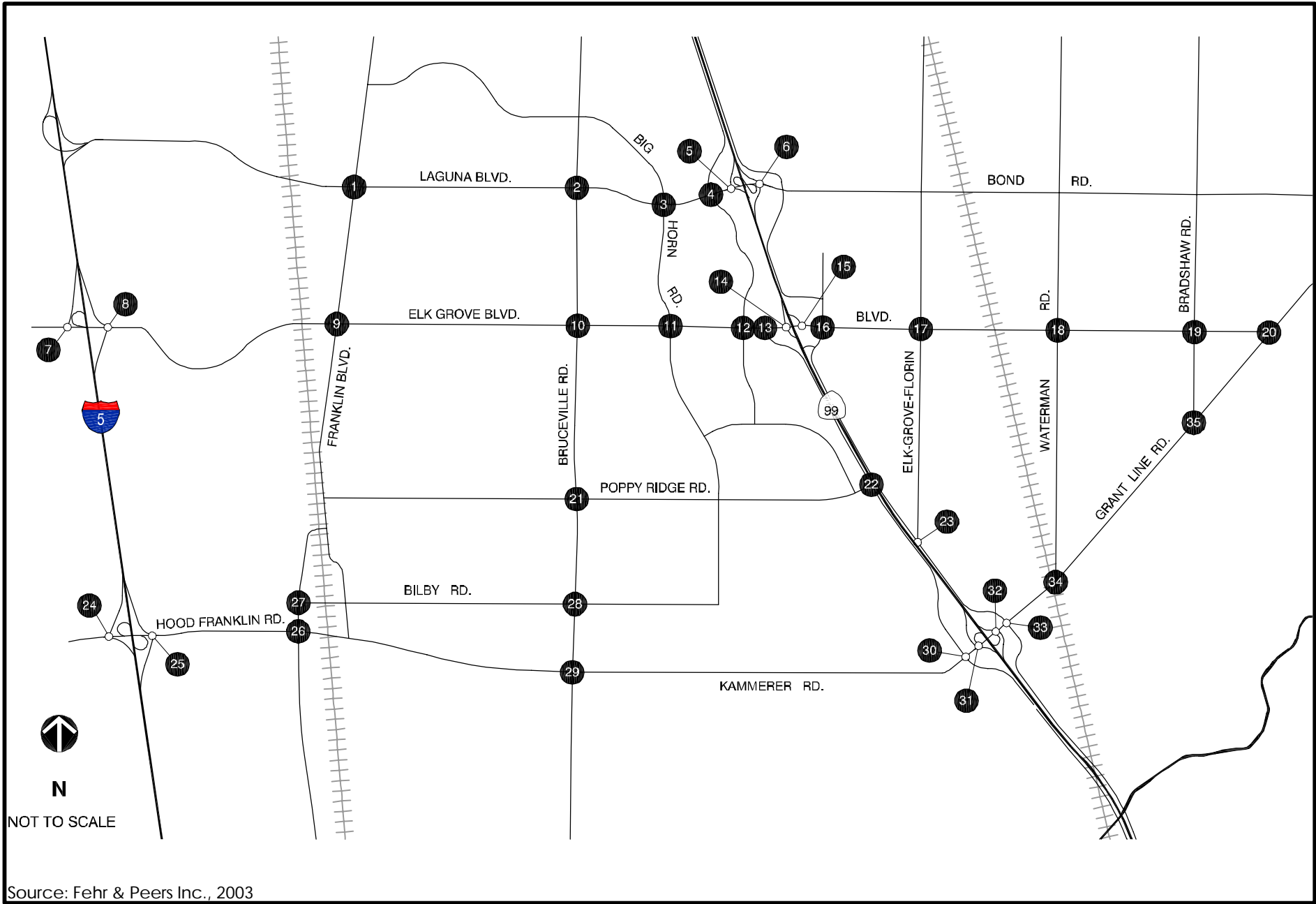


Figure 4.2-12  
Planned Cumulative (2025) Roadway Network



Source: Fehr & Peers Inc., 2003



## 4.2 TRANSPORTATION AND CIRCULATION

The cumulative traffic volume forecasts used in the traffic analysis are shown on the following figures.

**Figure 4.2-14** compares cumulative (2025) daily roadway segment traffic volumes with and without the Laguna Ridge Specific Plan. **Figure 4.2-15** presents cumulative (2025) a.m. and p.m. peak hour traffic volumes without the Laguna Ridge Specific Plan. **Figure 4.2-16** presents cumulative (2025) a.m. and p.m. peak hour traffic volumes with the Laguna Ridge Specific Plan.

Please note that on some locations the “with project” traffic volumes may be the same as or less than the “without project” traffic volumes. This may be counter-intuitive but is consistent with how the travel demand model functions. The model does not simply add project traffic to cumulative conditions; it reassigns project traffic based on the proximity and availability of attractions (i.e., employment and retail opportunities) within the region. In addition the “with project” scenario includes project roadways not included in the “without project” scenario.

### CUMULATIVE PROJECT IMPACTS AND MITIGATION MEASURES

#### Roadway System Operations

##### Arterial Roadway Segments

**Impact 4.2.3** The projected daily volume on the sections of Laguna Boulevard from Bruceville Road to SR 99, Laguna Boulevard from Franklin Road to Bruceville Road, Elk Grove Boulevard between Bruceville Road and Auto Center Drive, Elk Grove Boulevard from East Stockton Boulevard to Elk Grove-Florin Road, Bruceville Road from Elk Grove Boulevard to Laguna Boulevard, and Bruceville Road north of Laguna Boulevard, with the development of Laguna Ridge Specific Plan, would exceed the City’s thresholds for roadway segment operations. This would result in a **significant** impact.

Cumulative plus project daily traffic volumes shown on **Figure 4.2-14** were compared to the capacity criteria for arterial roadway segments presented in **Tables 4.2-1** and **4.2-2**. **Table 4.2-18** displays arterial roadway service levels for cumulative conditions and cumulative plus project conditions.

**TABLE 4.2-18**  
**ARTERIAL ROADWAY LEVEL OF SERVICE - CUMULATIVE PLUS PROJECT CONDITIONS**

Roadway Segment	Cumulative Conditions				Cumulative Plus Project Conditions			
	Lanes	Vol	V/C	LOS	Lanes	Vol	V/C	LOS
Laguna Blvd. - I-5 to Franklin Blvd.	6	39,500	0.73	C	6	40,700	0.75	C
Laguna Blvd. - Franklin Blvd. to Bruceville Rd.	6	46,200	0.86	D	6	49,100	0.91	E
Laguna Blvd. - Bruceville Rd. – SR-99	6	57,000	1.06	F	6	59,800	1.11	F
Elk Grove Blvd. - I-5 to Franklin Blvd.	6	33,200	0.61	B	6	35,200	0.65	B
Elk Grove Blvd. - Franklin Blvd. to Bruceville Rd.	6	35,500	0.66	B	6	42,700	0.79	C
Elk Grove Blvd. – Bruceville Rd. to Auto Center Drive	6	47,700	0.88	D	6	58,400	1.08	F

## 4.2 TRANSPORTATION AND CIRCULATION

Roadway Segment	Cumulative Conditions				Cumulative Plus Project Conditions			
	Lanes	Vol	V/C	LOS	Lanes	Vol	V/C	LOS
Elk Grove Blvd. - E. Stockton Blvd. to Elk Grove-Florin Rd.	4	42,900	1.19	F	4	53,100	1.48	F
Elk Grove Blvd. - Elk Grove-Florin Rd. to Waterman Rd.	2	12,700	0.71	C	2	15,000	0.83	D
Elk Grove Blvd. - Waterman Rd. to Grant Line Rd.	2	11,200	0.62	B	2	12,400	0.69	B
Hood Franklin Rd. - I-5 to Franklin Blvd.	4	14,800	0.41	A	4	16,200	0.45	A
Bilby Rd. - Franklin Blvd. to Bruceville Rd. <sup>1</sup>	2	4,900	0.27	A	2	4,400	0.24	A
Kammerer Rd. – Franklin Blvd. to Bruceville Rd	4	17,200	0.48	A	4	16,600	0.46	A
Kammerer Rd. – Bruceville Rd. to SR 99	4	27,200	0.76	C	4	26,700	0.74	C
Grant Line Rd. – SR 99 to Waterman Rd.	4	55,700	1.55	F	4	56,900	1.58	F
Grant Line Rd. – Waterman Rd. to Bradshaw Rd.	4	30,600	0.85	D	4	31,500	0.88	D
Franklin Blvd. – Hood Franklin Rd. to Bilby Rd.	2	5,900	0.33	A	2	8,400	0.47	A
Franklin Blvd. - Bilby Rd. to Elk Grove Blvd.	4	12,800	0.36	A	4	14,900	0.41	A
Franklin Blvd. - Elk Grove Blvd. to Laguna Blvd	4	32,500	0.90	E	4	32,500	0.90	E
Franklin Blvd. - North of Laguna Blvd.	4	34,400	0.96	E	4	35,000	0.97	E
Big Horn Rd. - Franklin Blvd. to Bruceville	4	11,400	0.32	A	4	11,500	0.32	A
Bruceville Rd. - Bilby Rd. to Poppy Ridge Rd.	4	24,900	0.69	B	4	15,400	0.43	A
Bruceville Rd. - Poppy Ridge Rd. to Elk Grove Blvd.	4	30,300	0.84	D	4	30,700	0.85	D
Bruceville Rd. - Elk Grove Blvd. to Laguna Blvd.	4	39,800	1.11	F	4	46,800	1.30	F
Bruceville Rd. - North of Laguna Blvd.	4	30,700	0.85	D	4	33,800	0.94	E
Poppy Ridge Rd. – Bruceville Rd. to W. Stockton Blvd.	4	11,800	0.33	A	4	15,600	0.43	A
W. Stockton Blvd. – Kammerer Rd. to Lent Ranch Access.	4	53,200	1.48	F	4	50,800	1.41	F
W. Stockton Blvd. – Lent Ranch Access to Poppy Ridge Rd.	4	35,800	0.99	E	4	25,900	0.72	C
W. Stockton Blvd. – Poppy Ridge Rd. to Auto Mall Access	2	24,100	1.33	F	2	14,300	0.79	C
W. Stockton Blvd. – Auto Mall Access to Elk Grove Blvd.	2	12,900	0.72	C	2	7,400	0.41	A

Notes: *Bolded areas indicate project deficiency.*

*Analysis is performed for the roadway one-way in each direction; the worst operation for the a.m. and p.m. peak hour is provided.*

Source: Fehr & Peers, 2003

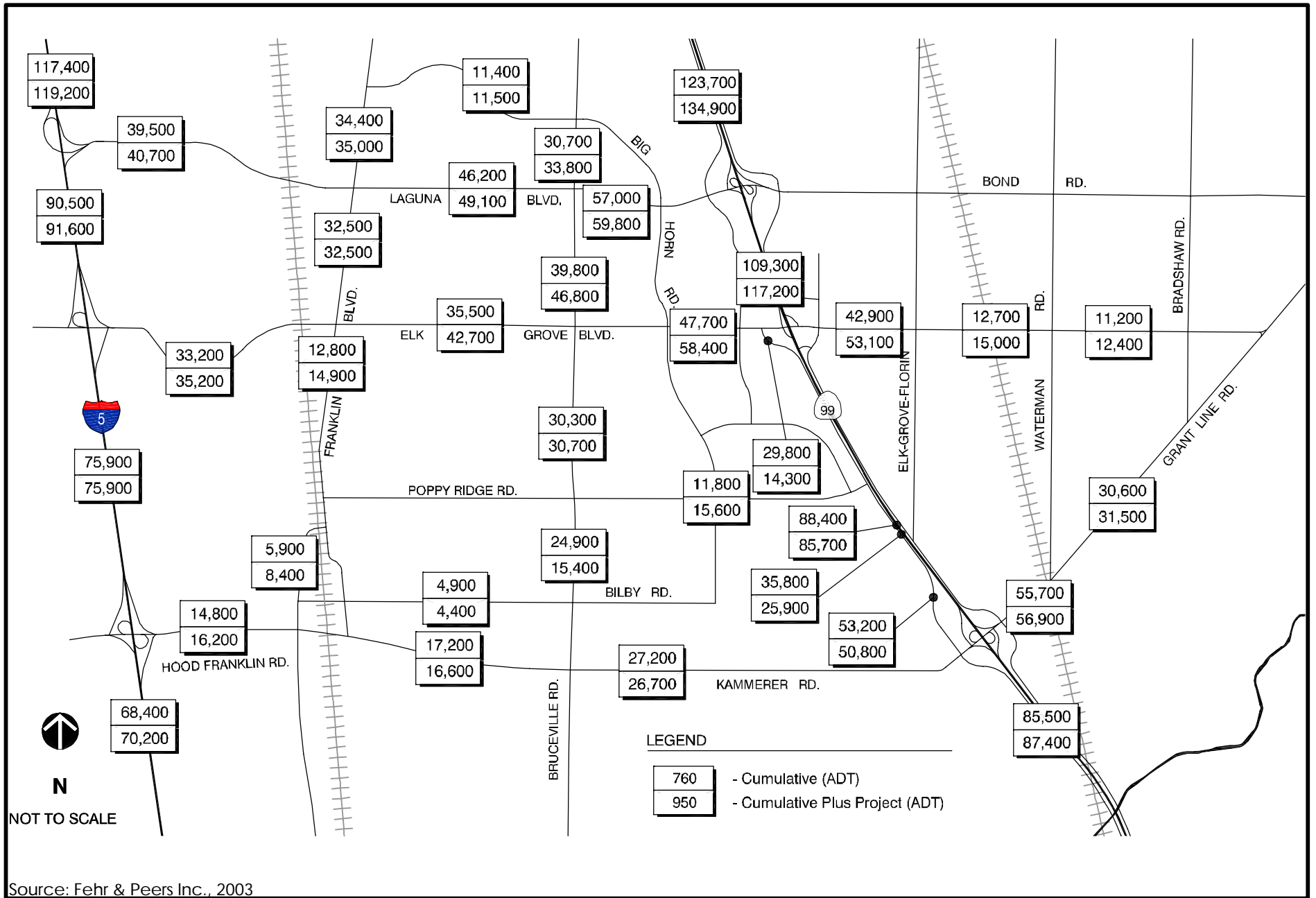
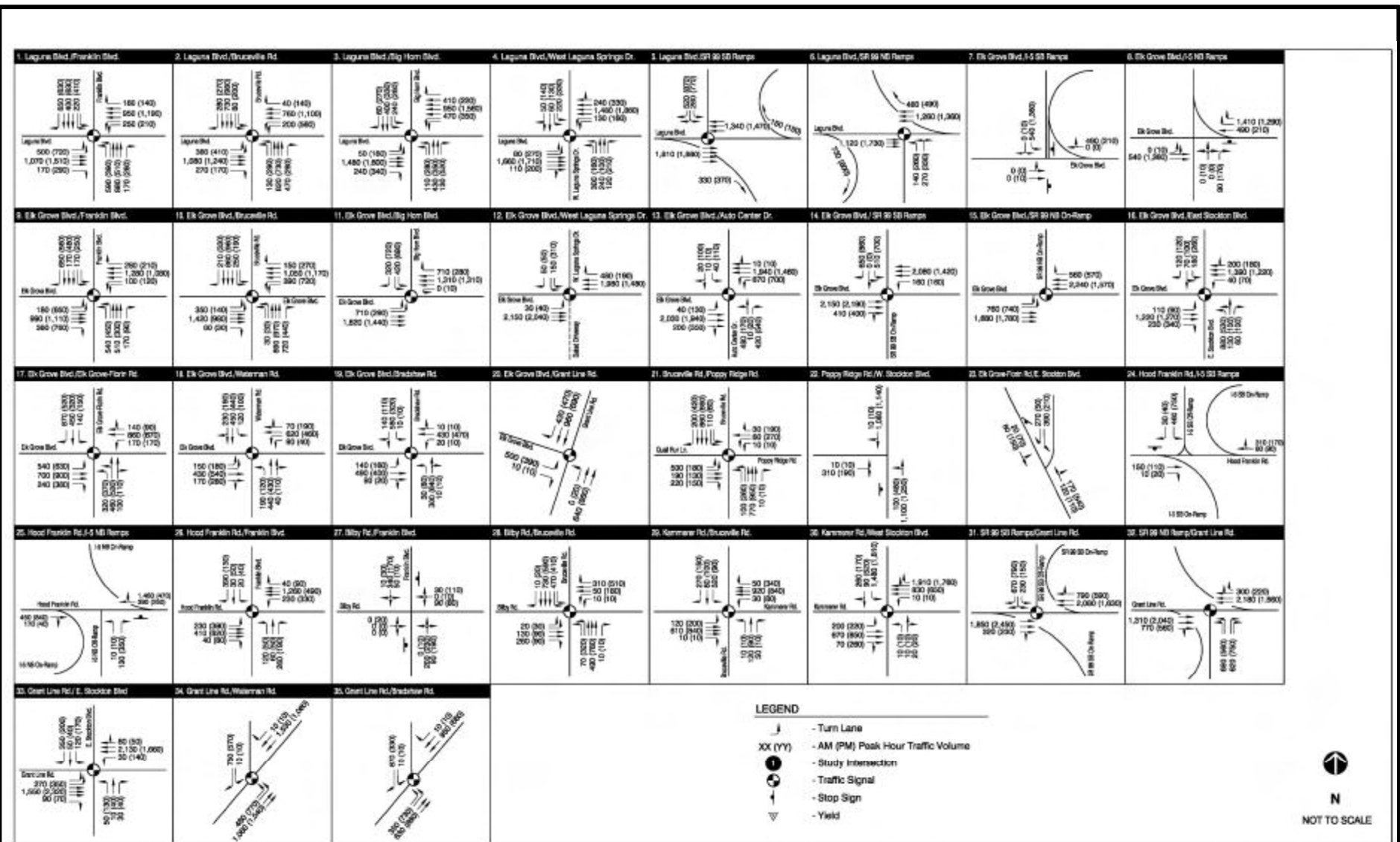


Figure 4.2-14  
Average Daily Traffic Volumes –  
Cumulative (2025) Plus Project Conditions

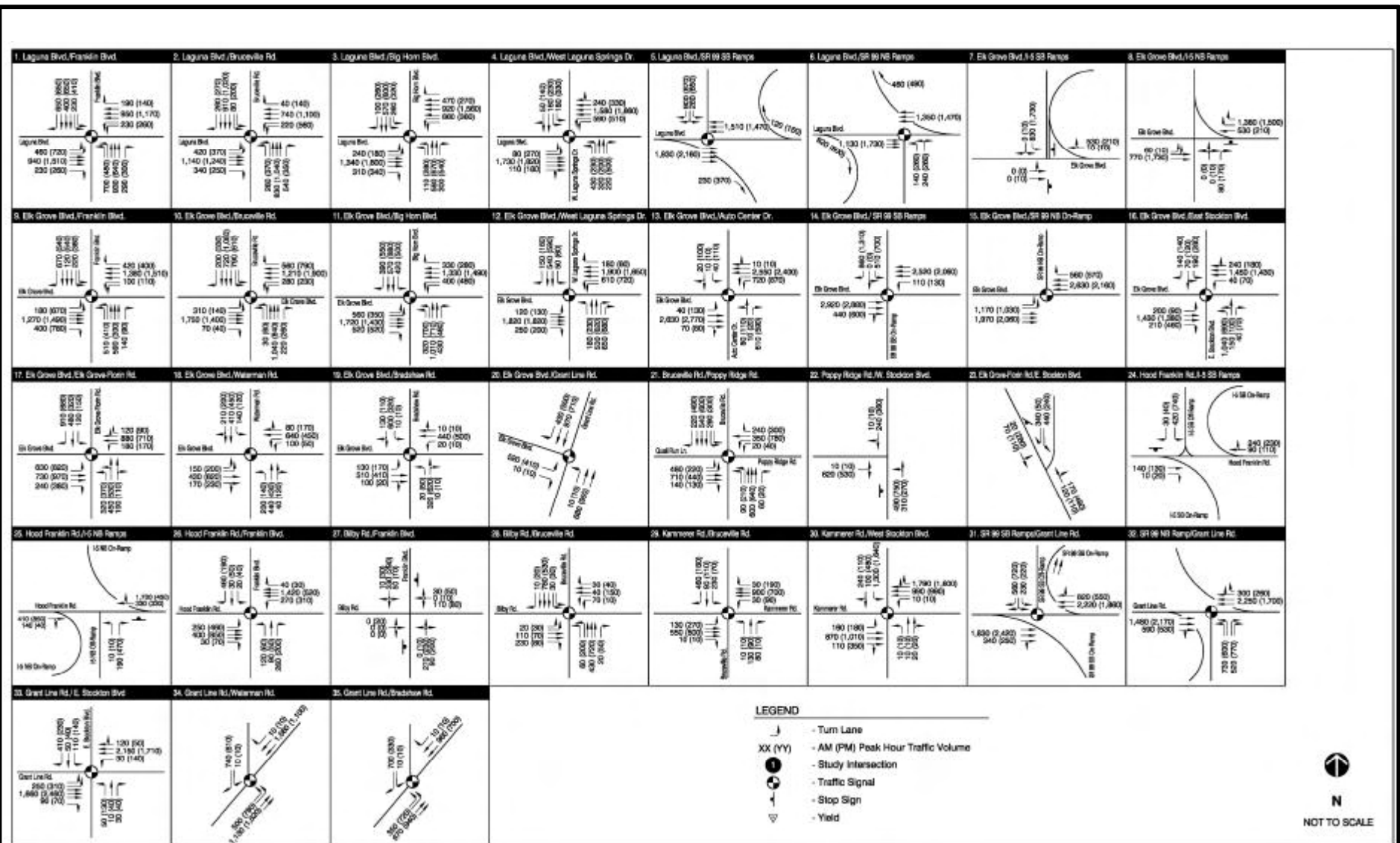


Source: Fehr & Peers Inc., 2003



City of Elk Grove Planning

Figure 4.2-15  
Peak Hour Traffic Volumes and Lane Configurations –  
Cumulative (2025) Conditions



Source: Fehr & Peers Inc., 2003



City of Elk Grove Planning

Figure 4.2-16  
Peak Hour Traffic Volumes and Lane Configurations –  
Cumulative (2025) Plus Project Conditions



## 4.2 TRANSPORTATION AND CIRCULATION

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Based on the information presented in **Table 4.2-18**, the addition of project traffic would create deficiencies on the following roadway segments:

- Laguna Boulevard from Bruceville Road to SR 99 would remain at LOS F and V/C would increase by 0.05.
- Elk Grove Boulevard from Bruceville Road to Auto Center Drive would deteriorate from LOS D to LOS F.
- Elk Grove Boulevard from East Stockton Boulevard to Elk Grove-Florin Road would remain at LOS F and V/C would increase by more than 0.05.
- Bruceville Road from Elk Grove Boulevard to Laguna Boulevard would remain at LOS F and V/C would increase by more than 0.05.
- Laguna Boulevard between Franklin Boulevard and Bruceville Road would decrease from LOS D to LOS E.
- Bruceville Road north of Laguna Boulevard would be reduced from LOS D to LOS E.

### Mitigation Measures

#### Laguna Boulevard – Bruceville Road to SR 99

**MM 4.2.3a** The section of Laguna Boulevard between Bruceville Road and SR 99 shall be widened from three to four lanes in each direction.

If the additional right-of-way necessary for the improvement cannot be obtained, the project applicant shall pay their fair-share of the estimated cost of the improvement and cost of the right-of-way into the City's Traffic Impact Fund.

*Timing/Implementation:* Prior to approval of subsequent development projects.

*Enforcement/Monitoring:* City of Elk Grove Development Services.

This improvement would provide sufficient capacity to accommodate the projected daily volume and would provide LOS D operation, resulting in a less than significant impact. This improvement is not included in the Laguna South Public Facilities Fee Program and the City currently does not have thresholds or standards for eight-lane roadways. Sufficient right-of-way to construct this improvement the length of Laguna Boulevard from Bruceville Road to SR 99 may not be available as portions of this roadway are developed with existing businesses and uses. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, traffic movement, and water quality impacts. Therefore, this improvement may not be feasible. If additional right-of-way were not available then the LOS would remain at LOS F and the impact would be **significant and unavoidable**.

#### Elk Grove Boulevard – Bruceville Road to Auto Center Drive

**MM 4.2.3b** The section of Elk Grove Boulevard between Bruceville Road and Auto Center Drive shall be widened from three to four lanes in each direction.

## 4.2 TRANSPORTATION AND CIRCULATION

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If the additional right-of-way necessary for the improvement cannot be obtained, the project applicant shall pay their fair-share of the estimated cost of the improvement and cost of the right-of-way into the City's Traffic Impact Fund.

*Timing/Implementation:* Prior to approval of subsequent development projects.

*Enforcement/Monitoring:* City of Elk Grove Development Services.

This improvement would provide sufficient capacity to accommodate the projected daily volume and would provide LOS D operation, reducing the impact to less than significant. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, traffic movement, and water quality impacts, disturbance to special-status species that may inhabit or forage in the vicinity of the proposed improvement, and tree removal. This improvement is not included in the Laguna South Public Facilities Fee Program and the City currently does not have thresholds or standards for eight-lane roadways. This improvement may not be feasible if additional right-of-way is not available. If additional right-of-way were not available then the LOS would remain at LOS F and the impact would remain **significant and unavoidable**.

### Elk Grove Boulevard – East Stockton Boulevard to Elk Grove-Florin Road

**MM 4.2.3c** Widen the section of Elk Grove Boulevard between East Stockton Boulevard and Elk Grove-Florin Road from two to three lanes in each direction.

If the additional right-of-way necessary for the improvement cannot be obtained, the project applicant shall pay their fair-share of the estimated cost of the improvement and cost of the right-of-way into the City's Traffic Impact Fund.

*Timing/Implementation:* Prior to approval of subsequent development projects.

*Enforcement/Monitoring:* City of Elk Grove Development Services.

This improvement would provide sufficient capacity to accommodate the projected daily volume and would provide LOS E operation which would reduce the impact to less than significant. However, this improvement is not included in the Laguna South Public Facilities Fee Program and would also require the acquisition of additional right-of-way. The segment of Elk Grove Boulevard between East Stockton Boulevard and Elk Grove-Florin Road is developed with business, residential, and other uses and right-of-way for the improvement may not be available. This would render the improvement infeasible, with the LOS remaining at LOS F and the impact **significant and unavoidable**.

### Bruceville Road – Elk Grove Boulevard to Laguna Boulevard

**MM 4.2.3d** Bruceville Road between Elk Grove Boulevard and Laguna Boulevard shall be widened from two to three lanes in each direction.

Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the inclusion of this improvement in the LSPFFP and by the annexation of the Laguna Ridge Specific Plan into the LSPFFP. Project and/or public facility financing plans

## 4.2 TRANSPORTATION AND CIRCULATION

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and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations.

*Timing/Implementation:* Prior to approval of subsequent development projects.

*Enforcement/Monitoring:* City of Elk Grove Development Services.

This improvement is not included in the Laguna South Public Facilities Fee Program, however, it is anticipated in the Draft General Plan Circulation Diagram. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, traffic movement, and water quality impacts. This improvement would provide sufficient capacity to accommodate the projected daily volume and would provide LOS D operation which would reduce the impact to **less than significant**.

### Laguna Boulevard – Franklin Boulevard to Bruceville Road

**MM 4.2.3e** Laguna Boulevard between Franklin Boulevard and Bruceville Road shall be widened from three to four lanes in each direction.

If the additional right-of-way necessary for the improvement cannot be obtained, the project applicant shall pay their fair-share of the estimated cost of the improvement and cost of the right-of-way into the City's Traffic Impact Fund.

*Timing/Implementation:* Prior to approval of subsequent development projects.

*Enforcement/Monitoring:* City of Elk Grove Development Services.

This improvement would provide sufficient capacity to accommodate the projected daily volume and would provide LOS B operation resulting in a less than significant impact. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, traffic movement, and water quality impacts, disturbance to special-status species that may inhabit or forage in the vicinity of the proposed improvement, and tree removal. However, this improvement would require additional right-of-way and the City currently does not have thresholds or standards for eight-lane roadways. Acquisition of additional right-of-way may not be feasible due to existing residences and businesses along this segment of Laguna Boulevard. If additional right-of-way were not available then the LOS would remain at LOS E and the impact would be **significant and unavoidable**.

### Bruceville Road – North of Laguna Boulevard

**MM 4.2.3f** Widen the section of Bruceville Road between Laguna Boulevard and Big Horn Boulevard from two to three lanes in each direction.

If the additional right-of-way necessary for the improvement cannot be obtained, the project applicant shall pay their fair-share of the estimated cost of the improvement and cost of the right-of-way into the City's Traffic Impact Fund.

*Timing/Implementation:* Prior to approval of subsequent development projects.

*Enforcement/Monitoring:* City of Elk Grove Development Services.

## 4.2 TRANSPORTATION AND CIRCULATION

This improvement would provide sufficient capacity to accommodate the projected daily volume and would provide LOS B operation, which would reduce the impact to less than significant. This improvement would eliminate the deficiency identified based on the City's LOS D threshold. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, traffic movement, and water quality impacts. This improvement is not included in the Laguna South Public Facilities Fee Program, but is anticipated in the Draft General Plan Circulation Diagram. Existing residences and businesses along this roadway segment may make the acquisition of additional right-of-way infeasible. If additional right-of-way were not available then the LOS would remain at LOS E and the impact would be **significant and unavoidable**.

### Interior Roadway Segments

**Impact 4.2.4** The projected traffic volume on the section of Laguna Springs Drive from Elk Grove Boulevard to Laguna Ridge Drive Southbound would exceed the City's thresholds for traffic operations. This would result in a **significant** impact.

Cumulative traffic levels expected for roadway segments interior to the Plan area are summarized in **Table 4.2-19**. The cumulative plus project conditions represent the development of the Plan area as well as other projects in Elk Grove in 2025. Some roadway segments described in **Table 4.2-19** are partially interior to the Plan area, with the remaining segment outside of the Plan area. Intersection operations within the Plan area were not modeled.

**TABLE 4.2-19**  
**INTERIOR ROADWAY LEVEL OF SERVICE - CUMULATIVE PLUS PROJECT CONDITIONS**

Roadway Segment	A.M. Peak Hour				P.M. Peak Hour			
	Lanes	Vol	V/C	LOS	Lanes	Vol	V/C	LOS
Big Horn Blvd. – Elk Grove Blvd. To Kammerer Rd. Northbound	2	1,857	0.69	B	2	1,532	0.77	B
Big Horn Blvd. – Elk Grove Blvd. To Kammerer Rd. Southbound	2	1,419	0.72	C	2	1,363	0.69	C
Laguna Springs Dr. – Elk Grove Blvd. To Laguna Ridge Drive Northbound	2	1,463	0.74	C	2	1,784	0.90	E
Laguna Springs Dr. – Elk Grove Blvd. To Laguna Ridge Drive Southbound	2	1,448	0.73	C	2	1,850	0.93	E
Laguna Ridge Dr. – Big Horn Blvd. To Poppy Ridge Rd. Northbound	2	903	0.46	A	2	814	0.41	A
Laguna Ridge Dr. – Big Horn Blvd. To Poppy Ridge Rd. Southbound	2	373	0.19	A	2	1,186	0.60	A
Laguna Ridge Dr. – Poppy Ridge Rd. to Kammerer Rd. Southbound	2	307	0.16	A	2	489	0.25	A
Laguna Ridge Dr. – Poppy Ridge Rd. to Kammerer Rd. Northbound	2	489	0.25	A	2	420	0.21	A
Poppy Ridge Rd. – Franklin Rd. to West Stockton	2	1,502	0.76	C	2	1,504	0.76	C

## 4.2 TRANSPORTATION AND CIRCULATION

Roadway Segment	A.M. Peak Hour				P.M. Peak Hour			
	Lanes	Vol	V/C	LOS	Lanes	Vol	V/C	LOS
Blvd. Eastbound								
Poppy Ridge Rd. – Franklin Rd. to West Stockton Blvd. Westbound	2	1,855	0.53	A	2	1,767	0.89	D

*Notes: Bolded areas indicate project deficiency.  
Source: CCS, 2003*

Based on the information presented in **Table 4.2-19**, the addition of project traffic could create deficient operations at LOS E on the segment of Laguna Springs Drive from Elk Grove Boulevard to Laguna Ridge Drive in the p.m. peak hour under cumulative conditions.

### Mitigation Measures

**MM 4.2.4a** Laguna Springs Drive shall be widened to an ultimate 6-lane width or other traffic improvements shall be provided to maintain acceptable operations (LOS D or better) This requirement shall be incorporated into the Specific Plan.

*Timing/Implementation: As part of the final approval of the Specific Plan.  
Enforcement/Monitoring: City of Elk Grove Development Services.*

**MM 4.2.4b** All internal intersections shall be designed to meet City Level of Service standards (LOS D or better). This requirement shall be incorporated into the Specific Plan.

*Timing/Implementation: As part of final Specific Plan approval.  
Enforcement/Monitoring: City of Elk Grove Development Services.*

Implementation of the above mitigation measure would result in traffic operations within the Plan area at acceptable LOS conditions, resulting in a **less than significant** impact.

### Study Intersections

**Impact 4.2.5** Implementation of the proposed project would degrade operations at the Laguna Boulevard/Franklin Boulevard, Elk Grove Boulevard/Big Horn Boulevard, Elk Grove Boulevard/West Laguna Springs Drive, Elk Grove Boulevard/Auto Center Drive, Elk Grove Boulevard/SR 99 Southbound Ramps, Elk Grove Boulevard/East Stockton Boulevard, Elk Grove Boulevard/Elk Grove-Florin Road, Elk Grove-Florin Road/East Stockton Boulevard, Hood-Franklin Road/I-5 Southbound Ramps, Hood-Franklin Road/I-5 Northbound Ramps, Grant Line Road/West Stockton Boulevard, Grant Line Road/Waterman Road, Laguna Boulevard/Big Horn Boulevard, Laguna Boulevard/West Laguna Springs Drive, Elk Grove Boulevard/Franklin Boulevard, Elk Grove Boulevard/Bruceville Road, and Grant Line Road/Bradshaw Road intersections to unacceptable LOS conditions, resulting in a **cumulative significant** impact.

## 4.2 TRANSPORTATION AND CIRCULATION

Cumulative plus project peak hour traffic volumes shown on **Figure 4.2-16** were used to calculate peak hour levels of service at the study intersections. Intersection LOS at each location is presented in **Table 4.2-20**.

**TABLE 4.2-20**  
**INTERSECTION LEVEL OF SERVICE - CUMULATIVE CONDITIONS**

Intersection	Control	Cumulative Conditions		Cumulative Plus Project Conditions	
		AM	PM	AM	PM
1. Laguna Boulevard/Franklin Boulevard	Signalized	73.6 (E)	77.3 (E)	78.0 (E)	> 80.0 (F)
2. Laguna Boulevard/Bruceville Road	Signalized	25.9 (C)	44.0 (D)	33.4 (C)	36.3 (D)
3. Laguna Boulevard/Big Horn Boulevard	Signalized	34.3 (C)	43.9 (D)	42.3 (D)	52.3 (D)
4. Laguna Boulevard/West Laguna Springs Drive	Signalized	14.9 (B)	28.3 (C)	33.2 (C)	59.9 (E)
5. Laguna Boulevard/SR 99 Southbound Ramps	Signalized	12.9 (B)	20.0 (B)	15.9 (B)	39.7 (D)
6. Laguna Boulevard/SR 99 Northbound Ramps	Signalized	9.3 (A)	10.1 (B)	9.0 (A)	9.5 (A)
7. Elk Grove Boulevard/I-5 Southbound Ramps	Side-street Stop	0.0 (A)	0.0 (A)	0.0 (A)	0.0 (A)
8. Elk Grove Boulevard/I-5 Northbound Ramps	Side-street Stop	10.5 (B)	19.1 (C)	12.1 (B)	27.5 (D)
9. Elk Grove Boulevard/Franklin Boulevard	Signalized	63.7 (E)	> 80.0 (F)	76.8 (E)	> 80.0 (F)
10. Elk Grove Boulevard/Bruceville Road	Signalized	> 80.0 (F)	> 80.0 (F)	> 80.0 (F)	> 80.0 (F)
11. Elk Grove Boulevard/Big Horn Boulevard	Signalized	36.6 (D)	35.6 (D)	> 80.0 (F)	> 80.0 (F)
12. Elk Grove Boulevard/West Laguna Springs Drive	Signalized	6.2 (A)	20.8 (C)	> 80.0 (F)	> 80.0 (F)
13. Elk Grove Boulevard/Auto Center Drive	Signalized	> 80.0 (F)	> 80.0 (F)	> 80.0 (F)	> 80.0 (F)
14. Elk Grove Boulevard/SR 99 Southbound Ramps	Signalized	38.6 (D)	79.3 (E)	> 80.0 (F)	> 80.0 (F)
15. Elk Grove Boulevard/SR 99 Northbound Ramps	Signalized	4.8 (A)	4.9 (A)	32.3 (C)	8.2 (A)
16. Elk Grove Boulevard/East Stockton Boulevard	Signalized	> 80.0 (F)	40.0 (D)	> 80.0 (F)	45.4 (D)
17. Elk Grove Boulevard/Elk Grove-Florin Road	Signalized	> 80.0 (F)	> 80.0 (F)	> 80.0 (F)	> 80.0 (F)
18. Elk Grove Boulevard/Waterman Road	Signalized	40.2 (D)	29.6 (C)	41.6 (D)	38.5 (D)
19. Elk Grove Boulevard/Bradshaw Road	Signalized	32.2 (C)	37.1 (D)	31.2 (C)	31.3 (C)

## 4.2 TRANSPORTATION AND CIRCULATION

Intersection	Control	Cumulative Conditions		Cumulative Plus Project Conditions	
		AM	PM	AM	PM
20. Elk Grove Boulevard/Grant Line Road	Signalized	10.5 (B)	8.5 (A)	14.9 (B)	15.3 (B)
21. Poppy Ridge Road/Bruceville Road	Signalized	23.1 (C)	27.6 (C)	34.8 (C)	20.3 (C)
22. Poppy Ridge Road/West Stockton Boulevard	Side-street Stop	> 50.0 (F)	> 50.0 (F)	31.6 (D)	> 50.0 (F)
23. Elk Grove-Florin Road/East Stockton Boulevard	Side-street Stop	17.5 (C)	27.5 (D)	13.5 (B)	> 50.0 (F)
24. Hood-Franklin Road/I-5 Southbound Ramps	Side-street Stop	20.9 (C)	> 50.0 (F)	18.4 (C)	> 50.0 (F)
25. Hood-Franklin Road/I-5 Northbound Ramps	Side-street Stop	13.5 (B)	> 50.0 (F)	14.2 (B)	> 50.0 (F)
26. Hood-Franklin Road/Franklin Boulevard	Signalized	40.2 (D)	27.7 (C)	50.0 (D)	36.0 (D)
27. Bilby Road/Franklin Boulevard	Side-street Stop	19.8 (C)	19.3 (C)	25.2 (D)	19.4 (C)
28. Bilby Road/Bruceville Road	Signalized	28.9 (C)	65.0 (E)	21.1 (C)	14.8 (B)
29. Kammerer Road/Bruceville Road	Signalized	24.7 (C)	22.5 (C)	28.4 (C)	21.7 (C)
30. Grant Line Road/SR 99 Southbound Ramps	Signalized	11.8 (B)	15.2 (B)	13.7 (B)	15.8 (B)
31. Grant Line Road/West Stockton Boulevard	Signalized	> 80.0 (F)	> 80.0 (F)	> 80.0 (F)	> 80.0 (F)
32. Grant Line Road/East Stockton Boulevard	Signalized	40.1 (D)	36.3 (D)	49.1 (D)	40.3 (D)
33. Grant Line Road/SR 99 Northbound Ramps	Signalized	15.6 (B)	13.3 (B)	15.2 (B)	16.0 (B)
34. Grant Line Road/Waterman Road	Signalized	47.0 (D)	13.9 (B)	> 80.0 (F)	> 80.0 (F)
35. Grant Line Road/Bradshaw Road	Signalized	19.3 (B)	9.5 (A)	62.7 (E)	47.3 (D)

Notes: Bolded areas indicate project deficiency.  
<sup>1</sup> Intersection located at Grant Line Road.  
*Highway Capacity Manual* (Transportation Research Board 2000)

The addition of project traffic would create deficiencies at the following study intersections, as shown in **Table 4.2-20** based on the City's thresholds,

- Laguna Boulevard/Franklin Boulevard (LOS E to LOS F in p.m. peak hour)
- Elk Grove Boulevard/Big Horn Boulevard (LOS D to LOS F in both a.m. and p.m. peak hours)
- Elk Grove Boulevard/West Laguna Springs Drive (LOS A to LOS F in a.m. peak hour and LOS C to LOS F in p.m. peak hour)

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- Elk Grove Boulevard/Auto Center Drive (LOS F in a.m. and p.m. peak hour)
- Elk Grove Boulevard/SR 99 Southbound Ramps (would remain at LOS F and average delay would increase by more than 5 seconds in both a.m. and p.m. peak hours)
- Elk Grove Boulevard/East Stockton Boulevard (would increase average delay by more than 5 seconds and remain at LOS F in a.m. peak hour)
- Elk Grove Boulevard/Elk Grove-Florin Road (would increase average delay by more than 5 seconds and remain at LOS F in p.m. peak hour)
- Elk Grove Boulevard/Franklin Boulevard (would increase average delay by more than 5 seconds and remain at LOS E in a.m. peak hour)
- Elk Grove Boulevard/Bruceville Road (would increase average delay by more than 5 seconds and remain at LOS F in p.m. peak hour)
- Elk Grove-Florin Road/East Stockton Boulevard (LOS D to LOS F in p.m. peak hour)
- Hood-Franklin Road/I-5 Southbound Ramps (would increase average delay by more than 5 seconds and remain at LOS F in p.m. peak hour)
- Hood-Franklin Road/I-5 Northbound Ramps (would increase average delay by more than 5 seconds and remain at LOS F in p.m. peak hour)
- Grant Line Road/West Stockton Boulevard (would increase average delay by more than 5 seconds and remain at LOS F in p.m. peak hour)
- Grant Line Road/Waterman Road (LOS D to LOS F in a.m. peak hour and LOS B to LOS F in p.m. peak hour)
- Laguna Boulevard/West Laguna Springs Drive (LOS C to LOS E in p.m. peak hour)
- Grant Line Road/Bradshaw Road (LOS B to LOS E in a.m. peak hour)

### Mitigation Measures

#### Laguna Boulevard/Franklin Boulevard

**MM 4.2.5a** Right-turn overlap phasing for the southbound right-turn movement at the Laguna Boulevard/Franklin Boulevard intersection.

Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program to include this improvement and by the annexation of the Laguna Ridge Specific Plan into the LSPFFP. Project and/or public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations.

*Timing/Implementation: Prior to approval of subsequent development*



*Enforcement/Monitoring:* projects.  
*City of Elk Grove Development Services.*

This improvement is not included in the Laguna South Public Facilities Fee Program. This improvement would require modification of the existing signal equipment and signal phasing. Environmental impacts associated with construction of this improvement include temporary air quality impacts associated with adjusting the signal operation to include overlap phasing. Implementation of this improvement would provide LOS D operation in both the a.m. and p.m. peak hours, resulting in a **less than significant** impact.

*Elk Grove Boulevard/Big Horn Boulevard*

**MM 4.2.5b** The following lane configurations shall be provided at the Elk Grove Boulevard/Big Horn Boulevard intersection.

- One right-turn lane, two through lanes, and two left-turn lanes on the northbound approach.
- One right-turn lane, two through lanes, and two left-turn lanes on the southbound approach.
- One right-turn lane, three through lanes, and two left-turn lanes on the eastbound approach.
- One right-turn lane, three through lanes, and two left-turn lanes on the westbound approach.
- Right-turn overlap phasing on all approaches to the intersection, which would require modification of the existing signal equipment and signal phasing.

Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP. Project public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations and consistent with the Specific Plan's Infrastructure Phasing Provisions.

*Timing/Implementation:* Prior to approval of subsequent development projects.

*Enforcement/Monitoring:* City of Elk Grove Development Services.

This improvement is included in the Laguna South Public Facilities Fee Program. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, traffic movement, and water quality impacts. The addition of the exclusive right-turn lane and overlap phasing would provide LOS E operation in both the a.m. and p.m. peak hours. No feasible mitigation exists to improve traffic operations to LOS D or better. While implementation of this mitigation measure would improve intersection operations, operations would remain at a deficient LOS resulting in a **significant and unavoidable** impact.

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### Elk Grove Boulevard/West Laguna Springs Drive

**MM 4.2.5c** The following lane configurations shall be provided at the Elk Grove Boulevard/West Laguna Springs Drive intersection.

- One right-turn lane, two through lanes, and one left-turn lane on the southbound approach.
- Two right-turn lanes, two through lanes and one left-turn lane on the northbound approach.
- One right-turn lane, three through lanes, and two left-turn lanes on the westbound approach.
- One right-turn lane, three through lanes, and one left-turn lane on the eastbound approach.
- Protected left-turn phasing for the north and southbound left-turn movements.
- Provide right-turn overlap phasing on the northbound and southbound approaches, which would require modification of the existing signal equipment and signal phasing.

Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP. Project public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations and consistent with the Specific Plan's Infrastructure Phasing Provisions.

*Timing/Implementation:* Prior to approval of subsequent development projects.

*Enforcement/Monitoring:* City of Elk Grove Development Services.

This improvement is included in the Laguna South Public Facilities Fee Program. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, and water quality impacts. The addition of the lane configurations identified above and the overlap phasing would provide LOS E operation in both the a.m. peak hour and LOS F operation in the p.m. peak hour. Consequently, this measure would not eliminate the deficiency identified based on the City's threshold in the p.m. peak hour and the impact would remain **significant and unavoidable**.

### Elk Grove Boulevard/Auto Center Drive

**MM 4.2.5d** The following lane configurations shall be provided at the Elk Grove Boulevard/Auto Center Drive intersection.

- Two right-turn lanes, one through lane, and one left-turn lane on the northbound approach.

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- Provide protected left-turn phasing on the northbound and southbound approaches.
- Provide right-turn overlap phasing on the northbound approach. Right-turn overlap phasing would require modification of the existing signal equipment and signal phasing.

Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP. Project and/or public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations.

*Timing/Implementation:* Prior to approval of subsequent development projects.  
*Enforcement/Monitoring:* City of Elk Grove Development Services.

This improvement is included in the Laguna South Public Facilities Fee. The addition of the lane configurations and signal phasing identified above would provide LOS E and LOS F operation in the a.m. and p.m. peak hours, respectively. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, and water quality impacts. This improvement would reduce the proposed project's contribution to intersection operations to a less than significant impact during the a.m. peak hour, but even though operations would be improved during the p.m. peak hour the City's standard would be exceeded. This facility is anticipated to fail even without implementation of the project. However, this measure would not eliminate the deficiency identified based on the City's LOS D threshold in the p.m. peak hour and the impact would be **significant and unavoidable**.

### Elk Grove Boulevard/SR 99 Southbound Ramps

**MM 4.2.5e** The following lane configurations shall be provided at the Elk Grove Boulevard/SR 99 Southbound Ramps intersection.

- One right-turn lane and three through lanes on the eastbound approach.
- Three through lanes on the westbound approach.
- Construct a loop on-ramp in the northwest quadrant of the interchange to replace the westbound left-turn movement.

This improvement will require coordination and approval of Caltrans. Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP.

*Timing/Implementation:* Prior to approval of subsequent development projects.  
*Enforcement/Monitoring:* City of Elk Grove Development Services.

Elimination of the westbound left-turn movement would reduce the on signal phases from three to two, which would reduce delay and improve LOS. The addition of the lane configurations

## 4.2 TRANSPORTATION AND CIRCULATION

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identified above and the southbound loop on-ramp would provide LOS C and LOS E operation in the a.m. and p.m. peak hours, respectively. The addition of the southbound loop on-ramp would require additional right-of-way. Therefore, this improvement may not be feasible. If additional right-of-way were not available then the LOS would remain at LOS F. Some of the cost associated with this improvement (i.e., turn lanes) is included in the Laguna South Public Facilities Fee Program. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, and water quality impacts. While implementation of this mitigation measure would improve traffic operations, no feasible mitigation exists to improve traffic operations to LOS D or better. Therefore, the impact would be **significant and unavoidable**.

### Elk Grove Boulevard/East Stockton Boulevard

**MM 4.2.5f** The following lane configurations shall be provided at the Elk Grove Boulevard/East Stockton Boulevard intersection.

- One right-turn lane, one through lane, and one left-turn lanes on the southbound approach.
- A shared through/right-turn lane and two left-turn lanes on the northbound approach.
- Provide protected left-turn phasing on the northbound and southbound approaches.

Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP. Project and/or public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations.

*Timing/Implementation:* Prior to approval of subsequent development projects.

*Enforcement/Monitoring:* City of Elk Grove Development Services.

The implementation of these improvements would provide LOS E and LOS C operation in the a.m. and p.m. peak hours, respectively. This measure would eliminate the deficiency identified based on the City's LOS threshold. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, and water quality impacts. This improvement is not included in the Laguna South Public Facilities Fee Program. No feasible mitigation exists to improve traffic operations to LOS D or better; however, the project's contribution to deficient operations would be mitigated. Therefore, the impact would be **less than significant**.

### Elk Grove Boulevard/Bruceville Road

**MM 4.2.5g** The following lane configuration shall be provided at the Elk Grove Boulevard/Bruceville Road intersection.

- One right-turn lane on the westbound approach.

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Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP. Project and/or public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations.

*Timing/Implementation:* Prior to approval of subsequent development projects.

*Enforcement/Monitoring:* City of Elk Grove Development Services

This improvement is not included in the Laguna South Public Facilities Fee Program. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, and water quality impacts. Additional improvements to the intersection are limited due to right-of-way constraints. The implementation of these improvements would reduce the delay in the a.m. peak hour to less than 5 seconds compared to “no project” conditions. However, the LOS in the p.m. peak hour would continue to operate at LOS F. Despite the improvement to traffic operations in the a.m. peak hour, the impact would remain **significant and unavoidable** due to the project’s contribution to deficient operations at the intersection in the p.m. peak hour.

### Elk Grove Boulevard/Elk Grove-Florin Road

**MM 4.2.5h** The following lane configurations shall be provided at the Elk Grove Boulevard/Elk Grove-Florin Road intersection.

- A shared through/right-turn lane, one through lane, and one left-turn lane on the northbound approach.
- In addition, provide protected left-turn phasing on the northbound and southbound approaches.

Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program to include this improvement and by the annexation of the Laguna Ridge Specific Plan into the LSPFFP. Project and/or public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations.

*Timing/Implementation:* Prior to approval of subsequent development projects.

*Enforcement/Monitoring:* City of Elk Grove Development Services.

This improvement is not included in the Laguna South Public Facilities Fee Program. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, and water quality impacts. Additional improvements to the intersection are limited due to right-of-way constraints. The implementation of these improvements would reduce the delay in the a.m. peak hour to less than 5 seconds compared to “no project” conditions. However, the LOS in the p.m. peak hour would continue to operate at LOS F. Despite the improvement to traffic operations in the a.m. peak hour, the impact would remain **significant and unavoidable** due to the project’s contribution to deficient operations at the intersection in the p.m. peak hour.

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### Elk Grove-Florin Road/East Stockton Boulevard

**MM 4.2.5i** A traffic signal shall be installed and the following lane configurations shall be provided at the Elk Grove-Florin Road/East Stockton Boulevard intersection.

- One through lane and one left-turn lane on the southbound approach.
- One right-turn lane and two left-turn lanes on the westbound approach.
- One right-turn lane and one through lane on the northbound approach.
- This improvement would require 3-phase signal operation.

Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP and to include this improvement. Project and/or public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations.

*Timing/Implementation:* Prior to approval of subsequent development projects.

*Enforcement/Monitoring:* City of Elk Grove Development Services.

This improvement is not included in the Laguna South Public Facilities Fee Program. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, and water quality impacts. Implementation of these improvements would provide LOS B and LOS E operation in the a.m. and p.m. peak hours, respectively. No feasible mitigation exists to improve the project's contribution to deficient operations to an acceptable level, therefore, the impact would be **significant and unavoidable**.

### Hood-Franklin Road/I-5 Northbound Ramps

**MM 4.2.5j** Install a traffic signal and coordinate it with the Hood-Franklin Road/I-5 Northbound Ramps intersection.

This improvement will require coordination and approval from Caltrans and Sacramento County. Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program to include this improvement and by the annexation of the Laguna Ridge Specific Plan into the LSPFFP.

*Timing/Implementation:* Prior to approval of subsequent development projects.

*Enforcement/Monitoring:* City of Elk Grove Development Services, Sacramento Count, and Caltrans

## 4.2 TRANSPORTATION AND CIRCULATION

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This improvement is not included in the Laguna South Public Facilities Fee Program. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, and water quality impacts. Implementation of these improvements would provide LOS A and LOS C operation during the a.m. and p.m. peak hours, respectively, and would reduce the impact to less than significant. However, this improvement is outside of the City's jurisdiction and, ultimately, timing and approval of this improvement would be the responsibility of Caltrans. Therefore, this impact would be **significant and unavoidable**.

### Hood-Franklin Road/I-5 Southbound Ramps

**MM 4.2.5k** Install a traffic signal and coordinate it with the Hood-Franklin Road/I-5 Southbound Ramps intersection.

This improvement will require coordination and approval from Caltrans and Sacramento County. Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program to include this improvement and by the annexation of the Laguna Ridge Specific Plan into the LSPFFP.

*Timing/Implementation:* Prior to approval of subsequent development projects.

*Enforcement/Monitoring:* City of Elk Grove Development Services, Sacramento County, and Caltrans

This improvement is not included in the Laguna South Public Facilities Fee Program. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, and water quality impacts. Implementation of these improvements would provide LOS B and LOS C operation during the a.m. and p.m. peak hours, respectively. Implementation of this mitigation measure would reduce the impact to less than significant. However, this improvement is outside of the City's jurisdiction and, ultimately, timing and approval of this improvement would be the responsibility of Caltrans. Therefore, this impact would be **significant and unavoidable**.

### Grant Line Road/West Stockton Boulevard

This deficiency is due to limited capacity at the SR 99/Grant Line Road interchange. Implementation of mitigation measure MM 4.2.2h requires participation in the Laguna South Public Facilities Fee Program, including reconstruction of the SR 99/Grant Line Road interchange. Implementation of this measure would reduce the proposed project's impact to **less than significant**.

### Grant Line Road/Waterman Road

**MM 4.2.5l** Right-turn overlap phasing shall be provided for the southbound right-turn movement at the intersection of Grant Line Road and Waterman Road.

Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP. Project and/or public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations.

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*Timing/Implementation:* Prior to approval of subsequent development projects.  
*Enforcement/Monitoring:* City of Elk Grove Development Services.

This improvement would require modification of the signal equipment and signal phasing. Environmental effects associated with this type of improvement are anticipated to be limited to air quality impacts. Implementation of this improvement would provide LOS D and LOS B operation in the a.m. and p.m. peak hours, respectively. Installation of a traffic signal was assumed constructed as part of the Grant Line Road widening identified MTP for 2025. With implementation of this mitigation measure, the impact would be reduced to **less than significant**.

### Laguna Boulevard/West Laguna Springs Drive

**MM 4.2.5m** Right-turn overlap phasing shall be provided for the northbound right-turn movement at the intersection of Laguna Boulevard with West Laguna Springs Drive.

Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program to include this improvement and by the annexation of the Laguna Ridge Specific Plan into the LSPFFP. Project and/or public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations.

*Timing/Implementation:* Prior to approval of subsequent development projects.  
*Enforcement/Monitoring:* City of Elk Grove Development Services.

This improvement is not included in the Laguna South Public Facilities Fee Program. This improvement would require modification of the existing signal equipment and signal phasing. Environmental effects associated with this type of improvement are anticipated to be temporary air quality impacts. Implementation of this improvement would provide LOS C operation in both the a.m. and p.m. peak hours, reducing the impact to **less than significant**.

### Elk Grove Boulevard/Franklin Boulevard

**MM 4.2.5n** Right-turn overlap phasing shall be provided for the southbound right-turn movement at the intersection of Elk Grove and Franklin Boulevards.

Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP. Project and/or public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations.

*Timing/Implementation:* Prior to approval of subsequent development projects.  
*Enforcement/Monitoring:* City of Elk Grove Development Services.



This improvement is included in the Laguna South Public Facilities Fee Program. This improvement would require modification of the existing signal equipment and signal phasing. Environmental effects associated with this type of improvement are anticipated to be temporary air quality impacts. Implementation of this improvement would provide LOS D operation in both the a.m. and p.m. peak hours. This measure would eliminate the deficiency identified, reducing the impact to **less than significant**.

### Grant Line Road/Bradshaw Road

**MM 4.2.5o** Right-turn overlap phasing shall be provided for the southbound right-turn movement at the Grant Line Road/Bradshaw Road intersection.

Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program to include this improvement and by the annexation of the Laguna Ridge Specific Plan into the LSPFFP. Project and/or public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations.

*Timing/Implementation:*      *Prior to approval of subsequent development projects.*

*Enforcement/Monitoring:*      *City of Elk Grove Development Services.*

This improvement is not included in the Laguna South Public Facilities Fee Program and would not require additional right-of-way. Installation of a traffic signal was assumed constructed as part of the Grant Line Road widening identified MTP for 2025. This improvement would require modification of the signal equipment and signal phasing. Implementation of this improvement would provide LOS C in the a.m. peak hour and would result in a **less than significant** impact.

### **Freeway Mainline Segments**

**Impact 4.2.6** Under cumulative plus project conditions, the section of SR-99 north of the Laguna Boulevard interchange would operate at LOS F during the a.m. peak hour (northbound) and LOS F during the p.m. peak hour (southbound) and the section of I-5 north of the Elk Grove Boulevard interchange would operate at LOS E during the a.m. peak hour (northbound). This would be a **cumulative significant** impact.

**Table 4.2-21** presents the LOS on the freeway mainline sections under cumulative plus project conditions.

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TABLE 4.2-21  
FREEWAY MAINLINE LEVEL OF SERVICE AND DENSITY – CUMULATIVE PLUS PROJECT CONDITIONS

Freeway Mainline	Cumulative Conditions				Cumulative Plus Project Conditions			
	AM Peak		PM Peak		AM Peak		PM Peak	
	Density <sup>1</sup>	LOS <sub>2</sub>	Density	LOS	Density	LOS	Density	LOS
SR 99 Northbound (north of Laguna Blvd.)	22.9	C	20.4	C	25.7	D	21.7	C
SR 99 Southbound (north of Laguna Blvd.)	15.1	B	25.7	D	17.4	B	26.9	D
SR 99 Northbound (south of Elk Grove Blvd.)	27.9	D	23.6	C	28.1	D	24.0	C
SR 99 Southbound (south of Elk Grove Blvd.)	19.4	C	27.3	D	18.7	C	29.2	D
SR 99 Northbound (north of Elk Grove Blvd.)	19.2	C	16.8	C	20.9	C	18.2	C
SR 99 Southbound (north of Elk Grove Blvd.)	13.3	B	20.9	C	13.6	B	22.0	C
SR 99 Northbound (south of Grant Line Rd.)	30.7	D	28.7	D	32.5	E	29.7	D
SR 99 Southbound (south of Grant Line Rd.)	21.2	C	26.1	D	21.8	C	27.7	D
I-5 Northbound (south of Hood-Franklin Rd.)	22.5	C	33.3	E	22.5	C	35.8	E
I-5 Southbound (south of Hood-Franklin Rd.)	20.4	C	33.6	E	29.0	D	35.1	E
I-5 Northbound (north of Hood-Franklin Rd.)	43.5	F	35.3	E	>45.0	F <sup>3</sup>	36.0	E
I-5 Southbound (north of Hood-Franklin Rd.)	22.1	C	>45.0	F <sup>3</sup>	31.7	D	>45.0	F <sup>3</sup>
I-5 Northbound (north of Elk Grove Blvd.)	33.4	E <sup>3</sup>	27.8	D	36.2	E <sup>3</sup>	29.9	D
I-5 Southbound (north of Elk Grove Blvd.)	15.1	B	32.5	E	21.0	C	37.0	F
I-5 Northbound (north of Laguna Blvd.)	>45.0	F <sup>3</sup>	35.6	E	>45.0	F <sup>3</sup>	39.4	F
I-5 Southbound (north of Laguna Blvd.)	20.7	C	>45.0	F <sup>3</sup>	26.2	D	>45.0	F <sup>3</sup>

Notes: <sup>1</sup> Density in passenger cars per mile per lane.

<sup>2</sup> Highway Capacity Manual (Transportation Research Board 2000)

<sup>3</sup> Unstable Flow.

The following freeway segments would operate unacceptably, based on Caltrans' Concept LOS thresholds, with the addition of the proposed project under cumulative conditions.

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- I-5 Northbound – north of Hood-Franklin Road (LOS E to LOS F in a.m. peak hour)
- I-5 Southbound – north of Hood-Franklin Road (LOS F increased by more than 0.05 in p.m. peak hour)
- I-5 Northbound – north of Laguna Boulevard (LOS F increased by more than 0.05 V/C in a.m. peak hour)
- I-5 Southbound – north of Laguna Boulevard (LOS F increased by more than 0.05 V/C in p.m. peak hour)
- I-5 Northbound – south of Hood-Franklin Road (LOS D to LOS E in p.m. peak hour)
- I-5 Southbound – south of Hood-Franklin Road (LOS D to LOS E in p.m. peak hour)
- I-5 Northbound – north of Elk Grove Boulevard (LOS D to LOS E in a.m. peak hour)
- I-5 Southbound – north of Elk Grove Boulevard (LOS D to LOS E in p.m. peak hour)

As shown in **Table 4.2-21**, the 1994 HCM method identifies the northbound and southbound segments of SR-99 north of the Laguna Boulevard interchange and the segment of I-5 north of the Elk Grove Boulevard interchange to be deficient, with or without the project.

### Mitigation Measures

#### I-5 Northbound – north of Hood-Franklin Road

**MM 4.2.6a** The project shall contribute to the following improvement to I-5:

- Construction of one lane northbound between Hood-Franklin Road and Elk Grove Boulevard.

This improvement will require coordination and approval from Caltrans. Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP as well as through the project's financing program and/or plan.

*Timing/Implementation:* Prior to approval of subsequent development projects.

*Enforcement/Monitoring:* City of Elk Grove Development Services and Caltrans

Improvements to the I-5 mainline are included in the LSPFFP for local contribution to these improvements. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, traffic flow, and water quality impacts. However, I-5 is a state highway facility and this improvement is not currently programmed in the Metropolitan Transportation Plan (MTP). Further, I-5 is under the jurisdiction of Caltrans and it is outside the City's jurisdiction to implement this improvement. Consequently, while this is a viable mitigation measure, the timing of this improvement is not known and will depend on when Caltrans (acting

## 4.2 TRANSPORTATION AND CIRCULATION

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as the lead agency) submits the projects for inclusion into the MTP. As such, this impact is considered to be **significant and unavoidable** until the timing of this improvement is determined.

### I-5 Southbound – north of Hood-Franklin Road

**MM 4.2.6b** The project shall contribute to the following improvement to I-5:

- Construction of one lane southbound between Hood-Franklin Road and Elk Grove Boulevard.

This improvement will require coordination and approval from Caltrans. Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP as well as through the project's financing program and/or plan.

*Timing/Implementation:* Prior to approval of subsequent development projects.

*Enforcement/Monitoring:* City of Elk Grove Development Services and Caltrans.

Implementation of this improvement would provide LOS C operation in the p.m. peak hour on the identified segment of I-5. This measure would eliminate the deficiency identified and, with construction of the improvement, the impact would be less than significant. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, traffic flow, and water quality impacts. Improvements to the I-5 mainline are included in the LSPFFP for local contribution to these improvements. However, I-5 is a state highway facility and this improvement is not currently programmed in the Metropolitan Transportation Plan (MTP). Consequently, while this is a viable mitigation measure, the timing of this improvement is not known and will depend on when Caltrans (acting as the lead agency) submits the projects for inclusion into the MTP. Since I-5 is under the jurisdiction of Caltrans, it is outside the City's jurisdiction to implement this improvement. As such, this impact is considered to be **significant and unavoidable** until the timing of this improvement is determined.

### I-5 Northbound – north of Laguna Boulevard

**MM 4.2.6c** The project shall contribute to the following improvement to I-5:

- Construction of one lane northbound between Laguna Boulevard and Pocket Road.

This improvement will require coordination and approval from Caltrans. Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP as well as through the project's financing program and/or plan.

*Timing/Implementation:* Prior to approval of subsequent development projects.

*Enforcement/Monitoring:* City of Elk Grove Development Services and Caltrans.

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Implementation of this improvement would provide LOS D operation in the a.m. peak hour on the identified segment of I-5. This measure would eliminate the deficiency identified and, with construction of the improvement, the impact would be less than significant. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, traffic flow, and water quality impacts. Improvements to the I-5 mainline are included in the LSPFFP for local contribution to these improvements. However, I-5 is a state highway facility and this improvement is not currently programmed in the Metropolitan Transportation Plan (MTP). Consequently, while this is a viable mitigation measure, the timing of this improvement is not known and will depend on when Caltrans (acting as the lead agency) submits the projects for inclusion into the MTP. Further, I-5 is under the jurisdiction of Caltrans and it is outside the City's jurisdiction to implement this improvement. As such, this impact is considered to be **significant and unavoidable** until the timing of this improvement is determined.

### I-5 Southbound – north of Laguna Boulevard

**MM 4.2.6d** The project shall contribute to the following improvement to I-5:

- Construction of one lane southbound between Laguna Boulevard and Pocket Road.

This improvement will require coordination and approval from Caltrans. Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP as well as through the project's financing program and/or plan.

*Timing/Implementation:* Prior to approval of subsequent development projects.

*Enforcement/Monitoring:* City of Elk Grove Development Services and Caltrans.

Implementation of this improvement would provide LOS C operation in the p.m. peak hour on the identified segment of I-5. This measure would eliminate the deficiency identified and, with construction of the improvement, the impact would be less than significant. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, traffic flow, and water quality impacts. Improvements to the I-5 mainline are included in the LSPFFP for local contribution to these improvements. However, I-5 is a state highway facility and this improvement is not currently programmed in the Metropolitan Transportation Plan (MTP). Consequently, while this is a viable mitigation measure, the timing of this improvement is not known and will depend on when Caltrans (acting as the lead agency) submits the projects for inclusion into the MTP. Further, I-5 is under the jurisdiction of Caltrans and it is outside the City's jurisdiction to implement this improvement. As such, this impact is considered to be **significant and unavoidable** until the timing of this improvement is determined.

### I-5 Northbound – south of Hood-Franklin Road

**MM 4.2.6e** The project shall contribute to the following improvement to I-5:

- Construction one lane northbound (approximately 0.25 miles) south of Hood-Franklin Road.

## 4.2 TRANSPORTATION AND CIRCULATION

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This improvement will require coordination and approval from Caltrans. Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP as well as through the project's financing program and/or plan.

*Timing/Implementation:* Prior to approval of subsequent development projects.  
*Enforcement/Monitoring:* City of Elk Grove Development Services and Caltrans.

Implementation of this improvement would provide LOS C operation in the p.m. peak hour on the identified segment of I-5. This measure would eliminate the deficiency identified and, with construction of the improvement, the impact would be less than significant. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, traffic flow, and water quality impacts. Improvements to the I-5 mainline are included in the LSPFFP for local contribution to these improvements. However, I-5 is a state highway facility and this improvement is not currently programmed in the Metropolitan Transportation Plan (MTP). Consequently, while this is a viable mitigation measure, the timing of this improvement is not known and will depend on when Caltrans (acting as the lead agency) submits the projects for inclusion into the MTP. Further, I-5 is under the jurisdiction of Caltrans and it is outside the City's jurisdiction to implement this improvement. As such, this impact is considered to be **significant and unavoidable** until the timing of this improvement is determined.

### I-5 Southbound – south of Hood-Franklin Road

**MM 4.2.6f** The project shall contribute to the following improvement to I-5:

- Construction one lane southbound (approximately 0.25 miles) south of Hood-Franklin Road.

This improvement will require coordination and approval from Caltrans. Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP as well as through the project's financing program and/or plan.

*Timing/Implementation:* Prior to approval of subsequent development projects.  
*Enforcement/Monitoring:* City of Elk Grove Development Services and Caltrans.

Implementation of this improvement would provide LOS C operation in the p.m. peak hour on the identified segment of I-5. This measure would eliminate the deficiency identified and, with construction of the improvement, the impact would be less than significant. Improvements to the I-5 mainline are included in the LSPFFP for local contribution to these improvements. However, I-5 is a state highway facility and this improvement is not currently programmed in the Metropolitan Transportation Plan (MTP). Consequently, while this is a viable mitigation measure, the timing of this improvement is not known and will depend on when Caltrans (acting as the lead agency) submits the projects for inclusion into the MTP. As such, this impact is considered to be **significant and unavoidable** until the timing of this improvement is determined.

### I-5 Northbound – north of Elk Grove Boulevard

**MM 4.2.6g** The project shall contribute to the following improvement to I-5:

- Construction of one lane northbound between Elk Grove Boulevard and Laguna Boulevard.

This improvement will require coordination and approval from Caltrans. Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP as well as through the project's financing program and/or plan.

*Timing/Implementation:* Prior to approval of subsequent development projects.  
*Enforcement/Monitoring:* City of Elk Grove Development Services and Caltrans.

Implementation of this improvement would provide LOS C operation in the a.m. peak hour on the identified segment of I-5. This measure would eliminate the deficiency identified and, with construction of the improvement, the impact would be less than significant. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, traffic, and water quality impacts. Improvements to the I-5 mainline are included in the LSPFFP for local contribution to these improvements. However, I-5 is a state highway facility and this improvement is not currently programmed in the Metropolitan Transportation Plan (MTP). Consequently, while this is a viable mitigation measure, the timing of this improvement is not known and will depend on when Caltrans (acting as the lead agency) submits the projects for inclusion into the MTP. As I-5 is under the jurisdiction of Caltrans, it is outside the control of the City to implement this improvement. As such, this impact is considered to be **significant and unavoidable** until the timing of this improvement is determined.

### I-5 Southbound – north of Elk Grove Boulevard

**MM 4.2.6h** The project shall contribute to the following improvement to I-5:

- Construction of one lane southbound between Elk Grove Boulevard and Laguna Boulevard.

This improvement will require coordination and approval from Caltrans. Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation

## 4.2 TRANSPORTATION AND CIRCULATION

of the Laguna Ridge Specific Plan into the LSPFFP as well as through the project's financing program and/or plan.

*Timing/Implementation:* Prior to approval of subsequent development projects.

*Enforcement/Monitoring:* City of Elk Grove Development Services and Caltrans

Implementation of this improvement would provide LOS C operation in the p.m. peak hour on the identified segment of I-5. This measure would eliminate the deficiency identified and, with construction of the improvement, the impact would be less than significant. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, traffic, and water quality impacts. Improvements to the I-5 mainline are included in the LSPFFP for local contribution to these improvements. However, I-5 is a state highway facility and this improvement is not currently programmed in the Metropolitan Transportation Plan (MTP). Consequently, while this is a viable mitigation measure, the timing of this improvement is not known and will depend on when Caltrans (acting as the lead agency) submits the projects for inclusion into the MTP. Further, I-5 is under the jurisdiction of Caltrans and it is outside the responsibility of the City to implement this improvement. As such, this impact is considered to be **significant and unavoidable** until the timing of this improvement is determined.

### Freeway Ramps

**Impact 4.2.7** Implementation of the proposed project would cause operations on the SR-99 northbound on-ramp junction from Laguna Boulevard to deteriorate from LOS D to F during the a.m. peak hour; on the SR-99 southbound off-ramp junction to Laguna Boulevard to deteriorate from LOS D to F during the p.m. peak hour; on the SR-99 southbound loop on-ramp junction from Grant Line Road to operate at LOS F during the p.m. peak hour; on the I-5 northbound off-ramp to Hood Franklin Road to operate at LOS E during the a.m. peak hour; on the I-5 northbound on-ramp from Hood Franklin Road to operate at LOS E during the a.m. peak hour; the I-5 southbound off-ramp to Hood Franklin Road to operate at LOS E during the p.m. peak hour; the I-5 northbound off-ramp to Elk Grove Boulevard to operate at LOS E during the a.m. peak hour and the I-5 northbound on-ramp from Elk Grove Boulevard to operate at LOS F during the a.m. peak hour indicating a **cumulative significant** impact.

Traffic volumes for the freeway ramps within the study area were obtained from the cumulative plus project intersection volumes shown on **Figure 4.2-16**. **Table 4.2-22** presents the LOS at the freeway ramp junctions under cumulative plus project conditions.

**TABLE 4.2-22**  
**FREEWAY RAMP JUNCTION LEVEL OF SERVICE AND DENSITY – CUMULATIVE PLUS PROJECT CONDITIONS**

Freeway Ramp Junctions	Cumulative Conditions				Cumulative Plus Project Conditions			
	AM Peak		PM Peak		AM Peak		PM Peak	
	Density <sup>1</sup>	LOS <sup>2</sup>	Density	LOS	Density	LOS	Density	LOS
Laguna Blvd./SR 99 Northbound Off-Ramp	34.5	D	30.4	D	37.3	E	32.7	D



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Freeway Ramp Junctions	Cumulative Conditions				Cumulative Plus Project Conditions			
	AM Peak		PM Peak		AM Peak		PM Peak	
	Density <sup>1</sup>	LOS <sup>2</sup>	Density	LOS	Density	LOS	Density	LOS
Laguna Blvd./SR 99 Northbound Loop On-Ramp	35.4	E	31.3	D	39.6	E	32.7	D
Laguna Blvd./SR 99 Northbound On-Ramp	38.3	E	34.5	D	42.6	E	36.5	E
Laguna Blvd./SR 99 Southbound Off-Ramp	16.4	B	33.8	D	20.2	C	35.7	E
Laguna Blvd./SR 99 Southbound Loop On-Ramp	21.3	C	31.5	D	21.8	C	33.2	D
Laguna Blvd./SR 99 Southbound On-Ramp	22.6	C	33.2	D	22.4	C	34.9	D
Elk Grove Blvd./SR 99 Northbound Off-Ramp	28.3	D	24.6	C	28.4	D	25.0	C
Elk Grove Blvd./SR 99 Northbound On-Ramp	32.2	D	28.5	D	34.9	D	30.6	D
Elk Grove Blvd./SR 99 Southbound Off-Ramp	12.5	B	25.3	C	13.0	B	27.2	C
Elk Grove Blvd./SR 99 Southbound On-Ramp	16.9	B	22.3	C	15.2	B	23.3	C
Grant Line Rd./SR 99 Northbound Off-Ramp	25.5	C	23.9	C	26.8	C	24.7	C
Grant Line Rd./SR 99 Northbound Loop On-Ramp	28.3	D	27.4	C	28.6	D	25.3	C
Grant Line Rd./SR 99 Northbound On-Ramp	30.0	D	26.1	C	30.2	D	26.4	C
Grant Line Rd./SR 99 Southbound Off-Ramp	14.1	B	22.6	C	13.4	B	24.3	C
Grant Line Rd./SR 99 Southbound Loop On-Ramp	20.8	C	26.6	C	21.3	C	27.8	C
Grant Line Rd./SR 99 Southbound On-Ramp	24.5	C	29.5	D	25.2	C	30.8	D
Laguna Blvd./I-5 Northbound Off-Ramp	20.3	C	22.7	C	20.3	C	22.7	C
Laguna Blvd./I-5 Northbound On-Ramp	34.9	D	20.6	C	34.9	D	20.6	C
Laguna Blvd./I-5 Southbound Off-Ramp	18.9	B	34.5	D	18.9	B	34.5	D
Laguna Blvd./I-5 Southbound Loop On-Ramp	11.8	B	18.0	B	11.8	B	18.0	B
Hood Franklin Rd./I-5 Northbound Off-Ramp	29.6	D	38.7	E	29.6	D	40.1	E
Hood Franklin Rd./I-5 Northbound Loop On-Ramp	27.6	C	36.2	E	6.9	A	33.6	D
Hood Franklin Rd./I-5 Northbound On-Ramp	37.7	E	35.4	E	39.4	E	35.8	E
Hood Franklin Rd./I-5 Southbound Off-Ramp	29.2	D	44.8	E	37.7	E	44.9	E
Hood Franklin Rd./I-5 Southbound Loop On-Ramp	25.5	C	36.1	E	37.5	E	36.8	E
Hood Franklin Rd./I-5 Southbound On-Ramp	24.6	C	35.1	E	32.3	D	35.9	E
Elk Grove Blvd./I-5 Northbound Off-Ramp	29.4	D	27.6	C	30.5	D	28.7	D

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Freeway Ramp Junctions	Cumulative Conditions				Cumulative Plus Project Conditions			
	AM Peak		PM Peak		AM Peak		PM Peak	
	Density <sup>1</sup>	LOS <sup>2</sup>	Density	LOS	Density	LOS	Density	LOS
Elk Grove Blvd./I-5 Northbound On-Ramp	34.2	D	30.6	D	34.9	D	32.4	D
Elk Grove Blvd./I-5 Southbound Off-Ramp	23.3	C	37.1	E	28.8	D	39.6	E
Elk Grove Blvd./I-5 Southbound On-Ramp	12.6	B	25.3	C	22.3	C	25.4	C

Notes: <sup>1</sup> Density in passenger cars per mile per lane.

<sup>2</sup> Highway Capacity Manual (Transportation Research Board 2000)

<sup>3</sup> Demand Exceeds Capacity.

As shown in **Table 4.2-22**, the following ramp junctions on I-5 would operate at unacceptable levels of service based on Caltrans' Concept LOS thresholds.

- Hood Franklin Road/I-5 Southbound Off-Ramp (LOS D to LOS E in a.m. peak hour)
- Hood Franklin Road/I-5 Southbound Loop On-Ramp (LOS C to LOS E in a.m. peak hour)

### Mitigation Measures

#### Hood-Franklin Road/I-5 Southbound Off-Ramp

**MM 4.2.7a** The project shall contribute to the following improvement to I-5:

- Construction of one lane southbound between Hood-Franklin Road and Elk Grove Boulevard.

This improvement will require coordination and approval from Caltrans. Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP as well as through the project's financing program and/or plan.

*Timing/Implementation:* Prior to approval of subsequent development projects.

*Enforcement/Monitoring:* City of Elk Grove Development Services and Caltrans.

Implementation of this improvement would provide LOS C operation in the p.m. peak hour on the identified segment of I-5. This measure would eliminate the deficiency identified and, with construction of the improvement, the impact would be less than significant. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, traffic, and water quality impacts. Improvements to the I-5 mainline are included in the LSPFFP for local contribution to these improvements. However, I-5 is a state highway facility and this improvement is not currently programmed in the Metropolitan Transportation Plan (MTP). Consequently, while this is a viable mitigation measure, the timing of this improvement is not known and will depend on when Caltrans (acting as the lead agency) submits the projects for

inclusion into the MTP. Since I-5 is under the jurisdiction of Caltrans, it is outside the control of the City to implement this improvement. As such, this impact is considered to be **significant and unavoidable** until the timing of this improvement is determined.

### Hood-Franklin Road/I-5 Southbound Loop On-Ramp

**MM 4.2.7b** The project shall contribute to the following improvement to I-5:

- Construction of one lane southbound from the southbound off-ramp at Hood-Franklin Road approximately 0.25 miles south of Hood-Franklin Road.

This improvement will require coordination and approval from Caltrans. Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP as well as through the project's financing program and/or plan.

*Timing/Implementation:* Prior to approval of subsequent development projects.

*Enforcement/Monitoring:* City of Elk Grove Development Services and Caltrans.

Implementation of this improvement would provide LOS C operation in the p.m. peak hour on the identified segment of I-5. This measure would eliminate the deficiency identified and, with construction of the improvement, the impact would be less than significant. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, traffic, and water quality impacts. Improvements to the I-5 mainline are included in the LSPFFP for local contribution to these improvements. However, I-5 is a state highway facility and this improvement is not currently programmed in the Metropolitan Transportation Plan (MTP). Consequently, while this is a viable mitigation measure, the timing of this improvement is not known and will depend on when Caltrans (acting as the lead agency) submits the projects for inclusion into the MTP. This facility is under the jurisdiction of Caltrans and it is outside the City's control to implement this improvement. As such, this impact is considered to be **significant and unavoidable** until the timing of this improvement is determined.

### Transit System Operations

**Impact 4.2.8** The proposed project would contribute to a cumulative demand for transit services and facilities. This is a **cumulative significant** impact.

Transit system operations under cumulative plus project conditions were evaluated by considering the potential effects of the project on existing or planned transit services in the vicinity of the plan area. Regional Transit (RT) maintains a 20-year master plan of transit facilities for the Sacramento region. This plan and the City's General Plan show that feeder bus service will be provided on: 1) Elk Grove Boulevard between SR-99 and the UPRR, and 2) Bruceville Road between Poppy Ridge Road and Laguna Boulevard.

Besides providing local bus service, the planned feeder service is intended to support future "trunk" transit service along the Union Pacific Railroad line from downtown Sacramento to Bilby Road. This service is ultimately planned to be provided by light rail, but an interim facility may be developed within this right-of-way prior to a rail system. This extension is subject to the outcome

## 4.2 TRANSPORTATION AND CIRCULATION

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of the City/RT Alignment Study. An Amtrak transit line is being planned to Grant Line Road on the existing Union Pacific rail line near Waterman Road. This future transit line is not planned for light rail at this time. **Figure 4.2-5** illustrates the existing and planned transit services within the study area.

All major arterial and collector streets in the vicinity of the plan area are expected to be designed to accommodate transit facilities such as turnouts, bus stops, and shelters. Thus, implementation of the proposed project would not disrupt existing or planned transit operations in the area. However, right-of-way for light rail facilities anticipated under the cumulative condition has not been provided. The project's cumulative impact to transit services is considered potentially significant.

**MM 4.2.8** Prior to the approval of tentative subdivision and parcel maps associated with land areas along Big Horn Blvd and Bruceville Road, right-of-way for future light rail stations and lines at locations along either Big Horn Boulevard and Bruceville Road shall be dedicated based on consultation with the City of Elk Grove and Sacramento Regional Transit.

*Timing/Implementation:* Prior to approval of tentative subdivision and parcel maps.

*Enforcement/Monitoring:* City of Elk Grove Development Services and Sacramento Regional Transit.

Implementation of the above mitigation measure would make this impact **less than significant**.

### Bicycle and Pedestrian System Operations

The planned bicycle facilities identified in the *Final Environmental Impact Report for the 2010 Sacramento City/County Bikeway Master Plan* (July 1993) are shown on **Figure 4.2-11**. The project would provide right-of-way for a future bicycle/pedestrian freeway over-crossing between the Plan area and Elk Grove Regional Park east of Highway 99. All major arterial and collector streets in the vicinity of the plan area would be designed to accommodate the planned bikeways and pedestrian sidewalks. Thus, implementation of the proposed project would not disrupt or interfere with existing or planned bikeways and pedestrian operations in the area, and therefore deficiencies under cumulative plus project conditions were not identified. The project's cumulative impact to bicycle and pedestrian operations is considered **less than significant**.

### REFERENCES

- CCS, 2003. *A.M. Peak Hour Volume/Capacity Analysis and P.M. Peak Hour Volume/Capacity Analysis*. March, 2003.
- City of Elk Grove, 2000. City of Elk Grove. *City of Elk Grove General Plan*. July 2000. Elk Grove, CA.
- City of Elk Grove, 2001. City of Elk Grove. *Laguna South Public Facilities Fee Program Nexus Study*. August 10, 2001. Elk Grove, CA.
- City/County of Sacramento, 1993. *2010 Sacramento City/County Bikeway Master Plan*. July 1993. Elk Grove, CA.
- Fehr & Peers Associates Inc., 2001. *Traffic Impact Study for Laguna Ridge Specific Plan*. January 22, 2001. Roseville, CA.

**SECTION 4.3  
AIR QUALITY**

## 4.3 AIR QUALITY

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This section describes the impacts of the proposed project on local and regional air quality. The firm of Donald Ballanti performed an air quality study of the proposed project area in June 2000. Donald Ballanti updated this section in 2002. This section was prepared using methodologies and assumptions recommended within that study and guidelines of the Sacramento Metropolitan Air Quality Management District (SMAQMD). In keeping with these guidelines the section describes existing air quality; construction-related impacts, direct and indirect emissions associated with the project; the impacts of these emissions on both the local and regional scale; and mitigation measures warranted to reduce or eliminate any identified significant impacts.

### 4.3.1 EXISTING SETTING

In an effort to study and manage regional air pollution problems, the state of California area has been divided into a number of air basins and airsheds. The proposed Specific Plan area is located within the Sacramento Valley Air Basin. Air quality within the Basin and County is degraded by high pollutant concentrations generated by dense population centers, heavy vehicular traffic, stationary source emissions and industry, combined with meteorological influences including frequent summer inversion layers.

#### CLIMATE AND METEOROLOGY

The Specific Plan area lies in the southern portion of the Sacramento Valley, a broad, flat valley bounded by the coastal ranges to the west and the Sierra Nevada to the east. A sea level gap in the Coast Range, the Carquinez Strait, is located about 50 miles southwest and the intervening terrain is very flat. The prevailing wind direction is southwesterly, which is the wind direction when marine breezes flow through the Carquinez Strait. Marine breezes dominate during the spring and summer months, and show a strong daily variation. Highest average windspeeds occur in the afternoon and evening hours; the lightest winds occur in the night and morning hours. During fall and winter, when the sea breeze diminishes, northerly winds occur more frequently, but southwesterly winds still predominate.

The plan area is within the Sacramento Metropolitan Air Quality Management District, which is part of the Sacramento Valley Air Basin. The Sacramento Valley Air Basin has been further divided into Planning Areas called the Northern Sacramento Valley Air Basin (NSVAB) and the Greater Sacramento Air region, designated by the U.S. Environmental Protection Agency (EPA) as the Sacramento Federal Ozone Non-attainment Area. The Non-attainment area consists of all of Sacramento and Yolo counties and parts of El Dorado, Solano, Placer, and Sutter counties.

The San Francisco Bay Area Air Basin lies to the west, and the San Joaquin Valley Air Basin is located to the south of the Planning Area. Considerable transport of pollutants occurs between these air basins, so that air quality in the Planning Area is partially determined by the release of pollutants elsewhere. In turn, pollutants generated in Planning Area affect air quality in areas to the north and east.

#### AMBIENT AIR QUALITY STANDARDS

Both the U. S. Environmental Protection Agency and the California Air Resources Board have established ambient air quality standards for common pollutants. These ambient air quality standards are levels of contaminants that represent safe levels that avoid specific adverse health effects associated with each pollutant. The ambient air quality standards cover what are

### 4.3 AIR QUALITY

called "criteria" pollutants because the health and other effects of each pollutant are described in criteria documents.

The federal and California state ambient air quality standards are summarized in **Table 4.3-1** for important pollutants. The federal and state ambient standards were developed independently with differing purposes and methods, although both processes attempted to avoid health-related effects. As a result, the federal and state standards differ in some cases. In general, the California state standards are more stringent. This is particularly true for ozone and PM<sub>10</sub>.

**TABLE 4.3-1  
FEDERAL AND STATE AMBIENT AIR QUALITY STANDARDS**

Pollutant	Averaging Time	Federal Primary Standard	State Standard
Ozone	1-Hour	0.12 PPM	0.09 PPM
	8-Hour	0.08 PPM	--
Carbon Monoxide	8-Hour	9 PPM	9.0 PPM
	1-Hour	35 PPM	20.0 PPM
Nitrogen Dioxide	Annual Average	0.05 PPM	--
	1-Hour	--	0.25 PPM
Sulfur Dioxide	Annual Average	0.03 PPM	--
	24-Hour	0.14 PPM	0.05 PPM
	1-Hour	--	0.25 PPM
PM <sub>10</sub>	Annual Average	50 µg/m <sup>3</sup>	30 µg/m <sup>3</sup>
	24-Hour	150 µg/m <sup>3</sup>	50 µg/m <sup>3</sup>
PM <sub>2.5</sub>	Annual	15 µg/m <sup>3</sup>	--
	24-Hour	65 µg/m <sup>3</sup>	--

Notes: PPM = Parts per Million; µg/m<sup>3</sup> = Micrograms per Cubic Meter  
Source: Donald Ballanti, 2000

The U.S. Environmental Protection Agency in 1997 adopted new national air quality standards for ground-level ozone and for fine particulate matter. The existing 1-hour ozone standard of 0.12 Parts Per Matter (PPM) will be phased-out and replaced by an 8-hour standard of 0.08 PPM. New national standards for fine particulate matter (diameter 2.5 microns or less) have also been established for 24-hour and annual averaging periods. The current PM<sub>10</sub> standards were retained, but the method and form for determining compliance with the standards were revised. Implementation of the new ozone and particulate matter standards was delayed by a lawsuit. On February 27, 2001 the U. S. Supreme Court unanimously ruled in favor of the Environmental Protection Agency, clearing the way for implementation of the new standards.

During the delay caused by the lawsuit, the California Air Resources Board developed recommended designations for California air basins, proposing that Sacramento County be designated as non-attainment for the new 8-hour ozone standard. Designations for PM<sub>2.5</sub> have



not been made, however, as a minimum 3-year monitoring period is required to determine designations.

As part of an air pollution reduction effort, Sacramento County established the General Plan AQ-15 requirement, which requires a 15 percent reduction in emissions associated with new development. The City of Elk Grove adopted similar air quality policies as Sacramento County (CAQ-24). The City requires all new development projects to reduce emissions by 15 percent.

### Criteria Pollutants

Air quality is a function of the criteria pollutants emitted locally, in addition to the existing regional ambient air quality and the meteorological and topographic features. There are six "criteria air pollutants" for which the Federal and State governments have established standards. These pollutants include ozone (O<sub>3</sub>), carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), sulfur dioxide (SO<sub>2</sub>), lead (Pb), and suspended particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>).

The most problematic pollutants in Sacramento County are ozone and particulate matter. The U.S. Environmental Protection Agency, in 1997, adopted new national air quality standards for ground-level ozone and for fine particulate matter. The existing 1-hour ozone standard of 0.12 PPM will be phased out and replaced by an 8-hour standard of 0.08 PPM. New national standards for fine particulate matter (diameter 2.5 microns or less) have also been established for 24-hour and annual averaging periods. The current PM<sub>10</sub> standards were retained, but the method and form for determining compliance with the standards were revised. Implementation of the 8-hour standard was delayed by litigation, but was determined to be valid and enforceable by the U. S. Supreme Court in a decision issued in February of 2001. However, the new federal ozone standard is not yet in effect pending final resolution of this litigation and adoption of implementing regulations.

In 1997 new national standards for fine Particulate Matter (diameter 2.5 microns or less) were adopted for 24-hour and annual averaging periods. The current PM<sub>10</sub> standards were to be retained, but the method and form for determining compliance with the standards were to be revised. Implementation of this standard was delayed by litigation and will not occur until the U. S. Environmental Protection Agency has issued court-approved guidance.

In June of 2002, the state of California adopted new state ambient standards for PM<sub>10</sub> and PM<sub>2.5</sub>. The annual-averaged standard for PM<sub>10</sub> was reduced from 30 micrograms per cubic meter to 20 micrograms per cubic meter, and a new annual average standard of 12 micrograms per cubic meter was established for PM<sub>2.5</sub>.

### Ozone

Ozone is the most prevalent of a class of photochemical oxidants formed in the urban atmosphere. The creation of ozone is a result of complex chemical reactions between hydrocarbons and oxides of nitrogen in the presence of sunshine. Unlike other pollutants, ozone is not released directly into the atmosphere from any sources. The major sources of oxides of nitrogen and reactive hydrocarbons, known as ozone precursors, are combustion sources such as factories and automobiles, and evaporation of solvents and fuels.

The health effects of ozone are eye irritation and damage to lung tissues. Ozone also damages some materials such as rubber, and may damage plants and crops.

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### Particulate Matter

Particulate matter consists of solid and liquid particles of dust, soot, aerosols and other matter, which are small enough to remain suspended in the air for a long period of time. A portion of the particulate matter in the air is due to natural sources such as wind blown dust and pollen. Man-made sources include combustion, automobiles, field burning, factories and road dust. A portion of the particulate matter in the atmosphere is also a result of photochemical processes.

The effects of high concentrations on humans include aggravation of chronic disease and heart/lung disease symptoms. Non-health effects include reduced visibility and soiling of surfaces.

### Causes of Smog

Smog is a general term based on the words smoke and fog that is used to describe dense, visible air pollution. Although some air pollutants are colorless, smog is commonly used to describe the general concentrations of pollutants in the air. Smog is formed when combustion emissions and gaseous emissions, such as reactive organic gases (ROG) and oxides of nitrogen ( $\text{NO}_x$ ), undergo photochemical reactions in sunlight to form ozone ( $\text{O}_3$ ). Ozone is a gas that, in the upper atmosphere, helps to shield the earth from harmful solar radiation. However, in the lower atmosphere where people live, ozone poses health risks and damages crops, rubber, and other materials. Particulates, such as soil and dust materials, and vehicle exhaust particulates often mix with ozone, carbon monoxide (CO), and other compounds and create a brownish haze in the air. "Smog episode" warnings occur when an occurrence of high concentrations of ozone is predicted that could endanger or cause harm to the public.

The topography and climate of the Basin combine to make it an area of smog potential. During the summer months, a warm air mass frequently descends over the lower, cool, moist marine air layer from the Sacramento Delta and San Francisco Bay. The warm upper layer forms a cap over the marine layer and inhibits the air pollutants generated near the ground from dispersing upward. Light summer winds and the surrounding mountains further limit the horizontal disbursement of the pollutants. Concentrating volumes of pollutants in this manner allows the summer sunlight to generate high levels of smog. In the winter, cool ground temperatures and very light winds cause extremely low inversions and air stagnation, which trap CO and  $\text{NO}_x$  during the late night and early morning hours. On days when no inversions occur, or when winds average 25 miles per hour or more, there are no significant smog effects.

The air pollutants within the Basin are generated by both stationary and mobile sources. Stationary sources are known as "point sources," which have one or more emission sources at a single facility, or "area sources," which are widely distributed, and produce many small emissions. Point sources are usually associated with manufacturing and industrial uses and include sources that produce electricity or process heat, such as refinery boilers or combustion equipment. Examples of area sources include residential water heaters, painting operations, lawn mowers, agricultural fields, landfills, and consumer products, such as barbecue lighter fluid or hair spray. "Mobile sources" refer to operational and evaporative emissions from motor vehicles. They account for the majority of the emissions generated within the Basin.

### Potential Sensitive Receptors

Residential uses and schools are considered sensitive receptors to air pollutants. Such uses are more sensitive to air pollutants and odors due to their proximity to the emissions source, duration

of exposure, and occupants that may have pre-existing health problems. The Laguna Ridge Specific Plan area is across from existing residential uses located south of Bilby Road and north of Elk Grove Boulevard. Future residential uses and a school site will be located west of Bruceville Road as part of the East Franklin Specific Plan. Additionally, the Laguna Ridge Specific Plan includes onsite residential uses and 5 school sites.

### AQ-15 Plan

The City of Elk Grove, as a recently incorporated city, is in the process of developing a General Plan. Policy CAQ-24 of the Draft General Plan is designed to improve air quality through a variety of measures that eliminate or reduce vehicle trips, reduce trip length, or change the time of day when trips are completed. CAQ-24 is intended to replace AQ-15 in the Sacramento County General Plan.

The City of Elk Grove's Draft General Plan Policy CAQ-24 is designed to improve air quality through a variety of measures that eliminate or reduce vehicle trips, reduce trip lengths, or change the time of day when trips are completed. As part of the Laguna Ridge Specific Plan, the project applicant has prepared a project-specific AQ-15 Management Plan in conjunction with the SMAQMD (see **Appendix 4.3**). This plan includes measures for mitigating air pollution, including transit, bike/pedestrian amenities, roadway alignment, parking, building construction and design, and project operation in an effort to reduce the project's contribution to regional air pollution.

### 4.3.2 Regulatory Framework

Air quality within the Basin is addressed through the efforts of various federal, state, regional, and local government agencies. These agencies work jointly, as well as individually, to improve air quality through legislation, regulations, planning, policy-making, education, and a variety of programs. The agencies primarily responsible for improving the air quality within Sacramento County are discussed below along with their individual responsibilities.

#### FEDERAL

The U.S. Environmental Protection Agency (U.S. EPA) is responsible for enforcing the 1990 amendments to the Federal Clean Air Act (CAA) and the national ambient air quality standards (Federal standards) that it establishes (see **Table 4.3-1**). These standards identify levels of air quality for six "criteria" pollutants, which are considered the maximum levels of ambient (background) air pollutants considered safe, with an adequate margin of safety, to protect public health and welfare. The six criteria pollutants include ozone, CO, nitrogen dioxide (NO<sub>2</sub> - a form of NO<sub>x</sub>), sulfur dioxide (SO<sub>2</sub> - a form of SO<sub>x</sub>), particulate matter 10 microns in size and smaller (PM<sub>10</sub>), and lead. The U.S. EPA also has regulatory and enforcement jurisdiction over emission sources beyond State waters (outer continental shelf), and sources that are under the exclusive authority of the Federal government, such as aircraft, locomotives, and interstate trucking.

#### STATE

The California Air Resources Board (ARB), a department of the California Environmental Protection Agency (Cal EPA), oversees air quality planning and control throughout California. It is primarily responsible for ensuring implementation of the 1989 amendments to the California

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Clean Air Act (CCAA), responding to the Federal CAA requirements, and for regulating emissions from motor vehicles and consumer products within the State. The ARB has established emission standards for vehicles sold in California and for various types of equipment available commercially. It also sets fuel specifications to further reduce vehicular emissions.

The amendments to the CCAA establish ambient air quality standards for the State (state standards) and a legal mandate to achieve these standards by the earliest practical date. These standards apply to the same six criteria pollutants as the Federal CAA, and also include sulfate, visibility, hydrogen sulfide, and vinyl chloride. They are more stringent than the federal standards and, in the case of PM<sub>10</sub> and SO<sub>2</sub>, far more stringent.

#### LOCAL

The management of air quality in Sacramento County is the responsibility of the Sacramento Metropolitan Air Quality Management District (SMAQMD). This agency is responsible for bringing air quality in the County into compliance with federal and state air quality standards. Specifically, the SMAQMD has the responsibility to monitor ambient air pollutant levels throughout the County and to develop and implement attainment strategies to ensure that future emissions will be within federal and state standards.

#### SMAQMD's Clean Air Plans

As discussed previously, the Federal and State Clean Air Acts require the preparation of plans to reduce air pollution to healthful levels. The SMAQMD has responded to this requirement by cooperating in the preparation of a series of clean air plans. One of these plans is the SMAQMD's *Air Quality Attainment Plan*, which was adopted in July 1991. This plan addresses CCAA requirements and focuses on ozone and CO emissions. The SMAQMD also cooperated in the preparation of the Sacramento Regional Ozone Attainment Plan (ROAP) which addresses the requirements of the CAA. This document focuses on reducing emissions from ozone precursors through stationary and mobile source reduction measures.

#### SMAQMD's Air Quality Thresholds of Significance

The Sacramento Metropolitan AQMD has recently adopted revised significance criteria/thresholds to be used to determine project significance under the California Environmental Quality Act (SMAQMD, 2002). The District defines three types of thresholds:

- **Mass Emission Thresholds**-The District considers increases in emissions of nitrogen oxides (NO<sub>x</sub>) greater than 85 pounds per day as significant during construction. For operation of a project, the District's threshold of significance is 65 pounds per day of either NO<sub>x</sub> or Reactive Organic Gases (ROG).
- **Emissions Concentration Thresholds**- A predicted violation of any California Ambient Air Quality Standard (CAAQS) during both construction or operation of the project would be considered a significant impact.
- **Substantial Contribution Threshold**- A project is considered to contribute substantially to an existing or projected violation of the CAAQS if it emits pollutants at a level equal to or greater than five percent of the CAAQS.

**Attainment Status and Regional Air Quality Plans**

The Sacramento Metropolitan Air Quality Management District (SMAQMD) maintains several air quality monitoring sites in the Sacramento area, including one in Elk Grove. This monitoring site measures two pollutants: ozone and nitrogen dioxide. Most of the standards shown in **Table 4.3-1** are met in Sacramento County with the exception of ozone (state and federal) and PM<sub>10</sub> (state 24-hour and annual).

SMAQMD is the local air quality agency and is responsible for preparing regional air quality plans under the state and federal Clean Air Acts. The current regional plan addresses ozone and identifies strategies for progressive reduction in emissions of ozone precursors. In addition to planning responsibilities, SMAQMD has permitting authority over stationary sources of pollutants. Authority over mobile sources of pollutants is given to the California Air Resources Board (CARB).

The California Legislature, when it passed the California Clean Air Act in 1988, recognized the relative intractability of the PM<sub>10</sub> problem and excluded it from the basic planning requirements of the Act. The Act did require the CARB to prepare a report to the Legislature regarding the prospect of achieving the State ambient air quality standard for PM<sub>10</sub>. This report recommended a menu of actions, but did not recommend imposing a planning process similar to that for ozone or other pollutants for achievement of the standard within a certain period of time.

The City of Elk Grove General Plan Policy CAQ-24 requires all new major development projects to reduce their emissions by 15 percent from the base-case level that would otherwise be produced, assuming full trip generation potential per the current Institute of Traffic Engineers (ITE) *Trip Generation* manual. CAQ-24 addresses air quality impacts as follows:

“All new development projects shall incorporate design, construction, and/or operational features to result in a reduction in emissions equal to 15 percent compared to an “unmitigated baseline” project. An “unmitigated baseline project” is a development project which is built and/or operated without the implementation of trip-reduction, energy conservation, or similar features, including any such features which may be required by the Zoning Code or other applicable codes.”

In addition, Sections 330-140 to 330-150 of City of Elk Grove’s Zoning Code require the preparation and implementation of a Transportation Systems Management (TSM) plan for major development plans with over 200 employees.

**CITY OF ELK GROVE DRAFT GENERAL PLAN**

**Table 4.3-2** identifies the General Plan Air Quality Element policies that are directly applicable to the proposed project, and presents an evaluation of the consistency of the project with these statements as required by CEQA. The final authority for interpretation of these policy statements, and determination of the project’s General Plan consistency, rests with the City Council.

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**TABLE 4.3-2  
DRAFT GENERAL PLAN CONSERVATION AND AIR QUALITY ELEMENT POLICY CONSISTENCY**

Draft General Plan Policies	Consistency with General Plan	Plan Analysis
<p><b>CAQ-18:</b></p> <p>It is the policy of the City of Elk Grove to minimize air pollutant emissions from all City facilities and operations to the extent feasible and consistent with the City's need to provide a high level of public service.</p>	<p align="center">Yes</p>	<p>Development within the Plan Area would be required to comply with Energy Building Regulations adopted by the California Energy Commission (Title 24 of the Cal. Code of Regulations) and adopted City of Elk Grove energy conservation requirements. The City would monitor compliance through the adopted Mitigation Monitoring And Reporting Program (MMRP).</p>
<p><b>CAQ-19:</b></p> <p>The City shall promote energy conservation measures in new development to reduce on-site emissions and power plant emissions. The City shall seek to reduce the energy impacts from new residential and commercial projects through investigation and implementation of energy efficiency measures during all phases of design and development.</p>	<p align="center">Yes</p>	<p>Landscape Design Guidelines include provisions for the installation of plant materials that are drought tolerant, that promote energy conservation and that comply with the City of Elk Grove Water Conservation Ordinance.</p> <p>The project would implement dust control measures pursuant to SMAQMD Rule 403 during construction to reduce PM<sub>10</sub> and PM<sub>2.5</sub> emissions, as well as measures contained the Draft General Plan Policy CAQ-22 (See analysis of Policy CAQ-22).</p> <p>The Laguna Ridge Specific Plan provides for a mixture of residential and commercial uses, including neighborhood services. Each neighborhood within the plan area includes parks, schools, and in some cases small commercial developments. The Specific Plan's neighborhood commercial centers would provide opportunities for support services such as clerical, telecommunications, and other office services. This would reduce vehicle trips and miles traveled during all times of the day.</p>
<p><b>CAQ-20:</b></p> <p>The City shall emphasize "demand management" strategies which seek to reduce single-occupant vehicle use in order to achieve state and federal air quality plan objectives.</p>	<p align="center">Yes</p>	<p>The project AQ-15 Plan outlines measures that would help reduce vehicular trips within the Specific Plan area. The Specific Plan is anticipated to provide for transit options, including a local shuttle transit service and jitneys for inter-community trips, linkages to major trip generator</p>

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Draft General Plan Policies	Consistency with General Plan	Plan Analysis
objectives.		centers, dial-a-ride. If current transit ridership levels warrant and suitable locations are available, a park-and-ride lot may be appropriately located within the Specific Plan area.
<p><b>CAQ-21:</b></p> <p>The City shall seek to ensure that public transit is a viable and attractive alternative to the use of private motor vehicles.</p>	Yes	The Specific Plan area is located along an existing transit corridor, SR-99. While the Specific Plan area is not directly served by transit currently, offsite transit routes would likely be planned to serve the project as ridership demand warrants. The Specific Plan locates multi-family and attached or small lot single-family housing within ¼ mile of likely bus routes. Additionally, the residential density is 7 units per acre in many portions of the plan area, which would support the use of public transit.
<p><b>CAQ-22:</b></p> <p>All new development projects which have the potential to result in substantial air quality impacts shall incorporate design, construction, and/or operational features to result in a reduction in emissions equal to 15 percent compared to an “unmitigated baseline” project. An “unmitigated baseline project” is a development project which is built and/or operated without the implementation of trip-reduction, energy conservation, or similar features, including any such features which may be required by the Zoning Code or other applicable codes.</p>	Yes	Although the project would create a significant air quality impact, it would comply with the requirements of this policy. As provided in <b>Appendix 4.3</b> , the project includes an AQ-15 Management Plan that would be consistent with this policy.
<p><b>CAQ-24:</b></p> <p>As part of the environmental review of projects, the City shall identify the air quality impacts of development proposals to avoid significant adverse impacts and require appropriate mitigation measures.</p>	Yes	An analysis of air quality impacts was performed and mitigation measures intended to reduce impacts have been identified.

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### 4.3.3 IMPACTS AND MITIGATION MEASURES

Development of the project would generate air pollutant emissions from a wide variety of stationary and mobile sources. Stationary source emissions, such as PM<sub>10</sub>, would be generated by onsite construction activities. Once the proposed uses are completed and occupied, emissions would be generated by stationary area sources such as water and space heaters. Mobile source emissions would be generated by motor vehicle travel associated with construction activities and occupancy of the proposed development. A discussion of significance criteria and an assessment of construction and operational emissions are presented below, based on SMAQMD guidance.

#### STANDARDS OF SIGNIFICANCE

New and redevelopment projects will often affect regional air quality both directly and indirectly. When determining the extent of a project's environmental impact and the significance of such impacts, the project should be compared to established thresholds of significance. The City of Elk Grove has not officially adopted thresholds of significance for determining air quality impacts. Therefore, in the absence of such thresholds, this EIR has used the thresholds recommended by the SMAQMD. The following discusses the thresholds for both construction and operational emissions generated by the proposed project.

#### Construction Emission Thresholds

The SMAQMD recommends that projects with construction-related emissions that exceed any of the following emissions thresholds be considered significant:

- 85 pounds per day of ROG
- 85 pounds per day of NO<sub>x</sub>
- 275 pounds per day of PM<sub>10</sub>
- Exceedance of any of the California Ambient Air Quality Standards

#### Operational Emission Thresholds

The SMAQMD has recommended two types of air pollution thresholds to assist lead agencies in determining whether the operational phase of a project's development would be significant. These are identified in the following discussion under Quantitative Emission Thresholds and Qualitative Emission Thresholds. The SMAQMD recommends that a project's impacts be considered significant if either type of these thresholds is exceeded.

#### Quantitative Emission Thresholds

The SMAQMD recommends that projects with quantitative operational emissions that exceed any of the following emissions thresholds be considered significant:

- 65 pounds per day of ROG
- 65 pounds per day of NO<sub>x</sub>
- A predicted violation of any California Ambient Air Quality Standard (CAAQS) during both construction or operation of the project would be considered a significant impact. A project is considered to contribute substantially to an



existing or projected violation of the CAAQS if it emits pollutants at a level equal to or greater than five percent of the CAAQS.

### Qualitative Emission Thresholds

The SMAQMD recommends that projects meeting any of the following criteria also be considered to have significant air quality impacts:

- Project has the potential to create or be near an objectionable odor (e.g., agriculture, wastewater treatment, food processing, chemical plants, composting, landfills, dairies, renderings, etc.).
- Project has the potential for an accidental release of toxic air emissions or acutely hazardous materials.
- Project has the potential to emit a toxic air contaminant regulated by the District or on a federal or state air toxics list.
- Project would involve the burning of hazardous, medical, or municipal waste as a waste-to-energy facility.
- Project has the potential to generate a substantial amount of wastewater or potential for toxic discharge (e.g., aluminum forming, battery manufacture, chemical manufacture, dye casting, electroplating, food manufacture, reclamation plants, metal finishing, metal molding and casting, pharmaceutical, petroleum/fuel refining, photography, pulp and paper manufacture).
- Project could place sensitive receptors (e.g., schools, households) located within a quarter mile of toxic air emissions or near CO hotspots.
- Project could generate carcinogenic or toxic air contaminant emissions that exceed or contribute to an exceedance of the District's action level for cancer (one in one million), chronic and acute risks.

### **Regional Thresholds**

A significant impact on regional air quality is defined in this analysis as an increase in emissions of an ozone precursor exceeding the SMAQMD's recommended thresholds of significance. The District considers increases in emissions, during construction or operation of the project, of 65 pounds per day of either ozone precursor to represent a significant adverse impact (SMAQMD, 2002). Exceedance of these standards is assumed to result in conflicts with SMAQMD's efforts to reach attainment for criteria air pollutants.

### **METHODOLOGY**

This section evaluates the proposed project impacts on air quality. This section will analyze the impacts from a local and regional standpoint. Impact significance is determined by comparing project conditions to the existing conditions described in the section below. Project emissions that consist of emissions from mobile and area sources (natural gas combustion, fireplaces, consumer products, etc.) were calculated using the URBEMI-2001 computer program (SJVUAPCD, 2000), utilizing parameters appropriate for the Sacramento Metropolitan area. A screening form of the CALINE-4 computer simulation model was applied to intersections within and near the Specific Plan area to predict worst-case concentrations of carbon monoxide at project buildout.

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### PROJECT IMPACTS AND MITIGATION MEASURES

#### Construction Impacts

**Impact 4.3.1** Construction activities associated with the development of the proposed specific plan area would contribute to regional pollutants, such as ROG, NO<sub>x</sub>, and PM<sub>10</sub>. This would result in a **significant impact**.

The SMAQMD guidance documents differentiate between Phase I (clearing, grading, trenching, etc.) and Phase II (actual construction) activities and air pollutant sources. **Table 4.3-3** shows calculated emissions for project Phase I and Phase II activities assuming a 20-year buildout of the Specific Plan area.

Construction activities would be subject to the SMAQMD Rule 403 that requires taking reasonable precautions to prevent the emissions of fugitive dust, such as “using water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the construction of roadways, or the clearing of land” where possible and applying “asphalt, oil, water, or suitable chemicals on dirt roads, materials, stockpiles and other surfaces which can give rise to airborne dust.”

Emissions in Phase I of construction are associated with heavy equipment. Emissions occur from both equipment exhaust and fugitive dust from the disturbed soil surface. Emissions in Phase II of construction are primarily associated with construction employee commute vehicles, asphalt paving, mobile equipment, stationary equipment, and architectural coatings.

The URBEMIS-2001 program was used to estimate emissions during Phase I and Phase II of construction and for calculating the mitigation effect of specific construction practices in reducing impacts. Adjustments were made, where necessary, to account for the 20-year build-out period for the project. As seen in **Table 4.4-3**, the construction emission for NO<sub>x</sub> would exceed SMAQMD’s construction emission threshold. Construction activities would also have the potential to cause local exceedances of the state standards for particulate matter. This impact is significant.

**TABLE 4.3-3**  
**ESTIMATED MAXIMUM DAILY EMISSIONS FROM CONSTRUCTION, IN POUNDS PER DAY**

Source	ROG	NO <sub>x</sub>	PM <sub>10</sub>
<b>Phase I: Clearing, Grading and Earthmoving</b>			
Equipment/Fugitive Dust	9.9	159.7	513.5
Total (Phase I)	9.9	159.7	513.5
<b>Phase II: Structure Construction</b>			
Employee Trips	2.4	3.4	0.7
Asphalt Paving	0.3	--	--
Stationary Equipment	3.4	2.7	0.2
Mobile Equipment	14.7	229.8	15.4

Architectural Coatings	142.8	--	--
Total (Phase II)	163.6	235.9	16.3

Source: Donald Ballanti, 2002

### Mitigation Measures

**MM 4.3.1a** The project applicant shall require that the contractors water all exposed surfaces, graded areas, storage piles and haul roads at least twice daily during construction. This requirement shall be included as a note in all project construction plans.

*Timing/Implementation:* During all grading and construction phases of the project.

*Enforcement/Monitoring:* City of Elk Grove Development Services and SMAQMD.

**MM 4.3.1b** The project applicant shall require that the contractor minimize the amount of material actively worked, the amount of disturbed area, and the amount of material stockpiled. This requirement shall be included as a note in all project construction plans.

*Timing/Implementation:* During all grading and construction phases of the project.

*Enforcement/Monitoring:* City of Elk Grove Development Services and SMAQMD.

**MM 4.3.1c** The project applicant shall require that the contractor limit vehicle speed for onsite construction vehicles to 15 mph when winds exceed 20 miles per hour. This requirement shall be included as a note in all project construction plans.

*Timing/Implementation:* During all grading and construction phases of the project.

*Enforcement/Monitoring:* City of Elk Grove Development Services and SMAQMD.

**MM 4.3.1d** The project applicant shall require paved streets adjacent to construction sites to be washed or swept daily to remove accumulated dust. This requirement shall be included as a note in all project construction plans.

*Timing/Implementation:* During all grading and construction phases of the project.

*Enforcement/Monitoring:* City of Elk Grove Development Services and SMAQMD.

**MM 4.3.1e** The project applicant shall require that, when transporting soil or other materials by truck during construction, two feet of freeboard shall be maintained by the contractor, and that the materials be covered. This requirement shall be included as a note in all project construction plans.

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<i>Timing/Implementation:</i>	<i>During all grading and construction phases of the project.</i>
<i>Enforcement/Monitoring:</i>	<i>City of Elk Grove Development Services and SMAQMD.</i>

### MM 4.3.1f

This mitigation measure shall be implemented by all subsequent projects within the Laguna Ridge Specific Plan. An individual project may be exempt from the following mitigation if it is less than 20 acres in size and will generate less than 400 pounds per day of NO<sub>x</sub>. All other projects (not meeting the two exemption criteria) will be required to implement the following measures.

(a) **Category 1: Reducing NO<sub>x</sub> emissions from off-road diesel powered equipment.**

The prime contractor shall provide a plan for approval by the City of Elk Grove and SMAQMD demonstrating that the heavy-duty (>50 horsepower) off-road vehicles to be used in the construction project, and operated by either the prime contractor or any subcontractor, will achieve a fleet-averaged 20 percent NO<sub>x</sub> reduction and a 45 percent particulate reduction compared to the most recent CARB fleet average. The prime contractor shall submit to the City of Elk Grove and SMAQMD a comprehensive inventory of all off-road construction equipment, equal to or greater than 50 horsepower, that will be used an aggregate of 40 or more hours during the construction project. The inventory shall include the horsepower rating, engine production year, and hours of use or fuel throughput for each piece of equipment. The inventory shall be updated and submitted monthly throughout the duration of the project, except that an inventory shall not be required for any 30-day period in which no construction activity occurs; and,

(b) **Category 2: Controlling visible emissions from off-road diesel powered equipment.**

The prime contractor shall ensure that emissions from all off-road diesel powered equipment used on the Specific Plan area do not exceed 40 percent opacity for more than three minutes in any one hour. Any equipment found to exceed 40 percent opacity shall be repaired immediately, and the City of Elk Grove and SMAQMD shall be notified within 48 hours of identification of non-compliant equipment. A visual survey of all in-operation equipment shall be made at least weekly, and a month summary of the visual results shall be submitted to the City and SMAQMD throughout the duration of the project, except that the monthly summary shall not be required for any 30-day period in which no construction activity occurs. The monthly summary shall include the quantity and type of vehicles surveyed as well as the dates of each survey. The SMAQMD and/or other officials may conduct

periodic site inspections to determine compliance. Nothing in this section shall supersede other SMAQMD or state rules or regulation.

In the event construction equipment meeting the requirements set forth above is determined not to be available, the project applicant shall notify the City and SMAQMD. Upon verification that required low-emission construction equipment is not available, the City may waive this measure. This requirement shall be included as a note in all project construction plans.

*Timing/Implementation:* Prior to and during construction activities.  
*Enforcement/Monitoring:* City of Elk Grove Development Services and SMAQMD.

**MM 4.3.1g** The project applicant shall require contractors to implement ridesharing programs for construction employees traveling to and from the site. This requirement shall be included as a note in all project construction plans.

*Timing/Implementation:* During all grading and construction phases of the project.  
*Enforcement/Monitoring:* City of Elk Grove Development Services and SMAQMD.

While implementation of these mitigation measures would minimize the project’s construction impact, emissions of NO<sub>x</sub> would remain above the SMAQMD threshold and the potential to locally exceed the PM<sub>10</sub> CAAQS would still exist, so this impact would be considered **significant and unavoidable**.

**Operational Impacts**

**Impact 4.3.2** Project emissions from mobile and area sources, such as natural gas combustion, fireplaces, and other consumer products, exceed SMAQMD’s significance threshold. This would result in a **significant** impact.

Total emissions of criteria pollutants associated with the project are shown in **Table 4.3-4** for the two ozone precursors (reactive organic gases and nitrogen oxides) and PM<sub>10</sub>. Project emissions of ROG and NO<sub>x</sub> exceed the SMAQMD’s significance threshold of 65 pounds per day. Based on this criterion, the project would have a significant impact on regional ozone air quality. Project operational emissions of PM<sub>10</sub>, which are dispersed over a large area, are unlikely to result in a violation of the California Ambient Air Quality Standard.

**TABLE 4.3-4  
 PROJECT REGIONAL EMISSIONS AT BUILDOUT, IN POUNDS PER DAY**

	ROG	NO <sub>x</sub>	PM <sub>10</sub>
Vehicles	644.6	500.1	617.4
Area Sources	402.5	111.8	0.4
<b>Total</b>	<b>1047.1</b>	<b>611.9</b>	<b>617.8</b>

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SMAQMD Threshold of Significance	65.0	65.0	CAAQS
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Notes: ROG = Reactive Organic Gases  
 NO<sub>x</sub> = Nitrogen Oxides  
 PM<sub>10</sub> = Particulate Matter, 10 Microns  
 Source: Donald Ballanti, 2002

The methodology and assumptions used in the Air Quality Study to calculate regional emissions was based on trip generation rates provided by the project transportation consultant, average trip lengths and vehicle mixes for Sacramento, and an average driving speed of 35 mph. Land uses included a mix of residential and non-residential. Additionally, an ambient summertime temperature of 85 degrees F and an analysis year of 2020 were assumed.

Project traffic would add to carbon monoxide concentrations along surface streets in the vicinity of the Specific Plan area. A screening form of the CALINE-4 computer simulation model was applied to intersections within and near the Specific Plan area to predict worst-case concentrations of carbon monoxide at project buildout. The analysis assumed a year 2025 buildout date for the project. The intersections analyzed were selected based on Level of Service.

**Table 4.3-5** shows predicted concentrations of carbon monoxide near selected intersections. Concentrations are predicted for year 2025 cumulative traffic with and without the proposed project.

**TABLE 4.3-5  
 WORST CASE CARBON MONOXIDE CONCENTRATIONS AT SELECTED INTERSECTIONS (PPM)**

Intersection	Cumulative (2025)		Cumulative + Proposed Project (2025)	
	1-Hour	8-Hour	1-Hour	8-Hour
Elk Grove/Bruceville	7.5	5.1	8.9	6.1
Elk Grove/SR 99 SB Ramps	8.0	5.5	8.9	6.1
Elk Grove/Franklin	8.1	5.5	9.3	6.4
Kammerer/W. Stockton	9.2	6.3	9.2	6.3
Grant Line/Waterman	7.0	4.7	7.1	4.8
Bighorn/Elk Grove	7.2	4.9	8.7	5.9
SR 99 SB Ramps/Laguna	7.8	5.3	8.1	5.5
Bruceville/Laguna	7.3	4.9	7.4	5.0
<b>Most Stringent Standard</b>	<b>20.0</b>	<b>9.0</b>	<b>20.0</b>	<b>9.0</b>

Source: Donald Ballanti, 2002

The proposed project would increase 1-hour averaged concentrations by up to 1.51 PPM and 8-hour averaged concentrations by up to 1.0 PPM. However, predicted concentrations do not exceed the state/federal ambient air quality standards.

The concentrations in **Table 4.3-5** are based on worst-case meteorology, traffic and location assumptions. Concentrations and project impacts at other locations and under more typical

meteorological conditions would be less than those shown. Project impacts on local carbon monoxide concentrations are less-than-significant.

The project applicant has prepared an AQ-15 Management Plan for the Laguna Ridge Specific Plan in compliance with the City of Elk Grove General Plan requirements discussed previously. A summary of the AQ-15 Management Plan is provided below (see **Appendix 4.3** for the full text).

1. A mixture of complementary land uses (i.e., commercial or residential zones for office uses; commercial or office zones for residential uses) is contained within the Specific Plan area. The mix of land uses would eliminate the need for numerous vehicular trips and encourage alternative modes of transportation. The Laguna Ridge Specific Plan is composed of relatively small, well-defined residential neighborhoods. Each neighborhood includes or is near a Neighborhood Commercial Mixed Use shopping center. The distribution of shopping centers, commercial uses, schools, and parks within the plan area would reduce the need for vehicular use.
2. The infrastructure of the community would facilitate access to technology, thus enabling residents to work from home and reduce automobile travel. Within the plan area, home occupation would be a permitted use within the residential zones, satellite facilities for large employers would be encouraged, and small neighborhood commercial centers would provide support services for onsite companies and home workers.
3. Within the Specific Plan area, the quadrants are designed to enhance bicycle and pedestrian access between residential uses, local services, schools and parks. The comprehensive bicycle/pedestrian network would be provided to encourage non-vehicular travel within the Specific Plan area. On-street bike lanes are planned along Elk Grove Boulevard, Bruceville Road, Laguna Springs Drive, Bilby Road, Poppy Ridge Road and Big Horn Boulevard. An off-street bicycle trail is designed along the open space corridor, which runs adjacent to Poppy Ridge Road.
4. The Laguna Ridge Specific Plan would provide multiple and/or direct pedestrian access between adjacent, complementary land uses throughout the project. Access would typically be provided by the intersection of a residential street with the collector. The bike lanes and trail would connect the residential neighborhoods with the schools and parks.
5. The internal circulation system would be designed in a grid pattern to preclude major traffic from passing through the neighborhoods.
6. The plan is designed to accommodate the use of a local shuttle transit service and small, low-emission vehicles for transportation within the plan area and to the transit stations planned nearby. It is generally recommended that the walking distance to the bus or shuttle routes should not exceed  $\frac{1}{4}$  mile. This plan locates multi-family and attached or small lot single-family housing within  $\frac{1}{4}$  mile of likely bus routes. The plan additionally supports the use of public transit by achieving an average density of 7 units per acre for a significant portion of the plan area, with a maximum density of 20 dwelling units per acre for the multiple family housing.
7. Presently direct transit service into the Laguna Ridge Specific Plan area does not exist. The closest transit routes provided by Regional Transit (RT) are Routes 56 and 60. RT has identified two conceptual transit corridors near the Laguna Ridge Specific Plan, including Elk Grove Boulevard (Franklin Blvd. to Elk Grove-Florin Road), and Bruceville Road (Poppy Ridge Road to SR-99). These corridors indicate the location for future transit for the area and serve as a trunk for more localized service. Within the plan area, a simple, direct loop system that provides connection to the higher density housing and commercial uses

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is anticipated. The location of higher density housing near the transit route should ensure that the average density is above 7 units per acre at transit nodes. A shuttle would also operate during non-commute periods. It is to be routed to provide a convenient link between residences and neighborhood/community regional commercial opportunities.

8. Measures to comply with the AQ-15 to be included in the Specific Plan document include the following:
  - a. Bicycle/Pedestrian/Transit Measures: provide bicycle lockers and/or racks; provide an additional 20 percent of required Class I and Class II bicycle parking facilities; provide bicycle storage at apartment complexes or condos without garages; the plan area is located within ½ mile of existing Class I or Class II bike lane and provides a comparable bikeway connection to that existing facility.
  - b. Parking: provide electric vehicle charging facilities; provide preferential parking for carpool/vanpools.
  - c. Mixed-Use: locate residential development, retail development, personal services, open space, and offices onsite or within ¼ mile; locate parks, school and civic uses within ¼ mile of neighborhoods.
  - d. Building Components Measures: install lowest emitting commercially available fireplace; install Energy Star labeled roof materials; install category 5 wiring at phone outlets.

#### Mitigation Measure

**MM 4.3.2** The project applicant shall implement all measures proposed in the AQ-15 Plan for each subsequent project to reduce the emissions from both mobile and stationary sources. Each subsequent development project shall be checked for compliance with the AQ-15 Plan.

*Timing/Implementation: During all planning and development phases of the project.*

*Enforcement/Monitoring: City of Elk Grove Development Services and SMAQMD.*

Even with implementation of the AQ-15 Plan, operational air quality impacts of the project would be considered **significant and unavoidable**.

#### **Qualitative Emissions Impacts**

Potential airborne odors associated with food services and eating establishments could result should such services locate on the site. Food-related odors would be typical of food service businesses. In such cases, odors would be controlled in accordance with County Department of Health Services and SMAQMD permit requirements for proper air filtration and food storage and disposal, and SMAQMD Rule 402 which prohibits persons from discharging quantities of air contaminants which cause nuisance to any considerable number of persons.

Agricultural odors that have been of concern in the Elk Grove area in the past have primarily included dairy farm operations. Odors associated with dairy farm operations are generated due



to the breakdown of food within the four-chamber stomach of cattle, and the breakdown of manure. These processes typically result in the generation of hydrogen sulfide, methane, and ammonia. There were two dairy farms located within the project boundaries and one immediately adjacent to the west however, all of these operations have ceased. The dairy farms would be converted to urban development as part of the implementation of the Specific Plan. Given that these dairy operations are proposed for urban development, the potential odor impacts due to dairy farm operations are considered to be **less than significant**.

Agricultural practices on-site and on parcels adjacent to the Specific Plan area are anticipated to involve the use of restricted and non-restricted pesticides, herbicides, and fungicides. These materials could be applied either through manual application and/or aerial spraying and could produce odors discernable within the plan area. Currently, the Sacramento County Department of Agriculture and Measurements regulates and imposes limitations on the use of all restricted materials as part of the conditions for obtaining a permit for use. Based on State law and County policy, permit limitations would include, but are not limited to, not allowing chemicals to drift on to adjacent properties (Food and Agricultural Code, Section 12972); limiting the use of application of chemicals to periods when the pesticides are least likely to affect an adjacent land use; and requiring of buffers for some restricted chemicals. The County of Sacramento issues the permit application conditions for restricted chemicals on a case-by-case basis taking into consideration surrounding land uses. Non-restricted materials do not require a permit for application, and include such materials as "Round-Up" and other chemicals commonly found in the household.

Properties to the north, east, and west of the plan area are already developed, being developed, or are approved for future development. The residences along the southern border of the plan area would be the area primarily exposed to agriculture uses. This area may be affected by odors from agriculture uses. The City of Elk Grove has enacted an ordinance referred to as the "Right to Farm" ordinance, which provides that any existing agricultural operation may continue to operate in accordance with County Department of Health Services, regardless of the encroachment of adjacent non-agricultural uses in the future. This ordinance is intended to assuage complaints of homeowners who move into new neighborhoods in proximity to existing agricultural operations and are offended by potential odor impacts.

Other odors that may be discernable to onsite uses could potentially include propane from the Suburban Propane facility and formalin from the Georgia-Pacific facility. These facilities are located over one mile southeast of the residential component of the project. Odors from these facilities are controlled in accordance with County Department of Health Services and SMAQMD permit requirements for proper air filtration, and SMAQMD Rule 402 which prohibits discharging quantities of air contaminants which cause nuisance to any considerable number of persons. Given the distance to these facilities from on onsite uses, SMAQMD permit conditions for these types of facilities, and prevailing wind conditions, potential odor impacts from these facilities are considered to be **less than significant**.

The future uses planned for the vicinity of the Specific Plan area are urban in nature, similar to the proposed project, and do not include uses that would generate objectionable odors. Consequently, no significant impacts from such odors are anticipated.

### Toxic Air Emissions

Toxic or carcinogenic air pollutants are not expected to occur in any meaningful amounts in conjunction with operation of the proposed land uses. Only common forms of hazardous or

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toxic substances typically used, stored, or sold in conjunction with commercial, office, retail, and household activities would be present in small quantities. Most uses of such substances would occur indoors. Only a few uses that could be developed on the site would require emitting toxic pollutants as a by-product. Any uses of toxic substances that could involve an air release, however, would be subject to regulatory control under the permitting authority of SMAQMD. The potential for toxic air pollutants would be evaluated during the permit process by SMAQMD, which may require emission control equipment at the site.

Adjacent land uses would not subject Specific Plan area residents, employees, or visitors to toxic or carcinogenic air emissions. Based on the requirement to obtain permits, and the common uses expected on the site, impacts are considered **less than significant**.

#### Emissions of federal or state-listed Toxics

As stated above, toxic or carcinogenic air pollutants are not expected to occur in any meaningful amounts in conjunction with the operation of the proposed land uses. Only a few uses that could be developed on the site would require emitting toxic pollutants as a by-product. Any uses of toxic substances that could involve an air release, however, would be subject to regulatory control under the permitting authority of SMAQMD. The potential for toxic air pollutants would be evaluated during the permit process by SMAQMD, which may require emission control equipment at the site. Therefore, this is a **less than significant** impact.

#### Burning of Hazardous Waste

The project would involve the burning of hazardous, medical, or municipal waste as a waste-to-energy facility; project has the potential to generate a substantial amount of wastewater or potential for toxic discharge (e.g., aluminum forming, battery manufacture, chemical manufacture, dye casting, electroplating, food manufacture, reclamation plants, metal finishing, metal molding and casting, pharmaceutical, petroleum/fuel refining, photography, pulp and paper manufacture.

None of the uses that could be developed within the plan area would involve the burning of hazardous, medical, or municipal waste as a waste-to-energy facility. None of the uses identified in the qualitative threshold as having the potential to generate substantial waste the potential for toxic discharge would occur in the plan area. Therefore, this impact is considered **less than significant**.

#### Exceedance of District Emission Levels

The proposed project could generate carcinogenic or toxic air contaminant emissions that exceed or contribute to an exceedance of the District's action level for cancer (one in one million), chronic (one) and acute (one) risks.

As stated above, toxic or carcinogenic air pollutants are not expected to occur in any meaningful amounts in conjunction with the operation of the proposed land uses. Only a few uses that could be developed on the site would require emitting toxic pollutants as a by-product. Any uses of toxic substances that could involve an air release, however, would be subject to regulatory control under the permitting authority of SMAQMD. The potential for toxic air pollutants would be evaluated during the permit process by SMAQMD, which may require emission control equipment at the site. This impact is considered **less than significant**.

### 4.3.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

According to page 43 of the SMAQMD's *Air Quality Thresholds of Significance* guidance document, development projects are considered cumulatively significant if:

- The project requires a change in the existing land use designation of the site (i.e., a general plan amendment or zoning change); and
- The projected emissions (ROG, NO<sub>x</sub>, or PM<sub>10</sub>) of the proposed project are greater than the emissions anticipated for the site if developed under the existing land use designation.

**Impact 4.3.8** Development of project in combination with cumulative projects would result in emissions that exceed SMAQMD thresholds. This would result in a **cumulative significant** impact.

Construction activities associated with the Grant Line Road interchange project, the development of the South Pointe project, the East Franklin Specific Plan, the Lent Ranch project, the Laguna Ridge Conceptual Study, the Laguna Ridge Specific Plan and other development areas within the City (City of Elk Grove Draft General Plan) and the region could potentially occur simultaneously. Therefore, the potential for combined construction air quality impacts would occur if the activities were occurring simultaneously. While all these projects would implement recommended air quality controls to reduce fugitive dust and engine emissions, the combined effect would be cumulatively significant. Short-term fugitive dust emissions during site preparation and construction (PM<sub>10</sub> and NO<sub>x</sub>) would remain both individually and cumulatively **significant and unavoidable**.

#### Mitigation Measures

Project-specific mitigation measures MM 4.3.1a through MM 4.3.1g would apply to cumulative air quality construction impacts, but would not reduce impacts to less than significant. Impacts would remain **significant and unavoidable** even with the implementation of these mitigation measures.

**Impact 4.3.9** Proposed project would exceed SMAQMD thresholds for cumulative impacts. This would result in a **cumulative significant** impact.

Implementation of the proposed project would have a significant adverse incremental effect on the region's ability to attain State and Federal air quality standards, and could be considered cumulatively significant.

#### Mitigation Measures

Mitigation measure MM 4.3.2a would not be sufficient to reduce cumulative operational air quality impacts to a less-than-significant level. Operational emissions would also remain above the SMAQMD's recommended thresholds for ROG and NO<sub>x</sub> and be both individually and cumulatively **significant and unavoidable**.

### 4.3 AIR QUALITY

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#### REFERENCES

Ballanti, Donald. *Laguna Ridge Specific Plan EIR Air Quality Study*. June 2000, updated December 2002.

City of Elk Grove, 2000. *City of Elk Grove Draft General Plan, Conservation and Air Quality Element*. City of Elk Grove, California. November 2002.

*Laguna Ridge Specific Plan AQ 15 Management Plan*. September 28, 2001.

SJUAPCD, 2000. *URBEMIS for Windows Computer Program User's Guide*. October 2000.

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SMAQMD, 2001. Christensen, Peter, Associate Air Quality Planner/Analyst; Sacramento Air Quality Management District. *Telephone conversations*. September and October 2001.

SMAQMD, 1994. *Air Quality Thresholds of Significance, First Edition*. 1994.

**SECTION 4.4  
NOISE**

This section considers the noise issues related to the proposed project. The section was prepared using existing literature, noise level measurements, and application of accepted noise prediction and sound propagation algorithms to predict changes in ambient noise levels resulting from development within the proposed plan area. The information is based upon an acoustical analysis prepared by Bollard & Brennan, Inc. in September 2000, and updated in December 2002. This section describes existing noise levels, construction-related impacts, direct and indirect noise impacts associated with the project, and mitigation measures warranted to reduce or eliminate any identified significant impacts.

### 4.4.1 EXISTING SETTING

#### CHARACTERISTICS OF NOISE

Noise is usually defined as unwanted sound. It is an undesirable by-product of society's normal day-to-day activities. Sound becomes unwanted when it interferes with normal activities, when it causes physical harm, or when it has adverse effects on health. The definition of noise as unwanted sound implies that it has an adverse effect on people and their environment.

Noise is measured on a logarithmic scale of sound pressure level known as a decibel (dB). The human ear does not respond uniformly to sounds at all frequencies, being less sensitive to low and high frequencies than to medium frequencies that correspond with human speech. In response, the A-weighted noise level (or scale) has been developed. It corresponds more closely to people's subjective judgment of sound levels. This A-weighted sound level is called the "noise level" referenced in units of dBA. Because noise is measured on a logarithmic scale, a doubling of sound energy results in a 3.0 dBA increase in noise levels. However, changes in a noise level of less than 3.0 dBA are not typically noticed by the human ear.<sup>1</sup> Changes from 3.0 to 5.0 dBA may be noticed by some individuals who are extremely sensitive to changes in noise. A 5.0 dBA increase is readily noticeable, and the human ear perceives a 10.0 dBA increase in sound level to be a doubling of sound.

Noise sources are classified in two forms: (1) point sources, such as stationary equipment, or individual motor vehicles; and (2) line sources, such as a roadway with a large number of point sources (motor vehicles). Sound generated by a point source typically diminishes (attenuates) at a rate of 6.0 dBA for each doubling of distance from the source to the receptor at acoustically "hard" sites and 7.5 dBA at acoustically "soft" sites.<sup>2</sup> For example, a 60 dBA noise level measured at 50 feet from a point source at an acoustically hard site would be 54 dBA at 100 feet from the source and 48 dBA at 200 feet from the source. Sound generated by a line source typically attenuates at a rate of 3.0 dBA and 4.4 dBA per doubling of distance from the source to the receptor for hard and soft sites, respectively.<sup>3</sup> Man-made or natural barriers can also attenuate sound levels as illustrated in **Figure 4.4-1**. Solid walls, berms, or elevation differences typically reduce noise levels by 5.0 to 10.0 dBA.<sup>4</sup> The noise attenuation provided by typical structures in California is provided in **Table 4.4-1**.

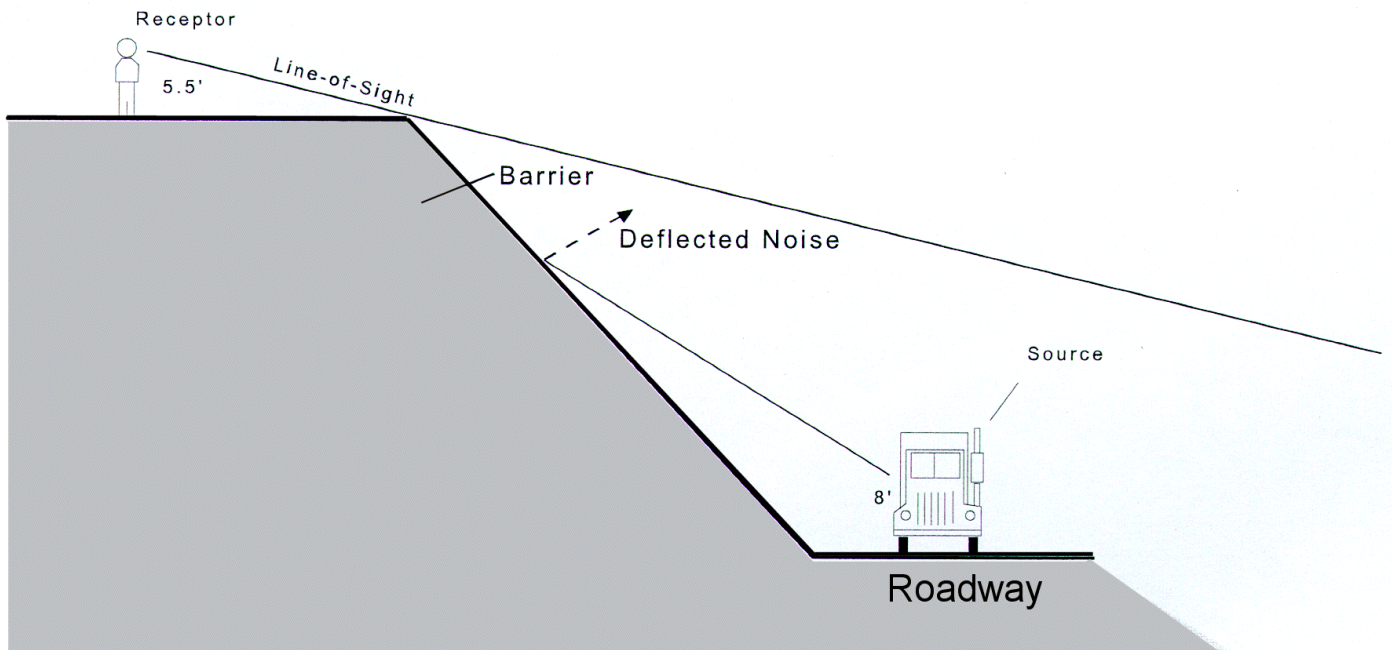
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<sup>1</sup> *Highway Noise Fundamentals*, (Springfield, Virginia: U.S. Department of Transportation, Federal Highway Administration, September 1980), p. 81.

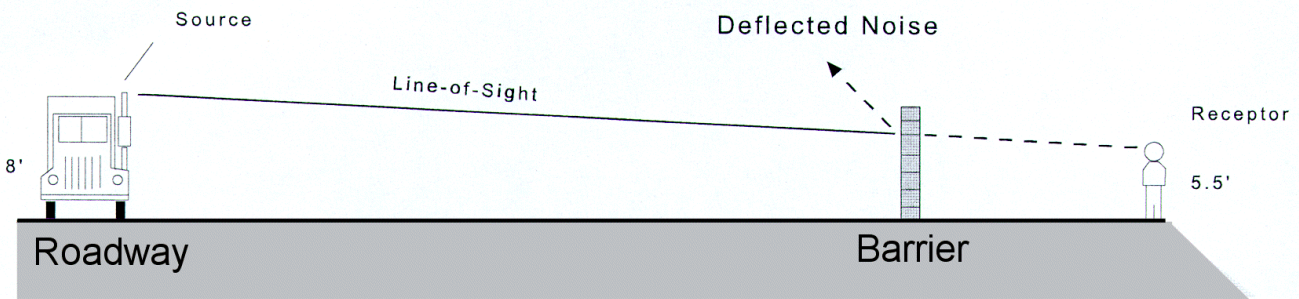
<sup>2</sup> *Ibid.*, p. 97. A "hard" or reflective site does not provide any excess ground-effect attenuation and is characteristic of asphalt, concrete, and very hard packed soils. An acoustically "soft" or absorptive site is characteristic of normal earth and most ground with vegetation.

<sup>3</sup> *Ibid.*, p. 97.

<sup>4</sup> *Highway Noise Mitigation* (Springfield, Virginia: U.S. Department of Transportation, Federal Highway Administration, September 1980), p. 18.



**"Barrier Effect" Resulting from Differences in Elevation.**



**"Barrier Effect" Resulting from Typical Soundwall.**



Source: Bollard & Brennan, Inc., 2000



**TABLE 4.4-1  
OUTSIDE TO INSIDE NOISE ATTENUATION**

Building Type	Noise Reduction - dBA	
	Open Windows	Closed Windows
Residences	12	25
Schools	12	25
Churches	20	30
Hospitals/Convalescent	17	25
Homes	17	25
Offices	20	30
Theaters	17	25
Hotels/Motels	17	25

*Source: Bollard & Brennan, 2000*

When assessing community reaction to noise, there is a need for a scale that averages varying noise exposures over time and quantifies the results in terms of a single number descriptor. Several scales have been developed which address community noise levels. Those that are applicable to this analysis are the Equivalent Noise Level ( $L_{eq}$ ) and the Community Noise Equivalent Level (CNEL).  $L_{eq}$  is the average A-weighted sound level measured over a given time interval.  $L_{eq}$  can be measured over any time period, but is typically measured for 1-minute, 10-minute, 15-minute, 1-hour, or 24-hour periods. CNEL is another average A-weighted sound level measured over a 24-hour time period, and is adjusted to account for some individuals' increased sensitivity to noise levels during the evening and nighttime hours. A CNEL noise measurement is obtained after adding 5.0 decibels to sound levels occurring during the evening from 7:00 P.M. to 10:00 P.M., and 10.0 decibels to sound levels occurring during the nighttime from 10:00 P.M. to 7:00 A.M. The 5.0 and 10.0 decibel "penalties" are applied to account for peoples' increased sensitivity during the evening and nighttime hours. For example, the logarithmic effect of these additions is that a 60.0 dBA 24-hour  $L_{eq}$  would result in a measurement of 66.7 dBA CNEL.

The Day-Night Average Level ( $L_{dn}$ ) is similar to CNEL in that it is measured over a 24-hour period. However, it is obtained after adding 10 decibels to sound levels occurring during the nighttime from 10:00 P.M. to 7:00 A.M. and no additional decibels to the evening noise levels.  $L_{dn}$  noise levels are typically a fraction of a dB less than CNEL noise levels and, for all practical purposes, CNEL and  $L_{dn}$  are interchangeable.

Other noise descriptors referred to in this section include  $L_{50}$ , which is the sound level exceeded 50 percent of the time, and  $L_{max}$ , which is the highest effective sound level measured over a given period of time.

#### CHARACTERISTICS OF VIBRATION

Vibration is a unique form of noise in that its energy is carried through structures and the earth, whereas noise is carried through the air. Thus, vibration is generally felt rather than heard. Some vibration effects can be caused by noise, for example, the rattling of windows from truck pass-



## 4.4 NOISE

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bys. This phenomenon is related to the coupling of the acoustic energy at frequencies that are close to the resonant frequency of the material being vibrated. Typically, ground-borne vibration generated by man-made activities attenuates rapidly with distance from the source of the vibration.

The peak particle velocity (PPV) or the root mean square (RMS) velocity is usually used to describe vibration amplitudes. PPV is defined as the maximum instantaneous peak of the vibration signal, while RMS is defined as the square root of the average of the squared amplitude of the signal. PPV is more appropriate for evaluating potential building damage, whereas RMS is typically more suitable for evaluating human response.

### ***Major Noise Sources in the Proposed Plan Area Vicinity***

Motor vehicle traffic is the major contributor to the existing noise environment in the proposed plan area. Major vehicular noise in the plan area occurs along SR-99, Elk Grove Boulevard, Bruceville Road, and to a lesser extent, Bilby and Poppy Ridge Roads. The plan area is not affected by major industrial noise sources. In addition, the plan area is not affected by noise from railroad operations, as the Union Pacific Railroad (UPRR) mainline is located east of Franklin Boulevard, a considerable distance to the west of the plan area.

Existing commercial uses in the general vicinity (Elk Grove Auto Mall and commercial uses north of Elk Grove Boulevard) do not contribute significantly to the ambient noise environment within the plan area.

### ***Noise-Sensitive Land Uses in the Proposed Plan Area Vicinity***

Noise sensitive land uses in the vicinity of the plan area generally consist of large-lot, ranch-style residences on portions of the plan area, and relatively new single-family residential developments north of Elk Grove Boulevard. The existing residential development on the east side of SR-99 is fairly isolated from the plan area due to SR-99. Finally, the East Franklin Specific Plan Area (EFSPA), which is immediately west of the plan area, has several new residential developments in the planning stages within its boundaries.

### ***Existing Noise Levels in the Proposed Plan Area Vicinity***

The most significant noise source affecting the plan area is traffic. At locations within the plan area which are removed from the major roadways, ambient noise levels are considerably lower. General ambient noise levels within the proposed plan area at locations removed from the major roadways were evaluated through short-term ambient noise monitoring at various locations. Noise levels associated with traffic were evaluated both through noise measurement surveys and through use of accepted traffic noise prediction models. General ambient and traffic-related noise is discussed in the following sections.

### ***General Ambient Noise Environment Away from Major Roadways***

Short-term ambient noise surveys were conducted within the proposed plan area to measure the existing ambient noise environment in the project vicinity. The sites used for the surveys were located within the proposed plan area at the locations shown on **Figure 4.4-2**. The results of these surveys are summarized in **Table 4.4-2**. The maximum value, denoted  $L_{max}$ , represents the highest noise level measured at any time during the measurement. The average value, denoted  $L_{eq}$ , represents the energy average of all of the noise received by the sound level

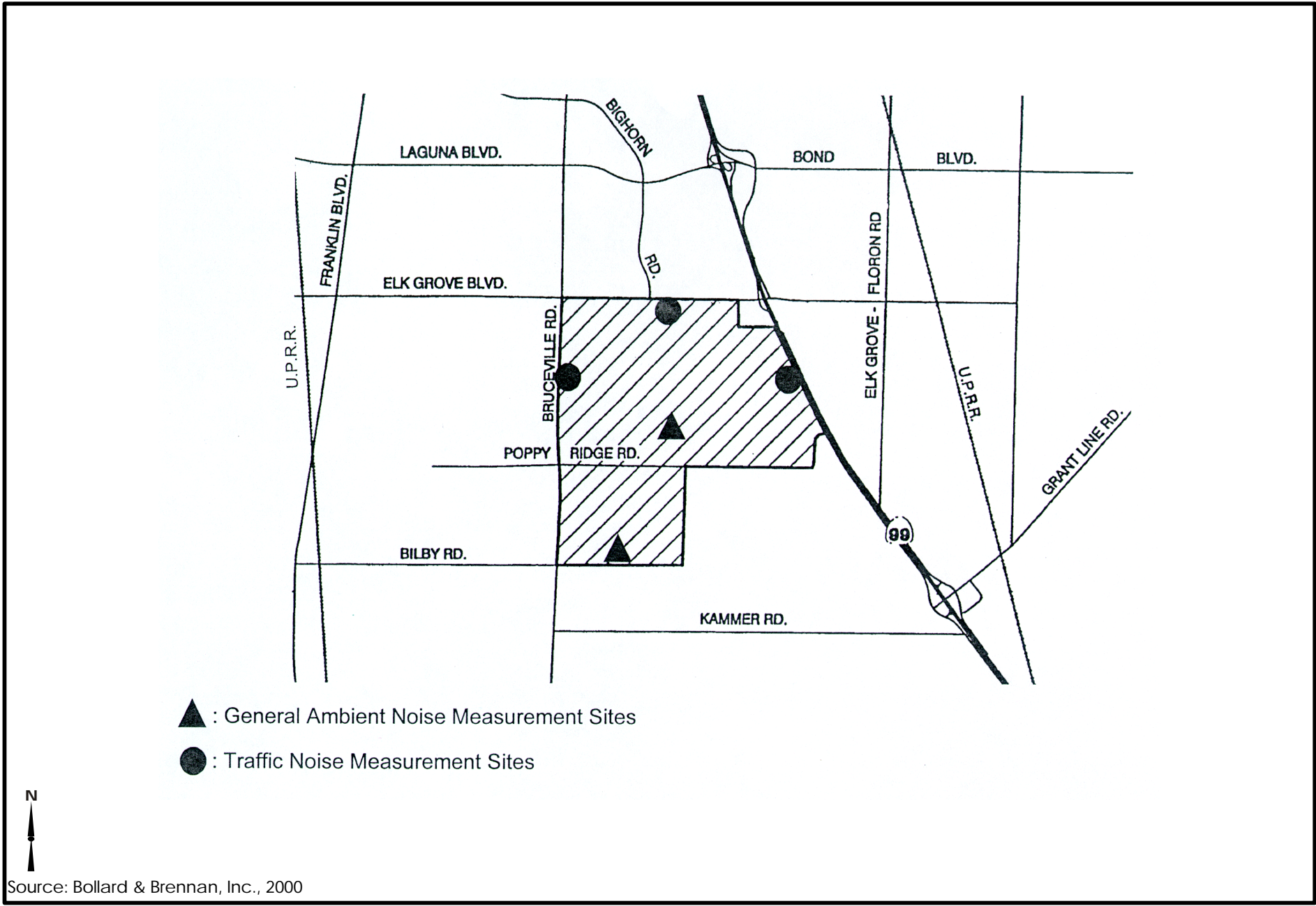


Figure 4.4-2  
Noise Measurement Locations

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meter microphone during the measurement period. The median value, denoted  $L_{50}$ , indicates the level, which is exceeded 50 percent of the time. In other words, half of the time the ambient noise environment was louder than the median level, and the other half it was quieter.

**TABLE 4.4-2**  
**SHORT TERM AMBIENT NOISE MONITORING RESULTS**  
**PROPOSED PLAN AREA, JUNE 30, 2000**

Site	Location	Time	Measured Sound Level, dBA		
			Average ( $L_{eq}$ )	Maximum ( $L_{max}$ )	Median ( $L_{50}$ )
1	Approximate Center of proposed plan area	8:50 a.m.	45	58	45
2	Southern Portion of proposed plan area	9:30 a.m.	45	55	44

Source: *Bollard & Brennan, 2000*  
Noise measurement locations are shown on Figure 4.4-2.

The short-term ambient noise level measurement results shown in **Table 4.4-2** are not meant to be a comprehensive assessment of overall ambient conditions within the proposed plan area. Rather, they are intended to provide a general indication of the existing noise environment at locations away from the major traffic noise sources.

The **Table 4.4-2** data indicate that the existing ambient noise conditions at those locations removed from the major roadways are fairly quiet, as would be expected for areas not affected by major noise sources.

### **Existing Traffic Noise Environment**

Based on existing traffic data for area roadways obtained from the traffic analysis prepared for this project, **Table 4.4-3** was developed to show the level of traffic volume created from the proposed project. **Table 4.4-4** shows the distances to the existing 60 and 65 dBA  $L_{dn}$  noise contours for each of the area roadways, based upon the Federal Highway Administration (FHWA) Highway Traffic Noise Prediction Model.

Based on field review of area roadways, the following roadways have walls and landscape that provide noise attenuation:

#### **Big Horn Road:**

Franklin to Bruceville	6-foot walls with 20 to 30-foot landscape corridors on both side of roadway.
Bruceville to Laguna	6-foot walls with 20 to 30-foot landscape corridor on south side of roadway.
Laguna to Elk Grove	6-foot walls with 20 to 30-foot landscape corridors on both sides of roadway.

#### **Bruceville Road:**

Big Horn to Laguna	8-foot walls on west side of roadway.
Laguna to Elk Grove	6-foot walls with 20 to 30-foot landscape corridors on both sides of roadway.

**Elk Grove Boulevard:**

Interstate 5 to Franklin	6-foot walls with 20 to 30-foot landscape corridors on both sides of roadway up to railroad tracks. East of the railroad there is an 8-foot wall on the north side of the roadway as well as wall features on the north side of the overcrossing.
Bruceville to Highway 99	6-foot wall with 20 to 50-foot landscape corridor on north side of roadway.

**Franklin Boulevard:**

Big Horn to Laguna	6-foot walls with 20 to 30-foot landscape corridors on both sides of roadway.
Laguna to Elk Grove	6-foot walls with 20 to 30-foot landscape corridors on both sides of roadway.

**Laguna Boulevard:**

Interstate 5 to Franklin	6 to 8-foot wall with 20-foot landscape corridor on both sides of roadway.
Franklin to Bruceville	6-foot walls with 20 to 50-foot landscape corridors on both sides of roadway.
Bruceville to Laguna	6-foot wall with 20 to 30-foot landscape corridor on south side of roadway.

**West Stockton Boulevard:**

Laguna Springs Drive	6-foot walls with 20 to 30-foot landscape corridors on both sides of roadway.
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***Existing Agricultural Noise Environment***

Active agricultural uses exist both within and adjacent to the proposed plan area. Field observations indicate that the agricultural activities appear to be limited to cattle grazing and alfalfa or wheat field cultivation. As a result, intermittent agricultural-related equipment and processes contribute to the existing ambient noise environment within the proposed plan area. Due to the wide array of equipment types and conditions under which that equipment is used in the agriculture industry, noise generated by agricultural processes varies substantially.

Maximum noise levels generated by farm-related tractors typically range from 77 to 85 dB at a distance of 50 feet from the tractor, depending on the horsepower of the tractor and the operating conditions. Noise generated by crop-dusting activities similarly varies, depending on the type of aircraft used and the proximity of the receiver to the operating aircraft. Recent measurements of crop-dusting activities showed that maximum noise levels of 100 dBA at a distance of 200 feet from the operating crop-dusting aircraft could be generated.

Due to the seasonal nature of the agricultural industry, there are often extended periods of time when no noise is generated on properties which are actively being farmed, followed by short-term periods of intensive mechanical equipment usage and corresponding noise generation. Due to this high degree of variability of agricultural activities, it is not feasible to reliably quantify the noise generation of agricultural uses in terms of noise standards commonly utilized to assess impacts of other noise sources. However, these uses generate short-term periods of elevated noise during all hours of the day and night and possess the potential to generate adverse public reaction during intensive farm-related activities.

## 4.4 NOISE

**TABLE 4.4-3  
FHWA HIGHWAY TRAFFIC NOISE PREDICTION MODEL INPUTS  
LAGUNA RIDGE SPECIFIC PLAN AREA - CITY OF ELK GROVE**

Roadway / Segment	Land Uses Along Roadway Segments	Average Daily Traffic Volume			
		Existing No Project	Existing With Project	Cumulative No Project	Cumulative + Project
<b>Highway 99:</b>					
North of Laguna	Comm/Ag/Res	96,000	111,700	123,700	134,900
Laguna to Elk Grove	Res/Comm	80,000	86,000	109,300	117,200
Elk Grove to Poppy Ridge	Ag/Res	56,000	56,000	88,400	85,700
Poppy Ridge to Grant Line	Ag/Res/Park/Ind	56,000	56,000	88,400	85,700
<b>Big Horn Road:</b>					
Franklin to Bruceville	Res/Public	10,000	10,300	11,400	11,500
<b>Bilby Road:</b>					
Franklin to Bruceville	Res/Ag	1,100	4,000	4,900	4,400
<b>Bruceville Road:</b>					
Big Horn to Laguna	Res/Comm	16,700	20,700	30,700	33,800
Laguna to Elk Grove	Res/Comm	15,400	30,300	39,800	46,800
Elk Grove to Poppy Ridge	Res/Ag	3,300	14,700	30,300	30,700
<b>Elk Grove Boulevard:</b>					
Interstate 5 to Franklin	Res/Ag	14,200	16,500	33,200	35,200
Franklin to Bruceville	Res/Park/Ag	22,200	29,300	35,500	42,700
Bruceville to Highway 99	Res/Ag/Comm	30,000	45,300	47,700	58,400
Highway 99 to Elk Grove-Florin	Res/Comm	35,300	41,600	42,900	53,100
<b>Franklin Boulevard:</b>					
Big Horn to Laguna	Res/Comm	25,600	25,200	34,400	35,000
Laguna to Elk Grove	Res/Park	13,600	11,100	32,500	32,100
Elk Grove to Bilby	Res/Ag	3,300	3,600	12,800	14,900
<b>Hood Franklin Road:</b>					
Interstate 5 to Franklin	Ag/Res	1,800	3,100	14,800	16,200
<b>Laguna Boulevard:</b>					
Interstate 5 to Franklin	Res/Comm/Ind	28,400	28,800	39,500	40,700
Franklin to Bruceville	Res/Comm	35,600	38,500	46,200	49,100
<b>Poppy Ridge Road:</b>					
Bruceville to Big Horn	Ag/Res	1,100	8,900	11,800	15,600
Big Horn to Highway 99	Ag/Res	1,100	8,900	11,800	15,600

Note: A day/night traffic distribution of 80%/20% was assumed for all roadway segments. The traffic volumes were assumed to consist of 2% medium trucks (2 axles), and 2% heavy trucks (3 or more axles). Vehicle speed was assumed to be approximately 50 mph on all project roadways.

Ag = agriculture; Comm = commercial; Res = residential; Sch = school; Ind = industrial; Park = park  
Source: Bollard & Brennan, 2002

**TABLE 4.4-4**  
**APPROXIMATE DISTANCES TO EXISTING TRAFFIC NOISE CONTOURS**  
**LAGUNA RIDGE SPECIFIC PLAN AREA - CITY OF ELK GROVE**

Roadway / Segment	Existing Land Uses Along Roadway Segments	Predicted L <sub>dn</sub> , dBA @ 100 feet	Distance from centerline to Noise Contour (feet)	
			60 dB L <sub>dn</sub>	65 dB L <sub>dn</sub>
<b>Highway 99:</b>				
North of Laguna	Comm/Ag/Res	78.7	1771	822
Laguna to Elk Grove	Res/Comm	77.9	1568	728
Elk Grove to Poppy Ridge	Ag/Res	76.4	1237	574
Poppy Ridge to Grant Line	Ag/Res/Park/Ind	76.4	1237	574
<b>Big Horn Road:</b>				
Franklin to Bruceville	Res/Public	65.1	219	102
<b>Bilby Road:</b>				
Franklin to Bruceville	Res/Ag	55.5	50	23
<b>Bruceville Road:</b>				
Big Horn to Laguna	Res/Comm	67.3	308	143
Laguna to Elk Grove	Res/Comm	67.0	292	135
Elk Grove to Poppy Ridge	Res/Ag	60.3	104	48
<b>Elk Grove Boulevard:</b>				
Interstate 5 to Franklin	Res/Ag	66.6	276	128
Franklin to Bruceville	Res/Park/Ag	68.6	372	173
Bruceville to Highway 99	Res/Ag/Comm	69.9	455	211
Hwy 99 to Elk Grove-Florin	Res/Comm	70.6	507	235
<b>Franklin Boulevard:</b>				
Big Horn to Laguna	Res/Comm	69.2	409	190
Laguna to Elk Grove	Res/Park	66.4	268	125
Elk Grove to Bilby	Res/Ag	60.3	104	48
<b>Hood Franklin Road:</b>				
Interstate 5 to Franklin	Ag/Res	57.7	70	32
<b>Laguna Boulevard:</b>				
Interstate 5 to Franklin	Res/Comm/Ind	69.6	439	204
Franklin to Bruceville	Res/Comm	70.6	510	237
<b>Poppy Ridge Road:</b>				
Bruceville to Big Horn	Ag/Res	55.5	50	23
Big Horn to Highway 99	Ag/Res	55.5	50	23

Note: Acoustically site assumed. Noise contour distances do not include shielding provided by intervening topography or existing or proposed structures.

Ag = agriculture; Comm = commercial; Res = residential; Sch = school; Ind = industrial; Park = park

Source: Bollard & Brennan, 2002

## 4.4 NOISE

### 4.4.2 REGULATORY FRAMEWORK

In order to limit population exposure to physically and/or psychologically damaging noise levels, the State of California and Sacramento County have established standards and ordinances to control noise. The City of Elk Grove has adopted and implements its policies in the Draft General Plan Noise Element, and the adopted Noise Ordinance. Following the final adoption of the General Plan, the Noise Ordinance will be updated as necessary to assure its consistency with the General Plan Noise Element.

#### CALIFORNIA DEPARTMENT OF HEALTH SERVICES

The California Department of Health Services (DHS) Office of Noise Control has studied the correlation of noise levels and their effects on different land uses. As a result, the DHS has established four categories for judging the severity of noise intrusion on specified land use. Noise in the "normally acceptable" category places no undue burden on affected receptors and would need no mitigation. As noise rises into the "conditionally acceptable" range, some mitigation of exposure, as established by an acoustic study, would be warranted. At the next level, noise intrusion is so severe that it is classified "normally unacceptable" and would require extraordinary noise reduction measures to avoid disruption. Finally, noise in the "clearly unacceptable" category is so severe that it cannot be mitigated.

Title 24 of the California Administrative Code establishes standards governing interior noise levels that apply to all new multifamily residential units in California. The standards require that acoustical studies be performed prior to construction at building locations where the existing  $L_{dn}$  exceeds 60 dBA. Such acoustical studies are required to establish mitigation measures that will limit maximum  $L_{dn}$  noise levels to 45 dBA in any inhabitable room. The U.S. Department of Housing and Urban Development (HUD) has set an  $L_{dn}$  of 45 as its goal for interior noise in residential units built with HUD funding.

#### CITY OF ELK GROVE DRAFT GENERAL PLAN

**Table 4.4-5** identifies the Draft General Plan Noise Element policies that are directly applicable to the proposed project, and presents an evaluation of the consistency of the project with these statements as required by CEQA. The final authority for interpretation of these policy statements, and determination of the project's consistency rests with the City Council.

**Table 4.4-5  
Draft General Plan Noise Element Policy Consistency**

Draft General Plan Policies	Consistency with General Plan	Analysis
<b>Policy NO-1:</b> New development of noise-sensitive uses shall not be allowed where the noise level due to non-transportation noise sources will exceed the noise level standards of Table NO-A as measured immediately within the	Yes	A preliminary acoustical analysis was performed for the proposed Laguna Ridge Specific Plan, which indicates that proposed land uses could exceed the noise level standards of Table A. Subsequent development would be required to comply with Mitigation

Draft General Plan Policies	Consistency with General Plan	Analysis
<p>measured immediately within the property line or within a designated outdoor activity area of the new development, unless effective noise mitigation measures have been incorporated into the development design to achieve the standards specified in Table NO-A.</p>		<p>Measures MM 4.4.3a and b, including acoustical analyses to demonstrate that the uses would not exceed City noise standards at nearby residential property lines. If noise standards would be exceeded as a result of proposed uses, noise attenuation measures would be required to lessen the impacts.</p>
<p><b>Policy NO-2:</b></p> <p>Noise created by new, proposed non-transportation noise sources shall be mitigated so as not to exceed the noise level standards of Table NO-A as measured immediately within the property line of lands designated for noise-sensitive uses.</p> <p><i>Note: For the purposes of this Noise Element, transportation noise sources are defined as traffic on public roadways, railroad line operations and aircraft in flight. Control of noise from these sources is preempted by Federal and State regulations. Other noise sources are presumed to be subject to local regulations, such as a noise control ordinance. Non-transportation noise sources may include industrial operations, outdoor recreation facilities, HVAC units, loading docks, etc.</i></p>	<p>Yes</p>	<p>See analysis of Policy NO-1, above.</p>
<p><b>Policy NO-3:</b></p> <p>Where proposed non-residential land uses are likely to produce noise levels exceeding performance standards of Table NO-A at existing or planned noise-sensitive uses, an acoustical analysis shall be required as part of the environmental review process so that noise mitigation may be included in the project design. The requirements for the content of an acoustical analysis are given by Table NO-B.</p>	<p>Yes</p>	<p>See analysis of Policy NO-1, above.</p>



#### 4.4 NOISE

Draft General Plan Policies	Consistency with General Plan	Analysis
<p><b>Policy NO-4:</b></p> <p>Noise created by new transportation noise sources shall be mitigated so as not to exceed the levels specified in Table NO-C at outdoor activity areas or interior spaces of existing noise-sensitive land uses.</p>	Yes	Implementation of Mitigation Measure MM 4.4.5 would mitigate project impacts associated with inconsistency with this policy.
<p><b>Policy NO-6:</b></p> <p>Where noise mitigation measures are required to achieve the standards of Tables NO-A and NO-C, the emphasis of such measures shall be placed upon site planning and project design. The use of noise barriers shall be considered a means of achieving the noise standards only after all other practical design-related noise mitigation measures have been integrated into the project.</p>	Yes	All residential development shall be subject to Design Review as required by the City Zoning Code. Should any conflicts exist between the adopted City Design Standards and Guidelines and the provisions of the Laguna Ridge Specific Plan, the more restrictive requirements and guidelines shall govern.
<p><b>Policy NO-7:</b></p> <p>New development of noise-sensitive land uses shall not be permitted in areas exposed to existing or projected levels of noise from transportation noise sources which exceed the levels specified in Table NO-C, unless the project design includes effective mitigation measures to reduce exterior noise and noise levels in interior spaces to the levels specified in Table NO-C.</p>	Yes	See analysis of Policy NO-6, above.
<p><b>Policy NO-8:</b></p> <p>Where noise-sensitive land uses are proposed in areas exposed to existing or projected exterior noise levels exceeding the levels specified in Table NO-C or the performance standards of Table NO-A, an acoustical analysis shall be required as part of the environmental review process so that noise mitigation may be included in the project design.</p>	Yes	See analysis of Policy NO-1, above.

## CITY OF ELK GROVE DRAFT GENERAL PLAN NOISE ELEMENT

In accordance with State noise regulations, the Elk Grove Draft General Plan Noise Element sets forth land use compatibility criteria for various community noise levels. For noise generated by transportation noise sources (roads and railroads), the Noise Element specifies that residential land uses are unconditionally compatible with exterior noise levels of up to 60 dB  $L_{dn}$ . The 60 dB  $L_{dn}$  noise level is considered an acceptable noise environment for residential outdoor activities. Where the exterior noise level from transportation sources is between 60 and 75 dB  $L_{dn}$ , the Noise Element specifies that residential uses should be permitted only after careful study and inclusion of noise reduction, or attenuation measures as needed. In these instances, an exterior noise level of 65 dB  $L_{dn}$  may be allowed in outdoor activity areas provided that "all practical" exterior noise reduction measures are applied.

An interior noise level criterion of 45 dB  $L_{dn}$  is specified in the Noise Element of the Draft General Plan for residential land uses exposed to transportation noise sources. The intent of this interior noise standard is to provide a suitable environment for indoor communication and sleep. For noise generated by non-transportation noise sources (e.g. industrial and commercial machinery, etc.), the draft Noise Element specifies that residential land uses are compatible with exterior daytime levels up to 55 hourly dB  $L_{eq}$ . The City's Noise Ordinance and Noise Element of the Draft General Plan are the basis for the adoption and enforcement of noise standards. The draft Noise Element establishes land-use compatibility criteria for both interior and exterior areas of various land uses.

Table NO-A of the Draft General Plan Noise Element applies to new or existing residential areas affected by new or existing non-transportation noise sources. For example, Policy NO-2 from the draft Noise Element states that new non-transportation noise sources shall be mitigated so as not to exceed any of the noise level standards in Table NO-A. Policy NO-3 states that Where proposed non-residential land uses are likely to produce noise levels exceeding performance standards of Table NO-A at existing or planned noise-sensitive uses, an acoustical analysis shall be required as part of the environmental review process so that noise mitigation may be included in the project design. Noise levels contained in Table NO-A of the Noise Element are presented in **Table 4.4-6** below.

**TABLE 4.4-6  
NOISE LEVEL PERFORMANCE STANDARDS FOR RESIDENTIAL AREAS  
AFFECTED BY OR INCLUDING NON-TRANSPORTATION NOISE**

Statistical Noise Level Descriptor	Exterior Noise Level Standards (dBA)	
	Daytime (7 am - 10 pm)	Nighttime (10 pm. - 7 am)
Hourly $L_{eq}$ , dB	55	45

*Source: City Draft General Plan, Noise Element*

#### City of Elk Grove Noise Element Standards Applicable to School Uses

The City of Elk Grove Draft Noise Element<sup>5</sup> indicates that an exterior noise level of up to 70 dB  $L_{dn}$  is considered an acceptable exterior noise environment for playground uses, which would be

<sup>5</sup> City of Elk Grove Draft Noise Element Table NO-C

## 4.4 NOISE

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applicable to the playgrounds of school uses proposed within the plan area. This standard recognizes that activities on school playgrounds tend to be noise generating, rather than noise-sensitive. The Draft Noise Element<sup>6</sup> specifies noise levels of 45 dB  $L_{eq}$  as being appropriate for the interior spaces of classrooms, which is intended to provide a suitable environment for indoor communication and concentration. This standard is based on the  $L_{eq}$  in the worst-case hour during school usage.

### City of Elk Grove Noise Ordinance

Noises generated by non-transportation noise sources are regulated by the City of Elk Grove Noise Ordinance as summarized in **Table 4.4-7** below.

**TABLE 4.4-7**  
**CITY OF ELK GROVE NOISE ORDINANCE STANDARDS**

Cumulative Duration of the Intrusive Sound	Descriptor	Exterior Noise Standard, dB	
		(7 am - 10 pm)	(10 pm - 7 am)
30-60 minutes per hour	$L_{50}$	55	50
15-30 minutes per hour	$L_{25}$	60	55
5-15 minutes per hour	$L_{08}$	65	60
1-5 minutes per hour	$L_{02}$	70	65
Any time during hour	$L_{max}$	75	70

The City of Elk Grove Noise Ordinance regulates development projects with regard to construction noise. Section 6.68.090 of the Ordinance contains quantitative restrictions on noise levels that effectively limit construction activities to 6:00 A.M. to 8:00 P.M., Monday through Friday, and 7:00 A.M. to 8:00 P.M. on Saturday and Sunday. Section 6.68.070 establishes exterior noise standards for residential properties of 55 dBA from 7:00 A.M. to 10:00 P.M., and 50 dBA from 10:00 P.M. to 7:00 A.M. Section 6.68.120 restricts the noise levels produced by machinery, equipment, fans and air conditioning, as heard at the property lines of nearby residential uses.

### City of Elk Grove Zoning Code

The City of Elk Grove Zoning Code includes certain performance standards (Title III, Use Regulations and Development Standards) that could have the effect of reducing noise levels. For example, Chapter I, Article 5, Section 301-61 requires that a masonry wall be provided along the exterior property lines for all industrial and commercial projects when located adjacent to residential (and other specified) zones, and that where a sound wall is required, a masonry wall of up to eight feet in height may be provided. Chapter 5, Article 2, Section 305-13.3 requires that a solid wood fence or masonry wall with a minimum height of six feet be built along the exterior property lines of any multi-family residential project. Chapter 15, Article 6, Section 315-43(f) requires that loading docks adjacent to residentially zoned property have a setback of at least 75 feet from that zoning boundary. Section 315-45(b) of the same Article requires that, for

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<sup>6</sup> City of Elk Grove Noise Element Table II-3

commercial development adjacent to residential and other specified zones, a six-foot high perimeter masonry wall be installed along the property lines of those zones.

### 4.4.3 PROJECT IMPACTS AND MITIGATION MEASURES

#### THRESHOLDS OF SIGNIFICANCE

CEQA guidelines and the City of Elk Grove General Plan Noise Element were used as the basis of impact standards in the Environmental Noise Analysis for the Laguna Ridge Specific Plan conducted by Bollard & Brennan, Inc. as updated as well as supplemental technical analyses performed by City staff. In order to assist in determining whether a project would have a significant effect on the environment, the CEQA Guidelines identify criteria that may be deemed to constitute a substantial or potentially substantial adverse change in physical conditions.

Generally, a project may have a significant effect on the environment if it will substantially increase the ambient noise levels for adjoining areas or expose people to severe noise levels. Specific professional standards have been derived to evaluate noise impacts; these state that a noise impact may be considered significant if it would generate noise that would conflict with local planning criteria or ordinances, or substantially increase noise levels at noise-sensitive land uses.

Implementation of the project would result in significant noise impacts if the project would result in any of the following:

- Exposure of persons to or generation of noise levels in excess of standards established in the City of Elk Grove Draft General Plan and Noise Ordinance, or applicable standards of other agencies;
- A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project, as defined by **Table 4.4-8** below.

**TABLE 4.4-8**  
**SIGNIFICANCE OF CHANGES IN CUMULATIVE NOISE EXPOSURE**

Ambient Noise Level without Project, Ldn	Increase Required for Significant Impact
<60 dB	+ 5.0 dB or more
60-65 dB	+ 3.0 dB or more
>65 dB	+1.5 dB or more

Source: Bollard & Brennan, 2002

#### Traffic and Operational Noise

##### Traffic Noise Impacts

On-site and off-site traffic noise impacts were evaluated based on draft Noise Element policies NO-4, NO-6, NO-7, and NO-8, which refer to the noise/land use compatibility criteria set forth in Table NO-C of the draft Noise Element (see **Table 4.4-9**). Specifically, increases in traffic noise as a result of the project would be considered significant if it results in exposure to noise levels above the "acceptable" noise level or above the average interior noise levels set forth in **Table**

## 4.4 NOISE

4.4-9. In addition, traffic noise impacts associated with the project would also be considered significant if they result in changes in the cumulative noise exposure set forth in **Table 4.4-8**.

**TABLE 4.4-9  
MAXIMUM ALLOWABLE NOISE EXPOSURE TRANSPORTATION NOISE SOURCES**

Land Use	Outdoor Activity Areas <sup>1</sup> L <sub>dn</sub> /CNEL, dB	Interior Spaces	
		L <sub>dn</sub> /CNEL, dB	Leq, dB <sup>2</sup>
Residential	60 <sup>3</sup>	45	--
Residential subject to noise from railroad tracks, aircraft overflights, or similar "single event" noise sources	60 <sup>3</sup>	40 <sup>5</sup>	--
Transient Lodging	60 <sup>4</sup>	45	--
Hospitals, Nursing Homes	60 <sup>3</sup>	45	--
Theaters, Auditoriums, Music Halls	--	--	35
Churches, Meeting Halls	60 <sup>3</sup>	--	40
Office Buildings	--	--	45
Schools, Libraries, Museums	--	--	45
Playgrounds, Neighborhood Parks	70	--	--

<sup>1</sup> Where the location of outdoor activity areas is unknown, the exterior noise level standard shall be applied to the property line of the receiving land use.

Where it is not practical to mitigate exterior noise levels at patio or balconies of apartment complexes, a common area such as a pool or recreation area may be designated as the outdoor activity area.

<sup>2</sup> As determined for a typical worst-case hour during periods of use.

<sup>3</sup> Where it is not possible to reduce noise in outdoor activity areas to 60 dB L<sub>dn</sub>/CNEL or less using a practical application of the best-available noise reduction measures, an exterior noise level of up to 65 dB L<sub>dn</sub>/CNEL may be allowed provided that available exterior noise level reduction measures have been implemented and interior noise levels are in compliance with this table.

<sup>4</sup> In the case of hotel/motel facilities or other transient lodging, outdoor activity areas such as pool areas may not be included in the project design. In these cases, only the interior noise level criterion will apply.

<sup>5</sup> The intent of this noise standard is to provide increased protection against sleep disturbance for residences located near railroad tracks.

Source: City of Elk Grove, 2002

### Operational Noise Impacts

While no specific land uses are proposed as part of the Laguna Ridge Specific Plan, potential operational noise impacts associated with future land uses in the plan area on existing, planned and proposed residential land uses are evaluated based on the City noise standards set forth in **Table 4.4-6** and **4.4-7**.

### **Vibration**

Reaction to vibration will vary from person to person. Peak velocities of 0.01 inches per second RMS are barely noticeable to people, while velocities of 0.1 inches per second RMS are troublesome to some people. Architectural damage to structures can begin occurring when peak velocities reach 0.4 inches per second RMS.<sup>7</sup> The point at which damage to residential, commercial, or industrial structures can occur is utilized as the significance threshold within this EIR.

### **NOISE ANALYSIS METHODOLOGY**

A combination of use of existing literature, noise level measurements, and application of accepted noise prediction and sound propagation algorithms, were used to predict changes in ambient noise levels resulting from development within the proposed Laguna Ridge Specific Plan Area. Additionally, the Environmental Noise Analysis prepared by Bollard & Brennan was used as the basis of this section as well as supplement noise analyses performed by City staff. Specific noise sources evaluated in this section include traffic, agriculture, and future noise sources which would be developed within the proposed plan area. Noise impacts of each of these major noise sources are described below.

#### **Methodology for Future Noise-Producing Uses Developed Within the Proposed Plan Area**

Future development within the plan area would have a variety of noise sources associated with it, which have the potential to create noise levels in excess of the applicable noise standards or result in annoyance at existing and future noise-sensitive developments within the plan area. Such uses/noise sources include, but are not limited to, commercial loading docks associated with grocery stores, automatic car washes, school playgrounds and neighborhood parks.

At the proposed project level, detailed site and grading plans associated with these types of noise sources have not yet been developed. As a result, it is not feasible to identify specific noise impacts associated with these sources. Rather, the potential for these sources to generate excessive or annoying noise levels is identified.

#### **Traffic Noise Impact Assessment Methodology**

To assess traffic noise impacts, traffic noise levels are predicted at a representative distance for both existing and future, project and no-project conditions. The noise analysis is based on Federal Highway Traffic Noise Prediction Model (FHWA RD-77-108) and qualitatively took into account existing noise attenuating features such as setback distance and walls. Noise impacts are identified at existing noise-sensitive areas if the increase in noise level resulting from the project exceeds the significance thresholds.

#### **Agricultural Noise Impact Assessment Methodology**

The methodology for assessing noise impacts associated with agricultural uses is more difficult than that used for the other noise sources affecting the plan area. The reason is that agricultural noise sources tend to be more variable, both in terms of noise level and frequency of occurrences. This analysis of agricultural noise impacts takes the approach that, although

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<sup>7</sup> Marshall Long Acoustics, *Weldon Canyon Vibration Study*, undated.

## 4.4 NOISE

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agricultural noise is variable, it has the potential to exceed local noise standards and create annoyance at future residential land uses when it does occur, so mitigation measures should be developed to minimize impacts of existing agricultural uses on new residential and commercial uses in the immediate plan area vicinity.

### Construction Noise Impact Methodology

During the construction phases of the project, noise from construction activities would add to the noise environment in the immediate project vicinity. Activities involved in construction would generate maximum noise levels ranging from 85 to 90 dB at a distance of 50 feet. Construction activities would be temporary in nature and are anticipated to occur during normal daytime working hours.

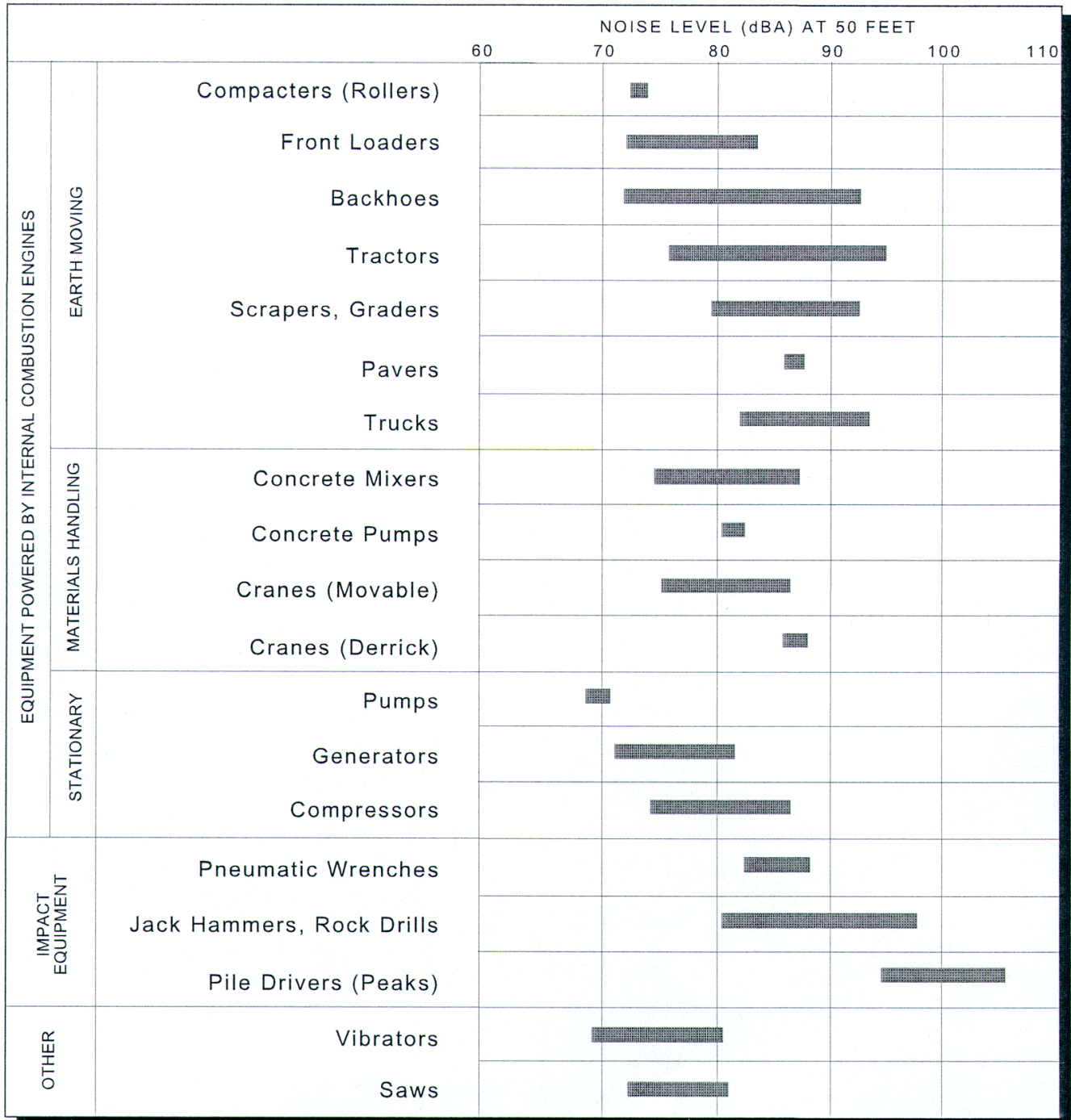
Noise would also be generated during the construction phase by increased truck traffic on area roadways. A significant project-generated noise source would be truck traffic associated with the transport of heavy materials and equipment to and from construction sites. This noise increase would be of short duration and would likely occur primarily during daytime hours.

## PROJECT IMPACTS AND MITIGATION MEASURES

### Construction Noise

**Impact 4.4.1** The on-site and off-site noise impacts associated with construction for the Laguna Ridge Specific Plan may exceed Elk Grove City Standards. This would result in a **potentially significant** impact.

Activities associated with on-site construction would result in elevated noise levels within the proposed plan area, and could generate noise levels in excess of the City of Elk Grove Draft General Plan noise standards, or expose future residents to substantial short-term increases in ambient noise levels. **Figure 4.4-3** illustrates typical construction equipment noise levels for individual pieces of equipment. Usually, construction noise is of relatively short duration, lasting from a few days to a period of several months. Additionally, project-related offsite construction could result in temporary, elevated noise levels around the plan area. Offsite improvements required for the Laguna Ridge Specific Plan include a connection to the Sacramento Regional Water Treatment Plant for wastewater service and a stormwater drainage channel. The wastewater infrastructure improvements would include a connection to the existing trunk/interceptor sewer system, which extends north and west from the Bruceville Road/Laguna Boulevard intersection to the Regional Treatment Plant. It is anticipated that the necessary wastewater facility improvements would contribute to temporary offsite noise impacts associated with the construction of the necessary infrastructure. Noise sensitive receptors would be those existing residences located along Bruceville Road between the Laguna Ridge Specific Plan area and Laguna Boulevard. If residential units associated with the East Franklin Specific Plan were constructed before the wastewater infrastructure were in place, those residents would also be temporarily impacted by the construction-related noise. Additionally, in order to provide improved stormwater drainage to the Laguna Ridge Specific Plan area, an 80-foot wide channel would be constructed south of the plan area. The construction of the drainage channel would have a temporary impact on the ten existing residences located south of the plan area along Bruceville Road. Noise generated by the wastewater facilities and stormwater drainage channel would be attributed to construction-related activities and would be temporary in nature.



Source: Bollard & Brennan, Inc., 2000



Figure 4.4-3  
Noise Levels of Typical  
Construction Equipment



## 4.4 NOISE

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In general, the first and noisiest stage is site preparation, which involves existing structure removal, earth moving, compaction of soils and the removal of excess materials. High noise levels created during this phase will be associated with the operation of heavy-duty trucks, scrapers, graders, backhoes, and front-end loaders. When construction equipment is operating, noise levels can range from 73 to 96 dBA at a distance of 50 feet from individual pieces of equipment. During the second stage of construction, foundation forms are constructed and concrete foundations are poured. Primary noise sources include heavy concrete trucks and mixers, cranes, and pneumatic drills. At 50 feet from the source, noise levels in the 70 to 90 dBA range are common.

The third and fourth stages consist of interior and facade construction, and site cleanup. Primary noise sources associated with the third phase include hammering, diesel generators, compressors, and light truck traffic. Noise levels are typically in the 60 to 80 dBA range at a distance of 50 feet. The final stages typically involve the use of trucks, landscape rollers and compactors, with noise levels in the 65 to 75 dBA range.

During construction activities, noise level increases could be noticeable to nearby rural residential land uses located to the south and west of the plan area as well as existing urban residential areas north of Elk Grove Boulevard. The residential uses built in association with the East Franklin Specific Plan (EFSP) could also be exposed to construction noise from the Laguna Ridge Specific Plan (LRSP) depending on the timing of the development of the EFSP and the LRSP. These residences could be exposed to periodic noise during demolition and construction activities occurring on and near the project. Additionally, if the onsite (existing or proposed) residential uses are occupied during construction activities, those uses could also be exposed to construction noise.

Construction activities on the plan area as a whole could occur on any one part of the site. The Noise Ordinance would restrict proposed construction activities to 6:00 A.M. to 8:00 P.M. during the weekdays, when residents are less likely to be disturbed, but would allow construction activities on the weekends from 7:00 A.M. to 8:00 P.M., when more residents could be disturbed by construction. Given that there is a potential that some existing, proposed, and potential future residential uses (particularly those further from SR-99) would be exposed to project construction noise, this impact, though temporary, is considered to be potentially significant when construction occurs near those sensitive receptors.

### Mitigation Measures

**MM 4.4.1a** Site preparation and construction activities shall be limited to between the hours of 6:00 A.M. to 8:00 P.M., Monday through Friday, and 7:00 A.M. to 8:00 P.M. on Saturday and Sunday (City of Elk Grove Noise Control Ordinance, Section #6.68.090). Furthermore, construction equipment maintenance shall be limited to the same hours. This requirement shall be included as a note in all project construction plans.

*Timing/Implementation:* During all construction phases of the project.  
*Enforcement/Monitoring:* City of Elk Grove Development Services

**MM 4.4.1b** All construction equipment shall be equipped with appropriate mufflers in good working condition. This requirement shall be included as a note in all project construction plans.

*Timing/Implementation:* During all construction phases of the project.  
*Enforcement/Monitoring:* City of Elk Grove Development Services

**MM 4.4.1c** Construction staging areas shall be located as far from noise-sensitive uses as is feasible. This requirement shall be included as a note in all project construction plans.

*Timing/Implementation:* During all construction phases of the project.  
*Enforcement/Monitoring:* City of Elk Grove Development Services

**MM 4.4.1d** Stationary construction equipment shall be located as far from noise sensitive uses as feasible, and temporary or portable acoustic barriers shall be installed around the equipment/work area when within 100 feet or less of residential properties or other sensitive uses. This requirement shall be included as a note in all project construction plans.

*Timing/Implementation:* During all construction phases of the project.  
*Enforcement/Monitoring:* City of Elk Grove Development Services

**MM 4.4.1e** Construction hours, allowable workdays, and the phone number of the job superintendent shall be clearly posted on a sign no larger than 4 foot by 8 foot at all construction entrances to allow for surrounding and onsite property owners to contact the job superintendent. If the City or the job superintendent receives a complaint, the superintendent shall investigate, take appropriate corrective action, and report the action taken to the reporting party. This requirement shall be included as a note in all project construction plans.

*Timing/Implementation:* During all construction phases of the project.  
*Enforcement/Monitoring:* City of Elk Grove Development Services

Implementation of the above mitigation measures would minimize the construction-related noise impacts, but the impact would remain **significant and unavoidable**.

### Construction Vibration

**Impact 4.4.2** Vibration associated with construction activities due to pile driving would affect nearby sensitive land uses. This would result in a **potentially significant** impact.

Construction operations can generate varying degrees of ground vibration, depending on the construction procedures and the construction equipment. Operation of construction equipment generates vibrations, which spread through the ground and diminish in amplitude with distance from the source. The effect on buildings located in the vicinity of the construction site often varies, depending on soil type, ground strata, and receptor building construction. The results from vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibrations at moderate levels, and slight damage at the highest levels. Ground vibrations from construction activities rarely reach the levels that can damage structures, but can achieve the audible and perceptible ranges in buildings close to the construction site. Typically, blasting and impact pile driving generate the highest vibration levels; blasting would not be employed for this project and pile driving would be very limited. **Table 4.4-10** below, lists vibration source levels for construction equipment.

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The primary vibration sources associated with the development of the project would include the use of pile drivers during the construction of foundations. Pile drivers create a high intensity, repetitious noise that is disturbing and can result in ground vibrations. The use of pile drivers would be very limited during the development of onsite structures.

**TABLE 4.4-10  
VIBRATION LEVELS FOR CONSTRUCTION EQUIPMENT**

Equipment		Approximate Velocity Level at 25 ft, VdB	Approximate RMS <sup>a</sup> Velocity at 25 ft, Inch/second
Pile Driver (impact)	Upper range	112	0.37950
	Typical	104	0.16100
Pile Driver (sonic)	Upper range	105	0.18350
	Typical	93	0.04250
Clam shovel drop (slurry wall)		94	0.05050
Hydromill (slurry wall)	In soil	66	0.00200
	In rock	75	0.00430
Large bulldozer		87	0.02225
Caisson drilling		87	0.02225
Loaded trucks		86	0.01900
Jackhammer		79	0.00875
Small bulldozer		58	0.00075

<sup>a</sup> RMS velocity calculated from vibration level (VdB) using the reference of 1 micro-inch/second.  
Source: City of Elk Grove, 2000

As indicated in **Table 4.4-10**, impact pile drivers are capable of producing RMS velocity levels at 25 feet in the upper range of 0.37 inch-per second, but typically produce levels of approximately 0.16 inches per second. Sonic pile drivers are capable of producing RMS velocity levels at 25 feet in the upper range of 0.18 inch-per second, but typically produce levels of approximately 0.04 inches per second. These vibration levels demonstrate that it is possible that pile-driving activities could result in vibration above the acceptable threshold of 0.4 inches per second. Given that there is a potential that some existing, proposed, and potential future residential uses (particularly those further from SR-99) would be exposed to project vibration, this impact, though temporary, would be considered potentially significant when construction occurs near those sensitive receptors.

### Mitigation Measure

**MM 4.4.2** Prior to the commencement of pile driver operations in proximity to residential areas, an assessment of vibrations induced by pile driving at the site shall be completed. During indicator pile driving, vibrations should be measured at regular intervals to determine the levels of vibration at various distances from pile driving equipment. The indicator piles shall be driven at locations at least 400 feet

from any existing residents. After monitoring, methods of reducing the peak ground velocities to less than 0.4 inches/second shall be determined and implemented during production pile driving. Methods to reduce vibrations, if needed, could include cut-off trenches, and the use of smaller hammers. The vibration reduction techniques to be used should be described in a note attached to the construction plans for the project to be reviewed and approved by the appropriate City regulatory agency prior to issuance of building permits. This requirement shall be included as a note in all project construction plans.

*Timing/Implementation:* Prior to any pile driving activities.  
*Enforcement/Monitoring:* City of Elk Grove Development Services

Implementation of the following mitigation measure reduces the vibration impacts to a **less than significant** level.

### Operational Noise

**Impact 4.4.3** Noise impacts associated with development of noise-producing uses within the proposed plan area would exceed City of Elk Grove noise standards. This would result in a **potentially significant** impact.

Noise-producing aspects of certain land uses potentially developed within the Specific Plan area such as school playgrounds, commercial loading docks, active recreation parks, etc. could generate noise levels in excess of the City of Elk Grove noise standards. It should be noted that this list of noise-excessive land uses does not represent all potential land uses that could result in noise conflicts. While no specific development projects are identified by the Specific Plan, noise associated with the following types of uses has been frequently cited as a potential source of annoyance at noise-sensitive areas and are discussed below.

**Car Washes:** Automatic car washes are frequently included in proposals for new gas stations. The most significant noise source associated with these uses is the blowers used during the drying cycle. Sustained noise levels in the range of 65 to 75 dB at unshielded locations 100 feet from the wash tunnel entrance or exit are typical, although there is considerable variation in the designs of these facilities. Relative to the drying cycle, the wash cycle is generally insignificant in terms of noise generation. The 70 dB daytime maximum noise level standard could be exceeded at noise-sensitive locations within about 100 to 200 feet of the wash-bay opening, provided there was a direct line of sight from the blowers to the affected residence.

**Loading Docks:** Due to the elevated noise emissions of heavy trucks and the common practice of utilizing loading docks during late night or early morning hours, adverse public reaction to loading dock usage is not uncommon. This is especially true if heavy trucks idle during unloading or if refrigeration trucks are parked in close proximity to residential boundaries.

Average noise levels for single idling trucks generally range from 60 to 65 dB  $L_{eq}$  at a distance of 100 feet, and maximum noise levels associated with heavy truck passages range from 70 to 75 dB  $L_{max}$  at a distance of 100 feet. Maximum noise levels generated by passages of medium duty delivery trucks generally range from 55 to 65 dB at a distance of 100 feet, depending on whether or not the driver is accelerating. In light of

## 4.4 NOISE

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these levels, a single heavy truck pass-by on a loading dock access route could exceed the City's maximum Noise Element standards.

The potential for adverse noise impacts associated with loading dock usage could be reduced by restricting heavy truck arrivals or departures during the nighttime hours, by requiring that heavy truck drivers turn off their engines while parked at the loading dock, and by requiring solid noise barriers along the side of the loading docks. It should be noted however, that such measures may not be sufficient to ensure compliance with the applicable Noise Element and Noise Ordinance standards. Due to the potential for adverse public reaction to new loading docks in close proximity to residential uses, the potential noise effects associated with proposals for new loading docks should be carefully evaluated.

**Schools/Playgrounds/Daycare Centers:** Children playing on school playgrounds, at neighborhood parks, and in daycare centers are often considered potentially significant noise sources that could adversely affect adjacent noise-sensitive land uses. Typical noise levels associated with groups of approximately 50 children playing at a distance of 50 feet range from 55 to 60 dB  $L_{eq}$ , with maximum noise levels ranging from 70 to 75 dB.

Because most schools, parks, and daycare centers are close to residential uses, the noise level from these facilities could potentially exceed the noise standards, depending on the orientation and proximity of the play areas to those nearest residences, the number of children using the play areas at a given time, and the types of activities in which the children are engaged. The outdoor playground noise, however, typically occurs during the day when residential uses are less sensitive to noise.

### Mitigation Measures

**MM 4.4.3a** When residential tentative subdivision maps include and/or are located adjacent to school and park sites, the residential subdivisions shall be designed to meet City noise standards set forth in **Table 4.4-6** of the Draft EIR. If the noise levels from the school and park facilities is expected to exceed the applicable standard, the project applicant shall implement appropriate mitigation measures. Appropriate mitigation measures include walls, berms, and buffers that would ensure compliance with applicable standards, as determined through the adopted Design Review procedures. Evidence of compliance shall be provided to the City.

*Timing/Implementation:* Prior to approval of residential tentative subdivision maps.

*Enforcement/Monitoring:* City of Elk Grove Development Services; Elk Grove Unified School District; and Elk Grove Community Services District.

**MM 4.4.3b** Prior to approval of a non-residential use that will abut a residential use and has the potential to generate noise, the project applicant shall demonstrate compliance with City noise standards set forth in **Table 4.4-6** of the Draft EIR. If the noise levels from the facility exceed the applicable standard, the project applicant shall implement appropriate mitigation measures. Appropriate mitigation measures include walls, berms, and buffers that would ensure

compliance with applicable standards, as determined through the adopted Design Review procedures.

*Timing/Implementation:* Prior to approval of permits and/or plans for non-residential uses adjacent to existing or planned residential uses.

*Enforcement/Monitoring:* City of Elk Grove Development Services

Implementation of the above mitigation measures reduces the operational noise impacts to a **less-than-significant** level.

### Agricultural Operations Noise

**Impact 4.4.4** Noise levels from agriculture operations that currently exist within and adjacent to the proposed plan area would exceed City of Elk Grove Noise Level Standards. This would result in a **significant** impact.

Due to the presence of agricultural-related operations both within and outside of the proposed plan area, and the potential noise-generation associated with agricultural operations, these agricultural operations may exceed the City of Elk Grove noise standards and create an adverse public reaction to agricultural operations from future noise-sensitive developments within the proposed plan area. Two types of impacts would occur as a result on ongoing agricultural uses. Portions of the plan area would be subjected to the noise of existing onsite agricultural operations during the development phases of the Laguna Ridge Specific Plan. However, these impacts would be temporary in nature. The second type of impact would occur along the southern edge of the plan area where the proposed onsite residential uses would interface with existing offsite agricultural uses located south of Bilby Road and Poppy Ridge Road. These impacts would be considered long-term. The potential for agricultural operations to generate noise levels exceeding the City's Standards would be greatest if crop-dusting activities and intensive plowing or harvesting operations in close proximity to noise-sensitive areas developed within the proposed plan areas were to occur. As a result, this impact is considered significant.

### Mitigation Measure

**MM 4.4.4** The project proponent shall ensure that a disclosure statement shall be recorded against the property and be provided to all prospective buyers of properties within the proposed plan area notifying such persons of the presence of existing and future noise-producing agricultural-related activities in the immediate Specific Plan area. The disclosure statement shall be reviewed and approved by City of Elk Grove Development Services.

*Timing/Implementation:* Prior to each final subdivision map approval.

*Enforcement/Monitoring:* City of Elk Grove Development Services

Implementation of the above mitigation measure would reduce the magnitude of agricultural noise on the project; however, the impact of agricultural noise remains **significant and unavoidable**.

## 4.4 NOISE

### 4.4.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

#### Traffic Noise

**Impact 4.4.5** Implementation of the Laguna Ridge Specific Plan in combination with approved and planned urban development in the region would increase traffic volumes within and adjacent to the plan area, which would increase transportation-related noise levels in excess of the City of Elk Grove noise standards. This would result in a **cumulative significant** impact.

Existing residences located along major roadways in the vicinity of the plan area would be exposed to elevated traffic noise levels under buildout conditions either with or without the project. **Table 4.4-11** indicates that the existing traffic noise level increases resulting from the development of the proposed plan area would range from 0.0 to 9.1 dB  $L_{dn}$ , relative to no-project conditions under existing conditions. However, the noise analysis does not take into account traffic noise impacts associated with railroad overcrossing at Laguna Boulevard and Elk Grove Boulevard where the line-of-sight between the traffic noise source and residential areas is elevated. This noise assessment was based on a worst-case scenario that assumed the buildout of the Laguna Ridge Specific Plan area would occur immediately. In actuality, the projected increase in noise levels would occur gradually over 20 years. For these reasons a cumulative analysis is a more realistic assessment, as compared to an existing plus project noise impact analysis, in determining the noise impacts associated with buildout of the Laguna Ridge Specific Plan area.

**TABLE 4.4-11  
PREDICTED EXISTING AND EXISTING PLUS PROJECT TRAFFIC NOISE LEVELS  
LAGUNA RIDGE SPECIFIC PLAN AREA**

Roadway / Segment	Land Uses Along Roadway Segments	$L_{dn}$ , dB, 100 feet from Roadway Centerline			Distance to Ex. + Project Noise Contours (feet)	
		Ex. No Project	Ex. + Project	Change, dB	65 dB $L_{dn}$	60 dB $L_{dn}$
<b>Highway 99:</b>						
North of Laguna	Comm/Ag/Res	78.7	79.4	0.7	909	1959
Laguna to Elk Grove	Res/Comm	77.9	78.2	0.3	764	1646
Elk Grove to Poppy Ridge	Ag/Res	76.4	76.4	0	574	1237
Poppy Ridge to Grant Line	Ag/Res/Park/Ind	76.4	76.4	0	574	1237
<b>Big Horn Road:</b>						
Franklin to Bruceville	Res/Public	65.1	65.2	0.1	104	223
<b>Bilby Road:</b>						
Franklin to Bruceville	Res/Ag	55.5	61.1	5.6	55	119

## 4.4 NOISE

Roadway / Segment	Land Uses Along Roadway Segments	L <sub>dn</sub> , dB, 100 feet from Roadway Centerline			Distance to Ex. + Project Noise Contours (feet)	
		Ex. No Project	Ex. + Project	Change, dB	65 dB L <sub>dn</sub>	60 dB L <sub>dn</sub>
<b>Bruceville Road:</b>						
Big Horn to Laguna	Res/Comm	67.3	68.3	1	165	355
Laguna to Elk Grove	Res/Comm	67.0	69.9	2.9	213	458
Elk Grove to Poppy Ridge	Res/Ag	60.3	66.8	6.5	131	283
<b>Elk Grove Boulevard:</b>						
Interstate 5 to Franklin	Res/Ag	66.6	67.3	0.7	142	305
Franklin to Bruceville	Res/Park/Ag	68.6	69.8	1.2	208	448
Bruceville to Highway 99	Res/Ag/Comm	69.9	71.7	1.8	278	599
Highway 99 to Elk Grove-Florin	Res/Comm	70.6	71.3	0.7	263	566
<b>Franklin Boulevard:</b>						
Big Horn to Laguna	Res/Comm	69.2	69.1	-0.1	188	405
Laguna to Elk Grove	Res/Park	66.4	65.6	-0.8	109	234
Elk Grove to Bilby	Res/Ag	60.3	60.7	0.4	51	111
<b>Hood Franklin Road:</b>						
Interstate 5 to Franklin	Ag/Res	57.7	60.0	0.3	46	100
<b>Laguna Boulevard:</b>						
Interstate 5 to Franklin	Res/Comm/Ind	69.6	69.7	0.1	205	443
Franklin to Bruceville	Res/Comm	70.6	71.0	0.4	249	537
<b>Poppy Ridge Road:</b>						
Bruceville to Big Horn	Ag/Res	55.5	64.6	9.1	94	202
Big Horn to Highway 99	Ag/Res	55.5	64.6	9.1	94	202

*Note: A day/night traffic distribution of 80%/20% was assumed for all roadway segments. The traffic volumes were assumed to consist of 2% medium trucks (2 axles), and 2% heavy trucks (3 or more axles). Vehicle speed was assumed to be approximately 50 mph on all project roadways.*

*Ag = agriculture; Comm = commercial; Res = residential; Sch = school; Ind = industrial; Park = park  
Source: Bollard & Brennan, 2000*

**Table 4.4-12** below shows the predicted cumulative no-project and cumulative-plus project traffic noise levels on the local roadway network. This analysis takes into account cumulative development conditions based on proposed, approved and planned development in the area. **Table 4.4-12** indicates that the project-related increase in cumulative noise environment would range from 0.0 to 1.2 dB L<sub>dn</sub>. The firm of Bollard & Brennan, Inc. provided the City of Elk Grove with general noise attenuation numbers resulting from sound walls and the first rows of homes within a subdivision. Typically, a 6-foot sound wall attenuates noise levels by 6 dBA and an 8-foot



## 4.4 NOISE

sound wall attenuates noise by 8 dBA. The concept is that 5 dBA are lost once a line of sight is broken by a sound wall. In general, for each additional foot of wall height, an additional 1 dBA is lost. The exception to this rule is along freeways or major highways where the presence of sound walls is inconsistent. The relative change in noise levels along freeways and highways due to increased traffic volumes would be the same with or without a sound wall because the overall noise levels would increase for the entire area. Within a subdivision, the first row of homes adjacent to a noise source attenuates noise by approximately 5 dBA for each subsequent row of homes (Bollard & Brennan, 2002).

**TABLE 4.4-12  
PREDICTED CUMULATIVE TRAFFIC NOISE LEVELS  
LAGUNA RIDGE SPECIFIC PLAN**

Roadway / Segment	Land Uses Along Roadway Segments	L <sub>dn</sub> , dB, 100 feet from Roadway Centerline			Distance to Cum. + Project Noise Contours (feet)	
		Cum. No Project	Cum. + Project	Change, dB	65 dB L <sub>dn</sub>	60 dB L <sub>dn</sub>
<b>Highway 99:</b>						
North of Laguna	Comm/Ag/Res	79.8	80.2	0.4	1031	2222
Laguna to Elk Grove	Res/Comm	79.3	79.6	0.3	939	2023
Elk Grove to Poppy Ridge	Ag/Res	78.4	78.2	0.2	762	1642
Poppy Ridge to Grant Line	Ag/Res/Park/Ind	78.4	78.2	0.2	762	1642
<b>Big Horn Road:</b>						
Franklin to Bruceville	Res/Public	65.7	65.7	0	111	240
<b>Bilby Road:</b>						
Franklin to Bruceville	Res/Ag	62.0	61.5	-0.5	59	127
<b>Bruceville Road:</b>						
Big Horn to Laguna	Res/Comm	70.0	70.4	0.4	229	493
Laguna to Elk Grove	Res/Comm	71.1	71.8	0.7	284	612
Elk Grove to Poppy Ridge	Res/Ag	69.9	70.0	0.1	214	462
<b>Elk Grove Boulevard:</b>						
Interstate 5 to Franklin	Res/Ag	70.3	70.6	0.3	235	506
Franklin to Bruceville	Res/Park/Ag	70.6	71.4	0.8	267	576
Bruceville to Highway 99	Res/Ag/Comm	71.9	72.8	0.9	329	709
Hwy 99 to Elk Grove-Florin	Res/Comm	71.4	72.3	0.9	309	666
<b>Franklin Boulevard:</b>						
Big Horn to Laguna	Res/Comm	70.5	70.5	0	234	504
Laguna to Elk Grove	Res/Park	70.2	70.2	0	221	476
Elk Grove to Bilby	Res/Ag	66.2	66.8	0.6	132	285

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Roadway / Segment	Land Uses Along Roadway Segments	L <sub>dn</sub> , dB, 100 feet from Roadway Centerline			Distance to Cum. + Project Noise Contours (feet)	
		Cum. No Project	Cum. + Project	Change, dB	65 dB L <sub>dn</sub>	60 dB L <sub>dn</sub>
<b>Hood Franklin Road:</b> Interstate 5 to Franklin	Ag/Res	66.8	67.2	0.4	140	302
<b>Laguna Boulevard:</b> Interstate 5 to Franklin	Res/Comm/Ind	71.1	71.2	0.1	259	558
Franklin to Bruceville	Res/Comm	71.7	72.0	0.3	293	632
<b>Poppy Ridge Road:</b> Bruceville to Big Horn	Ag/Res	65.8	67.0	1.2	137	294
Big Horn to Highway 99	Ag/Res	65.8	67.0	1.2	137	294

*Note:* A day/night traffic distribution of 80%/20% was assumed for all roadway segments. The traffic volumes were assumed to consist of 2% medium trucks (2 axles), and 2% heavy trucks (3 or more axles). Vehicle speed was assumed to be approximately 50 mph on all project roadways.

Ag = agriculture; Comm = commercial; Res = residential; Sch = school; Ind = industrial; Park = park

Source: Bollard & Brennan, 2002

**Table 4.4-13** provides an analysis of the cumulative noise levels in the vicinity of the plan area, taking into account the noise attenuation that occurs as a result of sound walls. The noise attenuation from sound walls typically ranges from 6 to 8 dBA depending on the height and construction of the wall.

**TABLE 4.4-13  
ADJUSTED CUMULATIVE TRAFFIC NOISE LEVELS  
LAGUNA RIDGE SPECIFIC PLAN**

Roadway / Segment	Land Uses Along Roadway Segments	L <sub>dn</sub> , dB, 100 feet from Roadway Centerline		Existing/ Planned Sound Wall	Adjusted Cumulative Traffic Noise Level	
		Cum. No Project	Cum. + Project		Cum. No Proj.	Cum. + Proj.
<b>Highway 99:</b> North of Laguna	Comm/Ag/Res	79.8	80.2	Yes; 20-ft	n/a	n/a
Laguna to Elk Grove	Res/Comm	79.3	79.6	No	n/a	n/a
Elk Grove to Poppy Ridge	Ag/Res	78.4	78.2	No	n/a	n/a
Poppy Ridge to Grant Line	Ag/Res/Park/Ind	78.4	78.2	Yes; 12-ft	n/a	n/a
<b>Big Horn Road:</b> Franklin to Bruceville	Res/Public	65.7	65.7	Yes; 6-ft	61.3	61.6
<b>Bilby Road:</b> Franklin to Bruceville	Res/Ag	62.0	61.5	No	n/a	n/a

## 4.4 NOISE

Roadway / Segment	Land Uses Along Roadway Segments	L <sub>dn</sub> , dB, 100 feet from Roadway Centerline		Existing/ Planned Sound Wall	Adjusted Cumulative Traffic Noise Level	
		Cum. No Project	Cum. + Project		Cum. No Proj.	Cum. + Proj.
<b>Bruceville Road:</b>						
Big Horn to Laguna	Res/Comm	70.0	70.4	Yes; 8-ft <sup>2</sup>	68.8/62.8	69.7/63.7
Laguna to Elk Grove	Res/Comm	71.1	71.8	Yes; 6-ft	62.1	63.6
Elk Grove to Poppy Ridge	Res/Ag	69.9	70.0	Yes; 8-ft <sup>1</sup>	66.1/60.1	68.5/62.5
<b>Elk Grove Boulevard:</b>						
Interstate 5 to Franklin	Res/Ag	70.3	70.6	Yes; 6-ft/8-ft	65.1-63.1	65.3-63.3
Franklin to Bruceville	Res/Park/Ag	70.6	71.4	Yes <sup>1</sup> ; 8-ft	70.2/62.2	70.5/62.5
Bruceville to Highway 99	Res/Ag/Comm	71.9	72.8	Yes; 6-ft <sup>3</sup>	71.3/65.3	71.7/65.7
Hwy 99 to Elk Grove-Florin	Res/Comm	71.4	72.3	No	n/a	n/a
<b>Franklin Boulevard:</b>						
Big Horn to Laguna	Res/Comm	70.5	70.5	Yes; 6-ft	65.2	65.3
Laguna to Elk Grove	Res/Park	70.2	70.2	Yes; 6-ft	64.0	64.0
Elk Grove to Bilby	Res/Ag	66.2	66.8	No	n/a	n/a
<b>Hood Franklin Road:</b>						
Interstate 5 to Franklin	Ag/Res	66.8	67.2	No	n/a	n/a
<b>Laguna Boulevard:</b>						
Interstate 5 to Franklin	Res/Comm/Ind	71.1	71.2	Yes; 6-ft	64.7	64.8
Franklin to Bruceville	Res/Comm	71.7	72.0	Yes; 6-ft	64.3	64.4
<b>Poppy Ridge Road:</b>						
Bruceville to Big Horn	Ag/Res	65.8	67.0	No	n/a	n/a
Big Horn to Highway 99	Ag/Res	65.8	67.0	No	n/a	n/a

Note: A day/night traffic distribution of 80%/20% was assumed for all roadway segments. The traffic volumes were assumed to consist of 2% medium trucks (2 axles), and 2% heavy trucks (3 or more axles). Vehicle speed was assumed to be approximately 50 mph on all project roadways.

Ag = agriculture; Comm = commercial; Res = residential; Sch = school; Ind = industrial; Park = park

<sup>1</sup> The East Franklin Specific Plan will include sound walls along Bruceville Road and Elk Grove Boulevard. The JAS Development Rezone was identified with an 8 to 9 foot wall along Bruceville Road. It was assumed that an 8-foot wall would be placed along the East Franklin Specific Plan site frontage (west side of roadway). assumed that the walls will be 6 feet tall and constructed of masonry. The Laguna Meadows was identified with an 8 to 10 foot wall along Elk Grove Boulevard. It was assumed that an 8-foot wall would be placed on the south side of Elk Grove Boulevard along the entire East Franklin Specific Plan frontage.

<sup>2</sup> The 8-foot wall is limited a residential area on the west side of the roadway.

<sup>3</sup> The 6-foot wall is limited to the north side of the roadway.

Source: Bollard & Brennan, 2002

As shown in **Table 4.4-12** and **4.4-13**, area roadways are anticipated to generate substantial noise levels under cumulative conditions, with noise levels ranging from 59.9 dBA L<sub>dn</sub> to 78.2 dBA L<sub>dn</sub>. However, the existence of walls along several of these roadway segments attenuate the traffic noise levels. The addition of project traffic would not result in any off-site land uses exceeding the Noise Element land use compatibility criteria (acceptable, conditionally acceptable) from cumulative no-project conditions as shown in **Table 4.4-9**. In addition, the project would not result in a significant cumulative increase in noise level exposure standards set

forth in **Table 4.4-8** over cumulative no-project conditions. However, the project would expose proposed on-site residential and other noise-sensitive land uses to noise levels in excess of City noise standards along the future extension of Big Horn Road between Elk Grove Boulevard and Poppy Ridge Road, the plan area's frontage with Elk Grove Boulevard and along Poppy Ridge Road.

The north side of Elk Grove Boulevard between Franklin Boulevard and Bruceville Road is not planned for walls. Residential areas along this roadway segment are expected to be exposed to noise levels at 70 dBA Ldn and may be worsened by noise reflected from planned walls along the south side of Elk Grove Boulevard associated with the East Franklin Specific Plan. However, the proposed project's contribution to the noise condition is estimated to be 0.6 dBA, which is not considered a significant cumulative impact.

#### Mitigation Measure

**MM 4.4.5** Prior to development of any noise-sensitive uses (as defined by the City of Elk Grove Noise Element) along Elk Grove Boulevard, Big Horn Road and Poppy Ridge Road, the project applicant shall identify specific noise mitigation measures for areas that would be located within the 60 dB Ldn traffic noise contours shown in **Table 4.4-12** in the Draft EIR that would attenuate noise levels in with City noise standards for traffic noise as shown in **Table 4.4-9** of the Draft EIR. Potential design features for noise attenuation are listed below.

- a. Setbacks (i.e., open space, frontage roads, recreational areas, and storage yards) typically reduce noise attenuation by 4 to 6 dB per doubling of distance from the source.
- b. Barriers (i.e., walls, berms, or structures) to achieve a noise reduction ranging from 5 to 15 dB. Earth berms provide approximately 3 dB more attenuation than a wall.
- c. Site design (i.e., building location) to reduce noise levels.
- d. Building design (i.e., location of noise-sensitive uses within a building) to reduce the impact of noises on inhabitants.
- e. Building façades (i.e., utilizing all features of the building façade including the closed windows) to reduce noise.
- f. Vegetation (i.e., trees and other vegetation) 100 feet of dense foliage can achieve a 5 dB attenuation of traffic noise.
- g. Noise-reducing paving materials (i.e., rubberized asphalt) reduce traffic noise by approximately 4 dB.

*Timing/Implementation:* Prior to approval of tentative subdivision maps and development projects along Elk Grove Boulevard, Big Horn Road and Poppy Ridge Road.

*Enforcement/Monitoring:* City of Elk Grove Development Services

Implementation of the above mitigation measure would reduce this cumulative impact to **less than significant**.

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### Cumulative Construction Activities

**Impact 4.4.6** Development within the Laguna Ridge Specific Plan area concurrent with development in other adjacent or nearby development areas could result in a cumulative increase in ambient noise levels due to combined construction activities. This would result in a **cumulative significant** impact.

Construction activities associated with the proposed project, in conjunction with other development in the area, including East Franklin Specific Plan, Lent Ranch, and the proposed South Pointe development, could all or partially occur during the same period. Therefore, the potential for combined construction noise or vibration impacts exists if activities occur simultaneously. While all these projects would implement standard construction techniques to reduce noise and would to the extent feasible adhere to City noise ordinances pertaining to the period when construction activities would occur, the combined noise effect would be cumulatively significant.

#### Mitigation Measure

Mitigation measures 4.4.1a through e would apply to cumulative construction noise impacts, but the impact would be considered **significant and unavoidable**.

### REFERENCES

- Bollard & Brennan, Inc., 2000. *Environmental Noise Analysis, Laguna Ridge Specific Plan*. Citrus Heights, CA. July 14, 2000.
- Bollard & Brennan, Inc., 2000. *Environmental Noise Analysis, Treichel Residence*. January, 2000.
- Bollard & Brennan, Inc., 2001. *Telephone conversation with Paul Bollard*. October 2, 2001.
- City of Elk Grove, 2002. *City of Elk Grove Draft General Plan, Noise Element*. Elk Grove, California. November 2002.

**SECTION 4.5**  
**HAZARDS AND HAZARDOUS MATERIALS**

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## 4.5 HAZARDS AND HAZARDOUS MATERIALS

This section describes the existing conditions of the plan area, identifies the methods used in analyzing the project's effects, provides CEQA standards of significance, identifies any hazardous materials that may impact public safety, and suggests mitigation measures to reduce the level of significance. This section is based on the initial study proposed for this project; a study performed by Wallace, Kuhl & Associates, *Environmental Site Assessment, Laguna Ridge Specific Plan Area*, May 1999; Review of Suburban Propane Hazards Analysis Studies and Evaluation of Accident Probabilities by Quest Consultants in June 2003; A Quantitative Risk Analysis for both the Suburban Propane and Georgia-Pacific Resins facilities, prepared by Quest Consulting in August 2000; A Screening-Level Hazard Analysis prepared by Dames and Moore, March 1992, and a second Screening-Level Hazard for Propane Emergency Release in May 1998; A "worst-case" scenario for possible predictable occurrences at the Suburban Propane facility, prepared by John Jacobus, Ph. D., November 1999; and, The Suburban Propane Hazard Assessment, Joint Fire and Law Hazard Assessment Work Group for Suburban Propane facility, prepared by Dunbar and Jukes, November 1999.

### 4.5.1 EXISTING SETTING

#### HAZARDOUS MATERIALS DEFINED

The term hazardous substance refers to both hazardous materials and hazardous wastes. A material is defined as hazardous if it appears on a list of hazardous materials prepared by a federal, state or local regulatory agency or if it has characteristics defined as hazardous by such an agency.

The California Environmental Protection Agency, Department of Toxic Substances Control (CAL-EPA, DTSC) defines hazardous waste, as found in the California Health and Safety Code Section 25141(b), as follows:

*. . . its quantity, concentration, or physical, chemical, or infections characteristics: (1) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible illness; (2) pose a substantial present or potential hazard to human health or the environment, due to factors including, but not limited to, carcinogenicity, acute toxicity, chronic toxicity, bioaccumulative properties, or persistence in the environment, when improperly treated, stored, transported, or disposed of, or otherwise managed.*

Public health is potentially at risk whenever hazardous materials are, or will be used. It is necessary to differentiate between the "hazard" of these materials and the acceptability of the "risk" they pose to human health and the environment. A hazard is any situation that has the potential to cause damage to human health and the environment. The risk to health and public safety is determined by the probability of exposure, in addition to the inherent toxicity of a material. When the risk of an activity is judged acceptable by society, in relation to perceived benefits, then the activity is judged to be safe. For example, ammonia is a common household chemical whose use has been judged safe in our society. Although it can be hazardous to health, irritating the eyes, respiratory tract and skin, and even causing bronchitis or pneumonia following severe exposures, the risk of such a severe exposure is believed to be low. Therefore, the use of household ammonia is thought to be a safe activity.

Factors that can influence the health effects of exposure to hazardous materials include the dose the person is exposed to, the frequency of exposure, the duration of exposure, the exposure pathway (route by which a chemical enters a person's body) and the individual's unique biological susceptibility.

## 4.5 HAZARDS AND HAZARDOUS MATERIALS

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**Table 4.5-1** lists general hazardous material categories and the nature of the hazards associated with the category.

**TABLE 4.5-1  
GENERAL HAZARDOUS MATERIAL CATEGORIES AND HAZARD NATURE**

<b>General Category</b>	<b>Nature of Hazard</b>
Compressed Gases	Pressurized gases, liquefied gases, cryogenic gases, dissolved gases stored under pressure and can explode.
Severe Poisons	Substances that may cause death or injury at relatively low concentrations or significant health effects from chronic exposure at relatively low concentrations.
Moderate Poisons	Substances that may cause death or injury at relatively low concentrations, or significant health effects from chronic exposure or harmful effects from acute exposure at higher concentrations.
Water Reactives	Materials that react violently with water to produce fire or toxic fumes other than strong acids or bases.
Oxidizers	Materials that release oxygen or add to the intensity of a fire.
Flammables	Liquids or solids that readily burn and/or are difficult to extinguish.
Corrosives	Materials that are strong acids or bases, will corrode skin or metal, and may react violently with water.
Radioactives	Materials that emit ionizing radiation.
Biohazards	Disease-producing living organisms or spores.
Other Hazardous Materials	Includes carcinogens, halogenated solvents, explosives and others.

### PROJECT SETTING

Existing land use within the plan area consists predominantly of irrigated pastures, haycrop lands, non-irrigated grazing (natural grass) land, and irrigated truck farming sites. Truck farming sites are those that produce relatively small quantities of a broader variety of vegetables, which are often sold at farmers' markets. Sporadically located among the irrigated and grazing lands (but generally located near existing roadways), are rural residential sites and older homestead sites; the homestead sites are typically the ranch operation hubs for the grazing and irrigated pasturelands. In this particular area of Sacramento County, much of the grazing and pasturelands are associated with dairies.

Most, if not all, of the potential hazardous conditions existing within the plan area can be attributed to some type of agricultural use or practice. Potential contamination sites and associated uses were identified and are discussed below.



### MAJOR HAZARDOUS MATERIAL HANDLING FACILITIES IN PROXIMITY TO THE PLAN AREA

The Laguna Ridge Specific Plan area is within the vicinity of two major industrial facilities that pose potential public health and safety hazards: the Suburban Propane facility, which is located at 10450 Grant Line Road, and the Georgia Pacific Resins facility, which is located at 10399 East Stockton Boulevard. Both facilities are within the Elk Grove City limits. Several studies have been conducted to determine the site-specific risks and evaluate the consequences that could be attributed to these facilities, including:

- Review of Suburban Propane Hazards Analysis Studies and Evaluation of Accident Probabilities by Quest Consultants in June 2003 (see **Appendix 4.5**).
- A Screening-Level Hazard Analysis prepared by Dames and Moore in March 1992 and a second Screening-Level Hazard for Propane Emergency Release in May 1998.
- A “worst-case” scenario for possible predictable occurrences at the Suburban Propane facility, prepared by John Jacobus, Ph. D., in November 1999.
- A Quantitative Risk Analysis for both the Suburban Propane and Georgia-Pacific Resins facilities, prepared by Quest Consulting in August 2000.
- The Suburban Propane Hazard Assessment, Joint Fire and Law Hazard Assessment Work Group for Suburban Propane facility, prepared by Dunbar and Jukes in November 1999.

These studies analyzed the hazard types, incidence scenarios, worst-case effects and the extent of those effects, specific conditions associated with worst-case effects, and approximate probabilities associated with each scenario. Off-site hazards to human health and property associated with incident at Suburban Propane and Georgia-Pacific facility identified in the these reports include the following:

- **Vapor cloud explosion** from a release at Suburban Propane that generates an overpressure. A 1.0 pounds per square inch gauge (psig) overpressure is not high enough to cause a fatality directly. However, it is high enough to cause a person to be knocked to the ground and be injured. In addition, a 1.0 psig can damage structures.
- **Radiant heat** of 200 kJ/m<sup>2</sup> can result in second-degree skin burns. This dose can be achieved by exposing a person to 5 kilowatts per square meter (kW/m<sup>2</sup>) for 40 seconds or 10 kW/m<sup>2</sup> for 20 seconds.
- **Flash fire**, the lower flammable limit (LFL) defines the boundary of the flammable cloud. Persons outside the cloud are not harmed by the flash fire that heads back to the source if the cloud ignites. Persons inside the cloud can be burned or killed.
- **Shrapnel**, the danger to a person or property from shrapnel is one of being hit. The probabilities are extremely low in all cases since only a small number of shrapnel pieces are generated per failure.
- **Formaldehyde exposure**, the most serious hazard associated with the exposure to formaldehyde vapor evolving from a spill of formalin is prolonged exposure (up to 60 minutes) to concentration levels at or above 25 parts per million (ppm). This results in a toxic does of 1,500 ppm-min. (25 ppm x 60 minutes). This does will allow a person to be exposed without experiencing or developing life-threatening health effects.

## 4.5 HAZARDS AND HAZARDOUS MATERIALS

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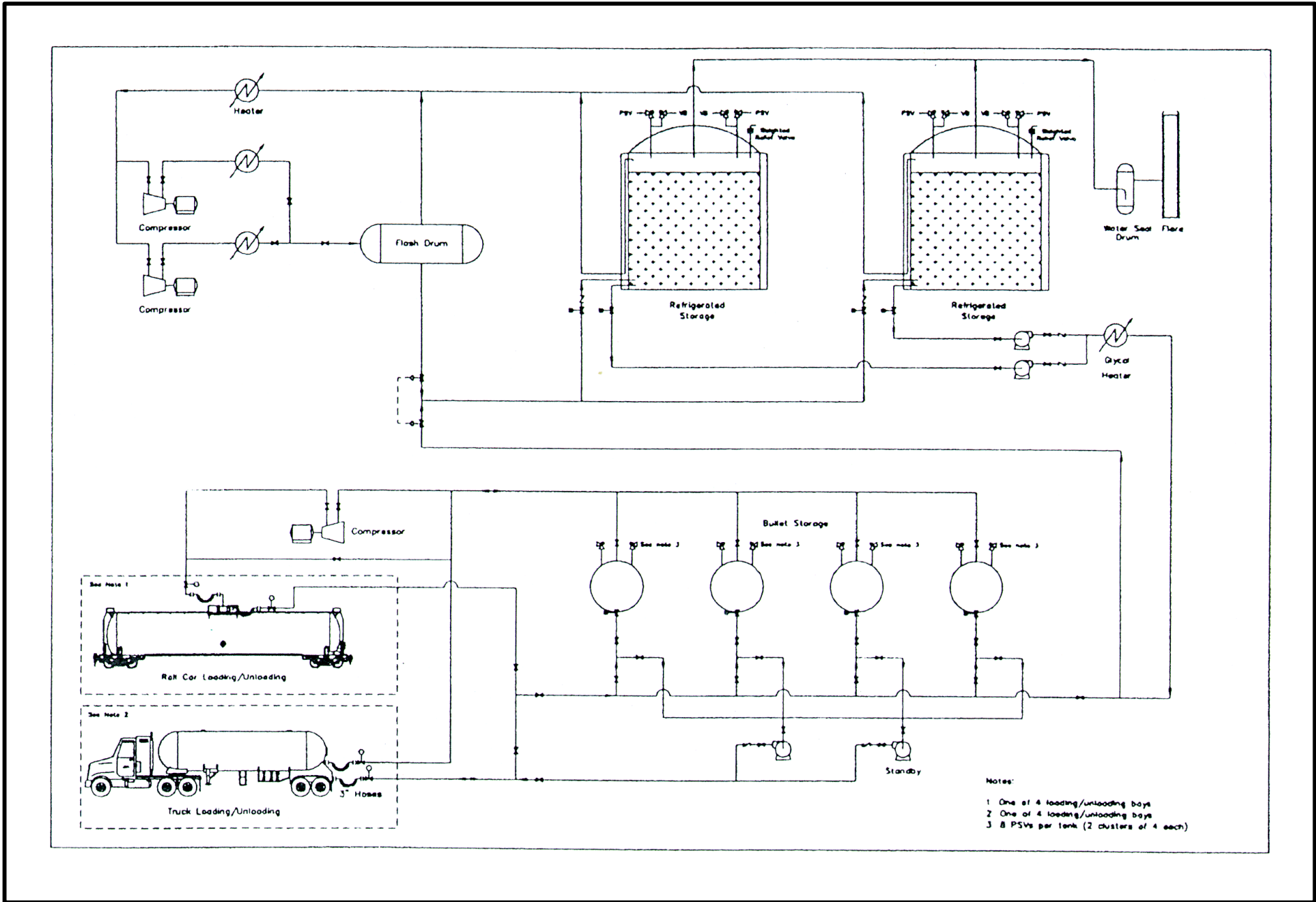
With the exception of the Quest reports (2000 and 2003) none of the previously mentioned reports provide any quantification of the probability of an accidental or intentional incident at either facility resulting in human injury or death or property damage. A further analysis of hazards and the probability of an incident associated with these facilities on the Plan area is provided in Section 4.5.3 below.

### Suburban Propane

The Suburban Propane Elk Grove Facility is considered one of the largest above ground propane storage facilities in the United States. This facility receives pressurized ambient temperature liquid propane from tank trucks and railcars, and stores both ambient temperature and refrigerated liquid propane, and loads ambient temperature propane for off-site transport. **Figure 4.5-1** presents a simplified Process Flow Diagram (PFD) of the Suburban facility. **Figure 4.5-2** illustrates a plot plan of the propane terminal and associated location with respect to the Georgia-Pacific facility.

The major components at the Suburban Propane facility include four 60,000-gallon pressurized, ambient temperature propane storage tanks (herein referred to as "bullet tanks"); two 12,000,000-gallon refrigerated, low pressure storage tanks; tank truck and railcar loading/unloading stations; a propane refrigeration system; a flare; and safety systems such as the water spray system in place in the railcar and truck loading area. The propane storage bullet tanks are approximately 12 feet in diameter and 91 feet long, placed horizontally on concrete supports about 5 feet above the ground. The large refrigerated propane storage tanks are approximately 146 feet in diameter and 122 feet tall.

Propane is received at the facility as pressurized, ambient temperature liquid carried in tank trucks or railcars. The tank trucks have a typical capacity of 10,000 gallons and the railcars a typical capacity of 33,000 gallons. Propane is transferred from tank trucks to the storage bullet tanks using pumps mounted on the trucks. Propane is moved from the railcars to the storage bullet tanks by increasing the pressure in the railcars using a compressor. The compressor takes vapor from the four pressurized, ambient temperature storage vessels, increases the pressure of the vapor, and uses the higher pressure vapor to force liquid from the railcars into the storage bullet tanks. The propane bullet tanks' liquid lines are manifolded together, with the liquid inlet



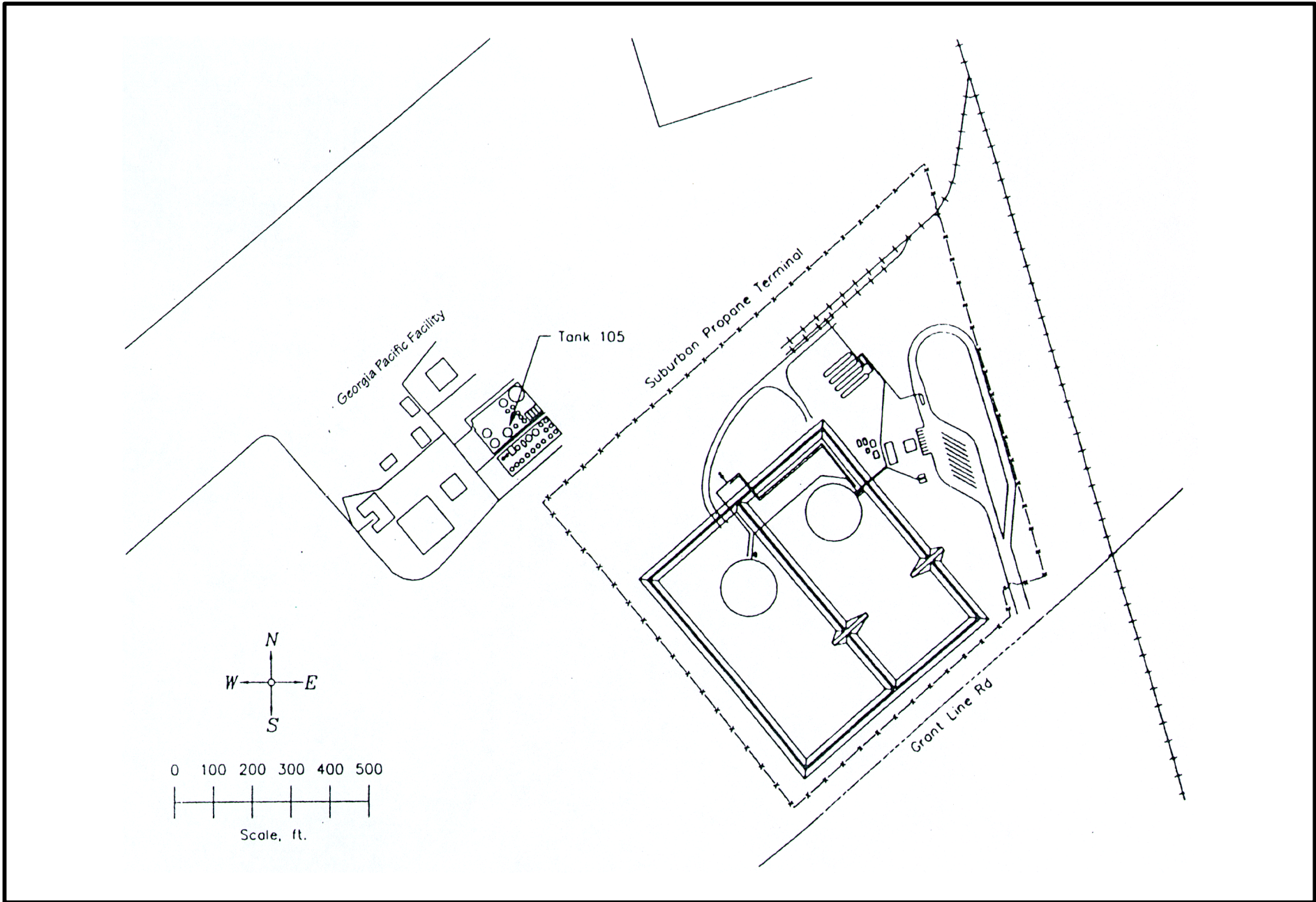


Figure 4.5-2  
Plot Plan of Suburban Propane Terminal

valves normally open on all four tanks. This provides for maximum surge capacity for the pressurized propane storage system.

Propane stored in the pressurized, ambient temperature bullet tanks is used to fill tank trucks or railcars for off-site delivery. The filling operation involves using centrifugal pumps to move the ambient temperature liquid propane from the bullet tanks to the tank truck/railcar. The vapor displaced by the liquid filling is returned to the bullet tanks. Propane from the bullet tanks is also transferred to the refrigerated tanks using the pressure difference between the pressurized bullet tanks and the near atmospheric pressure in the refrigerated storage tanks. The pressurized liquid from the bullet tanks is mixed with cold propane liquid and fed to the bottom of each refrigerated tank, where the pressurized liquid depressurizes and mixes with the cold liquid in the tank. The vapor produced by the depressurization is removed by way of a vapor line at the top of each tank, heated in a compressor preheater, compressed, cooled, and liquefied. The warm pressurized liquid is then flashed to produce cold propane liquid and flash vapor. The cold flash vapor is recycled through the preheater, compressor, and cooler to produce more cold liquid. The propane refrigeration system is designed to handle vapor volumes from both normal heat leak into the refrigerated tanks and the larger volume of vapor produced by a full-rate transfer of ambient temperature pressurized liquid in the hot summertime.

The large refrigerated storage tanks serve as storage reservoirs that can absorb the seasonal swings in propane demand. Liquid propane can be moved from the refrigerated storage tanks to the pressurized bullet tanks using centrifugal pumps. The cold liquid is first pumped to a pressure higher than found in the bullet tanks. The pressurized cold liquid is heated, using a remotely-fired glycol heater, to near ambient temperature, and flows to the pressurized bullet tanks. Each refrigerated tank can supply propane to the bullet tanks at a rate of 250 gallons per minute (gpm).

The ambient temperature propane storage bullet tanks are protected from overpressure by multiple pressure relief valves located on the top of each tank. A water spray system protects each bullet tank from excessive heating due to fire exposure. The refrigerated storage tanks are equipped with pressure and liquid level gauges, liquid overflow vents, pressure relief valves, vacuum breakers, and a vent line to the facility flare. The vent line to the flare is passed through a water seal with a 20-inch head of water. When the tank pressure exceeds 20 inches of water (about 0.7 pounds per square inch [psi]), vapor flows from the refrigerated storage tank through the water seal and into the flare stack. If pressure in the refrigerated tanks continues to increase, pressure relief valves located at the top of the tank open, venting vapor to the atmosphere. Further increases in pressure (above 1 psig [pounds per square inch gauge]) result in the venting of vapor from a large weighted relief valve on the tank roof.

The tank truck and railcar loading/unloading facilities are both equipped with water deluge systems. In the event of a fire in either of these areas, the deluge systems should help prevent tank trucks and railcars from failing catastrophically due to excessive heat and internal pressure.

### **Georgia-Pacific Resins Facility**

The largest quantity of formalin at the Georgia-Pacific facility is contained in Tank 105. This is an above-ground tank of welded steel construction. It has a nominal capacity of 40,000 gallons and is insulated. Formalin within the tank is heated in order to maintain its temperature at about 140 degrees Fahrenheit. Tank 105 is surrounded by a concrete containment structure that is large enough to hold the entire contents of the tank. The "pool area" of the concrete containment is approximately 11,120 square feet. Based on the physical characteristics of the

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materials stored on the Georgia-Pacific facility, formaldehyde would pose the largest problem following a large accidental release.

Formaldehyde is a colorless gas that can be toxic at certain levels by inhalation, ingestion, or physical contact. The odor of formaldehyde has a pungent, hay like smell at concentrations well below 1.0 ppm, which would provide ample warning to people and emergency response personnel in the vicinity of a release and allow them to move away from the source of toxic vapor.

### POTENTIAL ONSITE HAZARDOUS BUILDING MATERIALS

#### **Asbestos Containing Building Materials**

Structures constructed or remodeled between 1930 and 1981 have the potential to contain asbestos containing building materials (ACBM). These materials can include, but are not limited to: resilient floor coverings, drywall joint compounds, acoustic ceiling tiles, piping insulation, electrical insulation and fireproofing materials. Portions of the site were initially developed in 1947 with residential and agricultural uses. These improvements were made prior to a government ban on ACBM in 1978/79. Therefore, building materials containing asbestos may be present onsite in any of the residences constructed after 1930 and prior to 1979. There are approximately 35 rural residential structures (individual homesteads, many of which were constructed prior to 1975) within the Laguna Ridge Specific Plan area. Because a large number of homes were built during the timeframe when ACBM were common, the likelihood exists for asbestos to be found within the plan area.

#### **Lead Based Materials**

Exposure to lead from older vintage paint is possible when the paint is in poor condition or during its removal. In construction settings, workers can be exposed to airborne lead during renovation, maintenance or removal work. Lead-based paints were phased out of production in the early 1970s. Many of the onsite buildings, including the 35 residences, were constructed prior to the ban on lead-based paints and, therefore, these materials may be present onsite.

#### **Electrical Powerlines and Transformer PCB Potential**

In 1976, the United States Congress enacted the Toxic Substance Control Act (TSCA) which reviewed all industrial chemicals, including PCBs. Since the TSCA, the production and use of PCBs has been prohibited, limited or phased out. Potential sources of PCBs onsite include fluorescent light ballast and electrical transformers. The Laguna Ridge Specific Plan area contains both powerlines and electrical transformers.

Overhead SMUD electrical powerlines are located within street easements that bound and bisect the plan area. Powerlines that bound the area are located on the east side of Bruceville Road (powered at 12kV); on the west side of West Stockton Boulevard (powered at 69 kV with a 12 kV underbuild); on the north side of Elk Grove Boulevard (powered at 69 kV with a 12 kV underbuild); and, on the north side of Bilby Road (powered at 12kV). Within the plan area, overhead powerlines are located on the east side of Johnston Road (powered at 12kV); on the south side of Poppy Ridge Road (powered at 12kV); and, on the north side of Elefa Road (powered at 12kV).

High-voltage, tower-mounted electrical transmission lines powered at 230 kV to 480 kV, capacitors, or pad-mounted electrical transformers were not observed within the plan area.

Numerous pole-mounted electrical transformers exist within the plan area. Obvious evidence of transformer leakage has not been observed at accessible sites within the plan area. In 1979 SMUD changed its purchase specifications to preclude buying PCB-containing transformers and also removed PCB-containing transformers from its inventory. Consequently, sites developed after 1979 generally received PCB-free transformers as part of the electrical service provided by SMUD. Some newer transformers are tagged "Non-PCB" to indicate PCB content.

Sites within the plan area developed in the early 1980s and later are unlikely to be associated with PCB-containing transformers. Many transformers within the plan area most likely predate 1979 and are not tagged with respect to PCB content. These transformers are therefore of unknown PCB content. The actual levels of PCBs in specific equipment can only be confirmed by sampling and analysis of the mineral oil coolant within the actual pieces of equipment under consideration. SMUD is, however, responsible for its transformers and would remediate any situation in which a SMUD-owned transformer leaked. Privately owned electrical transformers within the plan area have not been observed. Because SMUD removed PCB-containing transformers from their inventory and replaced them with PCB-free transformers, it is unlikely that PCB is present in the plan area.

### **Radon Potential**

This discussion of the potential for radon exposure within the plan area is based on review of available scientific literature on the topic. Radon isotope-222 is a colorless, odorless, tasteless radioactive gas that is a natural decay product of uranium. Uranium and radon are present in varying amounts in rocks and soil, and radon is present in background concentrations in the atmosphere. Current evidence indicates that increased lung cancer risk is directly related to radon-decay products.

Radon potential of rocks and soils, and indoor radon exposure levels in the United States are currently areas of intense research by governmental regulators as well as the geoscience and medical communities. At this time, the EPA has recommended an "action" level for indoor radon concentrations at or exceeding 4 pico-curies per liter of air (pCi/l). The EPA has extrapolated a 1 percent to 3 percent lung cancer mortality rate due to a lifetime of exposure at 4 pCi/l; that is, 1 to 3 persons per 100 exposed to this concentration for life will die of lung cancer induced by radon.

The *California Statewide Radon Survey Interim Results*, based on the EPA/State Department of Health Services State Radon Survey, predicts that only 3.6 percent of homes in Sacramento County would exceed the EPA's recommended level of 4 pCi/l. Additionally, California ranks as the third lowest for percentage of homes exceeding 4 pCi/l, of the 33 states participating in the study.

Specific indoor radon information regarding the plan area can only be obtained through a sampling and testing program for existing or future buildings. Based on the low percentage of homes predicted to exceed the EPA's recommended exposure level as described above, the potential for radon concentrations exceeding 4 pCi/l within the plan area is estimated to be low.

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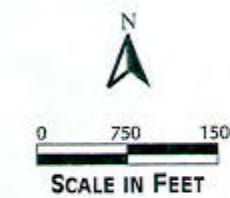
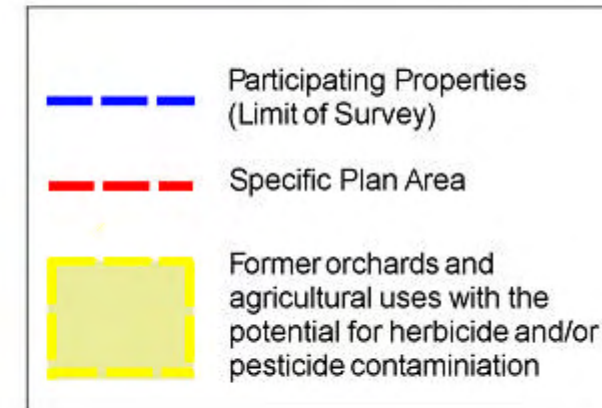
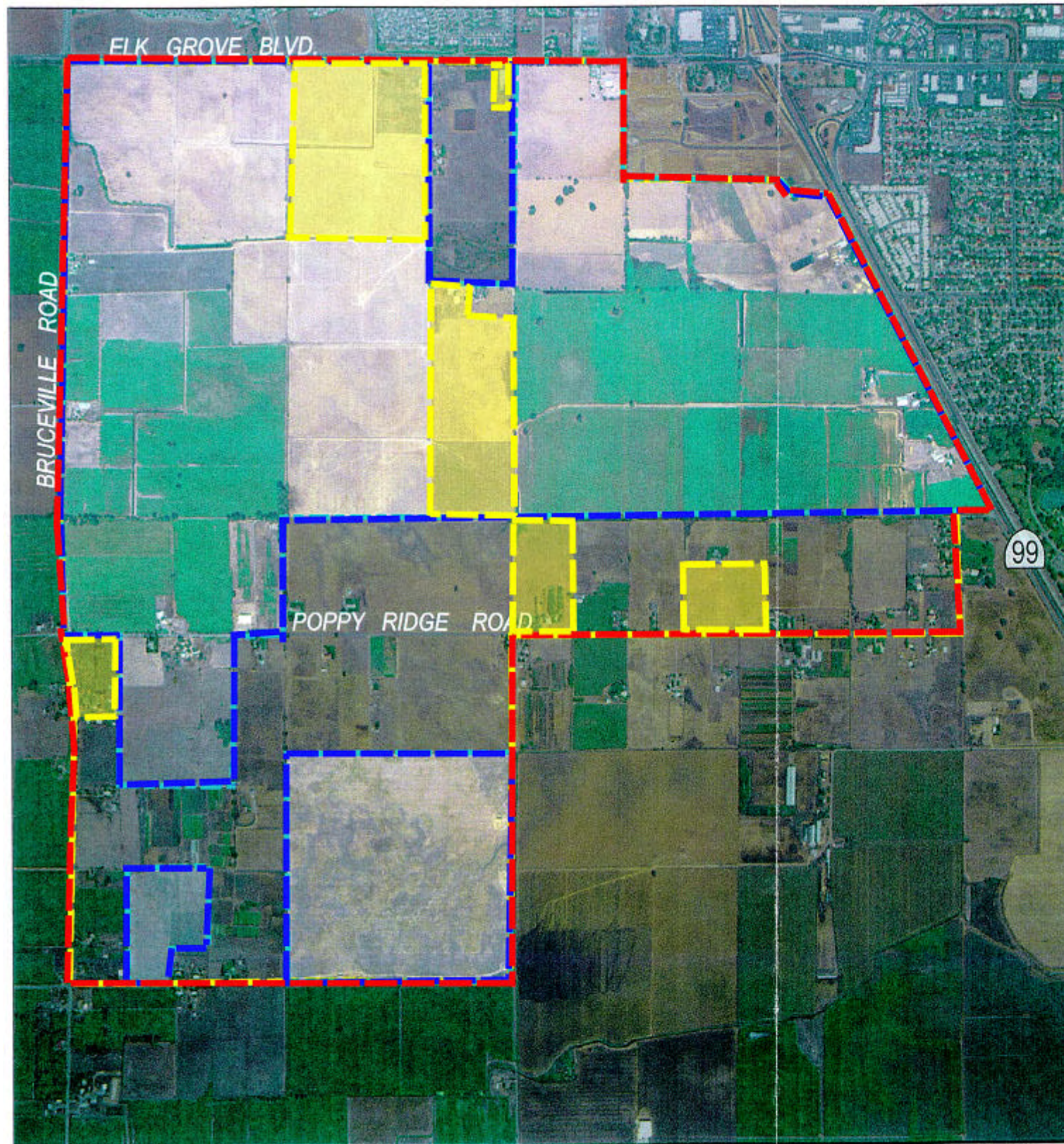
### POTENTIAL ON AND OFFSITE SOIL AND/OR GROUNDWATER CONTAMINATION

#### **Residual Agricultural Chemicals**

The area has been used predominantly as dairy and beef cattle pastureland and for the production of cattle feed-related irrigated crops including corn, oats, and alfalfa. Restricted (persistent) chemicals are typically not applied to pastureland and agricultural land of this nature, although restricted but non-persistent chemicals may have been applied to corn, oat, and alfalfa crops. The areas of potential pesticide/herbicide contamination are depicted on **Figure 4.5-3**.

Several small orchards have existed or still exist within the plan area. The orchard at the southerly end of Johnston Road is a pistachio orchard that has been out of production for several years. Restricted pesticides have not been applied to the orchard in recent years. Additionally, several small walnut orchards were located on the north side of Old Poppy Ridge Road. The former orchard located on Parcel 132-0050-050 was a mixed fruit orchard that was planted in the 1980s. About one dozen walnut trees remain of a larger historic orchard that was located near the east-central boundary of the plan area, on the north side of Poppy Ridge Road (APN 132-0290-039). Northerly, beyond the walnut orchard remnants, the typical operations of a modern "truck farm" were observed.





Source: Wallace Kuhl & Associates, 2000/2001



Figure 4.5-3  
Areas of Potential Pesticide/Herbicide Contamination

Intensive truck farming (also known as seed farming or vegetable farming) is a fairly recent occurrence in the central and southwesterly portions of the plan area, attributable to the increased public interest in farmers' market-type retail events. Truck farms produce a variety of vegetables including turnips, different lettuces, spinach, a variety of herbs, onions, watercress, peas, lemon grass, garlic, squashes, cabbages and broccoli. Sacramento County has discouraged the farmers' use of restricted pesticides and has recommended the use of over-the-counter pesticides instead. Truck farming is a less intrusive farming method because several different crops are grown within a small area. Pests are found in fewer numbers and are easily controlled with the over-the-counter pesticides.

The Redi Green Turf Farm, Inc. has not produced sod on the property for several years. When sod production occurred within the plan area, the turf farm only used a 2,4-D/Banvil herbicide combination to control broadleaf weed growth. The operators of the strawberry fields between the THS facility and the Redi Green Turf Farm, Inc., use restricted chemicals. The insecticides Lorsban and Lanate and the miticide Kelthane have been used on the strawberry fields. These three compounds are modern agricultural chemicals and are not expected to be persistent in the environment.

It is not known and records have not shown whether persistent chemicals such as DDT, Kelthane, dinitrophenol, lindane and/or toxaphene were historically used in the plan area. DDT and

toxaphene, for example, are organochlorine pesticides that are extremely persistent in soil, which were mostly applied to "fleshy" irrigated rowcrops such as tomatoes and potatoes, and to orchards; lead-arsenic compounds are also extremely persistent in soils and were historically applied to some rowcrops and to orchards. In addition, DDT, lindane and/or some of the other persistent pesticides may have been applied to the small historic orchards. These orchard sites are summarized on **Table 4.5-2** and include the pistachio orchard and the former walnut orchard that still contains a few remnant trees in the east-central portion of the plan area.

### **Underground and Aboveground Storage Tanks**

A review of available federal and state databases was conducted to identify government-regulated properties having known or potential recognized environmental conditions within the site vicinity. The radii of investigation for federal and state agency lists were selected in accordance with the American Society of Testing Materials (ASTM) Standards for Environmental Site Assessments (E-1527-97). The plan area was not identified in the government database review as a federal, state or county recognized property with known or potential recognized environmental conditions.

Underground Storage Tanks (UST) have not been identified through the historic photographic coverage. Additionally, the government agency databases and owner interviews do not reveal any registered USTs remaining in the proposed plan area. Two other UST sites are located near the proposed plan area. However, these two UST sites have not suffered any leakage or spills. Three UST sites in the plan area were located on the proposed plan area, but they were removed more than ten years ago and evidence of soil contamination has not been discovered in connection with the tanks in question.

Three sites have been identified with Aboveground Storage Tanks (AST). The Lindsey Dairy Farm (APN 132-0280-011) had one 300-gallon gasoline AST and one 400-gallon diesel AST, which were removed as part of the Elk Grove Auto Mall Phase Two development. The Double G Ranch (APN 132-0270-007) has two 500-gallon gasoline and diesel ASTs and one 55-gallon drum containing oil. The THS Products site (APN 132-0270-008) stores acetylene, carbon dioxide and

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argon in 200-cubic feet containers, 200 gallons waste oil and hydraulic oil, and 50 to 70 gallons of solvents, cleaning thinner and mineral spirits, all in aboveground containers. A 500-gallon propane tank is on site for the fueling of forklifts. Paints and coating materials are stored in five-gallon buckets near the paint shop area. The THS site operates under EPA Number CAL000146712. Contamination has not been identified at these sites.

### **Buried Natural Gas Pipeline**

Based on the field observation of placards posted along its length, a buried natural gas pipeline lies within the Elk Grove Boulevard street easement adjacent to the northerly boundary of the plan area. The pipeline is owned, operated and maintained by Pacific Gas and Electric (PG&E).

The pipeline is a ten-inch diameter buried pipe that operates at approximately 500 psi. The pipeline has not had reported leaks, ruptures, or other problems.<sup>1</sup> This section of buried pipeline does not appear in the regulatory agency databases discussed in a subsequent section of this report as an identified contamination or hazardous materials release site.

### HISTORIC TOPOGRAPHIC MAPS

Historic USGS topographic maps of the plan area were reviewed at the California State Library in Sacramento. Topographic maps covering the years 1909, 1953, 1968, 1975 and 1980 were available for review; the results of the map reviews are summarized below.

#### **1909 Map**

As early as 1909, single structures are mapped at most of the existing homestead sites within the plan area; the mapped symbols are those used to indicate a "dwelling" based on the USGS map legend. Ten dwellings are mapped on the plan area at this time. Four unimproved roads are mapped on the plan area. The easterly and westerly portions of what is currently identified as Poppy Ridge Road lead to dwellings within the plan area. Additionally, two unimproved roads extend southerly from what is now identified as Elk Grove Boulevard to dwellings located near the plan area. Existing roadways that bound the plan area have been constructed by this time. Otherwise, no man-made features are mapped within the plan area. The Elk Grove School and Elk Grove Cemetery are mapped north and southeast, respectively, from the intersection presently known as Elk Grove Boulevard and West Stockton Boulevard.

#### **1953 Map**

By 1953 several structures had been added to each of the previously mapped homestead sites; the USGS map symbol for the additional structures is that which is used for "barn" or "warehouse" buildings. New dwelling and barn symbols (relative to the 1909 mapping) are shown at additional locations of existing homestead or rural residential sites within the plan area.

An orchard is mapped within the plan area near the east-central boundary: the walnut tree remnants of this orchard were observed. Three intermittent streams are mapped on the northwesterly, west-central and southerly portions of the plan area (the streams are modified as

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<sup>1</sup> Based on telephone conversations with PG&E land agent, Lou Norton. Mr. Norton reported that to the best of his knowledge, no leaks, ruptures or problems are known to have occurred along the buried pipeline courses adjacent to or in the vicinity of the plan area.

time progresses, as further discussed below). Poppy Ridge Road is mapped as an improved road by this time. The other existing roadways are now identified as Stockton Boulevard, Elk Grove Road and Bruceville Road. A previously unimproved road in the proximity of the proposed plan area is now improved and identified as Johnston Road. An unimproved road is now mapped west of Johnston Road.

### **1968 Map**

Several barn and residential map symbols, as well as the unimproved dirt roads in the area are no longer mapped at some of the homestead sites; additional barn and residential map symbols replace and/or incorporate structures on these sites. Additional barn and residential map symbols and unimproved roads have been added to other locations within the plan area. The orchard that was shown within the plan area near the east-central boundary is no longer mapped. Water supply wells are mapped within the plan area for the first time, although it is anticipated that at least some of the supply wells predated the USGS mapping. The two northernmost intermittent streams identified on the 1953 map are either no longer mapped or are channelized. Three intermittent irrigation water holding ponds are also mapped by this time in the north-central portion of the plan area. A number of these features exist elsewhere in the plan area; some are mapped while others are not.

### **1975 Map**

Several dwelling and barn symbols (relative to the 1968 mapping) are shown at additional locations of existing homestead or rural residential sites within the plan area. An additional water holding pond is now mapped at Lindsay Jersey Dairy. Residential subdivisions are now visible northeast and east of the plan area.

### **1980 Map**

Minor changes have occurred on the plan area relative to the 1975 map. The north-central water holding pond now has a channelized irrigation distribution ditch between the pond and Bruceville Road. Another water holding pond is now mapped near the southwesterly corner of the plan area. An increase in residential development is now mapped northeast of the plan area.

### Map Summary

The reviewed topographic maps do not indicate the presence of large manufacturing facilities, large aboveground storage tanks, airfields, transportation hubs, mining features or mine tailings currently or historically located within the plan area. The major portion of the plan area remained relatively unchanged during the past ninety years based on the available topographic mapping.

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**TABLE 4.5-2  
LAND USE/SITE TYPE SUMMARY**

Street Number	Street Name	APN	Site Type	Comments	Recommendations
	Elk Grove Boulevard and Bruceville Road	132-0270-001*	fallow land	Dried grasses and green grasses on north side. Plowed south side with tree- and berry vine-lined irrigation canal bisects the central and southerly portion (northwest/southeast). Some bailed hay stored on parcel.	
	Elk Grove Boulevard	132-0270-002*	fallow land	Some bailed hay stored on parcel.	
8184	Elk Grove Boulevard	132-0270-003*	commercial & fallow land	Redi Green Turf Farm, Inc. Portable office building, mobile home, empty plant containers, tires, miscellaneous inert debris, fallow land. Former farm site, concrete floors from structures still in place.	Additional assessment recommended, including soil sampling for persistent pesticides/herbicides.
	Johnston Road	132-0270-015*	roadway	Johnston Road surfaced with gravel.	
	Elk Grove Boulevard	132-0270-016*	agriculture	Winter wheat crop seeded.	
9697	Johnston Road	132-0270-004	rural residential	Two residences, sheds, fallow land and strawberry fields.	
	Elk Grove Boulevard	132-0270-005	agriculture	Strawberry crops, truck farming.	
8280 & 8280A	Elk Grove Boulevard	132-0270-006	commercial	Truck Hydraulics Systems (THS) and Backyard Rentals. Materials storage yard south of building. Abandoned vehicles and stored AST on fallow land south of storage yard.	Additional assessment recommended.
8300	Elk Grove Boulevard	132-0280-001*	Homestead	Sherwood Allen Ranch. Residence, detached garage, possible dairy, barn, two silos, several stored/abandoned vehicles and implements, domestic well. State registered UST site. Owner removed UST approximately 10 years ago.	
	Elk Grove Boulevard	132-0280-002	Roadway	Old roadway trending north/south. Accesses Nunes,	

**TABLE 4.5-2  
LAND USE/SITE TYPE SUMMARY**

Street Number	Street Name	APN	Site Type	Comments	Recommendations
				Lindsey and Allen Parcels.	
9700	West Stockton Boulevard	132-0280-011*	commercial	Formerly the site of the Lindsey Jersey Dairy. Approved as Phase II of the Elk Grove Auto Mall.	
9776	West Stockton Boulevard	132-0280-013	rural residential	Residence associated with Lindsey Jersey Dairy, bails of hay near street. Domestic and irrigation wells.	
9769 & 9799	Bruceville Road	132-0270-007*	rural residential & former dairy	Northwest corner - dilapidated corrugated metal barn, dilapidated stucco house, concrete block building (former milking barn), mobile home, and debris. Southwest corner - one house.  Fallow land east of the residential sites.	
9901	Bruceville Road	132-0270-017*	rural residential & pasture	One rural residence, silo, barn, domestic well. Horse and cattle grazing, parcel divided by fences and gates. Trees and berry vines grow on perimeter and fence lines. Irrigation/drainage ditches separate pastures.	
	Elk Grove Boulevard	132-0270-010*	fallow land	Central portion of Specific Plan area.	
	Elk Grove Boulevard	132-0270-013	Agriculture	Winter wheat crop seeded. Central portion of Specific Plan area.	
	Elk Grove Boulevard	132-0270-014*	Agriculture	Central portion of Specific Plan area. Pistachio orchard on north and south sides of parcel, tailwater sump near northwest corner, fallow land on central portion.	Recommend soil sampling and testing for persistent pesticides.
8280	Elk Grove Boulevard	132-0270-011*	rural residential	Zehnder residence located in the central portion of Specific Plan area. One house, one barn, debris near barn.	
	West Stockton Boulevard	132-0280-007*	Agriculture	Truck farming located in the central portion of Specific Plan area.	
	West Stockton Boulevard	132-0280-005*	Pasture	Central portion of Specific Plan area.	

## 4.5 HAZARDS AND HAZARDOUS MATERIALS

**TABLE 4.5-2  
LAND USE/SITE TYPE SUMMARY**

Street Number	Street Name	APN	Site Type	Comments	Recommendations
9878 & 9896	West Stockton Boulevard	132-0280-006	rural residence, homestead, dairy & pasture	House, mobile home, fuel AST and haybails north of residence. Second residential site on south side of parcel. Consists of house, barn, milk barn, several outbuildings, water tank house.	
9930 & 9938	West Stockton Boulevard	132-0280-008	Farm	Two houses, barn, small and large garages, outbuildings, hay bails and pasture.	
7625	Old Poppy Ridge Road	132-0050-006*	Homestead	House, barns, two wells, farm implements in storage yard, livestock yards, ASTs	
	Old Poppy Ridge Road	132-0050-063*	fallow land		
8015	Old Poppy Ridge Road	132-0050-064*	rural residential	House set back from road, barn at roadside with mobile home, horses, horse runs, pasture.	
8109	Old Poppy Ridge Road	132-0050-053	rural residential	One house set back away from street, fallow land.	
8159	Old Poppy Ridge Road	132-0050-054	rural residential	Prefabricated house, barn, both set back away from street. Dried pond north of house, camper trailers, vehicles, miscellaneous unidentifiable items stored west of barn.	
	Old Poppy Ridge Road	132-0050-055	fallow land		
	Old Poppy Ridge Road	132-0050-056	fallow land	Rectangular shaped burn area - burned straw and unidentifiable glassy mass.	
8355	Old Poppy Ridge Road	132-0290-001	rural residential	One house and a trailer, a barn and miscellaneous outbuildings, a pony, and previously a small (15-20 tree) orchard on the southwest, and fir trees on the east.	Based on these limited uses, we recommend that the requirement for additional soil sampling and testing be removed.
8365	Old Poppy Ridge Road	132-0290-002	rural residential	M & M Ranch. Prefabricated house and barn, wells. Pasture east of house has outbuildings.	
8389	Old Poppy Ridge Road	132-0290-027	rural residential	Two houses, barn, outbuildings, house trailers.	

**TABLE 4.5-2  
LAND USE/SITE TYPE SUMMARY**

Street Number	Street Name	APN	Site Type	Comments	Recommendations
8399	Old Poppy Ridge Road	132-0290-026	rural residential	Wood-framed house, detached garage, sheds. UST removed from site in 1986, closed by County.	
8415	Old Poppy Ridge Road	132-0290-003	rural residential & fallow land	Two houses, outbuildings, ASTs, AST on trailer.	
8485	Old Poppy Ridge Road	132-0290-004	rural residential	One house set back from street.	
8533 & 8551	Old Poppy Ridge Road	132-0290-038	rural residential	Two houses, garage, large red barn, small barn, AST northwest of houses. Southwest side is fallow, truck farming north of the houses on east side of parcel.	
	Old Poppy Ridge Road	132-0290-039	agriculture	Old orchard on south side, irrigated truck farming on northerly side.	Recommend soil sampling and testing on the southern half of the parcel for persistent pesticides/herbicides.
8641 & 8645	Old Poppy Ridge Road	132-0290-042	rural residential	Two houses, old barn, abandoned or stored pickup truck camper shells, cars, boat, and some wood debris.	
8647	Old Poppy Ridge Road	132-0290-029	rural residential	House, stables, pasture on north side of parcel.	
8775	Old Poppy Ridge Road	132-0290-030	rural residential	House, barn outbuildings, pasture.	
8771	Old Poppy Ridge Road	132-0290-031	rural residential	Prefabricated house, garage, barn, outbuildings and sheds, pasture.	
8701	Old Poppy Ridge Road	132-0290-036	rural residential	Prefabricated house, garage, sheds, pasture.	
8781	Old Poppy Ridge Road	132-0290-037	rural residential	House, barn, stables, pasture.	
8675	Old Poppy Ridge Road	132-0290-009	rural residential	Daydream Oasis Ranch. House set back from road, barn, stables, horse run, grazing areas.	
8651	Old Poppy Ridge Road	132-0290-010	rural residential	House, small barn, grazing sheep.	



## 4.5 HAZARDS AND HAZARDOUS MATERIALS

**TABLE 4.5-2  
LAND USE/SITE TYPE SUMMARY**

Street Number	Street Name	APN	Site Type	Comments	Recommendations
86XX	Old Poppy Ridge Road	132-0290-011	rural residential	Two-story house with attached garage, out-of-service 550-gallon fuel AST with gauge visible under trees in front yard.	
	Old Poppy Ridge Road	132-0290-012	pasture	Horses grazing, several dirt piles on the northwesterly portion of parcel.	
10149	Bruceville Road	132-0050-050	farm	North portion of parcel lays fallow, previously supported orchard (planted in 1980s), tree stumps piled. Rural residential site located near the west-central portion of the parcel, well. Farm has green houses, barn, and outbuildings, fallow land and truck farming.	Recommend soil sampling and testing on the northern half of the parcel for persistent pesticides/ herbicides.
7518	Old Poppy Ridge Road	132-0050-049*	homestead & abandoned dairy	Farm site has three houses, garage, outbuildings, dilapidated and collapsed structures, two barns, silo, corral, cattle, horses, pastures.	
7710	Old Poppy Ridge Road	132-0050-009	rural residential	House, well, pool.	
8000	Old Poppy Ridge Road	132-0050-011	farm	House near road. Farm behind house includes barns, holding pens, horse run, pasture, bailed hay, implement storage.	
8132	Old Poppy Ridge Road	132-0050-057	rural residential	New house, corrugated metal garage/ shop.	
8178	Old Poppy Ridge Road	132-0050-058	Farm	House, stored or abandoned trucks, motor homes. Unidentifiable Items stored on south side of parcel. Leaf lettuce crops on north side of parcel.	
	Old Poppy Ridge Road	132-0050-059	fallow land		
	Old Poppy Ridge Road	132-0050-060	fallow land		
	Old Poppy Ridge Road	132-0050-052	fallow land	Farm implements and bailed hay stored on the north side of parcel.	
8296	Old Poppy Ridge Road	132-0050-044	rural residential	House, fallow land.	
10231	Bruceville Road	132-0050-048	farm	Two to three dilapidated houses, mobile homes, box	Recommend additional

**TABLE 4.5-2  
LAND USE/SITE TYPE SUMMARY**

Street Number	Street Name	APN	Site Type	Comments	Recommendations
				trailers, dilapidated barn, cattle, debris, abandoned vehicles, farm implements, tires, pasture. Truck farming on east side of parcel.	assessment at "boneyard" and building areas.
	Bruceville Road	132-0050-020	pasture, detention pond	Detention pond or depression on east side of parcel. Farming debris from truck farming north and east of parcel.	
7807	Elefa Avenue	132-0050-024	agriculture	Out-of-service green houses and barn, truck farm crops. Debris on perimeter of parcel.	
	Elefa Avenue	132-0050-025	agriculture	Truck farm crops. Debris on perimeter of parcel.	
7911	Elefa Avenue	132-0050-061*	rural residential	House, barn, outbuildings, unidentified stored items.	
	Bruceville Road	132-0050-034	fallow land		
10303	Bruceville Road	132-0050-026	rural residential	Mobile home, barn, sheds.	
10371	Bruceville Road	132-0050-035	rural residential	House, pool, barn, sheds, stables, pasture.	
10383	Bruceville Road	132-0050-028	rural residential	Two houses, sheds, AST, pasture.	
7417	Bilby Road				
7425	Bilby Road	132-0050-029	rural residential	House, barn.	
	Bilby Road	132-0050-065	fallow land		
7403 & 7445	Bilby Road	132-0050-066	rural residential	Two houses, mobile home, barn, outbuildings, debris, abandoned vehicles.	
7401	Bilby Road	132-0050-031	rural residential	House, pool, barn, outbuildings, detached garage, plowed fields and truck farming on north portion of parcel.	
	Bilby Road	132-0050-062*	fallow land		

\* = Participating property owners (this does not include parcels with a "Reserve" overlay designation).

## 4.5 HAZARDS AND HAZARDOUS MATERIALS

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### AERIAL PHOTOGRAPHIC REVIEW

Aerial photographs of the proposed plan area were reviewed for the years 1961, 1968, 1976, 1981 and 1991. The photographs were analyzed for obvious evidence of potential hazardous materials contamination such as ASTs, UST fueling islands, landfilling and mass grading activities, wastewater systems and industrial uses. Overall, the historic aerial photographs do not reveal these items that can be associated with potential hazardous materials contamination with the possible exception of dairy wastewater ponds. Dairy ponds generally are not a hazardous materials concern, but their operation can elevate ground water nitrate concentrations to levels that would be greater than naturally occurring nitrate concentrations found in most ground waters.

The existing homestead sites and a few of the existing rural residential sites are apparent within the plan area by the time of the earliest aerial photographs, dated 1961. The homestead sites have generally changed little during the past approximate 30 years of available aerial photography.

While a majority of the orchard located in the east-central portion of the proposed plan area was removed before 1961, portions of the orchard still appear in the photographs from 1961 to 1991. The boneyard on Parcel 132-0050-048, near the southwesterly plan area boundary, is visible in the photographs from 1976 to 1991. Additionally, stored materials, implements, vehicles and other unidentifiable materials are visible on the Sherwood Allen Ranch (APN 132-0280-001), the parcel currently occupied by THS (APN 132-0270-006), and the former ranch site (APN 132-0270-003) located west of THS. By 1976, the northernmost intermittent stream has been channelized.

The infrastructure (roadways, drainageways, etc.) mentioned in and around the plan area during the topographic map review is visible in the earliest, and throughout the years, of reviewed aerial photographic coverage. A small, non-commercial orchard (APN 132-0290-002) and small, non-commercial vineyard (APN 132-0290-001) are visible in 1976 and removed by 1991. Another orchard appears in 1991 on APN 132-0050-050 (at the southeast corner of Bruceville Road and Poppy Ridge Road). The Bruceville/Poppy Ridge Road orchard had been removed by the time of field reconnaissance, although the tree trunks remain piled on the parcel. Truck farming occurs on the Bruceville/Poppy Ridge Road parcel today, but not on the same area as the removed orchard. Except for the previously mentioned, non-commercial orchards and vineyard, and three other hobbyist-sized private orchards that are too small to be mentioned more specifically, agriculture land divided among haycrop, irrigated pasture and natural grass (grazing) uses is predominant throughout the historic aerial photographic coverage.

### AGENCY DATABASE REVIEW

The following agencies' databases regarding hazardous materials contamination for sites within the plan area were reviewed:

- United States Environmental Protection Agency (EPA)
- California Environmental Protection Agency (Cal-EPA)
- Cal-EPA Department of Toxic Substances Control (DTSC)
- Cal-EPA Office of Environmental Health Hazard Assessment (OEHHA)
- Cal-EPA Regional Water Quality Control Board (RWQCB)

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- Cal-EPA Integrated Waste Management Board (CIWMB)
- California State Water Resources Control Board (SWRCB)
- California Department of Health Services (DHS)
- Cal-DHS Office of Drinking Water (ODW)
- California Division of Oil and Gas (DOG)
- Sacramento County Environmental Management Department (EMD), Hazardous Materials Division.

The results of the regulatory agency reviewed are summarized on **Table 4.5-3**. The databases reviewed were the most current available (some databases have not been updated due to the lack of legislative funding for the program that originally generated the database under review), or were current within the past six months, during the timeframe of this assessment. In summary, potential or confirmed, state or federal "Superfund" sites within the plan area have not been identified during review of the former DHS's *Bond Expenditure Plan*, the EPA's *Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS)* and *National Priorities List (NPL)*, and the Cal-EPA's list of *Active Annual Workplan Sites*.

**TABLE 4.5-3  
AGENCY LISTS**

Agency Reviewed	Date of Review	Results
National Priorities List (EPA)	February 18, 1999	None
CERCLIS List (EPA)	February 18, 1999	None
Active Annual Work Plan Sites, FY 1998-99 (DTSC)	March 2, 1999	None
California EPA Facility Inventory Database	December, 1998	None
CalSites (DTSC)	December, 1998	None
Hazardous Waste and Substances Sites List (OEHHA)	December, 1998	Lester Baker Wells and Pumps – 8460 Elk Grove Blvd Arco #2123 – 8500 Elk Grove Blvd
Assembly Bill 1803 Contaminated Wells (DHS-ODW) – Small Systems	June, 1990	None
Assembly Bill 1803 Contaminated Wells (DHS-ODW) – Large Systems	April, 1986	None
Well Investigation Program List of Polluted Wells (RWQCB)	January, 1992	None
California Division of Oil and Gas (DOG)	June 27, 1998	Venada Drillco "Gold" Milon L. Johnston, Opr. Atkinson
Central Valley Tank Tracking System (RWQCB)	January 5, 1999	Lester Baker Wells and Pumps – 8460 Elk Grove Blvd

## 4.5 HAZARDS AND HAZARDOUS MATERIALS

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Agency Reviewed	Date of Review	Results
		Arco #2123 – 8500 Elk Grove Blvd Walt Davis Chevrolet – 9501 Stockton Blvd
Spills, Leaks, Investigations & Cleanups List (RWQCB)	FirstQuarter, 1999	None
Toxic Pits Cleanup Act (RWQCB)	July, 1990	None

Source: Wallace Kuhl & Associates, 1999

Databases published by other of the above-named regulatory agencies do not indicate known occurrences of the following within the plan area: contaminated municipal ground water supply wells; toxic pits; and, active or inactive landfills, transfer or material recovery stations.

The *DOG Map 614* indicates that the now abandoned Poppy Ridge Gas Field is included within the plan area. DOG files relative to the abandoned wells within the Poppy Ridge field show that two natural gas wells existed in the field located west of the plan area; wells were not located in the plan area. DOG personnel made and approved environmental inspections for abandonment of these wells between August 1975 and May 1988.

Additionally, review of various state databases including but not limited to OEHHA's *Hazardous Waste and Substances Sites List*, the RWQCB *Central Valley Tank Tracking System* database and the Sacramento County EMD *Sacramento County Master List of Facilities* report, reveals three known contaminated sites within one-half mile of the plan area. Two sites, Walt Davis Chevrolet and Lester Baker Wells and Pumps, are closed by the RWQCB. The third site, an ARCO Service Station corrected the contamination problem in 1993. A review of EMD data revealed three additional county-registered UST sites outside the plan area that have experienced subsurface contamination. One of these sites, Floyd Pederson Ventures, was closed by the Sacramento County EMD. The other two sites are TOSCO (Union) 76 Service Station and a Caltrans Station. The TOSCO 76 Service Station is still undergoing an investigation to determine whether the contamination continues after the station performed a clean up. The Caltrans Station properly disposed of the contamination in 1993.

Two other Underground Storage Tank (UST) sites are located near the proposed project site. However, these two UST sites have not suffered any leakage or spills. Three UST sites were located

within the proposed plan area, but they were removed more than ten years ago and evidence of soil contamination has not been discovered in connection with the tanks in question. Three sites have Aboveground Storage Tanks (AST), but contamination has not been connected with these tanks.

### 4.5.2 REGULATORY FRAMEWORK

Many agencies regulate hazardous substances. The following discussion contains a summary review of regulatory controls pertaining to hazardous substances, including federal, state and local laws and ordinances. **Table 4.5-4** lists federal, state and local regulatory agencies that oversee hazardous materials handling and hazardous waste management, and the statutes and regulations that they administer.

FEDERAL REGULATIONS

Federal agencies that regulate hazardous materials include the Environmental Protection Agency (EPA), the Occupational Safety and Health Administration (OSHA), the Department of Transportation (DOT), and the National Institute of Health (NIH). The following federal laws and guidelines govern hazardous materials.

- Federal Water Pollution Control
- Clean Air Act
- Occupational Safety and Health Act
- Federal Insecticide, Fungicide, and Rodenticide Act
- Comprehensive Environmental Response, Compensation, and Liability Act
- Guidelines for Carcinogens and Biohazards
- Superfund Amendments and Reauthorization Act Title III
- Resource Conservation and Recovery Act
- Safe Drinking Water Act
- Toxic Substances Control Act

**TABLE 4.5-4  
SUMMARY OF HAZARDOUS MATERIALS REGULATORY AUTHORITY**

Regulatory Agency	Authority
<b>Federal Agencies</b>	
Department of Transportation (DOT)	Hazardous Materials Transport Act - Code of Federal Regulations (CFR) 49
Environmental Protection Agency (EPA)	Federal Water Pollution Control Act Clean Air Act Resource Conservation and Recovery Act (RCRA) Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) Superfund Amendments and Reauthorization Act (SARA) Federal Insecticide, Fungicide and Rodenticide Act
Occupational Safety and Health Administration (OSHA)	Occupational Safety and Health Act and CFR 29
<b>State Agencies</b>	
Department of Toxic Substances Control (DTSC)	California Code of Regulations
Department of Industrial Relations (CAL-OSHA)	California Occupational Safety and Health Act, CCR Title 8
State Water Resources	Porter-Cologne Water Quality Act

#### 4.5 HAZARDS AND HAZARDOUS MATERIALS

Regulatory Agency	Authority
Control Board and Regional Water Quality Control Board	Underground Storage Tank Law
Health and Welfare Agency	Safe Drinking Water and Toxic Enforcement Act
Air Resources Board and Air Pollution Control District	Air Resources Act
Office of Emergency Services	Hazardous Materials Release Response Plans/Inventory Law
Department of Fish and Game	Fish and Game Code
Department of Food and Agriculture	Food and Agriculture Code
State Fire Marshall	Uniform Fire Code, CR Title 19
<b>County Agencies</b>	
Sacramento County Environmental Management Department	CCR Title 22
	Hazardous Waste Control Law
	Hazardous Materials Release Response Plans/Inventory Law
	Acutely Hazardous Materials Law
	Underground Storage Tanks Law

Source: Wallace Kuhl & Associates, 1999

Prior to August 1992, the principal agency at the federal level regulating the generation, transport and disposal of hazardous waste was the EPA under the authority of the Resource Conservation and Recovery Act (RCRA). As of August 1, 1992, however, the California Department of Toxic Substance Control (DTSC) was authorized to implement the State's hazardous waste management program for the EPA. The federal EPA continues to regulate hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA).

#### STATE REGULATIONS

The California Environmental Protection Agency (Cal-EPA) and the State Water Resources Control Board establish rules governing the use of hazardous materials and the management of hazardous waste. Applicable state and local laws include the following:

- Public Safety/Fire Regulations/Building Codes
- Hazardous Waste Control Law
- Hazardous Substances Information and Training Act
- Air Toxics Hot Spots and Emissions Inventory Law
- Underground Storage of Hazardous Substances Act
- Porter-Cologne Water Quality Control Act

Within Cal-EPA, DTSC has primary regulatory responsibility, with delegation of enforcement to local jurisdictions that enter into agreements with the state agency, for the management of hazardous materials and the generation, transport and disposal of hazardous waste under the authority of the Hazardous Waste Control Law (HWCL).

LOCAL REGULATIONS

The County of Sacramento, Office of Emergency Services implements the State’s Right-to-Know Ordinance that gives it the authority to inventory hazardous materials used by businesses. The County is also in the process of collecting information regarding existing and proposed locations of hazardous material disposal, storage, handling, and transportation facilities.

The Sacramento County Environmental Management Department (EMD) is responsible for enforcing the state regulations on both the city and county level, governing hazardous waste generators, hazardous waste storage, underground storage tanks (USTs) and environmental health including inspections and enforcement. EMD also regulates the use, storage, and disposal of hazardous materials in the County and abandonment of wells and septic systems in the County by issuing permits, monitoring regulatory compliance, investigating complaints, and other activities. EMD reviews technical aspects of hazardous waste site cleanups, and oversees remediation of certain contaminated sites resulting from leaking underground storage tanks. EMD is also responsible for providing technical assistance to public and private entities that seek to minimize the generation of hazardous waste.

CITY OF ELK GROVE DRAFT GENERAL PLAN

The City of Elk Grove Draft General Plan Safety Element addresses regulatory issues including safety and exposure standards, risk management, and interagency coordination. While this EIR analyzes the project’s consistency with the Draft General Plan pursuant to CEQA Section 15125(d), it is the Elk Grove City Council that will ultimately determine the project’s consistency with the Draft General Plan. **Table 4.5-5** identifies the Elk Grove Draft General Plan’s Safety Element policies that are directly applicable to the project and presents an evaluation of the project’s consistency with these statements.

**TABLE 4.5-5  
DRAFT GENERAL PLAN SAFETY ELEMENT POLICY CONSISTENCY**

Draft General Plan Policies	Consistency with General Plan	Analysis
<p><b>Policy SA-2:</b> In considering the potential impact of hazardous facilities on the public and/or adjacent or nearby properties, the City shall consider the consequences of a reasonably foreseeable event. Events need not be considered if their likelihood is so remote as to be considered unlikely to occur within the reasonably foreseeable lifetime of the facility or</p>	<p>Yes</p>	<p>Several studies have been done to analyze the hazards, incidence scenarios, worst-case effects and the extent of those effects, specific conditions associated with worst-case effects, and approximate probabilities associated with each scenario. Based on the conclusions of these studies, the Laguna Ridge Specific Plan area would not be significantly affected by the release of hazardous materials from</p>



#### 4.5 HAZARDS AND HAZARDOUS MATERIALS

Draft General Plan Policies	Consistency with General Plan	Analysis
operation.		Suburban Propane, Georgia Pacific Resins, and/ or other facilities through reasonably foreseeable upset and accident conditions.
<p><b>Policy SA-3:</b></p> <p>The City considers an “unlikely” event to be any event with an individual risk level of less than 10<sup>-6</sup> (1,000,000) per year. A “likely” event is any event with an individual risk level of 10<sup>-6</sup> (1,000,000) or more per year.</p>	Yes	The Plan area would not be exposed to human health hazards or property damage hazards associated with incidents at Suburban Propane and Georgia Pacific Resins that would have a likelihood of 1,000,000 per year as documented in the Review of Suburban Propane Hazards Analysis Studies and Evaluation of Accident Probabilities (Quest, 2003).
<p><b>Policy SA-7:</b></p> <p>Storage of hazardous materials and waste shall be strictly regulated, consistent with state and federal law.</p>	Yes	The County of Sacramento Environmental Management Department has the authority to inspect on-site uses to insure compliance with federal and state laws governing the storage, use, transport and disposal of hazardous materials. In addition, Sacramento County requires the preparation of an annual inventory of hazardous materials and a business emergency plan. The project would comply with all applicable laws and regulations relating to hazardous materials. In addition, mitigation measures in this section would further protect public health from potential exposure to hazardous materials.
<p><b>Policy SA-8:</b></p> <p>Industrial facilities shall be constructed and operated in accordance with up-to-date safety and environmental protection standards.</p>	Yes	See comments pertaining to Policy SA-7 above

#### 4.5.3 PROJECT IMPACTS AND MITIGATION MEASURES

##### THRESHOLDS OF SIGNIFICANCE

The CEQA guidelines contained below are used to assess all potential hazards associated with the project, with the exception of the Suburban Propane and Georgia-Pacific Facilities. Any

threshold of significance that is not listed below was dismissed within the Notice of Preparation contained in **Appendix 1.0** of this EIR. For purposes of this EIR, the following criteria were used in determining whether the proposed project would result in a significant impact:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment as defined by the City of Elk Grove Draft General Plan Policy SA-3.
- Be located on a site which is included on a list of hazardous materials sites compiled by Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment.

### PROJECT IMPACTS AND MITIGATION MEASURES

#### **Exposure to Hazards Associated with Suburban Propane and Georgia Pacific Facilities**

The Plan area is over one mile (approximately 1.33 miles) northwest of the Suburban Propane and Georgia Pacific facilities. As discussed previously, several studies have analyzed the types of hazards, incidence of events, worst-case effects and the extent of those effects, and specific conditions associated with worst-case effects that could be associated with these facilities. Off-site hazards to human health and property include exposure to overpressure of one psig, radiant heat, flash fire, shrapnel and formaldehyde vapor. As identified in the Review of Suburban Propane Hazards Analysis Studies and Evaluation of Accident Probabilities (Quest, 2003), two accident scenarios have been evaluated to determine the probability of an incident and the potential to effect off-site land areas. These scenarios include accidental incidents and intentional acts and are further described below.

#### Accidental Incidents at Suburban Propane and Georgia Pacific Facilities

Tables 6-10 and 6-11 of the Review of Suburban Propane Hazards Analysis Studies and Evaluation of Accident Probabilities Report (**Appendix 4.5**) summarize hazards impacts exceeding 0.5 miles and 0.75 miles from the Suburban Propane and Georgia Pacific facilities as well as the estimated accident probability identified by the various hazard studies performed. The accident probability of an off-site hazard was determined based on historical accidental release data, published data sources and the use of event trees to cover the range of possibilities that could occur as the result of an initial event (Quest, 2003). As shown in Tables 6-10 and 6-11 of the Review of Suburban Propane Hazards Analysis Studies and Evaluation of Accident Probabilities Report, the only potential off-site hazard that could impact the Plan area would be a flash fire as a result of major failure of one or both of the 12,000,000 gallon refrigerated storage tanks at the Suburban Propane Facility. However, the probability of this occurring has been estimated at  $3.56 \times 10^{-7}$  per year (one chance in 2,800,000 a year). Based on Draft General Plan Policy SA-3, this event is not considered a "reasonably foreseeable" event. This conclusion is consistent with criteria used by the Health and Safety Executive in the United Kingdom (Risk Criteria for Land Use Planning in the Vicinity of Major Industrial Hazards that defines acceptable individual risk criteria as less than one chance in 1,000,000 per year) and similar criteria used by the Environmental Protection Agency of Western Australia. Thus, this impact is considered **less than significant**.

## 4.5 HAZARDS AND HAZARDOUS MATERIALS

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### Intentional Acts at Suburban Propane and Georgia Pacific Facilities

The Review of Suburban Propane Hazards Analysis Studies and Evaluation of Accident Probabilities Report also estimated the probability of an intentional act (e.g., terrorism and vandalism) at the Suburban Propane and Georgia Pacific facilities that would result in an off-site hazard. Intentional acts at large-scale chemical and fuel facilities are rare in the United States and there is currently no reliable historical release data on such events. For the purposes of estimating the probability of an intentional act resulting in an off-site hazard, the Review of Suburban Propane Hazards Analysis Studies and Evaluation of Accident Probabilities Report utilized existing data from the Environmental Protection Agency regarding the number of toxic and flammable fuel facilities with the potential to impact a population area. It is identified that the Suburban Propane and Georgia Pacific facilities are among 12,711 other such facilities in the United States that have the potential to impact 100 people or more. In addition, the Review of Suburban Propane Hazards Analysis Studies and Evaluation of Accident Probabilities Report also utilized the first bombing of the World Trade Center in February 1993 as the first terrorist act in the United States (ten years ago). This data was utilized in order to determine the probability of the intentional act that becomes the initial event resulting in an off-site hazard, which was estimated at  $7.85 \times 10^{-6}$  a year (**Appendix 4.5**). The probability of an off-site hazard was then determined based on historical accidental release data, published data sources and the use of event trees to cover the range of possibilities that could occur as the result of the initial intentional act (Quest, 2003). The resulting probabilities of an off-site hazard occurring under the events evaluated in the hazard studies done on these facilities is provided in Tables 6-10 and 6-11 of the Review of Suburban Propane Hazards Analysis Studies and Evaluation of Accident Probabilities Report.

As shown in Tables 6-10 and 6-11 of the Review of Suburban Propane Hazards Analysis Studies and Evaluation of Accident Probabilities Report, the only potential off-site hazard that could impact the Plan area from an intentional act would be a flash fire as a result of major failure of one or both of the 12,000,000 gallon refrigerated storage tanks at the Suburban Propane Facility. However, the probability of this occurring has been estimated at  $4.66 \times 10^{-7}$  per year (one chance in 2,100,000 a year). Based on Draft General Plan Policy SA-3, this event is not considered a “reasonably foreseeable” event. This conclusion is consistent with criteria used by the Health and Safety Executive in the United Kingdom (Risk Criteria for Land Use Planning in the Vicinity of Major Industrial Hazards that defines acceptable individual risk criteria as less than one chance in 1,000,000 per year) and similar criteria used by the Environmental Protection Agency of Western Australia. Thus, this impact is considered **less than significant**.

### **Herbicide/Pesticide Contamination**

**Impact 4.5.1** Development within the Laguna Ridge Specific Plan area may expose residents or construction workers to past herbicide or pesticide applications. This is considered to be a **potentially significant** impact.

The proposed plan area consists predominantly of irrigated pasture, dry-farmed and natural grass grazing land, as well as modern truck farming sites; corn, alfalfa and clover are the irrigated crops that were historically cultivated in the plan area. Irrigated pasture, dry-farmed crops and natural grasses typically require little to no applications of environmentally persistent pesticides. Persistent pesticide residuals include lead, arsenic, and organochlorine pesticides. The historically irrigated rowcrops cultivated within the plan area generally are not the “fleshy” variety (potatoes, tomatoes, etc.) that would typically be associated with past applications of persistent compounds such as DDT. Although the historically cultivated irrigated rowcrops may have been subject to applications of restricted agricultural chemicals, restricted compounds are

not necessarily persistent compounds. An example of a restricted but not persistent group of agricultural chemicals would be the triazine herbicides, which are often applied to corn crops. Similarly, the truck farms currently within the plan area are using over-the-counter insecticides and herbicides that generally do not persist in soils for greater than one year from application. Based on these findings, the potential for significant residual agricultural chemical concentrations in the vast majority of existing plan area surface soils is low (Environmental Site Assessment, Preliminary Phase I; see **Appendix 4.5**). Based on studies conducted by Wallace Kuhl and Associates within the Laguna Ridge Specific Plan area and the East Franklin Specific Plan area, the onsite dairies are not thought to contain persistent pesticide residuals. Pesticides might have been used around the cattle-holding areas for fly control applications. However, based on the site-specific studies, the potential for persistent pesticide concentrations to exist in surficial soils around dairies is low.

An exception to the agricultural history described above occurs at former orchard areas within the plan area. Pistachio and walnut orchards were located within the east-central portion of the Laguna Ridge Specific Plan area prior to 1961 and up until 1991. The individual orchard sites are listed in **Table 4.5-2**. Historically, orchard cultivated soils could become contaminated through the repeated application of agricultural chemicals to fruit or nut trees. Specifically, organochlorine pesticides, a "family" of compounds that includes DDT and its degradation compounds DDD and DDE, as well as lead-arsenates were probably applied to the orchards in the past. Historically the Redi Green Turf Farm, Inc. produced sod within the plan area. This parcel also has the potential to contain persistent pesticide and herbicide residuals. **Figure 4.5-3** highlights the areas within the Laguna Ridge Specific Plan area with the potential for pesticide or herbicide contamination. The presence of persistent pesticide and herbicide residuals within the plan area is a **potentially significant** impact.

Mitigation Measure

**MM 4.5.1** With each improvement plan and/or grading plan application, the project applicant shall include a detailed assessment of soil contamination associated with previous herbicide/pesticide use. Soil sampling shall be conducted within the areas of potential herbicide/pesticide contamination as identified in **Figure 4.5-4** of the Draft EIR. If substances are detected at concentrations that could pose a health hazard and/or violate local, State, or Federal health standards, remediation of the affected areas shall be undertaken in accordance with the requirements of the City of Elk Grove and the Sacramento County Environmental Management Department. Development of the site shall not commence until the site is deemed remediated and clear for development by the City in consultation with the Sacramento County Environmental Management Department.

*Timing/Implementation:* Prior to approval improvement plans and/or grading plans for areas shown on Figure 4.5-4 of the Draft EIR.

*Enforcement/Monitoring:* City of Elk Grove Development Services and Sacramento County Environmental Management Department.

Implementation of the above mitigation measure would reduce this impact to a **less than significant** level.

### Asbestos Containing Building Materials

**Impact 4.5.2** Development of the Laguna Ridge Specific Plan area may expose residents and construction workers to asbestos. This is considered to be a **potentially significant** impact.

Between 1978 and 1979 the federal government banned nearly all uses of friable asbestos in building materials. Therefore, existing structures within the plan area built subsequent to 1979 are considerably less likely to contain asbestos in their building materials. However, most of the existing structures within the plan area predate 1979 and potentially contain asbestos in their building materials. There are approximately 35 residential structures within the plan area, many of which were constructed prior to 1978/79. During development of the Laguna Ridge Specific Plan area, these buildings may be demolished. Demolition of these structures may release asbestos into the atmosphere. The potential exposure of residents and construction workers to asbestos is a **potentially significant** impact.

#### Mitigation Measure

**MM 4.5.2** Prior to the issuance of demolition permits for existing onsite structures, asbestos material sampling shall be conducted to determine if materials are present. Any identified asbestos containing building materials present in each of the structures to be dismantled shall be removed under acceptable engineering methods and work practices by a licensed asbestos abatement contractor prior to removal. These practices include, but are not limited to: containment of the area by plastic, negative air filtration, wet removal techniques and personal respiratory protection and decontamination. The process shall be designed and monitored by a California Certified Asbestos Consultant. The abatement and monitoring plan shall be developed and submitted for review and approval by the appropriate regulatory agency (the Sacramento Metropolitan Air Pollution Management District).

*Timing/Implementation:* Prior to the issuance of demolition permits  
*Enforcement/Monitoring:* Sacramento Metropolitan APMD, City of Elk Grove Development Services

Implementation of the above mitigation measure would reduce this impact to a **less than significant** level.

### Chemical or Burn Dumps

**Impact 4.5.3** Historic chemical or burn dump areas may exist within the Laguna Ridge Specific Plan area. This is considered to be a **potentially significant** impact.

Chemical dumping areas or burn dumps have not been identified within the plan area. However, the Phase I Site Assessment did not involve detailed surface investigations; rather, it included a record search and field reconnaissance of accessible properties. Some of the land areas with a "Reserve" overlay designation were not included in the hazardous materials investigations. Historic burn dumps may exist on sites within the plan area that were not visible during flight or field reconnaissance. The concern for onsite chemical dumping or burn dumps is supported by the fact that the East Franklin Specific Plan identified three historic burn dumps within its plan area. Thus it can be concluded that chemical dumping and burn dump areas exist in the vicinity of the Laguna Ridge Specific Plan area.

Historic burn dumps may contain high concentrations of hazardous materials and the ashes may contain heavy metals and organochlorine pesticides. Chemical dumps may have a higher concentration of hazardous chemicals than burn dumps. The Phase I Site Assessment recommended remediation for any burn dumps, chemical dumps and/or ash found within the plan area, including subsurface soil sampling. The presence of burn dumps, chemical dumps and/or ash within the plan area would be a potentially significant impact.

### Mitigation Measures

**MM 4.5.3a** As part of the applications for rezone request to remove the "Reserve" overlay designation, the project applicant shall provide the City with a Phase I Site Assessment to determine whether ash or a former burn site is present on the subject property.

*Timing/Implementation:* Prior to acceptance of an application for a rezone request to remove the "Reserve" overlay designation as complete

*Enforcement/Monitoring:* City of Elk Grove Development Services

**MM 4.5.3b** Prior to approval of improvement plans and/or a grading permit, a detailed surface investigation shall be conducted to determine if former burn dumps, chemical dumps or ash are present within each subsequent project site. If any ash or burn sites are identified, surface and subsurface soil sampling shall be conducted to determine if contamination exists. If substances are detected at concentrations that could pose a health hazard and/or violate local, State, or Federal health standards, remediation of the affected areas shall be undertaken in accordance with the requirements of the City of Elk Grove and the Sacramento County Environmental Management Department. Development of the site shall not commence until the site is deemed remediated and clear for development by the City in consultation with the Sacramento County Environmental Management Department.

*Timing/Implementation:* Prior to approval of improvement plans and/or grading plans

*Enforcement/Monitoring:* City of Elk Grove Development Services and Sacramento County Environmental Management Department

Implementation of the above mitigation measures would reduce this impact to a **less than significant** level.

### **Lead Materials**

**Impact 4.5.4** During removal and construction activities, construction within the Specific Plan area could result in the disturbance of lead paint materials and expose persons to airborne material. This would result in a **potentially significant** impact.

A number of structures that exist in the plan area were constructed prior to the ban in 1970 of lead-based paints. Any exposure to lead from older vintage paint is possible when it is in poor condition or during its removal. Within the construction settings, workers can be exposed to airborne lead during renovation, maintenance or removal work. Potential health and safety impacts associated with the plan area could result to anyone in the area (including workers and

## 4.5 HAZARDS AND HAZARDOUS MATERIALS

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neighbors) who may be exposed to lead paint. As such, construction of the land uses under the Laguna Ridge Specific Plan, including removal of the existing structures could result in a significant impact.

### Mitigation Measures

**MM 4.5.4a** Prior to the issuance of demolition permits for existing onsite structures, all loose and peeling paint shall be removed and disposed of by a licensed and certified lead paint removal contractor, in accordance with local, state, and federal regulations.

*Timing/Implementation:* Prior to issuance of demolition permits  
*Enforcement/Monitoring:* City of Elk Grove Development Services

**MM 4.5.4b** The demolition contractor shall be informed that all paint on the buildings shall be considered as containing lead. The contractor shall take appropriate precautions to protect his/her workers, the surrounding community, and to dispose of construction waste containing lead paint in accordance with local, state, and federal regulations.

*Timing/Implementation:* Prior to issuance of demolition permits and included in construction contracts  
*Enforcement/Monitoring:* City of Elk Grove Development Services

Implementation of the above mitigation measures would reduce this impact to a **less than significant** level.

### 4.5.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

The hazards impacts associated with a proposed project usually occur on a project-by-project basis, rather than in a cumulative nature. Because the project contains mitigation measures to abate the site-specific hazards, any potential cumulative impacts associated with the project would be expected to be decreased as the harmful substances would be removed from the vicinity and replaced with currently approved building materials. The cumulative impacts associated with the proposed project are considered to be **less than significant**.

### Mitigation Measures

None required.

### REFERENCES

City of Elk Grove, 2003. *City of Elk Grove Draft General Plan, Safety Element*. Sacramento Elk Grove, California. January 1993.

Quest Consultants, Inc. *Quantitative Risk Analysis for Suburban Propane's Propane Terminal and Georgia-Pacific's Formalin Tank*. August 25, 2000.

Quest, 2003. *Review of Suburban Propane Hazards Analysis Studies and Evaluation of Accident Probabilities Report*. June 2003.

Wallace, Kuhl & Associates. 1999. *Environmental Site Assessment, Laguna Ridge Specific Plan Area*. May 1999.

Dames and Moore, 1998. *A Screening-Level Hazard Analysis*, March 1992; and a second *Screening-Level Hazard for Propane Emergency Release*, May 1998.

John Jacobus, Ph. D., 1999. *A "worst-case" scenario for possible predictable occurrences at the Suburban Propane facility*, November 1999.

Dunbar and Jukes, 1999. *The Suburban Propane Hazard Assessment, Joint Fire and Law Hazard Assessment Work Group for Suburban Propane facility*, November 1999.

Wayne A. Lundstrum, Sacramento Municipal Utility District. Letter dated December 17, 2001



**SECTION 4.6**  
**PUBLIC SERVICES AND UTILITIES**

The purpose of this section is to analyze potential impacts of the project to the public services and utilities that would serve the Laguna Ridge project site. Impacts associated with construction of infrastructure are evaluated in the individual environmental issue areas examined in this Draft EIR, such as air quality, noise, traffic, and biota. This analysis focuses specifically on operational impacts to these services.

### 4.6.1 WATER SERVICE

This section evaluates the impacts of the proposed project on water supply and service. Sources utilized in this section include the *Laguna Ridge Specific Plan Area Water Study* (January 2003) located in **Appendix 4.6** and associated references.

#### 4.6.1.1 EXISTING CONDITIONS

##### REGIONAL WATER SUPPLY AND DELIVERY

Water supply for the greater Sacramento region has been the subject of a great deal of collaborative effort. A diverse group of business and agricultural leaders, environmentalists, citizen groups, water managers, and local governments has carefully reviewed the region's water future. They found that unless action is taken now, the region is looking at a future with water shortages, environmental degradation, contamination, threats to groundwater reliability, and limits to economic prosperity.

Joining together as the "Water Forum," these community leaders from Sacramento along with water managers from Placer and El Dorado counties have agreed on principles to guide development of a regional water supply solution, and negotiated the *Water Forum Agreement*. The various stakeholders approved this agreement in April of 2000.

The Water Forum has agreed to pursue two coequal objectives:

- Provide a reliable and safe water supply for the region's economic health and planned development through to the year 2030; and
- Preserve the fishery, wildlife, recreational, and aesthetic values of the Lower American River.

The Sacramento County Water Agency (SCWA), a participant in the Water Forum, purveys water in seven separate retail service areas within the unincorporated area. The SCWA retail service areas vary in size from as few as 30 connections in the smallest service area to more than 17,000 connections in the Laguna/Vineyard and Elk Grove service area. There are a total of approximately 20,000 connections in the County retail service areas, of which approximately 19,000 are residential customers.

The SCWA is responsible for providing wholesale water supply to an area of the Laguna, Vineyard, and Elk Grove communities commonly referred to as "Zone 40." The long-term Master Water Plan for Zone 40 is based on meeting present and future water needs through a program of conjunctive use of groundwater and surface water.

#### Sacramento County Water Agency (SCWA)

As indicated in **Section 3.0**, the project site is within the Urban Service Boundary of the Sacramento County General Plan. As such, the SCWA is responsible for the development of wholesale surface water and groundwater facilities in this area.

## 4.6 PUBLIC SERVICES AND UTILITIES

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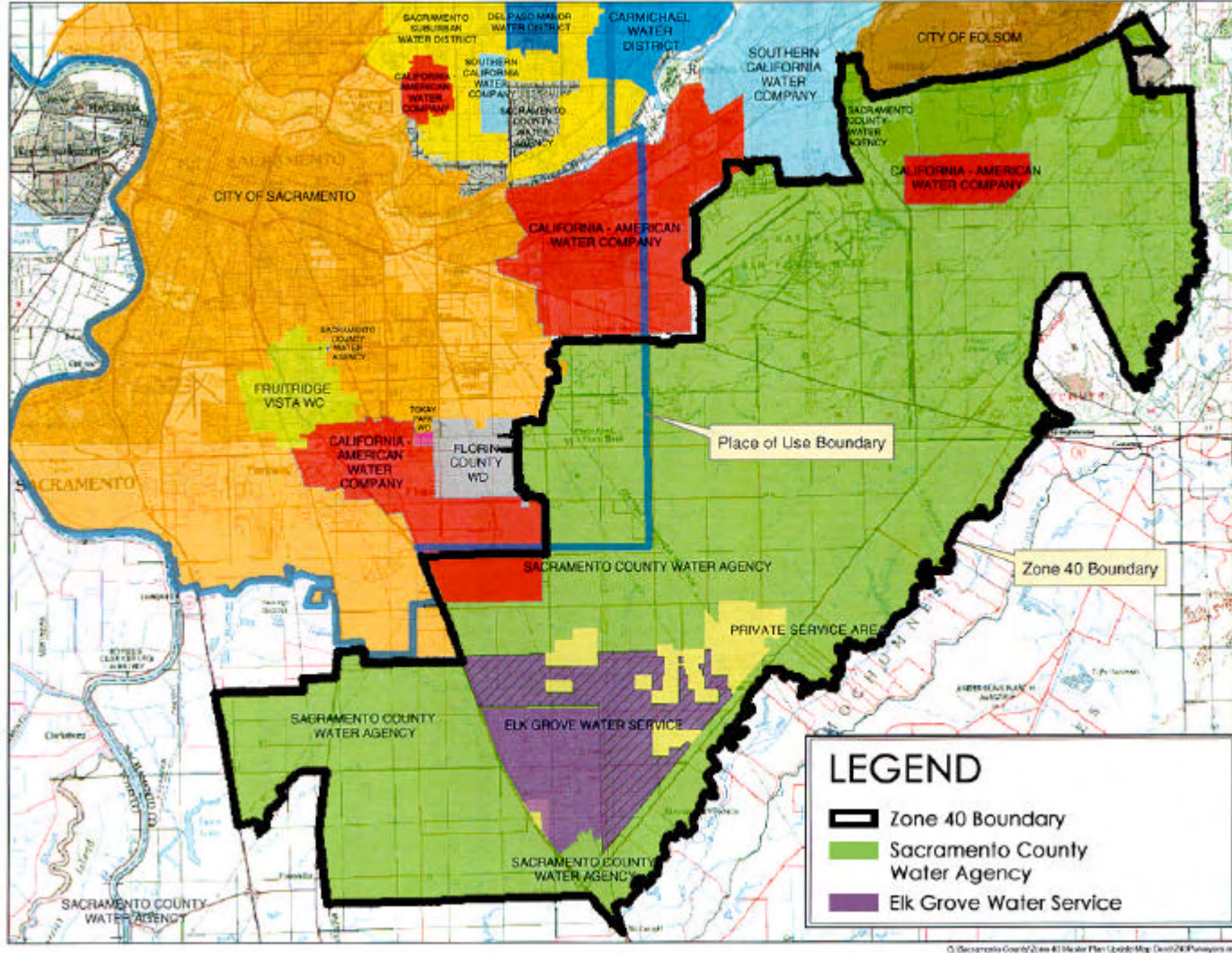
The SCWA is a public non-profit water purveyor governed by the Sacramento County Board of Supervisors. As a water purveyor, SCWA may contract with the Federal Government under reclamation laws with the same powers as irrigation districts, and with the State of California and the Federal Government with respect to the purchase, sale, and acquisition of water. Under the 1952 Sacramento County Water Agency Act, the SCWA is authorized to create groundwater management zones to provide for the construction of conjunctive use facilities and for the collection of fees and charges to fund projects. As a result of this authority, SCWA formed the Zone 40 groundwater management zone. Zone 40 of the SCWA was formed to manage groundwater resources within the influence area of the Elk Grove cone-of-depression by providing for the acquisition, construction, maintenance, and operation of facilities for the production, treatment, transmission, distribution, conservation, and sale of ground and surface water within the zone.

In March 1999, the Sacramento County Water Agency expanded Zone 40 to include large areas (consistent with the General Plan Urban Service Boundary) in the southern part of Sacramento County, including the City of Elk Grove and the proposed project site. The expanded area boundary is illustrated in **Figure 4.6.1-1**. Both supply and demand for these new growth areas are included in the *County/SCWA Purveyor Specific Agreement* contained in the *Water Forum Agreement*.

The SCWA has entered into a contract (PL 101-514) with United States Bureau of Reclamation (USBR) for the delivery of 22,000 acre-feet per year (AFY), "Fazio Water," of American River water, authorized by Public Law 101-514. Seven thousand AFY of the 22,000 AFY of water will be subcontracted to the City of Folsom. The remaining 15,000 AFY of the PL 101-514 water for SCWA use will be diverted at or near the mouth of the American River or from the Sacramento River. SCWA has also entered into a three party agreement-in-principle with SMUD and the City of Sacramento for the assignment to SCWA of 15,000 AFY of SMUD's existing contract with the USBR, to be diverted at or near the mouth of the American River or from the Sacramento River. The City of Sacramento treats the water and conveys it in its facilities ultimately to the Zone 40 system. Existing facilities are capable of diverting approximately 7,000 AFY; the City of Sacramento is developing a new diversion structure to pull the full 15,000 AFY.

SCWA and SMUD have also begun negotiations for purchase by the SCWA and assignment from SMUD of a second 15,000 AFY block of SMUD's USBR contract. A portion of the payments to SMUD from SCWA would be used to construct groundwater facilities that may be operated and maintained by SCWA. Groundwater from these wells would be available as an alternative supply for SMUD to meet increased demands in the drier and conference years as defined in the *Purveyor Specific Agreement* for SMUD (as presented in the *Water Forum Agreement*).

In addition to the 15,000 AFY of PL 101-514 contract water and the potential of 30,000 AFY of SMUD surface water, SCWA has applied to the State Water Resources Control Board (SWRCB) for excess flows on the American and Sacramento Rivers. That application is pending and is subject to negotiated terms through the Water Forum for delivery. To reduce reliance on intermittent surface water, SCWA intends to pursue upstream water transfers, which would be diverted at or near the mouth of the American River or from the Sacramento River.



Source: Montgomery Watson Harza, 2002



City of Elk Grove Planning

Figure 4.6.1-1  
Zone 40 Boundaries

Groundwater is used to supplement surface supplies. The *Water Forum Agreement* (see Groundwater Management Element, p. 96) describes the way in which groundwater is, and will be, used in the region while maintaining the viability of that resource for both current and future users (i.e., without exceeding the “sustainable yield” of the groundwater basin<sup>1</sup>). The recommended estimated average annual sustainable yield of the south area (which includes the City of Elk Grove) is 273,000 AFY.

### Existing Water System Facilities and Historic Project Site Water Use

Currently, public water service is not provided within the Laguna Ridge Specific Plan area. Water for agricultural activities on the project site is currently provided by private wells. The private wells on-site and in the project area generally extract water from the upper aquifer of the Laguna Formation at a depth of 200 to 300 feet. The Elk Grove Auto Mall (outside the Specific Plan) is served with public water through Zone 40. The project area would receive water through the Franklin Inter-tie used to convey water from the City of Sacramento facilities to users in the City of Elk Grove. The closest available public water transmission main is a 14-inch/18-inch transmission main located within Elk Grove Boulevard directly north of the project site. As discussed later in this section, water storage, treatment facilities, and water transmission mains are proposed for construction within the East Franklin Specific Plan (EFSP) area directly west of the plan area. This is planned to serve initial development within the EFSP.

The Laguna Ridge Specific Plan area has been an ongoing agricultural operation for more than 150 years. It is estimated that approximately 2,700 acre-feet per year (AFY) of groundwater is used to irrigate crops within the Laguna Ridge Specific Plan Area.<sup>2</sup> **Figure 4.6.1-2** indicates the areas on the project site that historically have been irrigated, based on irrigation information from August 1980 and June 1991. Historically irrigated sites, presumed to have contained predominantly row crops, comprise 471 acres of the project area (SCWA, 2001).

#### 4.6.1.2 REGULATORY FRAMEWORK

##### STATE

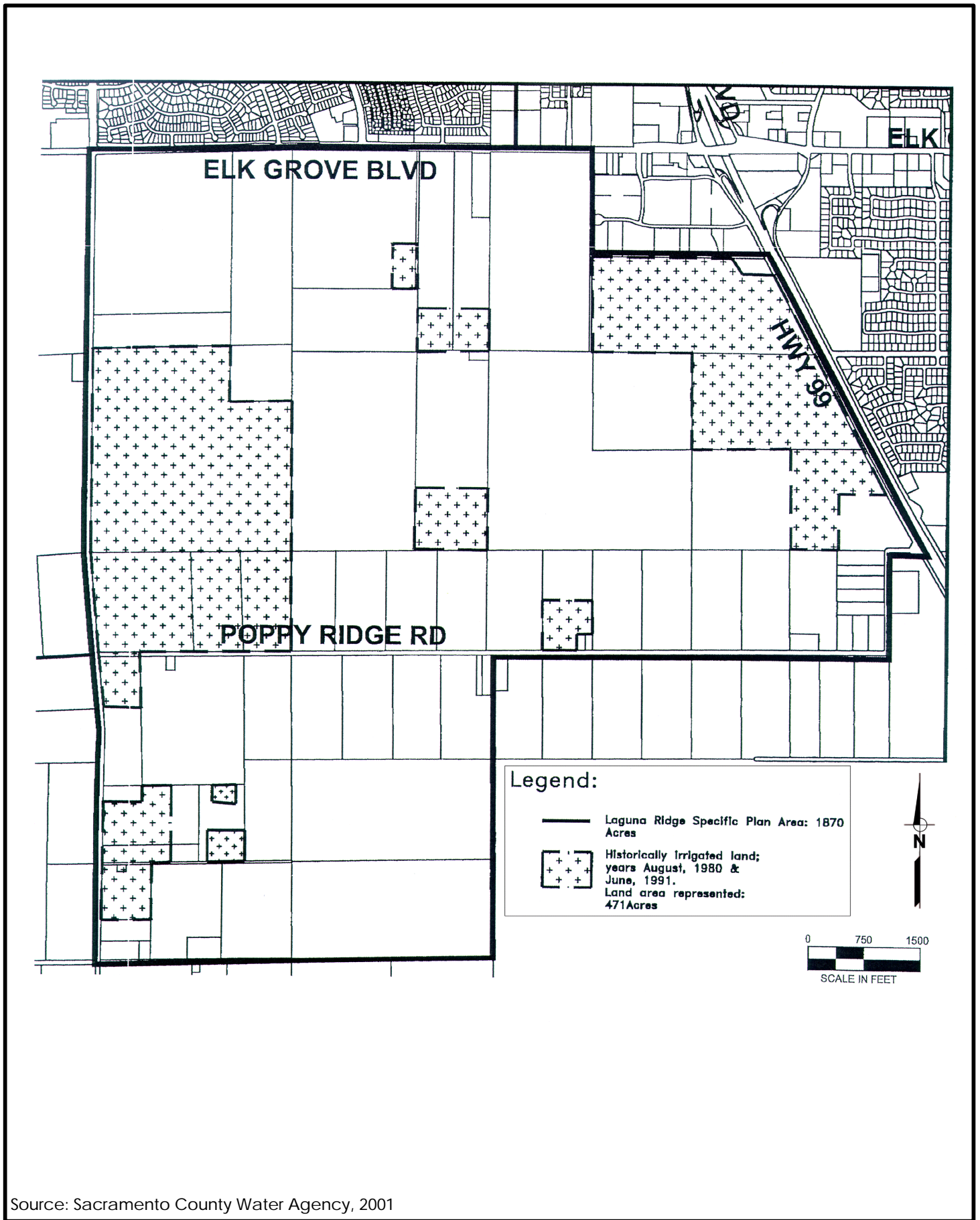
##### Urban Water Management Planning Act - Assembly Bill (SB) 797

The Urban Water Management Planning Act was established by Assembly Bill 797 (AB 797) on September 21, 1983. Passage of this law was recognition by state legislators that water is a limited resource and a declaration that efficient water use and conservation would be actively pursued throughout the state. The law requires water suppliers in California, providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet per year of water, to prepare and adopt a specific plan every five years which defines their current and future water use, sources of supply and its reliability, and existing conservation measures. The current Urban Water Management Plan (UWMP) was adopted in 2000. The UWMP 2000 serves as the *Urban Water Management Plan* for the SCWA and its primary water contractors, and describes the availability of water, water use, reclamation, and water conservation activities. This plan concludes that with the given assumptions of the water

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<sup>1</sup> Sustainable yield is defined as the amount of groundwater which can be safely pumped from the groundwater basin over a long period of time while maintaining acceptable groundwater elevations and avoiding undesirable effects which might include increased pumping costs, accelerated movement of underground pollutants, etc.

<sup>2</sup> Based on a demand rate of 5.7 acre feet/acre/annually and 475 (25%) acres under active cultivation.



Source: Sacramento County Water Agency, 2001



Figure 4.6.1-2  
Historically Irrigated Lands

supplies available to the Agency's water transmission system, and to the water contractors, are adequate over the next 20-year planning period.

### **Senate Bill (SB) 610 and Assembly Bill (AB) 901**

During the 2001 regular session of the State Legislature, SB 610 and AB 910 – Water Supply Planning bills were signed and became effective January 1, 2002. SB 610 amends Public Resources Code section 21151.9, requiring any EIR, negative declaration, or mitigated negative declaration for a qualifying project to include consultation with affected water supply agencies (prior law applied only to Notices of Preparation). SB 610 also amends the following:

- Water Code 10656 and 10657 to restrict state funding for agencies that fail to submit their urban water management plan to the Department of Water Resource;
- Water Code section 10910 to describe the water supply assessment that must be undertaken for projects referred under PRC section 21151.9, including an analysis of groundwater supplies. Water agencies are given 90 days from the start of consultation in which to provide a water supply assessment of the CEQA lead agency; Water Code section 10910 also specifies the circumstances under which a project for which a water supply assessment was once prepared would be required to obtain another assessment.

AB 910 amends Water Code section 10631, expanding the contents of the urban water management plans to include further information on future water supply projects and programs and groundwater supplies.

### LOCAL

#### **Water Forum Agreement**

The Water Forum is a diverse group of business and agricultural leaders, citizens groups, environmentalist, water managers and local governments in Sacramento County. The Water Forum was developed to address water related issues facing the Sacramento region, which include water shortages, environmental degradation, groundwater contamination and reliability, and economic prosperity. The Water Forum resulted in the establishment of principles to guide regional development and the development of the Water Forum Agreement (WFA). The comprehensive WFA allows the region to meet its needs in a balanced way through implementation of seven elements. The elements include detailed understandings among stakeholders on how this region will deal with key issues, which include groundwater management practices, water diversions, dry year water usage, water conservation measures, and the protection of the Lower American River. The understandings were forged and included in the Memorandum of Understanding for the Water Forum Agreement, which created the overall political and moral commitment to the WFA. The WFA established the following two main coequal objectives: "Provide a reliable and safe water supply for the region's economic health and planned development to the year 2030" and "Preserve the fishery, wildlife, recreational, and aesthetic values of the Lower American River."

The Sacramento Metropolitan Water Authority Groundwater Committee and the Sacramento Water Forum Groundwater Negotiation Team developed the Groundwater Management Element of the WFA jointly. The purpose of the groundwater management element is to protect the viability of groundwater resources for current and future uses. Through the creation of a publicly accountable governance structure, with respect to all groundwater users, the element requires the monitoring of total water withdrawn from the groundwater basin and the promotion

## 4.6 PUBLIC SERVICES AND UTILITIES

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groundwater use in conjunction with surface water supplies to maximize the availability of both. To achieve the objectives of the WFA, the Groundwater Management Element addresses both conjunctive use and sustainable yield.

Conjunctive use is the planned management and use of both groundwater and surface water in order to improve the overall reliability of the region's total water supply. For instance, in wet years when ample supplies of surface water are available, groundwater pumping may be reduced or ceased, with only surface water used, which would result in the groundwater basin being replenished in wetter years. In dryer years when surface water is in shorter supply, the water that accumulated during wetter years would be pumped for use, with surface water diversions being reduced or eliminated entirely. It should be noted that additional surface water diversions are required to implement the conjunctive use program. Conjunctive use is also expressed in acre-feet per year and according to Zone 40 Master Plan estimates; an average of 76,300 AF/yr of surface water is needed to sustain the conjunctive use program.

As defined above, sustainable yield is the amount of groundwater that can be safely pumped from the groundwater basin over a long period of time while maintaining acceptable groundwater elevations and avoiding undesirable effects. Sustainable yield requires a balance between pumping and basin recharge and is expressed as the number of acre-feet of water per year, which can be pumped from the basin on a long-term average basis.

The Baseline Report (existing conditions) used for the WFA and the current Sacramento County Water Agency (SCWA) Zone 40 Master Plan provided a basis for the WFA definition of a sustainable yield for each of the three Sacramento County groundwater basins. The WFA defined three groundwater basins underlying Sacramento County (North Area, Central Area, and the South Area) on the hydraulic boundaries resulting from each of the river sources. The agreed upon long-term average annual limit (sustainable yield) for each of the three geographic sub-areas of the groundwater basin within Sacramento County: 131,000 acre-feet (AF) for the North Area (north of the American River); 273,000 AF for the Central Area (between the American and Cosumnes rivers); and 115,000 AF for the Galt Area (south of the Cosumnes River). Any proposed water supply project must satisfy the groundwater conditions specified in the WFA for the 2030-projected level of development. Additionally, the WFA predicted that the projected pumping in the Central Area (273,000 AF/yr) would result in the cone of depression in the Elk Grove area stabilizing at approximately 50 feet below existing levels.

### **Water Forum Successor Effort Element**

The WFA was signed by forty stakeholder organizations and agencies in April of 2000 and provided the establishment of the Water Forum Successor Effort (WFSE), which is responsible for overseeing, monitoring and reporting on the implementation of the WFA. The WFSE Element of the WFA is composed of representatives of the stakeholder organizations that are WFA signatories. The WFSE continues the interest-based collaborative process that was used in developing the WFA. The WFSE has no independent governing or regulatory authority. One of the objectives of the WFSE is to continue a public process designed to provide all community interests the opportunity to participate in developing a groundwater management program which takes into account local needs and circumstances. The Sacramento County Department of Water Resources (DWR) entered into a MOU with the Sacramento City-County Office of Metropolitan Water Planning to act on behalf of the WFSE. The MOU for the WFSE calls for the following:

- Identify and convene stakeholders representing all segments of the community that have an interest in developing a groundwater management plan.



- Conduct an educational effort among the stakeholders to establish a common understanding of the groundwater basin conditions.
- Negotiate a groundwater management program, including identification of basin management objectives and some form of governance, if appropriate.

As stated above, the WFA is not a decision-making body and it holds no governing or regulatory authority. The recommendations of the WFA are presented to the WFSE for review and approval and forwarded to the relevant agencies for implementation.

CITY OF ELK GROVE

**Draft General Plan**

Water supply and distribution issues are addressed in the Conservation and Air Quality, and Public Facilities and Financing Elements of the Draft General Plan. **Table 4.6.1-1** identifies the Draft General Plan water supply and distribution policies that are directly applicable to the proposed project, and presents an evaluation of the consistency of the project with these statements as required by CEQA. While the EIR analyzes the project’s consistency with the General Plan, the final authority for interpretation of these policy statements, and determination of the project’s consistency, rests with the City Council.

**TABLE 4.6.1-1  
DRAFT GENERAL PLAN CONSISTENCY – WATER**

Draft General Plan Policies	Consistency with General Plan	Analysis
<p><b>Policy PF-3:</b> Water supply and delivery systems shall be available in time to meet the demand created by new development, or shall be assured through the use of bonds or other sureties to the City’s satisfaction.</p>	<p>Yes</p>	<p>The project site is located within Zone 40 of the Sacramento County Water Agency (SCWA). Zone 40 Master Plan calls for the conjunctive use of water conservation, groundwater, surface water and reclaimed water. Project water would be supplied from all these sources. Mitigation Measure 4.6.1.1a states that subsequent project applications shall not be approved by the City until proof that supplemental water supplies are in place and approval from SCWA has been received.</p>
<p><b>Policy PF-4:</b> The City supports the use of reclaimed water for irrigation wherever feasible.</p>	<p>Yes</p>	<p>The project proposes the use of recycled water for irrigation. In addition, implementation of mitigation measures MM 4.6.1.1b and c would further reduce project water demands.</p>
<p><b>Policy PF-5:</b> The City shall seek to protect the quality and quantity of groundwater</p>	<p>Yes</p>	<p>The proposed water system for the Laguna Ridge Specific Plan is designed to be generally consistent with the overall</p>

## 4.6 PUBLIC SERVICES AND UTILITIES

Draft General Plan Policies	Consistency with General Plan	Analysis
quality and quantity of groundwater resources, including those which serve households and businesses which rely on private wells.		Zone 40 Water Master Plan, which is intended to protect the quality and quantity of groundwater resources serving the Zone 40 Service Area.
<p><b>Policy PF-6:</b></p> <p>The City shall require that water flow and pressure be provided at sufficient levels to meet domestic, commercial, industrial, and firefighting needs.</p>	Yes	Fire flows shall meet the Elk Grove Community Services District Fire Flow Requirements for all development within the Laguna Ridge Specific Plan area.
<p><b>Policy CAQ-1:</b></p> <p>Reduce the amount of water used by residential and non-residential uses by encouraging water conservation.</p>	Yes	See analysis of Policy PF-4 above

### Draft General Plan Policy PF-3 Compliance

Draft General Plan policy PF-3, provided below, guides the process of development with regards to water supply.

**PF-3** Water supply and delivery systems shall be available in time to meet the demand created by new development, or shall be assured through the use of bonds or other sureties to the City's satisfaction.

### 4.6.1.3 IMPACTS AND MITIGATION MEASURES

#### THRESHOLDS OF SIGNIFICANCE

For this analysis, a project could have a significant effect on the environment if:

- The project would require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which would cause significant environmental effects;
- The project would not have sufficient water supplies available to serve the project from existing entitlements and resources, or new or expanded entitlements are needed; or
- The project would substantially degrade groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted).

#### METHODOLOGY

Analysis of potential water service impacts of the proposed project was based on consultations with City staff and service providers (SCWA), review of the Elk Grove Draft General Plan and

Zoning Code, and the Laguna Ridge Specific Plan Water Study prepared by Wood-Rodgers dated January 30, 2003 (see Appendix 4.6). An initial Water Study was prepared based on the original land use map, which was revised in 2002. The revised Water Study addresses changes in the Laguna Ridge Specific Plan land use diagram and provides greater detail in terms of distribution systems, demand locations and water treatment facilities.

**On-Site Impacts**

**Impact 4.6.1.1** The estimated water demands of the proposed project would increase demand for water supply to the project area, including new systems, supplies, and facilities. This is considered a **potentially significant** impact.

**Project Water Demand**

**Potable Water**

The Laguna Ridge Specific Plan Area Water Study, prepared by Wood-Rodgers Inc., was utilized to determine the ultimate water demands of the proposed project. The proposed project includes single-family, multi-family, commercial and other mixed land uses. In addition to the proposed development, agricultural operations have been ongoing in the Plan area for more than 150 years. It is estimated that 471 acres in the Laguna Ridge Specific Plan area have been irrigated historically (SCWA, 2000). Approximately 2,700 AFY of groundwater is used to irrigate the 471 acres. **Table 4.6.1-2** illustrates the estimated annual potable water demands for the Laguna Ridge Specific Plan area and includes 2,700 AFY allocated for existing agricultural uses.

**TABLE 4.6.1-2  
ESTIMATED ANNUAL WATER DEMANDS  
POTABLE WATER DEMAND PROJECTION FOR THE LAGUNA RIDGE PLAN AREA**

Land Use Designation	Symbol	Total Acres	Unit Demand (ac-ft/yr/ac)	Average Day Demand (ac-ft/yr)
Single Family	RD-4	168.1	3.57	600
Single Family	RD-5	737.6	3.57	2,633
Single Family	RD-6	111.7	3.57	399
Single Family	RD-7	123.6	3.57	441
Multi-Family	RD-10	43.1	4.58	197
Multi-Family	RD-20	75.0	4.58	344
Commercial	GC/CCMU/MP/ CIVIC/SC/WTP	335.2	3.40	1140
Schools	ES/MS/HS	100	2.50	250
Parks	LP/NP/CP/PKY	132.2	4.28	566
Arterial Roads	--	73.7	0	0.00
Subtotal	--	1,900.2	--	6,570

## 4.6 PUBLIC SERVICES AND UTILITIES

Land Use Designation	Symbol	Total Acres	Unit Demand (ac-ft/yr/ac)	Average Day Demand (ac-ft/yr)
7.5% Unaccounted for System Losses (System losses include minor leaks, unmetered water during construction, system maintenance and flushing)				493
Existing Agricultural Land Uses (471 acres)				2,700
Irrigation Uses				1,016
Total Water Demand				7,063

Source: Wood Rodgers, Inc., 2003

As indicated in **Table 4.6.1-2**, the total potable water demand for the Plan area is approximately 7,063 ac-ft/yr. The total potable water demand is approximately 3,347 AFY in excess of the 2,700 AFY of water use generated by existing agricultural uses on-site, and the approximately 1,016 AFY of recycled water would also be used for irrigation purposes.

### Recycled Water

Recycled water would also be used in the Plan area to irrigate landscaped right-of-ways, commercial areas, schools and parks. The use of recycled water would assist in conserving potable water supplies. The recycled water supply would originate at the Sacramento County Regional Wastewater Treatment Plant and be transported to the Plan area via a pipeline constructed either along the Union Pacific Railroad (UPRR) right-of-way or along Franklin Boulevard. The estimated annual recycled water demand for the Plan area is shown in **Table 4.6.1-3**. The proposed project would include 132.2 acres of park land, 100 acres of school sites and other landscaped areas; the estimated annual recycled water demand for these areas at buildout, is approximately 1,016 AFY.

**TABLE 4.6.1-3**  
**ESTIMATED ANNUAL WATER DEMANDS**  
**RECYCLED WATER DEMAND PROJECTION FOR THE LAGUNA RIDGE PLAN AREA**

Land Use	Acreage	Demand Factor (ac-ft/ac/yr)	Demand (ac-ft/yr)
Arterial Roads	73.7	4.28	315
Schools	100.0	4.28	300
Parks	104.2	4.28	401
Totals	305.9	--	1016

Source: Laguna Ridge Specific Plan Water Study, January 2003.

Notes: 1. Landscaped portion of the arterial roads, school and park areas are estimated at 20%, 70%, and 90%, respectively.

2. Local parks are not included and the channel corridor area was reduced by 50%.

The project's recycled water system would consist of a 16-inch transmission main from Bruceville

Road east to State Route 99 (SR-99). Branching from the main transmission line, a network of six-inch and 12-inch mains would serve the necessary landscaping needs within the Plan area. Final pipe sizes and alignments may change and are dependent on the Phasing of development within the Plan area. **Figure 4.6.1-3** shows the locations of the recycled water mains for the Plan area.

### Water Supply

The SCWA recently updated its long term Master Plan (Zone 40 Water Supply Master Plan, December 2002) that identifies a flexible approach to supplying water to customers. The Master Plan considers demand associated with buildout of uses allowed by the General Plan within the Urban Service Area boundary and identifies improvements and new sources of water needed to ensure adequate supplies are available. The project site is within the Zone 40 wholesale service area and the Zone 41 retail service area. Consistent with the *Master Plan* and the *Water Forum Agreement*, water demand generated by the Laguna Ridge Specific Plan project (7,063 acre-feet per year) would ultimately be met by using a combination of groundwater, surface water, and recycled water through Zone 40's conjunctive use program.

Initially, the Plan area would acquire all water supplies (groundwater) from on-site wells and would not rely on surface water from surrounding areas. The groundwater would be extracted from the deep aquifer, treated for iron, manganese, and arsenic and then pumped into the distribution system. Groundwater would only be used until surface and recycled infrastructure and facilities are in place to implement Zone 40's conjunctive use program, discussed below.

As previously discussed, conjunctive use is the planned management and use of groundwater, surface, and recycled water in order to improve the overall reliability of the region's total water supply. For instance, in wet years when ample supplies of surface water are available, groundwater pumping may be reduced or ceased, with only surface water used, which would result in the groundwater basin being replenished in wetter years. In dryer years when surface water is in shorter supply, the water that accumulated during wetter years would be pumped for use, with surface water diversions being reduced or eliminated entirely.

Sustainable yield is the amount of groundwater that can be safely pumped from the groundwater basin over a long period of time while maintaining acceptable groundwater elevations and avoiding undesirable effects. Sustainable yield requires a balance between pumping and basin recharge and is expressed as the number of acre-feet of water per year, which can be pumped from the basin on a long-term average basis. The Baseline Report (existing conditions) used for the WFA and the current Sacramento County Water Agency (SCWA) Zone 40 Master Plan provided a basis for the WFA definition of a sustainable yield for each of the three Sacramento County groundwater basins.

The WFA defined three groundwater basins underlying Sacramento County (North Area, Central Area, and the South Area) on the hydraulic boundaries resulting from each of the river sources. The agreed upon long-term average annual limit (sustainable yield) for each of the three geographic sub-areas of the groundwater basin within Sacramento County: 131,000 acre-feet (AF) for the North Area (north of the American River); 273,000 AF for the Central Area (between the American and Cosumnes rivers); and 115,000 AF for the Galt Area (south of the Cosumnes River). Any proposed water supply project must satisfy the groundwater conditions specified in the WFA for the 2030-projected level of development. Additionally, the WFA predicted that the projected pumping in the Central Area (273,000 AF/yr) would result in the cone of depression in the Elk Grove area stabilizing at approximately 50 feet below existing levels.

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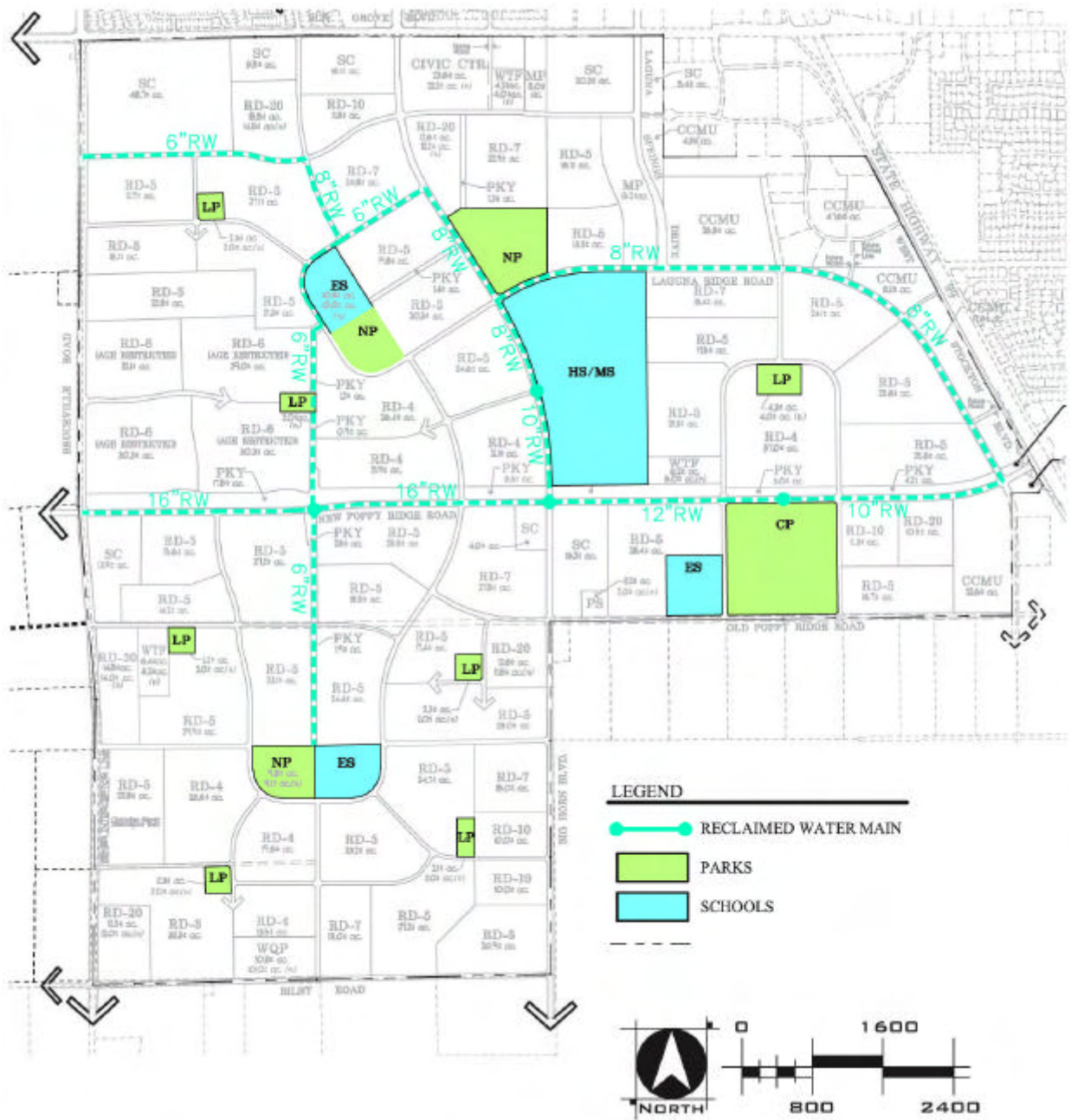
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Projected water demand in the Zone 40 service area totals 113,100 AFY through 2030. Surface water supplies for the area as reported in the *Water Forum Agreement* are anticipated to total up to 78,000 AFY. Of the estimated South County groundwater basin annual sustainable yield of 273,000 AFY, 41,000 AFY is planned to make up the balance of this demand. As indicated in **Tables 4.6.1-2** and **4.6.1-3**, the ultimate water demand for the project would be 7,063 AFY. However, 2,700 AFY would be used for existing agricultural uses on site, bringing the project's total new demand to 4,363 AFY. There would be additionally 1,016 AFY of recycled water used for irrigation, which would bring the final total demand to 3,347 AFY. The ultimate water demand in Zone 40 is 113,100 AFY; therefore, the project's demand would be approximately 0.03 percent of Zone 40's total demand through 2030. Consequently, adequate water supplies would be available to serve the proposed project along with current demand projections in Zone 40's the service area.

### PROPOSED WATER SYSTEM FACILITIES

The proposed water system for the Laguna Ridge Specific Plan is designed to be generally consistent with the overall Zone 40 Water Master Plan, which consists of an interconnected grid of facilities that provide treatment, storage, conveyance, and pump stations designed to serve all uses within the Zone 40 Service Area. Transmission line locations and sizes identified in the Master Plan have been designed to meet the demand for water generated by all uses in the service area. Currently, there are no potable water, recycled supplies, or distribution facilities within the Plan area. The nearest water transmission main is a 14-inch line along Elk Grove Boulevard. There is an 18-inch transmission main located within the Bruceville Road right-of-way, approximately 1,000 feet north of Elk Grove Boulevard and a 24-inch main from the New Poppy Ridge Road to Elk Grove Boulevard, which was constructed as part of the East Franklin Specific Plan.

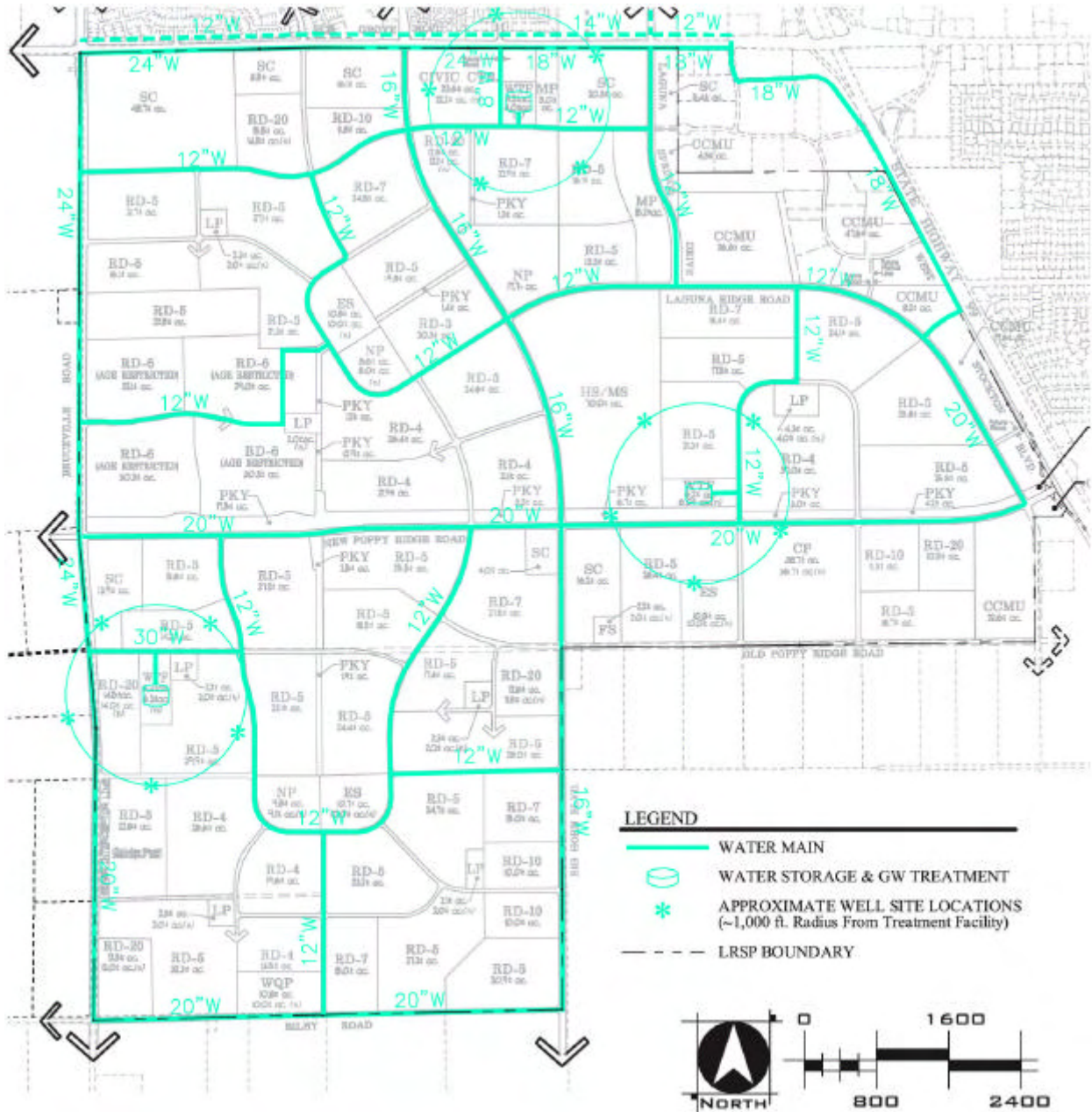
The proposed water system layout of the Plan area is shown on **Figure 4.6.1-4**. This figure also depicts the relationship of this water system to the larger Water Master Plan. It is noted that the water transmission mains shown on the Laguna Ridge Water Facilities Master Plan have been



Source: Wood Rogers, 2002



Figure 4.6.1-3  
Recycled Water Line Plan



Source: Wood Rogers, 2002



City of Elk Grove Planning

Figure 4.6.1-4  
Backbone Water Plan



sized to accept surface water from the existing system and to distribute the water that would be provided at the proposed storage/treatment facilities.

The project would be served by three water treatment facilities (Poppy Ridge, Laguna Ridge, and Big Horn), each consisting of a series of six planned wells. The proposed locations of the three facilities are depicted on **Figure 4.6.1-4**. The Poppy Ridge Water Treatment Plant (PRWTP) is currently under design and the bid has been awarded. The construction completion date is not known at this time. The Laguna Ridge Water Treatment Plant (LRWTP) is currently under design, and would be constructed and brought on line as future development within the Plan area occurs. The Big Horn Water Treatment Plant (BHWTP) would also be constructed within the Plan area and would replace the existing facilities north of Elk Grove Boulevard. The BHWTP would comply with future arsenic standards as well as serving future development south of Elk Grove Boulevard. It should be noted that the proposed water treatment facilities would also supply water to the East Franklin Specific Plan and Lent Ranch/ South Pointe service areas. The estimated water allocations for these areas are depicted on **Figure 7-4** in **Appendix 4.6**. Future developments within the Lent Ranch and South Point service areas are dependent on the construction of the LRWTP.

Approximately 16 groundwater wells would be required to adequately serve the Plan area and are detailed as follows:

- Six wells are planned for the PRWTP including up to 4 wells possibly being located within the Plan area. Additionally, 3 wells may be needed to accommodate the second phase expansion of the PRWTP. The first phase would be served by one on-site well and other wells located within the East Franklin Specific Plan area, west of Bruceville Road.
- Six wells are planned to serve the LRWTP.
- Six wells are planned to serve the BHWTP
- SCWA may elect to reserve replacement wells sites within park and school areas or similarly compatible public use areas.

The location of groundwater production wells may vary as a result of recent and future hydro-geologic studies and the number of wells serving each WTP may also vary. Additionally, the proposed water distribution system is designed to meet buildout demand and the Laguna Ridge Specific Plan includes a phasing plan that provides a timeline for water supply facilities.

### Fire Flows

The Laguna Ridge Specific Plan area water study prepared by Wood-Rodgers (January, 2003) concludes that the Zone 40 water system facilities would be capable of providing both domestic and fire flows which meet or exceed flows specified by the ISO and Elk Grove Community Services District Fire Department. Draft General Plan Policy PF-6 requires that water supply and delivery systems be available in time to meet the demand created by new development, or shall be assured through the use of bonds or other sureties to the City's satisfaction. The Fire Department relies of the 2001 California Fire Code Fire Flow Requirements for Buildings. The Fire Code requires fire flow of 1,500 gallons per minute (gpm) for one and two-family dwellings up to 3,600 square feet in area (gpm increases for dwellings in excess of 3,600 sq. ft.) and 3,000 gpm for commercial uses, at a minimum of 20 psi within the water system.

## 4.6 PUBLIC SERVICES AND UTILITIES

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### Mitigation Measures

**MM 4.6.1.1a** Prior to each tentative subdivision and/or parcel map approval, the project applicant shall submit to the City, information documenting adequate availability of water supplies and associated infrastructure facilities for the proposed development consistent with facilities and phasing set forth in the Laguna Ridge Specific Plan Water Study (Wood-Rogers, 2003). Subsequent project applications shall not be approved by the City until proof has been provided that water supplies are available and approval from SCWA has been received.

*Timing/Implementation:* Prior to tentative subdivision and/or parcel map approval.

*Enforcement/Monitoring:* City of Elk Grove Development Services, and Sacramento County Water Agency.

**MM 4.6.1.1b** As a condition of subsequent development applications, uses constructed on the property shall incorporate into the building plans water conservation measures including drought tolerant landscaping with low fuel potential, low-flow toilets, urinals, shower heads, lavatory faucets, and sink faucets, as well as insulation to reduce water used before hot water reaches equipment or fixtures.

*Timing/Implementation:* Prior to issuance of each building permit.

*Enforcement/Monitoring:* City of Elk Grove Development Services.

Implementation of mitigation measures 4.6.1.1a through 4.6.1.1d would assist in reducing the project's impacts associated to water supply to **less than significant**.

### OFF-SITE IMPACTS

The alignment of any off-site infrastructure would follow existing/proposed roadways and easement areas. Impacts associated with construction of water lines and other water facilities are evaluated in the respective technical sections of this EIR, including air quality, biota, noise, and traffic. The connection of the new facilities to the existing system would not create any impact to existing service because the system has been designed consistent with the overall Water Master Plan and service disruptions, if required, would be temporary.

### 4.6.1.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

#### SETTING

Mitigating cumulative impacts of providing water to the project site and nearby developments is the premise behind the preparation of the *Water Forum Agreement*, January 2000. (This document is incorporated into the EIR by reference). The cumulative impacts of development in the growth areas within the Urban Services Boundary have been taken into consideration during the preparation of *Water Forum Agreement*. The *Water Forum Agreement* indicates that cumulative development in the southern Sacramento County area served by Zone 40 would generate a projected water demand of 117,600 AFY in the Central Area, which includes the proposed project. Additionally, the South Area, which includes the City of Galt, has a projected water demand of approximately 115,000 AFY, through 2030. These figures include water demand generated at buildout of the East Franklin Specific Plan, Lent Ranch Marketplace, and

the South Pointe planning area, which would receive allocations of water from Laguna Ridge facilities. The City of Elk Grove Draft General Plan also includes the consideration of urban study areas outside of the Sacramento County's Urban Services Boundary that could result in an additional water demand of approximately 16,000 afy.

### CUMULATIVE IMPACTS AND MITIGATION MEASURES

**Impact 4.6.1.2** The project, when considered with other development projects in the area, would result in a cumulative demand for water supply and could impact flows along the Cosumnes River. This is considered a **cumulative significant** impact.

The proposed project would receive its water from Zone 40. As reported in the *Water Forum Agreement*, to accommodate future demand of 117,600 AFY, Zone 40 would rely on a surface water supply consisting of 45,000 AFY of firm entitlement and 33,000 AFY of intermittent surface supplies (the intermittent supply is subject to reduction in the drier and driest years). The balance of the total demand would be met through the conjunctive use of groundwater supplies. The *Water Forum Agreement* reports a sustainable yield for the groundwater basin of 273,000 AFY, of which approximately 155,000 would support agricultural uses and 117,600 AFY would support South County municipal and industrial use. Of the 117,600 AFY, an average of approximately 41,000 AFY would be available for use in Zone 40 over the long-term. Currently, 250,000 AFY of the 273,000 AFY sustainable yield is being drawn. Conjunctive use is the planned management and use groundwater, surface water, and recycled water in order to improve the overall reliability of a region's total water supply. For example, in wet years when surface water is plentiful, groundwater pumping may be reduced or eliminated and only surface water is used. The groundwater basin would be replenished in these wet years. In dry years when surface water is in short supply, the water that has been accumulating in the basin would be pumped for use and surface water diversions reduced or eliminated.

The *Water Forum Agreement* reports that the amount of groundwater used would vary from approximately 95,100 AFY in the driest years decreasing to approximately 34,000 AFY in the wet years. In either scenario, the average amount of groundwater used over the long term would be less than the sustainable yield of 273,000 AFY. The project would increase the cumulative demand for water supplies. Under buildout conditions, the project's ultimate water demand would be approximately 7,063 AFY; however, 2,700 AFY would be used for irrigating the 471 acres of agricultural land currently existing in the Plan area. The project's ultimate water demand, which included both potable and recycled water sources) would be approximately 4,363 AFY. Of the 4,363 AFY, 1,016 AFY would be supplied through recycled water from the SRWWTP, leaving the ultimate potable water demand for the Laguna Ridge Specific Plan Area at approximately 3,347 AFY, which is approximately 0.03 percent of Zone 40's projected demand through 2030. Based on the above estimates and projections, adequate water supply would be available to serve the project and meet the Zone 40's projected water demands through 2030.

Additionally, development projects within the Urban Service Boundary cannot occur until agreements and financing for water supplies are in place. Each development project in the service area, including the proposed project (see mitigation measure MM 4.6.1.a), would be required to demonstrate water availability as part of the subdivision approval process. Even if subsequent developments demonstrate water availability prior to the project approval, beyond the amount allowed under the Plan area's historical agricultural use (2,700 AFY), subsequent development of the Plan area would contribute to cumulative increases in groundwater production that may adversely affect flows on the Lower Cosumnes River.

## 4.6 PUBLIC SERVICES AND UTILITIES

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As discussed in Section 4.7 (Hydrology and Water Quality), several recent studies have been conducted to identify the interactions between the Cosumnes River, the regional aquifer system, and regional groundwater levels. Usually there is some form of hydraulic connection between a river and the groundwater system (aquifer), which means that changes in pressure or stage in one system may have an effect on the other system and the exchange between the two. Baseflow is contributions to river flow from the groundwater or aquifer system. A hydraulic disconnection means that the groundwater levels lie below the elevation of the river channel bottom for extended reaches of the river. Under hydraulic connection the river can receive flow contributions from the aquifer system and be a gaining or influent river or it can lose flow to the groundwater aquifer and be a losing or effluent river. Additionally, the pumping of groundwater may affect baseflow contributions along various reaches of a river; thereby, influencing aquifer and river interactions.

The studies indicated the regional aquifer system and the Lower Cosumnes River are hydraulically disconnected for extended reaches of the river. The hydraulic disconnection is most pronounced in the middle reaches of the river (river miles 11 to 25.8), which is between State Route 99 (SR 99) and Meiss Road. Depth to the regional groundwater table from the river channel elevation steadily increases from 7 to 20 feet in the Dillard Road area (river mile 27.5) to approximately 35 to 55 feet near Wilton Road (river mile 17.3). Between Wilton Road and Highway 99 (river mile 11) depth to the regional groundwater table decreases to approximately 15 to 30 feet and decreases even further to approximately 3 to 15 feet around the Twin Cities Road area (river mile 5). In some portions of the river downstream of Twin Cities Road, the water table (aquifer) lies above the channel elevation and appears to be hydraulically connected with the river.

Increased groundwater pumping or a significant lowering of the groundwater tables in these areas could have an adverse effect on river flows. Results of the studies indicate that there is strong evidence of a causal relationship; however, unequivocal proof of this relationship is difficult to establish due to the limited amount of historical records on ground- and surface-water conditions in Sacramento County. Additionally, the studies indicated that a better understanding of local and regional geologic heterogeneity as well as more reliable numerical models would be needed to accurately assess the river/aquifer interactions. Due to the project's proximity to river's channel near Twin Cities Road, which is more than 2-miles southeast of the site, implementation of the project is not expected to have a direct impact upon Cosumnes River flows, groundwater levels or the regional aquifer system. However, the project would contribute to increased groundwater production under cumulative conditions, which may alter current interactions between groundwater pumping and Cosumnes River flows and result in reduced flows. A reduction in flows within the Cosumnes River could result in adverse impacts to fishery and other aquatic resources as well as potential impacts to riparian habitat conditions along the river. Currently, the Sacramento County Water Agency is conducting detailed groundwater modeling associated with the Zone 40 Master Plan Update to evaluate potential effects on the Cosumnes River from increased groundwater production. However, no results from this modeling effort were available at the time of the release of this document.

### Mitigation Measure

As previously noted above, the Sacramento County Water Agency would provide water service to the Plan area rather than the City. Since the City does not provide water service and does not have direct jurisdiction over water service and facilities, there are no feasible mitigation measures available to the City to avoid this potential significant cumulative impact. Depending upon the County's modeling efforts, this cumulative impact could be **significant and unavoidable**, as is accordingly deemed as such for purposes of this EIR.

## **4.6.2 WASTEWATER**

This section evaluates the impacts of the proposed project on wastewater collection and treatment. The *Sewer Master Plan for Laguna Ridge Specific Plan*, dated November 16, 2000 and updated September 4, 2002 (see **Appendix 4.6**); the *Final Report Sacramento Sewerage Expansion Study- 1994 Update*, prepared by Montgomery Watson, August 1994; and the *Sacramento Sewerage Expansion Master Plan* (November 1996) and the *Final Draft, Sewerage Facilities Expansion Master Plan* (October 2000) were used in the preparation of this section.

### **4.6.2.1 EXISTING CONDITIONS**

Public wastewater service is provided in the urbanized portions of Sacramento County, including the City of Elk Grove, by the Sacramento Regional County Sanitation District (SRCSD) and County Sanitation District No. 1 (CSD-1). SRCSD is responsible for the regional interceptor collection system (sanitary wastewater facilities that are designed to carry flows in excess of 10 million gallons per day [mgd]), and treatment of wastewater. CSD-1 is responsible for the local collection system, including trunks (wastewater facilities that carry flows of 1 to 10 mgd) and laterals (wastewater facilities that carry flows of less than 1 mgd). CSD-1 provides local wastewater collection and transport from its facilities to the regional wastewater transmission, treatment and disposal facilities operated by SRCSD. Administration of both agencies is overseen by the Water Quality Division of the County Public Works Agency, which provides engineering and planning services and operates and maintains district facilities.

Treated effluent from the Sacramento urban area is ultimately discharged to the Sacramento River at SRCSD's Regional Wastewater Treatment Plant, located approximately 8.5 miles northwest of the project site near the unincorporated town of Freeport. The treatment plant has an average dry weather flow design capacity of 181 mgd, and treats an average of 155 mgd.

The project area is located within the sphere of influence of both the SRCSD and CSD-1 and was annexed to both districts in the summer of 2000. **Figure 4.6.2-1**, Existing Wastewater Facilities, illustrates the location of wastewater facilities in relation to the Laguna Ridge Specific Plan project site. As the map illustrates, wastewater facilities do not currently serve the project on-site. At the present time, the only existing public sewer facilities in the area are small sewer laterals ranging in size from six inches to 15 inches in diameter located just north of Elk Grove Boulevard north of the plan area. The existing Auto Mall site is currently served by a 12-inch lateral in Elk Grove Boulevard. County Water Quality Division staff has indicated that these sewer facilities currently are near capacity and will not be able to provide sewer service to new development south of Elk Grove Boulevard. Interim sewer facilities are being constructed to serve new development in the East Franklin Specific Plan (EFSP) area west of Bruceville Road. An interim lift station has been constructed in the vicinity of Franklin High School on Poppy Ridge Road which conveys sewage to an interceptor line in Bruceville Road. Existing residences within the LRSP area currently rely on septic systems for service. Capacity exists north of the plan area in Laguna Boulevard, where an existing 24-inch to 42-inch trunk/interceptor system extends from the Bruceville Road/Laguna Boulevard intersection west and north to the Regional Treatment Plant.

## 4.6 PUBLIC SERVICES AND UTILITIES

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### REGULATORY FRAMEWORK

#### Sacramento Regional County Sanitation District

##### Sewerage Expansion Master Plan and Studies

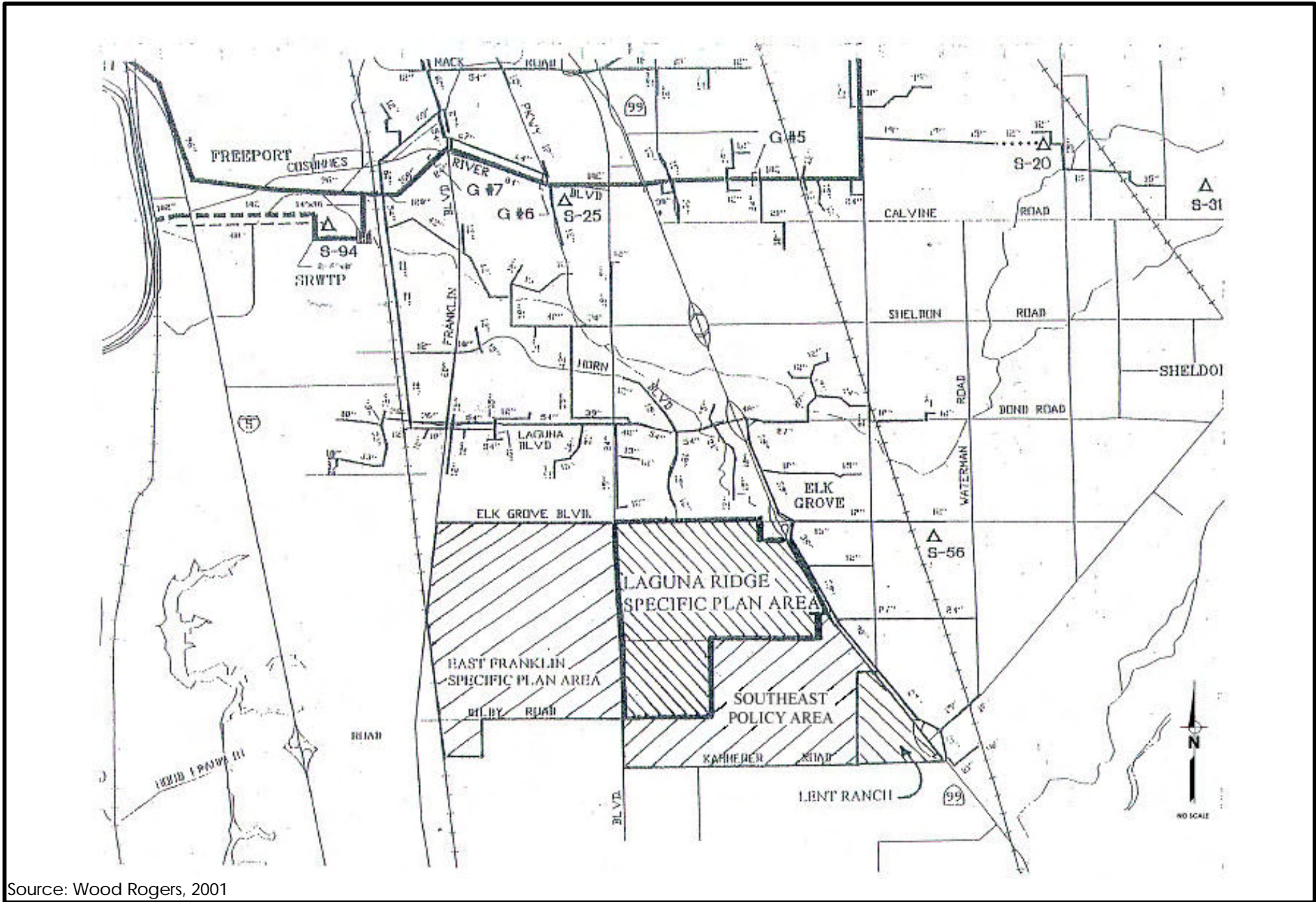
In 1993, the SRCSD and CSD-1 finalized the *Report for the Sacramento Sewerage Expansion Study*, by James M. Montgomery Consulting Engineers, Inc. The purpose of the study was to identify recommendations for improvements to and expansion of the SRCSD interceptor and CSD-1 trunk wastewater systems. An update to this report was prepared due to changes to the UPA and USB boundaries. *Final Report Sacramento Sewerage Expansion Study-1994 Update*, by Montgomery Watson, August 1994, identified wastewater interceptor projects that are intended to serve the project site as well as surrounding areas. In November of 1996, the SRCSD and CSD-1 Board of Directors approved the *Sacramento Sewerage Expansion Master Plan*. The Master Plan considers wastewater generation associated with buildout of uses allowed by the Sacramento County General Plan through the year 2014, and identifies improvements needed to ensure sufficient capacity in conveyance and treatment facilities. The Plan also identifies costs associated with construction and operation of these facilities. SRCSD also recently adopted their Master Plan 2000.

Lastly, the Sacramento County Water Quality Resources Division in conjunction with Montgomery Watson has prepared an overall master wastewater plan for the entire area. The overall study area is shown on **Figure 4.6.2-2** and is included as part of *the Final Draft Sewerage Facilities Expansion Master Plan* (October 2000). The Laguna Ridge Specific Plan is included in this analysis. The *Laguna Ridge Sewer Master Plan* (November 2000, updated September 2002) further defines those required facilities based on more defined land use and topography, and offers a higher degree of detail for lateral and trunk systems.

#### City of Elk Grove

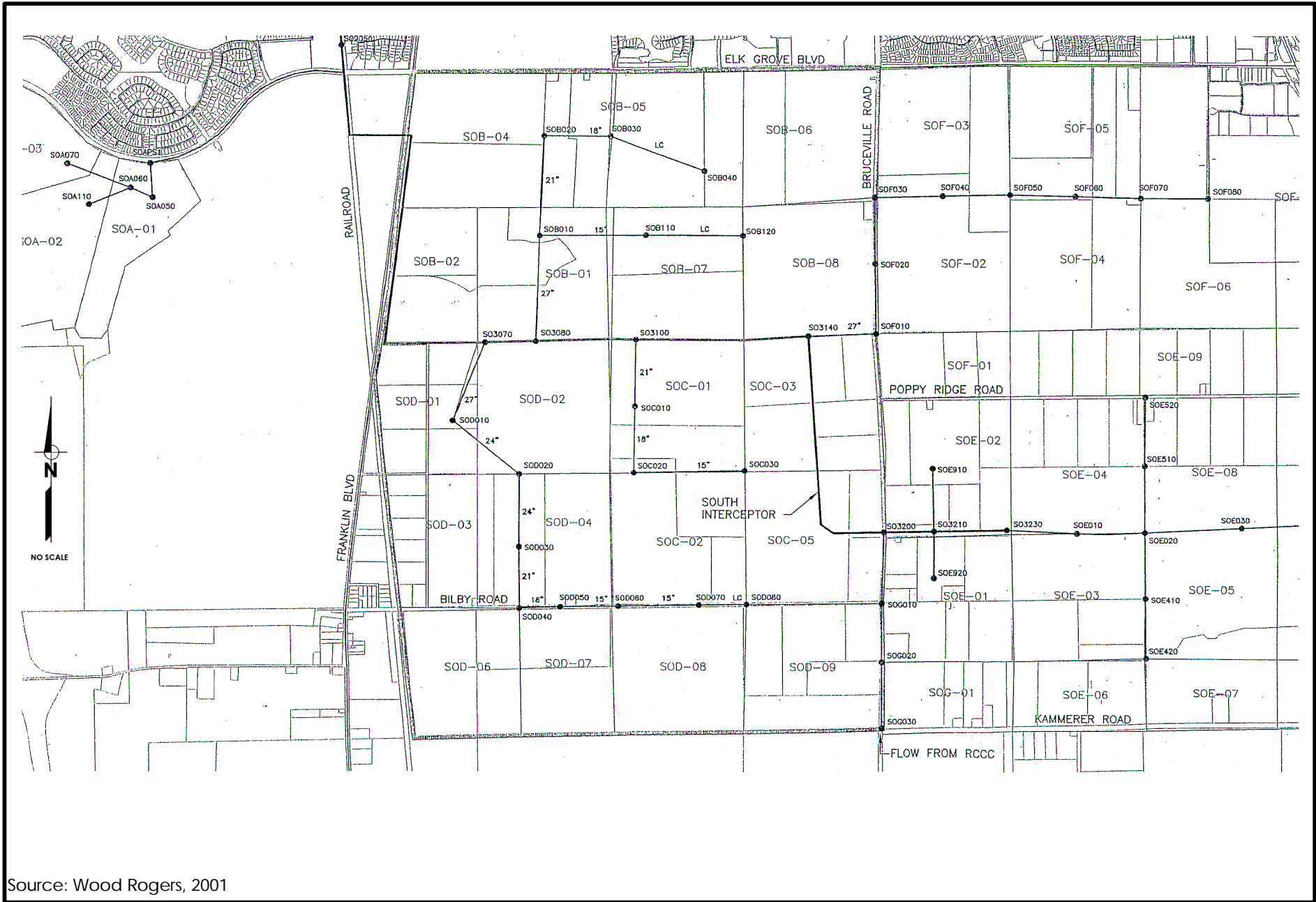
##### Draft General Plan

Wastewater issues are addressed in the Public Facilities and Financing Element of the Draft General Plan. **Table 4.6.2-1** identifies the Draft General Plan policies related to wastewater are



Source: Wood Rogers, 2001





Source: Wood Rogers, 2001



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Figure 4.6.2-2  
Overall Wastewater Study Area



directly applicable to the proposed project, and presents an evaluation of the consistency of the project with these statements as required by CEQA. While the EIR analyzes the project's consistency with the General Plan, the final authority for interpretation of these policy statements, and determination of the project's consistency, rests with the City Council.

**TABLE 4.6.2-1  
DRAFT GENERAL PLAN POLICY CONSISTENCY – WASTEWATER**

Draft General Plan Policies	Consistency with General Plan	Analysis
<p><b>Policy PF-7:</b> Sewage conveyance and treatment capacity shall be available in time to meet the demand created by new development, or shall be assured through the use of bonds or other sureties to the City's satisfaction</p>	<p>Yes, with Mitigation</p>	<p>Mitigation Measure MM 4.6.2.1 requires that prior to the approval of any subsequent project, the project applicant must demonstrate that a permanent sewer system is either available or will be available to adequately serve the project upon its development. A Preliminary Sewer Plan and Design Report have been prepared in accordance with the standards and requirements of the SRCSD and CSD-1. The project applicant would also be required to pay sewer connection and capacity fees that are used to fund expansion of trunk and interceptor facilities.</p>
<p><b>Policy PF-8:</b> Development along corridors identified by sewer providers in their Master Plans as locations of future sewerage conveyance facilities shall incorporate appropriate easements as a condition of approval.</p>	<p>Yes</p>	<p>The Laguna Ridge Specific Plan area would be served by County Sanitation District-1 (CSD-1). A Preliminary Sewer Plan and Design Report have been prepared in accordance with the standards and requirements of the SRCSD and CSD-1. The sewer system would be designed to comply with these standards and requirements, as well as the Draft General Plan policies and which address the locations of future sewerage conveyance facilities.</p>
<p><b>Policy PF-12:</b> Residential development on lots smaller than two (2) net acres shall be required to connect to public sewer service. This policy shall not apply to lots smaller than 2 net acres in the Rural Residential land use category which existed as legal lots as of the date of adoption of this General Plan; these lots shall not be required to connect to public sewer service as a condition of</p>	<p>Yes</p>	<p>See analysis of Policy PF-8 above.</p>

## 4.6 PUBLIC SERVICES AND UTILITIES

Draft General Plan Policies	Consistency with General Plan	Analysis
development.		
<b>Policy PF-13:</b> Independent community sewer systems may not be established for new development.	Yes	Development within the Laguna Ridge Specific Plan area would be served by County Sanitation District-1 (CSD-1).

### 4.6.2.3 PROJECT IMPACTS AND MITIGATION MEASURES

#### THRESHOLDS OF SIGNIFICANCE

For the purposes of this analysis, a project could have a significant effect on the environment if it would:

- Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board;
- Require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects; or
- Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has inadequate capacity within the collection system to serve the project's projected demand in addition to the provider's existing commitments.

#### METHODOLOGY

Evaluation of potential wastewater impacts of the proposed project was based on consultations with City staff and service providers, review of the Elk Grove General Plan and Zoning Code, and analysis of the Preliminary Sewer Master Plan prepared by Wood-Rodgers (2002) (see **Appendix 4.6**).

#### IMPACTS AND MITIGATION MEASURES

##### Predicted Wastewater Flows and Treatment

The total design wastewater flow was calculated using average daily flow values provided by the Sacramento County Water Quality Division for each land use designation, applying a factor for peak flows and also adding a value which accounts for groundwater and storm water infiltration. This methodology is recommended in the *Final Report Sacramento Sewerage Expansion Study- 1994 Update*, by Montgomery Watson.

**Table 4.6.2-2** shows the estimated Laguna Ridge Specific Plan average daily wastewater flows. As indicated in the table, the project would generate an average of approximately 3.67 million gallons per day of wastewater.

TABLE 4.6.2-2  
LAGUNA RIDGE SPECIFIC PLAN AVERAGE DAILY WASTEWATER FLOWS

Land Use Designation	Project Acres	Equivalent Single Family Dwellings (ESD)	Gallons per Day (GPD) per ESD	Estimated Flows (GPD in millions)
Single Family	1,184	7,104	310	2.202
Multi-Family	75	1,500	310	0.465
Commercial/ Office/Industrial	308	1,848	310	0.573
Schools	100	600	310	0.186
Parks/Open Space	132	792	310	0.245
<b>Total</b>	<b>1,799</b>		<b>310</b>	<b>3.671</b>

Source: Project flows were converted to ESD consistent with the Sacramento County Water Quality Division Sewer Master Plan.

Note: Acreage above excludes arterial roadways and infrastructure  
Civic Center and Fire Station acreage included in Commercial acreage.

Project generated wastewater would be treated at the SRCSD Wastewater Treatment Plant. The addition of 3.67 mgd would increase average daily dry weather flows at the plant to approximately 158.7 mgd (3.67 mgd plus 155 mgd existing), which is well below the plant's permitted design capacity of 181 mgd. Consequently, a **less than significant** would occur as a result of project implementation.

### Proposed Wastewater Conveyance System

#### On-Site Impacts

**Impact 4.6.2.1** The project could potentially impact the existing sewer network if construction of project improvements would not occur consistent with need, and if the proposed system was not properly designed and constructed. This is considered **potentially significant**.

The Preliminary Master Sewer Plan, see **Figure 4.6.2-2** for study area, of which the proposed project is a part, was prepared considering the area topography, land use designations, potential development timing, and the Sacramento County Water Quality Division's technical design requirements. The project would ultimately be served by the SRCSD South Interceptor to be extended from the SRCSD wastewater treatment plant through the East Franklin Specific Plan area. Preliminary alignments for the South Interceptor have been determined from the plant through the East Franklin Specific Plan and into the Laguna Ridge Specific Plan area.

**Figure 4.6.2-3** illustrates the location of on-site wastewater collection facilities. As shown, the on-site sanitary sewer system would consist of a series of laterals that extend into a network of trunk and interceptor sewer lines ranging in size from 8 to 33 inches in diameter.

A Public Facilities Financing Plan would be adopted to provide a strategy for funding the public facilities required to serve the proposed Laguna Ridge Specific Plan project. It would provide a

## 4.6 PUBLIC SERVICES AND UTILITIES

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detailed analysis of the costs to provide necessary infrastructure, funding sources for these improvements, and timing of construction. Funding needed to construct the sewerage infrastructure planned by the Master Plan is provided by the collection of sewer connection fees. The project applicant is responsible for funding and constructing the interim sewer system. Because the area is located within the USB as planned for urban growth and services, long term project impacts on the planned wastewater service would not be considered significant, so long as all future sewers are designed consistent with the sewer master plan. The timing of the improvements, however, is unknown and the impact is potentially significant. It should be noted that prior to tentative map approval, the developer would be required to prove that adequate sewer capacity exists. The interim sewer is described below.

### Mitigation Measure

**MM 4.6.2.1** Prior to the each tentative subdivision or parcel map, the project applicant shall be required to demonstrate that the permanent sewer system, consistent with the Preliminary Sewer Master Plan for the Laguna Ridge Specific Plan (Wood-Rodgers, 2002) adequately serves the subsequent project. This demonstration may take the form of plans and/or reports, which shall be reviewed and approved by the City consistent with the Specific Plan infrastructure phasing provisions. The project applicant shall also pay the required sewer connection and capacity fees that are used to fund expansion of trunk and interceptor facilities.

*Timing/Implementation:* Prior to the approval of each tentative subdivision or parcel map.

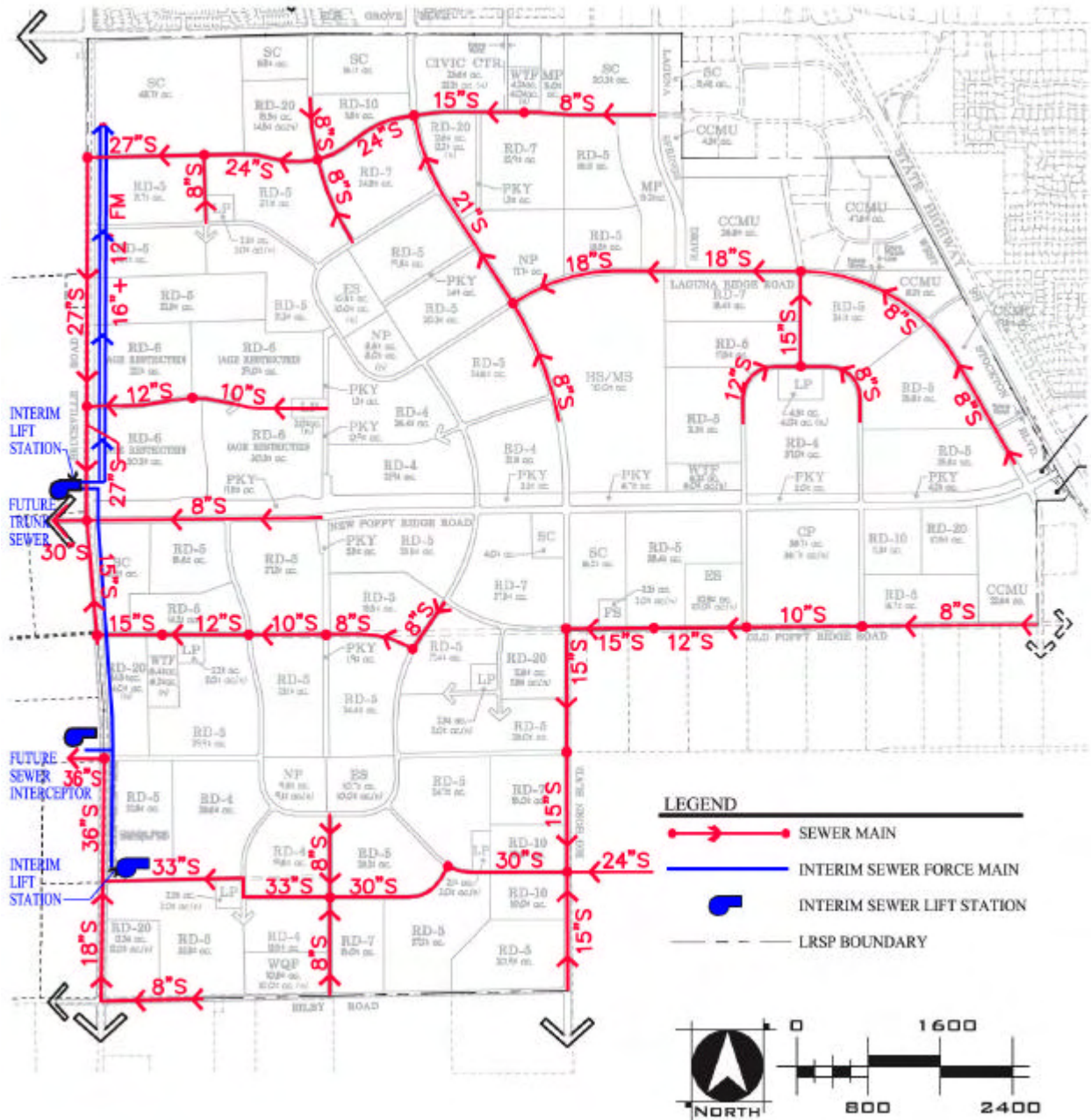
*Enforcement/Monitoring:* City of Elk Grove Development Services, Sacramento Regional County Sanitation District and County Sanitation District-1.

Implementation of the above mitigation measure would reduce any potential impact, to timely provision of wastewater services, to **less than significant**.

**Impact 4.6.2.2** Use of the existing sewer facilities, north of Elk Grove Boulevard as an interim connection to the sanitary sewer network may exceed capacity of the existing system. This is considered a **potentially significant** impact.

SRCSO is planning to ultimately construct the 72-inch diameter South Interceptor to serve areas south of Elk Grove Boulevard. Currently, its construction is scheduled as part of the Phase V Capital Sewerage Expansion projects after the year 2014. Current discussions with the Water Quality Division indicate that this timing may be accelerated such that the interceptor design and construction process may begin as early as 2005 (depending on flows generated in future development areas, i.e., existing new hookups in the tributary shed area). As this schedule would precede the construction of the South Interceptor to the area south of Elk Grove Boulevard, including the LRSP area, interim sewer improvements would need to be constructed to provide sewer service to new development within LRSP.

In coordination with the Water Quality Division, a potential alternative to provide interim sewer service to the LRSP area has been identified. Viability depends both on timing of development within the LRSP area and EFSP, as well as financial impacts. It should be noted that prior to



Source: Wood Rogers, 2002



tentative map approval, the developer would be required to prove that adequate sewer capacity exists. The interim sewer is described below.

Interim facilities (see **Figure 4.6.2-4**) assume that the 60-inch sewer line planned to connect the existing 60-inch dry sewer line at the intersection of Dwight Road and Franklin Boulevard with the SRWTP would be constructed to support development in the LRSP. Per the Water Quality Division, this connection is considered a high priority facility to relieve capacity constraints in 1) the existing system north of Elk Grove Boulevard; and 2) proposed interim connections for EFSP and LRSP south of Elk Grove Boulevard. This connection would allow enough sewer capacity for interim phases in both the EFSP and LRSP to be constructed until the South Interceptor is completed. In order to serve the LRSP, a lift station would be constructed at the intersection of Bruceville Road and Poppy Ridge Road (north lift station) where the 27-inch trunk sewer extends east into the LRSP area. A 12- to 16-inch force main constructed with this lift station would travel north along Bruceville Road to Laguna Boulevard where it would connect to the existing 42-inch gravity sewer. This lift station and force main would initially be sized based on needed capacity for initial development in the LRSP (approximately 2.0 MGD and 12-inch diameter force main) and then upgraded to the maximum needed capacity of approximately 5.5 MGD (16-inch force main) when more capacity is needed. The South Interceptor would be extended near the intersection of Poppy Ridge and Bruceville Road. The County Sewerage Master Plan anticipates completion of the South Interceptor in 2013.

An additional lift station (south lift station) may be built where the South Interceptor extends into the LRSP. This lift station would be sized for initial development in the southern shed of the LRSP (approximately 2.0 MGD). The force main with this lift station would travel north along Bruceville Road to the north lift station. The LRSP south lift station could be upgraded to approximately 3.0 MGD as more capacity is required.

This method of double lift stations for interim service to Laguna Ridge is costly, but would avoid construction of throwaway gravity systems pending construction of the interceptors to serve the project area. No permanent septic systems are proposed within the new development. Once the SRCSD interceptor line has been extended to the site, the lift stations would be removed and wastewater would flow by gravity through the trunk and interceptor system.

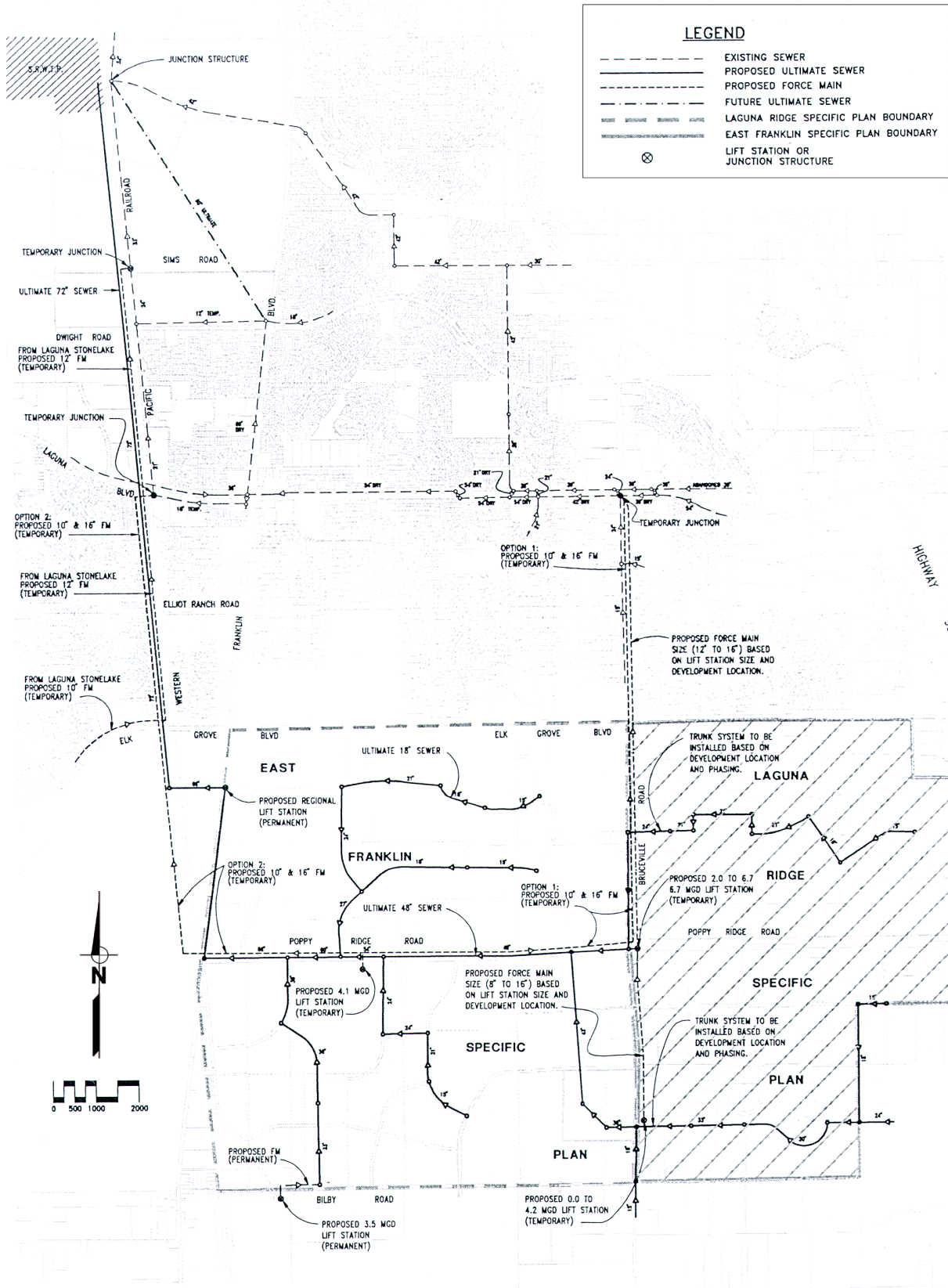
### Mitigation Measure

**MM 4.6.2.2** Prior to approval of each tentative subdivision or parcel map that would utilize the interim sewer facilities, the project applicant shall be required to demonstrate that there is adequate sewer capacity to support the proposed project. This will include confirmation from Sacramento Regional County Sanitation District and County Sanitation District-1 on the availability of sewer capacity.

*Timing/Implementation:* Prior to the approval of each tentative subdivision and parcel map.

*Monitoring/Enforcement:* City of Elk Grove Development Services, Sacramento Regional County Sanitation District, and County Sanitation District-1.

Implementation of the above mitigation measure would reduce impacts to wastewater capacity to **less than significant**.



### Off-Site Impacts

Construction and operation of off-site improvements would create **less than significant** impacts on existing customers. The existing sewerage treatment plant has adequate capacity to treat project-generated wastewater without the need for expansion, so impacts to this facility would not occur. Trunk and interceptor sewer lines needed to convey effluent would be placed in roadways; associated impacts are limited and addressed in the respective technical sections of this EIR, including air quality, biota, noise, and traffic.

#### 4.6.2.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

##### SETTING

Over the past several years the SRCSD and the CSD-1 have prepared numerous studies intended to analyze the need for expanded wastewater capacity as a result of planned development, including the East Franklin Specific Plan, Laguna Ridge Specific Plan area, the South Pointe planning area and Lent Ranch area. As discussed above, those studies include the Report for the Sacramento Sewerage Expansion Study, by James M. Montgomery, Consulting Engineers, Inc., Final Report Sacramento Sewerage Expansion Study-1994 Update, by Montgomery Watson, August 1994, the Sacramento Sewerage Expansion Master Plan prepared in 1996 and the Final Draft Report Sewerage facilities Expansion Master Plan, October 2000. SRCSD also recently adopted their Master Plan 2000.

The purpose of these studies is to address growth within the Urban Service Boundary and the need for capital improvements to accommodate planned and approved growth. Buildout of uses within the SRCSD service area is predicted to generate 417 mgd of wastewater requiring collection and treatment. Additional trunk and interceptor sewer lines, lift stations, and treatment plant capacity would be necessary to accommodate future growth. The existing Master Plans have identified preliminary sewer line sizing, sewer alignment, and location of lift stations necessary to convey effluent to the SRCSD treatment facility. A master plan for wastewater treatment is also under preparation to identify improvements necessary to treat the wastewater. For the next 10 to 15 years, the existing treatment facility will undergo expansion and renovation to accommodate projected wastewater. Beyond that horizon, it is likely that an additional plant would be constructed. Potential urban development of the urban study areas identified in the City of Elk Grove Draft General Plan would result in new unplanned wastewater service demands.

##### IMPACTS AND MITIGATION MEASURES

Each development project is required, prior to the recording of the Final Map, to ensure that adequate capacity in the receiving trunk sewers and receiving sewerage treatment plant exists to accommodate the effluent generated by that use. Additionally, each project is required to pay a connection fee used to fund expansions needed to accommodate growth. Assuming each project would construct the necessary improvements consistent with the Master Plan, and would pay connection fees to cover the costs for operation of facilities, sewerage infrastructure would be upgraded as necessary to accommodate sewage created by the development of future projects consistent with the Master Plan.

All new development would be required to pay connection fees and construct necessary improvements consistent with all SRCSD Master Plans, so cumulative impacts would not be anticipated. Impacts related to project demand for wastewater treatment facilities have been mitigated through mitigation measures MM 4.6.2.1 and MM 4.6.2.2. Therefore, the project's contribution to cumulative impacts would be **less than significant**.



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### **4.6.3 SOLID WASTE**

The information contained within this section includes information from the Source Reduction and Recycling Element (SRRE) for the Unincorporated Area of Sacramento County (September 1991), and information from the Household Hazardous Waste Element (1999). The City of Elk Grove has adopted these documents.

#### **4.6.3.1 EXISTING CONDITIONS**

##### **SACRAMENTO COUNTY WASTE DIVERSION**

The City of Elk Grove has the responsibility to develop plans and strategies to manage solid waste that is generated within its jurisdiction. These plans are articulated in the City's Source Reduction and Recycling Element. The Sacramento Regional County Solid Waste Authority (SWA) has the responsibility to develop plans and strategies to manage and coordinate the solid waste generated (including hazardous waste) in the unincorporated areas of the County and address the disposal needs of Sacramento County as a whole. Each City within the County submits their individual Source Reduction and Recycling Elements to the County, which incorporates them into a single Countywide Integrated Waste Management Plan.

Currently, most solid waste is disposed of in local landfills. In 1998, an estimated 37.7 percent of the County's waste from unincorporated areas was diverted through various source reduction, recycling and re-use efforts. In order to achieve 50 percent diversion, the Sacramento County Waste Management and Recycling Division (WMRD) has converted its existing recycling collection program to a co-mingled program and has completed the implementation of greenwaste collection for residents in the Regional Agency service area. The Regional Agency expects to be achieving 50 percent diversion in the residential section upon full implementation of these two major collection programs.

The WMRD relies on private refuse haulers (commercial permittees) and local solid waste facilities, to comply with "Solid Waste Authority Ordinance No. 2" and "Resolution 96-01." This ordinance mandates refuse haulers, as a condition of their refuse hauling permit, to divert 30 percent of the waste they currently collect from commercial and multi-family accounts in the unincorporated area, the City of Citrus Heights and the City of Sacramento. WMRD staff estimates that compliance with this ordinance, combined with existing diversion by private recycling companies, would increase overall diversion rates in the commercial/multi-family and self-haul sectors (and for the Regional Agency) to 50 percent.

##### **Existing Solid Waste Generation**

Licensed solid waste authorities hauled 292,000 tons of waste materials in 2000. Substantial progress in diverting this waste from landfills has been made. For example, in 1990 approximately 18.3 percent of the solid waste stream was diverted from landfills through various source reduction, recycling and re-use efforts. In 1998, the County of Sacramento achieved a 39 percent waste diversion. In 2002, approximately 90,000 tons of the 292,000 tons was diverted from local landfills and the waste stream, which is an approximate 31 percent diversion.

##### **Existing Solid Waste Collection and Disposal**

As a condition of incorporation, Sacramento County has negotiated for solid waste collection services in the new City of Elk Grove until 2004. The following discussion is based on services currently provided by the County.

### Solid Waste Collection

Commercial, multi-family residential and industrial waste is collected through open competition. The SWA approves a list of haulers with whom businesses can contract for waste collection services. At present, the list maintained by the SWA includes 16 haulers. Each of these haulers must receive a permit from the SWA prior to operating. As with residential collection, commercial and industrial collectors must divert 30 percent of the collected waste prior to disposal. The waste can be taken to any landfill that is willing to accept it and that provides the greatest economic advantages to the hauler, based on location and disposal fees.

The largest commercial, multi-family and industrial haulers in Sacramento County are BFI and Waste Management Inc. Both BFI and Waste Management Inc. take waste to their own transfer facilities and transport the remaining un-recyclable wastes to landfills outside of the County. The specific receiving landfill varies dependent upon tipping fees and transportation costs. BFI completed its transfer facility in May 2000 and stopped hauling refuse to the Kiefer Road Landfill at that time. Waste Management Inc. stopped hauling refuse to the Kiefer Road Landfill in 1999. It is likely, however, that the other private waste haulers in the County haul waste to the Kiefer Road Landfill, given its proximity.

Solid waste within the City limits is typically delivered to Sacramento County's Kiefer Landfill, located at the intersection of Grant Line Road and Kiefer Boulevard. The Kiefer Landfill is the primary municipal solid waste disposal facility in Sacramento County. It is the only landfill facility in Sacramento County permitted to accept household waste from the public. Waste is accepted from the general public, businesses and private waste haulers.

### Landfill Capacity

At present, the Kiefer Road Landfill, which comprises approximately 1,084 acres, is the only landfill within the jurisdiction of Sacramento County that is permitted to accept solid waste for disposal. The maximum tons per day (tpd) allowed at the Kiefer Road Landfill is 10,815 tpd, with an average intake of 6,362 tpd. The landfill has a total capacity of 117 million cubic yards (58 million tons). The Kiefer Road Landfill is classified as a major landfill, which is defined as a facility that receives more than 50,000 tons of solid waste per year. Currently, the Kiefer Road landfill is operating below permitted capacity and will have capacity for the next 30 to 40 years based on current disposal rates (SCDWMR 2002).

### **Service Standards**

Solid waste is generated at an average per capita rate of six pounds per day. Under AB 939, the County Integrated Waste Management Plan will require recycling programs that are expected to result in a 50 percent diversion away from landfills. Refuse from residences in the Plan Area would be collected by an automated truck collection system, identical to that provided to other residential areas of the county. The automated trucks are capable of collecting refuse from approximately 2,500 to 3,000 households per week. Commercial and industrial accounts will be required to obtain service from one of the private refuse collection companies that serve areas of Sacramento County.

## 4.6 PUBLIC SERVICES AND UTILITIES

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### Solid Waste Source Reduction Programs

#### Sacramento County

The County of Sacramento presently operates a solid waste management system (the "Solid Waste System") that is funded by solid waste revenues deposited in the County Refuse Enterprise Fund. The amount of solid waste disposed at the Solid Waste System has declined by almost 50 percent, due primarily to the delivery of waste generated in the City of Sacramento to transfer or disposal facilities other than the Solid Waste System. This loss of waste (and the corresponding loss of revenues associated with such waste) has placed significant financial stress on the Solid Waste System. The County is currently considering a number of additional ways to stabilize the long-term financial aspects of the Solid Waste System. In addition to the Solid Waste System the Department of Waste Management and Recycling implements various recycling programs including, but not limited to, Christmas Tree recycling, curbside recycling, and computer, television and electronics recycling to reduce solid waste generation in the City of Elk Grove and unincorporated portions of the County.

#### City of Elk Grove

AB 939 requires every city and county within the State to prepare a Household Hazardous Waste Element and to provide for management of household hazardous waste generated by the residents within its jurisdiction. In order to cost-effectively comply with AB 939, City staff recommended the City join both the SWA and the Regional Agency by May 2003, if the City is able to obtain an assurance that in five years the City has flexibility to withdraw from the SWA and enter into (exclusive) commercial collection contracts directly between the City and haulers. If the City is not able to secure those assurances, it is recommended that the City discuss the possibility of amending the SWA JPA agreement to allow for that flexibility. Additionally, the City of Elk Grove will update its Source Reduction and Recycling Element (SRRE) to ensure compliance with AB 939. The updated SRRE will include policies and programs that will be implemented by the City to achieve the State waste reduction mandates. Per AB 939, the SRRE projects disposal capacity needs for a fifteen-year period.

### 4.6.3.2 REGULATORY FRAMEWORK

#### STATE REGULATIONS AND POLICIES

##### **California Integrated Waste Management Act**

The California Integrated Waste Management Act of 1989 (AB 939) requires every city and county in the State to prepare a SRRE to its Solid Waste Management Plan that identifies how each jurisdiction will meet the mandatory State waste diversion goals of 25 percent by 1995 and 50 percent by 2000. The purpose of AB 939 is to "reduce, recycle, and re-use solid waste generated in the State to the maximum extent feasible." The term "integrated waste management" refers to the use of a variety of waste management practices to safely and effectively handle the municipal solid waste stream with the least adverse impact on human health and the environment. The Act has established a waste management hierarchy, as follows:

- Source Reduction;
- Recycling;
- Composting;
- Transformation; and

- Disposal

### **California Integrated Waste Management Board Model Ordinance**

Subsequent to the Integrated Waste Management Act, additional legislation was passed to assist local jurisdictions in accomplishing the goals of AB 939. The California Solid Waste Re-use and Recycling Access Act of 1991 (§42900-42911 of the Public Resources Code) directs the California Integrated Waste Management Board (CIWMB) to draft a "model ordinance" (which Sacramento County has adopted) relating to adequate areas for collecting and loading recyclable materials in development projects.

The model ordinance is used by the County as the basis for imposing recycling conditions on new development projects and on existing projects that add 30 percent or more to their existing floor area. The model ordinance requires that any new development project, for which an application is submitted on or after September 1, 1994, include "adequate, accessible, and convenient areas for collecting and loading recyclable materials." For subdivisions of single-family detached homes, recycling areas are required to serve only the needs of the home within that subdivision. The model ordinance also provides standards for recycling areas.

### **City of Elk Grove Source Reduction and Recycling Element**

The City of Elk Grove has adopted the County of Sacramento Source Reduction and Recycling Element (SRRE), which was prepared in response to AB 939. It describes policies and programs that will be implemented by the City to achieve the State waste reduction mandates. Per AB 939, the SRRE projects disposal capacity needs for a fifteen-year period. The current SRRE fifteen-year period ends in 2006.

### **City of Elk Grove Household Hazardous Waste Element (HHWE)**

AB 939 requires every city and county within the State to prepare an HHWE and to provide for management of household hazardous waste generated by the residents within its jurisdiction. The City household hazardous waste management program, consisting of collection and public education/information services, has been formulated to serve residents in a convenient and cost-effective manner. In addition to reducing the amount of waste that might otherwise be sent to a landfill as required by AB 939, these programs are important facets in the City's effort to clean up the solid waste stream.

### **Draft General Plan**

Waste disposal and treatment issues are not specifically addressed in the Draft General Plan. **Table 4.6.3-1** identifies the Draft General Plan policy PF-1 which relates to the assurance of adequate public facilities and would be applicable to the proposed project. An evaluation of the consistency of the project with this policy is provided, as required by CEQA. While the EIR analyzes the project's consistency with the General Plan, the final authority for interpretation of these policy statements, and determination of the project's consistency, rests with the City Council.

## 4.6 PUBLIC SERVICES AND UTILITIES

**TABLE 4.6.3-1  
DRAFT GENERAL PLAN POLICY CONSISTENCY - SOLID WASTE**

Draft General Plan Policies	Consistency with General Plan	Analysis
<p><b>Policy PF-1:</b> Except when prohibited by state law, the City shall require that sufficient capacity in all public services and facilities will be available on time to maintain desired service levels and avoid capacity shortages, traffic congestion, or other negative effects on safety and quality of life.</p>	<p align="center">Yes</p>	<p>Each individual project submitted subsequent to the approval of the LRSP would be required to comply with all pertinent citywide and/or countywide recycling programs, including AB 939 compliance. All new development would be conditioned to meet the requirements of all-applicable solid waste diversion, storage, and disposal regulations that are in effect at the time of development.</p>

### 4.6.3.3 PROJECT IMPACTS AND MITIGATION MEASURES

#### THRESHOLDS OF SIGNIFICANCE

For the purposes of this analysis, a project could have a significant effect on the environment if it would be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs, or if it would violate federal, state, or local standards relating to solid waste. Solid waste collection service and landfill capacity already exist in the project area. Therefore, for the purpose of this EIR, the project would cause a significant solid waste (including hazardous waste) impact if:

- It does not implement measures to reduce the amount of solid waste entering landfills in accordance with State and County standards and/or if future capacity at existing landfills would be inadequate to serve the project that would result in a physical effect on the environment.

#### METHODOLOGY

Evaluation of potential solid waste impacts of the proposed project was based on consultations with City staff and service providers as well as review of the Elk Grove General Plan and Zoning Code. The project would generate solid waste (including hazardous waste) during its construction and operational stages of development. Economics and adopted City of Elk Grove and State regulations dictate where the solid waste is disposed of and how they are recycled. In addition, the amount of solid waste entering landfills versus the amount generated would be based on a number of variables, including market demand for recyclables.

## IMPACTS AND MITIGATION MEASURES

### Construction Impacts

Site preparation (vegetation removal, demolition and grading activities) and construction activities would generate a total of approximately 90 tons of construction wastes per acre, assuming no recycling, or approximately 45 total tons per acre using recycling practices in effect today, such as the use of on-site recycling bins during construction, reuse of scrap lumber, and use of construction material made from recycled products.<sup>3</sup> These waste materials would be expected to be typical construction debris, including wood, paper, glass, plastic, metals, cardboard and green wastes. Cleared and grubbed materials would normally be disced into the site soils, and would not be hauled to the landfill. Construction activities could also generate hazardous waste products. The wastes generated would result in an incremental and intermittent increase in solid waste disposal at landfills and other waste disposal facilities.

Generally, typical construction-related solid waste is composed of small scrap materials and construction employee food waste. The waste generation typically occurs over short time periods and ceases following completion of the construction stage; in the case of the proposed project, construction would occur intermittently over project buildout. As discussed above, the Kiefer Landfill is presently operating below capacity and is permitted to intake 10,815 tpd of waste. Average daily flows are approximately 6,362 tpd. The introduction of 171,000 tons of waste per acre over project buildout represents an incremental increase (23.4 tons/day) in the volume of solid waste disposed at this landfill and can easily be accommodated at the landfill under existing permit conditions.<sup>4</sup>

Off-site impacts would not be associated with construction of the proposed project. As indicated above, the existing Kiefer Road landfill has capacity to accept all construction waste generated by the project as well as cumulative development within the wasteshed. Consequently, expansion of this landfill would not be necessary as a result of project construction. Therefore, impacts associated with solid waste generated by construction activities are anticipated to be **less than significant**.

### Operational Impacts

At buildout, the project would generate approximately 98,963 pounds (49.5 tons) of solid waste per day, or approximately 18,060 tons per year, as shown in **Table 4.6.3-2**. This quantity represents the project's solid waste generation under a worst-case scenario without any recycling activities in place. Under the City Model Ordinance, however, the uses within the project would be required to provide adequate areas for collecting and loading recyclable materials in concert with Countywide efforts and programs to reduce the volume of solid waste entering landfills.

Therefore, it can be assumed that the project would meet the current recycling goals of the community and in actuality would generate approximately 12,642 (or fewer) tons per year (34.5 tons per day) for disposal, because of current County diversion rates and the requirement for haulers to recycle 30 percent of waste generated.

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<sup>3</sup> Assumes a generation rate of 90 tons per acre of construction waste, with one acre of the project site developed with existing structures. This generation rate is based on standard factors used in Ventura County. Sacramento County does not have a construction waste generation factor.

<sup>4</sup> Assuming a 20 year buildout of the Specific Plan Area.  $(1,900 \text{ ac})(90 \text{ tons/ac})(1/20 \text{ yr}) = 23 \text{ tons per day}$ .

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TABLE 4.6.3-2  
DAILY PROJECT SOLID WASTE GENERATION (NO RECYCLING)

Land Use	Units/Square Feet	Generation Factor (pounds/day) <sup>1</sup>	Total Waste Generation (pounds/day)	Total Waste Generation (tons/day)	Total Waste Generation (tons/year)
Residential	7,826 du	6.4110	50,172	25.1	9,156
Commercial <sup>2</sup>	3,696,284 sf	0.0132	48,791	24.4	8,904
<b>Total:</b>			98,963	49.5	18,061

du- dwelling unit; sf = square feet

<sup>1</sup> The solid waste generation rates are those used in the Lent Ranch Marketplace DEIR (October 2000) which are derived from the Ventura County Solid Waste Management Department's Guidelines for Preparation of Environmental Assessments for Solid Waste Impacts.

<sup>2</sup> All of the commercial uses were analyzed under the Shopping Commercial, Community Commercial Mixed Use, Office Park and Civic Center usage amounts.

As discussed above, the Kiefer Road Landfill has a permitted capacity of 10,815 tpd, with at least 30 to 40 years of operating capacity. At project buildout, approximately 98,963 pounds (49.5 tons) of solid waste would be generated on a daily basis. Assuming that all waste is disposed at the Kiefer Landfill (unlikely based on economic forces discussed above) project operation would result in an increase in the average daily disposal rate of 6,411 tpd, which would be within the permitted capacity of the landfill. The project's contribution to the waste stream represents a 0.8 percent increase over the present daily intake at this landfill. Therefore, project generated solid waste would be accommodated at the Kiefer Landfill without significantly impacting the capacity of the landfill. This impact is considered **less than significant**.

### 4.6.3.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

#### SETTING

Sacramento County (wasteshed of Kiefer Landfill) is anticipated to undergo sustained growth through 2022. During this period (2000-2022), a net population increase of 414,308 persons is anticipated in the County.<sup>5</sup> Implementation of the proposed project in conjunction with related and approved projects throughout Sacramento County would increase solid waste generation over the existing Countywide levels. It is noted that each individual project would be required to comply with all pertinent citywide and/or countywide recycling programs, including AB 939 compliance. All new development (including potential development of the City of Elk Grove Draft General Plan urban study areas) would be conditioned to meet the requirements of all-applicable solid waste diversion, storage, and disposal regulations that are in effect at the time of development.

#### IMPACTS AND MITIGATION MEASURES

Based on per capita solid waste generation rates identified in City of Elk Grove `Source Reduction and Recycling Element (September 1991), and assuming implementation of mandatory diversion programs, cumulative development within the Kiefer Landfill wasteshed would generate an additional 609,033 tons of waste annually by the year 2022 (414,308 people x

<sup>5</sup> Sacramento Area Council of Governments, Regional Data Center (January 2002).

1.47 tons/person /year = 609,033 tons/year). When added to the project generated waste of 18,060 tons, an additional 627,093 tons of solid waste would be generated on an annual basis by that time. This represents a net increase in daily intake of approximately 2,090 tpd (609,033 tons/year ÷ 365 days = 1,669 tpd). When added to the existing average daily intake at the landfill of 6,362 tpd, the total daily intake at the landfill in the year 2022 is predicted to be 8,031, which is substantially below the maximum permitted daily intake total of 10,815 tpd. Based on the fact that Kiefer landfill has adequate capacity to accommodate the proposed project as well as buildout of all uses in the service area through the year 2022, and that all uses are subject to mandatory source reduction and recycling efforts, cumulative impact to solid waste capacity and landfill disposal facilities would be **less than significant**.

### 4.6.4 FIRE SERVICES

This section evaluates the impacts of the proposed project on the provision of fire services. Correspondence received from the Elk Grove Community Services District Fire Department provided much of the background information found within this section.

#### 4.6.4.1 EXISTING SETTING

##### EXISTING FIRE PROTECTION SERVICES

Fire protection service is provided to the project area by the Elk Grove Community Services District Fire Department. The Elk Grove Community Services service area is supported by six fire stations, with the addition of Fire Station 76 at 8545 Sheldon Road (between SR-99 and Elk Grove-Florin Road) in 2002. Fire Station No. 71 located at 8760 Elk Grove Boulevard would provide primary fire protection service to the project site until a new fire facility is built on-site. Additional fire protection services are provided by Fire Station 73, 74, and 72, as needed. A description of the operational characteristics of each station is provided below.

- Elk Grove Community Services Fire Station 71 is located at 8760 Elk Grove Boulevard and is approximately 0.57 miles east of the plan area. This station maintains a minimum of five personnel, 24 hours a day. The primary equipment at this station includes a rescue pumper, grass unit, reserve structure pumper and a paramedic ambulance.
- Elk Grove Community Services Fire Station 72, located at 4011 Hood Franklin Road, #B, is being relocated to a site within the East Franklin Specific Plan area. This station will provide fire, swift water rescue, and emergency medical services. Minimum staff at this station will include three personnel, 24 hours per day. Primary equipment at this station will include water tender-pumper, grass unit, swift water rescue boat, and a reserve paramedic ambulance.
- Elk Grove Community Services Fire Station 73 is located at 9607 Bond Road, approximately 2.78 miles northeast of the plan area. This station provides fire, emergency medical and ambulance transport services. This station also maintains a minimum of five personnel, 24 hours per day. Primary equipment at this station includes a water-tender pumper, grass unit, and a paramedic ambulance.
- Elk Grove Community Services Fire Station 74 is located at 6501 Laguna Park Drive, approximately 0.74 miles northwest of the plan area. This station provides fire, rescue, emergency medical, and ambulance transport services. Minimum staffing at this station includes six personnel, 24 hours per day. Primary equipment at this station includes a 105-



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foot aerial ladder truck, urban interface combination grass/structure pumper, and a paramedic ambulance.

- Elk Grove Community Services Fire Station 75 is located at 2300 Maritime Drive, approximately 3.35 miles northwest of the plan area. This station provides fire and emergency medical services. Minimum staff at this station includes three personnel, 24 hours a day. Primary equipment located at this station includes structure pumper, grass unit, heavy foam unit, and a breathing apparatus air compressor refill unit.
- Elk Grove Community Services Fire Station 76 is located at 8545 Sheldon Road. This station provides fire and emergency medical services. Staff at this station includes three personnel, 24 hours per day. Primary equipment located at this station includes a structure pumper and grass unit.
- Elk Grove Community Services Fire Station 76 is located at 8545 Sheldon Road. This station provides fire and emergency medical services. Staff at this station includes three personnel, 24 hours per day. Primary equipment located at this station includes a structure pumper and grass unit.
- Elk Grove Community Services Fire Station 78 is proposed to be constructed approximately one mile southeast of the Plan Area on Kammerer Road in the vicinity of the Lent Ranch project. This station is not currently planned for construction for several years.

Response times for all of the existing fire stations to the Plan Area are all eight minutes or more. This response time exceeds the Department response time standard of five minutes or less, eighty percent of the time in urban areas.

### 4.6.4.2 REGULATORY FRAMEWORK

#### CITY OF ELK GROVE

#### Draft General Plan

Fire services issues are addressed in the Public Facilities and Safety Elements of the General Plan. **Table 4.6.4-1** identifies the General Plan policies related to fire services that are directly applicable to the proposed project, and presents an evaluation of the consistency of the project with these statements as required by CEQA. While the EIR analyzes the project's consistency with the General Plan, the final authority for interpretation of these policy statements, and determination of the project's consistency, rests with the City Council.

**TABLE 4.6.4-1  
DRAFT GENERAL PLAN POLICY CONSISTENCY - FIRE SERVICES**

Draft General Plan Policies	Consistency with General Plan	Analysis
<b>Policy PF-2:</b> The City shall coordinate with outside service agencies, including	Yes	The project would be required to comply with the requirements of the Elk Grove Community Services District Fire

Draft General Plan Policies	Consistency with General Plan	Analysis
outside service agencies - including water and sewer providers, the Elk Grove Community Services District, and the Elk Grove Unified School District--during the review of plans and development projects.		Department regarding access, water mains, fire flow, brush clearance and hydrants.
<p><b>Policy PF-6:</b></p> <p>The City shall require that water flow and pressure be provided at sufficient levels to meet domestic, commercial, industrial, and firefighting needs.</p>	Yes	See Policy PF-2 Analysis above.

**Elk Grove Community Services District**

Fire Master Plan

The EGCSO has adopted a Master Plan that includes service level goals. The plan examines future growth in the service area and identifies the facilities, manpower, and equipment needed to meet these goals. Fire Station #71 is less than a mile from the site. Fire Station #77 is proposed within the plan area near the intersection of Big Horn Road and Old Poppy Ridge Road. Another future fire station (#78) is planned within one mile of the plan area in the Lent Ranch area.

The EGCSO relies upon a Fire Protection Development Fee program in order to fund needed facilities. The fee established under the Laguna South Public Facilities Fee Program would provide the three fire stations and associated apparatus required by the EGCSO to serve the Laguna South area (East Franklin Specific Plan, Laguna Ridge Specific Plan, South Pointe, and Lent Ranch Marketplace). Ongoing operations and maintenance is funded through a variety of different sources including property tax revenue from the EGCSO's general fund, which provides the majority of the District's funds. Additional funds would be generated through fire impact fees (used exclusively for construction of new growth stations and associated apparatus), ambulance transport fees, and service fees (mostly from fire prevention plan checking charges).

Fire Codes and Guidelines

The availability of sufficient on-site water pressure is a basic requirement of the Fire Department. Fire Department requirements are determined for each project at the design stage, based on the Uniform Fire Code. In addition to meeting the necessary fire flow, the proposed project would be required to meet other various fire protection requirements that would be identified during the plan check review process.

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### 4.6.4.3 PROJECT IMPACTS AND MITIGATION MEASURES

#### THRESHOLDS OF SIGNIFICANCE

For the purposes of this analysis, a project could have a significant impact if it would result in:

- Substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities; or,
- The need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services.

Requirements for adequate fire protection identified by the Fire Department would need to be satisfied to reduce impacts to below a level of significance. These requirements include but are not limited to fire flows, emergency access, and additional staff and/or equipment.

#### METHODOLOGY

Evaluation of potential fire service impacts of the proposed project was based on consultations with City staff and service providers, review of the Elk Grove General Plan and Zoning Code, and EGCSO requirements.

#### Construction Impacts

**Impact 4.6.4.1** Emergency crews responding to a call for service at the construction site may not arrive within the minimum response time of five minutes considered acceptable by the EGCSO. This is considered a **potentially significant** impact.

Some or all of the structures within the Plan area would be wood framed. In association with framing operations, electrical, plumbing, communications, and ventilation systems would be installed in each structure. Although rare, fires do occur at construction sites, and it is expected that such fires could occur if the electrical, plumbing, and mechanical systems within buildings are not properly installed during framing operations. The closest existing station is Station #71 located approximately 0.57 miles from the site. Response time to the LRSP would not be within the five-minute criteria.

#### Mitigation Measure

**MM 4.6.4.1** As a condition of subsequent development entitlements, uses constructed in the Plan area shall meet the minimum necessary fire flow and other standard fire protection and life safety requirements identified in the Uniform Fire Code, Uniform Building Code, and other applicable state regulations. Construction sites shall ensure adequate on-site water supply and all-weather access for fire-fighting equipment and emergency vehicles before framing can occur. The applicant shall also pay the Fire Protection Development Fee in effect at the time of building permit issuance. These requirements shall be noted on all construction plans.

*Timing/Implementation:* During construction activities and prior to improvement plan approval.

*Enforcement/Monitoring:* EGCSO and City of Elk Grove Development Services

Implementation of the above mitigation measure would reduce construction-related fire service impacts to **less than significant**.

### Operational Impacts

**Impact 4.6.4.2** Project operation may significantly impact fire department response times during the period between project opening and construction of a new station within the LRSP area. This could result in a **potentially significant** impact.

On-site uses associated with the proposed project consist of residential, commercial, and office/entertainment. These uses are not considered unique or especially hazardous (i.e., uses that utilize or generate hazardous and/or toxic materials in large quantities). Consequently, the project does not present unique fire fighting hazards. Intensification of land uses on the property combined with the increase in human activity within the plan area, when compared to present conditions, would result in an increase in fire hazards and other associated needs for fire protection services, including paramedic services.

The proposed project would include development resulting in an urban concentration of population. Preliminary figures indicate a population increase of approximately 23,217 (3.07 persons per dwelling x 7,189 dwellings and 1.8 persons per dwelling x 637 dwellings) people in the plan area. Using the Department's emergency response census, the Department believes that the likely direct response call volume for the Plan Area would be 6.5 calls per day or approximately 2,400 emergency responses per year. The prior DEIR stated that the response time would be within the five-minute criteria.

The development of new residential, office and other commercial land uses within the plan area and surrounding areas would increase the demand for fire suppression and emergency response services. Existing fire facilities in the vicinity of the plan area are sufficient to serve existing development, but new development would not be adequately served. In order to ensure adequate services in the plan area and its surrounding areas (East Franklin, Lent Ranch, South Pointe and the Southeast Study Area), the Laguna South Public Facilities Fee Program was established to include provisions for fire and emergency services.

The project applicant would be required to pay fees as established in the Laguna South PFFP. The fee program addresses the costs of financing fire station construction and equipment acquisition needed to meet service demands generated by development within the plan area. In addition, the project would generate revenue in the form of sales tax to the City General Fund that can be used to fund operational costs if so desired by the City Council. Given that the project would be required to meet all Uniform Fire Code requirements, would pay development fees to cover the project's share of the cost to provide facilities, equipment, and service to the site, and would generate revenue to fund ongoing service, significant impacts to ongoing fire protection and emergency services would not be expected at project buildout.

The proposed on-site fire station (#77) has yet to be designed and funded, and it is not expected to open for several years after the proposed project has begun development. Until the time that the new station is constructed and staffed, existing fire stations in the area would cover the project. The closest existing station is Station #71 located approximately 0.57 miles from the Plan Area. The response time would be influenced by traffic conditions and the location of the emergency. The estimated response time would exceed the Department's standard of five minutes or less, and would be considered to be a short-term impact that would cease upon completion and operation of proposed Fire Station #77. Several methods are available to reduce this interim impact to below a level considered significant; including

## 4.6 PUBLIC SERVICES AND UTILITIES

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advanced funding of a new station, construction of a temporary station, and/or installation of devices to improve traffic flow.

### Mitigation Measure

**MM 4.6.4.2a** The project applicant shall provide a permanent fire station within the plan area and sufficient funds to purchase associated facilities including an aerial truck, and urban interface engine. These improvements and facilities, included in the Laguna South Public Facilities Fee Program, shall be provided to the satisfaction of the Elk Grove Community Services District Fire Department (EGCSDFD).

Fair-share funding for the above fire facilities and services improvements shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the Fee Program. Project public facility financing plans and/or programs shall establish the timing of these improvements to ensure they are in place to the satisfaction of the EGCSDFD. Establishment of the financing plans and/or programs shall occur prior to the approval of any subsequent development project. Development may occur prior to approval of the project's financing plans and/or programs if the project applicant constructs the EGCSDFD required improvement and purchases associated facilities concurrent with the development of their specific project.

*Timing/Implementation:* Prior to approval of the Project Financing Program and/or Plan

*Enforcement/Monitoring:* EGCSD and City of Elk Grove Development Services

**MM 4.6.4.2b** All signalized intersections installed by the project developer shall be equipped with traffic pre-emption devices at the time of installation.

*Timing/Implementation:* Prior to improvement plan approval

*Enforcement/Monitoring:* EGCSD and City of Elk Grove Development Services

**MM 4.6.4.2c** Prior to approval of individual subdivision improvement plans, the water supply system plans for the subdivisions shall be reviewed by the City to ensure adequate fire flows for the project as specified by the EGCSD Fire Department.

*Timing/Implementation:* Prior to improvement plan approval

*Enforcement/Monitoring:* EGCSD and City of Elk Grove Development Services

**MM 4.6.4.2d** All dead-end streets in excess of 150 feet in the Laguna Ridge Specific Plan area shall have emergency vehicle turn-arounds approved by the Elk Grove Community Services District Fire Department.

*Timing/Implementation:* Prior to improvement plan approval.

*Enforcement/Monitoring:* EGCSD and City of Elk Grove Development Services

**MM 4.6.4.2e** Prior to approval of individual subdivision improvement plans, the project applicant shall demonstrate that all required roadways, water mains, fire hydrants, and fire flow necessary to serve the subdivision shall be provided prior to the existence of any combustible construction of storage and that the installation of on-site or off-site fire protection equipment, including fire hydrants and water mains, meets the standards of the EGCSDFD and the water purveyor. The

roadways shall be constructed to a 20-foot minimum width with an impervious surface to the satisfaction of the Elk Grove CSD and shall have good drainage.

*Timing/Implementation:* Prior to improvement plan approval.

*Enforcement/Monitoring:* EGCSDFD and City of Elk Grove Development Services

**MM 4.6.4.2f** Within the LRSP, the following requirements will be met:

1. Non-combustible fences shall be provided along all developed areas adjacent to wetlands/creeks/open spaces.
2. Access shall be provided to all wetland corridors at the end of cul-de-sacs via rolled curbs and gates to the satisfaction of the EGCSDFD. Bike lanes adjacent to creeks shall be a minimum of 10 feet wide with a turning radius of not less than 35 feet inside and 45 feet outside. All bike paths shall be paved with 2 inches of AC over 4 inches of AB compacts to 95 percent.
3. Any bridges over creeks or wetland areas shall be capable of supporting 65,000 GVW.
4. At least 10 feet of greenbelt or other defensible space between noncombustible fences and the creek/wetland areas shall be provided.

*Timing/Implementation:* Prior to improvement plan approval

*Enforcement/Monitoring:* EGCSDFD and City of Elk Grove Development Services

With the implementation of the above mitigation measures, the proposed project operational impacts on fire service would be **less than significant**.

#### 4.6.4.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

##### SETTING

The ultimate buildout of the plan area together with the East Franklin Specific Plan, Lent Ranch Marketplace, South Pointe, the Southeast Study Area, and other development envisioned by the City of Elk Grove Draft General Plan would affect the service levels provided by the Elk Grove Community Services District Fire Department. Improvements to the Grant Line interchange would further accommodate approved and planned growth in the City of Elk Grove. The EGCSDFD has participated with other agencies in various public infrastructure finance plans (e.g., the Elk Grove/West Vineyard Plan) to fund needed facilities. The South Laguna Public Facilities Fee Program would provide for the financing of fire and emergency services for new development.

##### IMPACTS AND MITIGATION MEASURES

If the Elk Grove Community Services Fire District service area builds out consistent with the City's Draft General Plan and the Sacramento County General Plan, a significant impact on the current level of fire protection services provided by the District would occur unless the equipment and personnel resources were to increase proportionately. It is assumed that other projects proposed within the Elk Grove Community Services Fire District would receive the same level of review as the proposed project. Assuming the City of Elk Grove supports the creation of similar infrastructure finance plans in its new growth areas and each future applicant pays the development fee in effect at the time their project is approved, then the level of fire protection service would increase to keep pace with the increased demands. Revenue generated by

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sales tax to the City's and County's General Funds would be available to fund operational costs if so desired by the City Council and Board of Supervisors. All development projects would be required to meet all Uniform Fire Code requirements, would pay development fees to cover their share of the cost to provide facilities, equipment, and services, and would generate revenue to fund ongoing service, significant impacts to ongoing fire protection and emergency services would not be expected. Therefore, cumulative impacts to fire service would be **less than significant**.

### 4.6.5 POLICE PROTECTION/CRIME PREVENTION

#### 4.6.5.1 EXISTING SETTING

The Sacramento County Sheriff's Department Patrol Services provide specialized law enforcement to unincorporated portions of the County and the contract cities of Citrus Heights and Elk Grove, serving approximately 616,600 people. Patrol Services operate the SCSD towing and parking enforcement, community resources, emergency operations, community-service centers, and specialized patrol units.

The County is divided into six (6) individual Divisions and each Division is divided into Zones. The project area is located within the jurisdiction of the South Patrol Division with a total of 148 personnel. The South Division includes a Captain, 7 lieutenants, 17 sergeants, 117 deputies and 6 civilians. The South Division's station is located at 9250 Bond Road in the City of Elk Grove.

The patrol function is staffed 24 hours each day and is broken up into five different ten-hour shifts. Responsibility of the South Patrol Division extends to the unincorporated area bounded by the American River and the Sacramento City limits on the North, the Sacramento River on the West, Contra Costa and San Joaquin Counties on the South and El Dorado and Amador Counties on the East.

#### CALIFORNIA HIGHWAY PATROL

The California Highway Patrol (CHP) provides traffic regulation enforcement, emergency accident management, and service and assistance on State roadways and other major roadways in unincorporated portions of the southern Sacramento Valley area. The primary responsibilities of the CHP are to patrol State highways and County roadways in the service area, enforce traffic regulations, respond to traffic accidents, and to provide service and assistance for disabled vehicles. In the Sacramento County area, the CHP maintains a Statewide Mutual Aid Agreement with the Sacramento County Sheriff's Department, which provides law enforcement service under contract to the City of Elk Grove.

The CHP provides its services from its station located at 6 Massie Court, near the interchange of Mack Road and SR-99. The CHP patrols all of Sacramento County south of the American River (including the project site), which includes Interstate 5 (I-5), U.S. Highway 50 (US-50), State Route 16 (SR-16), State Route 99 (SR-99), and State Route 104 (SR-104).

#### SACRAMENTO COUNTY SHERIFF'S DEPARTMENT

The Sacramento County Sheriff's Department is in the process of a decentralization effort to provide more focused law enforcement efforts in various locales of Sacramento County. The recently established South Division of the Sacramento County Sheriff's Department is responsible for providing general law enforcement to the City of Elk Grove. This station is located at the

intersection of Bond and Waterman Roads. This location is approximately 3.6 miles northeast of the center point of the project site.

The Sheriff's Department has not established an optimal response time. At present, response times vary dependent upon the location of the patrol car to the scene of the incident. It is expected that, with the decentralization and establishment of the South Division, response times will be better than present conditions.

For planning purposes, the SCSD uses a staffing ratio of one patrol officer to every one thousand residents and one support staff member for every 3 officers. Likewise, the Police Department's goal is to maintain an average response time for Priority One service calls for of five minutes or less (It should be noted that these standards have not been officially adopted by the City). According to the Police Department, the current average response time for Priority One calls is 10 minutes. A Priority One call is a violent crime against a person, or emergencies requiring an immediate response to preserve a life.

#### **4.6.5.2 REGULATORY FRAMEWORK**

##### **CITY OF ELK GROVE**

##### **City Emergency Response/Evacuation Plans**

The City of Elk Grove is responsible for emergency operations within City boundaries. The primary emergency operations center for the City of Elk Grove is City Hall, located on Elk Grove Boulevard. After the Oakland fire, the State of California passed legislation authorizing the State's Office of Emergency Services to prepare a Standard Emergency Management System (SEMS) program, which sets forth measures by which a jurisdiction handles emergency disasters. By December 1996, each jurisdiction incorporated by 1993 must have shown to the Office of Emergency Services that it is in compliance with SEMS through a number of measures, including having an up-to-date emergency management plan. Non-compliance with SEMS could result in the State withholding disaster relief from the non-complying jurisdiction in the event of an emergency disaster. Because the City of Elk Grove is only recently incorporated, it is not under any time constraints to prepare an emergency management plan. Until such time that it prepares an emergency management plan, should it choose to do so, the City would fall under the umbrella of the County of Sacramento's program.

##### **Draft General Plan**

**Table 4.6.5-1** identifies policies from the City of Elk Grove Draft General Plan that apply to law enforcement. These policies are general in nature and are subject to interpretation. While the EIR analyzes the project's consistency with the Draft General Plan, the final authority for interpretation of these policy statements and determination of the project's consistency rests with the City Council.



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**TABLE 4.6.5-1  
DRAFT GENERAL PLAN POLICY CONSISTENCY - POLICE PROTECTION/CRIME PREVENTION**

Draft General Plan Policies	Consistency with General Plan	Analysis
<p><b>Policy PF-1:</b> Except when prohibited by state law, the City shall require that sufficient capacity in all public services and facilities will be available on time to maintain desired service levels and avoid capacity shortages, traffic congestion, or other negative effects on safety and quality of life.</p>	Yes	The project applicant would include a finance program for all public service facilities and equipment required for the plan area and would also be required to participate in the South Laguna Public Facilities Financing Program.

**TABLE 4.6.5-1  
DRAFT GENERAL PLAN POLICY CONSISTENCY - SAFETY**

Draft General Plan Policies	Consistency with General Plan	Analysis
<p><b>Policy SA-26:</b> Design neighborhoods and buildings in a manner that prevents crime and provides security and safety for people and property when feasible.</p>	Yes	Crime prevention measures, such as proper lighting in commercial areas and parking lots, would be incorporated into site and building layout design.
<p><b>Policy SA-27:</b> Encourage the use of Crime Prevention Through Environmental Design (CPTED) principles in the design of development projects and buildings.</p>	Yes	See analysis of Policy SA-26 above.

### SACRAMENTO COUNTY

#### Emergency Response/Evacuation Plans

The County's Emergency Operations Office, operated through the Sheriff's Department, located in downtown Sacramento, coordinates with the emergency organizational network of cities and special districts within the County and the California Office of Emergency Services. The County Multi-Hazard Functional Plan details the coordination of County agencies during and after a catastrophic event and establishes the framework for mutual aid agreements between local, state, and federal governments for emergency personnel and equipment assistance when local government resources are overwhelmed by disaster. The La Sierra Community Center located at 5325 Engle Road, Carmichael serves as the Emergency Operations Center (EOC) for the Sacramento County area where response agencies coordinate emergency response and

recovery actions in the event of a disaster, such as fire suppression, search and rescue, evacuation, post disaster safety inspections, and clean-up efforts in the service area, which includes the City of Elk Grove. This EOC can be entirely self-sufficient during disaster operations. The State Office of Emergency Services is partially funded by the Federal Government through the Federal Emergency Management Act. A portion of this funding is allocated to emergency management programs in local jurisdictions.

The County's Multi-Hazard Functional Plan serves as the emergency management plan for the entire County. Specific emergencies considered in the Plan include severe floods, hazardous materials incidents, earthquake, and transportation incidents. Annexes to the Plan include terrorism activity and energy crisis. The Sacramento County Emergency Operations Office last revised and updated the plan in 1997.

### 4.6.5.3 PROJECT IMPACTS AND MITIGATION MEASURES

#### THRESHOLDS OF SIGNIFICANCE

For the purposes of this analysis, a project may have a significant impact on the environment:

- When it would result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives.

#### METHODOLOGY

Evaluation of potential police service/law enforcement impacts of the proposed project was based on consultations with the City of Elk Grove Police Department as well as review of applicable plans.

#### PROJECT IMPACTS AND MITIGATION MEASURES

##### Construction Impacts

During the construction of individual developments in the plan area, police service requirements on the project site would be increased over existing demands. Due to the presence of building materials, construction equipment, and related temporary office buildings, the potential for vandalism and theft would be greater, thereby increasing the Police Department's service demands for property protection. During this phase, private security patrols would be utilized to protect the project site, thereby reducing demands on the existing Police Department resources.

It would not be expected that construction-related traffic in the plan area would result in impacts on average response times. Slow-moving construction-related traffic on adjacent roadways may temporarily reduce optimal traffic flows and may delay emergency vehicles traveling through the area; however, they would not result in a significant impact on traffic flows because construction-related traffic would only occur during short periods of time. Moreover, to minimize potential conflicts between construction activity and through traffic, a construction traffic control plan would be developed for use during construction activity. The plan would identify all traffic control measures, signs, and delineators to be implemented by the construction contractor during the duration of demolition and construction activity.

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Construction traffic would be controlled in accordance with the CALTRANS Traffic Manual and City standards. Given the short-term and temporary nature of such activity, impacts are anticipated to be **less than significant**.

### Operational Impacts

**Impact 4.6.5.1** Project operation may significantly impact law enforcement services in the City of Elk Grove. This could result in a **potentially significant** impact.

Implementation of the proposed project would contribute to an increased demand for law enforcement services. The project proposes to develop 7,826 (637 of which are age restricted) residential units and 282 acres of commercial uses in an area currently occupied primarily by rural uses. It would be anticipated that as the project area is developed and residents begin to occupy the area, the need for police services would increase beyond the level currently required in the area.

The City of Elk Grove Police Department has an existing officer-to-population standard of one officer per 1,000 residents. Based on the statistics of 3.07 persons per household<sup>6</sup> for conventional housing and 1.8 for age restricted housing, the residential component of the project would require 24 deputies to maintain the current staffing ratio. Based on the demand for 3.6 police officers determined for the non-residential component of the Lent Ranch Marketplace, the comparable commercial uses in the Laguna Ridge Specific Plan would generate a need for 2.5 officers. The high school would generate the need for one youth resource officer and the remaining schools would have a combined need for one additional officer. Therefore, the total estimated project need would be 28.5 law enforcement officers. This increase would be in addition to other new construction in the City of Elk Grove.

### Mitigation Measure

**MM 4.6.5.1** The project's general financing program and/or plan shall demonstrate that there are sufficient sources of funding to provide adequate law enforcement facilities and equipment for new officers required to maintain the one officer per 1,000 residents ratio with the addition of the project.

*Timing/Implementation:* Prior to approval of the Project Financing Program and/or Plan

*Enforcement/Monitoring:* Elk Grove Police Department and City of Elk Grove Development Services

### County Emergency Response/Evacuation Plans

The County would continue to operate the Sacramento Operational Area EOC out of the La Sierra Community Center. The County's EOC has demonstrated compliance with the State's Standard Emergency Management System through its adopted emergency management plan and will be required to regularly demonstrate compliance through a variety of means, including a regular update of the County's Multi-Hazard Functional Plan.

The County does not identify specific evacuation routes. Instead, the Plan relies upon the Sheriff's Department to identify the specific routes to be used in an evacuation based on the nature of the emergency. Typically, the primary routes are major arterials and freeways. The

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<sup>6</sup> Source: 2000 Census.

proposed circulation plans for the project include a primary access from Elk Grove Boulevard, SR-99/Elk Grove Blvd Interchange, Bruceville Road, and Bilby Road. These roadways would provide alternative evacuation routes for the site. Given these alternative evacuation routes, it would not be anticipated that the design of the project would preclude implementation of an evacuation plan, which would provide for the safe movement of future residents and employees. Therefore, with regard to emergency evacuation of the project site or its surroundings, the impact is considered **less than significant**.

**4.6.5.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES**

SETTING

The analysis of cumulative impacts is based on the number of households within both the regional and project area based on projections from the Sacramento Council of Governments, Regional Data Center. This approach was used to provide analysis consistent with that presented in other sections of this EIR, and because the Sheriff Department and CHP do not have long-range projections of demand. These figures include buildout of the East Franklin Specific Plan, Laguna Ridge Specific Plan, Lent Ranch Marketplace, and the South Pointe planning area and other development potential set forth in the City of Elk Grove Draft General Plan.

IMPACTS AND MITIGATION MEASURES

As shown in **Table 4.6.5-2**, assuming an average household size of 2.64<sup>7</sup>, total residential population within the Sacramento County region in Year 2022 would be approximately 2.75 million persons. Study Area population in the Year 2020 would be approximately 73,000 persons. The project would contribute approximately 24,025 persons to these totals (3.07 pph x 7,826 du = 24,025).

**TABLE 4.6.5-2  
CUMULATIVE HOUSEHOLD BUILDOUT**

Area	Year 1990	Year 2020 (Cumulative)	
		Households	Population <sup>2</sup>
Regional	541,463	950,701	2,509,851
Study Area <sup>1</sup>	500	30,587	93,902

Source: Sacramento County General Plan Travel Model

1 Study Area is bounded by: Elk Grove Boulevard to the north; Cosumnes River to the south; SR 99 to the east; I-5 to the west

2 Assuming an average household size of 2.64 in Sacramento County, 3.07 in Elk Grove

The City of Elk Grove Police Department has an existing officer-to-population standard of one officer per 1,000 residents with a goal of two officers per thousand residents. Using the existing officer to population ratio, cumulative buildout within the service area of the Sacramento County Sheriffs Department, including the City of Elk Grove Police Department, would require a total of 2,554 sworn officers on a region-wide basis. A total of 28.5 officers are needed to serve the project area at the existing officer to population ratio. New development projects in the

7 Sacramento Area Council of Governments.

## 4.6 PUBLIC SERVICES AND UTILITIES

City would contribute to the City General Fund, which is the primary source of revenue to fund law enforcement services. Funding would be available to the City to negotiate a contract with the County Sheriffs Department or form a City Department with sufficient funds to hire the number of sworn officers and other support personnel needed to meet cumulative demands for law enforcement if the City Council budgets the funds. Moreover, each project would be subject to review by local law enforcement to ensure that adequate access, visibility, and security is provided. Therefore, with continued allocation of General Fund revenue to fund growing demand for law enforcement, sufficient revenue should be available to cover the cost associated with serving cumulative development resulting in **less than significant** impacts to police services.

### 4.6.6 SCHOOLS

This section evaluates the impacts of the proposed project on school facilities in the Elk Grove Unified School District. Sources utilized in this section include correspondence from the Elk Grove Unified School District. The environmental effects of building a school on the project site are generally addressed in this DEIR.

#### 4.6.6.1 EXISTING SETTING

The project site would be served by the Elk Grove Unified School District for elementary, middle and senior high school students. The EGUSD service area includes unincorporated areas of Sacramento County, the southernmost areas of the City of Sacramento and the incorporated City of Elk Grove. At present, the District is currently overcrowded and experiences a high rate of growth. The District has indicated that they do not have the financial resources to purchase school sites nor construct and furnish needed school facilities created by this and other projects. Therefore, they have adopted new residential development fees in accordance with Senate Bill 50 (SB 50). These development fees are subject to yearly increases based upon the update to the School Facilities Needs Analysis. As noted previously, all projects within the EGUSD are also subject to a Mello-Roos special tax.

Currently, schools do not exist within the proposed project area. The nearest schools are Franklin Elementary School, located at 4011 Hood-Franklin Road; Foulks Ranch Elementary, located at 6211 Laguna Park Road; Elitha Donner Elementary, located at 9461 Soaring Oaks Drive; Toby Johnson Middle School, located at 10099 Franklin High Road; and Franklin High School, located at 6400 Poppy Ridge Road. The EGUSD Master Plan has identified three elementary schools and one middle/high school within the project area.<sup>8</sup> New residential construction would generate students at rates as projected in **Table 4.6.6-1**.

TABLE 4.6.6-1  
EGUSD STUDENT GENERATION RATES

Grade Level	Single Family Units	Multiple Family Units
Elementary (K-6)	0.4416	0.2906
Middle School (7-8)	0.1178	0.0702
High School (9-12)	0.1949	0.1006
Total (K-12)	0.7544	0.4614

Source: EGUSD 2001.

<sup>8</sup> Elk Grove Unified School District, *School Facilities Master Plan Amendment, 2002-2010*, p. 16.

**OVERVIEW OF SCHOOL FUNDING****State Funding**

The State has traditionally been responsible for the funding of local public schools. To assist in providing facilities to serve students generated by new development projects, the State passed Assembly Bill 2926 (AB 2926) in 1986. This bill allowed school districts to collect impact fees from developers of new residential and commercial/industrial building space. Development impact fees were also referenced in the 1987 Leroy Greene Lease-Purchase Act, which required school districts to contribute a matching share of project costs for construction, modernization, or reconstruction.

Recently, Senate Bill (SB) 50 and Proposition 1A provided a comprehensive school facilities financing and reform program by, among other methods, authorizing a \$9.2 billion school facilities bond issue, school construction cost containment provisions, and an eight-year suspension of the Mira, Hart, and Murrieta court cases. Specifically, the bond funds are to provide \$2.9 billion for new construction and \$2.1 billion for reconstruction/modernization needs. The provisions of SB 50 prohibit local agencies from denying either legislative or adjudicative land use approvals on the basis that school facilities are inadequate and reinstate the school facility fee cap for legislative actions (e.g., general plan amendments, specific plan adoption, zoning plan amendments). According to Government Code Section 65996, the development fees authorized by SB 50 are deemed to be "full and complete school facilities mitigation." These provisions are in effect until 2006 and will remain in place as long as subsequent state bonds are approved and available.

SB 50 establishes three levels of developer fees:

- Level One fees are the base statutory fees of \$2.05 per square foot of assessable space for residential development and \$0.31 per square foot of chargeable, covered and enclosed commercial/industrial development.
- Level Two fees allow the school district to impose developer fees above the statutory levels, up to 50 percent of certain costs under designated circumstances. The State would match the 50 percent funding if funds are available.
- Level Three fees apply if the State runs out of bond funds after 2006, allowing the school district to impose 100 percent of the cost of the school facility or mitigation minus any local dedicated school moneys.

In order to levy the alternate (Level Two) fee and qualify for 50 percent state-matching funds, a school district must prepare and adopt a School Facilities Needs Analysis, apply and be eligible for state funding, and satisfy one of the four specified criteria by January 1, 2000 (or two of the four criteria after January 1, 2000): 1) 40 percent of pupils are enrolled on multi-track year round schedule; 2) a general obligation bond to finance new school facilities has been placed on the ballot in the past four years and passed with 50 percent +1 vote; 3) at least 20 percent of teaching stations are portable classrooms; or 4) the school district has issued debt or incurred obligations for capital outlay in an amount equal to 15 percent of school district's local bonding capacity including property taxes, parcel taxes, the district's general fund, redevelopment agency funds and special taxes from Community Facility Districts approved prior to November 1998 (or 30 percent if post-November 1998 landowner-approved Mello-Roos bonds are counted). The ability of a city or county to impose fees is limited to the statutory and potential additional charges allowed by the Act, as described above.

## 4.6 PUBLIC SERVICES AND UTILITIES

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### The Kindergarten-University Public Education Facilities Bond Act of 2002 (Prop 47)

This act was approved by voters in November 2002 and provides for a bond issue of \$13,050,000,000 (thirteen billion fifty million dollars) to fund necessary education facilities to relieve overcrowding and to repair older schools. Funds will be targeted to areas of greatest need and must be spent according to strict accountability measures. Funds will also be used to upgrade and build new classrooms in the California Community Colleges, the California State University, and the University of California, to provide adequate higher education facilities to accommodate growing student enrollment.

### ELK GROVE UNIFIED SCHOOL DISTRICT FUNDING

The Elk Grove Unified School District (EGUSD) operations are primarily funded through local property tax revenue that is first accrued in a common statewide pool, and then allocated to each school district on the basis of average daily attendance. State law also permits the charging of development fees to assist the EGUSD in funding capital acquisition and improvements to programs for school facilities, based on documented justification that residential and non-residential development projects generate students. The EGUSD School Facilities Needs Analysis (December 1999) provides this justification and allows the imposition of fees that can be adjusted periodically, consistent with SB 50. Adjusted developer fees are currently \$3.43 per square foot of residential space and \$0.33 per square foot of commercial/industrial space, as adjusted by the school board on March 17, 2003.

The District also collects a special Mello-Roos tax, with the taxes applied at various stages during project review and development. The project site is presently charged the lowest rate, which is applied to agricultural land containing residential structures established prior to 1987. Land which is rezoned to commercial uses is charged at the rate of \$72 per 1/3 acre at the time Council approval is given to a rezone. The highest rate of \$180 per 1/4 acre (through the 2001 school year) is applied at the time of building permit issuance.

#### 4.6.6.2 REGULATORY FRAMEWORK

##### CITY OF ELK GROVE

##### Draft General Plan

**Table 4.6.6-2** identifies the following policies that are contained in the City of Elk Grove Draft General Plan Public Facilities and Financing Element and are relevant to public schools. These policies are general in nature and are subject to interpretation. While the EIR analyzes the project's consistency with the General Plan, the final authority for interpretation of these policy statements and determination of the project's consistency rests with the City Council.

TABLE 4.6.6-2  
DRAFT GENERAL PLAN POLICY CONSISTENCY - SCHOOLS

Draft General Plan Policies	Consistency with General Plan	Analysis
<p><b>Policy PF-15:</b> Specific plans shall identify all existing and planned school sites and should include guidelines and conceptual examples for incorporating new schools into overall neighborhood design.</p>	<p>Yes</p>	<p>The Laguna Ridge Specific Plan has identified four school sites within the plan area.</p>
<p><b>Policy PF-16:</b> While recognizing that school siting and development are not within the jurisdiction of the City to control, the City strongly encourages the School District to consider the following criteria:</p> <ul style="list-style-type: none"> <li>• Traffic impacts on nearby roadways are addressed and mitigated to meet City standards for level of service.</li> <li>• Schools should serve as a focal point of neighborhood activity and be interrelated with churches, parks, greenways and off-street paths whenever possible.</li> <li>• Almost all residences will be within walking distance of a school (one mile or less) and all residences are within two miles of a school whenever possible.</li> <li>• New schools are adjacent to neighborhood and community parks whenever possible and designed to promote joint use of appropriate facilities.</li> </ul> <p>New schools should link with trails, bikeways, and pedestrian paths wherever possible.</p>	<p>Yes</p>	<p>The Laguna Ridge Specific Plan locates neighborhood parks adjacent to the proposed elementary schools and a community park adjacent to the combined high/junior high school. This would encourage the use of the parks as a community center for the plan area.</p> <p>The three elementary school sites within the plan area would be within one mile of a majority of the residential areas proposed.</p> <p>The combined junior high/high school site would be located along a minor arterial, the proposed Big Horn Boulevard, which has four lanes. The proposed elementary schools are not placed adjacent to an arterial or thoroughfare.</p> <p>Class II Bikeways (Bike Lanes) are proposed along proposed Big Horn Boulevard and Poppy Ridge Road. Parks within the plan area are interconnected via bikeways and pedestrian paths.</p>



## 4.6 PUBLIC SERVICES AND UTILITIES

Draft General Plan Policies	Consistency with General Plan	Analysis
<p><b>Policy PF-17:</b></p> <p>The City supports state legislative efforts to secure additional state funding for school construction and ensure maintenance of local district priorities for funds in the state school bond program.</p>	<p>Yes</p>	<p>The EGUSD School Facilities Needs Analysis (December 1999) provides this justification and allows the imposition of fees that can be adjusted periodically, consistent with SB 50. Adjusted developer fees are currently \$3.43 per square foot of residential space and \$0.33 per square foot of commercial/industrial space, as adjusted by the school board on March 17, 2003.</p>

### 4.6.6.3 PROJECT IMPACTS AND MITIGATION MEASURES

#### THRESHOLDS OF SIGNIFICANCE

An impact from the project would be considered significant if the proposed project creates:

- Substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services.

#### METHODOLOGY

The analysis presented in this DEIR is based on the services of the EGUSD, the School Facilities Needs Analysis (December 1994), direction provided in SB 50, and the City of Elk Grove Draft General Plan.

#### PROJECT IMPACTS AND MITIGATION MEASURES

##### Operational Impacts

Based on the **Table 4.6.6-1**, the proposed project area would generate the following number of students identified in **Table 4.6.6-3**. The numbers indicated on the chart should be considered significantly high. A portion of the project area, identified on the General Plan Land Use Map as RD-6, is proposed as age-restricted housing. This residential area would be limited to senior housing, which would not generate the same number of students as unrestricted single family residences.

TABLE 4.6.6-3  
LAGUNA RIDGE SPECIFIC PLAN STUDENT GENERATION

Grade Level	Single Family	Multifamily	Totals
Elementary	2,793	436	3,229
Middle School	745	105	750
High School	1,233	151	1,384
Total	4,772	692	5,464

Source: Elk Grove Unified School District, 2001.

At full buildout, the proposed project will add an additional 3,229 elementary school students, 750 middle school students, and 1,384 high school students. It should also be noted that employees working within the plan area could also result in some minor student generation. The nearest schools are Franklin Elementary School, located at the Franklin Boulevard/Hood-Franklin Road intersection, and Foulks Ranch Elementary and Donner Elementary schools located at Elk Grove Boulevard. These schools are already operating at or over capacity.

The Laguna Ridge Specific Plan would provide a total of three elementary schools and one combined middle and high school distributed in neighborhoods throughout the plan area. The EGUSD has not purchased land for the elementary school sites within the area. Since State law requires payment of school impact fees pursuant to SB 50 and the project would also pay Mello Roos fees for school facilities, impacts would be **less than significant**.

#### 4.6.6.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

##### SETTING

For the purposes of this Draft EIR, the analysis of cumulative impacts is based upon the number of households within both the regional and Study Area, based on projections from the Sacramento County of Governments, as used in the Sacramento County General Plan Travel Model. This methodology was considered the best approach to accurately identify cumulative impacts, because the school district does not provide enrollment projections for the affected schools out to the General Plan buildout year of 2020. However, the area covered by the model does include areas outside of the Elk Grove Unified School District.

##### IMPACTS AND MITIGATION MEASURES

**Table 4.6.6-4** provides projected student generation figures on a cumulative basis. These estimates are based on worst-case generation factors, combined for all grades, and include students generated by the East Franklin Specific Plan, Laguna Ridge Specific Plan, Lent Ranch Marketplace, and the South Pointe planning area.

## 4.6 PUBLIC SERVICES AND UTILITIES

**TABLE 4.6.6-4  
STUDENTS GENERATED BY REGIONAL AND STUDY AREA PROJECTS**

Area	Households and Model Year			Generation	Students Generated
	1990	2020 Cumulative	Increase	Rate (All Grades) <sup>2</sup>	
Regional	541,463	950,701	409,238	0.6746	276,072
Study Area <sup>1</sup>	500	30,587	30,087	0.6746	20,297

Source: Sacramento County General Plan Travel Model.

<sup>1</sup> Study Area is bounded by: Elk Grove Boulevard to the north  
Cosumnes River to the south  
SH 99 to the east  
I-5 to the west

<sup>2</sup> Because cumulative projections did not break down households into single and multi-family designations a worst case single-family generation factor was used for all grade classifications.

As illustrated, a total of 276,072 students would be generated by projected cumulative development within the Sacramento County General Plan Model area.

The development of the Laguna Ridge Specific Plan Area would result in population increases contributing to a cumulative impact on schools and related facilities. According to the EGUSD Master Plan (February 2002) and SACOG population projections, the District is expected to add nearly 30,000 new students over the current Plan period through 2010. Based on Sacramento County General Plan estimates, 276,072 new students will be generated in Sacramento County through the year 2020, including the plan area. Development would result in an incremental cumulative demand for schools and result in additional environmental impacts associated with the development of new sites. The construction of new schools and related facilities would provide additional capacity to accommodate current and future enrollment. However, providing new school sites would result in cumulative environmental impacts on traffic congestion, noise, potential loss of habitat, water, solid waste, etc. The environmental impacts associated with the development of future school sites would be evaluated individually by the EGUSD for immediate and cumulative impacts as required by the State Board of Education and CEQA.

The adoption of all or some combination of Mello-Roos taxes, and SB 50 funding would fully mitigate the potential cumulative impacts on schools and related facilities according to California Government Code Section 65996. The addition of 24 new elementary, 4 middle, and two alternative schools and supporting facilities identified in the EGUSD Master Plan would provide adequate capacity to accommodate the projected growth. The existing funding mechanisms, bond measures within the school district and compliance with the Draft General Plan policies would reduce the cumulative impacts on school facilities. Additionally, pursuant to State law, payment of statutory fees represents full and complete school facilities mitigation; therefore, cumulative impacts to these facilities are reduced to **less than significant**.

## 4.6.7 PARKS AND RECREATION

### 4.6.7.1 EXISTING SETTING

Public parkland in the project area would be provided by the Elk Grove Community Services District (EGCSD). Regional parks are provided and maintained by the County of Sacramento. The EGCSD is comprised of thirteen landscape and lighting assessment district zones of benefit (Benefit Zones). The proposed project is located in Benefit District 8. Benefit Districts 1, 3, 6, 9, 8, 8A, 8B and 8D are located within the City of Elk Grove.

#### LOCAL AND REGIONAL PARKS

##### Elk Grove Community Services District

Public parkland within the plan area would be conveyed to and maintained by Elk Grove Community Services District (EGCSD). The EGCSD maintains and operates 52 parks within the Community Services District boundaries. Approximately 396.8 acres of parkland exists within the City limits, which are maintained by either the EGUSD or the County. The EGUSD maintains a ratio of parkland to population of 5.0 acres per thousand persons. Overall, this ratio is exceeded within the City. However, the population density within the EGCSD service area is concentrated within a few benefit districts, so some districts operate at a parkland deficit relative to the desired parkland to population standard while others contain a large surplus. Most of these facilities are developed and contain amenities, such as children's play areas, play fields, turf and landscaping.

The largest park within the City limits is of the parks is Kloss Park, which is approximately 22 acres in size and located approximately four miles northwest of the project site. This park contains turf and landscape, tot lots, play areas, shelters, restrooms, soccer fields, softball fields, youth baseball fields, horseshoe pits and picnic areas. This park is considered to be a neighborhood park. There are also neighborhood parks closer to (within approximately two miles of) the project site, within the Hampton Village area and north of Elk Grove Boulevard.

##### County Parks

Elk Grove Regional Park is 127 acres in size and is located less than one mile northeast of the plan area. The EGCSD owns 38 acres of this park, which is maintained and operated by the County. This park is considered a district-wide community park. Park amenities and recreational facilities include turf and landscaped areas, tot lots/play areas, restrooms, softball fields, parking lot, water slide and youth center.

### 4.6.7.2 REGULATORY FRAMEWORK

#### CITY OF ELK GROVE DRAFT GENERAL PLAN

**Table 4.6.7-1** identifies policies from the City of Elk Grove Draft General Plan that apply to parks and recreation. These policies are general in nature and subject to interpretation. While the EIR analyzes the project's consistency with the Draft General Plan, the final authority for interpretation of these policy statements and determination of the project's consistency rests with the City Council.

## 4.6 PUBLIC SERVICES AND UTILITIES

**TABLE 4.6.7-1  
DRAFT GENERAL PLAN POLICY CONSISTENCY - PARKS AND RECREATION**

Draft General Plan Policies	Consistency with General Plan	Analysis
<p><b>Policy PRO-2:</b> New residential developments shall provide local parks for their residents consistent with the Quimby Act (CA Govt. Code Section 66477), through land dedication, fees in lieu, or on-site improvements at a standard of five (5) acres of land for parks per 1,000 residents.</p>	Yes	Based on the parkland dedication standard of 5.0 acres per 1,000 population, a total of 120 acres of parkland would be required. The LRSP proposes the dedication of 85.6 acres of parkland, with another 42.5 acres in parkway. CSD does not accept parkways for Quimby Act requirements in land, requiring the equivalent of 34.5 acres in fees. The project would satisfy this requirement through a combination of land dedication and payment of in-lieu fees in the ratio described above.
<p><b>Policy PRO-4:</b> The City encourages park development adjacent to school sites and the formation of joint use agreements between school and park districts.</p>	Yes	The LRSP locates neighborhood parks adjacent to the proposed elementary schools and a community park adjacent to the combined high/junior high school
<p><b>Policy PRO-5:</b> The City views open space lands of all types as important resource which should be preserved in the region, and supports the establishment of multi-purpose open space areas to address a variety of needs, including, but not limited to:</p> <ul style="list-style-type: none"> <li>• Maintenance of agricultural uses;</li> <li>• Wildlife habitat</li> <li>• Recreational open space</li> <li>• Aesthetic benefits</li> <li>• Flood control</li> </ul> <p>To the extent possible, lands protected in accordance with this policy should be in proximity to Elk Grove, to facilitate use of these areas by Elk Grove</p>	Yes	A linear parkway is proposed along the drainage channel that extends along the north side of New Poppy Ridge Road. This feature consists of approximately 35 acres of landscaping, bikeways and pedestrian paths, and facilitates flood control.

Draft General Plan Policies	Consistency with General Plan	Analysis
<p>residents, assist in mitigation of habitat loss within the city, and provide an open space resource close to the urbanized areas of Elk Grove.</p>		
<p><b>Policy PRO-8:</b></p> <p>The trails system in Elk Grove should provide for connectivity, so that all trails are linked to the extent possible for greater use as recreational and travel routes. The following features should be included in the trails system in Elk Grove:</p> <ul style="list-style-type: none"> <li>• Trails should link residential areas with parks, commercial and office areas, and other destinations.</li> <li>• Trails along major roadways should avoid meanders or other design features which make bicycle use less convenient or safe.</li> <li>• Trails should be located off-street to the extent possible.</li> </ul> <p>Easements such as access roads should be placed in joint use as trails.</p>	<p>Yes</p>	<p>Linear parks and pedestrian ways would link residential areas with parks, commercial and office areas, and other destinations. A Class I bikeway would be incorporated into the linear parkway through the center of the plan area.</p>
<p><b>Policy PRO-10:</b></p> <p>Dedication of land for trails shall be considered separate from the dedication of land for public parks to meet Quimby Act requirements. Land dedicated for trails shall not be counted toward meeting Quimby Act requirements.</p>	<p>Yes</p>	<p>See Policy PRO-2 above</p>
<p><b>Policy PRO-12:</b></p> <p>Stream corridors, floodways, electrical transmission corridors, and similar features shall be considered for inclusion in the citywide trails and open space</p>	<p>Yes</p>	<p>See Policy PRO-6 above</p>

## 4.6 PUBLIC SERVICES AND UTILITIES

Draft General Plan Policies	Consistency with General Plan	Analysis
system.		
<p><b>Policy PRO-15:</b></p> <p>Recreational trails should not be placed adjacent to or on farmland if feasible alternative routes exist elsewhere in the vicinity. However, if no other feasible routes exist, trail facilities should be designed in cooperation with adjacent property owners to minimize adverse impacts on farming practices.</p>	Yes	Proposed trails are separated from adjacent farmland by roadways.

### Park Standards

The EGCSO provides local parks and recreation facilities and services for the City of Elk Grove. The District Master Plan describes parks and recreation services in a variety of types for each Benefit Zone. Benefit District 8 is bounded by SR-99 on the east, Kammerer, McMillan, and Bilby Roads, Franklin Boulevard and Hood Franklin Road to the south, I-5 to the west and Elk Grove Boulevard to the north (excepting Laguna Stone Lake and the Automall). Parks within the approved East Franklin Specific Plan area are within Benefit District 8.

The EGCSO classifies parks as mini-parks, neighborhood parks or community parks. Mini-parks (three acres or less) can be characterized as having tot lots, open grass areas, picnic tables and hard courts surfaces for perhaps basketball. Neighborhood parks (4 - 20 acres) can also include uses found within mini-parks as well as playing fields (soccer and/or softball), groupings of picnic tables and shelters. Community parks (20 acres or more) could include all of the above noted uses in the mini- and neighborhood parks, as well as amenities such as swimming pools, multi-purpose fields with lighting, hard court areas, picnic areas and parking service areas.

The EGCSO Master Plan contains park and recreation standards for new development that are consistent with the City of Elk Grove Park and Recreation Dedication and Fees Ordinance and the Quimby Act requirements.<sup>9</sup> The EGCSO requires a parkland dedication requirement of 5.0 acres per 1,000 population, which is comprised of 3.84 acres in land and the remaining 1.16 acres in fees. **Table 4.6.7-2**, outlines the parkland facility types and standards.

<sup>9</sup> The State of California passed legislation (Section 66477 of the Government Code) which allows a city or county to pass an ordinance to require, as a condition of project approval of a land subdivision, the dedication of land or the payment of a fee in lieu of dedication, or some combination of both, for park or recreational purposes.

TABLE 4.6.7-2  
PARK LAND DEVELOPMENT STANDARDS

Facility Type	Acres/1,000 Population	Acres	Approximate Service Radius
Mini-Park	0.5	(under 5 acres)	1/3 miles (maximum)
Neighborhood Park	1.84	(5-20 acres)	2/3 mile (maximum)
Community Park	1.5	(over 20 acres)	3 miles (maximum)
<b>Sub-Total</b>	<b>3.84</b>		
District-Wide	1.16		
<b>Total</b>	<b>5.00</b>		

Source: EGCS D Standards, revised April 5, 1995.

4.6.7.3 PROJECT IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

For the purposes of this analysis, a project could have a significant effect on the environment if it would:

- Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives.

The City of Elk Grove and Elk Grove Community Services District have established a parkland dedication standard of 5.0 acres per 1,000 population as the proportionate amount of land necessary to satisfy the park requirements for new subdivisions. Projects within the Elk Grove Community Services District are also subject to a Development Impact Fee for physical improvements to parklands.

METHODOLOGY

Evaluation of potential fire service impacts of the proposed project was based on consultations with City staff and service providers, review of the Elk Grove General Plan and Zoning Code, and EGCS D requirements.

IMPACTS AND MITIGATION MEASURES

On-Site Impacts

**Impact 4.6.7.1** The proposed project has insufficient recreational facilities for the projected total population at full buildout. This is considered a **potentially significant** impact.

The Specific Plan includes three neighborhood parks totaling approximately 34.8 acres (net); seven local parks totaling approximately 16.0 acres (net), and a large community park approximately 36.7 acres (net) in area. Local parks are distributed throughout the plan area



## 4.6 PUBLIC SERVICES AND UTILITIES

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surrounded by residential areas. Neighborhood parks would be located near the center of a neighborhood quadrant for easy access by residents and would be sized to accommodate sports activities such as baseball, soccer and tennis. The neighborhood parks would be located adjacent to the elementary schools. The Community Park would be located next to the proposed high school site near the center of the plan area.

The Specific Plan designates more than 87 acres of parks and 44 acres of parkway open space. Of the 87 acres of parks, seven mini-parks are proposed, six of which are two acres and one is four acres (technically, this park would not meet the general parameters of the EGCSO, which describes a mini-park as three acres or less); three neighborhood parks are proposed ranging from 9 to more than 17 acres in size; and, one Community Park proposed at approximately 37 acres. Currently, the Elk Grove Community Services District standard for park acreage required to serve existing and new residents is 5.0 acres per 1,000 people. The estimate of population (and the park area required) is based on the average number of persons per dwelling unit. The projected population per unit is 3.07 persons<sup>10</sup> for conventional housing and 1.8 persons per unit for age restricted housing. Thus, the projected population for the proposed project at full build-out is 23,217. Based on these projections, the total park acreage for the proposed project would be 116 acres, at a ratio of 5.0 acres per 1,000 people.

**MM 4.6.7.1** The project applicant shall meet the parkland requirement to provide for 5.0 acres of parkland per 1,000 people through parkland dedications within the LRSP area and/or the payment of in-lieu fees.

<i>Timing/Implementation:</i>	<i>Prior to issuance of building permits</i>
<i>Enforcement/Monitoring:</i>	<i>City of Elk Grove development Services, Elk Grove Community Services District</i>

Implementation of the above mitigation measure would reduce impacts to recreational facilities to **less than significant**.

### 4.6.7.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

Implementation of proposed and approved projects would contribute to the cumulative demand for regional and local recreational facilities and services in the City limits and throughout the remaining portions of the Planning Area. Individual development projects would be subject to parkland standards per City, County and Quimby Act requirements. The Quimby Act Land Dedication Ordinance can be used to acquire most of the required parkland for future park locations. Community Active Use Parks would be acquired through developer dedications of land and District-wide facilities would be acquired through in-lieu fees, developer dedications or a combination of acceptable means.

Compliance with the Sacramento County and City of Elk Grove Draft General Plan policies would ensure that current and future projects meet the standards of the City, the EGCSO, and the County for parks and recreational facilities. Therefore, the cumulative impact on parks and recreation is expected to be **less than significant** and no further mitigation is necessary.

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10. Sacramento Area Council of Governments, web site, <<http://www.sacog.org/info/pophsq/cities/SAC/Sacr.htm>>, last visited March 12, 2003.

### **4.6.8 ELECTRICAL SERVICE**

This section evaluates the impacts of the proposed project on electrical service. With the recent electricity problems in California, concerns have been raised whether sufficient electricity exists for the proposed project.

#### **4.6.8.1 EXISTING SETTING**

The Sacramento Municipal Utility District (SMUD) provides electricity to Laguna Ridge Specific Plan area. Established in 1923, SMUD has provided electricity to Sacramento County since 1946. SMUD generates 1,196.8 Megawatts (MW) of electricity and delivers it to an approximately 900 square mile area within Sacramento County. Approximately 57 percent of the electricity is generated by hydroelectric means. Approximately 41 percent of the electricity is generated through thermal means. The remaining electricity is generated by either wind or solar power. SMUD also has entered into long-term contracts with other various suppliers to provide an additional 997 MW of electricity.

In addition, SMUD has applied to the California Energy Commission for a license to build a 1,000 MW power plant in a rural area of Sacramento County approximately 25 miles southeast of the City of Sacramento known as the Cosumnes Power Plant (CPP). The plant will be located on a 30-acre site approximately one-half-mile south of the now closed Rancho Seco Plant. This location will allow SMUD to reuse existing water systems, switchyards, and transmission lines that are already in place. SMUD anticipates receiving a license for CPP in 2003. Site work and Phase I construction (the first 500 megawatts) will begin shortly afterwards and is expected to take approximately two years to complete. Phase I is anticipated to be online to serve SMUD customers by summer 2005.

SMUD also has arrangements with the California Power Exchange, Automated Power exchange, the California Independent System Operator, Western Systems Power Pool and Northern California Power Pool to purchase and sell short-term power based on current market conditions. Throughout the year, the District buys and sells energy and capacity on a short-term basis to meet load requirements and reduce costs.

#### **Energy Availability**

Currently, SMUD generates approximately 1,197 megawatts (MW) per day and has long-term contracts with other electricity generators to provide 1,189 MW. According to the SMUD 2001 Annual Report, 10 MW can supply approximately 3,300 customers.

SMUD operates and maintains 69 Kilovolt (Kv) overhead power lines along the north side of Elk Grove Boulevard and along the north side of Bilby Road. A new 69 Kv line is being installed down the future center median of Bruceville Road that extends power to an electrical sub-station located near the intersection of Poppy Ridge Road and Bruceville Road in the East Franklin Specific Plan area.

## 4.6 PUBLIC SERVICES AND UTILITIES

### 4.6.8.2 REGULATORY FRAMEWORK

#### CITY OF ELK GROVE DRAFT GENERAL PLAN

**Table 4.6.8-1** identifies policies from the City of Elk Grove Draft General Plan that apply to electricity. These policies are general in nature and are subject to interpretation. While the EIR analyzes the project's consistency with the General Plan, the final authority for interpretation of these policy statements and determination of the project's consistency rests with the City Council.

**TABLE 4.6.8-1  
DRAFT GENERAL PLAN POLICY CONSISTENCY - ENERGY**

Draft General Plan Policies	Consistency with General Plan	Analysis
<p><b>Policy CAQ -20:</b></p> <p>The City shall promote energy conservation measures in new development to reduce on-site emissions and power plant emissions. The City shall seek to reduce the energy impacts from new residential and commercial projects through investigation and implementation of energy efficiency measures during all phases of design and development.</p>	Yes	<p>The proposed Laguna Ridge Specific Plan (LRSP) design standards address energy efficiency and conservation. Additionally, the Uniform Building Code addresses construction of residential structures to increase energy efficiency. The project's AQ-15 Plan also includes energy efficiency features.</p>
<p><b>Policy CAQ-24</b></p> <p>All new development projects shall incorporate design, construction, and/or operational features to result in a reduction in emissions equal to 15 percent compared to an "unmitigated baseline" project. An "unmitigated baseline project" is a development project which is built and/or operated without the implementation of trip-reduction, energy conservation, or similar features, including any such features which may be required by the Zoning Code or other applicable codes.</p>	Yes	<p>The Laguna Ridge Specific Plan requires that residential structures be oriented to increase energy conservation and use natural energy resources, such as solar power. As previously noted, the project's AQ-15 Plan also includes energy efficiency features.</p>

### 4.6.8.3 PROJECT IMPACTS AND MITIGATION MEASURES

#### THRESHOLDS OF SIGNIFICANCE

For this analysis, a project could have a significant effect on the environment if:

- Insufficient electricity exists for the proposed project; or
- The addition of the proposed project would cause shortages in another area.
- Extension of power facilities that would result in physical effects on the environment.

#### METHODOLOGY

Evaluation of potential electrical service impacts of the proposed project was based on consultations with service providers as well as review of the Elk Grove Draft General Plan and Zoning Code.

#### PROJECT IMPACTS AND MITIGATION MEASURES

The proposed project is within the Sacramento Municipal Utility District (SMUD), which is the sole provider for electricity within the plan area. The proposed project would add approximately 7,826 additional residential customers to the SMUD service area. The additional customers would require approximately 23.7 MW of electricity (3,300 customers / 10 MW X 7,826 customers).

SMUD currently has approximately 2,386 MW of electricity for distribution per day. The residential portion of the proposed project would require less than one percent of the total generating capacity of SMUD at full build out. It is expected that adequate power supplies would be available to serve the proposed project. Electrical distribution lines in the project area would need to be extended and improved to SMUD standards. It is anticipated that the new 69 Kv line being installed down the future center median of Bruceville Road to an electrical sub-station located near the intersection of Poppy Ridge Road and Bruceville Road in the East Franklin Specific Plan area would be used to serve the Laguna Ridge Specific Plan area as well. This extension is not expected to result in any significant environmental impacts beyond what has already been addressed in this Draft EIR associated with Plan Area Development. Thus, the project would pose a **less than significant** impact to the availability of electrical service.

### 4.6.8.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

#### SETTING

The proposed project would receive electrical service through SMUD, which provides power to a 900 square mile service area within Sacramento County. SMUD has continued to provide sufficient electricity for its customers through its management of energy production facilities, and its long and short-term agreements with various energy providers.

#### IMPACTS AND MITIGATION MEASURES

With regard to electrical utilities, the proposed project and other planned and proposed development would require additional resources on a cumulative basis. SMUD has developed plans to meet the increased energy needs over the next several years. Approval by the CEC will add 1,000 MW of with the first 500 megawatts online by summer 2005. Solar energy systems are planned to add 40 to 50 MW by 2011 while conservation measures would save 20 percent of the

## 4.6 PUBLIC SERVICES AND UTILITIES

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energy consumed in that time. Assuming that project review and compliance with the policies and requirements of the City in cooperation with SMUD, the cumulative effect of providing electric service would be **less than significant**.

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**SECTION 4.7**  
**HYDROLOGY AND WATER QUALITY**

## 4.7 HYDROLOGY AND WATER QUALITY

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This section of the EIR describes existing drainage and water resources for the Laguna Ridge Specific Plan area and the region, and evaluates potential impacts of the project with respect to flooding, surface water resources, and groundwater resources. Sources utilized to complete this section include the City of Elk Grove Draft General Plan, the *Draft Drainage Master Plan for Laguna Ridge Specific Plan* prepared by Wood Rodgers, Inc. (July 2002), and consultation with County of Sacramento Water Resources Department.

### 4.7.1 EXISTING CONDITIONS

#### SETTING

##### Groundwater Resources

The Central Valley contains the largest basin-fill aquifer system in the state. The valley is in a structural trough about 400 miles long and from 20 to 70 miles wide and extends over more than 20,000 square miles. The trough is filled to great depths by marine and continental sediments, which are the result of millions of years of inundation by the ocean and erosion of the rocks that form the surrounding mountains. Sand and gravel beds in this great thickness of basin-fill material form an important aquifer system. From north to south, the aquifer system is divided into the Sacramento Valley, the Sacramento-San Joaquin Delta, and the San Joaquin Valley sub regions, on the basis of different characteristics of surface-water basins. The aquifer underlying the Planning Area is part of the Sacramento Valley sub-region.

The Sacramento Valley aquifer system is formed primarily of sand and gravel with significant amounts of silt and clay, all of which have been eroded mainly from older rocks at the boundaries of the valley. The environments in which the continental sediments were deposited varied, but most were deposited in fluvial environments; however, the deposits contain some lacustrine beds. Beds and lenses of fine-grained materials, such as silt and clay, constitute a significant percentage of the aquifer system. In most parts of the valley, fine-grained materials compose 50 percent or more of the aquifer system. The most extensive clay bed, which is informally named the "E-clay", consists primarily of the Corcoran Clay. Because beds of silt and clay do not readily transmit water under natural conditions, they act as barriers to vertical flow and cause differences in hydraulic head with depth.

Sacramento County contains a single heterogeneous aquifer system that contains water under unconfined, or water-table, conditions in the upper few hundred feet; these conditions grade into confined conditions with depth. The confinement is the result of numerous overlapping lens-shaped clay beds. Geophysical well logs indicate that the "E-clay," although probably the largest single confining bed, constitutes only a small percentage of the total thickness of clay layers in the aquifer system. This indicates that the significance of the "E-clay" as a barrier to vertical flow may have been exaggerated. Further, the difference in hydraulic head directly above and below the "E-clay" is small when compared to head differences within intervals of the deep parts of the aquifer system.

Prior to urban development, the aquifer system was under steady-state conditions in which natural recharge balanced natural discharge. Groundwater in the shallow part of the aquifer system flowed from areas of high altitude at the valley margins, where most of the recharge took place, down gradient to discharge into rivers and marshes near the valley axis. Under predevelopment conditions, streams emanating from the Coast and Cascade Ranges and the Sierra Nevada primarily recharged the aquifer system. Most of the recharge was in the northern

## 4.7 HYDROLOGY AND WATER QUALITY

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and eastern parts of the valley. Precipitation falling on the valley floor during the rainy season provided only a small part of the total recharge. Groundwater that was not evaporated or transpired by plants discharged either into the Sacramento and the San Joaquin Rivers that drained to San Francisco Bay or into the Tulare Basin from which it was eventually removed by evaporation or transpiration.

Additionally, under predevelopment conditions in Sacramento County, the hydraulic head in the shallow water-table aquifer where water entered the aquifer system at the valley margins was greater than the head in the deeper confined aquifer; thus, ground water moved downward. Conversely, the head gradient was reversed where water left the aquifer; typically by discharge to surface-water bodies, and the hydraulic head in the water table aquifer was less than that in the confined aquifer. The difference in hydraulic head created upward movement of the groundwater toward rivers and marshes. Precipitation that fell on the valley floor and was not lost to evapotranspiration recharged the water-table aquifer and moved down the head gradient toward the rivers and surrounding marshes. Upward vertical flow to discharge areas from the deep confined aquifer was impeded by confining clay beds, which caused a pressure head in the deep parts of the aquifer system. Because of the pressure head, wells that penetrated the deep aquifer in low-lying areas near the rivers and marshes flowed during the early years of development in the valley, and did not require additional groundwater extraction.

By the early 1960's, urban development and agricultural activities had lowered groundwater elevations and altered groundwater flow patterns in the aquifer system. Because the magnitude of the withdrawals caused hydraulic heads in the confined parts of the aquifer system to fall far below the altitude of the water table, the vertical hydraulic gradient was reversed over much of the Central Valley. As a result, much of the water in the upper unconfined zone of the aquifer system that flowed laterally toward the river under predevelopment conditions leaked downward through the confining beds into the lower confined aquifer. However, concurrent with an increase in surface-water imports in the early 1970's, groundwater withdrawals in the aquifer system decreased, which allowed groundwater levels in many areas to recover in the confined part of the aquifer system, in some cases to pre-1960 levels. With few exceptions, the groundwater flow patterns in the aquifer system today are similar to those in the mid 1970's (USGS, 1995).

### Local Setting

Groundwater in the plan area occurs in both the upper shallow aquifer zone and in the underlying deeper aquifer zone. The deeper aquifer is composed primarily of the Mehrten Formation and is separated from the shallow aquifer by a discontinuous clay layer. The thickness of the deep aquifer ranges from approximately 200 feet thick in the eastern portion of the county to over 2,000 in some of the western portions of the County. As mentioned above, a discontinuous clay layer that is not completely impermeable in some areas separates the shallow and deep aquifers. Therefore, there is a potential for vertical movement of groundwater between the two aquifers. Generally, the movement of groundwater between the aquifers occurs when a head differential exists between the aquifer systems. For instance, if heavy pumping in the deep aquifer reduces the pressure head in this system, then groundwater from the shallow aquifer will be induced to recharge the deeper aquifer. Conversely, if groundwater levels are decreased (by increased pumping) in the shallow aquifer, then the potential exists for the upward movement of groundwater to recharge the shallow aquifer.

Recharge to the aquifer system in the area occurs from a combination of three main sources: stream recharge (primarily from the Cosumnes and Sacramento rivers), subsurface inflows from



## 4.7 HYDROLOGY AND WATER QUALITY

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adjacent areas, and percolation of rainfall and applied water. A large area on both sides of the Cosumnes River as well as a small portion around the Sacramento River have areas with high to moderate recharge capabilities. The majority of the area has poor groundwater recharge capabilities. Additionally, a groundwater contour map of the area shows groundwater levels ranging from fifty feet below sea level to fifty feet above sea level. The lowest point is located under Bruceville Road, south of Elk Grove Boulevard, just east of the town of Franklin. The highest point is located at the intersection of Grant Line Road and Cosumnes River in the northeast corner of the Planning Area.

### Groundwater Production

The Sacramento County Water Agency (SCWA), which provides wholesale water to Zone 40 (including the majority of the Planning Area and the communities of Laguna, Vineyard and Rancho Cordova) pumps its groundwater for municipal uses from the deeper aquifer due to higher per well yields. The Zone 40 boundaries are depicted on Figure 4.12.4-3. The California-American Water Company (Cal-Am) and the Florin Resource Conservation District/Elk Grove Water Service (FRCD/EGWS) also obtain groundwater from the deeper aquifer. The well depths in the aquifer system are determined by the depth of permeable aquifer material and the quality of the ground water. Generally, municipal wells depths are usually less than 500 feet deep in the Planning Area. The greater depth of wells is a result of the low permeability of the sands in the unconfined aquifer and of highly mineralized water and water high in selenium in the upper parts of the aquifer system. Well yields of more than 1,000 gallons per minute are commonly obtainable throughout the aquifer system. The average yield of wells is approximately 800 gallons per minute, but yields as large as 4,000 gallons per minute have been recorded.

There are approximately 22 municipal wells in and around the City. Municipal wells are those that are operated and maintained by water purveyors to provide potable water supplies for domestic, commercial and industrial uses within the urbanized portions of Sacramento County. The average municipal well depth in the area exceeds 350 feet, with few wells having depths of less than 200 feet. Agricultural wells are classified as those that are primarily utilized for crop and pasture irrigation. Because agricultural wells in Sacramento County are privately owned and operated by individual farmers, the total number and specific locations are not readily available. However, the agricultural wells in the County generally range in depths from 60 to 600 feet. The deepest agricultural wells in the County are located in the Galt area where the depth to groundwater levels is the greatest. Rural domestic wells are those that are used to supply rural homes with water. The actual amount of rural wells are hard to determine as these wells are owned and maintained by private homeowners who use the water for landscaping, livestock, and pastures. There is estimated to be approximately 667 rural wells in the County. Generally, municipal and agricultural wells require higher yields, which many times requiring tapping the deeper aquifer. Since rural domestic wells require smaller yields than both municipal and agricultural wells, the water is generally obtained from the upper shallow aquifer.

### Groundwater Quality

The thickness of aquifer saturated with freshwater (water with less than 1,000 milligrams per liter dissolved-solids concentration) in the aquifer system varies greatly and depends, for the most part, on the depth to and permeability of the rocks that underlie continental deposits. In the region, the base of freshwater generally coincides with the base of continental deposits. The several isolated lenses of saline water that are within the freshwater zone may be evaporation residues or estuarine water that was trapped by subsequent sedimentation. The depth to the base of freshwater is as much as 2,500 feet in some portions of the Sacramento Valley.

## 4.7 HYDROLOGY AND WATER QUALITY

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Freshwater is available throughout the Central Valley. The concentration of dissolved solids in the ground water reflects the general chemical character of water in the streams that recharge the aquifer system. Dissolved-solids concentrations in the streams, in turn, are directly related to the type of rocks that form the mountains in which the streams rise. Thus, groundwater in the Sacramento Valley has generally lower dissolved-solids concentrations than other sub-regions in the Central Valley. In general, dissolved-solids concentrations increase as the depth increases in the aquifer system. Therefore, the deeper wells are likely to produce water with larger dissolved-solids concentrations than the shallower wells in the aquifer system.

Groundwater in predominantly agricultural areas (i.e., southern and eastern Sacramento County) can become excessively saline and damaging to crops because evaporation of sprayed irrigation water and evapotranspiration of soil moisture and shallow ground water leaves behind dissolved salts. As a result, the concentration of salts in the soil and shallow ground water increases and may reach levels detrimental to plant growth. Shallow irrigation wells worsen the problem by recirculating the saline shallow ground water, thus accelerating the process. The potential for crop damage due to saline irrigation-return flow is widespread in some portions of the valley. Although several individual irrigation return-water drainage systems are operated, there is not a valley-wide system removes shallow saline groundwater. An estimated 400,000 to 700,000 acres of arable land may be lost by 2010 because of increasing soil and water salinity with an accompanying loss of from \$32 million to \$320 million annually.

Excessive concentrations of nitrate in water are potentially harmful to infants and young children, and the maximum recommended for drinking water by the U.S. Environmental Protection Agency is 10 milligrams per liter. Some crops may be affected by nitrate concentrations as low as 5 milligrams per liter. Generally, the contaminated wells are shallow, and the source of nitrate pollution can be attributed to effluent from waste-treatment facilities, discharge from septic tanks, or leaching of nitrogen fertilizers. Occurrences of nitrate in concentrations of greater than 5 milligrams per liter are sporadic in southern Sacramento County and seem to be confined mainly to the shallow parts of the aquifer. The contamination is usually attributable to local sources, such as septic tanks, feed lots, and dairies.

### Cosumnes River Groundwater Studies

The University of California, Davis has collaborated with the Cosumnes River Preserve, the United States Fish and Wildlife Service (USFWS), and other non-profit organizations to create a university/agency/foundation partnership with the purpose of *advancing watershed science to support more effective and sustainable watershed restoration practices and, addressing the information needs of adaptive management in the North Delta and the Cosumnes and Mokelumne River watersheds*. A number of studies were conducted in a wide range of disciplines, including hydrology, geology, engineering, ecology, and wildlife biology. The focus of the studies was to identify the interaction between regional groundwater elevations and surface water flows in the Lower Cosumnes River. The studies conducted include, but are not limited to the following:

- Local and Regional Scale Investigation of Groundwater Surface Water Interaction in an Over-Drafted Groundwater Basin (Jan Fleckenstein, Eriko Suzuki, and Graham Fogg, UC Davis/Cosumnes Research Group).
- Modeling Groundwater Surface Water Interactions to Restore Fall Flows in the Lower Cosumnes River Basin (Jan Fleckenstein, Eriko Suzuki, and Graham Fogg, UC Davis/Cosumnes Research Group).

- Investigations of Groundwater Surface Water Interactions and their Role in Declining Fall Flows in the Lower Cosumnes River Basin (Jan Fleckenstein, Eriko Suzuki, and Graham Fogg, UC Davis/Cosumnes Research Group).

Usually there is some form of hydraulic connection between the river and the groundwater system (aquifer), which means that changes in pressure or stage in one system have a direct effect on the other system and the exchange between the two. Base-flow is contributions to river flow from the groundwater or aquifer system. A hydraulic disconnection means that the groundwater levels lie below the elevation of the river channel bottom for extended reaches of the river. Under hydraulic connection the river can receive flow contributions from the aquifer system and be a gaining or influent river or it can lose flow to the groundwater aquifer and be a losing or effluent river. Additionally, the pumping of groundwater may affect baseflow contributions along various reaches of the river; thereby, potentially influencing aquifer and river interactions.

According to the studies, declining flows on the Cosumnes River may be linked to decreasing base-flows and the overall decline of groundwater tables; however, unequivocal proof of this relationship is difficult due to the limited amount of historical records on ground- and surface-water conditions in Sacramento County. The studies determined that groundwater levels around the river channel were possibly hydraulically connected with the river in the 1940's. However, the studies indicated that the Lower Cosumnes River (river miles 0-36) channel is largely hydraulically disconnected from the regional aquifer.

The Cosumnes River may have been in contact with the aquifer system and received base-flow along its entire length before major groundwater development occurred in Sacramento County in the 1950's and 1960's. Under a no groundwater pumping scenario, the Cosumnes River, even under natural conditions, may have alternated between gaining (influent) and losing (effluent) in some stretches. Enormous amounts of water would be needed to locally recover groundwater tables and restore base-flows to the river.

The hydraulic disconnection is most pronounced in the middle reaches of the river (river miles 11 to 25.8), which is between State Route 99 (SR 99) and Meiss Road. Depth to the regional groundwater table from the river channel elevation steadily increases from 7 to 20 feet in the Dillard Road area (river mile 27.5) to approximately 35 to 55 feet near Wilton Road (river mile 17.3). Between Wilton Road and SR 99 (river mile 11) depth to the regional groundwater table decreases to approximately 15 to 30 feet and decreases even further to approximately 3 to 15 feet around the Twin Cities Road area (river mile 5). In some portions of the river downstream of Twin Cities Road, the water table lies above the channel elevation. Additionally, seasonal water fluctuations from monitored wells along these stretches ranges from 10 to 17 feet.

It was determined that significant lowering of the groundwater tables in these areas could have an adverse effect on river flows; however, river flows over the extended middle reaches of the river (between SR 99 and Meiss Road) are unaffected by groundwater level fluctuations under current conditions. Additionally, these reaches receive no base flow contributions; therefore, are considered to be predominantly effluent or losing. To restore and sustain baseflows along the entire lower river, water table elevations between Dillard and Twin Cities Road would have to be raised by up to approximately 55 feet. Although the studies did indicate that drastic declines in groundwater tables are at least 'partially' responsible for the increasing low flows in the fall on the Lower Cosumnes, changes in groundwater levels were determined to have no immediate effect on flows in the river as long as no hydraulic connection is reestablished.

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When a river aquifer system is hydraulically disconnected, the only exchange between the two systems is seepage losses from the river to the aquifer. The simulations indicated that annual seepage losses ranged from 10,000 AF/yr to 20,000 AF/yr in both the upper and lower reaches of the river. Additionally, the simulations indicated that the combining of upstream pumping reductions and flow augmentations from the Folsom South Canal (FSC) would result in the greatest increase in fall flows. This results from less of the augmented water being lost to seepage from a partially reestablished hydraulic connection between the river and the aquifer in the upper reaches.

Reducing seepage losses by reconnecting the regional aquifer with the river channel would require enormous amounts of water. Annual reductions in pumping of approximately 166,000 AF would be required to partially reconnect the river in the upper reaches. In the lower stretches of the river, annual reductions of approximately 250,000 AF (or approximately 50 percent of the annual baseline groundwater pumping) is required to even partially reconnect the aquifer and river.

In 2000, a reversal occurred in September before the first fall rains. The reversal could indicate that the river reaches upstream of Dillard Road had switched from losing conditions to gaining conditions, probably in response to rising water tables and initiated baseflow after the end of summer irrigation, which indicates that the reaches upstream of Dillard Road seasonally receive baseflow. Other reasons for gains in flow may be attributable to additional baseflow from perched water tables that have built up from continuous irrigation return flows. Additionally, the general reaction of the groundwater system to additional recharge from floodplains suggests that large floods could significantly contribute to the recovery of regional groundwater levels.

Based on projected land uses and water use conditions in Sacramento County, groundwater levels tend to decline for approximately 20 years due to groundwater pumping that exceeds the level of groundwater recharge. However, groundwater recharge (mainly from stream recharge and subsurface boundary inflows) responds to the lowering of groundwater levels and eventually reaches a quasi-equilibrium position, in which groundwater levels stabilize. Under the quasi-equilibrium condition, groundwater levels fluctuate in response to hydrologic conditions (i.e., wet and dry years), with the long-term average levels remaining the same. It should be noted that generally, excess groundwater pumping beyond certain limits results in a continuous groundwater level decline, which could potentially result in a permanent mining condition of the groundwater basin. However, the results of the Baseline conditions indicated that this would not occur even under the projected level of groundwater pumping under cumulative 2030 conditions. Overall, the studies concluded that to better quantify effects of reconnecting the aquifer system and the river and to assess the potential efficiency of other artificial recharge efforts, a better understanding of local and regional scale hydrostratigraphy and geologic heterogeneity as well as more reliable numerical models would be needed. Additionally, the SCWA is currently working on new and updated models to identify the agencies activities and potential impacts on the Cosumnes River basin. The preliminary and final modeling results will be incorporated into the SCWA's Zone 40's EIR for its Water Supply Master Plan.

### Regional Drainage

The Sacramento River Basin covers 27,210 square miles and includes the entire area drained by the Sacramento River. For planning purposes, this area includes all of the watersheds tributary to the Sacramento area that are north of the Cosumnes River watershed. The City of Elk Grove is located within one of these watersheds, the Morrison Creek Stream Group drainage basin. This 192-square-mile drainage basin drains much of the area designated for urban development

## 4.7 HYDROLOGY AND WATER QUALITY

within the County. Storm water in most of the area flows west through Morrison, Laguna, Elder, Elk Grove, and other associated creeks to the Beach Stone Lakes basin west of I-5.

Most of the urbanized area within the City of Elk Grove, including the plan area, is located outside of the 100-year flood zone and/or the Folsom Dam failure flood area. As illustrated on **Figure 4.7-1**, the areas within the 100-year flood zone near the plan area are south of Eschinger Road on the west side of SR-99, and southeast of the Emerald Lakes Golf Course on the east side of SR-99. The 100-year Flood zone area is located about one mile west of the plan area in the Laguna Stone Lake Preserve Area. The areas contained within the Folsom dam failure flood area are located to the west along Franklin Road about a mile away from the plan area. The plan area is located outside of any designated special flood hazard area (Zone X).

Federal Emergency Management Agency definitions of flood zone in the plan area are defined as follows: A Zone "A" flood hazard area is identified as being subject to inundation by the 100-year flood. The Zone "AE" flood hazard area is an area subject to flooding where the base flood elevations have been determined. Zone "X" designates areas that are located outside a 500-year floodplain, but also includes areas within the 500-year floodplain; areas within the 100-year floodplain, where average depths are less than one foot, or where drainage areas are less than one square mile; and, areas protected by levees from a 100-year flood.

### Local Drainage

The plan area is part of two larger watersheds (defined in this document as Local Areas B and C) that drain into the Beach Stone Lakes Area. These are two smaller watersheds of the Morrison Creek Stream Group drainage basin. Local Area B encompasses 4,300 acres. Local Area C encompasses about 8,400 acres. Both watersheds currently consist of mostly agricultural land uses. As illustrated on **Figure 4.7-2**, the boundaries of these watersheds include SR-99 on the east, Eschinger Road to the south, I-5 to the west, and Elliot Ranch Road and as projected across USGS sections 33 and 34 to the north.

All surface flows within these watersheds move generally from east to west and ultimately drain into Beach Stone Lakes. Since essentially all of the natural drainage courses in the area have been altered by agricultural activities, surface water flows are channeled into agricultural and roadside ditches.

Pre-project 10-, and 100-year peak storm water flows within the plan area were modeled for the purposes of this project. Peak storm flows in cubic feet per second (cfs) at key locations are provided below in **Table 4.7-1**.

**TABLE 4.7-1  
EXISTING CONDITIONS FOR THE 10-, AND 100- YEAR PEAK STORM WATER FLOWS**

Location (Node)	Area (acres)	10-year Flows (cfs)	100-year Flows (cfs)
<b>Local Drainage B (North Shed)</b>		<b>Bruceville Road Storm Centering</b>	
Bruceville Road (upper) approx. 2000' south of Elk Grove Boulevard (Node N1)	760	205	338
Bruceville Road (lower) approx. 1500'	625	173	285

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south of Elk Grove Boulevard (Node N2)			
Combine N1 & N2 at Bruceville Road approx. 1500' north of Quail Run Ln (Node NC).	1385	378	623
Union Pacific Rail Road (Node C1) <sup>1</sup>	2597	533	930
Interstate 5 (Node C4) <sup>1</sup>	3352	609	1080
<b>Local Drainage C (South Sheds)</b>		<b>Bruceville Road Storm Centering</b>	
Combine Sheds at Project Boundary (Node CS1)	724	264	444
Combine LRSP and Lent Ranch at Bruceville Road (Node C5) <sup>2</sup>	2243	685	1175
Combine LRSP and Lent Ranch at Interstate 5 (Node C18) <sup>2</sup>	8323	1864	3271

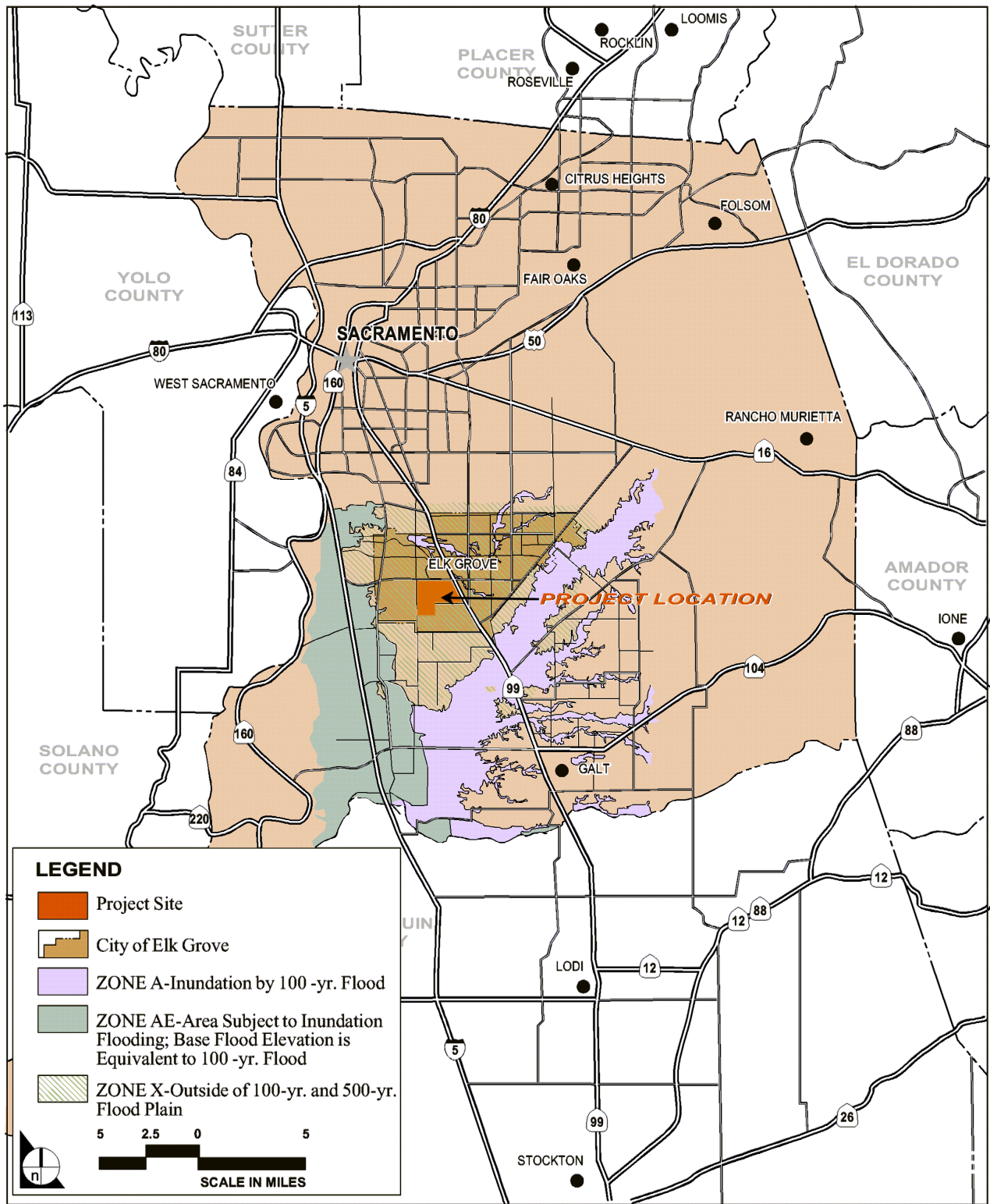
Notes: 1. Offsite areas assumed as developed conditions.

2. EFSP located downstream assumed as developed conditions.

Note: While drainage estimates were made for storm centering at both Bruceville Road and Interstate 5, Bruceville Road storm centering is only reported because it generates the largest flows.

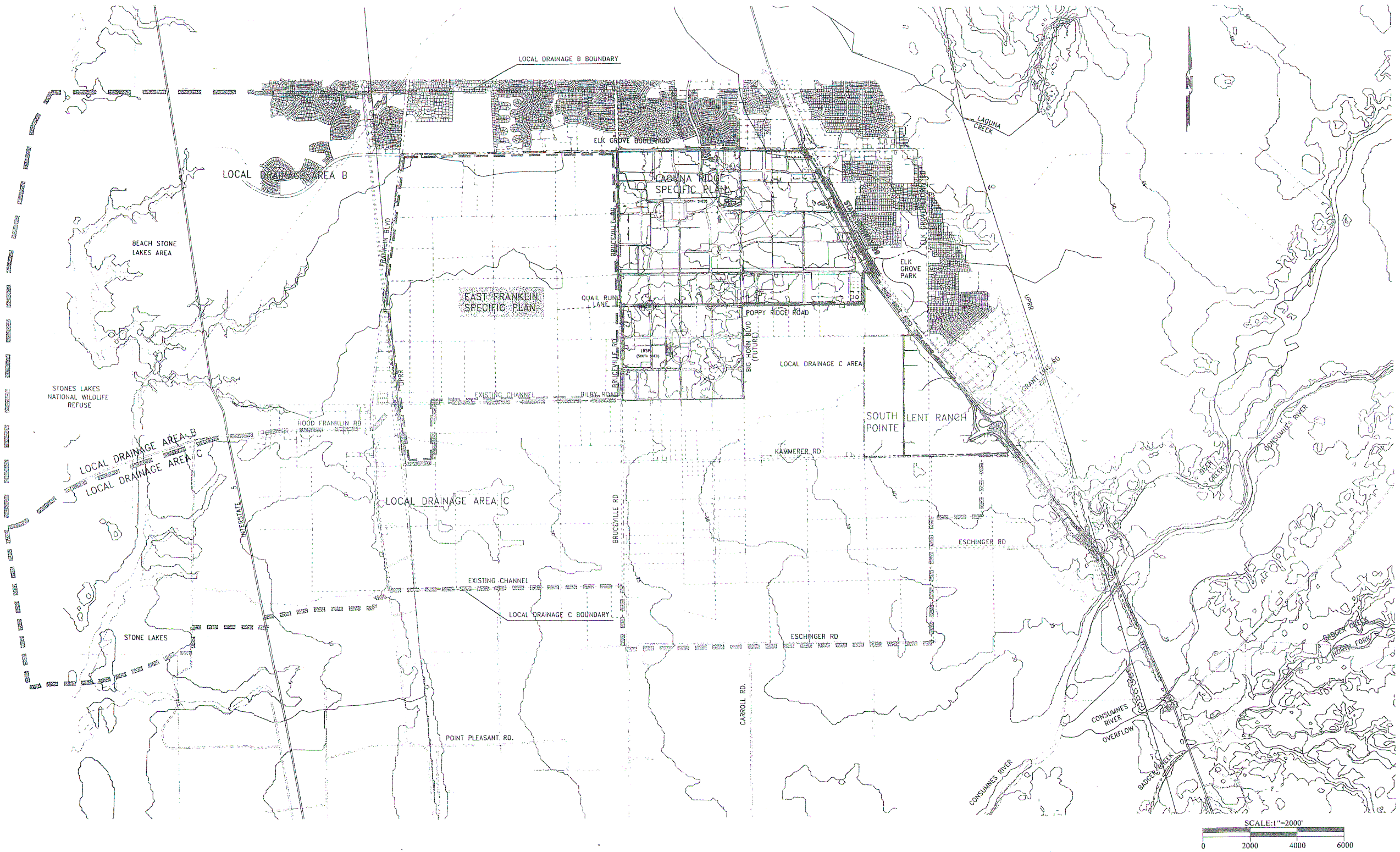
Source: Wood-Rogers, 2002

Observations of existing conditions indicate that sections of the existing drainage conveyance systems in Local Areas B and C within the plan area, as well as downstream to Interstate 5 are currently inadequate to handle peak runoff flows. The off-site channel systems that drain the plan area have hydraulic constraints, such as having undersized culvert crossings that currently create backwater conditions and spillage onto local roadways.



Source:





Source: Wood Rogers, 2001



Figure 4.7-2  
Watershed Map



## 4.7 HYDROLOGY AND WATER QUALITY

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The Plan Area and Beach Stone Lakes are identified in the Sacramento County General Plan as areas having poor groundwater recharge capability. The closest groundwater recharge area in the project area is approximately one mile to the east of the plan area, across SR-99, along the banks of the Cosumnes River. This area is identified in the Sacramento County General Plan as an area that has high to moderate groundwater recharge capability.<sup>1</sup>

Groundwater throughout the County area is encountered at a wide variety of depths that range between 10 and 100 feet. In the plan area, groundwater is in general encountered at about 65 feet below the ground surface.<sup>2</sup>

### 4.7.2 REGULATORY FRAMEWORK

#### FEDERAL WATER POLLUTION CONTROL ACT

The Federal Water Pollution Control Act, commonly known as the Clean Water Act ("the Act", 33 U.S.C. § 1251 et seq.) is the federal law that governs and authorizes water quality control activities by EPA. EPA has published water quality regulations under Volume 40 of the Code of Federal Regulations (40 CFR).

Section 303 of the Act requires states to adopt water quality standards for all surface waters of the U.S. consisting of two elements: (1) designated beneficial uses of the water body in question, and (2) criteria that protect the designated uses. Section 304(a) requires the EPA to publish advisory water quality criteria that accurately reflect the latest scientific knowledge on the kind and extent of all effects on health and welfare that may be expected from the presence of pollutants in water. Where multiple uses exist, water quality standards must protect the most sensitive use. Water quality standards are typically numeric, although narrative criteria may be employed where numerical standards cannot be established or where they are needed to supplement numeric standards.

States are required to review and modify water quality standards every three years. In reviewing the standards on water quality limited segments (water bodies in which standards cannot be attained even with the application of technology-based controls as specified in the Act), States are required to perform a use attainability analysis if they wish to remove a designated use, adopt subcategories of uses which require less stringent criteria than are currently adopted, or designate a use that does not reflect the "fishable/swimmable" goals of the Act. In no case may states downgrade an existing beneficial use. Additionally, states are encouraged to adopt site-specific standards where local conditions warrant a change from statewide or national standards.

Section 303(c)(2)(b) of the Clean Water Act, which was added in the 1987 revisions, requires states to adopt numerical water quality standards for toxic pollutants for which EPA has published water quality criteria and which reasonably could be expected to interfere with designated uses in a water body.

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<sup>1</sup> Sacramento County, *Sacramento County General Plan Update Environmental Impact Report*, September 1992.

<sup>2</sup> Wallace ■ Kuhl & Associates, Inc., *Preliminary Phase 1 Environmental Site Assessment Laguna Ridge Specific Plan Area, Elk Grove, California*, January, 1999.

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### National Toxics Rule and California Toxics Rule

On December 22, 1992, EPA promulgated the National Toxics Rule (NTR) under the Clean Water Act to establish numeric criteria for priority toxic pollutants for California and 13 other States that were not in complete compliance with Section 303(c)(2)(b) of the Act (EPA, 1995). For California, the NTR established water quality standards for 42 pollutants for which 304(a) water quality criteria exist, but which were not covered under California's statewide water quality regulations.

In May 2000, EPA issued the California Toxics Rule (CTR) that establishes standards for all the priority pollutants for which EPA has issued 304(a) numeric criteria and which are not already included in the December 1992 National Toxics Rule (EPA, 2000). The 304(a) numeric criteria are those Clean Water Act criteria, established by the EPA on a pollutant-by-pollutant basis, required to safeguard the chemical, physical, and biological integrity of a water body.

### NPDES Permit Program

The National Pollutant Discharge Elimination System (NPDES) permit program was established in the Clean Water Act of 1972 to regulate municipal and industrial discharges to surface waters of the U.S. The discharge of wastewater to surface waters is prohibited unless an NPDES permit has been issued which allows that discharge. Each NPDES permit contains effluent and receiving water limits on allowable concentrations and/or mass emissions of pollutants contained in the discharge, prohibitions on discharges not specifically allowed under the permit, and provisions which describe required actions by the discharger, including industrial pretreatment, pollution prevention, self-monitoring, and other activities.

The Central Valley Regional Water Quality Control Board (RWQCB) issues permits for activities that could cause impacts to surface waters and groundwater in the vicinity of any project site in the Planning Area, including construction activities. Since construction activities associated with the implementation of the Draft General Plan would result in the disturbance of surface and/or ground waters, a National Pollutant Discharge Elimination System (NPDES) construction activity permit would be required. The NPDES storm water permitting program, under Section 402(p) of the Federal Clean Water Act, is administered by the RWQCB on behalf of the EPA. The permit would require that the following measures be implemented during construction activity:

- Eliminate or reduce non-storm water discharges to storm water systems and other waters of the nation;
- Develop and implement a storm water pollution prevention plan (SWPPP); and
- Perform inspections of storm water control structures and pollution prevention measures.

The Stormwater Quality Improvement Plan was organized to implement federal stormwater regulations in the County of Sacramento, and the cities of Elk Grove, Galt, Folsom, and Citrus Heights. The Central Valley Regional Water Quality Control Board enforces these federal regulations in the Sacramento area. The Board issues a National Pollutant Discharge Elimination System Stormwater Permit (NPDES Permit) to the County and cities and renews the NPDES Permit about once every five years. The area now known as the City of Elk Grove has been covered under the County of Sacramento's NPDES Permit No. CA00082597 since 1990. The permit was renewed in May 1996 and expired in May 2001. On December 6, 2002, the RWQCB approved a

joint NPDES permit for Sacramento County and the cities of Citrus Heights, Elk Grove, Folsom, Galt, and Sacramento. The joint NPDES Permit became effective on January 25, 2003.

The City of Elk Grove NPDES permits are required for all construction projects affecting five acres or more, or smaller areas that are part of a larger common plan, including excavation, demolition, grading and clearing. As of March 10, 2003, the provisions of the renewed permit apply to disturbed lands of one acre or more. In addition, the NPDES permit requirement applies to all discharges of pollutants to "navigable waters" from a "point source." A point source is defined broadly in the Clean Water Act as "any discernible, confined and discrete conveyance" such as a well, pipe, ditch, discrete fissure, container, or vessel. Navigable waters are defined broadly as "waters of the United States," and the U.S. EPA has effectively asserted that these comprise most surface waters, including waters that are tributary to navigable waters, interstate waters, and interstate waters having some impact or involvement in interstate commerce.

### **Anti-degradation Policy**

The federal anti-degradation policy has been in existence since 1968 and is designed to protect and maintain existing uses and water quality, and to provide protection for higher quality waters and national water resources (40 C.F.R. § 131.12). The policy directs States to develop and adopt a statewide policy that includes the following primary provisions: (1) existing in-stream uses and the water quality necessary to protect those uses shall be maintained and protected; (2) where existing water quality is better than the quality necessary to support fishable and swimmable conditions, that quality shall be maintained and protected unless the State finds that allowing lower water quality is necessary to accommodate important local economic or social development; and (3) where high quality waters constitute an outstanding national resource, such as waters of national and State parks, wildlife refuges, and waters of exceptional recreational or ecological significance, that water quality shall be maintained and protected.

### **Section 303(d) Impaired Waters List and TMDLs**

Under Section 303(d) of the Clean Water Act, States are required to develop lists of water bodies that will not attain water quality objectives after implementation of required levels of treatment by point source dischargers (municipalities and industries). The most recent Section 303(d) list in California was issued in 1998 (SWRCB, 1998) and was approved by USEPA in May, 1999. Sacramento-San Joaquin Delta waterways and the San Joaquin River are listed for a number of pollutants (refer to **Table 4.6-16**, below).

Section 303(d) requires that the State develop a total maximum daily load (TMDL) for each of the listed pollutants. A TMDL is the amount of loading that the water body can receive and still be in compliance with water quality objectives. The TMDL prepared by the State must include an allocation of allowable loadings to point and nonpoint sources, with consideration of background loadings and a margin of safety. TMDLs must be performed for all parameters and water bodies listed on the most recent 303(d) list for California.

### **Coastal Zone Management Act**

The Coastal Zone Management Act (CZMA, 16 U.S.C. § 1451 et seq.) regulates land and water uses that may significantly affect the quality of coastal waters and habitats. The Act also requires the implementation of management measures for non-point sources of pollution to restore and protect coastal waters. The 1990 amendments to the CZMA allow the definition of

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“coastal zone” to extend inland “to the extent necessary to control shorelands, the uses of which have a direct and significant impact on the coastal waters”. This definition, when taken literally, may extend to all stretches of waterways that are tributary to coastal waters, including the Sacramento-San Joaquin Delta.

The CZMA requires federal, State, and local action. At the federal level, EPA and the National Oceanic and Atmospheric Administration (NOAA) are required to specify management measures to prevent water quality impacts from urban development, agriculture, forestry, and other land uses. At the State level, the SWRCB, in conjunction with the California Coastal Commission, is required to develop a coastal non-point source pollution control program. Furthermore, local governments are directed to implement non-point source pollution control and management measures whenever land use decisions are made.

### STATE LAWS AND REGULATIONS

In California, the State Water Resources Control Board (SWRCB) has broad authority over water quality control issues for the State. The SWRCB is responsible for statewide water quality policy development and exercises the powers delegated to the State by the federal government under the Clean Water Act. Regional authority for planning, permitting, and enforcement is delegated to the nine Regional Water Quality Control Boards (RWQCB). The Regional Boards are required to formulate and adopt water quality control plans for all areas within the region. Regional Boards are required to establish water quality objectives in the water quality control plans. The RWQCB responsible for the San Joaquin River and the Sacramento-San Joaquin Delta is the Central Valley Regional Board (Region 5), headquartered in Sacramento.

### Porter-Cologne Act

The Porter-Cologne Water Quality Control Act (Act) is California’s statutory authority for the protection of water quality (California Water Code § 13000 *et seq.*). Under the Act, the State must adopt water quality policies, plans, and objectives that will provide protection to the State’s waters for the use and enjoyment of the people of California. The Act sets forth the obligations of the Boards pertaining to the adoption of water quality control plans (Basin Plans) and establishment of water quality objectives, and authorizes the SWRCB and RWQCBs to issue and enforce permits containing waste discharge requirements. Basin Plans are the regional water quality control plans required by both the Clean Water Act and the Porter-Cologne Act in which beneficial uses, water quality objectives, and implementation programs are established for each of the nine regions in California.

The Elk Grove area is within the Sacramento River Basin and the jurisdiction of the Central Valley Region Water Quality Control Board (CVRWQCB). The CVRWQCB oversees the area between the Sierra Nevada on the east and the Coast Range and Klamath Mountains on the west, and from the California-Oregon border to the headwaters of the San Joaquin River. The water quality control plans that affect the Sacramento River are discussed below.

### Statewide Water Quality Control Plans (WQCPs)

#### Toxic Pollutants (Inland Surface Waters and Enclosed Bays and Estuaries Plan)

In April 1991, the SWRCB adopted two statewide water quality control plans (the Inland Surface Waters Plan (ISWP) and the Enclosed Bays and Estuaries Plan (EBEP)), which included narrative and numerical objectives for allowable concentrations of toxic pollutants in the State’s receiving

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waters. In September 1994, as a result of a Sacramento Superior Court decision, which ruled the plans invalid, the SWRCB withdrew the plans.

The SWRCB adopted its Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays and Estuaries of California on March 2, 2000. This State Implementation Policy (SIP) was approved by the Office of Administrative Law (OAL) on May 22, 2000, and was submitted to EPA Region IX for review and approval. Meanwhile, it is in effect under State law and is being implemented by the RWQCBs. The SIP outlines NPDES permitting procedures for meeting toxic pollutant objectives adopted in Basin Plans, the National Toxics Rule, and the California Toxics Rule. The SIP contains procedures for determining which pollutants must have effluent limits and the magnitude of those limits, the establishment of mixing zones, the control of chronic toxicity, and the establishment site-specific water quality objectives.

### WQCP for the San Francisco Bay/Sacramento-San Joaquin River Delta Estuary

The Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin River Delta Estuary was adopted by the State Board in 1991 (SWRCB, 1991). The Bay-Delta Plan establishes regulations and water quality control measures intended to protect beneficial uses in the San Francisco Bay/Sacramento-San Joaquin River Delta Estuary (the Bay-Delta). The Plan is reviewed every three years and a final revised Plan was released in May 1995 (SWRCB, 1995).

### WQCP for the Sacramento-San Joaquin River Basins (Basin Plan)

The Sacramento-San Joaquin Basin Plan, adopted by the Central Valley Regional Water Quality Control Board (CVRWQCB) on September 1, 1998, provides water quality objectives and standards for waters of the Sacramento River and San Joaquin River basins (CVRWQCB, 1998). The Basin Plan contains specific numeric water quality objectives for several toxic pollutants. These constituents include arsenic (10 µg/l), copper (10 µg/l), cyanide (10 µg/l), silver (10 µg/l), and zinc (100 µg/l). With the exception of arsenic, these objectives were superceded by the standards adopted in the California Toxics Rule.. In addition, the Basin Plan and the Water Quality Control Plan for the Delta (SWRCB, 1995) contain specific numeric standards for Delta inflow and outflow, chloride (Cl<sup>-</sup>), electrical conductivity (EC), and temperature.

The San Francisco Bay Region Basin Plan was last amended in June 1995 (SFBRWQCB, 1995b). This Basin Plan establishes beneficial uses, water quality objectives and policies for the waters of San Francisco Bay. Actions in the Central Valley must not result in violations of water quality objectives in San Francisco Bay.

### Nondegradation Policy

In 1968 the SWRCB adopted the nondegradation policy (SWRCB Resolution 68-16) aimed at maintaining high quality waters in California. The nondegradation policy states that the disposal of wastes into the waters of the State shall be regulated so as to achieve the highest water quality consistent with maximum benefit to the people of the State and so as to promote the peace, health, safety, and welfare of the people of the State. The SWRCB has interpreted Resolution 68-16 to incorporate the federal antidegradation policy, which is applicable if a discharge, which began after November 28, 1975, will lower existing surface water quality.

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### CVRWQCB Water Quality Control Plan, Sacramento River Basin and San Joaquin River Basin

The Basin Plan for the Sacramento River Basin and San Joaquin River Basin was adopted by the CVRWQCB and approved by the State Water Resources Control Board in 1975. The CVRWQCB recently adopted an updated version of the Basin Plan. The *Water Quality Control Plan (Basin Plan), Sacramento River Basin and San Joaquin River Basin*, prepared by the CVRWQCB was approved in 1998. The objective of the *Water Quality Control Plan*, or Basin Plan, is to preserve and enhance water quality, protect the beneficial uses of all regional waters, and implement the CWA. Specifically, the plan designates beneficial uses for surface and groundwaters, sets narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses and to conform to the State's anti-degradation policy, and describes implementation programs to protect all waters in the Region. In order to be considered consistent with the Basin Plan, a project must be in compliance with water quality objectives and may not cause a deterioration of beneficial uses.

### **Water Quality and Flood Control Standards**

Water quality and flood control standards and measures to alleviate potential problems are addressed within the *Sacramento City/County Drainage Manual (December 1996)*. The *Manual* indicates that the control of urban runoff from new development is a key Best Management Practice (BMP). Some of the most common BMPs utilized in the Sacramento area are dry-extended detention basins, wet-ponds, and natural processes. Dry-extended detention basins typically collect flows and drain out completely between storm events, while wet-ponds retain some or all of the storm runoff from a given event within a permanent pool until the next storm event. Both of these detention methods remove pollutants through the sedimentation of solids. Compliance with the Sacramento Stormwater Management Program's *Guidance Manual for On-Site Stormwater Quality Control Measures*, dated January 2000, is also a requirement.

The *Manual* also facilitates coordinated decision-making on flood control protection within the County. The *Manual* provides a methodology for estimating surface water runoff peak flows and volumes for the analysis and design of drainage facilities. The County uses three methods, the Nolte, the Sacramento, and the Sato, to estimate runoff flows for the design of drainage facilities. Each method is used for a specific purpose. The Nolte method is used for the design of street drainage, storm drains, and culverts not associated with channels. The Sacramento method is used for major drainage facility design and master planning where the facilities contribute to drainage areas of more than 640 acres, and for street and storm drain design that the City determines are subject to special circumstances. The Sato method is used for sizing water quality detention basins with less than 640 acres of contributing drainage. Where overflow conditions exist, provisions must be made to convey runoff in streets or other approved pathways for conditions equivalent to a 100-year storm event. In all cases, building pads must be elevated above the level of a 100-year flood.

The County is a member of the National Flood Insurance Program (NFIP). Through this program, new development is required, through conditions of approval, to eliminate existing flooding problems identified on the Flood Insurance Rate Maps produced under the NFIP. The NFIP has regulations requiring communities to adopt land use restrictions for their 100-year floodplain to qualify for federally subsidized flood insurance.

The tributary standards, Chapter 27 of the City of Elk Grove *Zoning Code*, and Chapter 5 of the City *Floodplain Management Ordinance*, identify requirements for development in areas subject

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to flooding. These requirements include, but are not limited to, standards on buildable area, fill in the floodplain, fencing and levees, and ground elevations.

### CITY OF ELK GROVE DRAFT GENERAL PLAN

**Table 4.7-2** identifies the Draft General Plan Agricultural, Conservation, and Safety Element policies that are directly applicable to the proposed project, and presents an evaluation of the consistency of the project with these statements as required by CEQA. The final authority for interpretation of these policy statements, and determination of the project's consistency rests with the City Council.

**TABLE 4.7-2  
DRAFT GENERAL PLAN CONSERVATION AND AIR QUALITY ELEMENT – FLOODING AND DRAINAGE POLICY CONSISTENCY**

General Plan Policies	Consistency with General Plan	Analysis
<p><b>Policy CAQ-11:</b></p> <p>The City recognizes the value of streams to allow natural vegetation in and along streams, commensurate with flood control and public acceptance, to assist in removal of nutrients, pollutants, and silt.</p>	Yes	<p>No natural streams traverse the plan area. Drainage through the plan area consists primarily of surface irrigation channels and drainage swales associated with agricultural operations. Proposed open drainage channels are intended to provide the necessary water quality benefits; such improvements would be landscaped with grasses and other plant materials and water velocities would be very low due to the relative flatness of the proposed project area.</p>
<p><b>Policy CAQ-12:</b></p> <p>Encourage the retention of natural stream corridors, and the creation of natural appearing stream channels where improvements to drainage capacity are required.</p>	Yes	<p>See analysis for Policy CAQ 11 above.</p>
<p><b>Policy CAQ-13:</b></p> <p>Fill may not be placed in any 100-year floodplain as delineated by currently effective FEMA Flood Insurance Rate Maps or subsequent comprehensive drainage plans unless specifically approved by the City.</p> <p>No fill shall be permitted in wetland areas unless approved by the City and appropriate state and federal agencies.</p>	Yes	<p>The project area is located outside of the designated 100-year flood zone. A recent Biological Resources Assessment concluded that 4.83 acres of jurisdictional wetlands exist within the plan area, which is discussed in Section 4.8 Biological Resources.</p>

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### 4.7.3 PROJECT IMPACTS AND MITIGATION MEASURES

#### THRESHOLDS OF SIGNIFICANCE

The project could have a significant impact on the environment when it would:

- Violate any water quality standards and/or substantially degrade water quality;
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site;
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;
- Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;
- Place within a 100-year flood hazard area structures which would impede or redirect flood flows;
- Adversely affect groundwater resources.

Based on the Notice of Preparation prepared for this project, the project would not result in significant impacts related to potential inundation by seiche, tsunami or mudflow. Therefore, this issue is not discussed further in this section. Impacts to groundwater supply are addressed in Section 4.6.

#### METHODOLOGY

The impact analysis is based on the Drainage Master Plan for the Laguna Ridge Specific Plan prepared by Wood-Rogers, Inc (April 2002) (see **Appendix 4.7**), review of previously prepared environmental documents for other projects in the area and field review of the plan area. It should be noted that the Drainage Master Plan has been updated to reflect the changes in the land use diagram.

#### PROJECT IMPACTS AND MITIGATION MEASURES

##### Construction Water Quality Impacts

**Impact 4.7.1** Construction activities associated with the development under the Laguna Ridge Specific Plan and of off-site infrastructure and improvement may result in short-term water quality degradation. This would result in a **potentially significant** impact.

Project construction and grading activities both on-site and off-site would involve the operation of heavy equipment and cutting of shallow excavations. Although the plan area and infrastructure improvement locations are relatively flat and the potential for soil erosion is considered to be low, peak storm water runoff could result in short-term sheet erosion within



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areas of exposed or stockpiled soils. Off-site improvements that may contribute to surface water quality degradation include the proposed 40-foot drainage channel to be placed south of Bilby Road and interim wastewater improvements along existing roadways in the area.

Furthermore, the compaction of soils by heavy equipment would reduce the infiltration capacity of soils and increase runoff and erosion potential. If uncontrolled, these soil materials could result in engineering problems including the blockage of storm drainage channels and downstream sedimentation. This would result in significant short-term impacts. Projects disturbing areas of one acre or more during construction are required to obtain a NPDES General Construction Activity Storm Water Permit. The project construction contractor would be required to file a Notice of Intent under the State's NPDES General Construction Permit (CAS00002). This permit requires that a Storm Water Pollutant Prevention Plan (SWPPP) be prepared specifying BMPs to reduce erosion of disturbed soils. In addition, the SWPPP would require that if any spills of materials known to be water pollutants or hazardous materials do occur, the proper agencies would be contacted immediately (if necessary) and appropriate clean-up of the spill would take place as soon as possible.

BMPs that would be implemented during site grading and construction could include use of straw hay bales, straw bale inlet filters, filter barriers, and silt fences. In addition, the project is subject to the City Land Grading and Erosion Control Ordinance. This ordinance establishes administrative procedures, minimum standards for review, and implementation and enforcement procedures for controlling erosion, sedimentation, disruption of existing drainage and related environmental damage caused by land clearing activities, grading, filling, and land excavation. The ordinance applies to all projects that would disturb 350 cubic yards or more of soil.

Depth to groundwater in the project area is estimated to be at approximately 65 feet below the ground surface. Grading activities could require rough grading up to depths of 10 feet for placement of building pads and 30 to 35 feet for utility trenching. As such, groundwater resources would not be affected during construction activities.

### Mitigation Measure

#### **MM 4.7.1**

The project applicant shall submit to the City of Elk Grove proof that a Storm Water Pollution Prevention Plan (SWPPP) has been to the California Regional Water Quality Control Board, Central Valley Region. The SWPPP shall be administered throughout all phases of grading and project construction. The SWPPP shall be included with all subsequent project improvement and grading plans and shall incorporate Best Management Practices (BMPs) to ensure that potential water quality impacts during construction phases are minimized. Examples of BMPs that may be implemented during site grading and construction could include inlet filters, filter barriers, silt fences, and sedimentation basins. The SWPPP shall be consistent with the City's NPDES permit (NPDES No. CAS082597).

*Timing/Implementation:* Prior to the approval of subsequent improvement plans and grading plans and noted on plans.

*Enforcement/Monitoring:* City of Elk Grove Public Works, and RWQCB.

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This measure would reduce potential construction impacts to water quality to **less than significant**.

### Drainage Impacts

**Impact 4.7.2** Implementation of the Laguna Ridge Specific Plan would increase drainage rates in the plan area and may result in on-site and downstream drainage and flooding impacts. This would result in a **potentially significant** impact.

Runoff and drainage are evaluated in three ways for differing site conditions: (1) total runoff volume, (2) time of runoff occurrence, and (3) peak discharge rate. Changes in runoff volumes typically result from changes in infiltration and basin storage. Changes in the time of occurrence of peak flow (time of concentration) result from changes in the flow velocities, as a result of the provision of a hydraulically efficient drainage system compared to the natural watershed or drainage system with less efficiency (i.e., a faster drainage system vs. a slower drainage system). Peak flow changes are the consequence of an increased runoff volume occurring in either a longer or shorter period of time. As further described below, planned drainage facilities for detaining and containment of surface runoff are planned to service this area, but are not yet in place to do so.

#### Total Runoff Volume

##### Local Drainage Area B

Of the approximately 1,900± acres of the plan area, approximately 1,500 acres are within the Local Area B watershed and approximately 402 acres are in the Local Area C watershed. Of the 1,500 acres of the plan area in Local Drainage Area B, approximately 810 acres would be covered with impervious surfaces, or 54 percent of the area within this watershed. As shown in **Table 4.7-3**, post-project drainage flows are expected to increase to 745 cubic feet per second (cfs) for 10-year storm flows and to 1,185 cfs for 100-year storm flows. Existing culverts along Bruceville Road would need to be upgraded to triple 8-foot by 12-foot reinforced concrete box culverts. The development of this area would increase the volume of runoff westerly through East Franklin and the Laguna Stonelake preserve to the Beach Stone Lakes Area. The drainage master plan for Local Drainage Area B assumes that a detention basin would not be built. Drainage would flow through into Beach Stone Lakes at a point that is prior to upstream flows from the Morrison Creek watershed. The impact of unattenuated flows in Local Drainage Area B is mitigated through the construction of a regional east to west channel that contains the post development volume within its banks thus resulting in less-than-significant impacts. (Wood-Rogers, 2002)

##### Local Drainage Area C

Of the approximately 402 acres of the plan area in Local Drainage Area C, an estimated 169 acres would be covered with impervious surfaces, or 42 percent of the site. The development of the plan area in Local Drainage Area C would increase the volume of runoff from those areas of the site that would be covered by houses, roads, buildings, paved parking areas, and other relatively impermeable or impervious features. Increased runoff volumes from the site could result in off-site flooding if allowed to exit the plan area unchecked. Unlike Local Area B, downstream improvements are not anticipated at this time. The detention basin proposed (see discussion below) as part of the plan would detain the increased runoff volumes generated by

the project and release them into the existing drainage system at a rate of discharge that is no greater than presently exits the site. As such, the downstream water surface elevation would be the same or less than pre-development conditions, resulting in less-than-significant impacts.

The plan area is anticipated to participate in the Sacramento County Water Agency Zone 11A (Morrison Creek stream group watershed) with development impact funding for on and offsite drainage improvements to assist in alleviating regional flood conditions. The amount of fees to be paid by development projects and the use of fees for drainage improvements are identified within the Sacramento County Water Agency, *Engineer's Report For Formation of Zones 11A, 11B, and 11C (Fee Plan)*. Identified drainage improvements within Zone 11A include, but are not limited to, the development of trunk pipe facilities, open channel construction, dual purpose detention, upsizing bridges and large culverts for ultimate capacities, and property acquisition.

### Peak Runoff Flows

In order to assess the affect of the project's increase in impervious surfaces, peak post-construction storm water conditions were modeled utilizing the County of Sacramento *City/County Drainage Manual, Volume 2, Hydrology Standards*, and the Army Corps of Engineers *HEC-1 Flood Hydrograph Package*. Detailed storm water runoff assumptions used in the assessment and calculations are provided in **Appendix 4.7** of this EIR.

**Table 4.7-3, Pre- and Post-Project Conditions For 10-, and 100-Year Peak Storm Water Flows (cfs)**, summarizes the results of modeling for pre- and post-project conditions for the 10-, and 100-year peak storm water flows, in cubic feet per second. The post-project conditions used in the analysis include the development of the Local Drainage Area C detention basin as part of the project.

As presented in **Table 4.7-3**, with the inclusion of the proposed drainage improvements and upgrades and off-site channel improvements west, the portion of the project in Local Drainage Area B would result in containment of the peak storm water flows within the proposed channel. As a result, the Local Area B portion of the project would provide beneficial impacts by containing the storm water flows in the downstream storm drainage system. Provided that the drainage improvements and upgrades previously described would be constructed to City/County standards, and the proposed improvements are implemented prior to project construction of impervious surfaces, potential impacts would be less-than-significant for Local Drainage Area B.

As presented in **Table 4.7-3**, with the inclusion of the proposed drainage improvements and upgrades, the portion of the project within Local Drainage Area C would either result in the same or reduced peak storm water flows compared to pre-project conditions. As a result, the Local Area C portion of the project would provide beneficial impacts by reducing the storm water flows in the down stream storm drainage system. Provided that the drainage improvements and upgrades would be constructed to City/County standards, and the proposed improvements would be implemented prior to project construction of impervious surfaces, potential impacts would be less-than-significant for Local Drainage Area C.

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TABLE 4.7-3  
PRE AND POST PROJECT CONDITIONS FOR THE 10-YEAR AND 100 YEAR PEAK STORM WATER FLOWS

Node and Location	Area Pre-Project (acres)	Area Post Project (acres)	10-Yr Flows		100-YrFlows	
			Pre Project (cfs)	Post Project (cfs)	Pre Project (cfs)	Post Project (cfs)
<b>Local Drainage Area B</b>						
Bruceville Road 1500' north of Quail Run Rd (Node CMB@15)	1,385	1,553	378	804	623	1,308
Union Pacific Railroad and Franklin Blvd. (Node C221)	2,597	3,302	533	967	930	1,655
Interstate 5 north of Hood Franklin Road (Node C226)	3,352	4,147	609	822	1,080	1,520
<b>Local Drainage Area C</b>						
Combine sheds at project boundary (Node CMBall)	724	658	264	292/227 <sup>1</sup>	444	469/377 <sup>1</sup>
Combine LRSP and Lent Ranch at Bruceville Rd (Node C5)	2,243	2,176	685	643/651 <sup>1</sup>	1175	1,113/1,116 <sup>1</sup>
Combine LRSP and Lent Ranch at Interstate 5 (Node C18)	8,323	8,256	1864	1,848/1,846 <sup>1</sup>	3271	3,246/3,239 <sup>1</sup>

Notes: Values above assume a storm center on Bruceville Road.  
Flows are increased in Local Drainage Area B based on the Overall County Master Drainage Plan, improved channel (no detention).

<sup>1</sup> Post-project flows are shown as (no on-site detention/on-site detention).

Note: While drainage estimates were made for storm centering at both Bruceville Road and Interstate 5, Bruceville Road storm centering is only reported because it generates the largest flows.

Source: Wood-Rogers, 2002

### Floodplain

As illustrated in **Figure 4.7-1**, the project site is not within a FEMA 100-year or 500-year floodplain and is outside of the Folsom Dam failure floodplain area. The project would not place housing or structures within the 100-year floodplain nor place structures within the 100-year floodplain. The project would not impede flows. Based on the proposed drainage design set forth in the Drainage Master Plan for Laguna Ridge Specific Plan, all new development would be located a minimum of 1-foot above the 100-year water surface elevation (Wood-Rogers, 2001). In addition, the project would not expose persons to hazards as a result of a failure of a levee or a dam. Impacts associated with flooding due to water sources in the project area would be considered to be less than significant.

The plan area contains agricultural drainage ditches, which are not considered to be streams or rivers. The closest stream or river in the plan area is over one mile to the east, the Cosumnes River, and about 1/2 mile to the northeast, Elk Grove Creek. The proposed project would not result in the alteration in the course of a stream or river either on or offsite. As such, potential impacts would be considered to be less-than-significant.

### Proposed Drainage Facilities

The Drainage Master Plan for Laguna Ridge Specific Plan identifies two alternatives to the design of on-site drainage facilities as shown in **Figure 4.7-3** and **4.7-4**. The difference in these drainage facility designs are additional piping and reduction of the proposed channel in Local Drainage Area B (see **Figure 4.7-5**). Under both alternatives, drainage facilities consist of varying sized storm drainage pipelines, drainage channels, a detention basin along Bilby Road and a 80-foot wide off-site drainage channel extending from Bilby Road to an existing agricultural drainage channel north of Kammerer Road.

While it is expected that implementation of the proposed storm drainage improvements would adequately handle increased drainage flows and not result in any on-site or off-site flooding impacts at buildout, the plan area could be developed over 20 years and may not be built at the same rate as downstream drainage improvements in the East Franklin Specific Plan area are completed. Thus, interim/short-term drainage impacts may occur. While the Drainage Master Plan for Laguna Ridge Specific Plan acknowledges the need for a phasing plan for drainage facilities, no such plan is suggested.

### Mitigation Measure

#### **MM 4.7.2**

Prior to the approval of each subsequent tentative subdivision map, the project applicant shall be required to demonstrate that permanent drainage facilities, generally consistent with the Storm Drainage Master Plan for Laguna Ridge Specific Plan (Wood-Rogers, 2002), will adequately serve the subsequent project, consistent with City standards and off-site flooding impacts would not result, and that such facilities are either available or will be available upon site development. This demonstration may take the form of plans and/or reports, which shall be reviewed and approved by the City consistent with the Specific Plan infrastructure phasing provisions. Interim storm drainage facilities shall be considered on a case-by-case basis to meet this mitigation measure.

*Timing/Implementation:* Prior to the approval of each subsequent tentative parcel and/or subdivision map.

*Enforcement/Monitoring:* City of Elk Grove Public Works.

This measure would reduce potential drainage impacts to **less than significant**.

### **Surface Water Quality**

#### **Impact 4.7.3**

Implementation of the Laguna Ridge Specific Plan may degrade long-term water quality due to the deposition of pollutants generated by motor vehicle uses on project roadways, parking lot areas, and other surfaces both on and offsite, as well as the maintenance and operation of landscape areas. This would result in a **potentially significant** impact.

Common concerns related to project impacts on surface water quality include the potential deposition of pollutants generated by motor vehicle use on project roadways, and the maintenance and operation of landscape areas. Storm water quality is generally affected by the length of time since the last rainfall, rainfall intensity, urban uses of the area, and quantity of transported sediment. Typical urban water quality pollutants usually result from motor vehicle operations, oil and grease residues, fertilizer/pesticide uses, human/animal littering, careless

## 4.7 HYDROLOGY AND WATER QUALITY

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material storage and handling, and poor property management. The majority of pollutant loads are usually washed away during the first flush of the storm occurring after the dry-season period.

Street- and parking lot-generated pollutants typically contain atmospheric pollution, tire-wear residues, petroleum products, oil and grease, fertilizer and pesticide washoffs, industrial chemical spills, as well as animal droppings and litter types of wastes. The pollutants are washed from street surfaces by a rainfall adequate enough to produce sufficient runoff. The amount of pollutants washed off the street surface is a function of the amount of pollutants on street surfaces and rainfall amount. These pollutants have the potential to degrade water quality and may result in significant impacts.

The area served by the City of Elk Grove is subject to the requirements of the NPDES Stormwater Permit No. CA0082597 issued and enforced by the CVRWQCB (renewal approved December 6, 2002). This permit requires that discharges of pollutants from areas of new development be reduced to the maximum extent practicable. Compliance with this standard requires that control measures be incorporated into the design of new development to reduce pollution discharges in site runoff over the life of the project.

### Mitigation Measures

**MM 4.7.3a** Biofilter swales and vegetated strips shall be placed in the bottom of channel areas and be designed to provide biofiltration of pollutants in project runoff. The project engineer shall consult with the City when designing these areas, and the developer shall submit designs of the areas to the City for review and approval prior to approval of the improvement plans. Water quality control features shall be consistent with the City's NPDES permit (NPDES No. CAS082597).

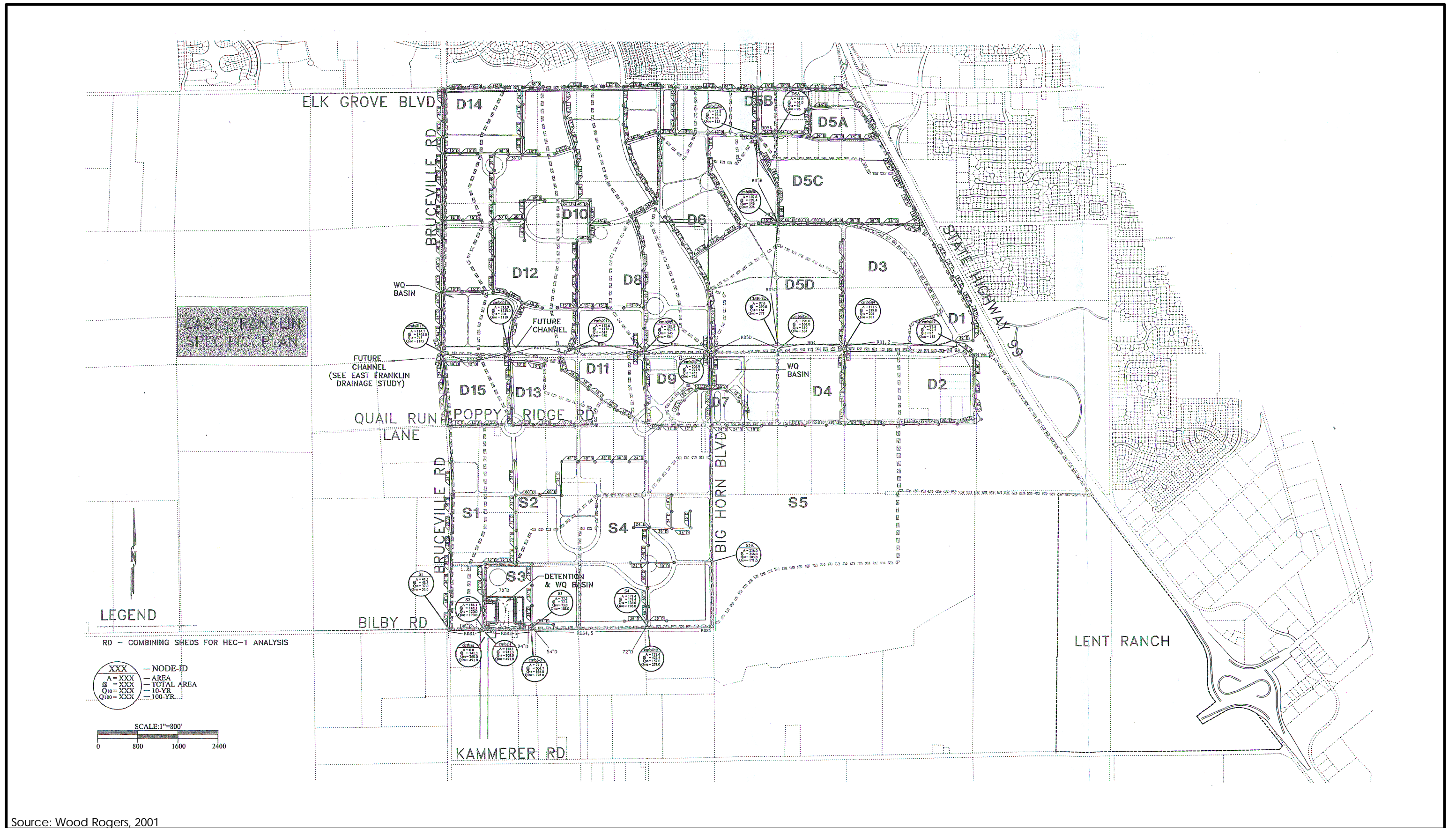
*Timing/Implementation:* Prior to approval of improvement plans for each water quality facility.

*Enforcement/Monitoring:* City of Elk Grove Public Works, and CVRWQCB.

**MM 4.7.3b** Subsequent non-residential projects shall be required to locate all storage areas away from any drainage features and provide water quality control measures in storm drainage facilities such as grease and sediment traps, vegetative filters, and containment structures for hazardous materials. This requirement shall be reflected on site plans and improvement plans. Water quality control features shall be consistent with the City's NPDES permit (NPDES No. CAS082597).

*Timing/Implementation:* Prior to approval of subsequent non-residential projects.

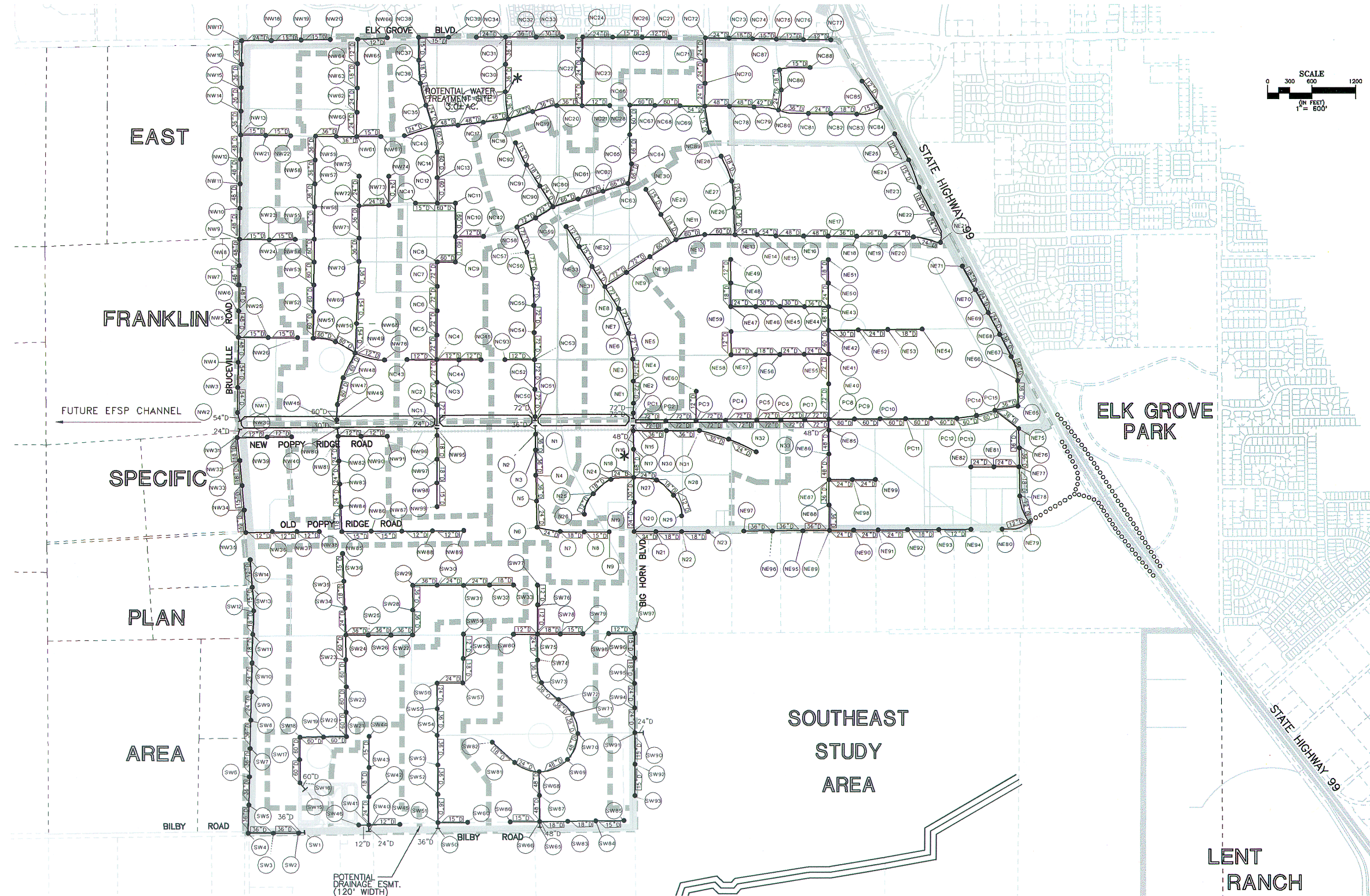
*Enforcement/Monitoring:* City of Elk Grove Public Works and Development Services



Source: Wood Rogers, 2001



Figure 4.7-3  
Proposed Drainage System (Alternative 1)

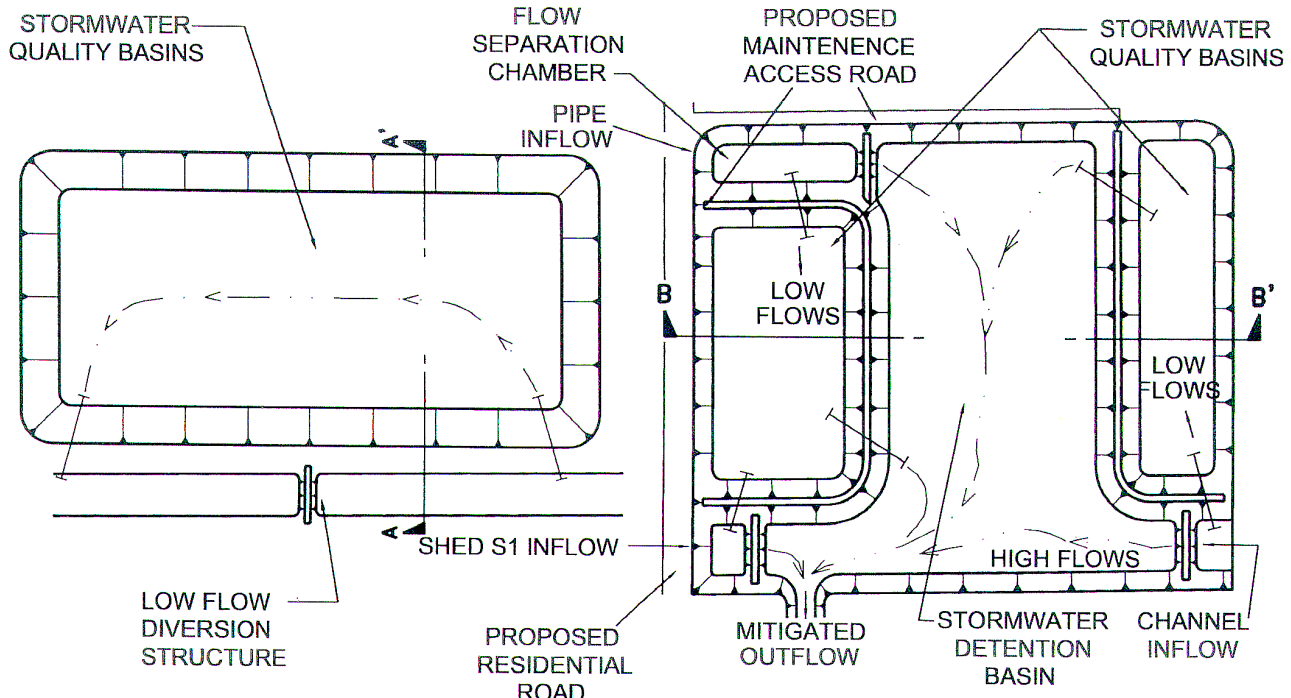


Source: Wood Rogers, 2001



Figure 4.7-4  
Proposed Drainage System (Alternative 2)

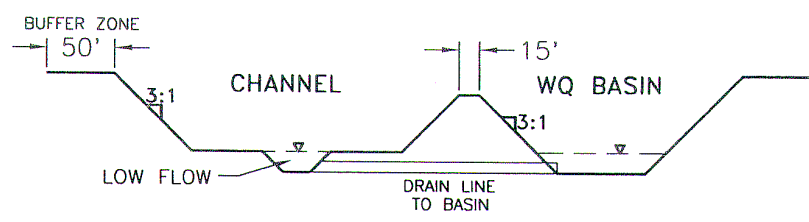




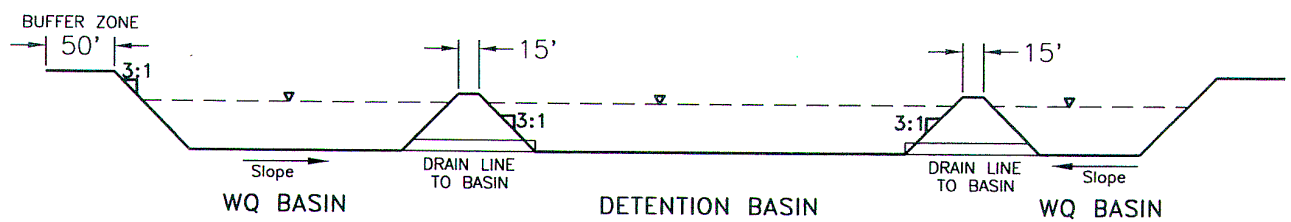
CONCEPTUAL WQ BASIN  
IN LOCAL DRAINAGE AREA B

CONCEPTUAL  
DETENTION & WQ BASIN  
IN LOCAL DRAINAGE AREA C

16 AC-FT TOTAL WATER QUALITY BASIN  
19 AC-FT TOTAL STORMWATER DETENTION  
35 AC-FT TOTAL STORAGE



SECTION A-A'



SECTION B-B'

Source: Wood Rogers, 2001



## 4.7 HYDROLOGY AND WATER QUALITY

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**MM 4.7.3c** All plan area storm drains shall provide a permanent storm drain message “No Dumping – Flows to Creek” or other approved message at each storm drain inlet. This may be accomplished with a stamped concrete impression (for curbs) or manufactured colored tiles, which are epoxied in place, adjacent to the inlet (for parking lots and areas without curbs).

*Timing/Implementation:* Prior to improvement plan approval for drainage facilities.

*Enforcement/Monitoring:* City of Elk Grove Public Works.

Implementation of the above mitigation measures would mitigate this impact to **less than significant**.

The SWRCB and RWQCB, Central Valley Region is responsible for administering NPDES permit requirements, such as the use of construction and operational BMPs, to ensure that projects are in compliance with water quality standards as set forth in the CWA. The SWRCB through the creation of a Storm Water Quality Task Force has published the *California Storm Water Best Management Practice Handbook*, which identifies a listing of acceptable BMPs to be used in meeting water standards as outlined by the CWA. BMPs incorporated into the project are identified as an acceptable means by the SWRCB to meet the water quality standards of the CWA.

### Groundwater Resources and Quality

With regard to groundwater quality, development of the plan area would be expected to generate urban pollutants that could be transported via storm water runoff into water bodies. The majority of storm water would be channeled through storm water conveyance facilities subject to the NPDES Municipal Storm Water permit program discussed above. Implementation of the BMPs previously listed under surface water quality, including the removal and filtration of water pollutants by way of the detention basin and other identified BMPs, would further minimize the potential for urban contaminants to reach any water body either above or below grade. Because the plan area is located outside the recharge area and the depth to groundwater is approximately 65 feet, significant impacts to groundwater quality would not be expected to result from the project. Groundwater resource impacts associated with water supply are addressed in Section 4.6 (Public Services and Utilities).

### 4.7.4 CUMULATIVE SETTING, IMPACTS AND MITIGATION MEASURES

The plan area is part of two larger watersheds (defined in this document as Local Areas B and C) that drain into the Beach Stone Lakes Area. These are two smaller watersheds of the Morrison Creek Stream Group drainage basin. Local Area B encompasses 4,300 acres. Local Area C encompasses about 8,400 acres. Much of the City of Elk Grove (existing, approved and planned development) eventually drains into the Beach Stone Lakes Area. New approved and proposed development in the plan area that would feed into these watersheds include the approved East Franklin Specific Plan, the approved Lent Ranch Marketplace project and the proposed South Pointe project.

### IMPACTS AND MITIGATION MEASURES

#### Water Quality

**Impact 4.7.4** Implementation of the Laguna Ridge Specific Plan in combination with existing, approved and proposed development in the area may degrade water quality due to the deposition of pollutants generated from construction and operation of the projects. This would result in a **cumulative significant** impact.

As described above under Impact 4.7.1 and 4.7.3, the proposed project may result in construction and operational surface water quality impacts, which would add to other existing, approved and proposed development in the area. No cumulative groundwater quality impacts are anticipated.

#### Mitigation Measures

Implementation of mitigation measures MM 4.7.1 and MM 4.7.3a through c would mitigate the project's contribution to **less than significant**.

#### Drainage Impacts

Implementation of the Laguna Ridge Specific Plan in combination with existing, approved and proposed development in the area would increase drainage rates in the region. The ultimate drainage facilities set forth in the Storm Drainage Master Plan for Laguna Ridge Specific Plan (Wood-Rogers, 2002) are designed to handle cumulative drainage flows and no flooding impacts are expected.

The existing County drainage system in the area of Beach Stone Lakes has a FEMA 100-year base flood elevation of 16 feet. Existing conditions within the watershed area have resulted in a flood elevation of 14.5 feet within Beach Stone Lake. Buildout of the Laguna/Franklin area, in concert with the proposed project, would result in the construction of additional impervious surfaces that would reduce water absorption and increase surface runoff throughout the area. This increase in runoff would result in an approximate 0.03 foot increase in flood elevation within the area of Beach Stone Lakes. This increase is not expected to result in the flooding of residential or developed areas. The County of Sacramento has adopted a drainage fee on new development located in Zone 11A and the City is coordinating with Sacramento County regarding regional drainage facilities. The rationale is new development is required to mitigate for impacts to the 100-year peak flow and storm water quality associated with development, and that the payment of the fee will provide mitigation of these impacts. Overall fees were computed by determining the cost for the improvements and spreading these cost over the Zone 11A area to be developed. Because the payment of fees is required and a current fee program exists to provide for flood control improvements and that no cumulative flooding impacts are expected, cumulative impacts would be considered **less than significant**.

## 4.7 HYDROLOGY AND WATER QUALITY

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### REFERENCES

- Wood-Rogers, 2002. *Drainage Master Plan for Laguna Ridge Specific Plan*. Sacramento, CA July 2002.
- City of Elk Grove, 2000. City of Elk Grove. *Lent Ranch Marketplace Draft EIR*. Elk Grove, CA. October 2000.
- City of Elk Grove, 2002. City of Elk Grove. *City of Elk Grove Draft General Plan*. Elk Grove, CA November 2002.
- City/County of Sacramento, 1996. *Sacramento City/County Drainage Manual*. Sacramento, CA. December 1996.
- City of Elk Grove, 2000. City of Elk Grove. *Chapter 27 of the City of Elk Grove Zoning Code*. Elk Grove, CA. July 2000.
- City of Elk Grove, 2000. City of Elk Grove. *Chapter 5 of the City Floodplain Management Ordinance*. Elk Grove, CA. July 2000.
- Wallace - Kuhl & Associates, Inc., *Preliminary Phase 1 Environmental Site Assessment Laguna Ridge Specific Plan Area, Elk Grove, California*, January 1999.

**SECTION 4.8**  
**BIOLOGICAL RESOURCES**

## 4.8 BIOLOGICAL RESOURCES

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The following discussion of biological resources is based on implementation of the proposed Laguna Ridge Specific Plan within the City of Elk Grove. The proposed development includes single- and multi-family residential, general commercial, commercial mixed use, schools, parks, and open space.

This biological resources analysis evaluates potential biological resource impacts associated with the proposed Laguna Ridge Specific Plan project, and includes a discussion of the mitigation measures necessary to reduce these impacts to a less than significant level. Information contained in this section is based on a review of documents pertaining to the natural resources of the project area; examination of aerial photography, biological resources, and vegetation maps; and field investigations. This section is based on a biological resources assessment prepared by Foothill Associates (Foothill Associates, 2002) (see **Appendix 4.8**).

### 4.8.1 EXISTING SETTING

The Laguna Ridge Specific Plan area is located in the City of Elk Grove, California. The Laguna Ridge site is bounded by SR-99 and the Elk Grove Auto Mall on the east, Bruceville Road on the west, Elk Grove Boulevard and the auto mall on the north, and Poppy Ridge Road, Bilby Road and open cropland on the south. Elevations within the project site range from approximately 30 feet along Bruceville Road to 40 feet above mean sea level (MSL) along SR-99, as delineated on the USGS 7.5-minute series Florin quadrangle,

#### WILDLIFE AND PLANT COMMUNITIES

The plant communities occurring within the Laguna Ridge Specific Plan project area are discussed below, including common wildlife and plant species, special-status species, and sensitive plant habitats. The discussion includes both species that were observed in the plan area as well as those that were expected to occur. The properties with a "Reserve" overlay designation were not surveyed as part of this analysis. Vegetation types occurring within the plan area include agricultural (irrigated pasture and crop), perennial marsh, open water (irrigation canals and stock ponds), and tree canopy. While rural development (residential) is shown as 31.19 acres. Although fields are periodically disced throughout the year, several areas appear to support isolated, depressional wetlands in the spring months (See **Figure 4.8-1**). Several properties within the Plan Area have had their wetland delineations verified by the U.S. Army Corps of Engineers.

#### Agricultural

The predominant vegetation community within the plan area is consistent with agricultural land uses. Generally, these areas vary from relatively pure stands of grains to mixed ruderal vegetation including wild oats (*Avena* sp.), ripgut brome (*Bromus diandrus*), yellow star thistle (*Centaurea solstitialis*), soft chess (*Bromus hordeaceus*), and Fitch's tarweed (*Hemizonia fitchii*). The majority of this vegetation grows along the perimeters of onsite agricultural fields and along the existing roads that outline the plan area. Additionally, the fencelines and roadsides within the plan area support the majority of the onsite trees (total canopy: 29.12 acres), which are primarily composed of valley oak (*Quercus lobata*), California black walnut (*Juglans hindsii*), and two significant groves of blue gum eucalyptus (*Eucalyptus globulus*).

Additional, non-native ornamental tree species are found in association with the rural residential home sites within the plan area (31.19 acres). Numerous trees also occur within the right-of-way

## 4.8 BIOLOGICAL RESOURCES

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(ROW) of Elk Grove Boulevard, Bruceville Road, and West Stockton Boulevard. A total of 1,294 trees have been inventoried on the plan area (see **Appendix 4.8**). There are approximately 310 additional trees that are located within the boundaries of non-participating owners' properties, including adjoining Elk Grove Boulevard, Bruceville Road, and West Stockton Boulevard right-of ways.

Agricultural land supports foraging habitat for numerous wildlife species. Avian species observed or expected to forage and/or nest in this habitat include American crow (*Corvus brachyrhynchos*), yellow-billed magpie (*Pica nuttalli*), western meadowlark (*Sturnella neglecta*), mourning dove (*Zenaida macroura*), turkey vulture (*Cathartes aura*), house finch (*Carpodacus mexicanus*), European starling (*Sturnus vulgaris*), northern harrier (*Circus cyaneus*), black-shouldered kite (*Elanus leucurus*), Swainson's hawk (*Buteo swainsoni*), red-tailed hawk (*Buteo jamaicensis*), and barn owl (*Tyto alba*). Additional wildlife species observed or expected to occur in this habitat include coyote (*Canis latrans*), deer mouse (*Peromyscus maniculatus*), and black-tailed jackrabbit (*Lepus californicus*).

### Perennial Marsh

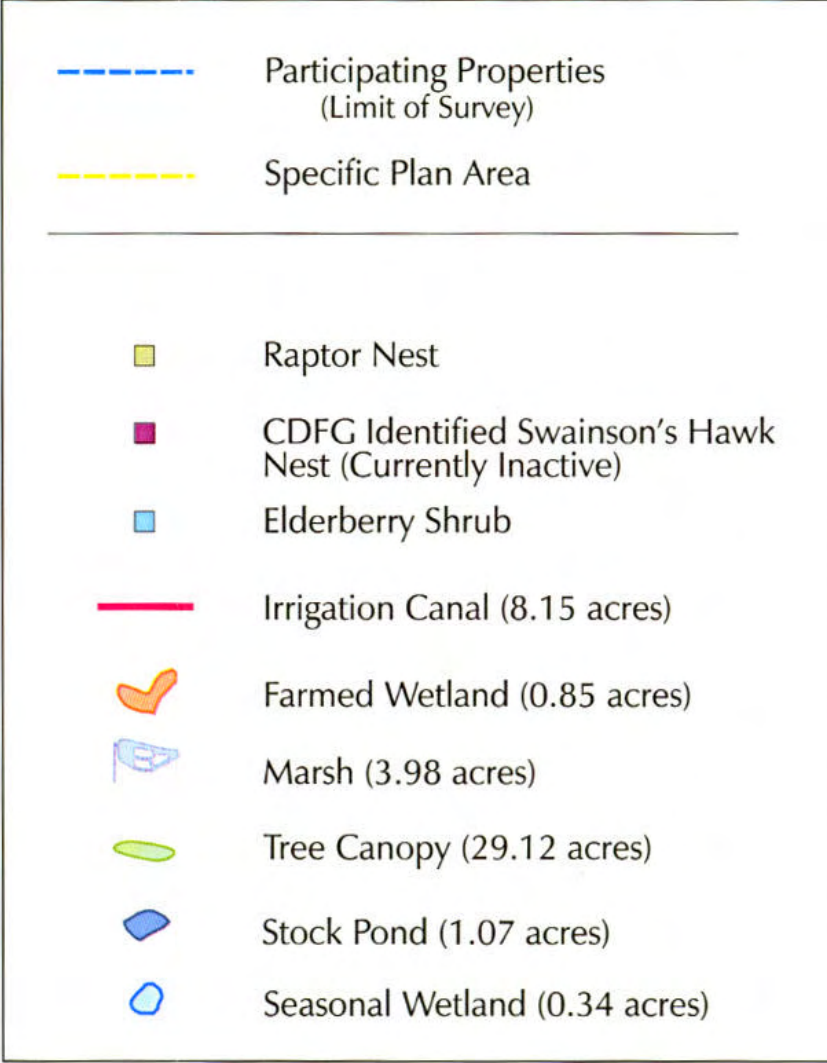
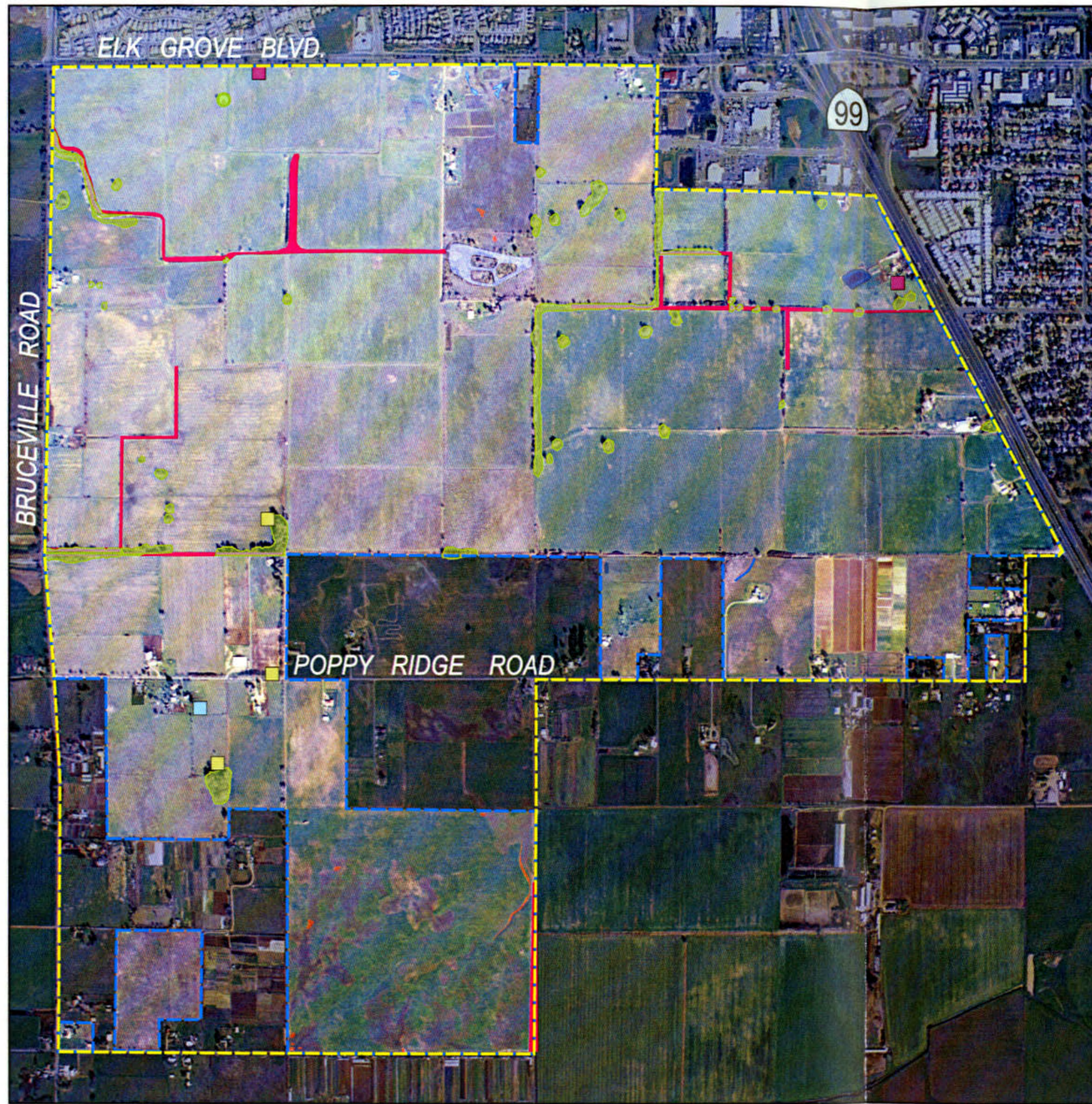
The perennial marsh habitat, which totals 3.98 acres, supports a diversity of plant species that have adapted to wet soil conditions. Plant species observed in this habitat include broad-leaved cattail (*Typha latifolia*), tule (*Scirpus acutus*), nutsedge (*Cyperus* sp.), dallis grass (*Paspalum dilatatum*), spikerush (*Eleocharis* sp.), rush (*Juncus* sp.), Johnson grass (*Sorghum halepense*), Himalayan blackberry (*Rubus discolor*), and willow (*Salix* spp.).

Perennial marsh habitats provide substantial foraging, breeding, and cover habitat for a wide variety of resident and migratory wildlife species. Many of the wildlife species associated with the agricultural land, in addition to great blue heron (*Ardea herodias*), great egret (*Casmerodius albus*), red-winged blackbird (*Agelaius phoeniceus*), black phoebe (*Sayornis nigricans*), and marsh wren (*Cistothorus palustris*) were observed or are expected to utilize this habitat. Common mammal species expected to occur in this habitat type include raccoon (*Procyon lotor*), striped skunk (*Mephitis mephitis*), and opossum (*Didelphis marsupialis*).

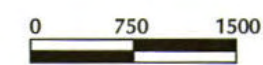
### Open Water (Irrigation Canals and Stock Ponds)

Open irrigation canals (8.15 acres) and two stock ponds (1.07 acres) onsite support floating aquatic plant species and some common riparian species. Dominant species found in these areas consist of woody species that include Fremont's cottonwood (*Populus fremontii*), arroyo willow (*Salix lasiolepis*), and some small valley oaks. Poison oak (*Toxicodendron diversilobum*) and Himalayan blackberry (*Rubus discolor*) are additional shrubby species observed in these areas. Wetland herbaceous species found in these features include broad-leaved cattail (*Typha latifolia*), yellow water primrose (*Ludwigia peploides*) and smartweed (*Polygonum lapathifolium*).

Wildlife species associated with this habitat would include many of the species occurring in the agricultural and perennial marsh habitats listed above, particularly foraging herons and egrets.



SCALE IN FEET



Source: Foothill Associates, 2002



Figure 4.8-1  
Vegetation Communities



### Special-Status Species

The following discussion describes the plant and animal species that have been afforded special recognition by federal, state, or local resource agencies or organizations. Listed and special-status species are of relatively limited distribution and may require specialized habitat conditions. Listed and special-status species are defined as:

- Listed or proposed for listing under the state or federal Endangered Species acts;
- Protected under other regulations (e.g. Migratory Bird Treaty Act);
- CDFG Species of Special Concern;
- Listed as species of concern by CNPS or USFWS; or,
- Receive consideration during environmental review under CEQA.

Special-status species were considered for this analysis based on field survey results, a review of the CNNDDB database (**Figure 4.8-2**), a review of the USFWS lists for special-status species occurring in the region, and CNPS literature. All potentially occurring special-status species are discussed in **Table 4.8-1**.

The South Sacramento County Habitat Conservation Plan (SSCHCP), which would address the conservation and development of lands within this portion of the County, is in the process of being prepared. The purpose of the plan is to encourage and simplify the process of conserving sensitive habitats for special-status species. Once the plan is approved, it will allow for incidental take of covered species with the requirement of mitigation for lost habitat at approved ratios. Information regarding the listed species covered in the SSCHCP is not available, however, it is likely that it will address species such as Swainson's hawk (*Buteo swainsoni*), giant garter snake (*Thamnophis gigas*), and valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*).

### Plants

Sanford's arrowhead (*Sagittaria sanfordii*) is a rare plant species that may potentially occur in the onsite perennial marsh habitat, although the potential for occurrence is low. The USFWS regards the Sanford's arrowhead as a species of special concern. A survey of the plan area found no occurrences of the species. However, the potential for the species to be found within the plan area still exists. Focused special-status plant surveys conducted in the spring would be needed to determine their presence or absence in this area.

### Valley Elderberry Longhorn Beetle

Elderberry shrubs are known to occur in the vicinity of the plan area. The larvae of the valley elderberry longhorn beetle, which is listed under the federal Endangered Species Act, inhabit these shrubs. One shrub (with a 5-inch trunk at ground level) was located in the southern portion of the plan area.

### Vernal Pool Invertebrates

California linderiella (a special concern species) and vernal pool fairy shrimp and vernal pool tadpole shrimp (both listed species) are associated with vernal pools and require inundation to complete their life cycle. Although farmed wetlands in the plan area have been disturbed from farming activities, they still provide potential habitat for these invertebrates.

## 4.8 BIOLOGICAL RESOURCES

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### Giant Garter Snake

Giant garter snakes are federally listed as threatened. They inhabit marshes, sloughs, ponds, small lakes, low gradient streams, other waterways and agricultural wetlands such as irrigation and drainage canals and rice fields, and the adjacent uplands. The giant garter snake typically inhabits small mammal burrows or other soil crevices above flood levels throughout its winter dormancy period, which runs from November to the middle of March. Giant garter snakes forage on small fish and frogs. Giant garter snakes have been observed within one-half mile of the plan area and one occurrence was reported from the Lent Ranch Marketplace project site, which is approximately one mile southeast of the plan area. Potential habitat occurs in the irrigation canals and the marsh area within the plan area. The East Franklin Specific Plan, which is located west of the plan area across Bruceville Road, identified the potential for onsite GGS habitat. However, because the snake was not observed during site surveys and the Laguna Ridge Specific Plan area is not hydrologically connected to the offsite areas that are known to support this species or have potential habitat, the Biological Resources Assessment and Preliminary Wetland Delineation study concluded that the plan area was not likely to contain potential giant garter snake habitat (see **Appendix 4.8**).

### Northwestern Pond Turtle

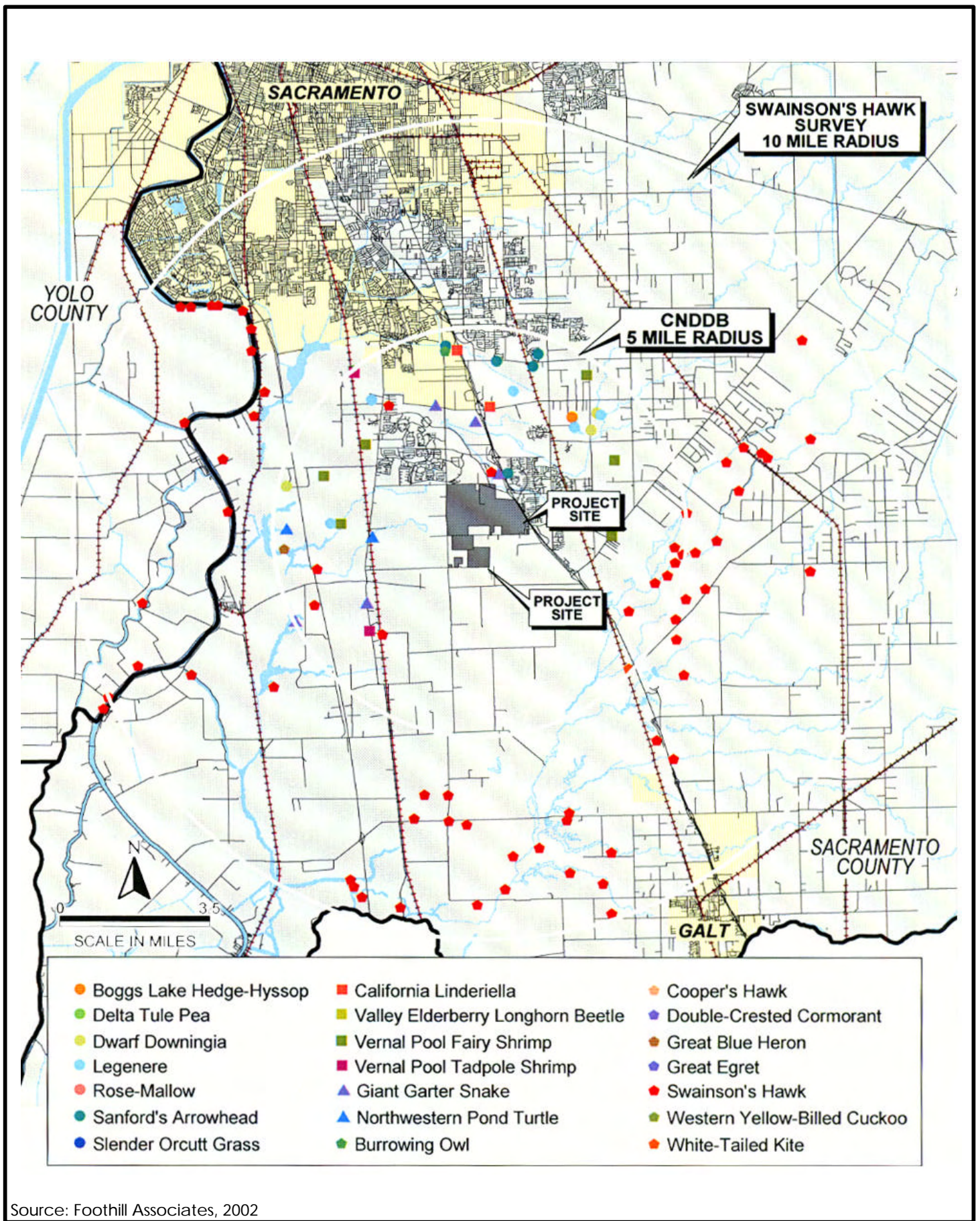
Northwestern pond turtles prefer permanent still, to slow-moving water bodies with basking sites such as logs, rocks, floating vegetation, or open mud banks. The USFWS and the CDFG both regard the turtles as species of concern. The onsite marsh provides habitat suitable for the northwestern pond turtle, however, the species was not observed during site surveys.

### Aleutian Canada Goose, Greater Sandhill Crane, and Mountain Plover

All three of these species are winter residents of the Central Valley and are known to breed outside of this region. The USFWS regards the Aleutian Canada Goose as threatened and the CDFG regard it as a species of special concern. The CDFG regards the Greater Sandhill Crane as threatened. Because these species were not observed during survey activities throughout the past three years, it is unlikely that they regularly forage in the plan area.

### Swainson's Hawk

Swainson's hawks typically nest in riparian corridors and isolated trees and forage in open grasslands and agricultural fields within close proximity to the nest (Zeiner *et. al.*, 1990). The foraging distribution for Swainson's hawk is considered to extend to a radius ten miles from its nesting location (CDFG, 1992). Swainson's hawk is listed in the CNDDDB as occurring 0.5 miles from the plan area. CDFG records also indicate that two nests are located within the plan area (near the intersection of Elk Grove Boulevard and Wymark Drive, and south of the Elk Grove Auto Mall). Another Swainson's hawk nest was identified off-site, south of the Grant Line Road/ State Route 99 interchange. During February 2002 surveys, no active nests were found within the plan area. An inactive raptor nest was identified in a tree near the intersection of Elk Grove Boulevard and Wymark Drive, and no nests were observed south of the Elk Grove Auto Mall. Three Swainson's hawks (two adults and one juvenile) were observed foraging in the plan area, on two separate occasions in 1998. Although several of the trees onsite provide potential nesting habitat, no active nests were found during site surveys.



Source: Foothill Associates, 2002



4.8 BIOLOGICAL RESOURCES

TABLE 4.8-1  
LISTED AND SPECIAL-STATUS SPECIES POTENTIALLY OCCURRING IN THE  
PLAN AREA OR IN THE PLAN AREA VICINITY

Species	Federal (USFWS)	State (CDFG)	CNPS	Habitat	Potential for Occurrence
<b>Plants</b>					
Bogg's Lake Hedge-Hyssop <i>Gratiola heterosepala</i>	--	E	1B	Marshes, swamps, vernal pools, and lake margins.	Unlikely due to the active discing of the land and excavated nature of the marsh.
Delta Tule Pea <i>Lathyrus jepsonii</i> var. <i>jepsonii</i>	--	--	1B	Coastal and estuarine marshes in the Sacramento-San Joaquin River Delta.	Unlikely; plan area is outside of species' known range.
Dwarf Downingia <i>Downingia pusilla</i>	--	--	2	Vernal pools.	Unlikely; disturbed nature of the land likely precludes the presence of this species.
Legenere <i>Legenere limosa</i>	SC	--	1B	Vernal pools.	Unlikely; disturbed nature of the land likely precludes the presence of this species.
Rose Mallow <i>Hibiscus lasiocarpus</i>	--	--	2	Marshes, ponds, and wet banks.	Unlikely due to the artificial origin of the marsh and active maintenance in the canals.
Sanford's Arrowhead <i>Sagittaria sanfordii</i>	SC	--	1B	Shallow freshwater marshes and low velocity streams.	Low; not observed, although potential habitat occurs onsite.
Pincushion Navarrettia <i>Navarrettia myersii</i>	--	--	1B	Vernal Pools	Unlikely; disturbed nature of the land likely precludes the occurrence of this species.
Slender and Sacramento Orcutt Grass <i>Orcuttia tenuis</i> / <i>Orcuttia viscida</i>	T/E	E/E	1B	Large, deep vernal pools.	Unlikely, due to the disturbed nature of the land and lack of appropriate habitat.
<b>Fish</b>					
Chinook Salmon (fall/late fall-run) <i>Oncorhynchus tshawytscha</i>	C	CSC	--	Sacramento River and its perennial tributaries.	Unlikely; the plan area does not support any tributaries to the Sacramento River.
Chinook Salmon (winter/spring -run /critical habitat)	E/T/PX	E/T/E	--	Sacramento River and its perennial tributaries.	Unlikely; the plan area does not support any tributaries to the Sacramento River.

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Species	Federal (USFWS)	State (CDFG)	CNPS	Habitat	Potential for Occurrence
<i>Oncorhynchus tshawytscha</i>					
Central Valley Steelhead <i>Oncorhynchus mykiss</i>	T	T	--	Sacramento River and its perennial tributaries.	Unlikely; the plan area does not support any tributaries to the Sacramento River.
Longfin Smelt <i>Spirinchus thaleichthys</i>	SC	CSC	--	Brackish water found in estuaries.	Unlikely; the plan area lacks suitable habitat.
Delta Smelt (species/critical habitat) <i>Hypomesus transpacificus</i>	T	T	--	Concentrated in Sacramento River channel between Collinsville and Rio Vista.	Unlikely; the plan area does not support any tributaries to the Sacramento River.
Sacramento Splittail <i>Pogonichthys macrolepidotus</i>	T	CSC	--	Sacramento River below Red Bluff.	Unlikely; the plan area lacks suitable habitat.
Sturgeon and Lamprey <i>Acipenser sp.</i> & <i>Lampetra spp.</i>	SC	CSC	--	Perennial freshwater rivers and streams.	Unlikely; the plan area lacks suitable habitat.
<b>Invertebrates</b>					
Valley Elderberry Longhorn Beetle <i>Desmocerus californicus dimorphus</i>	E	--	--	Elderberry shrubs.	Low; one elderberry shrub located in the southern portion of the plan area.
California Linderiella <i>Linderiella occidentalis</i>	--	SC	--	Vernal pools.	Low; although potential habitat occurs in the farmed wetlands within the plan area.
Vernal Pool Fairy Shrimp <i>Branchinecta lynchi</i>	T	--	--	Vernal pools.	Low; although potential habitat occurs in the farmed wetlands within the plan area.
Vernal Pool Tadpole Shrimp <i>Lepidurus packardii</i>	E	--	--	Vernal pools.	Low; although potential habitat occurs in the farmed wetlands within the plan area.
Antioch Dunes Anthicid Beetle <i>Anthicus antiochensis</i>	SC	--	--	Sand dunes; is known to occur only at Antioch Dunes in Contra Costa County.	Unlikely; the plan area is outside known range for this species and lacks suitable habitat.
Sacramento Anthicid Beetle <i>Anthicus sacramento</i>	SC	--	--	Sand dunes and sandbars associated with riparian habitats.	Unlikely; the plan area lacks suitable habitat.

## 4.8 BIOLOGICAL RESOURCES

Species	Federal (USFWS)	State (CDFG)	CNPS	Habitat	Potential for Occurrence
<b>Reptiles and Amphibians</b>					
Giant Garter Snake <i>Thamnophis gigas</i>	T	T	--	Sloughs, canals, and other small waterways hydrologically connected to areas of known occurrences. Prey base of small fish and amphibians; grassy banks and emergent vegetation for basking and high ground protected from winter flooding.	Low; not observed, although suitable habitat exists in the plan area if the marsh or any of the agricultural ditches contain adequate water levels to provide a prey base and cover from April through October.
Northwestern Pond Turtle <i>Clemmys marmorata marmorata</i>	SC	CSC	--	Permanent water bodies with basking sites such as logs and rocks.	Unlikely; not observed; although potential habitat occurs in onsite marsh and stock ponds.
Southwestern Pond Turtle <i>Clemmys marmorata pallida</i>	SC	CSC	--	Permanent water bodies with basking sites such as logs and rocks.	Unlikely; not observed and the plan area is outside known range for this species.
California Red-legged frog <i>Rana aurora draytonii</i>	T	CSC	--	Still or slow-moving water with dense riparian vegetation. Largely extirpated from the Central Valley.	Unlikely; plan area lacks suitable habitat
California Tiger Salamander <i>Ambystoma californiense</i>	C	T	--	Annual grasslands with temporary pools or ponds.	Unlikely due to disturbed nature of onsite farmed wetlands and surrounding land.
California Horned Lizard <i>Phrynosoma coronatum frontale</i>	SC	CSC	--	Valley-foothill woodlands and riparian habitats with annual grasslands.	Unlikely; the plan area lacks suitable habitat.
Western Spadefoot Toad <i>Scaphiopus hammondi</i>	SC	CSC	--	Grasslands with shallow temporary pools.	Unlikely due to disturbed nature of onsite farmed wetlands and surrounding land.

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Species	Federal (USFWS)	State (CDFG)	CNPS	Habitat	Potential for Occurrence
<b>Birds</b>					
Aleutian Canada Goose <i>Branta canadensis leucopareia</i>	T	CSC	--	Winter resident that utilizes pastures and grain fields for foraging.	Unlikely; not observed during winter surveys.
American Peregrine Falcon <i>Falco peregrinus anatum</i>	D	CSC	--	High vertical cliffs overlooking rivers, lakes or the ocean.	Unlikely; not observed during surveys and the plan area lacks suitable habitat.
Bald Eagle & Golden Eagle <i>Haliaeetus leucocephalus</i> <i>Aquila chrysaetos</i>	T	E/CSC	--	Large, open water bodies with large, old growth trees.	Unlikely; not observed during surveys and the plan area lacks suitable habitat.
Bank Swallow <i>Riparia riparia</i>	MBTA	T	--	Fine-textured siltaceous or sandy vertical banks along rivers.	Unlikely; not observed during surveys and the plan area lacks suitable habitat.
Western Burrowing Owl <i>Athene cunicularia hypugea</i>	SC	CSC	--	Open low-growing grasslands with suitable burrow sites.	Low; not observed; although potential habitat occurs along fringes of fields in the plan area.
Ferruginous hawk <i>Buteo regalis</i>	--	CSC	--	Winter resident of Central Valley. Forages in open.	Unlikely; not observed during winter surveys.
Greater Sandhill Crane <i>Grus canadensis tabida</i>	--	T	--	Winter resident of Central Valley grasslands and croplands.	Unlikely; not observed during winter surveys
Swainson's Hawk <i>Buteo swainsoni</i>	MBTA	T	--	Riparian woodland for nesting and adjacent grasslands for foraging.	High observed in the plan area during field surveys; foraging and nesting habitat exists onsite; no active nests were observed during February 2002 surveys.
OTHER RAPTORS (American kestrel, Cooper's hawk, northern harrier, red-shouldered hawk, red-tailed hawk, great horned owl, and white-tailed kite)	MBTA	CSC (some)	--	Large trees and riparian woodlands for nesting. Grasslands, croplands, open brush habitats and open woodlands for foraging.	High; all species observed roosting and/or foraging, and potential raptor nests were observed on-site.
Long-eared and short-	--	CSC	--	Winter residents of	Unlikely; not observed during

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Species	Federal (USFWS)	State (CDFG)	CNPS	Habitat	Potential for Occurrence
eared owls <i>Asio otus and Asio flammeus</i>				Central Valley. Open areas with few trees, oak thickets and riparian habitats.	winter surveys. Site lacks oak thickets and riparian habitat required by long-eared owls.
Western Screech Owl <i>Otus kennicottii</i>	--	--	--	Open oak, riparian, redwood, and mixed conifer habitats.	Low; not observed, however, suitable habitat exists within the plan area.
Merlin <i>Falco Columbarius</i>	--	CSC	--	Winer resident; forages in open habitats near water and tree stands. Does not breed in CA.	Unlikely; not observed during winter surveys.
Sharp-shinned Hawk <i>Accipiter striatus</i>	--	CSC	--	Winter resident of Central Valley. Uses dense tree stands near open areas.	Unlikely; not observed during winter surveys.
White-faced Ibis <i>Plegadis chihi</i>	SC	CSC	--	Dense, emergent wetlands.	Unlikely; not observed and species is rare in the Central Valley.
Yellow-Breasted Chat <i>Icteria virens</i>	--	CSC	--	Dense, bushy thickets near water and riparian woodlands	Unlikely; not observed and plan area lacks suitable habitat.
Loggerhead Shrike <i>Lanius ludovicianus</i>	--	CSC	--	Open habitats with scattered trees, shrubs and fences or other perches.	Low; not observed, however, suitable habitat exists within the plan area.
Horned Lark <i>Eremophila alpestris</i>	--	CSC	--	Grasslands and other open habitats with low, sparse vegetation.	Unlikely; not observed during surveys.
Mountain Plover <i>Charadrius montanus</i>	PT	CSC	--	Short grasslands and plowed fields in the Central Valley.	Unlikely; not observed; however potential habitat occurs throughout the plan area.
Little Willow Flycatcher <i>Empidonax traillii brewsteri</i>	--	T	--	Open river valleys with dense riparian vegetation.	Unlikely; not expected; plan area lacks suitable habitat.
Tricolored Blackbird	--	CSC	--	Freshwater marsh	Low; not observed; although



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Species	Federal (USFWS)	State (CDFG)	CNPS	Habitat	Potential for Occurrence
<i>Agelaius tricolor</i>				with stands of cattails, and tules; also blackberry brambles for nesting.	potential nesting habitat occurs in perennial marsh as well as blackberry brambles.
Western Yellow-Billed Cuckoo <i>Coccyzus americanus occidentalis</i>	--	E	--	Willow and cottonwood (riparian) forests along sloughs and slow-moving rivers.	Unlikely; not observed and plan area lacks suitable habitat.
EGRETS AND HERONS (includes double crested cormorant, great blue heron, and great egret)	MBTA	** for rookeries	--	Marshlands and ponds.	High; expected to periodically forage on the site, however, no rookeries (nesting sites) were found.
<b>Mammals</b>					
Ringtail <i>Bassariscus astutus</i>	--	CSC	--	Various riparian habitats and wooded areas with rocky areas.	Unlikely; not observed and plan area lacks suitable habitat.
American Badger <i>Taxidea taxus</i>	--	CSC	--	Uncultivated grasslands and meadows with friable soils.	Unlikely; disturbed nature of the plan area likely precludes the occurrence of this species.
Riparian Woodrat <i>Neotoma fuscipes riparia</i>	E*	CSC	--	Dense chaparral, oak, and riparian woodlands with nearby water source.	Unlikely; not observed and plan area lacks suitable habitat.
Riparian Brush Rabbit <i>Sylvilagus bachmani riparius</i>	E*	E	--	Dense, brushy areas of valley riparian forests.	Unlikely; not observed and plan area lacks suitable habitat.
San Joaquin Pocket Mouse <i>Perognathus inornatus</i>	SC	CSC	--	Agricultural fields or scrub on fine-textured soils.	Unlikely; unsuitable substrates and disturbed nature of the land likely precludes the occurrence of this species.
BATS (Pacific western big-eared, small-footed myotis, Long-eared myotis, Fringed myotis, Long-legged myotis, & Yuma myotis)	SC	CSC	--	Forests and woodlands with sources of water for feeding; maternity roosts in a variety of protected areas (i.e. rock crevices, caves, buildings, etc.).	Low; although abandoned outbuildings throughout the plan area provide potential habitat for maternity roosts, none have been found.

E = Endangered T = Threatened SC = federal Species of Concern CSC = California Species of Special Concern

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*PT = Proposed Threatened PX = Proposed Critical Habitat D = Delisted \* = Extirpated \*\* = DFG "Special Animal"*  
*MBTA = federal Migratory Bird Treaty Act*

**CNPS Categories:** 1B = Plants rare, threatened, or endangered in California and elsewhere

2 = Plants rare, threatened, or endangered in California, but common elsewhere

*CNPS is a private non-profit organization that works closely with CDFG throughout the state. CNPS-developed information serves as an important source of data for consideration by CDFG and USFWS in recommendations for listing state or federal threatened and endangered plant species.*

*Source: Foothill Associates, 2002*

In 1994, CDFG prepared a Staff Report describing mitigation of impacts to Swainson's hawks, which is a special-status bird species. Subsequent to preparation of this report, the County of Sacramento worked with staff of CDFG to develop an ordinance that provides a simplified means for individual development projects to mitigate impacts to Swainson's hawk foraging habitat on a region-wide basis. County Ordinance SCC No. 1093 requires payment of fees per acre of land developed within the County's Urban Services Boundary. Upon its incorporation, the City of Elk Grove adopted this ordinance for mitigation purposes as set forth in Chapter 16.130 of the City of Elk Grove Code. The fee is calculated at ratio dependent upon the proximity of the project area to known Swainson's hawk nests, up to a maximum of ten miles. The fees are used by the Nature Conservancy to purchase easements or fee title on property in the Consumnes River and/or Deer Creek corridors. The CDFG has determined this to be suitable mitigation for significant or cumulatively significant impacts to Swainson's hawk foraging habitat if the site is more than one mile from active nests. Where a project is located within one mile of known hawk nest sites, the impacts are not considered adequately mitigated by the payment of fees, and additional mitigation measures are required. These measures typically consist of providing protected habitat management land elsewhere in the region at a ratio of 1 acre per acre developed, if a portion of the land would be managed for agriculture; one half acre per acre developed if all the habitat management land would be managed specifically for hawk habitat; or alternative mitigation of equal or greater protection as approved by the Environmental Services Division of the CDFG.

### Burrowing Owl

Burrowing owls are found in grassland habitats, which support suitable burrowing sites. Because the plan area lacks an abundance of burrowing sites and no burrowing owls were observed during field surveys, the plan area only has a low potential for this species occurring here. Nonetheless, burrowing owls are known to occur in the vicinity of the plan area and could potentially move onto the site to nest prior to construction.

### Other Raptors

As discussed earlier, several common raptor species were observed foraging within the Laguna Ridge Specific Plan area. Inactive raptor nests were also identified during the site surveys. Although no evidence of active nesting (whitewash, pellets, feathers, etc) was found, the nests could be active during the breeding season.

### Tricolored Blackbird

Tricolored blackbirds inhabit freshwater marsh habitats with stands of cattails, tules, and blackberry thickets for nesting. The perennial marsh in the northern portion of the plan area and the blackberry brambles associated with the irrigated pastures and canals provide potential habitat for this species. However, none were observed during site surveys.

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### Hérons and Egrets

Hérons and egrets prefer marshlands and ponds for foraging habitat, and as previously mentioned, a great blue heron was observed foraging on the site. It is possible that these avian species forage in the perennial marsh and irrigation canals, however, no nesting sites (rookeries) were found and it is unlikely that these species nest onsite.

### Bats

Bats including Pacific western big-eared bat, small-footed myotis, long-eared myotis, fringed myotis, long-legged myotis, and yuma myotis, are known to occur in the vicinity of the plan area. These species are of concern to the CDFG due to recent population declines. Habitat for bat species consists of foraging habitat, night roosting cover, maternity roost sites, and winter hibernacula. Potential habitat for maternity roosts occurs in the abandoned outbuildings throughout the plan area. However, no bats were found during site surveys.

### Sensitive Habitats

Sensitive habitats include those that are of special concern to resource agencies and those that are protected under CEQA, Section 1600 of the CDFG Code, or Section 404 of the Clean Water Act (CWA). Additionally, habitats are protected under the City of Elk Grove General Plan. Sensitive habitats onsite include native and some non-native trees and the perennial marsh. **Figure 4.8-1** illustrates the sensitive habitats occurring within the plan area, excluding areas with a "Reserve" overlay designation.

### Trees

Although native trees such as oaks and California black walnuts are not afforded special protection under state or federal law, loss of these species is a concern of the CDFG and CNPS because of their continued depletion throughout California. In addition, under the City of Elk Grove Tree Preservation Ordinance and the City's Draft General Plan, the City regulates all projects with the potential to affect any protected trees. Protected trees are defined as all native oaks, California black walnuts and California sycamores with a diameter at breast height (DBH) of six inches and greater as well as all other trees with a 19-inch DBH and greater.

## 4.8.2 REGULATORY FRAMEWORK

The following describes federal, state, and local environmental laws and policies that are relevant to the CEQA review process. The CEQA significance criteria are also included in this section.

### LISTED SPECIES

The United States Congress passed the Federal Endangered Species Act (FESA) in 1973 to protect those species that are endangered or threatened with extinction. The State of California enacted a similar law, the California Endangered Species Act (CESA) in 1984. The state and federal Endangered Species Acts are intended to operate in conjunction with CEQA and the National Environmental Policy Act (NEPA) to help protect the ecosystems upon which endangered and threatened species depend. The United States Fish and Wildlife Service (USFWS) is responsible for implementation of the FESA, while the California Department of Fish

and Game implements the CESA. During project review, each agency is given the opportunity to comment on the potential of the project to affect listed plants and animals.

### SPECIAL-STATUS SPECIES

In addition to formal listing under the FESA and the CESA, species receive additional consideration during the CEQA process. Species that may be considered for review are included on a list of "Species of Special Concern," developed by the CDFG. It tracks species in California whose numbers, reproductive success, or habitat may be threatened.

The CNPS maintains a list of native California plant species that have low numbers, limited distribution, or are otherwise threatened with extinction. This information is published in the Inventory of Rare and Endangered Vascular Plants of California. Potential impacts to populations of CNPS-listed plants receive consideration under CEQA review.

Raptors (birds of prey), migratory birds, and other avian species are protected by a number of state and federal laws. The federal Migratory Bird Treaty Act (MBTA) prohibits the killing, possessing, or trading of migratory birds except in accordance with regulations prescribed by the Secretary of Interior. Section 3503.5 of the California Fish and Game Code states that it is "unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto."

### WATERS OF THE UNITED STATES

The U.S. Army Corps of Engineers (Corps) regulates discharge of dredged or fill material into Waters of the United States under Section 404 of the Clean Water Act (CWA). "Discharges of fill material" is defined as the addition of fill material into Waters of the U.S., including, but not limited to the following: placement of fill that is necessary for the construction of any structure, or impoundment requiring rock, sand, dirt, or other material for its construction; site-development fills for recreational, industrial, commercial, residential, and other uses; causeways or road fills; fill for intake and outfall pipes and subaqueous utility lines [33 C.F.R. §328.2(f)]. In addition, Section 401 of the CWA (33 U.S.C. 1341) requires any applicant for a federal license or permit to conduct any activity that may result in a discharge of a pollutant into waters of the United States to obtain a certification that the discharge will comply with the applicable effluent limitations and water quality standards.

Waters of the U.S. include a range of wet environments such as lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, and wet meadows.<sup>1</sup> Boundaries between jurisdictional waters and uplands are determined in a variety of ways depending on which type of waters is present.

In accordance with the California Fish and Game Code, the CDFG has jurisdiction over fish and wildlife resources of the State. Under Section 1603, a private party must notify the CDFG if a proposed project will "substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake designated by the department, or use any

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<sup>1</sup> Recently the United States Supreme Court ruled that the United States Army Corps of Engineers does not have the authority to regulate isolated waters (including wetlands) under the Clean Water Act, based on the use of the "migratory bird rule".

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material from the streambeds...except when the department has been notified pursuant to Section 1601." If an existing fish or wildlife resource may be substantially adversely affected by the activity, the CDFG may propose reasonable measures that will allow protection of those resources. If these measures are agreeable to the party, they may enter into an agreement with the CDFG identifying the approved activities and associated mitigation measures.

### Jurisdictional Wetlands and Drainages

Wetlands and permanent and intermittent drainages, creeks, and streams are generally subject to jurisdiction of the U.S. Army Corps of Engineers (Corps) under Section 404 of the federal Clean Water Act. Jurisdictional waters of the U.S. include jurisdictional wetlands as well as other waters of the U.S. such as creeks, ponds and intermittent drainages. The Corps defines wetlands as areas that are inundated or saturated by surface or groundwater at a frequency or duration to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions [33 C.F.R. §328.3(b)]. The lateral extent of non-tidal waters is determined by delineating the ordinary high water mark (OHWM) [33 C.F.R. §328.4(c)(1)]. The OHWM is defined by the Corps as "that line on shore established by the fluctuations of water and indicated by physical character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas" [33 C.F.R. §328.3(e)]. If adjacent wetlands occur, the limits of jurisdiction extend beyond the ordinary high water mark to the outer edge of the wetlands. The presence and extent of wetland areas are normally determined by examination of the vegetation, soils, and hydrology of a site. The majority of jurisdictional wetlands exhibit three wetland criteria, including: hydrophytic vegetation, wetland hydrology, and hydric soils.

In 2002, Foothill Associates conducted the Laguna Ridge Biological Resources Assessment and Preliminary Wetland Delineation. The results of the study concluded that there are 4.83 acres of jurisdictional wetlands within the plan area (0.85-acre of farmed wetland and 3.98-acres of perennial marsh). **Figure 4.8-1** shows the locations of onsite wetlands and perennial marshes. Several parcels within the plan area have had their wetlands delineations verified by the Corps. Other parcels within the Laguna Ridge Specific Plan area need to be further evaluated during the spring when hydrological conditions exist, and the total jurisdictional wetland acreage needs to be determined through a consultation with NRCS and the USACE. The excavated perennial marsh could potentially become a functioning wetland and the wetlands could become vernal pool habitats and open water canals could be considered jurisdictional wetlands if they continue to exhibit wetland characteristics.

### WILDLIFE MIGRATION CORRIDORS

Wildlife migration corridors are important for the movement of migratory wildlife populations. Corridors allow wildlife to move between existing habitats in search of food, shelter, and breeding mates, as well as escape routes from human disturbances, fire and predators. In addition to riparian corridors, migratory waterfowl and raptor species will use open agricultural land as resting and foraging sites during migration movements.

### CITY OF ELK GROVE DRAFT GENERAL PLAN

The City of Elk Grove has adopted the Draft General Plan, which includes the policies for the protection and preservation of the natural resources of the area.

Table 4.8-2 identifies the Draft General Plan Conservation and Air Quality element contains policies that are directly applicable to the proposed project, and presents an evaluation of the consistency of the project with these policies as required by CEQA. The final authority for interpretation of these policy statements, and determination of the project’s consistency rests with the City Council.

TABLE 4.8-2  
DRAFT GENERAL PLAN CONSERVATION AND OPEN SPACE ELEMENT POLICY CONSISTENCY

General Plan Policies	Consistency with General Plan	Analysis
<p><b>CAQ-8:</b></p> <p>Large trees of all species are an important aesthetic (and, in some cases, biological) resource. Trees which function as an important part of the City’s or a neighborhood’s aesthetic character or as natural habitat should be retained during the development of new structures, roadways (public and private, including roadway widening), parks, or other uses.</p>	<p>Yes</p>	<p>Many native oak trees, non-oak natives (California black walnut), and landmark-size trees (any tree species with a diameter at breast height of 19 inches or greater) occur within the Laguna Ridge Specific Plan area; some would require removal as part of the project. Because the removal of any oak or California black walnut tree with a diameter at breast height of six inches and greater, as well as any other tree species with a diameter at breast height of 12 inches or greater, would be in conflict with the City’s Draft General Plan, this would be considered a potentially significant impact and require mitigation. Mitigation measures 4.8.1(a) through 4.8.1(c) would mitigate the loss of landmark trees, native oak trees and other non-native trees.</p>
<p><b>CAQ-9</b></p> <p>Wetlands, vernal pools, marshland and riparian (streamside) areas are considered to be important resources. Impacts to these resources shall be avoided whenever technically feasible.</p>	<p>Yes</p>	<p>Onsite marshes will be preserved as open space areas. The plan area does not contain riparian woodland areas.</p>

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General Plan Policies	Consistency with General Plan	Analysis
<p><b>PRO-5:</b></p> <p>The City views open space lands of all types as important resource which should be preserved in the region, and supports the establishment of multi-purpose open space areas to address a variety of needs, including, but not limited to:</p> <ul style="list-style-type: none"> <li>• Maintenance of agricultural uses;</li> <li>• Wildlife habitat</li> <li>• Recreational open space</li> <li>• Aesthetic benefits</li> <li>• Flood control</li> </ul> <p>To the extent possible, lands protected in accordance with this policy should be in proximity to Elk Grove, to facilitate use of these areas by Elk Grove residents, assist in mitigation of habitat loss within the city, and provide an open space resource close to the urbanized areas of Elk Grove.</p>	<p>Yes</p>	<p>This section addresses the Biological Resource Impacts associated with the development of the Plan Area and includes mitigation measures to address significant impacts to the environment.</p>

### 4.8.3 PROJECT IMPACTS AND MITIGATION MEASURES

#### STANDARDS OF SIGNIFICANCE

Section 15064.7 of the CEQA Guidelines encourages local agencies to develop and publish the thresholds that the agency uses in determining the significance of environmental effects caused by projects under its review. However, agencies may also rely upon the guidance provided by the expanded Initial Study checklist contained in Appendix G of the CEQA Guidelines. Appendix G provides examples of impacts that would normally be considered significant.

Impacts to biological resources would be considered significant if the project would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.

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- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

The following discussion of impacts is based on the implementation of the Laguna Ridge Specific Plan. For the purposes of this discussion, development impacts refer to impacts resulting from the development of the residential lots, commercial facilities, public facilities, parks, access roads, and some open space (i.e. canal improvements).

### METHODOLOGY

Available information pertaining to the natural resources of the region was reviewed including biological resource documentation from other recent projects in the vicinity of the plan area. Literature review included:

- California Department of Fish and Game (CDFG) *California Natural Diversity Data Base* (CNDDB: Florin Quadrangle, 2000);
- U.S. Fish and Wildlife Service (USFWS) Special-Status Species List for the Elk Grove Quadrangle;
- California Native Plant Society's (CNPS) *Inventory of Rare and Endangered Vascular Plants of California*, 1994;
- *The City of Elk Grove Draft General Plan*, November 2002;
- U.S. Department of Agriculture (USDA), Natural Resource Conservation Service's (NRCS) *Soil Survey of Sacramento County*;
- *Lent Ranch Marketplace Draft EIR*. October 2000; and,
- *Notice of Preparation* for the Laguna Ridge Specific Plan, September and October 2000.

Biologists from Foothill Associates physically surveyed approximately 1,398-acres of the 1,900-acre plan area on July 15<sup>th</sup> and 23<sup>rd</sup> of 1998, with subsequent visits to conduct a tree survey in November and December of 2000, January of 2001 and February of 2002. As part of this assessment, Foothill Associates biologists prepared a preliminary wetland delineation utilizing the Corps 1987 three-parameter methodology to delineate jurisdictional Waters of the U.S. This methodology requires collection of hydric soils, hydrophytic vegetation, and hydrologic data at several locations to establish the jurisdictional edge of Waters of the U.S. Data points are



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surveyed to determine the percent dominance by hydrophytic vegetation, as determined by the *U.S. Fish and Wildlife Service National List of Plant Species that Occur in Wetlands: 1988 California (Region 0)*. Waters of the U.S. were mapped through a combination of the aerial photography and field survey. On October 1, 2001 Foothill Associates conducted an offsite analysis of property located south of the Laguna Ridge Specific Plan area, south of Bilby Road and east of Bruceville Road, to determine if significant biological impacts would result from the construction of the proposed 80-foot wide offsite drainage channel. The proposed drainage channel to the south of the plan area as well as the offsite wastewater facility improvements along Bruceville Road were evaluated for their potential to significantly impact biological resources at offsite locations.

As part of subsequent field surveys of the plan area, the City sent letters to non-participating property owners requesting access for on-site surveys. 45 of the 61 property owners whose properties constitute approximately 1,710 acres (approximately 90 percent of the plan area surveyed) responded affirmatively. The remaining 16 property owners, whose land constitutes approximately 160 acres, either did not respond or responded negatively. Despite being denied access to certain properties, reasonable efforts were made to gather information on the outstanding 160 acres by various means, which included conducting observations from property boundaries. The results of the survey are provided in **Appendix 4.8** of this document, which demonstrate that this Revised Draft EIR comprehensively addresses all potential biological impacts that would result from the project.

City staff reviewed and utilized the Biological Resource technical studies prepared by Foothill Associates as well as previous biological surveys performed for adjacent areas (East Franklin Specific Plan, Lent Ranch Marketplace) in evaluating project impacts.

### PROJECT IMPACTS AND MITIGATION MEASURES

#### Common and Special-Status Vegetation

Based on the proposed land use plan, approximately 1,900 acres would be converted to developed areas. As previously discussed, the plan area contains actively disced land and is generally disturbed in nature. The plan area consists of predominantly agricultural crop and non-native grassland species and has limited biological value. However, the existing land does provide habitat of importance for common and special-status species, which are discussed later in this section. Because local vegetative species associated with agricultural land is regionally widespread, this impact would be considered **less than significant** and requires no mitigation.

#### Native and Protected Tree Species

**Impact 4.8.1** Development under the Laguna Ridge Specific Plan would result in the loss of landmark-sized trees and protected tree species, which would conflict with the City's Tree Preservation Ordinance. This is considered a **potentially significant** impact.

Many native oak trees, non-oak natives (California black walnut), and landmark-size trees (any tree species with a diameter at breast height of 19 inches or greater) occur on the Laguna Ridge Specific Plan area. Some of the 1,294 regulated trees (not including trees located on properties with a "Reserve" overlay designation and within street rights-of-way) would be removed throughout the development and buildout of the specific plan. The extension of Poppy Ridge Road at Bruceville, Laguna Springs Drive at Elk Grove, and the construction of the

major drainage channel would require the removal of protected and non-protected trees. Any protected tree species remaining onsite could be subject to potential impacts from the following: disturbances to trees from grading and construction activities that may affect the branches, trunk, or roots directly from mechanical damages, and indirectly due to alterations in soil structure, drainage, or microbiology. Additionally, the construction of the proposed 80-foot wide offsite drainage channel, which would be located south of the plan area and east of Bruceville Road, may require the removal of protected tree species. It should be noted that the impacts of offsite improvements have been evaluated as part of the project-related impacts.

From a habitat perspective, the regular disturbance, wide spacing, and limited understory vegetation of the existing trees on the plan area provide limited foraging habitat and cover for wildlife. Therefore, the loss of these trees would not significantly affect existing habitat values. Removal of oak trees or California black walnut trees greater than 6 inches in diameter at breast height or any other tree species with a diameter at breast height of 12 inches or greater, would conflict with the City's Tree Ordinance (as amended) and Draft General Plan Policies. Consequently, the loss of such trees is considered a potentially significant impact.

Mitigation Measures

**MM 4.8.1a** A tree survey shall be conducted by an arborist certified by the International Society of Arboriculture (ISA) to enumerate and evaluate all trees on the site that meet the standards in the City Tree Ordinance (as amended).

All tree locations shall be mapped onto all subsequent improvement and construction plans, tentative subdivision maps, and maps associated with development projects and rezones. Direct loss of protected trees shall be clearly identified on all subsequent maps and plans.

*Timing/Implementation* As part of the subsequent development application submittals and prior to construction activities.

*Enforcement/Monitoring* City of Elk Grove Development Services

**MM 4.8.1b** Unless identified for removal as described in MM 4.8.1, all trees that meet the following criteria shall be avoided by construction and protected during all construction activity:

- Native and Non-Native Oak Trees with a trunk at least six inches (6") in diameter at a height of 4.5 feet. The removal of trees with a trunk diameter of twelve inches (12") or more is discouraged.
- All other trees with a trunk diameter of twelve inches (12") at a height of 4.5 feet. The removal of trees with a trunk diameter of twenty-four inches (24") or more is discouraged.

Trees to be retained shall be protected by implementation of the following measures:

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1. Before initiating any construction activity near protected trees, install chain link fencing or a similar protective barrier at least one foot outside the dripline of each tree or as far as possible from the tree trunk where the existing road is within the tree dripline. The barrier fencing will remain in place for the duration of construction activity.
2. Any required pruning of oak trees shall be conducted before construction activity begins. Oak trees that require pruning of branches larger than two inches in diameter shall be pruned by a certified arborist. No pruning of the six-foot-diameter tree will be permitted.
3. No signs, ropes, cables (except cable that may be installed by a certified arborist or other professional tree expert), or other items shall be attached to the oak trees.
4. No vehicles, construction equipment, mobile home/office, supplies, materials, or facilities shall be driven, parked, stockpiled, or located within the driplines of oak trees.
5. No grading shall be allowed within the driplines of oak trees except where paved roadway already exists and where it can be demonstrated that the health of the tree will not be significantly impacted. Removal of pavement and grading within the driplines of oak trees shall be conducted in the presence of a certified arborist to ensure that damage and stress to any oak tree is minimized.
6. Any work necessary within the driplines shall be conducted by hand.
7. Paving within the driplines of oak trees shall be stringently minimized. When paving is absolutely necessary, porous material shall be used or a piped aeration system shall be installed under the supervision of a certified arborist.
8. Landscaping beneath oak trees may include non-plant material such as boulders, cobbles, and wood chips. The only plant species that shall be planted within the driplines of oak trees are those that are tolerant of the natural semi-arid environs of the trees. Limited drip irrigation approximately twice per summer is recommended for understory plants.
9. No sprinkler system shall be installed in such a manner that it irrigates within the driplines of oak trees.

Trees that are subject to protection and which cannot be protected shall be replaced with in-kind species in accordance with established tree planting specifications, the combined diameter of which shall equal the combined diameter of the trees removed.

If trees cannot be preserved or replaced onsite, off-site mitigation or the payment of an in-lieu fee shall be provided in accordance with the provisions of the City Tree Preservation Ordinance (as amended).

The above requirements shall be implemented prior to and during construction activities for all subsequent public and private projects. Improvement and construction plans shall specifically note this measure.

*Timing/Implementation:* As part of the subsequent development application submittals and prior to and during construction activities.

*Enforcement/Monitoring:* City of Elk Grove Development Services

**MM 4.8.1c**

For trees that are planned to be removed and which meet the criteria contained in the City's Tree Preservation Ordinance (as amended) and the City of Elk Grove Draft General Plan Conservation and Air Quality Element, a tree mitigation plan shall be submitted to the City of Elk Grove in accordance with City requirements. Protected trees shall be replaced on a no-net-loss basis.

Tree mapping required under mitigation measure MM 4.8.1a will delineate all protected trees planned to be removed. Mitigation areas, if needed, shall be within the plan area limits in landscape corridors and designated open space areas, if feasible. However, if the applicant demonstrates that onsite mitigation is not feasible, offsite mitigation within the city limits will be acceptable. Should the applicant contract with an organization for offsite tree mitigation, the City of Elk Grove shall review and may approve the contract if it meets the no-net-loss requirement and is otherwise deemed appropriate. The mitigation plan shall include the following components:

1. Number, location, size, and species of the replacement trees to be planted;
2. Methods of irrigation for planted trees;
3. Planting and maintenance schedule; and
4. Plan for care of planted trees for a three-year establishment period and replacement of any planted trees that do not survive.

*Timing/Implementation:* Prior to issuance of grading permit.

*Enforcement/Monitoring:* City of Elk Grove Development Services

Implementation of the above mitigation measures reduces the impact on protected tree species to a **less than significant** level.

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### Sanford's Arrowhead

**Impact 4.8.2** Project implementation could remove potential habitat for Sanford's arrowhead, a special-status plant species. This is considered a **potentially significant** impact.

The perennial marsh in the northern portion of the plan area is considered suitable habitat for Sanford's arrowhead, a rare plant species in California. The proposed project design appears to avoid adverse effects to this species. However, future passive recreation uses of the proposed open space area may result in potential adverse effects to the areas containing perennial marsh. This impact would be considered potentially significant and would require mitigation.

### Mitigation Measures

**MM 4.8.2a** Prior to approval of site plans and/or tentative subdivision maps for each parcel proposed for development within 50 feet of the perennial marsh shown in **Figure 4.8-1** of the Draft EIR, a focused plant survey for Sanford's arrowhead is required to determine the presence/absence of this species. The surveys shall be conducted by a qualified botanist retained by the City and funded by the project applicant during the blooming period (May-August) for this species.

*Timing/Implementation:* Prior to approval of site plans and/or tentative subdivision map for parcels proposed for development within 50 feet of the perennial marsh.

*Enforcement/Monitoring:* City of Elk Grove Development Services

**MM 4.8.2b** If this species is not found onsite, no further measures are required. However, if Sanford's arrowhead is found, each population shall be mapped and technical assistance from CNPS and the U.S. Fish and Wildlife Service shall be requested. To the maximum extent feasible, plant populations shall be preserved within open space non-disturbance areas. However, if these areas cannot be avoided, land supporting populations of the impacted species shall be purchased and shall be permanently protected. Under the direction of CNPS and the U.S. Fish and Wildlife Service, preservation strategies shall be implemented, which may include seed and soil collection or plant transplant. At a minimum, mitigation shall occur at a 1:1 ratio (one plant preserved for every plant impacted). A detailed mitigation plan that includes species, habitat, preserve management, and monitoring strategies shall be developed in consultation with the U.S. Fish and Wildlife Service.

*Timing/Implementation:* Prior to approval of site plans and/or tentative subdivision maps for parcels proposed for development within 50 feet of the perennial marsh.

*Enforcement/Monitoring:* City of Elk Grove Development Services, and U.S. Fish and Wildlife Service

Implementation of the above mitigation measures in conjunction with future projects developed in accordance with the Laguna Ridge Specific Plan would reduce the impact on Sanford's arrowhead to a **less than significant** level.

### **Wetland Habitat and Jurisdictional Waters of the U.S.**

**Impact 4.8.3** Development under the Laguna Ridge Specific Plan could result in the filling of jurisdictional wetlands and waters of the U.S. This is considered a **potentially significant** impact.

Based on the proposed Specific Plan land use plan, approximately 4.83 acres of jurisdictional wetland habitat could be impacted by the conversion of agricultural land to residential, commercial, recreation and public service uses (not including the "Reserve" overlay designated areas). Wetlands represent potential habitat for two listed invertebrate species and one invertebrate species of special concern, including the giant garter snake. Because wetlands may support these species, loss of wetland may adversely affect them. The onsite wetlands are regulated under the federal Clean Water Act, thus requiring a permit from the U.S. Army Corps of Engineers for a fill permit. Because impacts to onsite wetlands would be significant, mitigation would be required. Additional wetland habitat may exist within land areas with the "Reserve" overlay designation. Land within the "Reserve" area has yet to be surveyed because the landowners do not anticipate developing their properties in the near future.

### Mitigation Measure

**MM 4.8.3** As part of each subsequent project application submittal to the City, the project applicant shall identify all potential wetland resources that occur on-site for City review (such as those identified in Figure 4.8-1 of the Draft EIR. If wetland resources are proposed to be impacted, the project applicant shall do the following:

1. The applicant shall delineate the extent of jurisdictional waters of the U.S. to be impacted by the proposed project and, if required, apply for a Section 404 permit from the U.S. Army Corps of Engineers (Corps). Wetland areas that would be lost or disturbed shall be replaced or rehabilitated on a "no-net-loss" basis. Onsite creation of wetland habitat is preferred to offsite mitigation. Habitat restoration, rehabilitation, and/or replacement shall be at a location and by methods agreeable to the Corps.
2. The applicant shall obtain a Section 401 water quality waiver of certification from the RWQCB.
3. A mitigation plan shall be implemented that includes one of the following:
  - (a) Completion of an onsite Mitigation and Monitoring Plan that includes onsite creation/preservation of the wetlands.
  - (b) Credits may be obtained at an approved mitigation bank.

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The project applicant shall provide written evidence to the City from the Corps and the RWQCB that this measure has been complied with prior to recordation of final maps.

<i>Timing/Implementation</i>	<i>A part of subsequent tentative map applications and completed prior to final map recordation.</i>
<i>Enforcement/Monitoring</i>	<i>City of Elk Grove Development Services, Corps, and RWQCB.</i>

Implementation of the above mitigation measure would reduce the impacts on jurisdictional wetlands to **less than significant**.

### Common Wildlife

While the agricultural fields on the Laguna Ridge Specific Plan area are considered habitat for numerous species of common resident wildlife and foraging habitat for migratory wildlife, these species are abundant. The habitats in which these species occur are also abundant in the areas surrounding the plan area. Project construction is likely to displace these species from the plan area; however, these species are not expected to be adversely affected by the proposed project because similar habitat is readily accessible. For these reasons, this impact would be considered **less than significant** and no mitigation measures would be required.

### Special-Status Wildlife Species

**Impact 4.8.4** Construction activities associated with the Laguna Ridge Specific Plan may result in the direct loss of giant garter snakes. This would be considered a **potentially significant** impact.

Even though the Biological Resources Assessment and the Preliminary Wetland Delineation study concluded that the Laguna Ridge Specific Plan area was unlikely to contain giant garter snakes (GGS)(based on the fact that this species was not observed during site surveys and the plan area is not hydrologically connected to the offsite areas that are known to support this species), there is a possibility for GGS to occur onsite. The following factors provide the basis for considering that GGS could occur onsite: (1) potential habitat exists in the irrigation canals and the marsh area within the plan area; (2) giant garter snakes have been observed within one-half mile of the plan area and one occurrence was reported on the Lent Ranch Marketplace site, which is approximately one mile southeast of the plan area; and, (3) the East Franklin Specific Plan, which is located west of Laguna Ridge Specific Plan across Bruceville Road, identified potential GGS habitat onsite. The possibility also exists for GGS to locate on the site between surveys and actual construction, as well as over the 20-year buildout of the Specific Plan area. If GGS were found within the plan area, the loss of the species due to construction-related activities would result in a significant impact, requiring mitigation.

### Mitigation Measures

**MM 4.8.4a** Within 30 days prior to commencement of construction activities, a pre-construction survey of land within 200 feet of all wetlands, channels, ponds, and other such waterways within the plan area shall be conducted by a qualified biologist retained by the City and funded by the project applicant who is approved by the Service's Sacramento Fish

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and Wildlife Office. In order to protect snakes, de-watering of areas within the site shall not occur prior to completion of the pre-construction surveys. The biologist will provide the Service with a field report form documenting the monitoring efforts within 24-hours of commencement of construction activities. The monitoring biologist shall be retained by the City and funded by the project applicant to routinely monitor construction activities. If a snake is encountered during construction activities, the monitoring biologist shall contact City Development Services and will have the authority to stop construction activities until appropriate corrective measures have been completed or it is determined that the snake will not be harmed.

Giant garter snakes encountered during construction activities should be allowed to move away from construction activities on their own. Capture and relocation of trapped or injured individuals can only be attempted by personnel or individuals with current Service recovery permits pursuant to Section 10(a) 1(A) of the Act. The biologist shall be required to report any incidental take to the Service immediately by telephone at (916) 979-2725 and by written letter addressed to the Chief, Endangered Species Division, within one working day. The project area shall be re-inspected whenever a lapse in construction activity of two weeks or greater has occurred.

This mitigation measure does not apply to land areas where surveys within the active period of the snake have been conducted and no snakes were found.

*Timing/Implementation: 30 days prior to grading and commencement of construction activities*  
*Enforcement/Monitoring: USFWS and City of Elk Grove Development Services*

### MM 4.8.4b

If a giant garter snake is identified within the plan area either during pre-construction surveys or during construction, the following shall occur:

1. The City of Elk Grove shall be notified;
2. The City shall suspend all construction activities on the site of the sighting and along any water feature within the plan area that is hydrologically connected to the site of the sighting;
3. Protocol surveys shall be conducted by qualified biologists retained by the City and funded by the project applicant who are approved by the Service's Sacramento Fish and Wildlife Office;
4. The project applicant shall consult with the USFWS and CDFG to determine appropriate mitigation for the species and habitat loss, possibly including Section 10 consultation with the USFWS and Section 2081 consultation with the CDFG; and,



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5. The project applicant shall provide the City with proof of the consultation and compliance with USFWS and CDFG mitigation requirements before construction activities may resume.

This mitigation measure does not apply to land areas where surveys within the active period of the snake have been conducted and no snakes were found.

*Timing/Implementation:* Prior to and during construction activities.  
*Enforcement/Monitoring:* City of Elk Grove Development Services, CDFG and USFWS.

### MM 4.8.4c

No grading or other construction activities shall be conducted from October 1 to April 30, which is the inactive period of the giant garter snake. More danger is posed to snakes during their inactive period, because they are occupying underground burrows or crevices and are more susceptible to direct effects, especially during excavation. A "no grading" period from October 1 to April 30 will apply to portions of the plan area located within 1,000 feet of ditches, canals, ponds, wetlands or other such areas. This mitigation measure does not apply to land areas where surveys within the active period of the snake have been conducted and no snakes have been found.

*Timing/Implementation:* Prior to project grading and during construction activity.  
*Enforcement/Monitoring:* City of Elk Grove Development Services

### MM 4.8.4d

Dewatering of ponds, ditches, canals and other such areas may begin any time after November 1, but no later than April 1 of the following year, once the absence of the species is determined or implementation of Mitigation Measure 4.8.4b has been completed. All water must be removed by April 15, or as soon thereafter as weather permits, and the habitat must remain dry without any standing water for 15 consecutive days after April 15 and prior to excavating or filling the dewatered habitat.

This mitigation measure does not apply to land areas where surveys within the active period of the snake have been conducted and no snakes were found.

*Timing/Implementation:* Prior to and during construction activity  
*Enforcement/Monitoring:* City of Elk Grove Development Services and CDFG.

### MM 4.8.4e

Construction personnel shall participate in a Service-approved worker environmental awareness program. Under this program, workers shall be informed about the presence of giant garter snakes and habitat associated with the species and that unlawful take of the animal or destruction of its habitat is a violation of the Act. Prior to construction activities, a qualified biologist approved by the Service shall instruct all construction personnel about: (1) the life history of the giant garter snake;

(2) the importance of irrigation canals, marshes/wetlands, and seasonally flooded areas, such as rice fields, to the giant garter snake; and (3) the terms and conditions of the biological opinion. Proof of this instruction shall be submitted to the City and the Sacramento U.S. Fish and Wildlife Office.

This mitigation measure does not apply to land areas where surveys within the active period of the snake have been conducted and no snakes were found.

*Timing/Implementation:* Prior to project grading and construction  
*Enforcement/Monitoring:* U.S. Fish and Wildlife Service and City of Elk Grove Development Services

Implementation of the above mitigation measures would reduce the impacts on giant garter snakes to a **less than significant** level.

**Impact 4.8.5** Implementation of the Laguna Ridge Specific Plan may result in the loss of potential valley elderberry longhorn beetle habitat. This impact could be a **potentially significant** impact.

An elderberry shrub (with a 5-inch trunk at ground level) was surveyed in the southern portion of the plan area. Consequently, this assessment addresses potential impacts to valley elderberry longhorn beetle (VELB) due to potential removal of this shrub during project construction. This animal, which is listed as a threatened species under the federal Endangered Species Act, is dependent on elderberry shrubs and is regulated by the USFWS. Therefore, the removal of elderberry shrubs as part of project development would be considered potentially significant and subject to mitigation. Since "Reserve" overlay designated areas have not been surveyed, additional habitat (shrubs) may be present in the plan area.

### Mitigation Measures

**MM 4.8.5** The project applicant shall design the subsequent public and private projects within the plan area to avoid impacts to potential habitat for VELB (elderberry shrubs; see **Figure 4.8-1** of the Draft EIR), if feasible. If project development is required in areas that may impact elderberry shrubs containing stems measuring 1.0 inch or greater in diameter at ground level (development within 100 feet of shrub dripline), the project applicant shall perform one of the following measures:

1. Fence and flag all areas to be avoided during construction activities. In areas where encroachment on the 100-foot buffer has been approved by the USFWS, provide a minimum setback of at least 20 feet from the dripline of each elderberry plant.
2. Brief contractors on the need to avoid damaging the elderberry plants and the possible penalties for not complying with these requirements.
3. Erect signs every 50 feet along the edge of the avoidance area with the following information: "This area is habitat of the valley

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elderberry longhorn beetle, a threatened species, and must not be disturbed. This species is protected by the Endangered Species Act of 1973, as amended. Violators are subject to prosecution, fines and imprisonment.” The signs should be clearly readable from a distance of 20 feet and must be maintained for the duration of construction.

4. Instruct work crews about the status of the beetle and the need to protect its elderberry host plant.

### Restoration and Maintenance

1. Restore any damage done to the buffer area (area within 100 feet of elderberry plants) during construction. Provide erosion control and re-vegetate with appropriate native plants.
2. Buffer areas must continue to be protected after construction from adverse effects of the project. Measures such as fencing, signs, weeding and trash removal are usually appropriate.
3. No insecticides, herbicides, fertilizers or other chemicals that might harm the beetle or its host plant should be used in the buffer areas, or within 100 feet of any elderberry plant with one or more stems measuring 1.0 inch or greater in diameter at ground level.
4. The applicant must provide a written description of how the buffer areas are to be restored, protected and maintained after construction is completed.
5. Mowing of grasses/ground cover may occur from July through April to reduce fire hazard. No mowing should occur within five feet of elderberry plant stems. Mowing must be done in a manner that avoids damaging plants (e.g., striping away bark through careless use of mowing/trimming equipment).

If the shrub cannot be avoided, then a mitigation plan shall be developed and implemented in consultation with USFWS consistent with the conservation guidelines for the valley elderberry longhorn beetle, which likely includes one or more of the following:

- Obtain credits at an approved mitigation bank; or
- Implement an onsite mitigation and monitoring plan that includes transplantation of the shrub and planting of elderberry seedlings.

The mitigation plan shall be approved by the USFWS prior to acceptance by the City. Any required onsite mitigation shall be incorporated into subsequent improvement and construction plans.

*Timing/Implementation: Prior to approval of subsequent development and prior to and during construction activities.*

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*Enforcement/Monitoring:* U.S. Fish and Wildlife Service and City of Elk Grove Development Services

Implementation of the above mitigation measures would reduce the impacts on VELB to a **less than significant** level.

**Impact 4.8.6** Implementation of the Laguna Ridge Specific Plan may remove potential habitat for vernal pool fairy shrimp (*Branchinecta lynchi*) and vernal pool tadpole shrimp (*Lepidurus packardii*). This impact is considered a **potentially significant** impact.

Based on wetland delineation data to date, a total of 0.13-acre of potential invertebrate habitat (farmed wetlands) is present within the plan area (not including areas with a "Reserve" overlay designation). If these species are present within these features, construction activities may result in the loss of individuals. Because loss of individuals of these species are of concern to state, federal, and local resource agencies and regulated under the federal Endangered Species Act, this impact would be considered potentially significant and subject to mitigation. Additional wetland habitat may exist within the plan area on properties with a "Reserve" overlay designation that have yet to be surveyed.

**MM 4.8.6** The project applicant shall design the subsequent public and private projects within the plan area to avoid impacts to potential habitat for vernal pool invertebrates by providing an appropriate setback from the edge of each pool, as determined by the City in consultation with the U.S. Fish and Wildlife Service, if feasible. If pools impacted cannot be avoided, the project proponent shall implement the following measures:

1. Completion of an onsite mitigation and monitoring plan that includes onsite creation/preservation of the pools. Mitigation shall be to the satisfaction of the U.S. Fish and Wildlife Service, the U.S. Army Corps of Engineers (as part of Section 404 permitting), and the City, or
2. Credits may be obtained at an approved mitigation bank.

*Timing/Implementation* Prior to the approval of subsequent development and prior to construction activities.

*Enforcement/Monitoring* U.S. Fish and Wildlife Service, U.S. Army Corps of Engineers, and City of Elk Grove Development Services

Implementation of the above mitigation measures would reduce the impacts on vernal pool fairy shrimp and vernal pool tadpole shrimp to a **less than significant** level.

**Impact 4.8.7** Implementation of the Laguna Ridge Specific Plan may remove Swainson's hawk nesting and foraging habitat. This is considered a **potentially significant** impact.

The agricultural fields within the Laguna Ridge Specific Plan site provide suitable Swainson's hawk foraging habitat, this species is also suspected of nesting on the property. As proposed,

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the project could remove up to 1,850 acres of open, onsite agricultural land, as well as the loss of tree canopy. The proposed 40-foot wide offsite drainage channel required for the Laguna Ridge Specific Plan would potentially impact Swainson's hawk through the removal of agricultural fields and trees. The drainage channel would be located offsite to the south of the plan area and east of Bruceville Road. However, it should be noted that the impacts of offsite improvements have been evaluated as part of the project-related impacts. At present, no Swainson's hawks are nesting within the plan area. However, there is a nest within 0.5 mile of the plan area. Additionally, on two separate occasions three hawks were sighted foraging in the plan area. Although the plan area does not currently contain an active nest, the possibility exists for the species to locate within the plan area over the 20-year buildout of the Specific Plan. The loss of suitable Swainson's hawk habitat, both on- and offsite, would be considered potentially significant and subject to mitigation.

### Mitigation Measures

**MM 4.8.7a** Prior to the approval of subsequent development (i.e., approval of improvement and construction plans), including offsite improvements, under the Plan, the City of Elk Grove shall ensure that the following mitigation measures are fulfilled:

- Based on the results of the survey identified in Mitigation Measure MM 4.8.8b, the project applicant shall mitigate the loss of Swainson's hawk foraging habitat by participating in the City of Elk Grove Swainson's Hawk Impact Mitigation Fees Ordinance or other methods determined acceptable to CDFG, if active nests are identified between one and ten miles of the project site. If active nests are identified within one mile of the project site, the project applicant and City shall consult with CDFG regarding the appropriate amount of acreage compensation, which may include participation in the City of Elk Grove Swainson's Hawk Impact Mitigation Fees Ordinance and/or additional foraging habitat preservation requirements.

*Timing/Implementation:* Prior to approval of improvement and construction plans.

*Enforcement/Monitoring:* City of Elk Grove Development Services and CDFG.

**MM 4.8.7b** Prior to any subsequent construction activities in the plan area, a Swainson's hawk nest survey shall be conducted within 30 days of construction activities for a one-mile radius. If active Swainson's hawk nests are found within ½ mile of a construction site, the applicant shall consult with the Department of Fish and Game and a qualified biologist shall be retained by the City and funded by the project applicant and clearing and construction shall be postponed or halted until additional nesting attempts no longer occur. If a nest tree is found on the subsequent project site prior to construction and is proposed for removal, then appropriate permits from CDFG shall be obtained and mitigation implemented pursuant to CDFG guidelines.

*Timing/Implementation:* Prior to construction activities.

*Enforcement/Monitoring:* City of Elk Grove Development Services and CDFG.

Implementation of the above mitigation measures would reduce the impact on Swainson's hawks to **less than significant**.

**Impact 4.8.8** Implementation of the Laguna Ridge Specific Plan could result in disturbance to bats, nesting raptors and other migratory birds, including burrowing owl and tricolored blackbird. This would be considered a **potentially significant** impact.

The large, mature trees including the two significant eucalyptus groves in the plan area support potential habitat for nesting resident and migratory birds, including raptors. Furthermore, raptor species including red-tailed hawk, Swainson's hawk, black-shouldered kite, barn owl, and Cooper's hawk have been observed in the plan area during the site surveys. However, no active nests for any of these species were found onsite during the surveys. Although burrowing owls were not observed in the plan area and the site has a low potential to for its occurrence, this species is known to occur in the vicinity of the site and could potentially move into the plan area to nest. Tricolored blackbirds could nest in the onsite marsh and blackberry brambles associated with the irrigated pasture.

Bats could occur in association with the agriculture outbuildings in the plan area. Because suitable habitat exists, the plan area could potentially be inhabited by bats, nesting raptors and migratory birds over the 20-year buildout of the Specific Plan.

Raptors are protected under the MBTA and Section 3503.5 of the California Fish and Game Code, and destruction of active raptor nests is considered a violation of this code. Migratory bird nests and eggs are protected under the MBTA as well, tricolored blackbird, burrowing owl, and several bat species are also considered CDFG sensitive species. However, no active nests were found during the site surveys. Consequently, impacts to nesting raptors, burrowing owl, and migratory birds would be considered potentially significant and would be subject to mitigation.

### Mitigation Measures

**MM 4.8.8a** If construction is proposed during the raptor breeding season (February–August), a focused survey for raptors (including burrowing owls), migratory bird nests, and bat roosts shall be conducted within 30 days prior to the beginning of construction activities by a qualified biologist in order to identify active nests onsite. If active nests are found, no construction activities shall take place within 500 feet of the nest until the young have fledged. This 500-foot construction prohibition zone may be reduced based on consultation and approval by the California Department of Fish and Game. Trees containing nests, or burrows that must be removed as a result of project implementation shall be removed during the non-breeding season (late September to March). If no active nests are found during the focused survey, no further mitigation will be required. This mitigation measure does not apply to a Swainson's hawk nest. Because the Swainson's hawk is Federally protected and a State threatened species, the removal of any tree containing an occupied hawk nest could severely affect nesting raptors, fledgling and/or eggs. Therefore, if an

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occupied Swainson's hawk nest tree is found on the subsequent project site prior to construction and is proposed for removal, then appropriate permits from CDFG shall be obtained pursuant to CDFG guidelines.

*Timing/Implementation:* *Prior to construction activities.*

*Enforcement/Monitoring:* *City of Elk Grove Development Services and CDFG.*

### MM 4.8.8b

Within 30 days prior to the onset of construction activities outside of the breeding season (September–January), a qualified biologist shall conduct a burrow survey to determine if burrowing owls are present in the plan area. If burrowing owls are observed on the site, measures shall be implemented to ensure that no owls or active burrows are inadvertently buried during construction. Such measures include: flagging the burrow and avoiding disturbance; securing and preserving suitable habitat offsite; passive relocation and/or active relocation to move owls from the site. All measures shall be determined by a qualified biologist and approved by the CDFG.

All burrowing owl surveys shall be conducted according to CDFG protocol. The protocol requires, at a minimum, four field surveys of the entire site and areas within 500 feet of the site by walking transects close enough that the entire site is visible. The survey shall be at least three hours in length, either from one hour before sunrise to two hours after or two hours before sunset to one hour after. Surveys shall not be conducted during inclement weather, when burrowing owls are typically less active and visible.

*Timing/Implementation* *Prior to construction activities.*

*Enforcement/Monitoring* *City of Elk Grove Development Services and CDFG.*

### MM 4.8.8c

Pursuant to the Migratory Bird Treaty Act and the California Fish and Game Code, if active songbird nests or active owl burrows are found within the survey area, clearing and construction within a minimum of 250 feet for owls and 100 feet for songbirds, or as determined by a qualified biologist to ensure disturbance to the nest will be minimized, shall be postponed or halted. Construction will not resume within the buffer until the nest is vacated and juveniles have fledged, as determined by the biologist, and there is no evidence of a second attempt at nesting. The perimeter of the protected area shall be indicated by bright orange temporary fencing. No construction activities or personnel shall enter the protected area, except with approval of the biologist.

*Timing/Implementation:* *Thirty days prior to construction activities occurring between September 1 through January 31.*

*Enforcement/Monitoring:* *City of Elk Grove Development Services and CDFG.*

Implementation of the above mitigation measures would reduce impacts on nesting raptors and migratory birds to a **less than significant** level.

### Indirect Impacts

During and after the completion of the proposed project, the preserved biological resources within the plan area along with the natural habitats in the vicinity of the plan area could be adversely affected by indirect impacts. The potential indirect impacts associated with the implementation of the proposed project could include the following:

- Increased populations of non-native plant species;
- Increased human populations may lead to more vehicle/wildlife interactions;
- Increased stormwater runoff and degradation of water quality; and
- Increased light and glare.

### Non-Native Plants

Typically, following the completion of project construction, a number of non-native plant species are used to landscape residential and commercial developments, as well as parks, schools, and planting strips associated with new roadways. Many of these ornamental and non-native plants grow relatively quickly, readily disperse their seeds into surrounding areas, propagate fairly easily, and tend to become invasive and out-compete native plant species.

Most of the plant species currently onsite are non-native species, including the plants in the agricultural fields and a portion of the tree population. Furthermore, introduced non-native plant species exist in residential subdivisions located east of SR-99 and north of Elk Grove Boulevard, and additional non-native landscaping is anticipated as the East Franklin Specific Plan becomes developed. As the land adjacent to the Laguna Ridge Specific Plan becomes developed, the potential for non-native plant species to become established outside the plan area and become detrimental to native plant species is low; therefore, increased populations of non-native plant species as a result of the proposed project would be considered less than significant and mitigation measures would not be required.

### Increased Human/Wildlife Interactions

A large portion of the plan area is heavily disturbed in nature due to recurring farming activities in addition to the moderate amount of vehicle traffic along Poppy Ridge and Bruceville Roads. Similarly, the surrounding land to the north, west, and east is either developed or presently undergoing construction. Implementation of the proposed project would increase the amount of vehicle traffic and would likely increase the potential for vehicle/wildlife interactions. However, because the wildlife in the plan area, and in the vicinity, is likely accustomed to moderate-high levels of disturbance, the increased human population associated with the proposed project would be considered less than significant and would not require mitigation.

### Water Quality

Grading activities and the addition of numerous impervious surfaces would result in an increase in erosion and stormwater runoff both during and after project construction. Implementation of water quality mitigation measures identified in this EIR and project consistency with the City's Land Grading and Erosion Control Ordinance, the implementation of Best Management Practices which is outlined in the Storm Water Pollution Prevention Plan and required by the National Pollutant Discharge Elimination System program, and the three proposed water quality



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detention basins would reduce potential sedimentation impacts to biological resources in the plan area and in the vicinity to less than significant levels.

### 4.8.3 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

#### SETTING

The region is predominantly characterized by agricultural uses, including farming and orchards. Irrigation canals traverse the area, providing water for the agricultural uses. Fremont cottonwood, arroyo willow, valley oak, poison oak, shrubs and Himalayan blackberry are commonly found around the irrigation canals. Perennial marshes and farmed wetlands are also prevalent in the region, supporting cattails, tule, Himalayan blackberry, willow, and grasses. Several species of oak, California black walnut, sycamore, and other native and ornamental tree species grow in the area. The agricultural lands, marshes, canals and trees provide habitat for endangered and protected species as well as species of concern. Such species include, but are not limited to, the native oak trees, Sanford's arrowhead, Valley Elderberry Longhorn Beetle, vernal pool fairy shrimp and tadpole shrimp, giant garter snake, northwestern pond turtle, Aleutian Canada goose, greater sandhill crane, mountain plover, Swainson's hawk, burrowing owl, tricolored blackbird, herons, egrets, and bats.

The character and landscape of the region has been gradually changing from agricultural to residential and commercial uses since the 1970s. This change will continue to occur as the City of Elk Grove expands.

#### IMPACTS AND MITIGATION MEASURES

**Impact 4.8.9** The development of this project would contribute cumulatively to the loss of biological resources in the region and the ongoing urbanization in southern Sacramento County. This would result in a **cumulative significant** impact.

In addition to the Laguna Ridge Specific Plan project, several other developments in southern Sacramento County are currently approved, proposed, under construction or in the preliminary planning stages. These projects include the Lent Ranch Marketplace, East Franklin Specific Plan, East Elk Grove Specific Plan, the Grant Line Road/SR-99 interchange improvement, and potential future development of the "Urban Study Areas" identified in the City's Draft General Plan, which all have the potential to adversely affect the biological resources in the region. Future developments would require on- and offsite improvements to provide water, wastewater, storm drainage, solid waste disposal, and other such services at the City's required level of service. Such improvements could contribute to the loss of potential habitat within the region. Offsite improvements required to serve Laguna Ridge Specific Plan area include a 40-foot wide offsite drainage channel, south of the plan area and east of Bruceville Road, as well as necessary wastewater infrastructure, which would be constructed within the Bruceville Road right-of-way extending from the plan area to connect with the existing pipeline north of Elk Grove Boulevard. The impacts of these two offsite facility improvements have been evaluated as project-related impacts.

On a cumulative level, the change in land uses would contribute to a loss of habitat for endangered and protected species, and species of concern, that currently inhabit the plan area, or that could potentially inhabit the plan area in the future. Although the Laguna Ridge

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Specific Plan area is generally degraded and disturbed as a result of recurring agricultural activities, it provides habitat for a variety of common wildlife species as well as special-status species. While potential direct impacts on biological resources are reduced, the increased human presence would be anticipated to cause potential indirect impacts. These could disturb breeding and foraging behavior of wildlife, and would result in a significant and unavoidable cumulative impact.

Another indirect impact would be stormwater runoff. Each project is required to participate in the NPDES permit program for stormwater runoff, which effectively reduces water quality impacts to below a level of significance. Planned urbanization of the project area would create new sources of light and glare. While project specific measures would be undertaken to orient or shield lights to minimize illumination of adjacent lands, the combined effect of all new developments approved or planned in the area would create a significant and unavoidable cumulative impact associated with increased human presence.

### Mitigation Measures

Implementation of mitigation measures MM 4.8.1a through c, MM 4.8.2a through c, MM 4.8.3, MM 4.8.4a through f, MM 4.8.5a and b, MM 4.8.7a and b, and MM 4.8.8a through c would reduce the direct project-specific impacts on special-status plant and animal species and native trees to a less than significant level. However, on a cumulative level the direct and indirect impacts would be considered **significant and unavoidable**.

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**SECTION 4.9**  
**GEOLOGY AND GEOTECHNICAL HAZARDS**

## 4.9 GEOLOGY AND GEOTECHNICAL HAZARDS

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This section assesses the affects of the proposed project on the soils and geology within the proposed project area. This analysis is based on an environmental site assessment (see **Appendix 4.5**) and a geotechnical engineering overview (see **Appendix 4.9**) by Wallace-Kuhl & Associates. This section discusses the potential effects of expansive soils on structures within the proposed project and the potential for erosion of topsoil during construction. If the impact the project has on the site exceeds the standards of significance, the impact would be considered significant and require mitigation measures if feasible.

### 4.9.1 ENVIRONMENTAL SETTING

The plan area consists of approximately 1,900± acres within the City of Elk Grove and is located southwest of the State Highway 99 and Elk Grove Boulevard interchange. The western boundary of the proposed plan area is Bruceville Road and the southern boundary is Bilby Road and Poppy Ridge Road. Elk Grove Boulevard comprises the majority of the northern project boundary.

#### GEOLOGIC SETTING

The plan area is located within the Great Valley geomorphic province of California. The geology of the Great Valley is typified by thick sequences of sedimentary deposits of Jurassic through Holocene age. The California Division of Mines and Geology (CDMG) and the United States Geologic Survey (USGS) have mapped a large portion of the site as being underlain by the lower member of the Quaternary-aged Riverbank formation. The Riverbank formation represents dissected alluvial fans and is generally composed of alluvial gravel, sand and silt derived from the western slopes of the Sierra Nevada Range. The Great Valley province is bounded on the north by the Klamath and Cascade mountain ranges, on the east by the Sierra Nevada Mountains, and on the west by the California Coast Mountain Range.

#### Geological Structure

The Great Valley of California is generally considered to be an elongated sedimentary trough, approximately 450 miles long and 50 miles wide, which has been filled by a thick sequence of Jurassic to Holocene continental and marine sediments. The sediments have been folded into an asymmetric syncline, the axis of which lies immediately east of the interior Coast Ranges. The Great Valley province is further divided into four geomorphic subunits: the Delta, River Floodplain, Alluvial Floodplain, and Low Foothills.

Surface elevations within the Great Valley generally range from several feet below mean sea level (msl) to more than 1,000 feet above sea level. The major topographical feature in the Sacramento Valley is the Sutter Buttes (a volcanic remnant), which rises approximately 1,980 feet above the surrounding valley floor. The ground surface elevation in the vicinity of the project area, as shown on the USGS Topographic Map of the Florin Quadrangle, California (1980), ranges from approximately 30 to 40 feet above msl.

#### Geotechnical Conditions

##### Structural Support

Preliminary studies of the plan area indicate that the undisturbed natural soils at shallow depths would be capable of supporting anticipated residential, commercial, and light industrial

## 4.9 GEOLOGY AND GEOTECHNICAL HAZARDS

structural loads. Furthermore, native soils are considered suitable for use as engineered fill. Such materials placed and compacted in accordance with standard geotechnical engineering recommendations for engineered fill construction would also provide suitable support for light to moderate foundation loads. Substantially higher bearing capacities can be assigned to the deeper undisturbed cemented "hardpan" soils.

### Faults

The severity of an earthquake can be expressed in terms of both *intensity* and *magnitude*. However, the two terms are quite different, and they are often confused. Intensity is based on the observed effects of ground shaking on people, buildings, and natural features. It varies from place to place within the disturbed region depending on the location of the observer with respect to the earthquake epicenter. **Table 4.9-1** provides a comparison of the two scales.

The intensity scale consists of a series of certain key responses such as people awakening, movement of furniture, damage to chimneys, and finally--total destruction. Although numerous intensity scales have been developed over the last several hundred years to evaluate the effects of earthquakes, the one currently used in the United States is the Modified Mercalli (MM) Intensity Scale. This scale, composed of 12 increasing levels of intensity that range from imperceptible shaking to catastrophic destruction, is designated by Roman numerals. It does not have a mathematical basis; instead it is an arbitrary ranking based on observed effects. The lower numbers of the intensity scale generally deal with the manner in which the earthquake is felt by people. The higher numbers of the scale are based on observed structural damage. For example, an earthquake with an intensity of III would be felt quite noticeably by persons indoors, especially on upper floors of buildings. Many people would not recognize it as an earthquake. On the other hand, an earthquake of X intensity would destroy some well-built wooden structures, while most masonry and frame structures would also be destroyed with foundations.

**TABLE 4.9-1  
MAGNITUDE AND INTENSITY**

Magnitude	Intensity	Description
1.0 - 3.0	I	Not felt except by a very few under especially favorable conditions.
3.0 - 3.9	II - III	II. Felt only by a few persons at rest, especially on upper floors of buildings.
		III. Felt quite noticeably by persons indoors, especially on upper floors of buildings. Many people do not recognize it as an earthquake. Standing motor cars may rock slightly. Vibrations similar to the passing of a truck. Duration estimated.
4.0 - 4.9	IV - V	IV. Felt indoors by many, outdoors by few during the day. At night, some awakened. Dishes, windows, doors disturbed; walls make cracking sound. Sensation like heavy truck striking building. Standing motor cars rocked noticeably.
		V. Felt by nearly everyone; many awakened. Some dishes, windows broken. Unstable objects overturned. Pendulum clocks may stop.

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Magnitude	Intensity	Description
5.0 - 5.9	VI - VII	<p>VI. Felt by all, many frightened. Some heavy furniture moved; a few instances of fallen plaster. Damage slight.</p> <p>VII. Damage negligible in buildings of good design and construction; slight to moderate in well-built ordinary structures; considerable damage in poorly built or badly designed structures; some chimneys broken.</p>
6.0 - 6.9	VIII - IX	<p>VIII. Damage slight in specially designed structures; considerable damage in ordinary substantial buildings with partial collapse. Damage great in poorly built structures. Fall of chimneys, factory stacks, columns, monuments, walls. Heavy furniture overturned.</p> <p>IX. Damage considerable in specially designed structures; well-designed frame structures thrown out of plumb. Damage great in substantial buildings, with partial collapse. Buildings shifted off foundations.</p>
7.0 and higher	VIII or higher	<p>X. Some well-built wooden structures destroyed; most masonry and frame structures destroyed with foundations. Rails bent.</p> <p>XI. Few, if any (masonry) structures remain standing. Bridges destroyed. Rails bent greatly.</p> <p>XII. Damage total. Lines of sight and level are distorted. Objects thrown into the air.</p>

Source: City of Elk Grove, 2000

Magnitude is related to the amount of seismic energy released at the hypocenter of the earthquake. It is based on the amplitude of the earthquake waves recorded on instruments which have a common calibration. The magnitude or strength of earth movement associated with seismic activity is typically quantified using the Richter scale. This scale is a measure of the strength of an earthquake or strain energy released by it, as determined by seismographic observations. This is a logarithmic value originally defined by Charles Richter (1935). An increase of one unit of magnitude (for example, from 4.6 to 5.6) represents a 10-fold increase in wave amplitude on a seismogram or approximately a 30-fold increase in the energy released. In other words, a magnitude 6.7 earthquake releases over 900 times (30 times 30) the energy of a 4.7 earthquake.

According to the *Fault Activity Map of California*, the nearest faults to the plan area with Historic displacement (activity within the last 200 years) are the Concord, Hayward, and Cleveland Hill faults, located approximately 42 miles southwest, 59 miles southwest, and 72 miles north of the site, respectively. Portions of the Greenville and Calaveras fault zones also have been rated as being active within the last 200 years and those portions are located approximately 46 and 53 miles southwest of the plan area, respectively; however, the major portion of these faults are indicated to be of Holocene activity (activity within the last 10,000 years). Other Holocene faults within 100 miles of the plan area are the Dunnigan Hills (Zamora) (37 miles northwest), Green Valley (42 miles southwest), Hunting Creek (45 miles west), Healdsburg-Rodgers Creek (56 miles

## 4.9 GEOLOGY AND GEOTECHNICAL HAZARDS

southwest), and West Napa (49 miles southwest). Distances from faults are measured from the center of the property.

TABLE 4.9-2  
FAULTS IN VICINITY OF SACRAMENTO COUNTY

Name	Approximate Distance from Project Area (Miles)	Maximum Magnitude (MW)
Foothills Fault System	21	6.5
Great Valley Fault (segment 5)*	27	6.5
Great Valley Fault (segment 4)*	29	6.6
Greenville Fault	41	6.9
Concord –Green Valley Fault	42	6.9
Hunting Creek – Barryessa Fault	45	6.9
West Napa Fault	49	6.5
Calaveras Fault	50	6.8
Rodgers Creek Fault	56	7.0
Hayward Fault	59	7.1
Bartlett Springs Fault	72	7.1
Maacama Fault (south)	73	6.9
Collayomi Fault	76	6.5
Ortigalita Fault	76	6.9
San Andreas Fault (1906)	76	7.9
San Gregorio Fault	78	7.3
Monte Vista - Shannon Fault	80	6.8
Mohawk Valley-Honey Lake Fault Zone	82	7.3
Point Reyes Fault	82	6.8
Genoa	87	6.9
Sargent	91	6.8
Zayante-Vergeles	94	6.8

\* Nine segments of the Great Valley Fault are located 27 to 91 miles west of the site and have maximum magnitudes of 6.4 to 6.8

Source: *City of Elk Grove, 2000*

The closest fault to the plan area shown on the *Fault Activity Map* is the south end of a queried trace of the northwest-southeast trending pre-Quaternary Willows fault zone, located approximately 10 miles north of the site.



## 4.9 GEOLOGY AND GEOTECHNICAL HAZARDS

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The Great Valley Fault is not indicated on the *Fault Activity Map*, but is considered to be a factor in determining seismic risk potential. In the north Central Valley, the width of the zone extends from the eastern flanks of the Coast Ranges as far easterly as Dunnigan. This zone of potential faulting is not well understood, but is believed to be connected to the Vacaville-Winters earthquakes of 1892 and the Coalinga earthquake of 1983. Earthquake activity within the Great Valley fault zone often occurs on "blind thrusts" in reference to their lack of surface expression and the direction of fault offset.

The *Seismic Safety Element of the General Plan for the County of Sacramento* (1985) shows two faults influential to Sacramento County: the Midland fault zone, located approximately 20 miles west, and the Bear Mountains fault zone, located approximately 21 miles east of the site; these faults are mapped as pre-Quaternary (older than 1.6 million years) and late-Quaternary (activity within the last 700,000 years). The *Seismic Safety Element* also shows two short traces of a "Linda Creek fault" at the north edge of Sacramento County; however, these traces are not depicted on any current California Department of Conservation, Division of Mines and Geology or USGS references.

The Midland fault zone is considered to be a deep pre-Oligocene subsurface feature extending nearly 50 miles along the west side of the Sacramento Valley. This fault has been approximately located only from exploration work for natural gas reserves. Subsurface data indicate that there has been no appreciable movement on the Midland fault in the last 24 to 36 million years, and no evidence of surface expression has been found.

The Bear Mountains fault is the westerly-most fault within the Foothills fault zone, which consists of numerous northwesterly trending faults along the western edge of the Sierra Nevada range. The Foothills fault zone is generally bounded by the Bear Mountains and the Melones fault zones (Wagner, 1981). The closest segment of the Bear Mountain fault is approximately 21 miles northeast of the plan area; the closest segment of the Melones fault zone is approximately 30 miles east of the plan area. Faults within this belt are mapped as pre-Quaternary with some segments mapped as having late-Quaternary displacement (Jennings, 1994). The closest segment of the Foothills fault system with late-Quaternary displacement is located approximately 34 miles northeast of the plan area (the Rescue lineament of the Bear Mountains fault zone)

### Groundshaking

Data pertinent to the greatest historical earthquakes that has affected the project site was obtained from the EQSEARCH computer program database. The EQSEARCH database was developed by extracting records of events greater than magnitude 4.0 from the Department of Mining and Geology (DMG) Comprehensive Computerized Earthquake Catalog, supplemented by records from the USGS, University of California, Berkeley, the California Institute of Technology, and the University of Nevada at Reno.

Based on the EQSEARCH, the most intense earthquake ground shaking in the vicinity of the plan area resulted from the  $M_g$  8.25 San Francisco earthquake of April 18, 1906, with an epicenter located approximately 77 miles southwest. In addition, the Vacaville-Winters events of April 19 and 21, 1892 are estimated to have produced a local intensity roughly equivalent to the 1906 San Francisco event. The larger Vacaville-Winters earthquakes were of magnitude 6.4 and 6.2, with epicenters located approximately 34 and 30 miles northwest of the plan area (City of Elk Grove, 2000).

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Active or potentially active faults are not known to underlie the Laguna Ridge Specific Plan area based on the published geologic maps and aerial photographs. The plan area is not located within an Alquist-Priolo Fault Study Zone and surface evidence of faulting has not been observed. Additionally, the plan area is not located within 15 kilometers of a Type A or Type B fault as indicated in the "Maps of Known Active Fault Near Source Zones in California and Adjacent Portions of Nevada". Therefore, ground rupture at the site resulting from seismic activity is unlikely.

### Liquefaction Potential

Subsurface data was obtained during the investigation of nearby projects which indicated dense, cemented, silty sands underlying the majority of the plan area. Sandy silts were also identified based upon known soil and groundwater conditions, the potential for liquefaction beneath the plan area is very low. The potential for ground lurching, differential settlement, or lateral spreading occurring during or after seismic events in the plan area is considered to be low, provided subdivision-specific geotechnical engineering studies are completed by competent firms, and prudent geotechnical engineering recommendations are followed during site preparation.

### Volcanic Hazard

The project area is located more than 130 miles from the Lassen Peak and the Mono Lake-Long Valley Volcanic areas; therefore, the risk to the site associated with volcanic hazards is very low.

### Ground Water

Design and performance of future structures would not be adversely affected by a permanent high ground water table. However, perched water from precipitation or irrigation of adjacent properties may cause some locally soft, saturated areas that could impede access to construction equipment. This would certainly be the case during winter and spring months, and also may be true during summer if nearby agriculture land is under irrigation.

### **Soil Conditions**

Review of the April 1993 U.S. Department of Agriculture, Soil Conservation Service (SCS) *Soil Survey of Sacramento County, California (SSSCC)*, indicates that the near-surface soils of the plan area consist of eleven soil types. The soil types include complexes and slope variations. The predominant soil consists of approximately 80 percent San Joaquin silt loam. Complexes within the San Joaquin silt loam include Durixeralfs in cut area, Xerarents in filled area, Bruella soils in intermediate area, and Galt and Madera soils in depressions. SCS reports that slopes range from level (due to leveling) to three percent.

The San Joaquin silt loam formed in alluvium from mixed granite rock sources. This soil is typically brown silt loam approximately 23 inches thick. The subsoil, approximately five-inches thick, is a yellowish red clay loam claypan that is underlain by a 26-inch thick hardpan. The substratum is light yellowish brown loam to a depth of 60 inches.

The Durixeralfs formed alluvium from mixed granite rocks. The surface layer is typically brown clay, clay loam, or sandy clay loam approximately six inches thick. The subsoil, also brown clay, is approximately 14 inches thick and is underlain by a continuous hardpan that is strongly cemented with silica.

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The Xerarents formed in fill material mixed by leveling activities. These areas originally consisted of depressions and narrow channels along drainageways. The surface layer, approximately 16 inches thick, is typically pale brown, yellowish brown, light gray, white, and brown sandy loam and sandy clay loam fill. The subsurface layer consists of 14 inches of pale brown and brown loamy sand and sandy loam fill. Both surface and subsurface layers contain remnant subsoil fragments of clay loam or clay. The underlying unit consists of a five-inch thick buried surface layer of gray brown loam, under which, to a depth of 60 inches, is a brown loam and light yellowish brown weakly cemented hardpan.

The Galt clay formed in fine textured alluvium from granite rocks. The surface layer is typically grayish brown and brown clay, and in some areas clay loam, silty clay loam, or silty clay, approximately 19 inches thick. The subsoil, approximately 32 inches thick, consists of a variegated yellowish red, light yellowish brown, and white calcareous hardpan that is weakly cemented with silica.

The Madera soil formed in alluvium from granitic rocks. The surface layer is typically light brownish gray and brown loam approximately 19 inches thick. The subsoil, approximately 14 inches thick, consists of a brown claypan and is underlain by a hardened, silica-cemented hardpan at a depth of 29 inches.

The Bruella soil formed in alluvium from granitic rocks. The surface layer is typically yellowish brown sandy loam approximately 18 inches thick. The subsoil consists of a brown sandy clay loam approximately 24 inches thick underlain by a yellowish red sandy clay approximately 19 inches thick.

The SSSCC rates some of the soils with a large clay content to possess moderate to high shrink-swell characteristics. The shallow depth to cemented soil strata results in poor permeability properties. These conditions result in soils having possible limitations with respect to site development.

### 4.9.2 REGULATORY FRAMEWORK

#### CITY OF ELK GROVE CODES AND REGULATIONS

##### Grading Provisions

The City's Building and Construction Ordinance (Title 16 Chapter 16.44 of the City Code) establishes administrative procedures, minimum standard of review, and implementation and enforcement procedures for controlling erosion, sedimentation and other pollutant runoff including construction debris and hazardous substances use on construction sites, and disruption of existing drainage and related environmental damage caused by land clearing and grubbing, grading, filling, and land excavation activities. The ordinance applies to projects that will disturb 350 cubic yards or more of soil. The intent of the ordinance is to minimize damage to surrounding properties and public rights-of way, the degradation of the water quality of water courses, and the disruption of natural or City authorized drainage flows caused by construction activities, and to comply with the provisions of the City's National Pollutant Discharge Elimination System (NPDES) Permit Number, CA0082597, issued by the California Regional Water Quality Control Board (CRWQCB). The City of Elk Grove is co-permittee on a NPDES Permit along with Sacramento County and the cities of Sacramento, Folsom, Galt, and Citrus Heights. The NPDES Permit was renewed by the Central Valley CRWQCB on December 6, 2002.

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### City of Elk Grove Draft General Plan

The City of Elk Grove Draft General Plan (November 2002) contains goals, objectives, and polices relating to geology, soils, and seismicity. These policy statements are contained in the Safety and Conservation and Air Quality sections of the Draft General Plan. Policy statements that apply to the proposed project are listed below. **Table 4.9-3** identifies applicable Draft General Plan policies, and summarizes the project's consistency with the Draft General Plan. While this EIR analyzes the project's consistency with the Draft General Plan pursuant to CEQA Section 15125(d), the final authority for interpretation of these policy statements, and determination of the project's consistency rests with the City Council.

**TABLE 4.9-3  
DRAFT GENERAL PLAN POLICY CONSISTENCY - GEOLOGY AND GEOTECHNICAL HAZARDS**

General Plan Policies	Consistency with General Plan	Analysis
<p><b>Policy SA-23:</b> The City supports efforts by Federal, State, and other local jurisdictions to investigate local seismic and geological hazards and support those programs that effectively mitigate these hazards.</p>	Yes	<p>The project shall be required to comply with all applicable federal, state and local regulations and requirements intended to mitigate seismic and geologic hazards.</p> <p>The City of Elk Grove has adopted the Uniform Building Code for the review of all building permit applications.</p>
<p><b>Policy CAQ-5:</b> Roads and structures shall be designed, built and landscaped so as to minimize erosion during and after construction.</p>	Yes	<p>The City's Building and Construction Ordinance (Title 16 Chapter 16.44 of the City Code) establishes administrative procedures, minimum standard of review, and implementation and enforcement procedures for controlling erosion. The project is subject to these standards.</p>

### 4.9.3 PROJECT IMPACTS AND MITIGATION MEASURES

#### THRESHOLDS OF SIGNIFICANCE

A project could have a significant effect on the environment when it would:

- a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving:
  - i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence or other substantial evidence of a known fault. Refer to Division of Mines and Geology Special Publication 42;

## 4.9 GEOLOGY AND GEOTECHNICAL HAZARDS

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- ii) Strong seismic ground shaking;
- iii) Seismic-related ground failure, including liquefaction;
- iv) Landslides;
- b) Result in substantial soil erosion or the loss of topsoil;
- c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse;
- d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property; or
- e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.

Based on the analysis in the Initial Study (**Appendix 1.0**), some potential impacts were determined to be less-than-significant, and thus were not analyzed in this EIR. Those impacts included the potential for landslides (because the site is relatively flat), and the capability of the soils for supporting septic tanks (because no septic system is proposed).

### METHODOLOGY

Evaluation of potential geologic and soil impacts of the proposed project was based on review of the Environmental Site Assessment for the Laguna Ridge Specific Plan prepared by Wallace-Kuhl & Associates, Preliminary Geotechnical Engineering Overview for the Laguna Ridge Specific Plan Area, prepared by Wallace-Kuhl & Associates, the USDA Soil Survey of Sacramento County, the Elk Grove Zoning Code, Development Regulations, and Draft General Plan, and field review of the plan area and surrounding areas.

### PROJECT IMPACTS AND MITIGATION MEASURES

#### Faults and Groundshaking

Faults are not known to cross through the plan area. The plan area is not located in an Alquist-Priolo Earthquake Hazard Zone or Fault Study Zone. As such, ground rupture due to faulting is considered to be unlikely. No active or potentially active faults pass through the plan area based on published geologic maps.

The plan area is in the area of seismic zones I and II as defined by the California Department of Mines and Geology on the Preliminary Map of Maximum Expectable Earthquake Intensity in California. A seismic zone I is an area that can expect to experience ground motion of low severity; seismic zone II is an area with potential ground motion of moderate severity.

The plan area has experienced ground shaking equivalent to Modified Mercalli Intensity Zone VIII. Uses and people in this zone can experience slight damage in specially designed structures; considerable damage in ordinary substantial buildings with partial collapse; and extensive damage in poorly built structures. Ground shaking of this intensity could cause panel walls to be thrown out of frame structures. In addition, such movement could cause chimneys, factory

## **4.9 GEOLOGY AND GEOTECHNICAL HAZARDS**

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stacks, columns, monuments, and walls to fall. Heavy furniture may be overturned, and persons driving automobiles may be disturbed.

### Maximum Probable Earthquake

The Maximum Probable Earthquake (MPE) is defined in Section 1631A.2 of the 1997 edition of the Uniform Building Code (UBC) as "having a 10-percent probability of being exceeded in 50 years." This probability of exceedance also can be expressed as the 475-year event. Criteria for determining the MPE include: the regional seismicity and known past seismic activity; the types of faults considered; the seismic recurrence factor for the area and for faults located within a 100 kilometer (63 mile) radius; and, the computed probability of seismic activity associated with the faults located within the 100 kilometer radius.

The Lent Ranch Marketplace Draft EIR analyzed the probability of earthquake activity surrounding the plan area utilizing the FRISKSP computer model and assuming the cumulative effect of fault activity within a 100-mile (160 km) radius of the project site. From a statistical viewpoint, the plan area has a 10 percent probability of exceeding 0.17 gravity (g) horizontal ground acceleration in 50 years (City of Elk Grove, 2000).

People in the area would experience earth movement equivalent to VIII on the Modified Mercalli Scale based on a ground acceleration of 0.17g. This equates to a magnitude 6.0-6.9 on the Richter scale. Damage would be slight in specially designed structures, but considerable damage may occur in standard buildings. The intensity of such earth movement could cause chimneys, factory stacks, column monuments, and walls to fall. Heavy furniture would also be overturned if not properly strapped (City of Elk Grove, 2000).

### Upper Bound Earthquake

The Upper Bound Earthquake (UBE) is defined in the California Building Code (CBC) Section 1631A.2.6 "...as the motion having a 10-percent probability of being exceeded in a 100-year period or maximum level of motion which may ever be expected at the building site within the known geologic framework." This probability of exceedance also can be expressed as a 950-year event. Criteria for determining the UBE event include the seismic history of the vicinity, the geologic province in which the faults under consideration are located, fault lengths, faulting mechanisms and regional geologic structure.

A magnitude 6.5-earthquake occurring on the Foothills Fault system is anticipated to produce the maximum level of motion possible in the plan area. The horizontal ground acceleration component associated with a 6.5 magnitude event occurring approximately 21 miles (34 km) east of the plan area, using published attenuation relationships, would be approximately 0.17g. This equates to VIII-IX on the Mercalli scale.

Furthermore, the probability of earthquake activity affecting the plan area indicates a 10-percent probability of exceeding 0.19g horizontal ground acceleration in 100 years. This is approximately equal to the maximum possible ground motion that could be generated in the plan area.

### 10,000-Year Earthquake

The 10,000-year earthquake event is an event that has a 10 percent probability of being exceeded in 1,054 years. In other words, it is the event that has a 90 percent probability of not

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## 4.9 GEOLOGY AND GEOTECHNICAL HAZARDS

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being exceeded in 1,054 years. The maximum horizontal ground acceleration associated with the 10,000-year event was determined using the same methods described above for the UBE and MPE events. Statistically, the site has a 10 percent probability of exceeding a peak horizontal ground acceleration of 0.3g. To put this in perspective, it would be necessary to have an earthquake magnitude of 7.5 on the Foothills Fault zone to produce this level of ground motion. This is not considered to be realistic magnitude for this fault zone. Similarly, 0.3g horizontal ground acceleration would be generated by a theoretical (but unrealistic) 9.7 magnitude earthquake on the San Andreas Fault zone (at its nearest point to the site). However, the San Andreas Fault zone is only considered capable of producing a maximum 7.9 moment magnitude earthquake (City of Elk Grove, 2000).

In the unlikely event such an earthquake were to occur, people in the plan area would experience severe movement equivalent to an intensity of IX on the Modified Mercalli Scale based on a ground acceleration of 0.3g. Damage would be considerable in specially designed structures, with well-designed frame structures thrown out of plumb. Damage would be great in substantial buildings, with partial collapse. Buildings would also shift off foundations (City of Elk Grove, 2000).

### Conclusion

The plan area, as with virtually all sites within the State of California, could be subjected to ground shaking from earthquakes. Based upon the seismologic and geologic conditions surrounding the plan area, the maximum level of ground motion that could ever be experienced in the plan area would occur as the result of a 6.5 magnitude earthquake on the Foothills Fault zone or Great Valley fault, as discussed under the upper bound earthquake, above. Nonetheless, the design of the proposed structures in conformance with the 1997 edition of the UBC, Seismic Zone 3, should be sufficient to prevent significant damage from ground shaking during seismic events resulting from movement on any of the faults or fault systems discussed within this EIR. The purpose of this Code is to provide minimum standards to preserve the public peace, health and safety by regulating the design, construction, quality of materials, use, occupancy, location and maintenance of all buildings, structures, grading and certain equipment. Standards address foundation design, shear wall strength, among others. As a result, the effects resulting from earthquakes and ground shaking would be reduced to a minimum by application of the UBC and are considered to be **less than significant**.

### **Liquefaction**

The potential for soil liquefaction under earthquake shaking is considered minimal due to the depth to the groundwater beneath the site and the nature of on-site soils. Therefore, impacts related to liquefaction are considered to be **less than significant**.

### **Loss of Topsoil**

**Impact 4.9.1** Development of the Laguna Ridge Specific Plan area and off-site improvements may result in increased soil erosion, wind and water erosion, and siltation of local drainage during and after construction from excavation and grading activities. This is considered to be a **potentially significant** impact.

During construction within the plan area and off-site infrastructure improvements (e.g., off-site drainage channel south of Bilby Road), topsoil would be moved and graded. This would lead to

## 4.9 GEOLOGY AND GEOTECHNICAL HAZARDS

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disturbed soils, which do not have as much connectivity to the ground as undisturbed soils. These disturbed soils are more likely to suffer from erosion from a variety of sources, such as wind and water. Furthermore, construction activities involve water, which may further erode the topsoil as the water moves across the ground. While the project would be subject to a Nationwide Pollution Discharge Elimination System permit and would be required to adhere to a Stormwater Pollution Prevention Plan, the following mitigation measure is included to ensure that impacts resulting from development under the Specific Plan would be less than significant.

### Mitigation Measure

#### **MM 4.9.1**

Prior to issuance of a grading permit for each subsequent project, the project applicant shall submit to the City an erosion control plan which will utilize best construction practices to limit the erosion effects of the proposed project. Measures shall include, but are not limited to, the following:

- Hydro-seeding
- Placement of loose straw and/or straw bales within drainageways and ahead of drop inlets;
- The temporary lining (during construction activities) of drop inlets with "filter fabric" (a specific type of geotextile fabric);
- The placement of straw wattles along slope contours;
- Directing subcontractors to a single designation "wash-out" location (as opposed to allowing them to washout wherever they feel like); and
- The use of siltation fences.

*Timing/Implementation:*      *Prior to the issue of grading permit and during construction.*

*Enforcement/Monitoring:*      *City of Elk Grove Development Services, Public Works.*

Implementation of the preceding mitigation measure and Mitigation Measure MM 4.7.1 would reduce this impact to **less than significant**.

### **Soil Stability**

The soils beneath the plan area exhibit significant strength and are considered capable of supporting relatively loads anticipated from development under the Laguna Ridge Specific Plan. Potential impacts related to soil stability would be reduced to a less-than-significant level.

### **Expansive Soils**

The SSSCC indicates that soils with a moderate to high shrink/swell potential are located within the plan area. Soils with a moderate to high shrink/swell potential tend to expand during wet seasons and shrink during dry seasons. While most of the soils within the plan area have a low



## 4.9 GEOLOGY AND GEOTECHNICAL HAZARDS

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plasticity level, which translates to a low to moderate expansion potential, occasional layers of highly expansive soils may exist throughout the plan area. If a structure is constructed on an area that contains some expansive soils, the structure may suffer damage from the expansion.

The City of Elk Grove Building Code and commonly accepted engineering practices already require special design and construction methods for dealing with expansive soil behavior. The two most common methods to prevent damage due to expansive soil behavior is to design the foundation of a building to resist soil movement and to control surface drainage in order to reduce seasonal fluctuations in soil moisture content. Because each project within the plan area would be required to submit a geotechnical report and the building code and commonly accepted engineering practices would be applied to all development within the plan area, this is considered a **less than significant** impact and further mitigation is not required.

### 4.9.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

Geotechnical impacts tend to be site specific rather than cumulative in nature and each development site would be subject to, at a minimum, uniform site development and construction standards relative to seismic and other geologic conditions that are prevalent within the region. Because the development of each site would have to be consistent with requirements of the City and the Uniform Building Code as they pertain to protection against known geologic hazards, impacts of cumulative development would be less-than-significant given known geologic considerations.

Impacts regarding surficial deposits, namely erosion and sediment deposition, can be cumulative in nature within a watershed. Buildout of approved and planned uses, such as the East Franklin Specific Plan, Laguna Ridge Specific Plan area, South Pointe, Lent Ranch, future development in accordance with the City of Elk Grove Draft General Plan and the Grant Line interchange improvements has the potential to impact water quality. However, with implementation of Best Management Practices required by MM 4.7.1 and MM 4.9.1 along with the NPDES permit and the City Land Grading and Erosion Control Ordinance requirements for each development project, cumulative erosion within the watershed would not exceed natural levels cumulative impacts would be **less than significant**.

### REFERENCES

City of Elk Grove. *City of Elk Grove Draft General Plan*. November 2002. Sacramento, CA.

City of Elk Grove, 2000. *Lent Ranch Marketplace Draft EIR (State Clearinghouse No. 1997122002), Section 4.9*. October, 2000. Sacramento, CA.

Wallace – Kuhl & Associates, 2000. *Environmental Site Assessment – Laguna Ridge Specific Plan*. May 28, 1999. West Sacramento, CA.

Wallace – Kuhl & Associates, 2000. *Preliminary Geotechnical Engineering Review – Laguna Ridge Specific Plan Area*. May 10, 2000. West Sacramento, CA.

**SECTION 4.10**  
**CULTURAL RESOURCES**

## 4.10 CULTURAL RESOURCES

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This section addresses known historic and prehistoric resources in the plan area and the potential for unknown resources to exist. The analysis includes a description of the existing conditions, the method used for evaluation, the impacts associated with the project and the mitigation measures that would be necessary to reduce impacts to a less-than-significant level. This section is based on a study performed by Peak & Associates and included herein in **Appendix 4.10**. However, the Peak & Associates study did not perform detailed evaluations of specific plan properties with a "Reserve" overlay designation. Thus, the impact and mitigation measure discussion below differentiates between properties with and without the "Reserve" overlay designation.

### 4.10.1 EXISTING SETTING

Humans have altered the proposed project site over the past 200 years, primarily for agricultural use. Based on the study by Peak & Associates in July 1999, indications of any prehistoric artifacts have not been found within the project site. The proposed project site contains some structures constructed near the early 1900s.

#### PREHISTORY/ETHNOGRAPHY

The Eastern Miwok represent one of the two main divisions of the Miwokan subgroup of the Utian language family. The Plains Miwok, one of five separate cultural and linguistic groups of the Eastern Miwok, occupied the lower reaches of the Mokelumne, Cosumnes and Sacramento Rivers including the area of south Sacramento County surrounding the project area. The Plains Miwok inhabited the Sacramento Delta for a considerable period of time.

The Plains Miwok organized their society into smaller tribelets, each of which controlled a specific area of resources. Each tribelet consisted of 300 to 500 persons scattered about in several smaller villages and hamlets. Each village represented a different lineage of the tribelet and was localized to a specific village site where resources existed.

The diet of the Plains Miwok emphasized the collection of floral resources such as acorns, buckeye, digger pine nuts, seeds from the native grasses and various fresh greens. Faunal resources such as tule elk, pronghorn antelope, deer, jackrabbits, cottontails, beaver, gray squirrels, wood rats, quail and waterfowl were hunted. Fishing, particularly salmon and sturgeon, contributed significantly to the Plains Miwok diet. The primary method of collecting fish was by nets, but the use of bone hooks, harpoons and obsidian-tipped spears is also indicated by ethnographic evidence.

The Plains Miwok have been characterized as intensive hunter-gatherers, with an emphasis upon gathering. The seasonal availability of floral resources defined the limits of the group's economic pursuits. Hunting and fishing subsistence pursuits apparently accommodated the given distribution of resources. The Plains Miwok territory covered six seasonally productive biotic communities and as such native people could apparently afford to pick and choose the resources they ranked highest from each of these zones. The subsequent storage of floral resources (such as acorns in granaries) allowed for a more stable use of the resource base. The acorn was apparently the subsistence base needed to provide an unusually productive environment as earlier non-acorn using peoples who resided in the same geographic setting apparently suffered some seasonal deprivation. Such an emphasis upon the gathering of acorns is consistent with the population increase evident during the Upper Emergent Period in California.

## 4.10 CULTURAL RESOURCES

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The people of this area would probably have been a part of the Newachumne tribelet, one of the smaller Plains Miwok tribelets. The main village of the group can probably be associated with an archeological site located on the Cosumnes River about a mile southeast of the proposed project area. This tribelet has been classified as part of the Cosumnes Group of cooperating tribelets, even though the main village was on the Sacramento River. The Newachumne had four associated subsidiary settlements in the immediate vicinity.

This group apparently resisted missionization, but was depleted by the 1833 epidemic. The Murphy family settled in the vicinity of Newachumne in 1844, building their ranch house adjacent to the Indian village. After the discovery of gold in early 1848, John Murphy used Indian labor in his operations on Weber Creek in El Dorado County. In September of the same year, he appears to have transported Indians from Newachumne and its subsidiary settlement of Chuyumkakat to the Upper Stanislaus River in Calaveras County. He established a trading post known as Murphys Camp, providing food and trade goods to the Indian laborers in exchange for gold.

### HISTORICAL PERIOD

The plan area lies within the corporate boundaries of the City of Elk Grove. While the City recently incorporated, the town of Elk Grove has existed since 1850. In 1850, a hotel was built at the eventual site for the town. However, the town did not begin to expand until the railroad was constructed. The residents of the area pooled their money together to form a construction company which eventually built two general stores, two hotels, a flouring mill, the railroad depot, a hardware store, a meat market, a furniture factory, two drug stores, a harness shop, a grain and hay warehouse, a dressmaking shop, two millinery shops, a boot shop, a wagon factory and a blacksmith. The town continued to grow, first as a commercial center for the farmers in the area and recently as a suburban residential zone for greater Sacramento.

The lands of the plan area lay north of any of the land grants awarded by the Mexican government in the 1840s. The lands apparently lay vacant until the mid-1850s-early 1860s. One of the early settlers was Norman Stewart who came to California in 1852. Stewart acquired a 320-acre tract on the upper Stockton road in 1854. Two other parcels of the plan area were first acquired in 1860 and 1861 as military patents. The remainder of the lands was awarded to the State of California, which then sold them to settlers. Stewart must have had to pay the State to acquire clear title to his holdings.

By 1885, there were only seven different individuals who owned the entire plan area--Isaac Freeman, O.S. Freeman, Ellen McConnell Wilson, Martin Dart, Norman Stewart, David Upton, and Mrs. L.M. Graham. By 1903, there were still only nine owners, including two large tracts held by banks. Most of the owners used the land for agricultural purposes, includes vineyards and wheat growing.

Major change in the pattern of ownership began to occur between 1903 and 1911. In the plan area, 320 acres in the southwest corner were subdivided into 20-acre tracts as H.J. Goethe Colony No.7. It was in this era also that dairy farming began to be more common in the region. Three of the four dairies that located on the property were constructed during in the decade of the 1900s. The increase in dairying may have been due to the completion of the Western Pacific Railroad in 1909, with this additional route only one to two miles west of the plan area. It provided a means of quickly getting the dairy production to market.

## 4.10 CULTURAL RESOURCES

Further subdivision of parcels in the plan area occurred in the 1910s and early 1920s. By 1944, there were at least 20 building complexes within the plan area boundaries suggesting further subdivision of the tract, with several more building complexes added in the late 1940s and early 1950s.

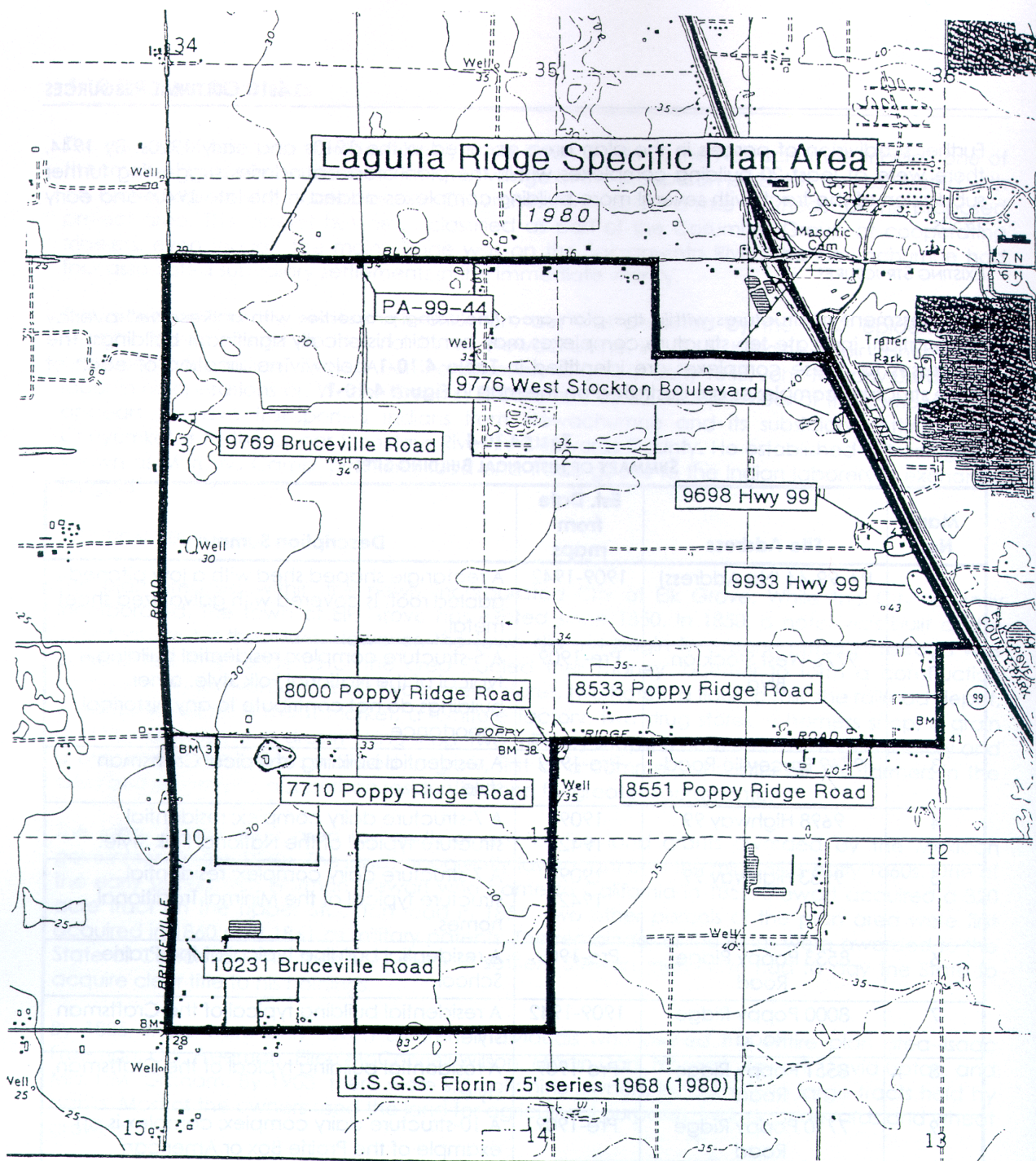
### EXISTING STRUCTURES

An assessment of structures within the plan area (including properties with a "Reserve" overlay designation) indicates ten structure complexes may contain historically significant buildings. The addresses for these complexes are identified in **Table 4.10-1** below. The location of each of these structure complexes is illustrated on the map in **Figure 4.10-1**.

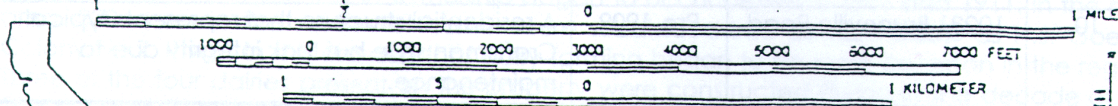
**TABLE 4.10-1**  
**SUMMARY OF HISTORICAL BUILDING SITES**

Map No.	Site Address	Est. Date from maps	Description Summary
1	PA-99-44 (No Address)	1909-1942	A rectangle shaped shed with a low-pitched gabled roof. Is covered with galvanized sheet metal.
2	9776 West Stockton Blvd.	Pre-1909	A 5-structure complex; residential building is typical of the National Folk Style; other buildings do not contribute to any historical importance.
3	9769 Bruceville Road	Pre-1909	A residential building of typical Craftsman style.
4	9698 Highway 99	1909-1942 <sup>1</sup>	A 7-structure dairy complex; residential structure typical of the National Folk Style.
5	9933 Highway 99	1909-1942 <sup>2</sup>	A 7-structure dairy complex; residential structure typical of the Minimal Traditional homes.
6	8533 Poppy Ridge Road	Pre-1909	A residential building typical of the Prairie School.
7	8000 Poppy Ridge Road	1909-1942	A residential building typical of the Craftsman style.
8	8551 Poppy Ridge Road	Pre-1909	A residential building typical of the Craftsman style.
9	7710 Poppy Ridge Road	Pre-1909	A 10-structure dairy complex; complex is an example of the Prairie Box or American Foursquare style.
10	10231 Bruceville Road	Pre-1909	A residential structure that represents typical Craftsman style but lack integrity due to maintenance.

Notes: 1. Some of the outlying buildings were constructed before 1909.  
2. A structure appears on this site before 1909, but it is unlikely that the existing structure is the same.



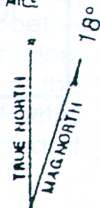
SCALE 1:24000



CONTOUR INTERVAL 5 FEET

BASE MAP IS MAPPED EDITED AND PUBLISHED BY THE U. S. GEOLOGICAL SURVEY

QUADRANGLE LOCATION



Source: Peak & Associates, 1999



City of Elk Grove Planning

Figure 4.10-1  
Location of Potentially Historic  
Structure Complexes

The plan area has been in agricultural use since the 1850s. However, none of the surviving structures represent the early years of pioneer settlement of the area. The earliest structures date to the early 1900s. The structures listed above represent building styles typical of 1900-1920 era. The remaining structures within the plan area are the typical 1950s ranch style structures.

Most of the structures within the plan area are not historically significant. Most represent typical styles from the early 1900s. Two structures, 8533 and 8551 Poppy Ridge Road, may have some historical significance because they are stylistically consistent and retain sufficient integrity to be considered important. According to Peak & Associates, the remaining structures are not historically significant or lack integrity due a need for maintenance. A more detailed analysis would be needed to confirm the historical importance of these two structures.

### 4.10.2 REGULATORY FRAMEWORK

#### NATIONAL HISTORIC PRESERVATION ACT

Under the National Historic Preservation Act (NHPA), the quality of significance in American history, architecture, archaeology and culture is present in districts, sites, buildings, structures, and objects of State and local importance that possess integrity of location, design, setting, materials, handiwork, feeling and association and:

1. That are associated with events that have made a significant contribution to the broad patterns of our history;
2. That are associated with the lives of persons significant in our past;
3. That embody the distinctive characteristics of a type, period, or method of construction, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; and/or
4. That have yielded or may be likely to yield, information important in prehistory or history.

#### CALIFORNIA REGISTER OF HISTORIC RESOURCES

Pursuant to Section 15064.5 of the CEQA *Guidelines*, an historical resource (including both built environment and prehistoric archaeological resources) is presumed significant if it is listed on the California Register of Historical Resources (CRHR) or has been determined to be eligible for listing by the State Historical Resources Commission. An historical resource may also be considered significant if the lead agency determines, based on substantial evidence, that the resource meets the criteria for inclusion in the CRHR. Any resource that is listed on or considered eligible for inclusion on the National Register of Historic Places is automatically considered eligible for the CRHR.

#### CITY OF ELK GROVE DRAFT GENERAL PLAN

**Table 4.10-2** identifies the Draft General Plan Historical Resources Element policies that are directly applicable to the proposed project, and presents an evaluation of the consistency of the project with these statements as required by CEQA. The final authority for interpretation of these policy statements, and determination of the project's consistency rests with the City Council.

## 4.10 CULTURAL RESOURCES

**TABLE 4.10-2  
DRAFT GENERAL PLAN CONSERVATION ELEMENT POLICY CONSISTENCY**

General Plan Policies	Consistency with General Plan	Analysis
<b>Historical Resource Policies</b>		
<p><b>HR-1:</b> Encourage the preservation and enhancement of existing historical and archaeological resources in the City.</p>	Yes	<p>Based on the literature search and on the field survey, it was concluded that the plan area does not likely contain any archaeological resources that would be significantly affected by the project.</p> <p>The plan area has been subject to disturbance associated with active agricultural production, so surficial evidence of such resources has either been disturbed or covered over. Development of the project, however, could result in disruption or adverse effects to unknown prehistoric archaeological resources where construction involves land alteration activities. Per mitigation measures MM 4.10.1a and b this impact would be mitigated through monitoring and recovery (if significant resources are discovered).</p>
<p><b>Policy HR-3:</b> Encourage restoration, renovation, and/or rehabilitation of all historic structures.</p>	Yes	<p>Two parcels within the "Reserve" overlay area may be eligible for the California Register of Historical Resources, but a more detailed examination would be required to make a final determination. Mitigation Measure MM 4.10.2 requires a detailed evaluation of the historical significance of the structures would be conducted by the City and funded by the project applicant. If the evaluation determines that the two sites are historically significant, the subsequent development project would be redesigned to avoid the building site(s). The building site(s) will be deeded to a non-profit agency to be approved by the City for the maintenance of the site(s).</p> <p>If avoidance is determined to be</p>



## 4.10 CULTURAL RESOURCES

General Plan Policies	Consistency with General Plan	Analysis
		infeasible by the City, all required documentation (in addition to the items above) would be conducted in accordance with appropriate documentation. In addition, Any historical significant artifacts within building and the surrounding area shall be recorded and deposited with the appropriate museum.
<b>Archaeological and Paleontological</b>		
<b>HR-6:</b> Protect and preserve prehistoric and historic archaeological resources throughout the City.	Yes	Indications of burial sites were not encountered during the survey of the plan area, nor have prehistoric resources been recorded within 1/4 mile of the study area. A sacred lands check with the Native American Heritage Commission was conducted. Sacred lands were not determined to be on the project site. However, per mitigation measure MM 4.10.1b, if any Native American burial sites are encountered during construction, excavation and reburial will occur in accordance with the provisions of this policy and CEQA Section 15064.5 (d) and (e).  Per mitigation measures MM 4.10.1a and b this impact would be mitigated through monitoring and recovery (if significant resources are discovered).

### 4.10.3 IMPACTS AND MITIGATION MEASURES

#### STANDARDS OF SIGNIFICANCE

##### *Archaeological Resources*

A project could have a significant effect on the environment if it would cause a substantial adverse change in the significance of an archaeological resource or disturb any human remains. Pursuant to Section 15064.5 of the CEQA Guidelines, archaeological resources, not otherwise determined to be historical resources, may be significant if they are unique. Pursuant to PRC Section 21083.2, a unique archaeological resource is defined as an archaeological artifact, object, or site about which it can be clearly demonstrated that without merely adding

## 4.10 CULTURAL RESOURCES

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to the current body of knowledge, there is a high probability that it meets one of the following criteria:

- Contains information needed to answer important scientific questions and there is a demonstrable public interest in that information;
- Has a special and particular quality, such as being the oldest of its type or the best available example of its type; or
- Is directly associated with a scientifically recognized important prehistoric or historic event or person.

According to Section 15064.5 of the CEQA Guidelines, all human remains are significant.

A non-unique archaeological resource means an archaeological artifact, object, or site that does not meet the above criteria. Non-unique archaeological resources do not receive further consideration under CEQA.

### *Historic Resources*

Section 15065 of the CEQA Guidelines mandates a finding of significance if a project would eliminate important examples of major periods of California history or pre-history. In addition, pursuant to Section 15064.5 of the CEQA Guidelines, a project could have a significant effect on the environment if it "may cause a substantial adverse change in the significance of an historical resource." A "substantial adverse change" means "physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource is impaired." Material impairment means altering "in an adverse manner those characteristics of an historical resource that convey its historical significance and its eligibility for inclusion in the California Register of Historical Resources."

Pursuant to Section 15064.5 of the CEQA Guidelines, an historical resource (including both built environment and prehistoric archaeological resources) is presumed significant if it is listed on the California Register of Historical Resources (CRHR) or has been determined to be eligible for listing by the State Historical Resources Commission. An historical resource may also be considered significant if the lead agency determines, based on substantial evidence, that the resource meets the criteria for inclusion in the CRHR. Any resource that is listed on or considered eligible for inclusion on the National Register of Historic Places is automatically considered eligible for the CRHR.

### *Paleontological Resources*

As shown on Figure II-2 of the Safety Element of the Sacramento County General Plan, Quaternary alluvium terraces underlie the plan area. These alluvial deposits have a low potential for yielding unique paleontological resources, due to the geologic age of the deposits. Therefore, this issue will not be analyzed in the EIR.

## METHODOLOGY

This section evaluates the impacts from the development on the cultural resources that could occur within the plan area. This section will identify the standard of significance for cultural resources, apply these standards to the existing conditions, determine the impacts, and proposed mitigation measures, if necessary. An important archaeological resource is one that:

- Is associated with an event or person recognized as significant in California or American history or in scientific importance in prehistory;
- Can provide information which is both of demonstrable public interest and useful in addressing scientific consequential and reasonable archaeological research questions;
- Has a special or particular quality such as oldest, best example, largest, or last surviving of its kind;
- Is at least 100-years-old and possesses substantial stratigraphic integrity; or
- Involves important research questions that historical research has shown can be answered only with archaeological methods.

### PROJECT IMPACTS AND MITIGATION MEASURES

#### Impacts to Undiscovered Cultural Resources From Onsite and Offsite Development

**Impact 4.10.1** Implementation of the Laguna Ridge Specific Plan could, during construction and excavation activities, uncover unidentified cultural resources. This would result in a **potentially significant** impact.

Prehistoric archaeological resources were not identified during a survey of the participating properties within the plan area. The plan area is not anticipated to contain such archaeological resources because the plan area did not contain many of the resources the Miwok tribal members needed to survive in the area. Evidence of a water or food source is not apparent within the plan area. However, some evidence of Miwok may exist within the plan area. The closest tribelet had a main village approximately one mile southeast of the plan area. Four smaller villages existed near the plan area. Thus, it is possible that prehistoric artifacts exist within the plan area. In addition, the field survey and analysis conducted by Peak & Associates did not encompass the properties within the "Reserve" overlay designation.

Offsite infrastructure needed to serve the project, such as utility extensions, would be constructed on previously disturbed areas located along either existing roadway alignments or land disturbed by agricultural activity. Construction of the offsite 80-foot wide drainage channel, which would be located south of the plan area and east of Bruceville Road, may have a significant impact on cultural resources. The drainage channel would be constructed in an area with trees and agricultural uses. Consequently, surficial evidence of cultural or historic resources in the vicinity of the plan area has either been disturbed or covered over. Infrastructure construction associated with the Laguna Ridge Specific Plan could result in disruption or adverse effects to unknown prehistoric archaeological resources where construction involves land alteration activities. This would be considered a significant impact.

#### Mitigation Measures

**MM 4.10.1a** Prior to the approval of any rezone request to remove the "Reserve" overlay designation from any property, a detailed cultural resources field survey of the subject property shall be conducted by the City and funded by the project applicant. The cultural resources field survey shall identify any cultural resource finds and will set out measures to mitigate any impacts to any significant resources as defined by CEQA, California Register of Historic Resources and/or National Historic Preservation Act. Mitigation methods to be employed include, but are not limited to, the following:

## 4.10 CULTURAL RESOURCES

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- Redesign of the subsequent development project to avoid the resource. The resource site shall be deeded to a non-profit agency to be approved by the City for maintenance of the site.
- If avoidance is determined infeasible by the City, then the resource shall be mapped, stabilized, and capped pursuant to appropriate standards.
- If capping is determined infeasible by the City, then the resource shall be excavated and recorded to appropriate standards.

*Timing/Implementation:* Prior to approval of rezone request  
*Enforcement/Monitoring:* City of Elk Grove Development Services

### MM 4.10.1b

In the event that any historic surface or subsurface archaeological features or deposits, including locally darkened soil indicative of an archaeological midden that could conceal cultural deposits, animal bone, shell, obsidian, mortars, or human remains, are uncovered during on-site or off-site construction, all work within 100 feet of the find shall cease and Development Services shall be notified. An archaeologist who meets the Secretary of the Interior's Professional Qualifications Standards shall be contacted to determine if the resource is significant and to determine appropriate mitigation. Any artifacts uncovered shall be recorded and removed to a location to be determined by the archaeologist. The discovery of human remains shall also be reported to the County Coroner in accordance with Section 7050.5 the California Health and Safety Code, and the Native American Commission for further investigation. If the remains are determined to be Native American, the Native American Commission shall inform the most likely descendent and will determine the appropriate disposition of the remains and grave goods.

*Timing/Implementation:* During construction activities.  
*Enforcement/Monitoring:* City of Elk Grove Development Services

### Impacts To Known Historic Resources

#### Impact 4.10.2

Development under the Laguna Ridge Specific Plan may cause existing, potentially historically significant structures to be damaged or demolished. This would result in a **potentially significant** impact.

Most of the plan area is agricultural land. However, some buildings exist within the plan area. While the vast majority of structures on the plan area are relatively modern in style and construction, ten structures were constructed between 1900s and 1950s and could be considered stylistically important.

Most of the structures that are potentially historically significant do not have sufficient structural integrity or unique characteristics required to be deemed historically significant (Peak & Associates, 1999). The style of these structures is typical of the early 1900s. Also, many of these structures have either been modified or neglected to such an extent that they no longer retain sufficient integrity as a historically significant building.

Two structures may have sufficient integrity and stylistic importance to warrant further study. These structures, identified as 8533 and 8551 Poppy Ridge Road (within the "Reserve" overlay designation), still retain some important historical characteristics. Construction within this area may adversely affect these structures.

Mitigation Measure

**MM 4.10.2**

Prior to the approval of any rezone request to remove the "Reserve" overlay designation on the properties that include the buildings at 8533 and 8551 Poppy Ridge Road, a detailed evaluation of the historical significance of the structures at the two sites listed above shall be conducted by the City and funded by the project applicant. If the evaluation is negative (i.e., not historically significant), no further mitigation is required.

If the evaluation determines that the two sites are historically significant, the subsequent development project shall be redesigned to avoid the building site(s). The building site(s) will be deeded to a non-profit agency to be approved by the City for the maintenance of the site(s). If avoidance is determined to be infeasible by the City, all required documentation (in addition to the items above) shall be conducted in accordance with appropriate standards:

- The development of a site-specific history and appropriate contextual information regarding the particular resource; in addition to archival research and comparative studies, this task could involve limited oral history collection;
- Accurate mapping of the noted resources, scaled to indicate size and proportion of the structures;
- Architectural description of affected structures;
- Photo documentation of the designated resources, both in still and video format;
- Recordation of measured architectural drawings, in the case of specifically designated buildings of higher architectural merit; and
- Any historical significant artifacts within buildings and the surrounding area shall be recorded and deposited with the appropriate museum.

These buildings shall be preserved and relocated off-site.

*Timing/Implementation: Prior to approval of a rezone request for properties associated with 8533 and 8551 Poppy Ridge Road.*

*Enforcement/Monitoring: City of Elk Grove Development Services*

Implementation of the above mitigation would mitigate this impact to **less than significant**.

## 4.10 CULTURAL RESOURCES

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### 4.10.4 CUMULATIVE SETTINGS, IMPACTS, AND MITIGATION MEASURES

Buildout of approved and planned uses such as the East Franklin Specific Plan, Lent Ranch Marketplace area, South Pointe planning area, future development under the proposed Draft General Plan, and associated infrastructure projects such as the Grant Line Road/ SR 99 interchange improvements have the potential to uncover previously unknown resource sites. Each cultural site is a unique contributor to the overall scientific understanding of a region's pre-history. Evaluation of cultural finds and resources within their original context is a critical component of their value. Disturbance, movement, and destruction of such resources would remove or preclude the analysis of the resource within its origin and therefore adversely affect the understanding of the development of human cultural history. Increased population and intensified land use patterns associated with cumulative growth could also increase the potential for vandalism and/or inadvertent destruction of such resources.

#### Mitigation Measures

Mitigation measures 4.10.1a, 4.10.1b, and 4.10.2 would mitigate cumulative impacts on cultural resources resulting from the Laguna Ridge Specific Plan to **less than significant** levels.

#### REFERENCES

City of Elk Grove, 2002. *City of Elk Grove Draft General Plan, Historic Resources Element*. November 2002. Elk Grove, California.

Peak & Associates, 1999. *Cultural Resources Assessment for the Laguna Ridge Specific Plan and Environmental Impact Report*. July 23, 1999. Sacramento County, CA.

**SECTION 4.11**  
**VISUAL RESOURCES**

## 4.11 VISUAL RESOURCES

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This section of the EIR describes the existing visual resources of the Laguna Ridge Specific plan area, its consistency with the Elk Grove Draft General Plan, current planning activities, and provides an analysis of the anticipated aesthetic changes to the visual characteristics and landscape of the area as a result of the Specific Plan.

### 4.11.1 EXISTING SETTING

#### AESTHETICS

While the northern boundary of the plan area across Elk Grove Boulevard is substantially developed with residential uses, the aesthetic character of the plan area is dominated by its agricultural setting. Agricultural operations exist along West Stockton Boulevard, along the eastern boundary from the intersection of Bilby Road and Bruceville Road south, and along the entire southern boundary, extending well south of Kammerer Road. The interior of the plan area is also predominantly agricultural, sparsely populated with established farmhouses, widely separated by cultivated and non-cultivated fields. Some trees exist in windrows interspersed among the fields. Existing structures are located primarily along Elk Grove Boulevard and Poppy Ridge Road. Most of these structures are associated with farming and include barns, corrals and other similar facilities. Some houses of historical importance exist within the boundaries of the plan area and are discussed in detail in **Section 4.10**, Cultural Resources.

The plan area is adjacent to State Route 99 and two major roadways, Elk Grove Boulevard and Bruceville Road. These corridors serve as major access points through the City of Elk Grove and into Sacramento to the north. Numerous receptors see the proposed plan area in its current state. The Sacramento County General Plan Scenic Highways Element designates State Route 99 as a Scenic Highway, which designates a scenic corridor 660-foot on either side of the right of way line in the unincorporated areas of the county. The Elk Grove Zoning Code designates State Route 99 as a Special Sign Corridor, which regulates the type, size and location of signs within the view of the traveling public.

Approaching the plan area from the south on State Route 99 (SR-99), the visual character of the area is dominated by farmland. The fields appear either fallow or cultivated with grain crops. In the vicinity of Grant Line Road, industrial uses exist on the east side of SR 99, including the Suburban Propane facility with its two large holding tanks. Properties on the west side, just south of the plan area, remain agricultural. Further north, primarily single-family residences occupy the properties on the east side of SR-99, across from the plan area. Some higher density residential development is under construction in this area. Approximately three quarters (3/4) of a mile north of the SR-99/Grant Line junction, Elk Grove Regional Park becomes visible from SR-99.

Continuing north toward Elk Grove Boulevard, properties on the east side of SR 99 are occupied by established residential and commercial development, while agricultural and residential uses are visible on the west side. At the SR-99/Elk Grove Boulevard interchange, several commercial centers are in operation on both sides. The Elk Grove Automall is also visible on the west side of SR 99 and south of Elk Grove Boulevard.

Approaching the plan area from the west on Elk Grove Boulevard, residential development is visible along the northern side of the street. The southern side of the street is primarily agricultural land, which is in the process of development as the East Franklin Specific Plan area. Residential development continues to dominate the viewshed along the north side of Elk Grove Boulevard



east of Big Horn Boulevard. East of Laguna Springs Drive, commercial development dominates the view on both sides of Elk Grove Boulevard.

### Site Visibility

Although the plan area is visible from many locations, the most prominent views occur in close proximity to the site. Ten (10) viewing locations were selected to assess the visual characteristics of the plan area and surrounding area. Each location is characterized by the presence of a significant viewing audience. The ten (10) viewing locations are identified in **Figure 4.11-1**, and the range of view for each location is also illustrated.

As shown, the primary viewing audience consists of persons with northern and southern views from SR-99, Elk Grove Boulevard, Bruceville Road, Bilby Road, Poppy Ridge Road, and West Stockton Boulevard, and interior boundaries of the plan area. As previously stated, the plan area is sufficiently visible from each of these locations that viewers are able to identify on-site development and notice changes that would occur on the site. Views from each of these locations are shown in **Figures 4.11-2** through **4.11-11**.

#### Viewing Location 1 – Offsite Project Perspective Looking Southeast from the Intersection of Elk Grove Boulevard and Big Horn Boulevard

Viewing Location 1 (**Figure 4.11-2**) is an off-site view of the plan area looking southeast across the plan area from the intersection of Elk Grove Boulevard and Big Horn Boulevard. The viewing audience from this location would be pedestrians or motorists. Prominent views across the site include tree groves, homesteads, small-scale farming uses, and the rear side of the Truck Hoist System (THS) facility. No distant views are visible from this vantage point due to the fact that the buildings and trees located east of SR-99 block such views.

#### Viewing Location 2 - Offsite Project Perspective looking Northeast from Bruceville Road

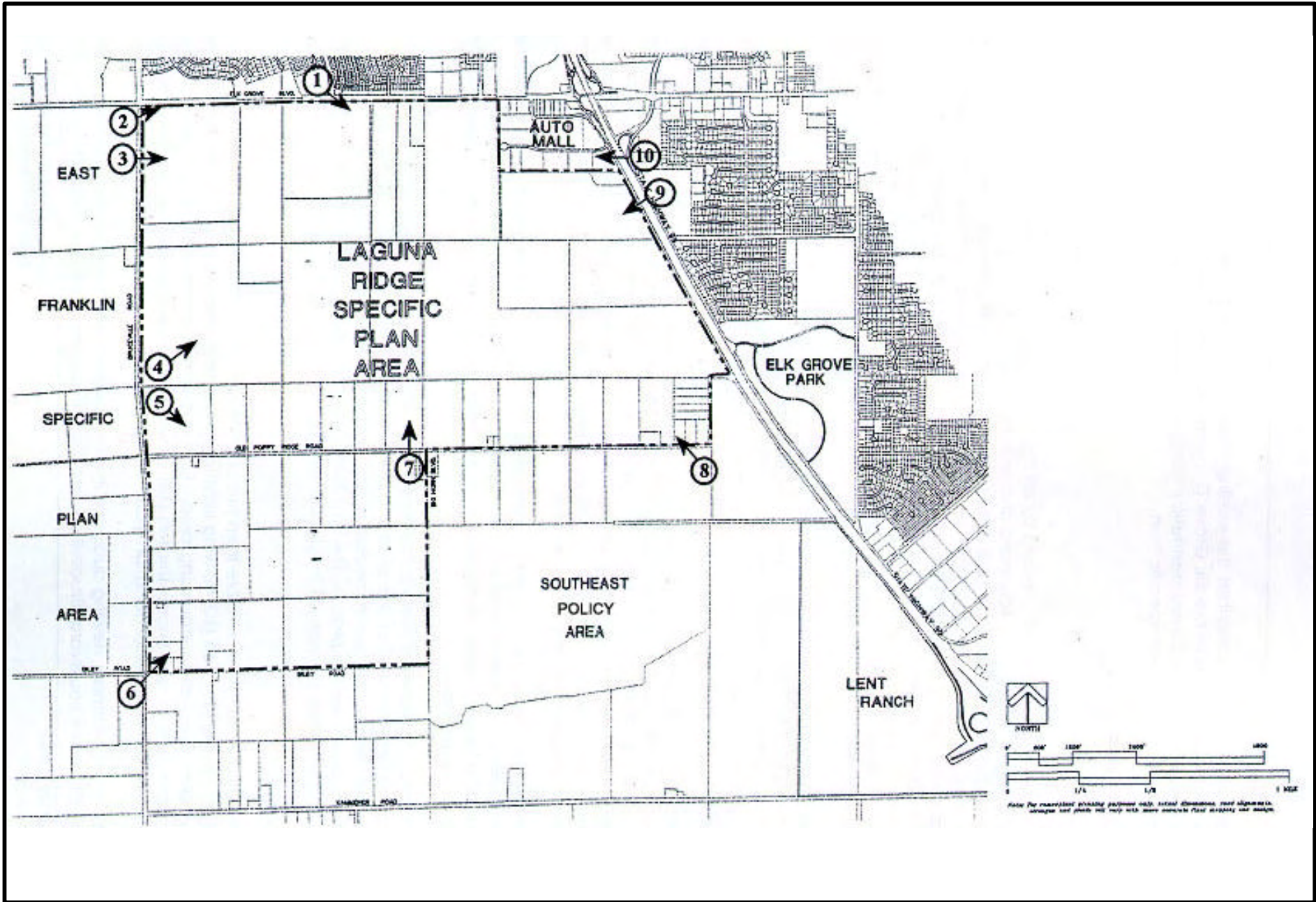
Viewing Location 2 is shown on **Figure 4.11-3**. Looking northeast across the plan area from an offsite location at Bruceville Road near its intersection with Elk Grove Boulevard. From this vantage point the foreground is entangled with brush and interspersed with trees that are located along Bruceville Road. Though it is not evident in **Figure 4.11-3**, Elk Grove Boulevard is in the background of this image. Also, existing residential developments located north of Elk Grove Boulevard are visible from this location. The middle-ground view contains vacant land and agricultural fields; however, it is difficult to distinguish between these uses.

#### Viewing Location 3 – Offsite Project Perspective East from Bruceville Road

Viewing Location 3 (**Figure 4.11-4**) looks east across the plan area from the same offsite location as Viewing Location 2. The foreground of this perspective is entangled with brush and interspersed with trees that are located along Bruceville Road. The middle ground contains vacant land and agricultural fields. Some structures and tree groves are visible in the background.

#### Viewing Location 4 – Onsite Project Perspective Northeast from the Intersection of Bruceville and Poppy Ridge Roads

Viewing Location 4 is illustrated on **Figure 4.11-5**. This view shows a northeast perspective from an onsite location at the intersection of Bruceville and Poppy Ridge Roads. Empty fields and



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Figure 4.11-1  
Photo Key Map

interspersed trees dominate the view. Some structures are visible in the distance. In the foreground, a wooden fence (in poor condition) and vacant fields dominate the view. Interspersed trees, vacant fields and an unidentified mound of dirt are in the middle ground. Structures and tree groves dominate the background.

### Viewing Location 5 – Onsite Project Perspective Southeast from the Intersection of Bruceville Road and Poppy Ridge Road

Viewing Location 5 is illustrated on **Figure 4.11-6**. Looking southeast across the plan area from this vantage point at the intersection of Bruceville Road and Poppy Ridge Road, a variety of vacant properties and underbrush interspersed with trees are visible. Also visible are a treelike that is located approximately 150 feet from the viewing location and a structure that is approximately 200 feet from the viewing location. Otherwise, the view is dominated by vacant land overgrown by underbrush.

### Viewing Location 6 – Offsite Project Perspective Northeast from Bilby Road and Bruceville Road

Viewing Location 6 (**Figure 4.11-7**) is a vantage point located off-site at the intersection of Bilby Road and Bruceville Road. Looking northeast across the plan area empty fields, farming structures, fences, and trees are visible. A vacant, fenced-in field dominates the immediate foreground. To the north and east of the vacant land are residential structures. The residence located north of the field is surrounded by several trees and separated from the field in the foreground by a wood fence. An open field lies to the rear of the home. Some trees and underbrush exist in this field. To the east of the field is another residence. Trees also surround the property. A wood fence marks the boundary between the vacant field and the residence. To the rear of the home is a large white barn structure. Some utility wires cross the property at this point. In the background, empty fields dominate the viewshed, although there are some other farming structures and fences in the area.

### Viewing Location 7 – Onsite Project Perspective to the North of Poppy Ridge Road.

Viewing Location 7 is illustrated in **Figure 4.11-8**. Looking north across the plan area from this location at Poppy Ridge Road, approximately one mile east of Bruceville Road, the primary feature is an empty field with a grove of trees and some residential structures. Also visible in the far distance are some other structures. To the east of this vantage point is a residential home. There are several vehicles and farming structures to the rear of the home that are enclosed by a chain link fence. Several of the vehicles appear to be abandoned. To the west is a large tree grove. In the background of the image there are several structures and vehicles. Most of these are not clearly visible.

### Viewing Location 8 – Offsite Project Perspective Looking to the Northwest of Poppy Ridge Road.

Viewing Location 8 is shown on **Figure 4.11-9**. Looking northwest across the plan area from Poppy Ridge Road, approximately one mile east of Bruceville Road (which is adjacent to the proposed extension for Big Horn Boulevard), the viewer can see vacant and agricultural fields. In the distance, some agriculture structures and trees are visible. Additionally, utility lines and poles cross over the fields.



Figure 4.11-2  
Viewing Location 1 – Project Perspective Looking Southeast  
from the Intersection of Elk Grove Boulevard and Big Horn  
Boulevard



Figure 4.11-4  
Viewing Location 3 – Offsite Project Perspective East from  
Bruceville Road



Figure 4.11-3  
Viewing Location 2 – Off Site Project Perspective looking  
Northeast from Bruceville Road



Figure 4.11-5  
Viewing Location 4 – Onsite Project Perspective Northeast from  
the Intersection of Bruceville and Poppy Ridge Roads





Figure 4.11-6  
Viewing Location 5 – Onsite Project Perspective Southeast from the Intersection of Bruceville Road and Poppy Ridge Road



Figure 4.11-8  
Viewing Location 7 – Onsite Project Perspective to the North of Poppy Ridge Road.



Figure 4.11-7  
Viewing Location 6 – Offsite Project Perspective Northeast from Bilby Road and Bruceville Road



Figure 4.11-9  
Viewing Location 8 – Offsite Project Perspective Looking to the Northwest of Poppy Ridge Road.



## 4.11 VISUAL RESOURCES

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### Viewing Location 9 – Offsite Project Perspective Looking to the Southwest of West Stockton Boulevard

Viewing Location 9 is shown in **Figure 4.11-10**. Looking south-southwest across the plan area, this vantage point is approximately one quarter (¼) mile south of Elk Grove Boulevard along West Stockton Boulevard where West Stockton Boulevard parallels SR-99. The view is predominantly vacant fields with some structures, trees, fencing and utility lines. In the foreground is a barbed fence with some undergrowth along the fence. One tree can be seen adjacent to the fence.

Beyond the fence are vacant fields and a fence to the south. The fence extends from east to west for approximately 300 feet. A single tree is located near the fence approximately 150 feet from the eastern end. Two other trees are in the vacant field. The background is dominated by vacant fields, interspersed with some trees, farming structures, utility poles, and fences. A tree line appears in the distance. Significant features do not exist from this viewpoint.

### Viewing Location 10 – Offsite Project Perspective looking Northwest from West Stockton Boulevard

Viewing Location 10 (**Figure 4.11-11**) is the same location as Viewing Location 9, but this view crosses the plan area in a northwesterly direction. From this vantage point, open fields dominate the view. Two structures are located to the north-northwest, outside of the plan area, including one residential and one commercial structure. West Stockton Boulevard and a barbwire fence are in the foreground of the viewpoint. In the middle ground, vacant fields dominate the area. Only one structure is visible in this view located within the plan area, which has been identified as a water pump adjacent to a tree. The other structures that can be seen from this viewpoint are outside the plan area. The background shows mostly empty fields, with a tree line in the distance.

## LIGHTING AND GLARE

Currently, minimal lighting exists in the plan area. Most of the light emanates from local farms and homes. SR-99 also contributes some light to the plan area. Minimal glare exists from the plan area due to its low-intensity nature. Farmland generally does not create intensive glare. During the day, sunlight reflecting from structures and motor vehicles are the primary source of glare; nighttime light and glare can also be divided into those associated with both stationary and mobile sources. Stationary sources of nighttime light include structure illumination, interior lighting, decorative landscape lighting, lighted signs, and streetlights. The principal sources of nighttime light and glare are vehicle headlamp illumination, streetlights, and building lighting. During nighttime hours, this ambient light environment can be accentuated during periods of low cloudiness or fog, which increases the amount of light and reflective glare.

The various land uses present near the plan area emit ambient light from five main sources. These include SR-99, commercial/industrial uses east of SR-99, lighting associated with the on-site residential and agricultural buildings, commercial and residential uses north of Elk Grove Boulevard, and the Elk Grove Automall northeast of the plan area.

4.11.2 REGULATORY FRAMEWORK

CITY OF ELK GROVE GENERAL PLAN

Table 4.11-1 identifies the General Plan Land Use and Scenic Element policies that are directly applicable to the proposed project, and presents an evaluation of the consistency of the project with these statements as required by CEQA. The final authority for interpretation of these policy statements, and determination of the project’s consistency rests with the City Council.

TABLE 4.11-1

GENERAL PLAN LAND USE AND SCENIC ELEMENT POLICY CONSISTENCY

General Plan Policies	Consistency with General Plan	Analysis
<p><b>Policy LU-30:</b> Signs should be used primarily to facilitate business identification, rather than the advertisement of goods and services. Sign size limits and locations should be designated consistent with this policy.</p>	<p>Yes</p>	<p>Sign size limits and locations are regulated by the provisions of City of Elk Grove Sign Code, Special Sign District, in addition to the project design guidelines related to entry monumentation and signage. Mitigation Measure 4.11.2a would address signage within the plan area.</p>
<p><b>Policy LU-32:</b> Reduce the unsightly appearance of overhead and aboveground utilities.</p>	<p>Yes</p>	<p>The Laguna Ridge Specific Plan requires that all new electrical and telecommunication services, excluding primary transmission lines and substations, be installed underground. The guidelines and standards for utilities further require the "undergrounding" of existing overhead facilities to the extent practical.</p>

4.11.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

A project is considered to have a significant effect on the environment if it will:

- Have a substantial adverse effect on a scenic vista;
- Substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;



Figure 4.11-10  
Viewing Location 9 – Offsite Project Perspective Looking to the  
Southwest of West Stockton Boulevard



Figure 4.11-11  
Viewing Location 10 – Offsite Project Perspective looking  
Northwest from West Stockton Boulevard





## 4.11 VISUAL RESOURCES

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- Substantially degrade the existing visual character or quality of the site and its surroundings; or
- Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area.

As proposed, the project would change the existing primarily undeveloped agriculture project site to residential, commercial and civic uses. Project impacts will be discussed in terms of the project's effect on visual resources, and the generation of ambient and stationary light and glare.

### METHODOLOGY

This section of the EIR evaluates the potential project-related changes in the visual character of the plan area and surrounding areas through a combination of methods that: (1) identify corridors in which the plan area can be viewed; (2) identify "viewsheds" within the view corridors where the development area is most visible; (3) identify, within those viewsheds, "prominent visual features;" and (4) provide examples of existing commercial and residential land uses which would be typical of those proposed as part of the project in order to demonstrate potential changes in the visual character of the plan area. For the purposes of this analysis, "viewsheds" are defined as the most visible portions of the development area that can be seen by a relatively large mobile viewing audience (primarily from automobiles). The primary viewing audience is from automobiles because there are no nearby parks, public spaces, or established commercial or industrial parks from which the site is visible.

"Prominent visual features" are defined as features that are unique to the City of Elk Grove, and/or those features that stand out in relation to their surroundings. "Development area" is defined as the portion of the plan area that would be subject to grading and construction activity due to project implementation and buildout.

A determination was made as to the areas from which the plan area is viewed on a regular basis. These areas include ten visual perspectives: (1) Intersection of Elk Grove Boulevard and Big Horn Boulevard; (2) Bruceville Road, looking northeast; (3) Bruceville Road, looking east; (4) Intersection of Bruceville Road and Poppy Ridge Road, looking northeast; (5) Intersection of Bruceville Road and Poppy Ridge Road, looking southeast; (6) Intersection of Bilby Road and Bruceville Road; (7) North of Poppy Ridge Road; (8) Poppy Ridge Road, looking northwest; (9) West Stockton Boulevard, looking southwest; and (10) West Stockton Boulevard, looking northeast.

It is not the intent of this analysis to suggest that the plan area is visible only from the ten viewing locations. Rather, an attempt was made to identify a range of viewsheds that are a representative sample of the most prominent views available of the plan area. In this analysis, emphasis has been placed on the viewing population, which has an opportunity to view the site from the ten representative visual perspectives identified.

With each of the ten viewsheds, view orientations were selected that would display the maximum amount of development visible within that range of view. Photographs of these viewsheds are presented in this section of the EIR to document the existing visual character of the area.

To provide a standard frame of reference for the reader, the visual character within each of the viewsheds is described in terms of foreground, middle-ground, and background elements. Each represents a portion of the total view, based on distance from the viewing location. Foreground scenes represent the closest views available, middle-ground scenes represent the next distinguishable range of view, and the background represent the most distant visible landscape elements that typically form backdrops for the middle and foreground scenes. The delineation between one viewing range and the next is largely based on prominent transitions in landscape character and the reduction in visibility of the landscape features as distance increases; however, the judgments of such transitions are admittedly subjective.

Upon buildout of the proposed project, it is anticipated that the full range of building colors and roofing materials would be represented in the plan area in accordance with the Laguna Ridge Specific Plan. The ultimate types of building materials and colors would be determined at the time individual elements of the proposed project are submitted for building permits.

### PROJECT IMPACTS AND MITIGATION MEASURES

#### Local Visual Resource Impacts

**Impact 4.11.1** Implementation of the Laguna Ridge Specific Plan would alter the plan area's visual character from a rural area to a suburban environment. Views of open areas would be replaced by views of residential and commercial uses. This would result in a **significant** impact.

The proposed project would alter the plan area's visual character from a rural area to an urban environment. Views of open areas would be replaced by views of residential and commercial uses. While the setbacks, landscaping, varied building heights and sizes, and varied building locations would provide visual relief, project development as proposed would significantly impact existing views of the area.

The existing uses and features within the plan area are not considered to be significant visual resources. Additionally, there are no scenic visual resources within the vicinity of the plan area. The Land Use Policy Map of the Draft General Plan designates the majority of the properties north of the plan area as Low Density Residential and Commercial. The Draft Land Use Policy Map designates the properties south of the plan area as the Southeast Policy Area. The Elk Grove Draft General Plan anticipates that the area north of the plan area would be developed, while the properties to the south would be developed residential, office and commercial uses in the near future.

The plan area is undergoing rapid urbanization. While site development would initially be out of character with the existing rural nature of the area, this impact would diminish over time as other development occurs east, west and south of the site. Over time, development of the plan area would become increasingly consistent with the evolving visual character of the area.

#### Mitigation Measures

There are no feasible mitigation measures that would mitigate the project's impact on local views. This impact is considered **significant** and **unavoidable**.

## 4.11 VISUAL RESOURCES

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### Light and Glare

**Impact 4.11.2** Implementation of the Laguna Ridge Specific Plan would introduce new sources of light and glare in and around the plan area. This would result in a **significant** impact.

As proposed, the project would be operational during both the daytime and nighttime hours and would create sources of light and glare not currently present in the plan area. Proposed windows, particularly large areas of glass in commercial structures, could create substantial glare. Light most visible to off-site viewers would include streetlights within the project adjacent to West Stockton Boulevard, Bruceville Road, Elk Grove Boulevard, Bilby Road, Poppy Ridge Road, SR-99, and the proposed Big Horn Boulevard. Also, parking lot lighting, car lights, and lights associated with residential, park, school and commercial structures would be visible and would increase the sky glow within the region. These lights would be visible during nighttime hours and would represent the greatest source of new light to nearby residents.

The surrounding areas north, east and west of the plan area have either been approved for development or have already been developed. Residential development is in progress within the approved East Franklin Specific Plan area adjacent to the plan area west of Bruceville Road. To the north, residential development has already been completed along Elk Grove Boulevard. Phase One of the Elk Grove Automall is in operation at the southwest quadrant of the SR-99/Elk Grove Boulevard intersection and Phase Two, located within the plan area, has been approved and is under construction. These projects will result in a significant amount of illumination within the vicinity, in addition to that already created by significant traffic levels on SR 99. Further conflicts could arise where reflective surfaces on commercial buildings were located in proximity to SR 99 and internal roadways, resulting in reflected glare that could impair the sight of passing motorists, creating a traffic hazard. The addition of lighting and glare from the proposed project would be considered a **significant** impact.

**MM 4.11.2a** A lighting plan shall be developed and provided with improvement plans for each subsequent non-residential project to ensure that parking lot pole lights and streetlights shall be fully hooded and back shielded to reduce the light "spillage" and glare, prohibit the illumination from breaking the horizontal plane, and ensure that lighting not exceed the standard illumination of two-foot candles along the property lines of adjoining land uses. The two-foot candle lighting standard shall also apply to all park and school facilities where stadium lighting may be installed and used.

*Timing/Implementation:* Prior to approval of improvement plans for all subsequent public and private projects.

*Enforcement/Monitoring:* City of Elk Grove Development Services, Elk Grove Community Services District and Elk Grove Unified School District.

**MM 4.11.2b** Non-glare glass shall be used in all non-residential buildings to minimize and reduce impacts from glare. Office and commercial buildings, which are allowed to use semi-reflective glass, must be oriented so that the reflection of sunlight is minimized. This requirement shall be incorporated into the Specific Plan and reflected in subsequent development applications.

<i>Timing/Implementation:</i>	<i>Types of non-glare glass shall be specified on final development plans for subsequent commercial and office projects, and installed prior to building occupancy.</i>
<i>Enforcement/Monitoring:</i>	<i>City of Elk Grove Development Services</i>

While the above mitigation measures would reduce the effect of light and glare, the impact would remain significant and unavoidable.

### State Route 99 Corridor View Impacts

**Impact 4.11.3** The Laguna Ridge Specific Plan would change the visual character of the plan area from rural residential to suburban mixed-use along scenic corridor SR-99. This would result in a **significant** impact.

As shown on **Figure 3.0-2**, the proposed project is immediately adjacent to SR-99. As discussed above, the Zoning Code establishes standards intended to create a more attractive image of the urban area within 660 feet of freeway right-of-way. However, the character of the area is undergoing a rapid transformation from agricultural to higher density residential and commercial. Therefore, impacts to the freeway scenic corridor would be **significant and unavoidable**.

#### Mitigation Measures

There are no mitigation measures for this impact. Changes to the existing rural landscape would result in a **significant and unavoidable impact**.

### 4.11.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

#### SETTING

The proposed project would be a continuation of planned development in the plan area. Development has begun to the north and west, and additional development is proposed to the south. The East Franklin Specific Plan to the west is approximately 2,474 acres and includes 10,103 dwelling units, support commercial/retail uses, open space, and public facilities. The Elk Grove Automall, adjacent to the northwest, occupies 45 acres. To the south, the Lent Ranch Marketplace Project occupies approximately 293 acres and has been approved by the City Council. The proposed South Pointe project, occupies approximately 200 acres adjacent to the Lent Ranch Marketplace. These projects comprise the majority of development that would cumulatively occur within the viewshed of the Laguna Ridge Specific Plan.

#### IMPACTS AND MITIGATION MEASURES

**Impact 4.11.4** Implementation of the Laguna Ridge Specific Plan in combination with other projects would introduce new development into an agricultural area and increase nighttime lighting and glare. These impacts would be considered **cumulatively significant**.

Cumulative impacts from these projects would include the conversion of vacant or agricultural land to urban uses. A cumulative visual impact would exist relative to the loss of vacant undeveloped land as viewed from the public roadways discussed in this section of the EIR. The

## 4.11 VISUAL RESOURCES

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amount of visible natural vegetation would also decrease. Nighttime illumination and daytime glare would also be increased in the plan area as a result of cumulative project development. Although individual development projects would be responsible for incorporating mitigation to minimize their visual impacts, the net result would still be a general conversion of an area with an open, rural character to a more urban and developed character. This impact would be **cumulatively significant**.

Because the project-specific and cumulative impacts are inherently related to the general conversion of an agricultural area to urban development from the introduction of development structures and lighting sources, both project-specific and cumulative impacts would be **significant and unavoidable**.

### Mitigation Measures

Implementation of mitigation measures MM 4.11.2a and MM 4.11.2b would reduce the project's contribution to cumulative visual impacts, the cumulative impact is considered **significant and unavoidable**.

### REFERENCES

City of Elk Grove, 2002. *Land Use Element, City of Elk Grove Draft General Plan*. Elk Grove, California. November 2002.

**SECTION 4.12**  
**LAND USE/POPULATION, HOUSING, AND EMPLOYMENT**

## 4.12 LAND USE/POPULATION, EMPLOYMENT AND HOUSING

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The purpose of this section is to evaluate Laguna Ridge Specific Plan in a regional and local planning context, to address the consistency of the project with the applicable land use programs and policies of the City of Elk Grove Draft General Plan. In addition, this section will assess the impacts to future population, employment, and housing projects, as well as summarize the potential applicable land use compatibility conflicts from other sections of the EIR.

### 4.12.1 EXISTING CONDITIONS

#### REGIONAL SETTING

As previously described in **Section 3.0**, Project Description, and illustrated on **Figure 3.0-1**, Regional Location, the plan area is located in the central and southern portion of Sacramento County, in the incorporated City of Elk Grove, California. The City of Elk Grove is approximately 14 miles southeast of downtown Sacramento, and approximately 12 miles north of the Sacramento-San Joaquin County boundary.

The City of Elk Grove Draft General Plan identifies this plan area as the Laguna Ridge Land Use Policy Area, the boundaries of which are exactly the same. The Draft General Plan designates the area south of the plan area as the Southeast Policy Area, which extends to the City's corporate limit line. Properties south of the City limit line, delineated by Kammerer Road, are outside of the County's designated Urban Services Boundary (USB), which is the ultimate extension of urban development within the unincorporated County. It is the County's policy not to expand the USB, except to account for extraordinary circumstances.

#### LOCAL SETTING

##### Existing Land Uses on Plan Area

The 1,900±-acre plan area is occupied by a variety of land uses, although the majority is used for agricultural purposes. On the northern boundary of the site, a truck maintenance facility is located on Elk Grove Boulevard. This facility, Truck Hoist Systems (APN 132-0270-006), is located approximately midway between the existing of the Elk Grove Automall and the proposed extension of Big Horn Boulevard.

Several dairy farms were previously in operation both within and in close proximity to the project area. The Lindsay Jersey Dairy farm occupied approximately 76.2 acres immediately south of the first phase of the Elk Grove Automall on the west side of West Stockton Boulevard. The Elk Grove General Plan designated the dairy property Low Density Residential (LDR) and the site was zoned AG-80. In April 2002, the Elk Grove City Council approved a General Plan Amendment changing the designation from LDR to Commercial & Office (CO) and rezoned 44 acres of the site from AG-80 to Auto Commercial (AC) to accommodate Phase II of the Elk Grove Auto Mall. The Elk Grove Draft General Plan designates this area Commercial/Multi-family.

Old Poppy Ridge Road is an existing rural road that extends east-west through the approximate center of the plan area, between Bruceville Road and West Stockton Boulevard. Several home sites exist along Poppy Ridge Road surrounded by fields that have historically been used for grazing livestock and growing crops. Housing in the area includes recently constructed single family residences, older established farm houses, and scattered mobile homes. The condition of these properties ranges from well maintained to dilapidated and abandoned. Agricultural buildings and structures are located on many of the home sites, including barns, corrals and

## 4.12 LAND USE/POPULATION, EMPLOYMENT AND HOUSING

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pens for keeping livestock. Some of the land surrounding the homes is used for “truck farming,” where a variety of agricultural crops are grown. Near West Stockton Boulevard, where Poppy Ridge Road turns north-south, properties on the east side are zoned AG-80 and properties on the west side are zoned AR-2. AG-80 primarily allows agricultural uses on a minimum parcel size of 80 acres and AR-2 allows agricultural and residential uses on a two-acre minimum lot area. Further west, where Poppy Ridge Road turns back to an east-west direction, properties are zoned predominantly AG-20, establishing a 20-acre minimum parcel size. Relatively isolated houses surrounded by larger, open fields exist north and south of Poppy Ridge Road, where the extension of Big Horn Boulevard is proposed. In the vicinity of Poppy Ridge Road and Bruceville Road, and extending south near the intersection of Bilby and Bruceville Roads, properties are zoned AG-20.

The majority of the remaining land is either large, seasonally cultivated grain fields or is fallow, with the exception of two parcels (APN 132-0050-006 and APN 132-0050-063), where the land has been continuously farmed on a year-round basis since the 1950s. The fields along Bruceville Road appear to be used for growing hay for livestock. Some of the fields are separated by tall windrows of trees. Most homes located on these properties are agriculturally oriented. Zoning in this area is predominantly AG-80.

A drainage ditch exists approximately one mile south of Elk Grove Boulevard that begins near the proposed Big Horn Boulevard extension, approximately one mile east of Bruceville Road. The drainage ditch extends west across Bruceville Road and into the East Franklin Specific Plan area.

### **Surrounding Land Uses**

A variety of land uses surround the plan area. On the north side of Elk Grove Boulevard, which delineates the northern boundary of the plan area, low density residential development, zoned RD-7, extends approximately 0.6 miles from Bruceville Road to the east. A commercial site zoned Shopping Center (SC) encompasses approximately six acres at the northwest corner of Elk Grove Boulevard and Big Horn Boulevard. High density residential development, zoned RD-20, occupies the northeast corner. Developed low density residential and undeveloped agricultural/residential properties extend east to Laguna Springs Road. Further east is the “Laguna-99 Shopping Center”, which is zoned Limited Commercial (LC) and Shopping Center (SC) Commercial adjacent to State Route (SR) 99 frontage.

Other properties zoned LC and occupied by commercial uses exist on the south side of Elk Grove Boulevard adjacent to SR 99. A gas station and small retail/office complex is located between Elk Grove Boulevard and the Elk Grove Auto Mall. The first phase of the Auto Mall occupies 48.7 acres zoned Auto Commercial (AC). The site adjoins West Stockton Boulevard, which is parallel to SR 99. This commercial development encompasses 44.0 acres directly south of the first phase, which was formerly occupied by the Lindsay Dairy and is adjacent to the northeast corner of the plan area. West Stockton Boulevard serves as the easternmost boundary of the project area, parallel to State Route 99. Established residential development exists on the east side of SR-99, which is predominantly RD-5, with a lesser area designated RD-7. Elk Grove Regional Park is also located directly east of SR-99, between East Stockton Boulevard and Elk Grove-Florin Road. Elk Grove High School adjoins this 114-acre park facility to the north. South of the park, manufacturing and industrial zoning extends to Grant Line Road, with a portion of LC Limited Commercial zoning at the corner of East Stockton Boulevard and Grant Line Road. The Draft General Plan designates this area as Light and Heavy Industrial.

On the west side of SR 99, Grant Line Road intersects West Stockton Boulevard in the vicinity of the approved Lent Ranch Marketplace project. This development encompasses approximately



## 4.12 LAND USE/POPULATION, EMPLOYMENT AND HOUSING

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295 acres, of which approximately 280 acres are planned for a regional shopping mall, and other retail and commercial uses, and the remaining acreage (approximately 15 acres) designated for mixed use commercial/multiple family residential. The land south of the Lent Ranch Marketplace, below Kammerer Road, is zoned either AG-20 or AG-80 and is outside of the City limits. The Draft General Plan Land Use Policy Map delineates the South Pointe Policy Area directly adjacent to the west of the Lent Ranch Marketplace. This 200-acre area is planned for low density, single family, and high density, multi-family development.

The Draft General Plan designates the Southeast Policy Area north of the Lent Ranch site and the South Pointe Policy Area, and directly south of the Laguna Ridge plan area. Land uses within the Southeast Policy Area are intended to include a mix of residential densities, commercial, and office uses. Development in the area is contingent upon the preparation and approval of a comprehensive master plan, which includes (but is not limited to) the detailed designation of land uses, a master plan of infrastructure and financing, and the phasing of infrastructure for the entire area. No portion of the Southeast Policy Area may be planned as a separate project prior to the completion of a comprehensive master plan, which may be in the form of a Specific Plan, a Special Planning Area, or similar comprehensive plan for the entire area.

Poppy Ridge Road separates the Southeast Policy Area and the eastern portion of the Laguna Ridge plan area. Properties along the south side of Poppy Ridge Road are zoned AG-20. The easternmost properties are occupied by single residences with ancillary agricultural buildings and holding pens. The properties further west, closer to the Big Horn Road extension and south to Bilby Road, appear to be consolidated into larger 40 and 80 acre parcels, where the residences are fewer and further apart. Agricultural operations are similar along the south side of Bilby Road, where the frequency of residences increases as Bilby Road approaches and intersects with Bruceville Road.

Bruceville Road is the western border of the plan area and the eastern boundary of the East Franklin Specific Plan Area (EFSP). The EFSP was adopted by the Sacramento County Board of Supervisors in April, 2000. The EFSP is bounded by Elk Grove Boulevard to the north, Franklin Boulevard to the west, Bilby Road to the south, and Bruceville Road to the east. A drainage ditch approximately one mile south of Elk Grove Boulevard continues west and eventually drains across Franklin Boulevard. The current land use designations for the EFSP Area are Low Density Residential, Medium Density Residential, Recreation, and Commercial/Office.

The Machado Dairy is located at the northwest corner of Bruceville Road and Bilby Road, within the East Franklin Specific Plan area. The owners have ceased the dairy operations and have filed a notice of non-renewal and cancellation of the Williamson Act contract. The Souza Dairy is located south of the project site, west of the proposed South Pointe subdivision. The owners have also submitted notice of non-renewal of their Williamson Act contract, which expires February 2012.

### POPULATION, HOUSING, AND EMPLOYMENT SETTING

The Sacramento Area Council of Governments (SACOG) has adopted population, housing unit, and employment forecasts for the SACOG region. The SACOG region includes all of El Dorado, Placer, Sacramento, Sutter, Yolo, and Yuba Counties. The growth forecasts were developed by SACOG staff with input for the planning staffs of the County and each pertinent City and are used for regional planning efforts such as the Air Quality Management Plan.

## 4.12 LAND USE/POPULATION, EMPLOYMENT AND HOUSING

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### Population

Sacramento County is currently the sixth-fastest-growing county in the state. The County is projected to undergo continued growth through the twenty-year period from 2000 to 2020. The 2000 population of the County is approximately 1.22 million persons. By the year 2020, the countywide population is projected to increase to approximately 1.65 million, which represents a 35 percent increase over the 2000 population. More than half of this increase in population is projected to occur due to residential development within the unincorporated areas of the County (1990 Census, 2000 Census, and SACOG Projections).

The City of Elk Grove, as identified by the SACOG, has a 2000 population of approximately 72,685 persons. The year 2020 population projection for the City of Elk Grove is estimated to be approximately 166,300 persons, which represents a 129 percent increase over the 2000 population.

### Housing

There are approximately 473,211 dwelling units within Sacramento County at the present time. By the year 2020, the housing stock countywide is projected to increase to approximately 641,752 dwelling units, which represents an increase of 36 percent. More than half of this increase is projected to be within the unincorporated areas of the County. The City of Elk Grove is estimated to have had a 2000 housing stock of approximately 24,817 dwelling units. The year 2020 housing stock for the City of Elk Grove, as identified by SACOG, is estimated to be approximately 60,355 dwelling units, which represents an increase of 143 percent.

### Employment

Employers within Sacramento County were providing approximately 561,728 jobs in 2000, with approximately 792,494 jobs predicted by the year 2020. This represents an increase in jobs provided within the County of approximately 41 percent. In the City of Elk Grove, approximately 11,147 jobs existed in 2000 with approximately 38,203 jobs predicted by the year 2022. This represents an increase in the amount of available jobs within the City by approximately 243 percent. Both increases (County and City) illustrate that a major influx of new businesses and the expansion of existing businesses will occur within the next two decades.

## 4.12.2 REGULATORY FRAMEWORK

### CITY OF ELK GROVE

#### Draft General Plan Land Use Designations

The City of Elk Grove Draft General Plan establishes several "Land Use Policy Areas" as part of the Land Use Element. These Policy Areas are designated to reflect existing and pending major project approvals, or to reflect the need for more detailed land use planning at a future date. The Draft General Plan states that the Laguna Ridge area is currently undergoing a comprehensive planning process as the Laguna Ridge Specific Plan. It is the intent of the Draft General Plan that the Specific Plan be used to implement the City's General Plan policies for the area. The Laguna Ridge Policy Area is shown in **Figure 4.12-1**.

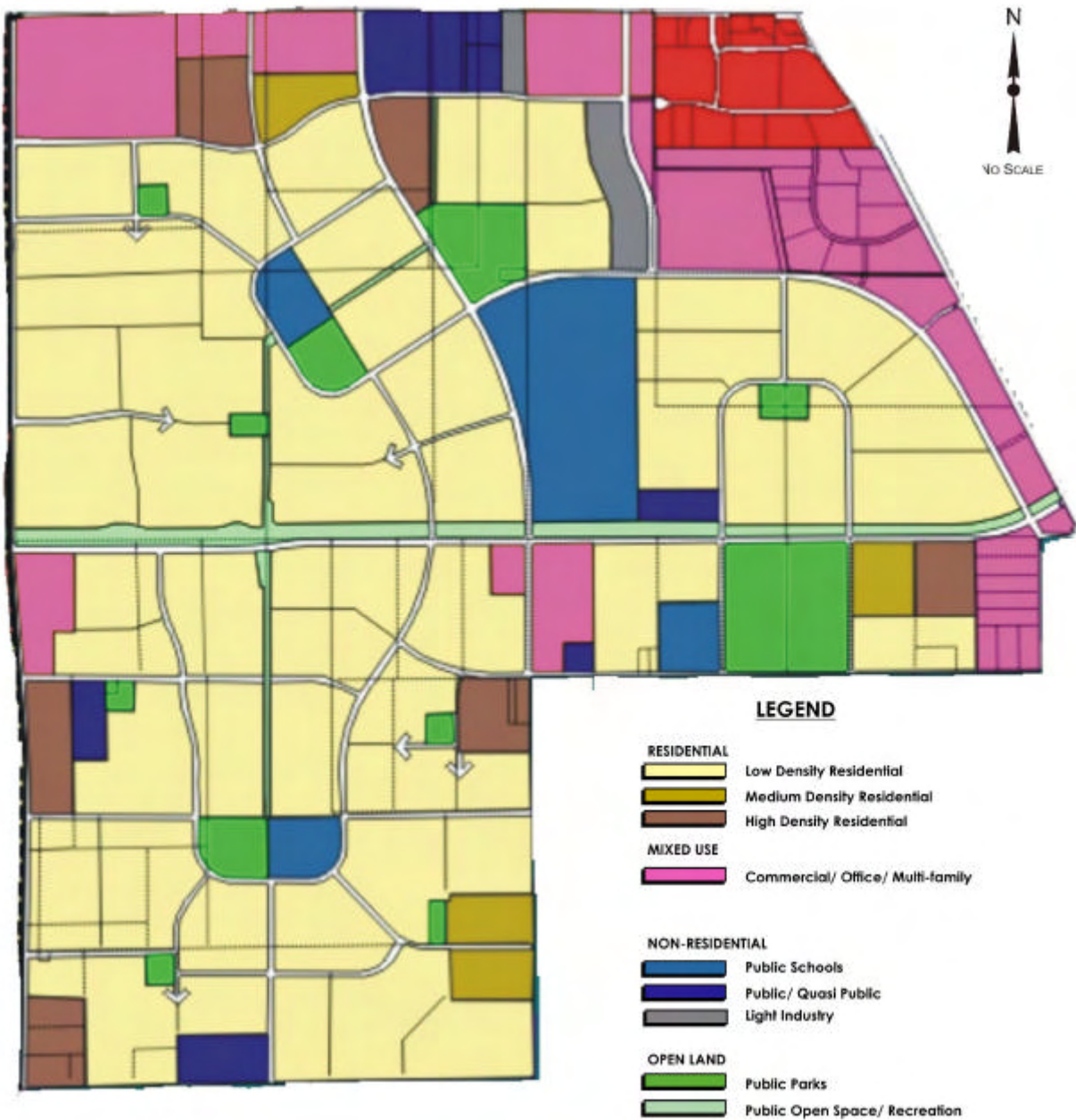


Figure 4.12-1  
Laguna Ridge Policy Area  
General Plan Land Use Designations

**Draft General Plan Policies**

The goals and policies of the City of Elk Grove (adopted by City the govern the plan area. The Draft General Plan contains goals, policies, and objectives to which the project must adhere, as must all projects. The function of the Draft General Plan is to provide guidance to the development and management of land within the plan area. The General Plan summarizes its policies and implementation strategies as they relate to the City’s goals and objectives. The Draft General Plan contains the following ten elements: Land Use; Circulation; Housing; Economic Development; Public Facilities and Finance; Historic Resources; Parks, Recreation, Trails and Open Space; Safety; Noise; and, Conservation and Air Quality.

**Table 4.12-1** identifies the Draft General Plan land use, population, employment, and housing policies that are directly applicable to the proposed project, and presents an evaluation of the consistency of the project with these statements as required by CEQA. This assessment is based on the City staff’s interpretation of the Draft General Plan policies and programs, which were adopted by The City Council on November 16, 2002. The final authority for interpretation of these policy statements, and determination of the project’s consistency rests with the City Council.

**TABLE 4.12-1  
DRAFT GENERAL PLAN LAND USE ELEMENT POLICY CONSISTENCY**

General Plan Policies	Consistency with General Plan	Analysis
<b>General Plan</b>		
<p><b>Policy LU-4:</b> All land use approvals, including, but not limited to:</p> <ul style="list-style-type: none"> <li>• Zoning,</li> <li>• Planning documents (such as Specific Plans and Special Planning Areas),</li> <li>• Tentative Maps,</li> <li>• Conditional Use Permits,</li> <li>• Etc.,</li> </ul> <p>shall be required to conform to the General Plan.</p>	Yes	The Draft General Plan designates the plan area as the "Laguna Ridge Policy Area." The Laguna Ridge Specific Plan has been prepared as the document intended to guide the implementation of the Draft General Plan policies for this policy area. The Land Use map presented in the Laguna Ridge Specific Plan is identical to the Figure LU-5, Laguna Ridge Policy Area, delineated in the Draft General Plan.
<p><b>Policy LU-5:</b> Multi-family housing development in excess of 15 dwelling units per net acre should be located according to the following general criteria:</p> <ul style="list-style-type: none"> <li>• Multi-family housing sites should generally be no smaller than eight (8) acres and no larger</li> </ul>	Yes	<p>The project includes 75 acres designated RD-20 for the development of multi-family housing, in accordance with City's Housing Element Update process, which targeted the Laguna Ridge Specific Plan area for 75 acres of affordable housing.</p> <p>This acreage is distributed among six sites located throughout the plan area, which range between 10 and 15 acres in size.</p>

#### 4.12 LAND USE/POPULATION, EMPLOYMENT AND HOUSING

General Plan Policies	Consistency with General Plan	Analysis
<p>than fifteen (15) acres. <i>The minimum size is intended to ensure on-site management; the maximum size is intended to reduce the potential for public safety problems</i></p> <ul style="list-style-type: none"> <li>Individual sites should be located at least one-third (1/3) mile apart. <i>This is intended to reduce the potential for over-concentration of multi-family uses in any part of Elk Grove.</i></li> <li>Multi-family housing sites should be located close to commercial areas, major roadways, and public transit to encourage pedestrian rather than vehicle traffic.</li> <li>Senior housing projects may be appropriate at sizes and spacing below typical thresholds, due to the reduced traffic and other impacts generally associated with these uses.</li> </ul>		<p>range between 10 and 15 acres in size.</p> <p>Multi-family sites are located on major roadways where public transit routes are anticipated, in close proximity to neighborhood serving commercial areas, and sufficiently dispersed throughout the plan area to avoid over-concentration .</p> <p>In addition, the plan area includes more than 100 acres of age-restricted, single-family housing intended for seniors.</p>
<p><b>Policy LU-8:</b></p> <p>The City should seek to designate sufficient land in all employment-generating categories to provide a minimum 1:1 correspondence between Elk Grove's working population and jobs in categories matching their employment level.</p>	Yes	<p>The project proposes Shopping Commercial, Community Commercial Mixed Use, Office Park and Civic Center uses on more than 300 acres of the plan area, contributing positively to the jobs/housing balance that the Draft General Plan promotes.</p>
<p><b>Policy LU-22</b></p> <p>Land uses in the Laguna Ridge Policy Area shall conform to the uses shown in Figure LU-5.</p>	Yes	<p>The Land Use Plan of the Laguna Ridge Specific Plan is consistent with Figure LU-5 of the Draft General Plan Land Use Element.</p>
<p><b>Policy LU-23</b></p> <p>At least four percent (4%) of the total land area within the Laguna Ridge Policy Area shall be designated for high density residential development.</p>	Yes	<p>The Laguna Ridge Specific Plan area designates six RD-20 sites intended for high density residential development in accordance with this policy.</p>

**4.12 LAND USE/POPULATION, EMPLOYMENT AND HOUSING**

General Plan Policies	Consistency with General Plan	Analysis
<p><b>Policy LU-24:</b> Development in the Laguna Ridge Policy Area shall take place under the guidance of a Specific Plan which includes:</p> <ul style="list-style-type: none"> <li>• Land use designations</li> <li>• Development standards</li> <li>• Infrastructure plans</li> <li>• Financing plan</li> <li>• Design guidelines and implementation</li> </ul>	Yes	The Laguna Ridge Specific Plan contains all the necessary provisions identified in this policy to guide the development of the plan area.
<p><b>Policy LU-25:</b> The Laguna Ridge Specific Plan and any related implementation plans (including, but not limited to, capital facilities plans, public facilities financing plans, etc.) shall be consistent with this General Plan and shall be used to implement the land use and other policies of this General Plan.</p>	Yes	The Laguna Ridge Specific Plan and related plans are consistent with the Draft General Plan and are intended to implement its policies.
<p><b>Policy LU-28</b> All development projects shall provide trails and open space consistent with the Open Space and Trails Policy Map in the Parks, Trails and Open Space Element of this General Plan.</p>	Yes	The Laguna Ridge Specific Plan proposes a major trail corridor along the drainageway parallel to Poppy Ridge Road, with a point of connection to facilitate a possible future overcrossing to Elk Grove Park, consistent with the Open Space and Trails Policy Map. The overcrossing is not proposed as part of the Laguna Ridge Specific Plan project.
<b>Housing Element</b>		
<p><b>H-1 Policy:</b> Maintain an adequate supply of appropriately zoned land with available or planned public services and infrastructure to accommodate the City's projected housing needs for all income levels and for special needs groups. The acreage of appropriately zoned land needed to meet housing needs will be updated annually,</p>	Yes	The Laguna Ridge Specific Plan identifies six RD-20 sites intended for multi-family development, including affordable housing. The amount of acreage devoted to multi-family complies with the actions of the City Council in establishing housing policies of the Draft General Plan.

## 4.12 LAND USE/POPULATION, EMPLOYMENT AND HOUSING

General Plan Policies	Consistency with General Plan	Analysis
based on construction of housing units (tallied by income group and special needs group) and loss of sites through rezoning, in accordance with Action 12.		
<p><b>Policy H-2:</b> Support zero-lot line or reduced setback single-family residential developments and corner duplexes, in addition to multifamily projects, to increase affordable housing supply.</p>	Yes	The Laguna Ridge Specific Plan includes Development Standards that reduce building setback requirements and minimum lot sizes required by the Elk Grove Zoning Code.
<p><b>Policy H-3:</b> Promote development where affordable housing is located in close proximity to services, shopping, and public transportation.</p>	Yes	The Laguna Ridge Specific Plan identifies multi-family development sites that are located on major roadways where public transit or bus service are most likely to be provided, that are in proximity to commercially designated sites, that are at least 8 acres and no more than 15 acres in size, which lack of physical constraints such as noise or wetlands, and that would serve to integrate multifamily units into larger, adjacent neighborhoods.
<b>Economic Development Element</b>		
<p><b>Policy ED-1:</b> Strive to establish a balanced mix of commercial, office and industrial businesses to the City to ensure a variety of employment and business opportunities.</p>	Yes	The Laguna Ridge Specific Plan would provide a mix of land uses, including a balance of residential and employment opportunities as well as providing support commercial and neighborhood-oriented services.
<p><b>Policy ED-4:</b> Encourage developers of larger commercial and office projects to provide for on-site mixed uses that would allow employees and residents to make non-work-related trips (e.g., banking, lunch, dry cleaning, recreation, child care) without having to use their automobiles.</p>	Yes	See analysis of Policy ED-1 above.
<p><b>Policy ED-5:</b> The City shall support the development of neighborhood-serving commercial uses adjacent</p>	Yes	The Laguna Ridge Specific Plan provides a substantial amount of area to accommodate neighborhood serving commercial uses in close proximity to

## 4.12 LAND USE/POPULATION, EMPLOYMENT AND HOUSING

General Plan Policies	Consistency with General Plan	Analysis
serving commercial uses adjacent to residential areas which provide quality, convenient and community-serving retail choices in a manner that does not impact neighborhood character.		areas designated for both single family and multi family development areas

### Zoning Code

The Zoning Code of the City of Elk Grove was established to promote and protect the health, safety, and welfare of the residents of Elk Grove and the general public. Among the various objectives of the Zoning Code is the promotion of development at appropriate densities in order to conserve and enhance the City's physical scale and character as defined in the City's Draft General Plan. The City of Elk Grove Zoning Code includes land use regulations, density provisions and development standards based on the Sacramento County code. Upon the adoption of the Draft General Plan, the City Zoning Code will undergo a comprehensive revision to ensure its consistency with the policies of the Elk Grove General Plan.

The majority of the plan area is zoned Agricultural (AG-20 or AG-80), with two smaller portions zoned Light Industrial (M-1) and Agricultural Residential (AR-2) (see **Figure 4.12-2**, Existing Zoning Designations). These designations will be changed to the Laguna Ridge Specific Plan area upon certification of this EIR and approval of the project by the City Council.

### 4.12.3 PROJECT IMPACTS AND MITIGATION MEASURES

#### STANDARDS OF SIGNIFICANCE

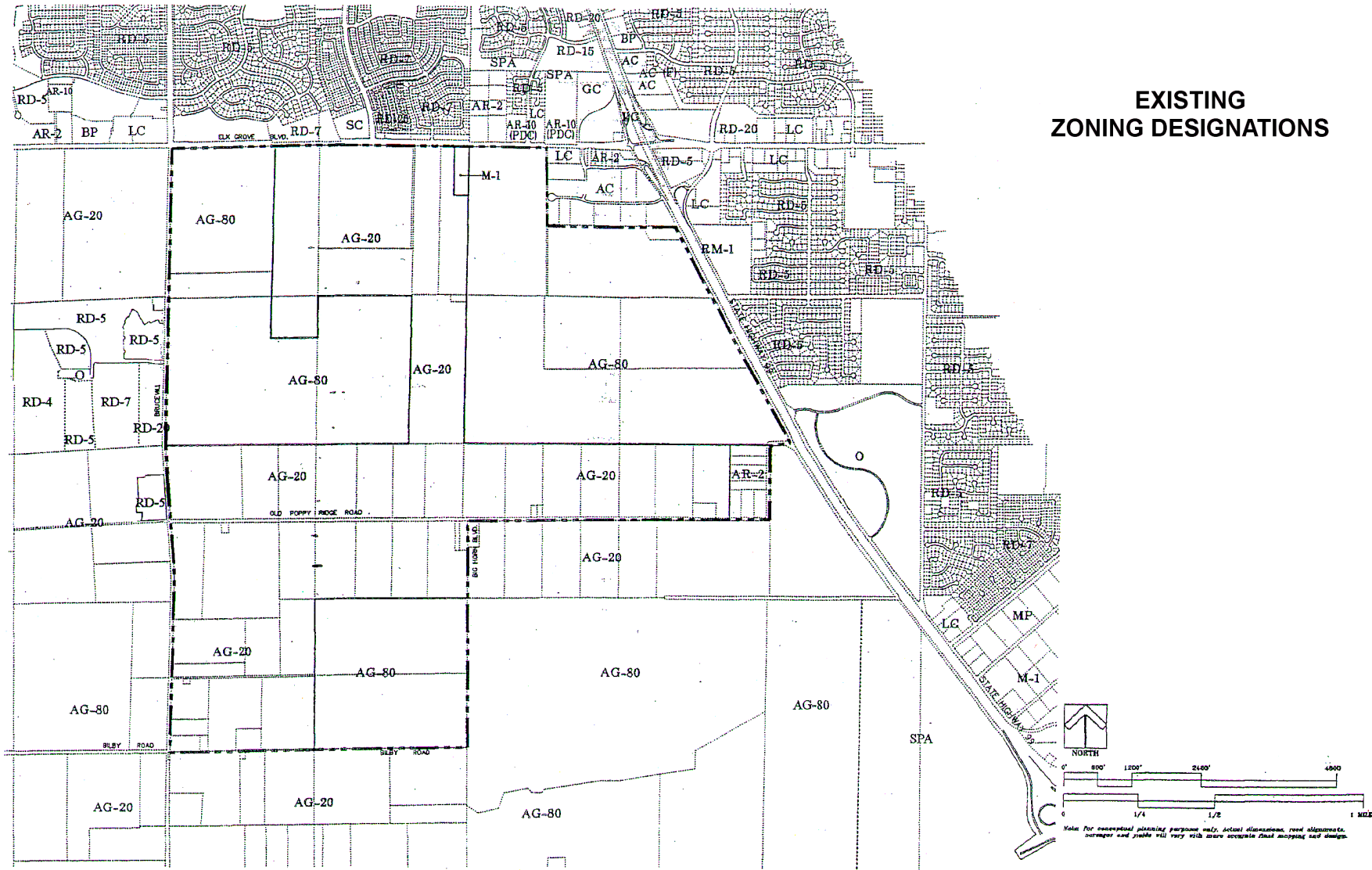
The standards of significance identified below pertain to land use and population and housing. Land use impacts typically result from conflicts with existing plans and policies, or incompatibilities with surrounding land uses. Population and housing impacts occur when expected population and housing projections are exceeded. Growth-inducing impacts associated with the project are addressed in Section 8.0 of this EIR.

A project could have a significant impact when it would:

- Result in land uses that are incompatible with existing and planned land uses on or surrounding the project site.
- Result in an inconsistency with the land use objectives and policies of the City of Elk Grove Draft General Plan, City of Elk Grove Zoning Code, or other City land use standards that provide protection of environmental resources.
- Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through the extension of roads or other infrastructure).



## EXISTING ZONING DESIGNATIONS



SOURCE: Wood - Rodgers, inc., 2001



City of Elk Grove Planning

Figure 4.12-2  
Existing Zoning Designations

The NOP circulated for this project indicated that the project would not physically divide an established community, conflict with any applicable habitat conservation plan or natural community conservation plan, or displace substantial numbers of housing or people. Therefore, these issues are not addressed in this EIR.

### METHODOLOGY

Evaluation of potential land use impacts of the proposed Laguna Ridge project was based on review of the City of Elk Grove Draft General Plan, the City of Elk Grove Zoning Code, and field review of the project and surrounding area.

### Summary of Land Use Compatibility Impacts Previously Discussed within the EIR

The key areas of impacts to surrounding land uses are briefly discussed below and are addressed in greater detail within Section 4.1, Agricultural Resources, Section 4.4, Noise, and Section 4.11, Visual Resources, of this EIR.

As discussed in Section 4.1, Agricultural Resources, potential land use conflicts associated with the project could result from the agricultural-commercial and agricultural-residential interface. The City's Draft General Plan anticipates the loss of agricultural productivity on lands designated for urban uses within the city limits as of January 2002, which is accepted as a consequence of the development of Elk Grove. However, agricultural properties in proximity to the plan area would be protected against nuisance complaints per the City's and/or County's "Right-to-Farm" Ordinance, provided that farming activities are properly conducted in accordance with applicable standards. As long as the farmer follows applicable laws and/or City policies, such as those established for pesticide applications, no formal complaint would be taken or enforced. The presence of such ordinances would not, however, be expected to eliminate entirely all of the conflicts addressed in this section. The Laguna Ridge Specific Plan would provide substantial building setbacks and landscaped corridors along all roadways located between proposed residential areas and current active agricultural operations. The most active operations occur east of the proposed extension of Big Horn Boulevard south of Poppy Ridge Road. The roadway width in this location is 72 feet including a 12-foot landscaped median. An additional 25 feet is provided for a landscaped easement, which extends to the property lot line and associated masonry wall. With the inclusion of rear yard setbacks, the separation between agricultural and urban uses would be more than 100 feet in width. As such, potential land use compatibility impacts were considered to be **less than significant**.

As indicated in Section 4.4, Noise, the proposed project would result in an increase in noise in the area caused by vehicle traffic and construction. Noise levels indicated in **Table 4.4-9** of the Draft EIR would result from implementation of individual developments within the plan area. Noise mitigation measures shall be included in the project design to achieve compliance with the City noise standards. Recommended design features for noise attenuation include open space setbacks (frontage roads, recreational areas, and storage yards) which can reduce noise; barriers (i.e., walls, berms, or structures) to achieve a noise reduction site design (i.e., building location) to reduce noise levels; building design (i.e., location of noise-sensitive uses within a building to reduce the impact of noises on inhabitants; Building façades (i.e., utilizing all features of the building façade including the closed windows) to reduce noise; vegetation (i.e., trees and other vegetation) which can achieve some level of traffic noise attenuation.; and, noise-reducing paving materials (i.e., rubberized asphalt) reduce traffic noise. However, traffic and construction noise would still be considered **significant and unavoidable**, and would result in associated land use compatibility issues.

## 4.12 LAND USE/POPULATION, EMPLOYMENT AND HOUSING

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The proposed project would result in the conversion of an agricultural area to urban uses and significant visual impacts would result. The project could also result in significant light and glare impacts, and would contribute to the overall cumulative change in the open visual character of the plan area. Project-specific and cumulative impacts to the change in views were considered to be **significant and unavoidable**.

### PROJECT IMPACTS AND MITIGATION MEASURES

#### Consistency with Draft General Plan and Zoning Code

The proposed Laguna Ridge Specific Plan document includes policies and general development guidelines for the plan area, which would guide development within the plan area. While these policies and general development guidelines would provide more specified standards than provided in the Draft General Plan and the City of Elk Grove Zoning Code, the Specific Plan is required to be consistent with the Draft General Plan.

#### Urban Services Boundary

The Plan area is within the Urban Services Boundary (USB) designated by Sacramento County. The County established the USB to indicate the ultimate boundary of urban development based upon natural and environmental constraints to urban growth. The USB is intended to be a permanent boundary not subject to modification except under extraordinary circumstances.

#### Draft General Plan

The Elk Grove General Plan establishes several "Land Use Policy Areas," which have been designated to reflect existing and pending major project approvals, or to reflect the need for more detailed land use planning at a future date. The Draft General Plan designates the plan area as the Laguna Ridge Policy Area. Development in the Laguna Ridge Policy Area is to be guided by the Laguna Ridge Specific Plan, which includes land use designations, development standards, design guidelines, infrastructure plans, financing plans for the its systematic implementation. These uses are also described in Section 3.0 (Project Description).

The project provides for a balance of neighborhood commercial uses, employment opportunities, a variety of housing opportunities, and pedestrian circulation. It further provides for a mix of land uses, such as neighborhood commercial, community commercial, civic uses and multifamily housing. The land uses proposed by the project are consistent with an urban level of development and would be compatible with the low and medium density residential, commercial and office, and limited commercial uses adjacent to the project to the north, and both planned and under development in the East Franklin Specific Plan area to the west. Discussion of the interfaces between the proposed land uses and agricultural land uses to the south of the project is located under Section 4.1 (Agricultural Resources).

#### Rezone

The zoning designations on the project site are Agricultural (AG-80 and AG-20), Agriculture-Residential (AR-2), Agricultural-Urban Reserve (AG-UR), and Light Industrial (M-1). The purposes of the Agricultural Zone include eliminating "the encroachment of land uses which are incompatible with the long-term agricultural use of land"; preserving "the maximum amount of the limited supply of agricultural land in order to conserve the County's economic resources..."; discouraging "the premature and unnecessary conversion of agricultural land to urban uses..."; assuring "the preservation of agricultural lands which have a definite value as open space and for the production of agricultural products..."; and encouraging "the retention of sufficiently

large agricultural lots to assure maintenance of viable agricultural units.” The Draft General Plan anticipates the loss of agricultural productivity on lands designated for urban uses within the city limits as of January 2002, which is accepted as a consequence of the development of Elk Grove, and therefore supports a rezone of the plan area.

The land uses described previously in Section 3.0, Project Description, would also serve as the zoning for the project. These zones would be similar to the surrounding zoning north, west, and east of the plan area. The rezone would be consistent with the changes in land use designations.

Overall, the project is consistent with the Draft General Plan policies and with City standards. The development of the project and its densities would require changes to existing designations for the property. The physical development of the project would be consistent with the project’s location within the Urban Services Boundary. The project’s impact is **less than significant** regarding consistency with the City’s Draft General Plan and Zoning Code.

### Population and Household Growth

#### Population

Based on an average household size of 3.07 persons, the 7,826 housing units generated by the proposed project would translate into a population increase of 24,025 persons. The resultant increase in population would represent approximately 14 percent of the City’s projected 2020 population of 166,300 and 25 percent of the growth anticipated to occur from 2000 to 2020, with that growth estimated at 93,215 persons.

The existing land use designations in the plan area would result in approximately 1,000 dwelling units, resulting in a population of approximately 2,930 persons. The proposed project increases this by more than 20,000 persons.

#### Housing

Impacts to the housing inventory would occur as a result of the increase in available housing stock which would provide market rate, senior, and affordable housing opportunities for residents who may be employed within the plan area or in the project vicinity. Projected housing growth within the City of Elk Grove from the year 2000 to 2020 is estimated to be approximately 35,538 housing units. Under the proposed project, the 7,826 housing units would represent 22 percent of the total housing units projected to be developed within the City through the year 2020.

While development under the project would provide for 7,826 housing units and accommodate approximately 24,025 persons, the growth would be consistent with projections for the City over the next two decades and would not exceed SACOG projections. Therefore, population and housing impacts are anticipated to be **less than significant**.

### 4.12.4 CUMULATIVE SETTING, IMPACTS AND MITIGATION MEASURES

The proposed Laguna Ridge Specific Plan, along with all known projects such as South Pointe, Lent Ranch Marketplace, and East Franklin would change the intensity of land uses in the City’s Planning Area. In particular, this cumulative development scenario would increase development in the southwestern portion of the City, and provide additional housing, employment, shopping, and recreational opportunities.

## 4.12 LAND USE/POPULATION, EMPLOYMENT AND HOUSING

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### CUMULATIVE SETTING

The cumulative setting for the southern portion of the City of Elk Grove includes the Laguna Ridge Specific Plan, together with the South Pointe subdivision, the Lent Ranch Marketplace development, the East Franklin Specific Plan and the Southeast Policy Area. The Elk Grove Draft General Plan designates the plan area and adjacent areas for development with office, commercial, residential, recreational, and civic uses, as well as mixed-use development. The land south of Kammerer Road, located in unincorporated Sacramento County, is designated for agricultural use in the Sacramento County General Plan and as an Urban Study Area in the Elk Grove Draft General Plan.

### CUMULATIVE IMPACTS AND MITIGATION MEASURES

The Laguna Ridge Specific Plan area is one component of the cumulative development scenario that would change the intensity of land uses in the southwestern portion of the City, which currently consists primarily of agricultural and rural residential uses. The City's Draft General Plan anticipates the loss of agricultural operations in this area, which is accepted as a consequence of the development of Elk Grove. The residential uses proposed in the plan area would be compatible with other similar uses in the East Franklin area and would support commercial, retail, and mixed land uses in both East Franklin and the Lent Ranch Marketplace SPA. Overall, the Laguna Ridge Specific Plan would implement an orderly pattern of development in an area that is planned future urban development. The project would not add significantly to the cumulative loss of such lands.

While it is recognized that the area will ultimately transition from predominantly agricultural to urbanized land use, agricultural operations may continue on the lands adjacent to the plan area. The project would provide substantial buffering between uses by combining building setbacks and landscaped corridors along all roadways located between proposed residential areas and active agricultural operations. The combined width of setbacks, corridors and roadways, together with the installation of street trees and other landscape features, would create sufficient separation buffering between urban and agricultural uses. As such, potential land use compatibility impacts would be **less than significant**.

The proposed project would result in an increase in noise in the area as a result of vehicle traffic and construction. Development of the site would include design features for noise attenuation. Such features include open space setbacks (i.e., frontage roads, recreational areas, and storage yards); physical barriers (i.e., walls, berms, or other structures); site design (i.e., building orientation and location); building design (i.e., location of noise-sensitive uses within a building to reduce the impact of noises on inhabitants; building façades (i.e., utilizing all features of the building façade including closed windows); vegetation (i.e., trees and other landscape materials); and, noise-reducing paving materials (i.e., rubberized asphalt). Even with the implementation of these measures, construction noise would still be considered **significant and unavoidable**.

The proposed project would result in the conversion of a predominantly agricultural area to urban land uses, and significant visual impacts would result. The project would generate significant levels of light and glare, and would contribute to the overall cumulative change in the open visual character of the plan area. The effects of light and glare could be minimized through the implementation of design features and installation of appropriate building materials, such as limiting the use of on-glare glass in all commercial and office buildings, orienting buildings so that the reflection of sunlight is minimized, and installing landscape materials to shade and screen buildings. Nighttime lighting and glare would be minimized by requiring

## 4.12 LAND USE/POPULATION, EMPLOYMENT AND HOUSING

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parking lot pole lights and streetlights to be fully hooded and back shielded, and ensuring that lighting not exceed the standard illumination of two-foot candles along the property lines of adjoining land uses. Even with the implementation of these measures, impacts resulting from the generation of light and glare from the plan area would still be considered **significant and unavoidable**.

### REFERENCES

City of Elk Grove, 2002. City of Elk Grove. *Conservation and Air Quality Element, City of Elk Grove Draft General Plan*. November 2002. Elk Grove, CA.

City of Elk Grove, 2002. City of Elk Grove. *Parks, Trails and Open Space Element, City of Elk Grove Draft General Plan*. November 2002. Elk Grove, CA.

City of Elk Grove, 2002. City of Elk Grove. *Housing Element, City of Elk Grove Draft General Plan*. November 2002. Elk Grove, CA.

City of Elk Grove, 2002. City of Elk Grove. *Land Use Element, City of Elk Grove Draft General Plan*. November 2002. Elk Grove, CA.

Sacramento Area Council of Governments. *Projections – City of Elk Grove and Sacramento County*. January 2003. Taken from SACOG website at: [www.sacog.org](http://www.sacog.org).

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## **5.0 CUMULATIVE IMPACTS SUMMARY**

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## 5.0 CUMULATIVE IMPACTS SUMMARY

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This section identifies the cumulative impacts associated with the proposed project. Cumulative impacts are the result of combining the potential effects of the project with other planned developments, as well as foreseeable development projects. The following discussion considers the cumulative impacts of the relevant environmental issue areas.

### 5.1 INTRODUCTION

The California Environmental Quality Act (CEQA) requires that an Environmental Impact Report (EIR) contain an assessment of the cumulative impacts that could be associated with the proposed project. According to CEQA Guidelines Section 15130(a), "an EIR shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable". "Cumulatively considerable" means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects (as defined by Section 15130). As defined in CEQA Guidelines Section 15355, a cumulative impact consists of an impact that is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts. A cumulative impact occurs from:

*... the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.*

In addition, Section 15130(b) identifies that the following three elements are necessary for an adequate cumulative analysis:

- 1) Either:
  - a) A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency; or,
  - b) A summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area wide conditions contributing to the cumulative impact. Any such planning document shall be referenced and made available to the public at a location specified by the lead agency.
- 2) A summary of the expected environmental effects to be produced by those projects with specific reference to additional information stating where that information is available; and
- 3) A reasonable analysis of the cumulative impacts of the relevant projects. An EIR shall examine reasonable, feasible options for mitigating or avoiding the project's contribution to any significant cumulative effects.

Where a lead agency is examining a project with an incremental effect that is not "cumulatively considerable," a lead agency need not consider that effect significant, but shall briefly describe its basis for concluding that the incremental effect is not cumulatively considerable.



## 5.0 CUMULATIVE IMPACTS SUMMARY

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This EIR utilizes both the "list" and the "general plan" approach in the cumulative analysis.

### 5.2 CUMULATIVE SETTING

#### CITY OF ELK GROVE GENERAL PLAN

On October 16, 2002, the City Council adopted Resolution No. 2002-185, which established the draft General Plan Land Use Policy Map and draft General Plan elements as the interim land use policy document for the City. The General Plan is anticipated to be formally adopted by the City in 2003. **Figures 5.0-1** and **5.0-2** illustrate the draft Consolidated General Plan Land Use Policy Map and the Elk Grove Planning Area Land Use Concept Map that is the City's long-term vision for land uses in the Planning Area.

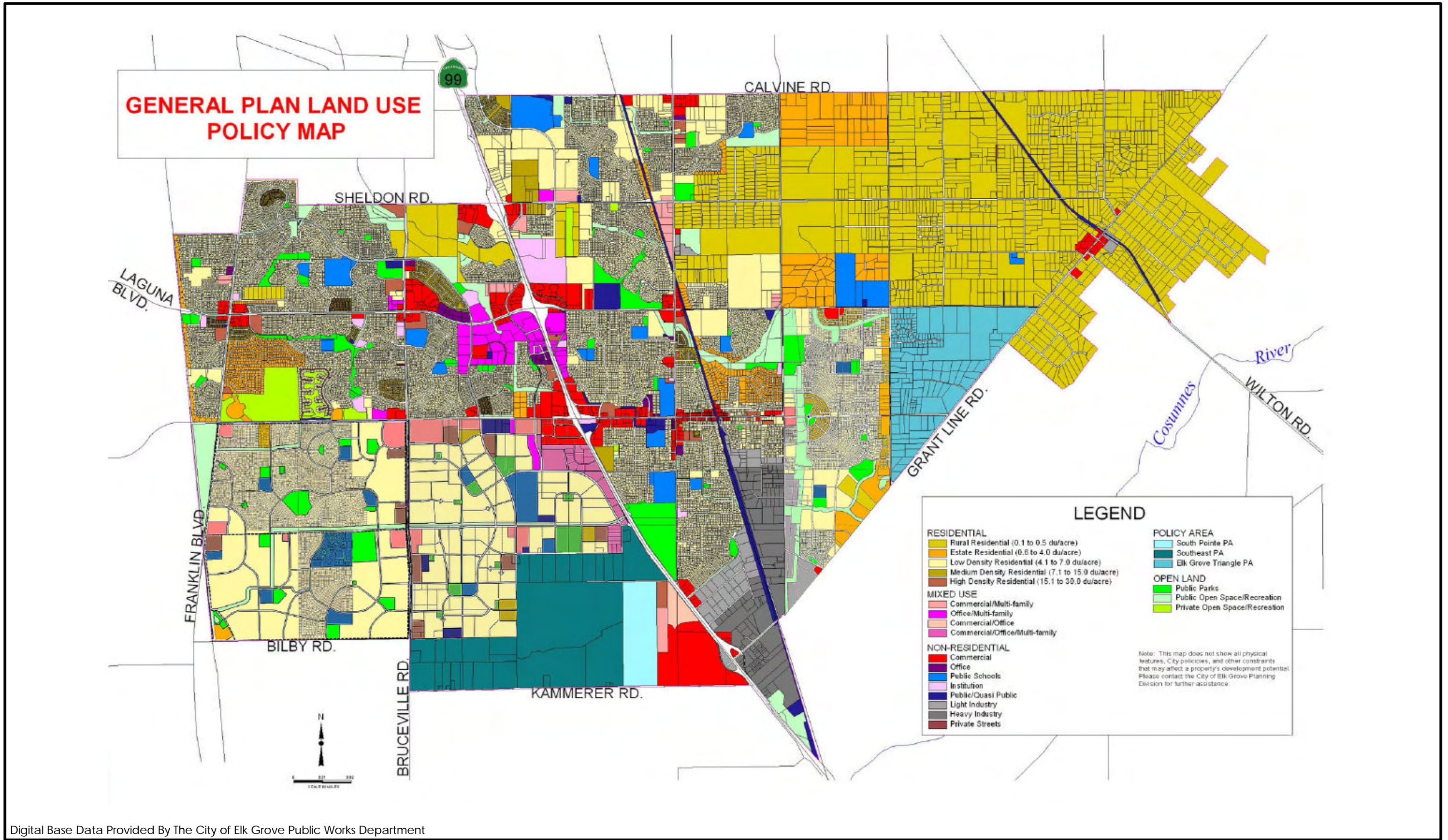
#### APPROVED AND PROPOSED PROJECTS

The Laguna Ridge Specific Plan area is located within a portion of the City currently experiencing urban growth and development. Approved projects in the area include the East Franklin Specific Plan (immediately west of the plan area) and the Lent Ranch Marketplace project (southeast of the plan area). Proposed projects in the area include the South Pointe project and the Grant Line Road/SR-99 Interchange Improvements project.

**Table 5.0-1** lists large-scale approved and pending development projects within the City of Elk Grove and areas adjacent to the City.

### 5.3 CUMULATIVE IMPACT ANALYSIS

Identified below is a compilation of the cumulative impacts that would result from the implementation of the project and future development in the vicinity. As described above, cumulative impacts are two or more effects that, when combined, are considerable or compound other environmental effects. Each cumulative impact is determined to have one of the following levels of significance: less than significant, significant, or significant and unavoidable. The reader is referred to Section 4.0 for a complete discussion of the project's impacts.



Digital Base Data Provided By The City of Elk Grove Public Works Department



Figure 5.0-1  
Draft General Plan  
Land Use Policy Map

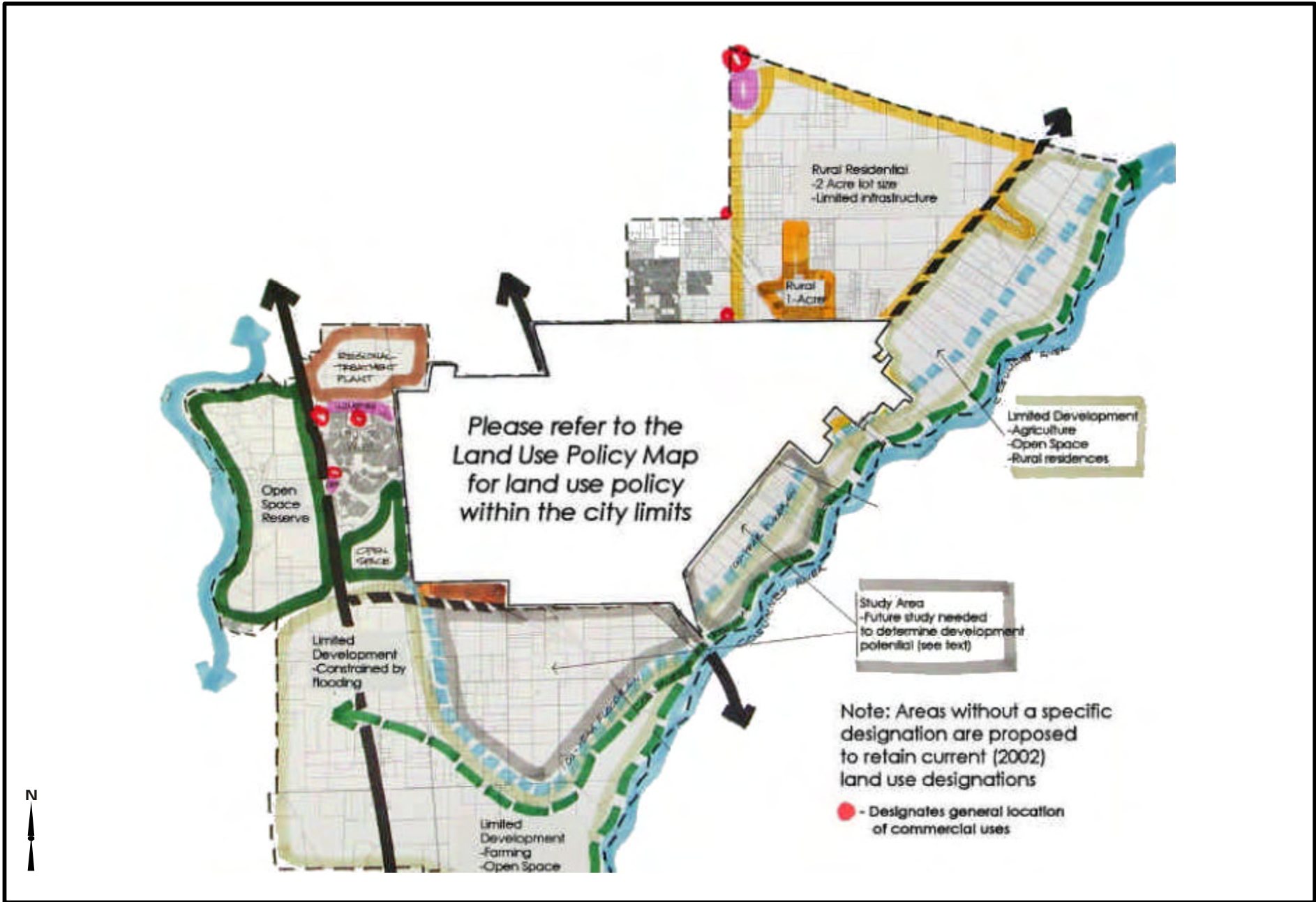


Figure 5.0-2  
Planning Area Land Use Concept

**TABLE 5.0-1  
PROPOSED AND APPROVED LARGE-SCALE RESIDENTIAL AND COMMERCIAL PROJECTS IN ELK GROVE**

Map Number	Name of Project	Use	Total Number of Dwelling Units	Total Commercial Square Footage	Total Acreage	Location	Status
<b>ELK GROVE PROJECTS:</b>							
1	Kapalua Estates	Single-family residential development with private streets and gated entries.	49 single-family units (1-acre lots)	N/A	55	<b>Elk Grove Triangle Policy Area:</b> East of Bradshaw Rd., south of Bond Rd.	Approved
2	Van Ruiten Acres	Single-family residential lots with private streets and gated entries.	83 single-family units (1-acre lots)	N/A	90.5	<b>Elk Grove Triangle Policy Area:</b> East of Bradshaw Rd., south of Bond Rd.	Approved
3	<b>East Elk Grove Policy Area: Approved Projects:</b> Tributary Pointe, Elk Grove Crossing Unit II, Elk Grove Crossing Unit III, East Park, Heritage, Windsor Downs, Waterman Ranch, Newton Ranch, Silver Creek, Windsor Glen, Waterman Plaza	A mix of single-family residential development, commercial uses, park sites, school sites, and open space.	<b>Total:</b> 4,300 single-family units (based on the average density in each land use category) <b>Proposed:</b> 114 single-family units	23.5 total acres: 54,000 square feet (approved)	1,439	<b>Policy Area:</b> Borders of Bradshaw Rd., Bond Rd., and Grant Line Rd.	See previous columns

## 5.0 CUMULATIVE IMPACTS SUMMARY

Map Number	Name of Project	Use	Total Number of Dwelling Units	Total Commercial Square Footage	Total Acreage	Location	Status
	<b>Proposed Projects:</b> Bond Ridge, Newton Ranch #2						
4	Park Meadows Apartments	Multi-family residential development.	144 multi-family units	N/A	7.7	<b>Elk Grove:</b> Northeast corner of Lewis Stein Rd. and W. Stockton Blvd.	Approved
5	Lent Ranch Marketplace SPA	Commercial/ Office/ Residential Development.	280 multi-family units	3.1 million square feet of commercial/ office uses	295	<b>Elk Grove:</b> W. Stockton Blvd./ Highway 99 as eastern borders; Kammerer Rd. as southern border	Approved
6	Sheldon Park	Single-family residential development.	177 single-family units	N/A	40	<b>Elk Grove:</b> NE corner of Highway 99 and Sheldon Rd.	Approved
7	<b>Calvine/99 SPA:</b> Proposed Projects: Arcadian Village #2, Arcadian Village #3, Arcadian Village #4, Sheldon Park	A mix of residential developments, commercial, office, schools, and park uses.	Total: 4,125 to 4,191 Proposed units: 842	1,046,000 square feet to 1,630,000 square feet	Total: 615 Proposed: Approx. 157	<b>Elk Grove:</b> Sheldon Rd./E. Stockton Blvd.	Approved
8	<b>East Franklin Policy Area:</b> <b>Approved projects:</b> Elk Grove Greens; Franklin	A mix of single-family residential development, multi-family residential development, commercial uses,	Total: 3,712 approved single-family units; 428 proposed single-family units	313,632	Total: 844.6 (approved); 102.5 (proposed)	<b>Policy Area:</b> Borders of Elk Grove Blvd., Franklin Blvd., Bilby Rd., and Bruceville Rd.	See previous columns

5.0 CUMULATIVE IMPACTS SUMMARY

Map Number	Name of Project	Use	Total Number of Dwelling Units	Total Commercial Square Footage	Total Acreage	Location	Status
	Meadows; Laguna Creek South; Elk Grove Meadows; Franklin 51; Quail Ridge; Laguna Estates; Backer Ranch; Schuler Ranch <b>Proposed Projects:</b> Elk Grove Meadows Phase III	park sites, and school sites.					
9	Elk Grove Auto Mall Expansion	Expansion of existing auto mall.	N/A	1,533,312	44	<b>Elk Grove:</b> South of Elk Grove Blvd. and the existing auto mall; west of Highway 99	Approved
10	Krispy Kreme	Doughnut shop; convenience store; gasoline canopy and 6 fueling dispensers.	N/A	10,747	2.5	<b>Elk Grove:</b> SW corner of Bond Rd. and E. Stockton Blvd.	Approved
11	Waterman & Elk Grove Center	Drive-thru pharmacy and retail building.	N/A	19,600	1.8	<b>Elk Grove Old Town SPA:</b> NW corner of Waterman and Elk Grove Blvd.	Approved
12	Laguna Creek Apartments	Multi-family residential development.	160	N/A	12	<b>Elk Grove:</b> SW corner of Bruceville and Center Parkway	Approved

## 5.0 CUMULATIVE IMPACTS SUMMARY

Map Number	Name of Project	Use	Total Number of Dwelling Units	Total Commercial Square Footage	Total Acreage	Location	Status
13	Laguna Gateway Phase II	Retail center including specialty shop space, full service restaurants, and a gas service station/fast food use.	N/A	150,537	15	<b>Laguna Gateway SPA:</b> NE corner of Laguna Blvd. and Big Horn Blvd.	Proposed
14	Webb Street	Single-family residential development with a private park and greenbelt.	84	N/A		<b>9720 Webb St.</b>	Proposed
15	Laguna Ridge Policy Area (Laguna Ridge Specific Plan – Proposed Project)	A mix of residential, commercial, and office uses, as well as schools, parks, and open space.	7,826	3,131,310.6	1,900.2	<b>Policy Area:</b> Borders of Elk Grove Blvd., Bruceville Rd., Kammerer Rd., W. Stockton Blvd.	Proposed
16	South Pointe Policy Area	A mix of residential, schools, parks, and open space uses.	27,875	N/A	210.6	<b>Policy Area:</b> Borders of Southeast Policy Area, Kammerer Rd., and Lent Ranch SPA	Proposed
17	Calvine Pointe	Commercial development.	N/A	241,046	22.36	SE corner of Calvine Rd. and Elk Grove-Florin Rd.	Proposed
18	Sheldon Lakes	A mix of single-family residential uses as well open space and trails.	257	N/A	155.1	SE corner of Sheldon Rd. and Waterman Rd.	Proposed

5.0 CUMULATIVE IMPACTS SUMMARY

Map Number	Name of Project	Use	Total Number of Dwelling Units	Total Commercial Square Footage	Total Acreage	Location	Status
<b>SACRAMENTO COUNTY PROJECTS</b>							
19	North Vineyard Station Specific Plan	A mix of residential developments of different densities, commercial and office uses, schools, and recreation/ open space uses.	5,732	30.5 gross acres (approximately 1,062,864 square feet)	1,594.5	<b>Sacramento County:</b> Boundaries of Florin Rd., Gerber Rd., Vineyard Rd., Elder Creek Rd.	Approved
20	Vineyard Springs Comprehensive Plan	Mix of residential developments of different densities with a large community park, schools, and neighborhood parks.	5,942	13 gross acres (approximately 453,024 square feet)	2,650	<b>Sacramento County:</b> Boundaries of Gerber Rd., Calvine Rd., Excelsior Rd., Bradshaw Rd.	Approved
21	Florin Vineyard "Gap" Community Plan	A mix of residential developments of different densities, commercial uses, and recreation/ trails.	5,639 to 5,981	Approximately 5,052,960 square feet	3,766	<b>Sacramento County:</b> Boundaries of Elder Creek Rd. /City of Sacramento, north of Vintage Park Drive and Churchill Downs subdivision, Bradshaw Rd., and UPRR/Elk Grove-Florin Rd.	Proposed



## 5.0 CUMULATIVE IMPACTS SUMMARY

Map Number	Name of Project	Use	Total Number of Dwelling Units	Total Commercial Square Footage	Total Acreage	Location	Status
22	Sunrise-Douglas Community Plan	A mix of low and medium density residential uses, commercial uses, and recreation/pedestrian uses.	21,728	479.6 acres of commercial/ office uses (approximately 16,713,100.8 square feet)	6,015.3 total; 2,632 acres are the Sunridge Specific Plan area	<b>Sacramento County:</b> Boundaries of Douglas Rd., Kiefer Blvd./ Jackson Highway, Grant Line Rd., Sunrise Blvd.	Proposed
<b>CITY OF SACRAMENTO PROJECTS</b>							
23	Airport Meadowview/ South Sacramento Community Plan Update - includes Sunnyside Meadows, Village Meadows, Delta Shores Village PUD, City Farms, Fruitridge Manor, Glen Elder, Elder Creek, Franklin Villa, Southgate, Valley Hi and Florin-Perkins industrial area	A mix of medium to high density residential developments, commercial uses, public/quasi public uses.	33,045	573 gross acres (approximately 19,967,904 square feet)	12,015 acres	<b>City of Sacramento:</b> Joining of the Airport Meadowview Community Plan and South Sacramento Community Plan areas, north of the Sacramento Regional Wastewater Treatment Plant	Update in process

## AGRICULTURAL RESOURCES

### SETTING

The proposed project is located in a primarily agricultural area in the southern portion of the City of Elk Grove. The City's Draft General Plan identifies the project area and surrounding areas as Urban Study Areas, envisioned as areas in which urbanization, to some extent, could occur. Portions of these areas are either currently used or were previously used for agricultural operations, which the Draft General Plan acknowledges will be phased out over time. Other projects in the area with the potential to urbanize and affect agricultural lands include the approved Lent Ranch Marketplace, the approved East Franklin Specific Plan, and the proposed South Pointe project. In addition to these local development projects, there are several urban development projects in Sacramento County and throughout the Central Valley that are contributing to the cumulative loss of agricultural resources.

### CUMULATIVE IMPACTS AND MITIGATION MEASURES

**Impact 4.1.3** The project would convert important farmland areas to urban uses. This loss would contribute to the cumulative loss of farmland in the region. The loss of such farmland from the Laguna Ridge Specific Plan project would contribute to a **cumulative significant** impact.

According to the Draft General Plan policies, conversion of the Southeast Policy Area as identified in the Draft General Plan Land Use Map would convert farmland to urban uses over the planning period covered by the new General Plan. This impact is identified as significant and unavoidable in the EIR prepared for the General Plan Update. The project would convert approximately 52.8 acres of Prime Farmland and 1,545.9 acres of Farmland of Statewide Importance to urban uses. To the extent that other projects in the County would affect Prime Farmland and Farmland of Statewide Importance, the loss of such farmland from the Laguna Ridge Specific Plan project would contribute to a cumulative significant impact.

#### Mitigation Measure

Mitigation measure options outlined in Impact 4.1.1 would not reduce the impact related to loss of agricultural lands nor would any of the options reduce the project impact as it relates to cumulative development. A permanent, irreplaceable loss of farmland would occur and the project's contribution to this impact is considered **significant and unavoidable**.

**Impact 4.1.4** Cumulative projects could result in impairment to agricultural productivity and land use compatibility impacts. This would result in a **cumulative significant** impact.

Development of the proposed Laguna Ridge Specific Plan, the approved East Franklin Specific Plan, and the approved Lent Ranch Marketplace, could occur during the same general time period. The potential exists for these projects either individually or cumulatively to result in significant cumulative impacts to the productivity of adjacent agricultural land and land use compatibility, as previously described under Impact 4.1.2

## 5.0 CUMULATIVE IMPACTS SUMMARY

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### Mitigation Measure

Implementation of mitigation measures MM 4.1.2 a and b would minimize potential conflicts, therefore, the conflict between agricultural land uses to the south of the project and the urban uses proposed under the project would be considered **less than significant**.

## TRANSPORTATION AND CIRCULATION

### SETTING

The purpose of the cumulative analysis is to determine if implementation of the proposed project, in addition to cumulative background growth, would adversely affect the planned transportation system.

Two acceptable approaches to the analysis of cumulative transportation impacts are available to the City. The first approach relies on the build-out assumptions of the Draft General Plan and includes consideration of the planned transportation improvements. This approach relies on the commitment of the City of Elk Grove to plan for, fund, and construct circulation improvements in a timely manner. No assurances are available at this time that all of the improvements are feasible or that financial resources would be available to assure their timely construction. The results of this approach to cumulative impact analysis are contained in **Tables 4.2-18 and 4.2-19**. This approach is consistent with the approach to the City of Elk Grove General Plan EIR and is most appropriate for broad level planning analysis.

The second approach is a more conservative approach which analyzes cumulative traffic conditions, but factors in only the Tier I improvements identified in the MTP for 2025. Tier I improvements are considered to be reasonable foreseeable and likely to be constructed in a timely manner. The City has chosen to analyze this project's cumulative impacts in this manner. While this approach may overstate impacts if Draft General Plan transportation improvements are completed, it is considered a prudent approach to achieving CEQA's objective of disclosure of potential impacts.

### Roadway Improvements

As outlined previously, cumulative (2025) roadway improvements are consistent with Tier 1 improvements identified in the MTP for 2025. Roadway improvements included in the City's Draft General Plan were not assumed in the 2025 roadway network used in this analysis (e.g., Bruceville Road is identified as a six-lane facility in the Draft General Plan, but only a four-lane facility in the MTP). Consequently, project impacts identified in this study may be over-stated if roadway improvements included in the Draft General Plan are built. Planned roadway improvements, shown on **Figure 4.2-12** include the following:

- Kammerer Road would be extended west from Bruceville Road to I-5 via Hood Franklin Road and would be four lanes. Kammerer Road would be widened to four lanes between SR 99 and Bruceville Road and realigned with Grant Line Road in the east. The roadway extension would include a new grade-separated crossing of the existing Union Pacific Railroad. The cumulative analysis assumed an improved Kammerer Road/Grant Line Road interchange at SR 99. The preliminary plan shows an L-9 type configuration with both loop on-ramps and diagonal on-ramps. West and East Stockton Boulevards would be realigned to provide sufficient spacing from the ramp terminal intersection.

## 5.0 CUMULATIVE IMPACTS SUMMARY

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- Franklin Boulevard would be built as four lanes south of Elk Grove Boulevard to the planned Kammerer Road extension and realigned east of the existing Union Pacific Railroad.
- Bruceville Road would be widened to four lanes from Elk Grove Boulevard to Kammerer Road.

The LSPFFP will likely provide funding for most of the improvements listed above. Other funding sources may include other developer fees and public sources. Public funds will be necessary for a fair share contribution to improvements that eliminate existing deficiencies. It is anticipated that an update to the LSPFFP would be necessary based on the results of this analysis.

### Other Improvements Planned As Part of the Project

- Provisions for transit facilities and services would be integrated as part of the Laguna Ridge Specific Plan and would include facilities such as bus stops, waiting shelters, and turnouts.
- The planned facilities in the vicinity of the plan area would include on-street bike lanes and pedestrian sidewalks as described below. A pedestrian and bicycle trail is planned along the parkway/drainage corridor that parallels New Poppy Ridge Road and a future bicycle/pedestrian freeway over-crossing is planned between the Plan area and Elk Grove Regional Park east of Highway 99.

### ROADWAY SYSTEM OPERATIONS

The following summarizes traffic operations under cumulative (2025) conditions with the addition of the Laguna Ridge Specific Plan. **Figure 4.2-13** displays the project study intersections. The cumulative traffic volume forecasts used in the traffic analysis are shown on the following figures.

**Figure 4.2-14** compares cumulative (2025) daily roadway segment traffic volumes with and without the Laguna Ridge Specific Plan. **Figure 4.2-15** presents cumulative (2025) a.m. and p.m. peak hour traffic volumes without the Laguna Ridge Specific Plan. **Figure 4.2-16** presents cumulative (2025) a.m. and p.m. peak hour traffic volumes with the Laguna Ridge Specific Plan.

Please note that on some locations the “with project” traffic volumes may be the same as or less than the “without project” traffic volumes. This may be counter-intuitive but is consistent with how the travel demand model functions. The model does not simply add project traffic to cumulative conditions; it reassigns project traffic based on the proximity and availability of attractions (i.e., employment and retail opportunities) within the region. In addition the “with project” scenario includes project roadways not included in the “without project” scenario.

## 5.0 CUMULATIVE IMPACTS SUMMARY

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### CUMULATIVE IMPACTS AND MITIGATION MEASURES

#### Arterial Roadway Segments

**Impact 4.2.3** The projected daily volume on the sections of Laguna Boulevard from Bruceville Road to SR 99, Laguna Boulevard from Franklin Road to Bruceville Road, Elk Grove Boulevard between Bruceville Road and Auto Center Drive, Elk Grove Boulevard from East Stockton Boulevard to Elk Grove-Florin Road, Bruceville Road from Elk Grove Boulevard to Laguna Boulevard, and Bruceville Road north of Laguna Boulevard, with the development of Laguna Ridge Specific Plan, would exceed the City's thresholds for roadway segment operations. This would result in a **significant** impact.

Cumulative plus project daily traffic volumes shown on **Figure 4.2-14** were compared to the capacity criteria for arterial roadway segments presented in **Tables 4.2-1** and **4.2-2**. **Table 4.2-18** displays arterial roadway service levels for cumulative conditions and cumulative plus project conditions.

Based on the information presented in **Table 4.2-18**, the addition of project traffic would create deficiencies on the following roadway segments:

- Laguna Boulevard from Bruceville Road to SR 99 would remain at LOS F and V/C would increase by 0.05.
- Elk Grove Boulevard from Bruceville Road to Auto Center Drive would deteriorate from LOS D to LOS F.
- Elk Grove Boulevard from East Stockton Boulevard to Elk Grove-Florin Road would remain at LOS F and V/C would increase by more than 0.05.
- Bruceville Road from Elk Grove Boulevard to Laguna Boulevard would remain at LOS F and V/C would increase by more than 0.05.
- Laguna Boulevard between Franklin Boulevard and Bruceville Road would decrease from LOS D to LOS E.
- Bruceville Road north of Laguna Boulevard would be reduced from LOS D to LOS E.

#### Mitigation Measures

##### *Laguna Boulevard – Bruceville Road to SR 99*

**MM 4.2.3a** The section of Laguna Boulevard between Bruceville Road and SR 99 shall be widened from three to four lanes in each direction.

If the additional right-of-way necessary for the improvement cannot be obtained, the project applicant shall pay their fair-share of the estimated cost of the improvement and cost of the right-of-way into the City's Traffic Impact Fund.

*Timing/Implementation: Prior to approval of subsequent development projects.*

*Enforcement/Monitoring:* City of Elk Grove Development Services.

This improvement would provide sufficient capacity to accommodate the projected daily volume and would provide LOS D operation, resulting in a less than significant impact. This improvement is not included in the Laguna South Public Facilities Fee Program and the City currently does not have thresholds or standards for eight-lane roadways. Sufficient right-of-way to construct this improvement the length of Laguna Boulevard from Bruceville Road to SR 99 may not be available as portions of this roadway are developed with existing businesses and uses. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, traffic movement, and water quality impacts. Therefore, this improvement may not be feasible. If additional right-of-way were not available then the LOS would remain at LOS F and the impact would be **significant and unavoidable**.

*Elk Grove Boulevard – Bruceville Road to Auto Center Drive*

**MM 4.2.3b** The section of Elk Grove Boulevard between Bruceville Road and Auto Center Drive shall be widened from three to four lanes in each direction.

If the additional right-of-way necessary for the improvement cannot be obtained, the project applicant shall pay their fair-share of the estimated cost of the improvement and cost of the right-of-way into the City's Traffic Impact Fund.

*Timing/Implementation:* Prior to approval of subsequent development projects.

*Enforcement/Monitoring:* City of Elk Grove Development Services.

This improvement would provide sufficient capacity to accommodate the projected daily volume and would provide LOS D operation, reducing the impact to less than significant. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, traffic movement, and water quality impacts, disturbance to special-status species that may inhabit or forage in the vicinity of the proposed improvement, and tree removal. This improvement is not included in the Laguna South Public Facilities Fee Program and the City currently does not have thresholds or standards for eight-lane roadways. This improvement may not be feasible if additional right-of-way is not available. If additional right-of-way were not available then the LOS would remain at LOS F and the impact would remain **significant and unavoidable**.

*Elk Grove Boulevard – East Stockton Boulevard to Elk Grove-Florin Road*

**MM 4.2.3c** Widen the section of Elk Grove Boulevard between East Stockton Boulevard and Elk Grove-Florin Road from two to three lanes in each direction.

If the additional right-of-way necessary for the improvement cannot be obtained, the project applicant shall pay their fair-share of the estimated cost of the improvement and cost of the right-of-way into the City's Traffic Impact Fund.

*Timing/Implementation:* Prior to approval of subsequent development projects.

*Enforcement/Monitoring:* City of Elk Grove Development Services.

This improvement would provide sufficient capacity to accommodate the projected daily volume and would provide LOS E operation which would reduce the impact to less than significant. However, this improvement is not included in the Laguna South Public Facilities Fee Program and would also require the acquisition of additional right-of-way. The segment of Elk

## 5.0 CUMULATIVE IMPACTS SUMMARY

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Grove Boulevard between East Stockton Boulevard and Elk Grove-Florin Road is developed with business, residential, and other uses and right-of-way for the improvement may not be available. This would render the improvement infeasible, with the LOS remaining at LOS F and the impact **significant and unavoidable**.

### *Bruceville Road – Elk Grove Boulevard to Laguna Boulevard*

**MM 4.2.3d** Bruceville Road between Elk Grove Boulevard and Laguna Boulevard shall be widened from two to three lanes in each direction.

Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the inclusion of this improvement in the LSPFFP and by the annexation of the Laguna Ridge Specific Plan into the LSPFFP. Project and/or public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations.

*Timing/Implementation:* Prior to approval of subsequent development projects.

*Enforcement/Monitoring:* City of Elk Grove Development Services.

This improvement is not included in the Laguna South Public Facilities Fee Program, however, it is anticipated in the Draft General Plan Circulation Diagram. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, traffic movement, and water quality impacts. This improvement would provide sufficient capacity to accommodate the projected daily volume and would provide LOS D operation which would reduce the impact to **less than significant**.

### *Laguna Boulevard – Franklin Boulevard to Bruceville Road*

**MM 4.2.3e** Laguna Boulevard between Franklin Boulevard and Bruceville Road shall be widened from three to four lanes in each direction.

If the additional right-of-way necessary for the improvement cannot be obtained, the project applicant shall pay their fair-share of the estimated cost of the improvement and cost of the right-of-way into the City's Traffic Impact Fund.

*Timing/Implementation:* Prior to approval of subsequent development projects.

*Enforcement/Monitoring:* City of Elk Grove Development Services.

This improvement would provide sufficient capacity to accommodate the projected daily volume and would provide LOS B operation resulting in a less than significant impact. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, traffic movement, and water quality impacts, disturbance to special-status species that may inhabit or forage in the vicinity of the proposed improvement, and tree removal. However, this improvement would require additional right-of-way and the City currently does not have thresholds or standards for eight-lane roadways. Acquisition of additional right-of-way may not be feasible due to existing residences and businesses along this segment of Laguna Boulevard. If additional right-of-way were not available then the LOS would remain at LOS E and the impact would be **significant and unavoidable**.

*Bruceville Road – North of Laguna Boulevard*

**MM 4.2.3f** Widen the section of Bruceville Road between Laguna Boulevard and Big Horn Boulevard from two to three lanes in each direction.

If the additional right-of-way necessary for the improvement cannot be obtained, the project applicant shall pay their fair-share of the estimated cost of the improvement and cost of the right-of-way into the City’s Traffic Impact Fund.

*Timing/Implementation:* Prior to approval of subsequent development projects.

*Enforcement/Monitoring:* City of Elk Grove Development Services.

This improvement would provide sufficient capacity to accommodate the projected daily volume and would provide LOS B operation, which would reduce the impact to less than significant. This improvement would eliminate the deficiency identified based on the City’s LOS D threshold. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, traffic movement, and water quality impacts. This improvement is not included in the Laguna South Public Facilities Fee Program, but is anticipated in the Draft General Plan Circulation Diagram. Existing residences and businesses along this roadway segment may make the acquisition of additional right-of-way infeasible. If additional right-of-way were not available then the LOS would remain at LOS E and the impact would be **significant and unavoidable**.

**Interior Roadway Segments**

**Impact 4.2.4** The projected traffic volume on the section of Laguna Springs Drive from Elk Grove Boulevard to Laguna Ridge Drive Southbound would exceed the City’s thresholds for traffic operations. This would result in a **significant** impact.

Cumulative traffic levels expected for roadway segments interior to the Plan area are summarized in **Table 4.2-19**. The cumulative plus project conditions represent the development of the Plan area as well as other projects in Elk Grove in 2025. Some roadway segments described in **Table 4.2-19** are partially interior to the Plan area, with the remaining segment outside of the Plan area. Intersection operations within the Plan area were not modeled.

Based on the information presented in **Table 4.2-19**, the addition of project traffic could create deficient operations at LOS E on the segment of Laguna Springs Drive from Elk Grove Boulevard to Laguna Ridge Drive in the p.m. peak hour under cumulative conditions.

Mitigation Measures

**MM 4.2.4a** Laguna Springs Drive shall be widened to an ultimate 6-lane width or other traffic improvements shall be provided to maintain acceptable operations (LOS D or better). This requirement shall be incorporated into the Specific Plan.

*Timing/Implementation:* As part of the final approval of the Specific Plan.

*Enforcement/Monitoring:* City of Elk Grove Development Services.

**MM 4.2.4b** All internal intersections shall be designed to meet City Level of Service standards (LOS D or better). This requirement shall be incorporated into the Specific Plan.

*Timing/Implementation:* As part of final Specific Plan approval.



## 5.0 CUMULATIVE IMPACTS SUMMARY

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*Enforcement/Monitoring: City of Elk Grove Development Services.*

Implementation of the above mitigation measure would result in traffic operations within the Plan area at acceptable LOS conditions, resulting in a **less than significant** impact.

### Study Intersections

**Impact 4.2.5** Implementation of the proposed project would degrade operations at the Laguna Boulevard/Franklin Boulevard, Elk Grove Boulevard/Big Horn Boulevard, Elk Grove Boulevard/West Laguna Springs Drive, Elk Grove Boulevard/Auto Center Drive, Elk Grove Boulevard/SR 99 Southbound Ramps, Elk Grove Boulevard/East Stockton Boulevard, Elk Grove Boulevard/Elk Grove-Florin Road, Elk Grove-Florin Road/East Stockton Boulevard, Hood-Franklin Road/I-5 Southbound Ramps, Hood-Franklin Road/I-5 Northbound Ramps, Grant Line Road/West Stockton Boulevard, Grant Line Road/Waterman Road, Laguna Boulevard/Big Horn Boulevard, Laguna Boulevard/West Laguna Springs Drive, Elk Grove Boulevard/Franklin Boulevard, Elk Grove Boulevard/Bruceville Road, and Grant Line Road/Bradshaw Road intersections to unacceptable LOS conditions, resulting in a **cumulative significant** impact.

Cumulative plus project peak hour traffic volumes shown on **Figure 4.2-16** were used to calculate peak hour levels of service at the study intersections. Intersection LOS at each location is presented in **Table 4.2-20**.

The addition of project traffic would create deficiencies at the following study intersections, as shown in **Table 4.2-20** based on the City's thresholds,

- Laguna Boulevard/Franklin Boulevard (LOS E to LOS F in p.m. peak hour)
- Elk Grove Boulevard/Big Horn Boulevard (LOS D to LOS F in both a.m. and p.m. peak hours)
- Elk Grove Boulevard/West Laguna Springs Drive (LOS A to LOS F in a.m. peak hour and LOS C to LOS F in p.m. peak hour)
- Elk Grove Boulevard/Auto Center Drive (LOS F in a.m. and p.m. peak hour)
- Elk Grove Boulevard/SR 99 Southbound Ramps (would remain at LOS F and average delay would increase by more than 5 seconds in both a.m. and p.m. peak hours)
- Elk Grove Boulevard/East Stockton Boulevard (would increase average delay by more than 5 seconds and remain at LOS F in a.m. peak hour)
- Elk Grove Boulevard/Elk Grove-Florin Road (would increase average delay by more than 5 seconds and remain at LOS F in p.m. peak hour)
- Elk Grove Boulevard/Franklin Boulevard (would increase average delay by more than 5 seconds and remain at LOS E in a.m. peak hour)

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- Elk Grove Boulevard/Bruceville Road (would increase average delay by more than 5 seconds and remain at LOS F in p.m. peak hour)
- Elk Grove-Florin Road/East Stockton Boulevard (LOS D to LOS F in p.m. peak hour)
- Hood-Franklin Road/I-5 Southbound Ramps (would increase average delay by more than 5 seconds and remain at LOS F in p.m. peak hour)
- Hood-Franklin Road/I-5 Northbound Ramps (would increase average delay by more than 5 seconds and remain at LOS F in p.m. peak hour)
- Grant Line Road/West Stockton Boulevard (would increase average delay by more than 5 seconds and remain at LOS F in p.m. peak hour)
- Grant Line Road/Waterman Road (LOS D to LOS F in a.m. peak hour and LOS B to LOS F in p.m. peak hour)
- Laguna Boulevard/West Laguna Springs Drive (LOS C to LOS E in p.m. peak hour)
- Grant Line Road/Bradshaw Road (LOS B to LOS E in a.m. peak hour)

### Mitigation Measures

#### *Laguna Boulevard/Franklin Boulevard*

**MM 4.2.5a** Right-turn overlap phasing for the southbound right-turn movement at the Laguna Boulevard/Franklin Boulevard intersection.

Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program to include this improvement and by the annexation of the Laguna Ridge Specific Plan into the LSPFFP. Project and/or public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations.

*Timing/Implementation:* Prior to approval of subsequent development projects.

*Enforcement/Monitoring:* City of Elk Grove Development Services.

This improvement is not included in the Laguna South Public Facilities Fee Program. This improvement would require modification of the existing signal equipment and signal phasing. Environmental impacts associated with construction of this improvement include temporary air quality impacts associated with adjusting the signal operation to include overlap phasing. Implementation of this improvement would provide LOS D operation in both the a.m. and p.m. peak hours, resulting in a **less than significant** impact.

#### *Elk Grove Boulevard/Big Horn Boulevard*

**MM 4.2.5b** The following lane configurations shall be provided at the Elk Grove Boulevard/Big Horn Boulevard intersection.

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- One right-turn lane, two through lanes, and two left-turn lanes on the northbound approach.
- One right-turn lane, two through lanes, and two left-turn lanes on the southbound approach.
- One right-turn lane, three through lanes, and two left-turn lanes on the eastbound approach.
- One right-turn lane, three through lanes, and two left-turn lanes on the westbound approach.
- Right-turn overlap phasing on all approaches to the intersection, which would require modification of the existing signal equipment and signal phasing.

Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP. Project public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations and consistent with the Specific Plan's Infrastructure Phasing Provisions.

*Timing/Implementation:*      *Prior to approval of subsequent development projects.*  
*Enforcement/Monitoring:*      *City of Elk Grove Development Services.*

This improvement is included in the Laguna South Public Facilities Fee Program. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, traffic movement, and water quality impacts. The addition of the exclusive right-turn lane and overlap phasing would provide LOS E operation in both the a.m. and p.m. peak hours. No feasible mitigation exists to improve traffic operations to LOS D or better. While implementation of this mitigation measure would improve intersection operations, operations would remain at a deficient LOS resulting in a **significant and unavoidable** impact.

### *Elk Grove Boulevard/West Laguna Springs Drive*

**MM 4.2.5c** The following lane configurations shall be provided at the Elk Grove Boulevard/West Laguna Springs Drive intersection.

- One right-turn lane, two through lanes, and one left-turn lane on the southbound approach.
- Two right-turn lanes, two through lanes and one left-turn lane on the northbound approach.
- One right-turn lane, three through lanes, and two left-turn lanes on the westbound approach.
- One right-turn lane, three through lanes, and one left-turn lane on the eastbound approach.

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- Protected left-turn phasing for the north and southbound left-turn movements.
- Provide right-turn overlap phasing on the northbound and southbound approaches, which would require modification of the existing signal equipment and signal phasing.

Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP. Project public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations and consistent with the Specific Plan's Infrastructure Phasing Provisions.

*Timing/Implementation:* Prior to approval of subsequent development projects.

*Enforcement/Monitoring:* City of Elk Grove Development Services.

This improvement is included in the Laguna South Public Facilities Fee Program. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, and water quality impacts. The addition of the lane configurations identified above and the overlap phasing would provide LOS E operation in both the a.m. peak hour and LOS F operation in the p.m. peak hour. Consequently, this measure would not eliminate the deficiency identified based on the City's threshold in the p.m. peak hour and the impact would remain **significant and unavoidable**.

### *Elk Grove Boulevard/Auto Center Drive*

**MM 4.2.5d** The following lane configurations shall be provided at the Elk Grove Boulevard/Auto Center Drive intersection.

- Two right-turn lanes, one through lane, and one left-turn lane on the northbound approach.
- Provide protected left-turn phasing on the northbound and southbound approaches.
- Provide right-turn overlap phasing on the northbound approach. Right-turn overlap phasing would require modification of the existing signal equipment and signal phasing.

Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP. Project and/or public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations.

*Timing/Implementation:* Prior to approval of subsequent development projects.

*Enforcement/Monitoring:* City of Elk Grove Development Services.

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This improvement is included in the Laguna South Public Facilities Fee. The addition of the lane configurations and signal phasing identified above would provide LOS E and LOS F operation in the a.m. and p.m. peak hours, respectively. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, and water quality impacts. This improvement would reduce the proposed project's contribution to intersection operations to a less than significant impact during the a.m. peak hour, but even though operations would be improved during the p.m. peak hour the City's standard would be exceeded. This facility is anticipated to fail even without implementation of the project. However, this measure would not eliminate the deficiency identified based on the City's LOS D threshold in the p.m. peak hour and the impact would be **significant and unavoidable**.

### *Elk Grove Boulevard/SR 99 Southbound Ramps*

**MM 4.2.5e** The following lane configurations shall be provided at the Elk Grove Boulevard/SR 99 Southbound Ramps intersection.

- One right-turn lane and three through lanes on the eastbound approach.
- Three through lanes on the westbound approach.
- Construct a loop on-ramp in the northwest quadrant of the interchange to replace the westbound left-turn movement.

This improvement will require coordination and approval of Caltrans. Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP.

*Timing/Implementation:* Prior to approval of subsequent development projects.

*Enforcement/Monitoring:* City of Elk Grove Development Services.

Elimination of the westbound left-turn movement would reduce the on signal phases from three to two, which would reduce delay and improve LOS. The addition of the lane configurations identified above and the southbound loop on-ramp would provide LOS C and LOS E operation in the a.m. and p.m. peak hours, respectively. The addition of the southbound loop on-ramp would require additional right-of-way. Therefore, this improvement may not be feasible. If additional right-of-way were not available then the LOS would remain at LOS F. Some of the cost associated with this improvement (i.e., turn lanes) is included in the Laguna South Public Facilities Fee Program. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, and water quality impacts. While implementation of this mitigation measure would improve traffic operations, no feasible mitigation exists to improve traffic operations to LOS D or better. Therefore, the impact would be **significant and unavoidable**.

### *Elk Grove Boulevard/East Stockton Boulevard*

**MM 4.2.5f** The following lane configurations shall be provided at the Elk Grove Boulevard/East Stockton Boulevard intersection.

## 5.0 CUMULATIVE IMPACTS SUMMARY

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- One right-turn lane, one through lane, and one left-turn lanes on the southbound approach.
- A shared through/right-turn lane and two left-turn lanes on the northbound approach.
- Provide protected left-turn phasing on the northbound and southbound approaches.

Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP. Project and/or public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations.

*Timing/Implementation:*      *Prior to approval of subsequent development projects.*  
*Enforcement/Monitoring:*      *City of Elk Grove Development Services.*

The implementation of these improvements would provide LOS E and LOS C operation in the a.m. and p.m. peak hours, respectively. This measure would eliminate the deficiency identified based on the City's LOS threshold. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, and water quality impacts. This improvement is not included in the Laguna South Public Facilities Fee Program. No feasible mitigation exists to improve traffic operations to LOS D or better; however, the project's contribution to deficient operations would be mitigated. Therefore, the impact would be **less than significant**.

### *Elk Grove Boulevard/Bruceville Road*

**MM 4.2.5g**      The following lane configuration shall be provided at the Elk Grove Boulevard/Bruceville Road intersection.

- One right-turn lane on the westbound approach.

Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP. Project and/or public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations.

*Timing/Implementation:*      *Prior to approval of subsequent development projects.*  
*Enforcement/Monitoring:*      *City of Elk Grove Development Services*

## 5.0 CUMULATIVE IMPACTS SUMMARY

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This improvement is not included in the Laguna South Public Facilities Fee Program. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, and water quality impacts. Additional improvements to the intersection are limited due to right-of-way constraints. The implementation of these improvements would reduce the delay in the a.m. peak hour to less than 5 seconds compared to “no project” conditions. However, the LOS in the p.m. peak hour would continue to operate at LOS F. Despite the improvement to traffic operations in the a.m. peak hour, the impact would remain **significant and unavoidable** due to the project’s contribution to deficient operations at the intersection in the p.m. peak hour.

### *Elk Grove Boulevard/Elk Grove-Florin Road*

**MM 4.2.5h** The following lane configurations shall be provided at the Elk Grove Boulevard/Elk Grove-Florin Road intersection.

- A shared through/right-turn lane, one through lane, and one left-turn lane on the northbound approach.
- In addition, provide protected left-turn phasing on the northbound and southbound approaches.

Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program to include this improvement and by the annexation of the Laguna Ridge Specific Plan into the LSPFFP. Project and/or public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations.

*Timing/Implementation:* Prior to approval of subsequent development projects.  
*Enforcement/Monitoring:* City of Elk Grove Development Services.

This improvement is not included in the Laguna South Public Facilities Fee Program. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, and water quality impacts. Additional improvements to the intersection are limited due to right-of-way constraints. The implementation of these improvements would reduce the delay in the a.m. peak hour to less than 5 seconds compared to “no project” conditions. However, the LOS in the p.m. peak hour would continue to operate at LOS F. Despite the improvement to traffic operations in the a.m. peak hour, the impact would remain **significant and unavoidable** due to the project’s contribution to deficient operations at the intersection in the p.m. peak hour.

### *Elk Grove-Florin Road/East Stockton Boulevard*

**MM 4.2.5i** A traffic signal shall be installed and the following lane configurations shall be provided at the Elk Grove-Florin Road/East Stockton Boulevard intersection.

- One through lane and one left-turn lane on the southbound approach.
- One right-turn lane and two left-turn lanes on the westbound approach.

- One right-turn lane and one through lane on the northbound approach.
- This improvement would require 3-phase signal operation.

Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP and to include this improvement. Project and/or public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations.

*Timing/Implementation:* Prior to approval of subsequent development projects.  
*Enforcement/Monitoring:* City of Elk Grove Development Services.

This improvement is not included in the Laguna South Public Facilities Fee Program. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, and water quality impacts. Implementation of these improvements would provide LOS B and LOS E operation in the a.m. and p.m. peak hours, respectively. No feasible mitigation exists to improve the project's contribution to deficient operations to an acceptable level, therefore, the impact would be **significant and unavoidable**.

*Hood-Franklin Road/I-5 Northbound Ramps*

**MM 4.2.5j** Install a traffic signal and coordinate it with the Hood-Franklin Road/I-5 Northbound Ramps intersection.

This improvement will require coordination and approval from Caltrans and Sacramento County. Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program to include this improvement and by the annexation of the Laguna Ridge Specific Plan into the LSPFFP.

*Timing/Implementation:* Prior to approval of subsequent development projects.  
*Enforcement/Monitoring:* City of Elk Grove Development Services, Sacramento Count, and Caltrans

This improvement is not included in the Laguna South Public Facilities Fee Program. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, and water quality impacts. Implementation of these improvements would provide LOS A and LOS C operation during the a.m. and p.m. peak hours, respectively, and would reduce the impact to less than significant. However, this improvement is outside of the City's jurisdiction and, ultimately, timing and approval of this improvement would be the responsibility of Caltrans. Therefore, this impact would be **significant and unavoidable**.

*Hood-Franklin Road/I-5 Southbound Ramps*

**MM 4.2.5k** Install a traffic signal and coordinate it with the Hood-Franklin Road/I-5 Southbound Ramps intersection.



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This improvement will require coordination and approval from Caltrans and Sacramento County. Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program to include this improvement and by the annexation of the Laguna Ridge Specific Plan into the LSPFFP.

*Timing/Implementation:* Prior to approval of subsequent development projects.  
*Enforcement/Monitoring:* City of Elk Grove Development Services, Sacramento County, and Caltrans

This improvement is not included in the Laguna South Public Facilities Fee Program. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, and water quality impacts. Implementation of these improvements would provide LOS B and LOS C operation during the a.m. and p.m. peak hours, respectively. Implementation of this mitigation measure would reduce the impact to less than significant. However, this improvement is outside of the City's jurisdiction and, ultimately, timing and approval of this improvement would be the responsibility of Caltrans. Therefore, this impact would be **significant and unavoidable**.

### *Grant Line Road/West Stockton Boulevard*

This deficiency is due to limited capacity at the SR 99/Grant Line Road interchange. Implementation of mitigation measure MM 4.2.2h requires participation in the Laguna South Public Facilities Fee Program, including reconstruction of the SR 99/Grant Line Road interchange. Implementation of this measure would reduce the proposed project's impact to **less than significant**.

### *Grant Line Road/Waterman Road*

**MM 4.2.5I** Right-turn overlap phasing shall be provided for the southbound right-turn movement at the intersection of Grant Line Road and Waterman Road.

Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP. Project and/or public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations.

*Timing/Implementation:* Prior to approval of subsequent development projects.  
*Enforcement/Monitoring:* City of Elk Grove Development Services.

This improvement would require modification of the signal equipment and signal phasing. Environmental effects associated with this type of improvement are anticipated to be limited to air quality impacts. Implementation of this improvement would provide LOS D and LOS B operation in the a.m. and p.m. peak hours, respectively. Installation of a traffic signal was assumed constructed as part of the Grant Line Road widening identified MTP for 2025. With implementation of this mitigation measure, the impact would be reduced to **less than significant**.

*Laguna Boulevard/West Laguna Springs Drive*

**MM 4.2.5m** Right-turn overlap phasing shall be provided for the northbound right-turn movement at the intersection of Laguna Boulevard with West Laguna Springs Drive.

Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program to include this improvement and by the annexation of the Laguna Ridge Specific Plan into the LSPFFP. Project and/or public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations.

*Timing/Implementation:* Prior to approval of subsequent development projects.  
*Enforcement/Monitoring:* City of Elk Grove Development Services.

This improvement is not included in the Laguna South Public Facilities Fee Program. This improvement would require modification of the existing signal equipment and signal phasing. Environmental effects associated with this type of improvement are anticipated to be temporary air quality impacts. Implementation of this improvement would provide LOS C operation in both the a.m. and p.m. peak hours, reducing the impact to **less than significant**.

*Elk Grove Boulevard/Franklin Boulevard*

**MM 4.2.5n** Right-turn overlap phasing shall be provided for the southbound right-turn movement at the intersection of Elk Grove and Franklin Boulevards.

Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP. Project and/or public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations.

*Timing/Implementation:* Prior to approval of subsequent development projects.  
*Enforcement/Monitoring:* City of Elk Grove Development Services.

This improvement is included in the Laguna South Public Facilities Fee Program. This improvement would require modification of the existing signal equipment and signal phasing. Environmental effects associated with this type of improvement are anticipated to be temporary air quality impacts. Implementation of this improvement would provide LOS D operation in both the a.m. and p.m. peak hours. This measure would eliminate the deficiency identified, reducing the impact to **less than significant**.

*Grant Line Road/Bradshaw Road*

**MM 4.2.5o** Right-turn overlap phasing shall be provided for the southbound right-turn movement at the Grant Line Road/Bradshaw Road intersection.

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Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program to include this improvement and by the annexation of the Laguna Ridge Specific Plan into the LSPFFP. Project and/or public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations.

*Timing/Implementation:* Prior to approval of subsequent development projects.

*Enforcement/Monitoring:* City of Elk Grove Development Services.

This improvement is not included in the Laguna South Public Facilities Fee Program and would not require additional right-of-way. Installation of a traffic signal was assumed constructed as part of the Grant Line Road widening identified MTP for 2025. This improvement would require modification of the signal equipment and signal phasing. Implementation of this improvement would provide LOS C in the a.m. peak hour and would result in a **less than significant** impact.

### Freeway Mainline Segments

**Impact 4.2.6** Under cumulative plus project conditions, the section of SR-99 north of the Laguna Boulevard interchange would operate at LOS F during the a.m. peak hour (northbound) and LOS F during the p.m. peak hour (southbound) and the section of I-5 north of the Elk Grove Boulevard interchange would operate at LOS E during the a.m. peak hour (northbound). This would be a **cumulative significant** impact.

**Table 4.2-23** presents the LOS on the freeway mainline sections under cumulative plus project conditions.

The following freeway segments would operate unacceptably, based on Caltrans' Concept LOS thresholds, with the addition of the proposed project under cumulative conditions.

- I-5 Northbound – north of Hood-Franklin Road (LOS E to LOS F in a.m. peak hour)
- I-5 Southbound – north of Hood-Franklin Road (LOS F increased by more than 0.05 in p.m. peak hour)
- I-5 Northbound – north of Laguna Boulevard (LOS F increased by more than 0.05 V/C in a.m. peak hour)
- I-5 Southbound – north of Laguna Boulevard (LOS F increased by more than 0.05 V/C in p.m. peak hour )
- I-5 Northbound – south of Hood-Franklin Road (LOS D to LOS E in p.m. peak hour)
- I-5 Southbound – south of Hood-Franklin Road (LOS D to LOS E in p.m. peak hour)
- I-5 Northbound – north of Elk Grove Boulevard (LOS D to LOS E in a.m. peak hour)
- I-5 Southbound – north of Elk Grove Boulevard (LOS D to LOS E in p.m. peak hour)

As shown in **Table 4.2-23**, the 1994 HCM method identifies the northbound and southbound segments of SR-99 north of the Laguna Boulevard interchange and the segment of I-5 north of the Elk Grove Boulevard interchange to be deficient, with or without the project.

Mitigation Measures

*I-5 Northbound – north of Hood-Franklin Road*

**MM 4.2.6a** The project shall contribute to the following improvement to I-5:

- Construction of one lane northbound between Hood-Franklin Road and Elk Grove Boulevard.

This improvement will require coordination and approval from Caltrans. Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP as well as through the project's financing program and/or plan.

*Timing/Implementation: Prior to approval of subsequent development projects.*

*Enforcement/Monitoring: City of Elk Grove Development Services and Caltrans*

Improvements to the I-5 mainline are included in the LSPFFP for local contribution to these improvements. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, traffic flow, and water quality impacts. However, I-5 is a state highway facility and this improvement is not currently programmed in the Metropolitan Transportation Plan (MTP). Further, I-5 is under the jurisdiction of Caltrans and it is outside the City's jurisdiction to implement this improvement. Consequently, while this is a viable mitigation measure, the timing of this improvement is not known and will depend on when Caltrans (acting as the lead agency) submits the projects for inclusion into the MTP. As such, this impact is considered to be **significant and unavoidable** until the timing of this improvement is determined.

*I-5 Southbound – north of Hood-Franklin Road*

**MM 4.2.6b** The project shall contribute to the following improvement to I-5:

- Construction of one lane southbound between Hood-Franklin Road and Elk Grove Boulevard.

This improvement will require coordination and approval from Caltrans. Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP as well as through the project's financing program and/or plan.

*Timing/Implementation: Prior to approval of subsequent development projects.*

*Enforcement/Monitoring: City of Elk Grove Development Services and Caltrans.*

## 5.0 CUMULATIVE IMPACTS SUMMARY

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Implementation of this improvement would provide LOS C operation in the p.m. peak hour on the identified segment of I-5. This measure would eliminate the deficiency identified and, with construction of the improvement, the impact would be less than significant. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, traffic flow, and water quality impacts. Improvements to the I-5 mainline are included in the LSPFFP for local contribution to these improvements. However, I-5 is a state highway facility and this improvement is not currently programmed in the Metropolitan Transportation Plan (MTP). Consequently, while this is a viable mitigation measure, the timing of this improvement is not known and will depend on when Caltrans (acting as the lead agency) submits the projects for inclusion into the MTP. Since I-5 is under the jurisdiction of Caltrans, it is outside the City's jurisdiction to implement this improvement. As such, this impact is considered to be **significant and unavoidable** until the timing of this improvement is determined.

### *I-5 Northbound – north of Laguna Boulevard*

**MM 4.2.6c** The project shall contribute to the following improvement to I-5:

- Construction of one lane northbound between Laguna Boulevard and Pocket Road.

This improvement will require coordination and approval from Caltrans. Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP as well as through the project's financing program and/or plan.

*Timing/Implementation:* Prior to approval of subsequent development projects.

*Enforcement/Monitoring:* City of Elk Grove Development Services and Caltrans.

Implementation of this improvement would provide LOS D operation in the a.m. peak hour on the identified segment of I-5. This measure would eliminate the deficiency identified and, with construction of the improvement, the impact would be less than significant. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, traffic flow, and water quality impacts. Improvements to the I-5 mainline are included in the LSPFFP for local contribution to these improvements. However, I-5 is a state highway facility and this improvement is not currently programmed in the Metropolitan Transportation Plan (MTP). Consequently, while this is a viable mitigation measure, the timing of this improvement is not known and will depend on when Caltrans (acting as the lead agency) submits the projects for inclusion into the MTP. Further, I-5 is under the jurisdiction of Caltrans and it is outside the City's jurisdiction to implement this improvement. As such, this impact is considered to be **significant and unavoidable** until the timing of this improvement is determined.

### *I-5 Southbound – north of Laguna Boulevard*

**MM 4.2.6d** The project shall contribute to the following improvement to I-5:

- Construction of one lane southbound between Laguna Boulevard and Pocket Road.

## 5.0 CUMULATIVE IMPACTS SUMMARY

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This improvement will require coordination and approval from Caltrans. Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP as well as through the project's financing program and/or plan.

*Timing/Implementation:* Prior to approval of subsequent development projects.

*Enforcement/Monitoring:* City of Elk Grove Development Services and Caltrans.

Implementation of this improvement would provide LOS C operation in the p.m. peak hour on the identified segment of I-5. This measure would eliminate the deficiency identified and, with construction of the improvement, the impact would be less than significant. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, traffic flow, and water quality impacts. Improvements to the I-5 mainline are included in the LSPFFP for local contribution to these improvements. However, I-5 is a state highway facility and this improvement is not currently programmed in the Metropolitan Transportation Plan (MTP). Consequently, while this is a viable mitigation measure, the timing of this improvement is not known and will depend on when Caltrans (acting as the lead agency) submits the projects for inclusion into the MTP. Further, I-5 is under the jurisdiction of Caltrans and it is outside the City's jurisdiction to implement this improvement. As such, this impact is considered to be **significant and unavoidable** until the timing of this improvement is determined.

### *I-5 Northbound – south of Hood-Franklin Road*

**MM 4.2.6e** The project shall contribute to the following improvement to I-5:

- Construction one lane northbound (approximately 0.25 miles) south of Hood-Franklin Road.

This improvement will require coordination and approval from Caltrans. Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP as well as through the project's financing program and/or plan.

*Timing/Implementation:* Prior to approval of subsequent development projects.

*Enforcement/Monitoring:* City of Elk Grove Development Services and Caltrans.

Implementation of this improvement would provide LOS C operation in the p.m. peak hour on the identified segment of I-5. This measure would eliminate the deficiency identified and, with construction of the improvement, the impact would be less than significant. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, traffic flow, and water quality impacts. Improvements to the I-5 mainline are included in the LSPFFP for local contribution to these improvements. However, I-5 is a state highway facility and this improvement is not currently programmed in the Metropolitan Transportation Plan (MTP). Consequently, while this is a viable mitigation measure, the timing of this improvement is not known and will depend on when Caltrans (acting as the lead agency) submits the projects for inclusion into the MTP. Further, I-5 is under the jurisdiction of Caltrans and it is outside the City's

## 5.0 CUMULATIVE IMPACTS SUMMARY

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jurisdiction to implement this improvement. As such, this impact is considered to be **significant and unavoidable** until the timing of this improvement is determined.

### *I-5 Southbound – south of Hood-Franklin Road*

**MM 4.2.6f** The project shall contribute to the following improvement to I-5:

- Construction one lane southbound (approximately 0.25 miles) south of Hood-Franklin Road.

This improvement will require coordination and approval from Caltrans. Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP as well as through the project's financing program and/or plan.

*Timing/Implementation:* Prior to approval of subsequent development projects.

*Enforcement/Monitoring:* City of Elk Grove Development Services and Caltrans.

Implementation of this improvement would provide LOS C operation in the p.m. peak hour on the identified segment of I-5. This measure would eliminate the deficiency identified and, with construction of the improvement, the impact would be less than significant. Improvements to the I-5 mainline are included in the LSPFFP for local contribution to these improvements. However, I-5 is a state highway facility and this improvement is not currently programmed in the Metropolitan Transportation Plan (MTP). Consequently, while this is a viable mitigation measure, the timing of this improvement is not known and will depend on when Caltrans (acting as the lead agency) submits the projects for inclusion into the MTP. As such, this impact is considered to be **significant and unavoidable** until the timing of this improvement is determined.

### *I-5 Northbound – north of Elk Grove Boulevard*

**MM 4.2.6g** The project shall contribute to the following improvement to I-5:

- Construction of one lane northbound between Elk Grove Boulevard and Laguna Boulevard.

This improvement will require coordination and approval from Caltrans. Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP as well as through the project's financing program and/or plan.

*Timing/Implementation:* Prior to approval of subsequent development projects.

*Enforcement/Monitoring:* City of Elk Grove Development Services and Caltrans.

Implementation of this improvement would provide LOS C operation in the a.m. peak hour on the identified segment of I-5. This measure would eliminate the deficiency identified and, with

construction of the improvement, the impact would be less than significant. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, traffic, and water quality impacts. Improvements to the I-5 mainline are included in the LSPFFP for local contribution to these improvements. However, I-5 is a state highway facility and this improvement is not currently programmed in the Metropolitan Transportation Plan (MTP). Consequently, while this is a viable mitigation measure, the timing of this improvement is not known and will depend on when Caltrans (acting as the lead agency) submits the projects for inclusion into the MTP. As I-5 is under the jurisdiction of Caltrans, it is outside the control of the City to implement this improvement. As such, this impact is considered to be **significant and unavoidable** until the timing of this improvement is determined.

*I-5 Southbound – north of Elk Grove Boulevard*

**MM 4.2.6h** The project shall contribute to the following improvement to I-5:

- Construction of one lane southbound between Elk Grove Boulevard and Laguna Boulevard.

This improvement will require coordination and approval from Caltrans. Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP as well as through the project's financing program and/or plan.

*Timing/Implementation:* Prior to approval of subsequent development projects.

*Enforcement/Monitoring:* City of Elk Grove Development Services and Caltrans

Implementation of this improvement would provide LOS C operation in the p.m. peak hour on the identified segment of I-5. This measure would eliminate the deficiency identified and, with construction of the improvement, the impact would be less than significant. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, traffic, and water quality impacts. Improvements to the I-5 mainline are included in the LSPFFP for local contribution to these improvements. However, I-5 is a state highway facility and this improvement is not currently programmed in the Metropolitan Transportation Plan (MTP). Consequently, while this is a viable mitigation measure, the timing of this improvement is not known and will depend on when Caltrans (acting as the lead agency) submits the projects for inclusion into the MTP. Further, I-5 is under the jurisdiction of Caltrans and it is outside the responsibility of the City to implement this improvement. As such, this impact is considered to be **significant and unavoidable** until the timing of this improvement is determined.

**Freeway Ramps**

**Impact 4.2.7** Implementation of the proposed project would cause operations on the SR-99 northbound on-ramp junction from Laguna Boulevard to deteriorate from LOS D to F during the a.m. peak hour; on the SR-99 southbound off-ramp junction to Laguna Boulevard to deteriorate from LOS D to F during the p.m. peak hour; on the SR-99 southbound loop on-ramp junction from Grant Line Road to operate at LOS F during the p.m. peak hour; on the I-5 northbound off-ramp to Hood Franklin Road to operate at LOS E during the a.m. peak hour; on the I-5 northbound on-



## 5.0 CUMULATIVE IMPACTS SUMMARY

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ramp from Hood Franklin Road to operate at LOS E during the a.m. peak hour; the I-5 southbound off-ramp to Hood Franklin Road to operate at LOS E during the p.m. peak hour; the I-5 northbound off-ramp to Elk Grove Boulevard to operate at LOS E during the a.m. peak hour and the I-5 northbound on-ramp from Elk Grove Boulevard to operate at LOS F during the a.m. peak hour indicating a **cumulative significant** impact.

Traffic volumes for the freeway ramps within the study area were obtained from the cumulative plus project intersection volumes shown on **Figure 4.2-16**. **Table 4.2-24** presents the LOS at the freeway ramp junctions under cumulative plus project conditions.

As shown in **Table 4.2-24**, the following ramp junctions on I-5 would operate at unacceptable levels of service based on Caltrans' Concept LOS thresholds.

- Hood Franklin Road/I-5 Southbound Off-Ramp (LOS D to LOS E in a.m. peak hour)
- Hood Franklin Road/I-5 Southbound Loop On-Ramp (LOS C to LOS E in a.m. peak hour)

### Mitigation Measures

#### *Hood-Franklin Road/I-5 Southbound Off-Ramp*

**MM 4.2.7a** The project shall contribute to the following improvement to I-5:

- Construction of one lane southbound between Hood-Franklin Road and Elk Grove Boulevard.

This improvement will require coordination and approval from Caltrans. Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP as well as through the project's financing program and/or plan.

*Timing/Implementation:*      *Prior to approval of subsequent development projects.*

*Enforcement/Monitoring:*      *City of Elk Grove Development Services and Caltrans.*

Implementation of this improvement would provide LOS C operation in the p.m. peak hour on the identified segment of I-5. This measure would eliminate the deficiency identified and, with construction of the improvement, the impact would be less than significant. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, traffic, and water quality impacts. Improvements to the I-5 mainline are included in the LSPFFP for local contribution to these improvements. However, I-5 is a state highway facility and this improvement is not currently programmed in the Metropolitan Transportation Plan (MTP). Consequently, while this is a viable mitigation measure, the timing of this improvement is not known and will depend on when Caltrans (acting as the lead agency) submits the projects for inclusion into the MTP. Since I-5 is under the jurisdiction of Caltrans, it is outside the control of the City to implement this improvement. As such, this impact is considered to be **significant and unavoidable** until the timing of this improvement is determined.

*Hood-Franklin Road/I-5 Southbound Loop On-Ramp*

**MM 4.2.7b** The project shall contribute to the following improvement to I-5:

- Construction of one lane southbound from the southbound off-ramp at Hood-Franklin Road approximately 0.25 miles south of Hood-Franklin Road.

This improvement will require coordination and approval from Caltrans. Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP as well as through the project's financing program and/or plan.

*Timing/Implementation:* Prior to approval of subsequent development projects.  
*Enforcement/Monitoring:* City of Elk Grove Development Services and Caltrans.

Implementation of this improvement would provide LOS C operation in the p.m. peak hour on the identified segment of I-5. This measure would eliminate the deficiency identified and, with construction of the improvement, the impact would be less than significant. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, traffic, and water quality impacts. Improvements to the I-5 mainline are included in the LSPFFP for local contribution to these improvements. However, I-5 is a state highway facility and this improvement is not currently programmed in the Metropolitan Transportation Plan (MTP). Consequently, while this is a viable mitigation measure, the timing of this improvement is not known and will depend on when Caltrans (acting as the lead agency) submits the projects for inclusion into the MTP. This facility is under the jurisdiction of Caltrans and it is outside the City's control to implement this improvement. As such, this impact is considered to be **significant and unavoidable** until the timing of this improvement is determined.

**Transit System Operations**

**Impact 4.2.8** The proposed project would contribute to a cumulative demand for transit services and facilities. This is a **cumulative significant** impact.

## 5.0 CUMULATIVE IMPACTS SUMMARY

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Transit system operations under cumulative plus project conditions were evaluated by considering the potential effects of the project on existing or planned transit services in the vicinity of the plan area. Regional Transit (RT) maintains a 20-year master plan of transit facilities for the Sacramento region. This plan and the City's General Plan show that feeder bus service will be provided on: 1) Elk Grove Boulevard between SR-99 and the UPRR, and 2) Bruceville Road between Poppy Ridge Road and Laguna Boulevard.

Besides providing local bus service, the planned feeder service is intended to support future "trunk" transit service along the Union Pacific Railroad line from downtown Sacramento to Bilby Road. This service is ultimately planned to be provided by light rail, but an interim facility may be developed within this right-of-way prior to a rail system. This extension is subject to the outcome of the City/RT Alignment Study. An Amtrak transit line is being planned to Grant Line Road on the existing Union Pacific rail line near Waterman Road. This future transit line is not planned for light rail at this time. **Figure 4.2-5** illustrates the existing and planned transit services within the study area.

All major arterial and collector streets in the vicinity of the plan area are expected to be designed to accommodate transit facilities such as turnouts, bus stops, and shelters. Thus, implementation of the proposed project would not disrupt existing or planned transit operations in the area. However, right-of-way for light rail facilities anticipated under the cumulative condition has not been provided. The project's cumulative impact to transit services is considered potentially significant.

### Mitigation Measures

**MM 4.2.8** Prior to the approval of tentative subdivision and parcel maps associated with land areas along Big Horn Blvd and Bruceville Road, right-of-way for future light rail stations and lines at locations along either Big Horn Boulevard and Bruceville Road shall be dedicated based on consultation with the City of Elk Grove and Sacramento Regional Transit.

*Timing/Implementation:* Prior to approval of tentative subdivision and parcel maps.

*Enforcement/Monitoring:* City of Elk Grove Development Services and Sacramento Regional Transit.

Implementation of the above mitigation measure would make this impact **less than significant**.

### **Bicycle and Pedestrian System Operations**

The planned bicycle facilities identified in the *Final Environmental Impact Report for the 2010 Sacramento City/County Bikeway Master Plan* (July 1993) are shown on **Figure 4.2-11**. The project would provide right-of-way for a future bicycle/pedestrian freeway over-crossing between the Plan area and Elk Grove Regional Park east of Highway 99. All major arterial and collector streets in the vicinity of the plan area would be designed to accommodate the planned bikeways and pedestrian sidewalks. Thus, implementation of the proposed project would not disrupt or interfere with existing or planned bikeways and pedestrian operations in the area, and therefore deficiencies under cumulative plus project conditions were not identified. The project's cumulative impact to bicycle and pedestrian operations is considered **less than significant**.

### AIR QUALITY

#### SETTING

According to page 43 of the SMAQMD's *Air Quality Thresholds of Significance* guidance document, development projects are considered cumulatively significant if:

- The project requires a change in the existing land use designation of the site (i.e., a general plan amendment or zoning change); and
- The projected emissions (ROG, NO<sub>x</sub>, or PM<sub>10</sub>) of the proposed project are greater than the emissions anticipated for the site if developed under the existing land use designation.

#### CUMULATIVE IMPACTS AND MITIGATION MEASURES

##### Cumulative Emissions - Construction

**Impact 4.3.8** Development of project in combination with cumulative projects would result in emissions that exceed SMAQMD thresholds. This would result in a **cumulative significant** impact.

Construction activities associated with the Grant Line Road interchange project, the development of the South Pointe project, the East Franklin Specific Plan, the Lent Ranch project, the Laguna Ridge Conceptual Study, the Laguna Ridge Specific Plan and other development areas within the City (City of Elk Grove Draft General Plan) and the region could potentially occur simultaneously. Therefore, the potential for combined construction air quality impacts would occur if the activities were occurring simultaneously. While all these projects would implement recommended air quality controls to reduce fugitive dust and engine emissions, the combined effect would be cumulatively significant. Short-term fugitive dust emissions during site preparation and construction (PM<sub>10</sub> and NO<sub>x</sub>) would remain both individually and cumulatively **significant and unavoidable**.

##### Mitigation Measures

Project-specific mitigation measures MM 4.3.1a through MM 4.3.1g would apply to cumulative air quality construction impacts, but would not reduce impacts to less than significant. Impacts would remain **significant and unavoidable** even with the implementation of these mitigation measures.

##### Cumulative Emissions – Operational

**Impact 4.3.9** Proposed project would exceed SMAQMD thresholds for cumulative impacts. This would result in a **cumulative significant** impact.

Implementation of the proposed project would have a significant adverse incremental effect on the region's ability to attain State and Federal air quality standards, and could be considered cumulatively significant.

##### Mitigation Measures

## 5.0 CUMULATIVE IMPACTS SUMMARY

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Mitigation measure MM 4.3.2a would not be sufficient to reduce cumulative operational air quality impacts to a less-than-significant level. Operational emissions would also remain above the SMAQMD's recommended thresholds for ROG and NO<sub>x</sub> and be both individually and cumulatively **significant and unavoidable**.

### NOISE

#### SETTING, CUMULATIVE IMPACTS AND MITIGATION MEASURES

##### Traffic Noise

**Impact 4.4.5** Implementation of the Laguna Ridge Specific Plan in combination with approved and planned urban development in the region would increase traffic volumes within and adjacent to the plan area, which would increase transportation-related noise levels in excess of the City of Elk Grove noise standards. This would result in a **cumulative significant** impact.

Existing residences located along major roadways in the vicinity of the plan area would be exposed to elevated traffic noise levels under buildout conditions either with or without the project. **Table 4.4-11** indicates that the existing traffic noise level increases resulting from the development of the proposed plan area would range from 0.0 to 9.1 dB L<sub>dn</sub>, relative to no-project conditions under existing conditions. However, the noise analysis does not take into account traffic noise impacts associated with railroad overcrossing at Laguna Boulevard and Elk Grove Boulevard where the line-of-sight between the traffic noise source and residential areas is elevated. This noise assessment was based on a worst-case scenario that assumed the buildout of the Laguna Ridge Specific Plan area would occur immediately. In actuality, the projected increase in noise levels would occur gradually over 20 years. For these reasons a cumulative analysis is a more realistic assessment, as compared to an existing plus project noise impact analysis, in determining the noise impacts associated with buildout of the Laguna Ridge Specific Plan area.

**Table 4.4-12** below shows the predicted cumulative no-project and cumulative-plus project traffic noise levels on the local roadway network. This analysis takes into account cumulative development conditions based on proposed, approved and planned development in the area. **Table 4.4-12** indicates that the project-related increase in cumulative noise environment would range from 0.0 to 1.2 dB L<sub>dn</sub>. The firm of Bollard & Brennan, Inc. provided the City of Elk Grove with general noise attenuation numbers resulting from sound walls and the first rows of homes within a subdivision. Typically, a 6-foot sound wall attenuates noise levels by 6 dBA and an 8-foot sound wall attenuates noise by 8 dBA. The concept is that 5 dBA are lost once a line of sight is broken by a sound wall. In general, for each additional foot of wall height, an additional 1 dBA is lost. The exception to this rule is along freeways or major highways where the presence of sound walls is inconsistent. The relative change in noise levels along freeways and highways due to increased traffic volumes would be the same with or without a sound wall because the overall noise levels would increase for the entire area. Within a subdivision, the first row of homes adjacent to a noise source attenuates noise by approximately 5 dBA for each subsequent row of homes (Bollard & Brennan, 2002).

**Table 4.4-13** provides an analysis of the cumulative noise levels in the vicinity of the plan area, taking into account the noise attenuation that occurs as a result of sound walls. The noise

attenuation from sound walls typically ranges from 6 to 8 dBA depending on the height and construction of the wall.

As shown in **Table 4.4-12** and **4.4-13**, area roadways are anticipated to generate substantial noise levels under cumulative conditions, with noise levels ranging from 59.9 dBA Ldn to 78.2 dBA Ldn. However, the existence of walls along several of these roadway segments attenuate the traffic noise levels. The addition of project traffic would not result in any off-site land uses exceeding the Noise Element land use compatibility criteria (acceptable, conditionally acceptable) from cumulative no-project conditions as shown in **Table 4.4-9**. In addition, the project would not result in a significant cumulative increase in noise level exposure standards set forth in Table 4.4-8 over cumulative no-project conditions. However, the project would expose proposed on-site residential and other noise-sensitive land uses to noise levels in excess of City noise standards along the future extension of Big Horn Road between Elk Grove Boulevard and Poppy Ridge Road, the plan area's frontage with Elk Grove Boulevard and along Poppy Ridge Road.

The north side of Elk Grove Boulevard between Franklin Boulevard and Bruceville Road is not planned for walls. Residential areas along this roadway segment are expected to be exposed to noise levels at 70 dBA Ldn and may be worsened by noise reflected from planned walls along the south side of Elk Grove Boulevard associated with the East Franklin Specific Plan. However, the proposed project's contribution to the noise condition is estimated to be 0.6 dBA, which is not considered a significant cumulative impact.

### Mitigation Measure

**MM 4.4.5** Prior to development of any noise-sensitive uses (as defined by the City of Elk Grove Noise Element) along Elk Grove Boulevard, Big Horn Road and Poppy Ridge Road, the project applicant shall identify specific noise mitigation measures for areas that would be located within the 60 dB Ldn traffic noise contours shown in **Table 4.4-12** in the Draft EIR that would attenuate noise levels in with City noise standards for traffic noise as shown in **Table 4.4-9** of the Draft EIR. Potential design features for noise attenuation are listed below.

- a. Setbacks (i.e., open space, frontage roads, recreational areas, and storage yards) typically reduce noise attenuation by 4 to 6 dB per doubling of distance from the source.
- b. Barriers (i.e., walls, berms, or structures) to achieve a noise reduction ranging from 5 to 15 dB. Earth berms provide approximately 3 dB more attenuation than a wall.
- c. Site design (i.e., building location) to reduce noise levels.
- d. Building design (i.e., location of noise-sensitive uses within a building) to reduce the impact of noises on inhabitants.
- e. Building façades (i.e., utilizing all features of the building façade including the closed windows) to reduce noise.
- f. Vegetation (i.e., trees and other vegetation) 100 feet of dense foliage can achieve a 5 dB attenuation of traffic noise.
- g. Noise-reducing paving materials (i.e., rubberized asphalt) reduce traffic noise by approximately 4 dB.

## 5.0 CUMULATIVE IMPACTS SUMMARY

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<i>Timing/Implementation:</i>	<i>Prior to approval of tentative subdivision maps and development projects along Elk Grove Boulevard, Big Horn Road and Poppy Ridge Road.</i>
<i>Enforcement/Monitoring:</i>	<i>City of Elk Grove Development Services</i>

Implementation of the above mitigation measure would reduce this cumulative impact to **less than significant**.

### Cumulative Construction Activities

**Impact 4.4.6** Development within the Laguna Ridge Specific Plan area concurrent with development in other adjacent or nearby development areas could result in a cumulative increase in ambient noise levels due to combined construction activities. This would result in a **cumulative significant** impact.

Construction activities associated with the proposed project, in conjunction with other development in the area, including East Franklin Specific Plan, Lent Ranch, and the proposed South Pointe development, could all or partially occur during the same period. Therefore, the potential for combined construction noise or vibration impacts exists if activities occur simultaneously. While all these projects would implement standard construction techniques to reduce noise and would to the extent feasible adhere to City noise ordinances pertaining to the period when construction activities would occur, the combined noise effect would be cumulatively significant.

#### Mitigation Measure

Mitigation measures 4.4.1a through e would apply to cumulative construction noise impacts, but the impact would be considered **significant and unavoidable**.

## HAZARDS AND HAZARDOUS MATERIALS

### SETTING, CUMULATIVE IMPACTS, AND MITIGATION MEASURES

The hazards impacts associated with a proposed project usually occur on a project-by-project basis, rather than in a cumulative nature. Because the project contains mitigation measures to abate the site-specific hazards, any potential cumulative impacts associated with the project would be expected to be decreased as the harmful substances would be removed from the vicinity and replaced with currently approved building materials. The cumulative impacts associated with the proposed project are considered to be **less than significant**.

#### Mitigation Measures

None required.

### PUBLIC SERVICES AND UTILITIES

#### WATER SUPPLY

##### SETTING

Mitigating cumulative impacts of providing water to the project site and nearby developments is the premise behind the preparation of the *Water Forum Agreement*, January 2000. (This document is incorporated into the EIR by reference). The cumulative impacts of development in the growth areas within the Urban Services Boundary have been taken into consideration during the preparation of *Water Forum Agreement*. The *Water Forum Agreement* indicates that cumulative development in the southern Sacramento County area served by Zone 40 would generate a projected water demand of 117,600 AFY in the Central Area, which includes the proposed project. Additionally, the South Area, which includes the City of Galt, has a projected water demand of approximately 115,000 AFY, through 2030. These figures include water demand generated at buildout of the East Franklin Specific Plan, Lent Ranch Marketplace, and the South Pointe planning area, which would receive allocations of water from Laguna Ridge facilities. The City of Elk Grove Draft General Plan also includes the consideration of urban study areas outside of the Sacramento County's Urban Services Boundary that could result in an additional water demand of approximately 16,000 afy.

##### CUMULATIVE IMPACTS AND MITIGATION MEASURES

**Impact 4.6.1.2** The project, when considered with other development projects in the area, would result in a cumulative demand for water supply and could impact flows along the Cosumnes River. This is considered a **cumulative significant** impact.

The proposed project would receive its water from Zone 40. As reported in the *Water Forum Agreement*, to accommodate future demand of 117,600 AFY, Zone 40 would rely on a surface water supply consisting of 45,000 AFY of firm entitlement and 33,000 AFY of intermittent surface supplies (the intermittent supply is subject to reduction in the drier and driest years). The balance of the total demand would be met through the conjunctive use of groundwater supplies. The *Water Forum Agreement* reports a sustainable yield for the groundwater basin of 273,000 AFY, of which approximately 155,000 would support agricultural uses and 117,600 AFY would support South County municipal and industrial use. Of the 117,600 AFY, an average of approximately 41,000 AFY would be available for use in Zone 40 over the long-term. Currently, 250,000 AFY of the 273,000 AFY sustainable yield is being drawn. Conjunctive use is the planned management and use groundwater, surface water, and recycled water in order to improve the overall reliability of a region's total water supply. For example, in wet years when surface water is plentiful, groundwater pumping may be reduced or eliminated and only surface water is used. The groundwater basin would be replenished in these wet years. In dry years when surface water is in short supply, the water that has been accumulating in the basin would be pumped for use and surface water diversions reduced or eliminated.

The *Water Forum Agreement* reports that the amount of groundwater used would vary from approximately 95,100 AFY in the driest years decreasing to approximately 34,000 AFY in the wet years. In either scenario, the average amount of groundwater used over the long term would be less than the sustainable yield of 273,000 AFY. The project would increase the cumulative demand for water supplies. Under buildout conditions, the project's ultimate water demand



## 5.0 CUMULATIVE IMPACTS SUMMARY

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would be approximately 7,063 AFY; however, 2,700 AFY would be used for irrigating the 471 acres of agricultural land currently existing in the Plan area. The project's ultimate water demand, which included both potable and recycled water sources) would be approximately 4,363 AFY. Of the 4,363 AFY, 1,016 AFY would be supplied through recycled water from the SRWWTP, leaving the ultimate potable water demand for the Laguna Ridge Specific Plan Area at approximately 3,347 AFY, which is approximately 0.03 percent of Zone 40's projected demand through 2030. Based on the above estimates and projections, adequate water supply would be available to serve the project and meet the Zone 40's projected water demands through 2030.

Additionally, development projects within the Urban Service Boundary cannot occur until agreements and financing for water supplies are in place. Each development project in the service area, including the proposed project (see mitigation measure MM 4.6.1.a), would be required to demonstrate water availability as part of the subdivision approval process. Even if subsequent developments demonstrate water availability prior to the project approval, beyond the amount allowed under the Plan area's historical agricultural use (2,700 AFY), subsequent development of the Plan area would contribute to cumulative increases in groundwater production that may adversely affect flows on the Lower Cosumnes River.

As discussed in Section 4.7 (Hydrology and Water Quality), several recent studies have been conducted to identify the interactions between the Cosumnes River, the regional aquifer system, and regional groundwater levels. Usually there is some form of hydraulic connection between a river and the groundwater system (aquifer), which means that changes in pressure or stage in one system may have an effect on the other system and the exchange between the two. Baseflow is contributions to river flow from the groundwater or aquifer system. A hydraulic disconnection means that the groundwater levels lie below the elevation of the river channel bottom for extended reaches of the river. Under hydraulic connection the river can receive flow contributions from the aquifer system and be a gaining or influent river or it can lose flow to the groundwater aquifer and be a losing or effluent river. Additionally, the pumping of groundwater may affect baseflow contributions along various reaches of a river; thereby, influencing aquifer and river interactions.

The studies indicated the regional aquifer system and the Lower Cosumnes River are hydraulically disconnected for extended reaches of the river. The hydraulic disconnection is most pronounced in the middle reaches of the river (river miles 11 to 25.8), which is between State Route 99 (SR 99) and Meiss Road. Depth to the regional groundwater table from the river channel elevation steadily increases from 7 to 20 feet in the Dillard Road area (river mile 27.5) to approximately 35 to 55 feet near Wilton Road (river mile 17.3). Between Wilton Road and Highway 99 (river mile 11) depth to the regional groundwater table decreases to approximately 15 to 30 feet and decreases even further to approximately 3 to 15 feet around the Twin Cities Road area (river mile 5). In some portions of the river downstream of Twin Cities Road, the water table (aquifer) lies above the channel elevation and appears to be hydraulically connected with the river.

Increased groundwater pumping or a significant lowering of the groundwater tables in these areas could have an adverse effect on river flows. Results of the studies indicate that there is strong evidence of a causal relationship; however, unequivocal proof of this relationship is difficult to establish due to the limited amount of historical records on ground- and surface-water conditions in Sacramento County. Additionally, the studies indicated that a better understanding of local and regional geologic heterogeneity as well as more reliable numerical models would be needed to accurately assess the river/aquifer interactions. Due to the

project's proximity to river's channel near Twin Cities Road, which is more than 2-miles southeast of the site, implementation of the project is not expected to have a direct impact upon Cosumnes River flows, groundwater levels or the regional aquifer system. However, the project would contribute to increased groundwater production under cumulative conditions, which may alter current interactions between groundwater pumping and Cosumnes River flows and result in reduced flows. A reduction in flows within the Cosumnes River could result in adverse impacts to fishery and other aquatic resources as well as potential impacts to riparian habitat conditions along the river. Currently, the Sacramento County Water Agency is conducting detailed groundwater modeling associated with the Zone 40 Master Plan Update to evaluate potential effects on the Cosumnes River from increased groundwater production. However, no results from this modeling effort were available at the time of the release of this document.

### Mitigation Measure

As previously noted above, the Sacramento County Water Agency would provide water service to the Plan area rather than the City. Since the City does not provide water service and does not have direct jurisdiction over water service and facilities, there are no feasible mitigation measures available to the City to avoid this potential significant cumulative impact. Depending upon the County's modeling efforts, this cumulative impact could be **significant and unavoidable**, as is accordingly deemed as such for purposes of this EIR.

## WASTEWATER TREATMENT

### SETTING

Over the past several years the SRCSD and the CSD-1 have prepared numerous studies intended to analyze the need for expanded wastewater capacity as a result of planned development, including the East Franklin Specific Plan, Laguna Ridge Specific Plan area, the South Pointe planning area and Lent Ranch area. As discussed above, those studies include the Report for the Sacramento Sewerage Expansion Study, by James M. Montgomery, Consulting Engineers, Inc., Final Report Sacramento Sewerage Expansion Study-1994 Update, by Montgomery Watson, August 1994, the Sacramento Sewerage Expansion Master Plan prepared in 1996 and the Final Draft Report Sewerage facilities Expansion Master Plan, October 2000. SRCSD also recently adopted their Master Plan 2000.

The purpose of these studies is to address growth within the Urban Service Boundary and the need for capital improvements to accommodate planned and approved growth. Buildout of uses within the SRCSD service area is predicted to generate 417 mgd of wastewater requiring collection and treatment. Additional trunk and interceptor sewer lines, lift stations, and treatment plant capacity would be necessary to accommodate future growth. The existing Master Plans have identified preliminary sewer line sizing, sewer alignment, and location of lift stations necessary to convey effluent to the SRCSD treatment facility. A master plan for wastewater treatment is also under preparation to identify improvements necessary to treat the wastewater. For the next 10 to 15 years, the existing treatment facility will undergo expansion and renovation to accommodate projected wastewater. Beyond that horizon, it is likely that an additional plant would be constructed. Potential urban development of the urban study areas identified in the City of Elk Grove Draft General Plan would result in new unplanned wastewater service demands.

## 5.0 CUMULATIVE IMPACTS SUMMARY

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### CUMULATIVE IMPACTS AND MITIGATION MEASURES

Each development project is required, prior to the recording of the Final Map, to ensure that adequate capacity in the receiving trunk sewers and receiving sewerage treatment plant exists to accommodate the effluent generated by that use. Additionally, each project is required to pay a connection fee used to fund expansions needed to accommodate growth. Assuming each project would construct the necessary improvements consistent with the Master Plan, and would pay connection fees to cover the costs for operation of facilities, sewerage infrastructure would be upgraded as necessary to accommodate sewage created by the development of future projects consistent with the Master Plan.

All new development would be required to pay connection fees and construct necessary improvements consistent with all SRCSD Master Plans, so cumulative impacts would not be anticipated. Impacts related to project demand for wastewater treatment facilities have been mitigated through mitigation measures MM 4.6.2.1 and MM 4.6.2.2. Therefore, the project's contribution to cumulative impacts would be **less than significant**.

### SOLID WASTE GENERATION

Sacramento County (wasteshed of Kiefer Landfill) is anticipated to undergo sustained growth through 2022. During this period (2000-2022), a net population increase of 414,308 persons is anticipated in the County.<sup>1</sup> Implementation of the proposed project in conjunction with related and approved projects throughout Sacramento County would increase solid waste generation over the existing Countywide levels. It is noted that each individual project would be required to comply with all pertinent citywide and/or countywide recycling programs, including AB 939 compliance. All new development (including potential development of the City of Elk Grove Draft General Plan urban study areas) would be conditioned to meet the requirements of all-applicable solid waste diversion, storage, and disposal regulations that are in effect at the time of development.

### CUMULATIVE IMPACTS AND MITIGATION MEASURES

Based on per capita solid waste generation rates identified in City of Elk Grove `Source Reduction and Recycling Element (September 1991), and assuming implementation of mandatory diversion programs, cumulative development within the Kiefer Landfill wasteshed would generate an additional 609,033 tons of waste annually by the year 2022 (414,308 people x 1.47 tons/person /year = 609,033 tons/year). When added to the project generated waste of 18,060 tons, an additional 627,093 tons of solid waste would be generated on an annual basis by that time. This represents a net increase in daily intake of approximately 2,090 tpd (609,033 tons/year ÷ 365 days = 1,669 tpd). When added to the existing average daily intake at the landfill of 6,362 tpd, the total daily intake at the landfill in the year 2022 is predicted to be 8,031, which is substantially below the maximum permitted daily intake total of 10,815 tpd. Based on the fact that Kiefer landfill has adequate capacity to accommodate the proposed project as well as buildout of all uses in the service area through the year 2022, and that all uses are subject to mandatory source reduction and recycling efforts, cumulative impact to solid waste capacity and landfill disposal facilities would be **less than significant**.

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<sup>1</sup> Sacramento Area Council of Governments, Regional Data Center (January 2002).

## FIRE PROTECTION SERVICES

The ultimate buildout of the plan area together with the East Franklin Specific Plan, Lent Ranch Marketplace, South Pointe, the Southeast Study Area, and other development envisioned by the City of Elk Grove Draft General Plan would affect the service levels provided by the Elk Grove Community Services District Fire Department. Improvements to the Grant Line interchange would further accommodate approved and planned growth in the City of Elk Grove. The EGCSD has participated with other agencies in various public infrastructure finance plans (e.g., the Elk Grove/West Vineyard Plan) to fund needed facilities. The South Laguna Public Facilities Fee Program would provide for the financing of fire and emergency services for new development.

## CUMULATIVE IMPACTS AND MITIGATION MEASURES

If the Elk Grove Community Services Fire District service area builds out consistent with the City's Draft General Plan and the Sacramento County General Plan, a significant impact on the current level of fire protection services provided by the District would occur unless the equipment and personnel resources were to increase proportionately. It is assumed that other projects proposed within the Elk Grove Community Services Fire District would receive the same level of review as the proposed project. Assuming the City of Elk Grove supports the creation of similar infrastructure finance plans in its new growth areas and each future applicant pays the development fee in effect at the time their project is approved, then the level of fire protection service would increase to keep pace with the increased demands. Revenue generated by sales tax to the City's and County's General Funds would be available to fund operational costs if so desired by the City Council and Board of Supervisors. All development projects would be required to meet all Uniform Fire Code requirements, would pay development fees to cover their share of the cost to provide facilities, equipment, and services, and would generate revenue to fund ongoing service, significant impacts to ongoing fire protection and emergency services would not be expected. Therefore, cumulative impacts to fire service would be **less than significant**.

## POLICE PROTECTION/CRIME PREVENTION

### SETTING

The analysis of cumulative impacts is based on the number of households within both the regional and project area based on projections from the Sacramento Council of Governments, Regional Data Center. This approach was used to provide analysis consistent with that presented in other sections of this EIR, and because the Sheriff Department and CHP do not have long-range projections of demand. These figures include buildout of the East Franklin Specific Plan, Laguna Ridge Specific Plan, Lent Ranch Marketplace, and the South Pointe planning area and other development potential set forth in the City of Elk Grove Draft General Plan.

## 5.0 CUMULATIVE IMPACTS SUMMARY

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### CUMULATIVE IMPACTS AND MITIGATION MEASURES

As shown in **Table 4.6.5-2**, assuming an average household size of 2.64<sup>2</sup>, total residential population within the Sacramento County region in Year 2022 would be approximately 2.75 million persons. Study Area population in the Year 2020 would be approximately 73,000 persons. The project would contribute approximately 24,025 persons to these totals (3.07 pph x 7,826 du = 24,025).

The City of Elk Grove Police Department has an existing officer-to-population standard of one officer per 1,000 residents with a goal of two officers per thousand residents. Using the existing officer to population ratio, cumulative buildout within the service area of the Sacramento County Sheriffs Department, including the City of Elk Grove Police Department, would require a total of 2,554 sworn officers on a region-wide basis. A total of 28.5 officers are needed to serve the project area at the existing officer to population ratio. New development projects in the City would contribute to the City General Fund, which is the primary source of revenue to fund law enforcement services. Funding would be available to the City to negotiate a contract with the County Sheriffs Department or form a City Department with sufficient funds to hire the number of sworn officers and other support personnel needed to meet cumulative demands for law enforcement if the City Council budgets the funds. Moreover, each project would be subject to review by local law enforcement to ensure that adequate access, visibility, and security is provided. Therefore, with continued allocation of General Fund revenue to fund growing demand for law enforcement, sufficient revenue should be available to cover the cost associated with serving cumulative development resulting in **less than significant** impacts to police services.

### SCHOOLS

#### SETTING

For the purposes of this Draft EIR, the analysis of cumulative impacts is based upon the number of households within both the regional and Study Area, based on projections from the Sacramento County of Governments, as used in the Sacramento County General Plan Travel Model. This methodology was considered the best approach to accurately identify cumulative impacts, because the school district does not provide enrollment projections for the affected schools out to the General Plan buildout year of 2020. However, the area covered by the model does include areas outside of the Elk Grove Unified School District.

### CUMULATIVE IMPACTS AND MITIGATION MEASURES

**Table 4.6.6-3**, provides projected student generation figures on a cumulative basis. These estimates are based on worst-case generation factors, combined for all grades, and include students generated by the East Franklin Specific Plan, Laguna Ridge Specific Plan, Lent Ranch Marketplace, and the South Pointe planning area.

As illustrated, a total of 276,072 students would be generated by projected cumulative development within the Sacramento County General Plan Model area.

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<sup>2</sup> Sacramento Area Council of Governments.

## 5.0 CUMULATIVE IMPACTS SUMMARY

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The development of the Laguna Ridge Specific Plan Area would result in population increases contributing to a cumulative impact on schools and related facilities. According to the EGUSD Master Plan (February 2002) and SACOG population projections, the District is expected to add nearly 30,000 new students over the current Plan period through 2010. Based on Sacramento County General Plan estimates, 276,072 new students will be generated in Sacramento County through the year 2020, including the plan area. Development would result in an incremental cumulative demand for schools and result in additional environmental impacts associated with the development of new sites. The construction of new schools and related facilities would provide additional capacity to accommodate current and future enrollment. However, providing new school sites would result in cumulative environmental impacts on traffic congestion, noise, potential loss of habitat, water, solid waste, etc. The environmental impacts associated with the development of future school sites would be evaluated individually by the EGUSD for immediate and cumulative impacts as required by the State Board of Education and CEQA.

The adoption of all or some combination of Mello-Roos taxes, and SB 50 funding would fully mitigate the potential cumulative impacts on schools and related facilities according to California Government Code Section 65996. The addition of 24 new elementary, 4 middle, and two alternative schools and supporting facilities identified in the EGUSD Master Plan would provide adequate capacity to accommodate the projected growth. The existing funding mechanisms, bond measures within the school district and compliance with the Draft General Plan policies would reduce the cumulative impacts on school facilities. Additionally, pursuant to State law, payment of statutory fees represents full and complete school facilities mitigation; therefore, cumulative impacts to these facilities are reduced to **less than significant**.

### PARKS AND RECREATION

#### SETTING, CUMULATIVE IMPACTS, AND MITIGATION MEASURES

Implementation of proposed and approved projects would contribute to the cumulative demand for regional and local recreational facilities and services in the City limits and throughout the remaining portions of the Planning Area. Individual development projects would be subject to parkland standards per City, County and Quimby Act requirements. The Quimby Act Land Dedication Ordinance can be used to acquire most of the required parkland for future park locations. Community Active Use Parks would be acquired through developer dedications of land and District-wide facilities would be acquired through in-lieu fees, developer dedications or a combination of acceptable means.

Compliance with the Sacramento County and City of Elk Grove Draft General Plan policies would ensure that current and future projects meet the standards of the City, the EGUSD, and the County for parks and recreational facilities. Therefore, the cumulative impact on parks and recreation is expected to be **less than significant** and no further mitigation is necessary.

### ELECTRICAL SERVICE

#### SETTING

The proposed project would receive electrical service through SMUD, which provides power to a 900 square mile service area within Sacramento County. SMUD has continued to provide

## 5.0 CUMULATIVE IMPACTS SUMMARY

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sufficient electricity for its customers through its management of energy production facilities, and its long and short-term agreements with various energy providers.

### CUMULATIVE IMPACTS AND MITIGATION MEASURES

With regard to electrical utilities, the proposed project and other planned and proposed development would require additional resources on a cumulative basis. SMUD has developed plans to meet the increased energy needs over the next several years. Approval by the CEC will add 1,000 MW of with the first 500 megawatts online by summer 2005. Solar energy systems are planned to add 40 to 50 MW by 2011 while conservation measures would save 20 percent of the energy consumed in that time. Assuming that project review and compliance with the policies and requirements of the City in cooperation with SMUD, the cumulative effect of providing electric service would be **less than significant**.

### HYDROLOGY AND WATER QUALITY

#### SETTING

The plan area is part of two larger watersheds (defined in this document as Local Areas B and C) that drain into the Beach Stone Lakes Area. These are two smaller watersheds of the Morrison Creek Stream Group drainage basin. Local Area B encompasses 4,300 acres. Local Area C encompasses about 8,400 acres. Much of the City of Elk Grove (existing, approved and planned development) eventually drains into the Beach Stone Lakes Area. New approved and proposed development in the plan area that would feed into these watersheds include the approved East Franklin Specific Plan, the approved Lent Ranch Marketplace project and the proposed South Pointe project.

### CUMULATIVE IMPACTS AND MITIGATION MEASURES

#### Water Quality

**Impact 4.7.4** Implementation of the Laguna Ridge Specific Plan in combination with existing, approved and proposed development in the area may degrade water quality due to the deposition of pollutants generated from construction and operation of the projects. This would result in a **cumulative significant** impact.

As described above under Impact 4.7.1 and 4.7.3, the proposed project may result in construction and operational surface water quality impacts, which would add to other existing, approved and proposed development in the area. No cumulative groundwater quality impacts are anticipated.

#### Mitigation Measures

Implementation of mitigation measures MM 4.7.1 and MM 4.7.3a through c would mitigate the project's contribution to **less than significant**.

### Drainage Impacts

Implementation of the Laguna Ridge Specific Plan in combination with existing, approved and proposed development in the area would increase drainage rates in the region. The ultimate drainage facilities set forth in the Storm Drainage Master Plan for Laguna Ridge Specific Plan (Wood-Rogers, 2002) are designed to handle cumulative drainage flows and no flooding impacts are expected.

The existing County drainage system in the area of Beach Stone Lakes has a FEMA 100-year base flood elevation of 16 feet. Existing conditions within the watershed area have resulted in a flood elevation of 14.5 feet within Beach Stone Lake. Buildout of the Laguna/Franklin area, in concert with the proposed project, would result in the construction of additional impervious surfaces that would reduce water absorption and increase surface runoff throughout the area. This increase in runoff would result in an approximate 0.03 foot increase in flood elevation within the area of Beach Stone Lakes. This increase is not expected to result in the flooding of residential or developed areas. The County of Sacramento has adopted a drainage fee on new development located in Zone 11A and the City is coordinating with Sacramento County regarding regional drainage facilities. The rationale is new development is required to mitigate for impacts to the 100-year peak flow and storm water quality associated with development, and that the payment of the fee will provide mitigation of these impacts. Overall fees were computed by determining the cost for the improvements and spreading these cost over the Zone 11A area to be developed. Because the payment of fees is required and a current fee program exists to provide for flood control improvements and that no cumulative flooding impacts are expected, cumulative impacts would be considered **less than significant**.

### BIOLOGICAL RESOURCES

#### SETTING

The region is predominantly characterized by agricultural uses, including farming and orchards. Irrigation canals traverse the area, providing water for the agricultural uses. Fremont cottonwood, arroyo willow, valley oak, poison oak, shrubs and Himalayan blackberry are commonly found around the irrigation canals. Perennial marshes and farmed wetlands are also prevalent in the region, supporting cattails, tule, Himalayan blackberry, willow, and grasses. Several species of oak, California black walnut, sycamore, and other native and ornamental tree species grow in the area. The agricultural lands, marshes, canals and trees provide habitat for endangered and protected species as well as species of concern. Such species include, but are not limited to, the native oak trees, Sanford's arrowhead, Valley Elderberry Longhorn Beetle, vernal pool fairy shrimp and tadpole shrimp, giant garter snake, northwestern pond turtle, Aleutian Canada goose, greater sandhill crane, mountain plover, Swainson's hawk, burrowing owl, tricolored blackbird, herons, egrets, and bats.

The character and landscape of the region has been gradually changing from agricultural to residential and commercial uses since the 1970s. This change will continue to occur as the City of Elk Grove expands.



## 5.0 CUMULATIVE IMPACTS SUMMARY

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### CUMULATIVE IMPACTS AND MITIGATION MEASURES

**Impact 4.8.9** The development of this project would contribute cumulatively to the loss of biological resources in the region and the ongoing urbanization in southern Sacramento County. This would result in a **cumulative significant** impact.

In addition to the Laguna Ridge Specific Plan project, several other developments in southern Sacramento County are currently approved, proposed, under construction or in the preliminary planning stages. These projects include the Lent Ranch Marketplace, East Franklin Specific Plan, East Elk Grove Specific Plan, the Grant Line Road/SR-99 interchange improvement, and potential future development of the "Urban Study Areas" identified in the City's Draft General Plan, which all have the potential to adversely affect the biological resources in the region. Future developments would require on- and offsite improvements to provide water, wastewater, storm drainage, solid waste disposal, and other such services at the City's required level of service. Such improvements could contribute to the loss of potential habitat within the region. Offsite improvements required to serve Laguna Ridge Specific Plan area include a 40-foot wide offsite drainage channel, south of the plan area and east of Bruceville Road, as well as necessary wastewater infrastructure, which would be constructed within the Bruceville Road right-of-way extending from the plan area to connect with the existing pipeline north of Elk Grove Boulevard. The impacts of these two offsite facility improvements have been evaluated as project-related impacts.

On a cumulative level, the change in land uses would contribute to a loss of habitat for endangered and protected species, and species of concern, that currently inhabit the plan area, or that could potentially inhabit the plan area in the future. Although the Laguna Ridge Specific Plan area is generally degraded and disturbed as a result of recurring agricultural activities, it provides habitat for a variety of common wildlife species as well as special-status species. While potential direct impacts on biological resources are reduced, the increased human presence would be anticipated to cause potential indirect impacts. These could disturb breeding and foraging behavior of wildlife, and would result in a significant and unavoidable cumulative impact.

Another indirect impact would be stormwater runoff. Each project is required to participate in the NPDES permit program for stormwater runoff, which effectively reduces water quality impacts to below a level of significance. Planned urbanization of the project area would create new sources of light and glare. While project specific measures would be undertaken to orient or shield lights to minimize illumination of adjacent lands, the combined effect of all new developments approved or planned in the area would create a significant and unavoidable cumulative impact associated with increased human presence.

#### Mitigation Measures

Implementation of mitigation measures MM 4.8.1a through c, MM 4.8.2a through c, MM 4.8.3, MM 4.8.4a through f, MM 4.8.5a and b, MM 4.8.7a and b, and MM 4.8.8a through c would reduce the direct project-specific impacts on special-status plant and animal species and native trees to a less than significant level. However, on a cumulative level the direct and indirect impacts would be considered **significant and unavoidable**.

## GEOLOGY AND GEOTECHNICAL HAZARDS

### SETTING, CUMULATIVE IMPACTS, AND MITIGATION MEASURES

Geotechnical impacts tend to be site specific rather than cumulative in nature and each development site would be subject to, at a minimum, uniform site development and construction standards relative to seismic and other geologic conditions that are prevalent within the region. Because the development of each site would have to be consistent with requirements of the City and the Uniform Building Code as they pertain to protection against known geologic hazards, impacts of cumulative development would be less-than-significant given known geologic considerations.

Impacts regarding surficial deposits, namely erosion and sediment deposition, can be cumulative in nature within a watershed. Buildout of approved and planned uses, such as the East Franklin Specific Plan, Laguna Ridge Specific Plan area, South Pointe, Lent Ranch, future development in accordance with the City of Elk Grove Draft General Plan and the Grant Line interchange improvements has the potential to impact water quality. However, with implementation of Best Management Practices required by MM 4.7.1 and MM 4.9.1 along with the NPDES permit and the City Land Grading and Erosion Control Ordinance requirements for each development project, cumulative erosion within the watershed would not exceed natural levels cumulative impacts would be **less than significant**.

## CULTURAL RESOURCES

### SETTING, CUMULATIVE IMPACTS, AND MITIGATION MEASURES

Buildout of approved and planned uses such as the East Franklin Specific Plan, Lent Ranch Marketplace area, South Pointe planning area, future development under the proposed Draft General Plan, and associated infrastructure projects such as the Grant Line Road/ SR 99 interchange improvements have the potential to uncover previously unknown resource sites. Each cultural site is a unique contributor to the overall scientific understanding of a region's pre-history. Evaluation of cultural finds and resources within their original context is a critical component of their value. Disturbance, movement, and destruction of such resources would remove or preclude the analysis of the resource within its origin and therefore adversely affect the understanding of the development of human cultural history. Increased population and intensified land use patterns associated with cumulative growth could also increase the potential for vandalism and/or inadvertent destruction of such resources.

#### Mitigation Measures

Mitigation measures 4.10.1a, 4.10.1b, and 4.10.2 would mitigate cumulative impacts on cultural resources resulting from the Laguna Ridge Specific Plan to **less than significant** levels.

## VISUAL RESOURCES

### SETTING

The proposed project would be a continuation of planned development in the plan area. Development has begun to the north and west, and additional development is proposed to the south. The East Franklin Specific Plan to the west is approximately 2,474 acres and includes

## 5.0 CUMULATIVE IMPACTS SUMMARY

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10,103 dwelling units, support commercial/retail uses, open space, and public facilities. The Elk Grove Automall, adjacent to the northwest, occupies 45 acres. To the south, the Lent Ranch Marketplace Project occupies approximately 293 acres and has been approved by the City Council. The proposed South Pointe project, occupies approximately 200 acres adjacent to the Lent Ranch Marketplace. These projects comprise the majority of development that would cumulatively occur within the viewshed of the Laguna Ridge Specific Plan.

### CUMULATIVE IMPACTS AND MITIGATION MEASURES

**Impact 4.11.4** Implementation of the Laguna Ridge Specific Plan in combination with other projects would introduce new development into an agricultural area and increase nighttime lighting and glare. These impacts would be considered **cumulatively significant**.

Cumulative impacts from these projects would include the conversion of vacant or agricultural land to urban uses. A cumulative visual impact would exist relative to the loss of vacant undeveloped land as viewed from the public roadways discussed in this section of the EIR. The amount of visible natural vegetation would also decrease. Nighttime illumination and daytime glare would also be increased in the plan area as a result of cumulative project development. Although individual development projects would be responsible for incorporating mitigation to minimize their visual impacts, the net result would still be a general conversion of an area with an open, rural character to a more urban and developed character. This impact would be **cumulatively significant**.

Because the project-specific and cumulative impacts are inherently related to the general conversion of an agricultural area to urban development from the introduction of development structures and lighting sources, both project-specific and cumulative impacts would be **significant and unavoidable**.

#### Mitigation Measures

Implementation of mitigation measures MM 4.11.2a and MM 4.11.2b would reduce the project's contribution to cumulative visual impacts, the cumulative impact is considered **significant and unavoidable**.

## LAND USE/POPULATION, EMPLOYMENT AND HOUSING

### SETTING

The proposed Laguna Ridge Specific Plan, along with all known projects such as South Pointe, Lent Ranch Marketplace, and East Franklin would change the intensity of land uses in the City's Planning Area. In particular, this cumulative development scenario would increase development in the southwestern portion of the City, and provide additional housing, employment, shopping, and recreational opportunities.

### CUMULATIVE SETTING

The cumulative setting for the southern portion of the City of Elk Grove includes the Laguna Ridge Specific Plan, together with the South Pointe subdivision, the Lent Ranch Marketplace development, the East Franklin Specific Plan and the Southeast Policy Area. The Elk Grove Draft

General Plan designates the plan area and adjacent areas for development with office, commercial, residential, recreational, and civic uses, as well as mixed-use development. The land south of Kammerer Road, located in unincorporated Sacramento County, is designated for agricultural use in the Sacramento County General Plan and as an Urban Study Area in the Elk Grove Draft General Plan.

### CUMULATIVE IMPACTS AND MITIGATION MEASURES

The Laguna Ridge Specific Plan area is one component of the cumulative development scenario that would change the intensity of land uses in the southwestern portion of the City, which currently consists primarily of agricultural and rural residential uses. The City's Draft General Plan anticipates the loss of agricultural operations in this area, which is accepted as a consequence of the development of Elk Grove. The residential uses proposed in the plan area would be compatible with other similar uses in the East Franklin area and would support commercial, retail, and mixed land uses in both East Franklin and the Lent Ranch Marketplace SPA. Overall, the Laguna Ridge Specific Plan would implement an orderly pattern of development in an area that is planned future urban development. The project would not add significantly to the cumulative loss of such lands.

While it is recognized that the area will ultimately transition from predominantly agricultural to urbanized land use, agricultural operations may continue on the lands adjacent to the plan area. The project would provide substantial buffering between uses by combining building setbacks and landscaped corridors along all roadways located between proposed residential areas and active agricultural operations. The combined width of setbacks, corridors and roadways, together with the installation of street trees and other landscape features, would create sufficient separation buffering between urban and agricultural uses. As such, potential land use compatibility impacts would be **less than significant**.

The proposed project would result in an increase in noise in the area as a result of vehicle traffic and construction. Development of the site would include design features for noise attenuation. Such features include open space setbacks (i.e., frontage roads, recreational areas, and storage yards); physical barriers (i.e., walls, berms, or other structures); site design (i.e., building orientation and location); building design (i.e., location of noise-sensitive uses within a building to reduce the impact of noises on inhabitants; building façades (i.e., utilizing all features of the building façade including closed windows); vegetation (i.e., trees and other landscape materials); and, noise-reducing paving materials (i.e., rubberized asphalt). Even with the implementation of these measures, construction noise would still be considered **significant and unavoidable**.

The proposed project would result in the conversion of a predominantly agricultural area to urban land uses, and significant visual impacts would result. The project would generate significant levels of light and glare, and would contribute to the overall cumulative change in the open visual character of the plan area. The effects of light and glare could be minimized through the implementation of design features and installation of appropriate building materials, such as limiting the use of on-glare glass in all commercial and office buildings, orienting buildings so that the reflection of sunlight is minimized, and installing landscape materials to shade and screen buildings. Nighttime lighting and glare would be minimized by requiring parking lot pole lights and streetlights to be fully hooded and back shielded, and ensuring that lighting not exceed the standard illumination of two-foot candles along the property lines of adjoining land uses. Even with the implementation of these measures, impacts resulting from the

## 5.0 CUMULATIVE IMPACTS SUMMARY

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generation of light and glare from the plan area would still be considered **significant and unavoidable**.

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## **6.0 ALTERNATIVES**

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This section of the EIR provides a comparative analysis of the merits of alternatives to the proposed project pursuant to Section 15126.6 of the CEQA Guidelines, as amended. According to the Guidelines, the discussion of alternatives should focus on alternatives to a project or its location, which can avoid or substantially lessen the significant effects of the project. The CEQA Guidelines indicate that the range of alternatives included in this discussion should be sufficient to allow decision-makers a reasoned choice. The alternative discussion should provide decision-makers with an understanding of the merits and disadvantages of these alternatives.

### 6.1 INTRODUCTION

As discussed above, the purpose of the alternatives analysis is to avoid or minimize significant effects of the project. According to the CEQA Guidelines, the EIR need only examine in detail those alternatives that could feasibly meet most of the basic objectives of the project. When addressing feasibility, the CEQA Guidelines Section 15126.6 states that "among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, jurisdictional boundaries, and whether the applicant can reasonably acquire, control or otherwise have access to alternative sites." The CEQA Guidelines also specify that the alternatives discussion should not be remote or speculative, and need not be presented in the same level of detail as the assessment of the proposed project.

Therefore, based on the CEQA Guidelines, several factors need to be considered in determining the range of alternatives to be analyzed in an EIR and the level of analytical detail that should be provided for each alternative. These factors include: (1) the nature of the significant impacts of the proposed project; (2) ability of alternatives to avoid or lessen the significant impacts associated with the project; (3) the ability of the alternatives to meet the objectives of the project; and (4) the feasibility of the alternatives. These factors would be unique for each project.

The alternatives to the proposed Laguna Ridge Specific Plan ultimately selected for analysis in this EIR were developed with the aim of minimizing environmental impacts while still meeting the basic objectives of the project. The project applicant has defined the following objectives for this proposed project:

- Provide housing to accommodate the employees of the major employment centers in City of Elk Grove;
- Provide a variety of housing opportunities for a wide range of social, economic and age groups;
- Comply with the all applicable policies of the City General Plan;
- Foster a strong sense of community place and human scale;
- Provide for the development of employment centers that offer job opportunities to improve the jobs/housing balance;
- Engender high quality urban design;
- Provide a community that is resource efficient;
- Provide flexibility to respond to changes in economic and social factors; and
- Provide for the location of neighborhood-serving commercial projects.

## 6.0 ALTERNATIVES

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### 6.2 ALTERNATIVES EVALUATION

Based on the environmental analysis, alternatives were developed which would provide decision-makers with a reasonable range of alternatives with which to compare to the proposed project. A list of the alternatives selected for evaluation in this analysis is provided below.

- Alternative 1 - No Project Alternative, including the No Project, No Development Alternative (Alternative 1a), and the Zoning Code Alternative (Alternative 1b);
- Alternative 2 – Agricultural Preservation Alternative;
- Alternative 3 – Reduced Density Alternative; and
- Alternative 4 - Office Development Alternative.

Due to the size and nature of the Specific Plan, true environmental benefits would not be achieved by the selection of an alternative site. Currently, there are no large vacant land areas within the City that are not already approved for development. In addition, if a site could be located, environmental benefits over the proposed project would not likely be achieved. It is likely that agricultural land would still be impacted, and infrastructure, traffic, and air quality impacts would remain. Therefore, an alternative site alternative was not selected for analysis in this report.

#### ALTERNATIVE 1 – NO PROJECT ALTERNATIVE

The No Project Alternative is required by Section 15126.6(e) of the *CEQA* Guidelines. As required by the *CEQA* Guidelines, the analysis must examine the impacts which might occur if the site is left in its present condition, as well as what may be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services.

#### **No Project, No Development Alternative (Alternative 1a)**

The No Project, No Development alternative would leave the plan area in its present condition. Existing agricultural operations would remain, along with the existing residences and approved expansion of the Elk Grove Auto Mall. Impacts associated with construction and operational activities would not occur if the No Project, No Development Alternative was selected. Additional vehicle trips would not be generated over present conditions, nor would noise and air quality impacts occur with the selection of this alternative. In addition, this alternative would have no impact with regard to visual resources, land use, public services, energy, utilities, land use, hazardous materials, biological resources or cultural resources.

This alternative eliminates the environmental impacts associated with the proposed project. However, the No Project, No Development Alternative would not meet any of the project objectives.

#### **Zoning Code Alternative (Alternative 1b)**

Under the Zoning Code Alternative, the existing zoning of the plan area remains AG-20, AG-80, M-1 and AR-2, and the property would be developed under the existing zoning. Existing land uses would continue. Infrastructure in the plan area would not be expanded. Development of



the plan area consistent with the existing zoning designations would allow for approximately 800 to 1,000 single family units throughout the site. Consequently, impacts associated with this alternative are essentially the same as those described above under the No Project, No Development Alternative (1a). As with Alternative 1a, this alternative would minimize and/or eliminate the significant environmental impacts associated with the proposed project (visual resources, land use, public services, energy, utilities, land use, hazardous materials, biological resources or cultural resources). However, as with Alternative 1a, the Planning and Zoning Code Alternative would not meet most of the basic project objectives.

#### ALTERNATIVE 2 – AGRICULTURAL PRESERVATION ALTERNATIVE

Under this alternative, the site would have General Plan and zoning designations for commercial and residential uses along the major street frontages, including Elk Grove Boulevard, Bruceville Road, and SR-99. High, medium, and low density residential uses would be located along the major street frontages of the plan area. Rural residential uses with five-acre lot minimums along southern roadway frontages and two-acre lot minimums along the western roadway frontages would transition to 20-acre to 160-acre lots towards the interior of the plan area. A majority of the plan area would remain in agricultural production (see **Figure 6.0-1**). This alternative would be inconsistent with the Draft General Plan Land Use Policy Map (see **Figure 5.0-1**) and would require a General Plan Amendment; however, the General Plan does indicate that existing agricultural uses can continue as long as individual owners desire. This alternative would be consistent with Draft General Plan policies regarding agricultural uses, but would not result in the urbanization anticipated by the Draft General Plan. The following land use mix would be developed under Alternative 2:

**TABLE 6.0-1**  
**ALTERNATIVE 2- AGRICULTURAL PRESERVATION ALTERNATIVE**

Land Use	Acres	Dwelling Units
Single Family Residential (3-6 du/acre)	135	608
Single Family Residential (7-8 du/acre)	65	488
Single Family Residential (10 du/acre)	10	100
Multi-Family Residential (20 du/acre)	12	240
General Commercial (GC)	45	---
Commercial Mixed Use (CMU)*	112	---
Schools	12	---
Agricultural Residential (2 acre/du)	50	25
Agricultural Residential (5 acre/du)	80	16
Agricultural Residential (10 acre/du)	160	16
Agricultural	1,210	---
<b>Total</b>	<b>1,900±</b>	<b>1,493</b>

\*includes approved Auto Mall expansion

## **6.0 ALTERNATIVES**

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### **Agricultural Resources**

Alternative 2 would result in 391 acres of development, substantially less compared to the proposed project, and would substantially reduce the loss of farmland. However, this alternative would still result in land use conflicts between urban and agricultural uses. This conflict would occur within the plan area. The impact on agricultural resources would be reduced with Alternative 2.

### **Transportation and Circulation**

Implementation of Alternative 2 would result in a decrease in project-generated traffic. Generally, Alternative 2 results in 81 percent fewer single and multiple family dwelling units on the site and 44 percent fewer commercial/office uses. The average daily trip generation in the plan area, therefore, would decrease by approximately 70 to 80 percent. Alternative 2 would result in less transportation and circulation impacts than the proposed project.

### **Air Quality**

On-site grading would occur under Alternative 2, however, the developed acreage is 20 percent of what would occur with the proposed project. The total amount of grading and construction-related air quality impacts would be reduced accordingly. Construction of the proposed project would result in 105.9 pounds per day of ROG, 97.2 pounds per day of NO<sub>x</sub>, and 1619.9 pounds per day of PM<sub>10</sub>. Assuming 20 percent of the developed acreage under Alternative 2, results in 21.18 pounds per day of ROG, 19.44 pounds per day of NO<sub>x</sub>, and 323.98 pounds per day of PM<sub>10</sub>. With mitigation, Alternative 2 construction air quality impacts could be reduced to a less-than-significant level, while the proposed project's air quality impacts would be significant and unavoidable.

Operational air quality impacts would also be reduced by approximately 70 to 80 percent. However, even with this reduction in ROG and NO<sub>x</sub>, the operational impacts would still remain significant and unavoidable. Given the reduction in the developed acreage and the resulting decrease in air quality impacts, Alternative 2 would be environmentally superior to the proposed project with respect to air quality.

### **Noise**

With a decrease in the number of vehicle trips introduced onto the local roadway network, there would be an associated decrease in project-generated noise impacts on and in the vicinity of the site due to project-generated vehicular traffic. The impact, however, on the project site due to continued agriculture operations in close proximity to residential uses is a potentially significant impact. Overall, this alternative would result in fewer noise impacts than the proposed project.

### **Hazards and Hazardous Materials**

Given the similar location of development between the proposed project and Alternative 2, and because development under this alternative would also place developed uses near potential hazards when compared with the proposed project, Alternative 2 impacts associated with environmental hazards are similar to those of the proposed project. Alternative 2, however, places residences in close proximity to agricultural uses that may introduce environmental

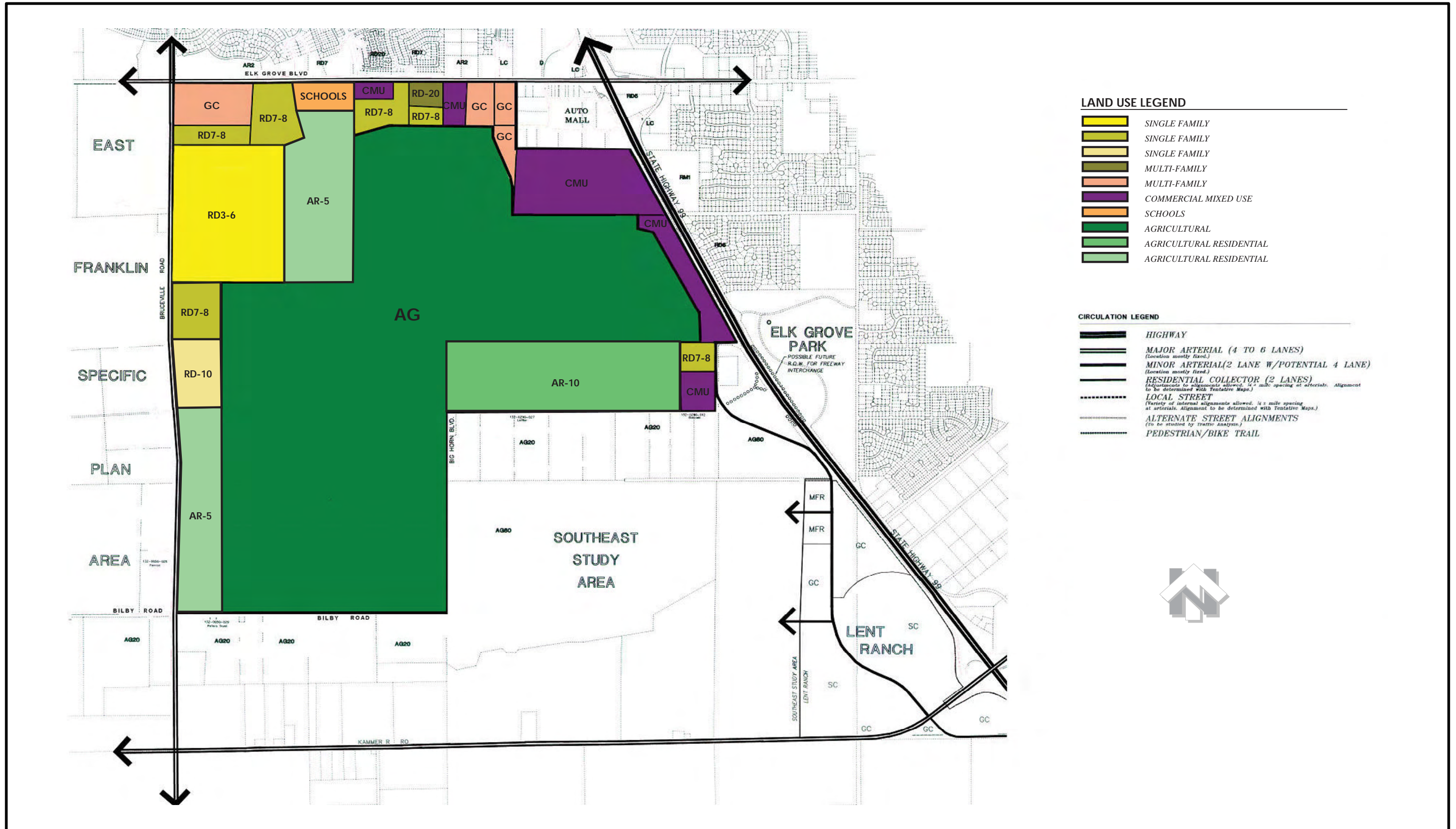


Figure 6.0-1  
Alternative 2 – Agricultural Preservation alternative

hazards into the area. Given the above, Alternative 2 and the proposed project would have similar impacts with respect to environmental hazards.

### **Public Services and Utilities**

#### a) Water Resources

The demand for water resources would be less under Alternative 2 than under the proposed project due to the fewer residential uses associated with this alternative. Water consumption for Alternative 2 would be reduced by approximately 80 percent than that of the proposed project from potable water supplies. Off-site infrastructure would be necessary to serve either the proposed project or this alternative. Because Alternative 2 would consume less water than the proposed project, it would reduce the magnitude of impacts when compared to the project with respect to water resources.

#### b) Wastewater Disposal

Wastewater generation for Alternative 2 would be reduced by approximately 80 percent compared to the proposed project. As with the proposed project, this wastewater would be treated by SRCSD. Off-site infrastructure would be necessary to serve either the proposed project or this alternative. Because less wastewater would be generated on the project site that would go to SRCSD, this alternative would have reduced impact on the treatment facility and conveyance facilities than would the proposed project.

#### c) Solid Waste Disposal

Alternative 2 would generate approximately 80 percent less solid waste annually than the proposed project. Given that less solid waste would be generated by uses developed under Alternative 2 compared to that of the proposed project, Alternative 2 would reduce the magnitude of impact with respect to solid waste disposal.

#### d) Fire Services

Site development under either the proposed project or Alternative 2 would increase the amount of human presence and the number of structures in the project vicinity; creating a new demand for fire protection and emergency services. However, Alternative 2 would reduce the population on-site when compared to the proposed project by approximately 80 percent. Alternative 2 would reduce the number of calls for service that would be generated by the proposed project, thereby reducing the magnitude of the impact with regard to fire protection service.

#### e) Police Protection/Crime Prevention

Site development under either the proposed project or Alternative 2 would increase the amount of human presence; thereby creating demands on the Police Department to respond to an increase in the number of calls to the site in either condition. However, Alternative 2 would reduce the population on-site when compared to the proposed project by 80 percent, reducing the number of calls for service proportionately. Therefore, Alternative 2 would reduce the magnitude of the impact when compared to the proposed project with regard to Police protection service.

## 6.0 ALTERNATIVES

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### f) Schools

Alternative 2 would generate approximately 80 percent fewer students compared to the students that would be generated by the project. All uses that would be constructed on-site are required to pay statutory school impact fees to mitigate impacts to schools. Compliance with the fee program would mitigate impacts to the affected district regardless of the type of development proposed. However, based on impact potential without consideration to mitigation payments, Alternative 2 would reduce the magnitude of the impacts when compared to the proposed project.

### g) Parks and Recreation

Under City requirements of 5.0 acres of parkland per 1,000 persons, development of the proposed project would require the applicant to provide 108 acres of local parkland and/or in-lieu fees. The proposed project would include the provision of 132 acres of new parkland, resulting in adequate parkland. Per the same requirements, development under Alternative 2 would require a total of 20 acres for parkland and/or in-lieu fees. As indicated in Section 4.6.7, Parks and Recreation, the applicant is required to pay an in-lieu fee to cover the cost generated by the increased demand for park and recreation facilities. Alternative 2 would decrease the demand for park facilities beyond that of the proposed project.

The combination of land credit and payment of in-lieu fees mitigates the impact on park and recreation facilities. However, from an impact perspective, Alternative 2 creates a reduced demand for parkland based on the standards identified by City requirements. Therefore, Alternative 2 would reduce the magnitude of impacts when compared to the proposed project with regard to demands placed upon park and recreation facilities and the need for construction of new facilities.

### h) Electrical Service

Development under Alternative 2 would still require the extension and expansion of electrical distribution facilities in the plan area. However, this alternative would result in a substantial decrease in the demand for electrical service as compared to the proposed project.

## **Hydrology and Water Quality**

Urban runoff generated under Alternative 2 would be conveyed and discharged off site through existing and proposed drainage conveyance facilities and drainage basins. Section 4.7, Hydrology and Water Quality, indicates that site development would increase runoff flows over present conditions. However, because the residential component of Alternative 2 would cover less surface area with impermeable material, the amount of runoff from the site would be less under Alternative 2, resulting in a lesser impact than the proposed project.

Under either development scenario, storm and irrigation runoff could contain substances, such as pesticides, herbicides, etc. However, stormwater runoff of urban development would be required to meet the same Regional Water Quality Control Board water quality standards. Therefore, Alternative 2 and the proposed project would have similar impacts with respect to runoff water quality.

### **Biological Resources**

Under Alternative 2, there would be reduced grading activity (disturbance to 382 acres) to that of the plan area (disturbance to 1,900 acres), and would reduce the human presence onsite which would reduce indirect impacts to biological resources. This alternative would also avoid development in the vicinity of several farmed wetlands and an elderberry bush located in the plan area. Thus, direct impacts to on-site biological resources would be reduced under Alternative 2 when compared to the proposed project.

### **Geology and Geotechnical Hazards**

Grading activity on-site would be reduced when compared to the proposed project, because of the fewer developed acres. The same soil conditions, however, would apply regardless of the uses proposed on the property. In addition, improvements constructed on the site under Alternative 2 would be subjected to the forces of ground movement (e.g., shaking buildings, etc.) during seismic events similar to the proposed project, and would also be subject to the same construction requirements as the proposed project. The number of structures subjected to the seismic events, however, would be reduced. Because site development under this alternative would reduce the structures built, Alternative 2 would reduce the impacts when compared to the proposed project.

### **Cultural Resources**

The plan area has no known evidence of prehistoric or historic occupation based on archival records search. In addition, the plan area has been previously disturbed by agricultural cultivation, which makes it unlikely that the site contains any undisturbed cultural resources. However, this alternative would avoid impacting potentially historic structures along Poppy Ridge Road. Therefore, this alternative would reduce cultural resource impacts as compared to the proposed project.

### **Visual Resources**

Implementation of either Alternative 2 or the proposed project would result in the development of the current agricultural properties. The site would be prepared through a combination of earth moving activities including excavation, grading, and compaction. These short-term impacts would occur under either development scenario, although to a reduced number of acres under Alternative 2.

In the long term, site development would result in the introduction of urban uses in a rural area that is undergoing urbanization. The acreage of urban development, however, under Alternative 2 is reduced by 80 percent. Alternative 2, therefore, would result in a reduction in the magnitude of impacts when compared to the proposed project with respect to visual quality.

### **Land Use**

Land use consistency impacts associated with Alternative 2 would be reduced when compared to the proposed project. This alternative would be inconsistent with the Draft General Plan Land Use Policy Map (see **Figure 5.0-1**) and would require a General Plan Amendment; however, the General Plan does indicate that existing agricultural uses can continue as long as individual owners desire. This alternative would be consistent with Draft General Plan policies regarding

## 6.0 ALTERNATIVES

agricultural uses, but would not result in the degree of urbanization anticipated by the Draft General Plan.

Land use compatibility impacts, however, associated with the agricultural operations (i.e., pesticide use, trespassing, and vandalism) to the west and south of the project site would be exist between proposed residential and agricultural uses within the plan area. However, this alternative would not result in land use compatibility impacts to uses adjacent the plan area beyond present impacts from existing uses. The introduction of residential land uses would increase the permanent site population in close proximity to lands under agricultural production. The issue of the proximity of residential development to agricultural lands becomes bigger as development fills in around the area and a pocket of agricultural land would remain. This agricultural land would be under continued pressure for development but has not been included in the specific plan area, which would include development guidelines and policies. In addition, noise impacts due to the introduction of residential land uses in close proximity to agricultural operations would be greater than those of the project. Overall, this alternative would result in more land use compatibility impacts than the proposed project.

### Conclusion

In conclusion, this alternative would result in lesser environmental impacts in many of the environmental categories, while a few of the unavoidable significant impacts would remain. In general, Alternative 2 would be considered the environmentally superior alternative. However, this alternative would not provide as much housing, commercial uses or employment opportunities as the proposed project.

### ALTERNATIVE 3 – REDUCED DENSITY ALTERNATIVE

Under Alternative 3, the 1,900-acre project site would be developed with 1,368 acres of residential development and the remaining acreage in commercial, schools, parks, open space, and roadway infrastructure. This is the same acreage of development as the proposed project. However, this alternative would reduce the density of the residential development from an average of 6.2 dwelling units per acre (7,826 total units) to 3 units per acre (4,146 units). A General Plan Amendment and zone change would still be required to reflect the single family residential and commercial uses shown in Alternative 3. In addition, Alternative 3 would also require an amendment to the General Plan Transportation Diagram to reflect interior project roadways as appropriate. The development footprint would remain similar to that of the proposed project. The following uses would be developed with selection of Alternative 3:

**TABLE 6.0-2  
ALTERNATIVE 3- REDUCED DENSITY ALTERNATIVE**

Land Use	Acres	Dwelling Units
Single Family Residential (3 du/acre)	1,382	4,146
General Commercial	67	--
Commercial Mixed Use	125	--
Schools	100	--
Park/Open Space	110	--
Arterial Roadways	116	--
<b>Total</b>	<b>1,900±</b>	<b>4,146</b>

### **Agricultural Resources**

Both the project and this alternative would develop 1,900 acres of land that has been historically in agricultural production with urban uses. Because the area of development is the same for the proposed project and Alternative 3, similar impacts to agricultural resources (farmland loss and land use compatibility) would occur.

### **Transportation and Circulation**

Implementation of Alternative 3 would result in a reduced number of residential units by approximately 47 percent and commercial uses by 44 percent, a similar decrease in project-generated traffic would be expected. The average daily trip generation on the project site, therefore, would decrease by approximately 47 percent. Alternative 3 would result in less transportation and circulation impacts than the proposed project.

### **Air Quality**

Because similar on-site grading would occur under Alternative 3, the total amount of grading and construction-related air quality impacts would be similar to those of the project. Operational air quality impacts would be reduced by approximately 47 percent. However, even with this reduction in ROG and NO<sub>x</sub>, the operational impacts would still remain significant and unavoidable. Given the reduction in the number of residential units developed, Alternative 3 would result in a reduction in the magnitude of air quality impacts when compared to the proposed project.

### **Noise**

With a decrease in the number of vehicle trips introduced onto the local roadway network, there would be an associated decrease in project-generated noise impacts on and in the vicinity of the site due to project-generated vehicular traffic. Alternative 3 would, therefore, reduce the magnitude of the noise impacts when compared to the proposed project.

### **Hazards and Hazardous Materials**

Given the similar location of development between the proposed project and Alternative 3, and because development under this alternative would also place developed uses near potential hazards when compared with the proposed project, Alternative 3 impacts associated with environmental hazards are similar to those of the proposed project.

### **Public Services and Utilities**

#### a) Water Resources

The demand for water resources would be less under Alternative 3 than under the proposed project due to the 3,680 fewer residential uses associated with this alternative. Water consumption for Alternative 3 would be reduced by approximately 47 percent than that of the proposed project from potable water supplies. Off-site infrastructure would be necessary to serve either the proposed project or this alternative. Because Alternative 3 would consume less water than the proposed project, it would reduce the magnitude of impacts when compared to the project with respect to water resources.



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### b) Wastewater Disposal

Wastewater generation for Alternative 3 would be reduced by approximately 56 percent compared to the proposed project. As with the proposed project, this wastewater would be treated by SRCSD. Off-site infrastructure would be necessary to serve either the proposed project or this alternative. Because less wastewater would be generated on the project site that would go to SRCSD, this alternative would have a reduced impact on the treatment facility and conveyance facilities than would the proposed project.

### c) Solid Waste Disposal

Alternative 3 would generate approximately 47 percent less solid waste annually than the proposed project. Given that less solid waste would be generated by uses developed under Alternative 3 compared to that of the proposed project, Alternative 3 would reduce the magnitude of impact with respect to solid waste disposal.

### d) Fire Services

Site development under either the proposed project or Alternative 3 would increase the amount of human presence and the number of structures in the project vicinity; creating a new demand for fire protection and emergency services. However, Alternative 3 would reduce the population on-site when compared to the proposed project by approximately 47 percent. Alternative 3 would reduce the number of calls for service that would be generated by the proposed project, thereby reducing the magnitude of the impact with regard to fire protection service.

### e) Police Protection/Crime Prevention

Site development under either the proposed project or Alternative 3 would increase the amount of human presence; thereby creating demands on the Police Department to respond to an increase in the number of calls to the site in either condition. However, Alternative 3 would reduce the population on-site when compared to the proposed project by 56 percent, reducing the number of calls for service proportionately. Therefore, Alternative 3 would reduce the magnitude of the impact when compared to the proposed project with regard to Police protection service.

### f) Schools

Alternative 3 would generate approximately 47 percent fewer students compared to the students that would be generated by the project. All uses that would be constructed on-site are required to pay statutory school impact fees to mitigate impacts to schools. Compliance with the fee program would mitigate impacts to the affected district regardless of the type of development proposed. However, based on impact potential without consideration to mitigation payments, Alternative 3 would reduce the magnitude of the impacts when compared to the proposed project.

### g) Parks and Recreation

Under City requirements of 5.0 acres of parkland per 1,000 persons, development of the proposed project would require the applicant to provide 108 acres of local parkland and/or in-lieu fees. Per the same requirements, development under Alternative 3 would require

approximately 61 acres for parkland and/or in-lieu fees. As indicated in Section 4.6.7, Parks and Recreation, the applicant is required to pay an in-lieu fee to cover the cost generated by the increased demand for park and recreation facilities. Both the proposed project and Alternative 3 would provide the adequate acreage of parkland, resulting in no shortfall of park acreage decrease the demand for park facilities beyond that of the proposed project. However, Alternative 3 would result in a smaller population and decrease the demand for parks and recreational facilities.

The combination of land credit and payment of in-lieu fees mitigates the impact on park and recreation facilities. However, from an impact perspective, Alternative 3 creates a reduced demand for parkland based on the standards identified by City requirements. Therefore, Alternative 3 would reduce the magnitude of impacts when compared to the proposed project with regard to demands placed upon park and recreation facilities.

### h) Electrical Service

Development under Alternative 3 would still require the extension and expansion of electrical distribution facilities in the plan area. However, this alternative would result in a substantial decrease in the demand for electrical service as compared to the proposed project.

### **Hydrology and Water Quality**

Urban runoff generated under Alternative 3 would be conveyed and discharged off-site through existing and proposed drainage conveyance facilities and drainage basins. Section 4.7, Hydrology and Water Quality, indicates that site development would increase runoff flows over present conditions. However, because the residential component of Alternative 3 would cover the same surface area with impermeable material, the amount of runoff from the site would be the same under Alternative 3, resulting in a similar impact as the proposed project.

Under either development scenario, storm and irrigation runoff could contain substances, such as pesticides, herbicides, etc. However, stormwater runoff of development would be required to meet the same Regional Water Quality Control Board water quality standards. Therefore, Alternative 3 and the proposed project would have similar impacts with respect to runoff water quality.

### **Biological Resources**

Under Alternative 3, the area developed would be the same as the area of the proposed project (disturbance to 1,900 acres) and would also result in the same amount of indirect impact on biological resources from human presence as the proposed project. Thus, impacts to biological resources would be similar under Alternative 3 when compared to the proposed project.

### **Geology and Geotechnical Hazards**

Grading activity on-site would be similar to the proposed project (1,900 acres). The same soil conditions would apply regardless of the uses proposed on the property. In addition, improvements constructed on the site under Alternative 3 would be subjected to the forces of ground movement (e.g., shaking buildings, etc) during seismic events similar to the proposed project, and would also be subject to the same construction requirements as the proposed

## **6.0 ALTERNATIVES**

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project. Under Alternative 3, the geology and geotechnical impacts would be similar to the proposed project.

### **Cultural Resources**

The plan area has no known evidence of prehistoric or historic occupation based on archival records search. In addition, the site has been previously disturbed by agricultural cultivation, which makes it unlikely that the site contains any undisturbed cultural resources. This alternative and the proposed project would have the same impact on potentially significant historic structures along Poppy Ridge Road. Therefore, site development under either the proposed project or Alternative 3 would result in similar impacts to cultural resources.

### **Visual Resources**

Implementation of either Alternative 3 or the proposed project would result in the development of the current agricultural properties. The site would be prepared through a combination of earth moving activities including excavation, grading, and compaction. These short-term impacts would occur under either development scenario.

In the long term, site development would result in the introduction of urban uses in a rural area that is undergoing urbanization. Alternative 3, therefore, would result in similar impacts with respect to visual quality when compared to the proposed project.

### **Land Use**

Land use consistency impacts associated with Alternative 3 would be similar when compared to the proposed project. The General Plan Amendment to Low Density Residential, commercial, parks and open space designations, and modifications to the transportation diagram would still be required. The proposed reduced density of three dwelling unit per acre, however, does not allow the provision of a variety of housing types, nor does it allow the increased densities along transit corridors. Land use compatibility impacts would remain similar to that of the proposed project.

### **Conclusion**

In conclusion, this alternative would result in similar environmental impacts in many of the environmental categories, while reducing the magnitude of impacts on public services, transportation, and air quality. This alternative would generally meet the project objectives. However, it would not provide as much variety in housing opportunities (low to high density) as the proposed project.

## **ALTERNATIVE 4 – OFFICE DEVELOPMENT ALTERNATIVE**

This alternative would consist of designation of approximately 285 acres of the Plan area from Single-Family Residential (258 acres), General Commercial (17 acres), Community Commercial Mixed Use (8 acres) and Park (2 acres) to Office. This designation of 285 acres of Office could generate 17,100 to 21,300 in new employment opportunities based on factors utilized at the January 23, 2002 Elk Grove General Plan Advisory Committee meeting. A portion of the commercially designated land, 25 acres, would be relocated to the northwest corner of the future intersection of Poppy Ridge Road and Big Horn Boulevard and would be designated as

General Commercial (see **Figure 6.0-2**). The plan area would also include the provision of a pedestrian/bicycle overcrossing of SR-99 connecting to Elk Grove Regional Park.

- Provision of a high-quality shopping center at the intersection of Poppy Ridge Road and Big Horn Boulevard;
- Provision of a bicycle/pedestrian overcrossing of SR-99 that would connect the Plan area to Elk Grove Regional Park; and,
- Provision of 200 to 300 acres of business/office development.

The following table summarizes land uses for this alternative:

**TABLE 6.0-3**  
**ALTERNATIVE 4 - OFFICE DEVELOPMENT ALTERNATIVE**

Land Use	Acres	Units
Single Family (Res Avg 4.5)	799	3,595
Single Family (Res Avg 6.0)	126	755
Single Family (Res Avg 7.0)	149	1,044
Multi-Family (20 du/acre)	36	720
<b>Total Residential Development</b>	<b>1,130</b>	<b>6,113</b>
General Commercial <sup>1</sup>	79	
Community Commercial-Mixed Use <sup>2</sup>	104	
Neighborhood Commercial-Mixed Use <sup>3</sup>	12	
Office	285	
Parks	83	
Schools	100	
Open Space	35	
Infrastructure and Roadways	92	
<b>Total Project Area</b>	<b>1,900±</b>	<b>6,113</b>

### Agricultural Resources

Both the project and this alternative would develop 1,900 acres of land for urban that has been historically in agricultural production. Because the area of development is the same for the proposed project and this alternative, similar impacts to agricultural resources (farmland loss and land use compatibility) would occur.

### Transportation and Circulation

Implementation of this alternative would result in a reduced number of residential units by approximately 21.9 percent, while providing an increase of 1,408.9 percent in office uses with the Plan area. The average daily trip generation and trip distribution in the plan area would be altered substantially from the proposed project. Average daily trips (ADT) would increase by approximately 12,000 and p.m. peak hour trips would increase by approximately 5,500. While this alternative could internalize residential trips to work places, it would encourage additional traffic to enter the plan area for work places, as it would generate from 2.80 to 3.45 jobs for each residence within the plan area. While this alternative would increase jobs available locally and could internalize trips within the City, the number of trips added in the p.m. peak hour would be

## 6.0 ALTERNATIVES

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anticipated to worsen local roadway impacts. This alternative would also have improved pedestrian and bicycle access over SR-99.

### **Air Quality**

Because similar on-site grading would occur under this alternative, the total amount of grading and construction-related air quality impacts would be similar to those of the project. The increase in ADT would result in an increase in operational air quality impacts. However, even with this reduction in ROG and NO<sub>x</sub>, the operational impacts would still remain significant and unavoidable.

### **Noise**

Construction noise impacts for this alternative would be similar to the proposed project. With an alteration of vehicle trip characteristics on the local roadway network, there would be an increase in project-generated noise impacts on and in the vicinity of the site due to project-generated vehicular traffic.

### **Hazards and Hazardous Materials**

Given the similar location of development between the proposed project and this alternative, and because development under this alternative would also place developed uses near potential hazards when compared with the proposed project, impacts associated with environmental hazards are similar to those of the proposed project.

### **Public Services and Utilities**

#### a) Water Resources

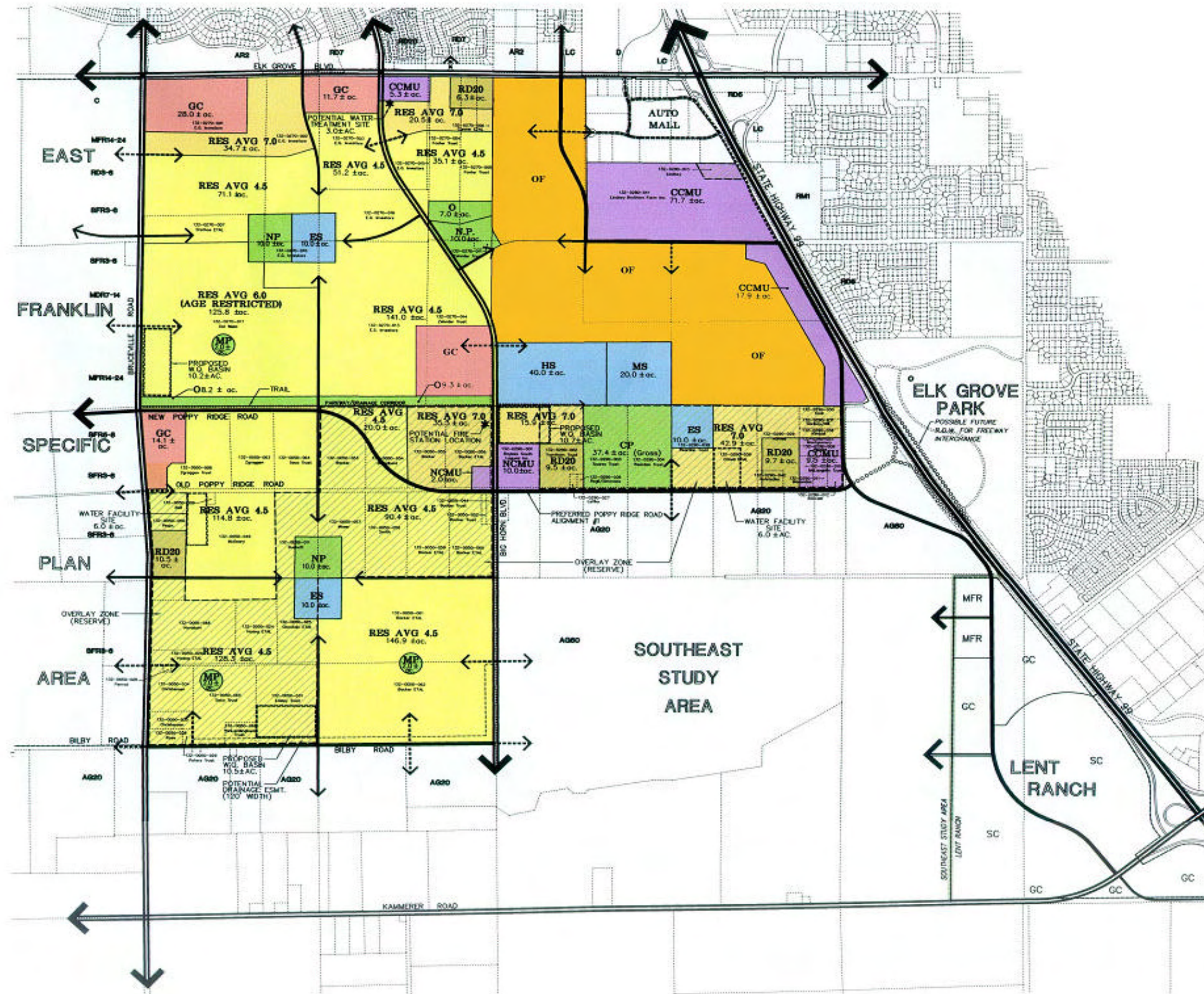
The demand for water resources would be less under this alternative than under the proposed project due to the alteration of land uses (i.e., reduction in residential uses and an increase in office uses) associated with this alternative. Off-site infrastructure would be necessary to serve either the proposed project or this alternative. Because this alternative would likely consume less water than the proposed project, it would reduce the magnitude of impacts when compared to the project with respect to water resources.

#### b) Wastewater Disposal

Wastewater generation for this alternative would decrease due to the alteration of land uses (i.e., reduction in residential uses and an increase in office uses) as compared to the proposed project. As with the proposed project, this wastewater would be treated by SRCSD. Off-site infrastructure would be necessary to serve either the proposed project or this alternative. Because less wastewater would be generated on the project site that would go to SRCSD, this alternative would have a reduced impact on the treatment facility and conveyance facilities than would the proposed project.

#### c) Solid Waste Disposal

This alternative would generate less solid waste annually than the proposed project due to the alteration of land uses (i.e., reduction in residential uses and an increase in office uses). Given that less solid waste would be generated by uses developed under this alternative compared to that of the proposed project, this alternative would reduce the magnitude of impact with respect to solid waste disposal.



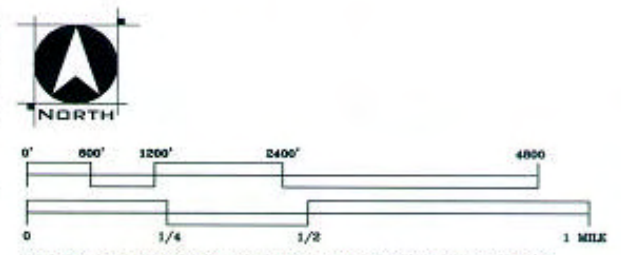
**LAND USE LEGEND**

SYMBOL	LAND USE	Average		
		Density Du/Ac	Acres	Units
[Yellow Box]	RES AVG 4.5 SINGLE FAMILY	4.5	799	3,595
[Light Green Box]	RES AVG 6.0 SINGLE FAMILY	6.0	125.8	756
[Light Blue Box]	RES AVG 7.0 SINGLE FAMILY	7.0	149	1,044
[Orange Box]	RD20 MULTI-FAMILY	20.0	36.0	720
[Pink Box]	GC GENERAL COMMERCIAL			79
[Purple Box]	CCMU COMMUNITY COMMERCIAL MIXED USE			104
[Light Purple Box]	NCMU NEIGHBORHOOD COMMERCIAL MIXED USE			12.0
[Light Orange Box]	OF OFFICE			288
[Light Blue Box]	ES, MS, HS SCHOOLS <i>(Precise configuration to be determined)</i>			100
[Light Green Box]	CP, NP, NP PARKS <i>(Precise configuration to be determined)</i>			83
[Light Green Box]	O OPEN SPACE			35
Arterial Roads				92
			1,900	6,113

[Hatched Box] DENOTES AREAS SUBJECT TO OVERLAY ZONING DESIGNATION "RESERVE" (NON-PARTICIPATING OWNERS) TOTAL OF 473.5± ACRES

**CIRCULATION LEGEND**

[Thick Solid Line]	HIGHWAY
[Double Solid Line]	MAJOR ARTERIAL (4 TO 6 LANES) <i>(Location mostly fixed)</i>
[Thin Solid Line]	MINOR ARTERIAL (2 LANE W/POTENTIAL 4 LANE) <i>(Location mostly fixed)</i>
[Dashed Line]	RESIDENTIAL COLLECTOR (2 LANES) <i>(Alignments to be determined with Tentative Maps)</i>
[Dotted Line]	LOCAL STREET <i>(Priority of internal alignments allowed, 4 ± mile spacing at arterials. Alignments to be determined with Tentative Maps.)</i>
[Dotted Line]	PEDESTRIAN/BIKE TRAIL



*Note: For conceptual planning purposes only. Actual dimensions, road alignments, acreages and yields will vary with more accurate final mapping and design.*



Figure 6.0-2  
Office Development Alternative

d) Fire Services

Site development under either the proposed project or this alternative would increase the amount of human presence and the number of structures in the project vicinity; creating a new demand for fire protection and emergency services. However, this alternative would reduce the population on-site when compared to the proposed project. This alternative would reduce the number of calls for service that would be generated by the proposed project, thereby reducing the magnitude of the impact with regard to fire protection service.

e) Police Protection/Crime Prevention

Site development under either the proposed project or this alternative would increase the amount of human presence; thereby creating demands on the Police Department to respond to an increase in the number of calls to the site in either condition. However, this alternative would reduce the population on-site when compared to the proposed project, reducing the number of calls for service proportionately. Therefore, this alternative would reduce the magnitude of the impact when compared to the proposed project with regard to police protection service.

f) Schools

This alternative would generate fewer students compared to the students that would be generated by the project. All uses that would be constructed on-site are required to pay statutory school impact fees to mitigate impacts to schools. Compliance with the fee program would mitigate impacts to the affected district regardless of the type of development proposed. However, based on impact potential without consideration to mitigation payments, this alternative would reduce the magnitude of the impacts when compared to the proposed project.

g) Parks and Recreation

Under City requirements of 5.0 acres of parkland per 1,000 persons, development of the proposed project would require the applicant to provide 108 acres of local parkland and/or in-lieu fees. The proposed project would include the provision of 80 acres of new parkland, resulting in a 28-acre shortfall. Per the same requirements, development under this alternative would require approximately 89 acres for parkland and/or in-lieu fees. As indicated in Section 4.6.7, Parks and Recreation, of the Draft EIR the applicant is required to pay an in-lieu fee to cover the cost generated by the increased demand for park and recreation facilities. This alternative would decrease the demand for park facilities beyond that of the proposed project.

h) Electrical Service

Development under this alternative would still require the extension and expansion of electrical distribution facilities in the plan area. However, this alternative would result in a substantial decrease in the demand for electrical service as compared to the proposed project.

## **6.0 ALTERNATIVES**

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### **Hydrology and Water Quality**

Urban runoff generated under this alternative would be conveyed and discharged off-site through existing and proposed drainage conveyance facilities and drainage basins. Section 4.7, Hydrology and Water Quality, of the Draft EIR indicates that site development would increase runoff flows over present conditions. However, because this alternative would cover the same surface area with impermeable material, the amount of runoff from the site would be the same under this alternative, resulting in a similar impact as the proposed project.

Under either development scenario, storm and irrigation runoff could contain substances, such as pesticides, herbicides, etc. However, stormwater runoff of development would be required to meet the same Regional Water Quality Control Board water quality standards. Therefore, this alternative and the proposed project would have similar impacts with respect to runoff water quality.

### **Biological Resources**

Under this alternative, the area developed would be the same as the area of the proposed project (disturbance to 1,900 acres) and would also result in the same amount of indirect impact on biological resources from human presence as the proposed project. Thus, impacts to biological resources would be similar under this alternative when compared to the proposed project.

### **Geology and Geotechnical Hazards**

Grading activity on-site would be similar to the proposed project (1,900 acres). The same soil conditions would apply regardless of the uses proposed on the property. In addition, improvements constructed on the site under this alternative would be subjected to the forces of ground movement (e.g., shaking buildings, etc) during seismic events similar to the proposed project, and would also be subject to the same construction requirements as the proposed project. Under this alternative, the geology and geotechnical impacts would be similar to the proposed project.

### **Cultural Resources**

The plan area has no known evidence of prehistoric or historic occupation based on archival records search. In addition, the site has been previously disturbed by agricultural cultivation, which makes it unlikely that the site contains any undisturbed cultural resources. This alternative and the proposed project would have the same impact on potentially significant historic structures along Poppy Ridge Road. Therefore, site development under either the proposed project or this alternative would result in similar impacts to cultural resources.

### **Visual Resources**

Implementation of either this alternative or the proposed project would result in the development of the current agricultural properties. The site would be prepared through a combination of earth moving activities including excavation, grading, and compaction. These short-term impacts would occur under either development scenario.

In the long term, site development would result in the introduction of urban uses in a rural area



that is undergoing urbanization. This alternative, therefore, would result in similar impacts with respect to visual quality when compared to the proposed project.

### Land Use

Land use consistency impacts from adjacent agricultural uses associated with this alternative would be similar when compared to the proposed project. A General Plan Amendment to modify the acreage Low Density Residential, office, commercial, parks and open space designations, and modifications to the transportation diagram would be required. Land use compatibility impacts would remain similar to that of the proposed project.

### Conclusion

In conclusion, this alternative would result in similar environmental impacts in many of the environmental categories, while reducing the magnitude of impacts on public services, transportation, and air quality. This alternative would generally meet the project objectives. However, it would not provide as much variety in housing opportunities (low to high density) as the proposed project. In addition, this alternative would not be considered the “environmentally superior” alternative. As identified in Section 6.0 of the Draft EIR, alternatives 1 and 2 would be environmentally superior.

### 6.3 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

**Table 6.0-4** on the following page provides a comparison of each of the project alternatives on an environmental topic-by-topic basis. Based on the foregoing analysis, Alternative 1 (No Project) is considered the environmentally superior alternative. Section 15326(d)(2) of the CEQA Guidelines indicates that, if the No Project Alternative is the “environmentally superior” alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives. In this instance, Alternative 2 (Agricultural Preservation) is considered environmentally superior to the proposed project.

**TABLE 6.0-4  
ALTERNATIVE IMPACT COMPARISON MATRIX**

ENVIRONMENTAL TOPIC	Alternative 1(a) (No development)	Alternative 1(b) (Exiting designation)	Alternative 2* (Agricultural Preservation)	Alternative 3 (Reduced Density)	Alternative 4 (Office Development)
AGRICULTURAL RESOURCES	<	<	<	=	=
TRANSPORTATION AND CIRCULATION	<	<	<	<	>
AIR QUALITY	<	<	<	<	>
NOISE	<	<	<	<	>
ENVIRONMENTAL HAZARDS	<	<	=	=	=

## 6.0 ALTERNATIVES

ENVIRONMENTAL TOPIC	Alternative 1 (a) (No development)	Alternative 1 (b) (Exiting designation)	Alternative 2* (Agricultural Preservation)	Alternative 3 (Reduced Density)	Alternative 4 (Office Development)
WATER RESOURCES	<	<	<	<	<
WASTEWATER DISPOSAL	<	<	<	<	<
SOLID WASTE DISPOSAL	<	<	<	<	<
FIRE SERVICES	<	<	<	<	<
POLICE PROTECTION/CRIME PREVENTION	<	<	<	<	<
SCHOOLS	<	<	<	<	<
PARKS AND RECREATION	<	<	<	<	<
ELECTRICAL SERVICE	<	<	<	<	<
HYDROLOGY AND WATER QUALITY	<	<	<	=	=
BIOLOGICAL RESOURCES	<	<	<	=	=
GEOLOGY AND GEOTECHNICAL HAZARDS	<	<	<	=	=
CULTURAL RESOURCES	<	<	<	=	=
VISUAL QUALITY	<	<	<	=	=
LAND USE	<	<	=	=	=
<b>KEY</b> (Level of Impact in Comparison to Proposed Project) < Alternative Produces Lesser Level of Impact = Alternative Produces Equal Level of Impact > Alternative Produces Greater Level of Impact * Environmentally Superior Alternative					

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## **7.0 LONG-TERM IMPLICATIONS OF THE PROJECT**

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## 7.0 UNAVOIDABLE SIGNIFICANT IMPACTS

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This section discusses the additional topics statutorily required by CEQA. The topics discussed include significant and unavoidable environmental impacts, growth-inducing impacts, and significant irreversible environmental changes/irretrievable commitment of resources.

### 7.1 SIGNIFICANT AND UNAVOIDABLE ENVIRONMENTAL EFFECTS

#### INTRODUCTION

Section 15126(b) of the CEQA Guidelines requires an EIR to describe any unavoidable significant impacts, including those that can be mitigated but not reduced to a level of insignificance. In addition, Section 15093(a) of the CEQA Guidelines allows the decision-making agency to determine if the benefits of a proposed project outweigh the unavoidable adverse environmental impacts of implementing the project. The City can approve a project with unavoidable adverse impacts if it prepares a "Statement of Overriding Considerations" setting forth the specific reasons for making such a judgement. A list of unavoidable adverse impacts identified in this EIR is provided below.

#### AGRICULTURAL RESOURCES

**Impact 4.1.3** The project would convert important farmland areas to urban uses. This loss would contribute to the cumulative loss of farmland in the region. The loss of such farmland from the Laguna Ridge Specific Plan project would contribute to a **cumulative significant** impact.

According to the Draft General Plan policies, conversion of the Southeast Policy Area as identified in the Draft General Plan Land Use Map would convert farmland to urban uses over the planning period covered by the new General Plan. This impact is identified as significant and unavoidable in the EIR prepared for the General Plan Update. The project would convert approximately 52.8 acres of Prime Farmland and 1,545.9 acres of Farmland of Statewide Importance to urban uses. To the extent that other projects in the County would affect Prime Farmland and Farmland of Statewide Importance, the loss of such farmland from the Laguna Ridge Specific Plan project would contribute to a cumulative significant impact.

#### Mitigation Measure

Mitigation measure options outlined in Impact 4.1.1 would not reduce the impact related to loss of agricultural lands nor would any of the options reduce the project impact as it relates to cumulative development. A permanent, irreplaceable loss of farmland would occur and the project's contribution to this impact is considered **significant and unavoidable**.

#### TRAFFIC AND CIRCULATION

##### Existing Arterial Roadway Segments

**Impact 4.2.1** The projected daily volume on the existing sections of Elk Grove Boulevard from Bruceville Road to Auto Center Drive, Elk Grove Boulevard from East Stockton Boulevard to Elk Grove-Florin Road, Grant Line Road between SR 99 and Waterman Road, Poppy Ridge Road from Bruceville Road to West Stockton Boulevard, West Stockton Boulevard between Kammerer Road and Poppy Ridge Road, and West Stockton Boulevard from Poppy Ridge Road to the Auto Mall

## 7.0 UNAVOIDABLE SIGNIFICANT IMPACTS

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Access, with the development of Laguna Ridge Specific Plan would exceed the City's thresholds for roadway segment operations. This would result in a **significant** impact.

Daily traffic volumes projected with the development of the proposed project shown on **Figure 4.2-9** were compared to the capacity criteria for existing arterial roadway segments presented in **Tables 4.2-1** and **4.2-2**. This comparison reveals that the operation of several roadway segments would be deficient with the addition of project traffic. Each deficiency under existing plus project conditions is discussed below. **Table 4.2-14** summarizes the arterial roadway analysis. Portions of some of these roadways, including Poppy Ridge Road, West Stockton Boulevard, and Bruceville Road, border the Plan area and would be improved with development of the project.

As shown in **Table 4.2-14**, the following roadway segments would operate deficiently with the addition of the plan area traffic.

- Elk Grove Boulevard from Bruceville Road to Auto Center Drive would decline from LOS B to LOS F.
- Elk Grove Boulevard from East Stockton Boulevard to Elk Grove-Florin Road would drop from LOS E to LOS F.
- Grant Line Road from SR 99 to Waterman Road operations would decrease from LOS C to LOS E.
- Poppy Ridge Road between Bruceville Road and West Stockton Boulevard, currently operating at LOS A, would deteriorate to LOS E.
- West Stockton Boulevard from Kammerer Road to Poppy Ridge Road would go from LOS D to LOS E.
- West Stockton Boulevard between Poppy Ridge Road and Auto Mall Access would decline from LOS D to LOS E.

### Mitigation Measures

Mitigation measures are provided below for each roadway segment operating deficiently, as described above, with the implementation of the Laguna Ridge Specific Plan.

#### *Elk Grove Boulevard – East Stockton Boulevard to Elk Grove-Florin Road*

**MM 4.2.1b** Elk Grove Boulevard between East Stockton Boulevard and Elk Grove-Florin Road shall be widened from two to three lanes in each direction. If the additional right-of-way necessary for the improvement cannot be obtained, the project applicant shall pay their fair-share of the estimated cost of the improvement and cost of the right-of-way into the City's Traffic Impact Fund.

*Timing/Implementation:* Prior to approval of subsequent development projects.

*Enforcement/Monitoring:* City of Elk Grove Development Services.

This improvement would provide sufficient capacity to accommodate the projected daily volume and would provide LOS C operation on Elk Grove Boulevard from East Stockton

## 7.0 UNAVOIDABLE SIGNIFICANT IMPACTS

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Boulevard to Elk Grove-Florin Road. This improvement is not included in the Laguna South Public Facilities Fee Program and would require the acquisition of additional right-of-way, which would require relocation of existing businesses and uses along Elk Grove Boulevard. Therefore, this improvement is not considered to be feasible. If additional right-of-way is not available, than the LOS would remain at LOS F and the impact would be **significant and unavoidable**.

### Study Intersections

**Impact 4.2.2** The addition of project traffic would cause LOS F operations at the Elk Grove Boulevard/Bruceville Road intersection during the a.m. and p.m. peak hours; LOS F operations at the Elk Grove Boulevard/Big Horn Road intersection during the a.m. and p.m. peak hours; LOS F operations at the Elk Grove Boulevard/Auto Center Drive intersection during the a.m. and p.m. peak hours; LOS F operations at the Elk Grove Boulevard/SR-99 SB Ramps intersection during the a.m. and p.m. peak hours; LOS F operations at the Poppy Ridge Road/Bruceville Road intersection during a.m. and p.m. peak hours; and LOS F operations at the Elk Grove Boulevard intersection during the p.m. peak hour. This would result in a **potentially significant** impact.

Existing plus project traffic volumes shown on **Figure 4.2-10** were used to calculate peak hour levels of service at the study intersections. Intersection LOS at each location is presented in **Table 4.2-15** and was compared to the capacity criteria for intersections provided in **Tables 4.2-3** and **4.2-4**.

As shown on **Figure 4.2-10**, the existing Elk Grove Boulevard/Bighorn Road intersection would be modified as part of the proposed project. A new northbound approach would be constructed to include a left-turn lane, a through lane, and a right-turn lane.

Based on the results shown in **Table 4.2-15**, the following intersections were identified to be deficient with addition of the project traffic:

- Elk Grove Boulevard/Bruceville Road (from LOS B to LOS F in both a.m. and p.m. peak hours)
- Elk Grove Boulevard/Big Horn Boulevard (from LOS B to LOS F in both a.m. and p.m. peak hours)
- Elk Grove Boulevard/West Laguna Springs Drive (from LOS A to LOS E in a.m. peak hour and from LOS A to LOS F in p.m. peak hour)
- Elk Grove Boulevard/Auto Center Drive (from LOS B to LOS F in a.m. peak hour and from LOS C to LOS F in p.m. peak hour)
- Elk Grove Boulevard/SR 99 Southbound Ramps (from LOS B to LOS F in a.m. peak hour and from LOS A to LOS F in p.m. peak hour)
- Elk Grove Boulevard/Waterman Road (from LOS D to LOS E in a.m. peak hour and would increase average delay by more than 5 seconds and remain at LOS F in p.m. peak hour)
- Poppy Ridge Road/Bruceville Road (from LOS A to LOS F in both a.m. and p.m. peak

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- Grant Line Road/West Stockton Boulevard (would increase average delay by more than 5 seconds and remain LOS F in both a.m. and p.m. peak hours)
- Grant Line Road/East Stockton Boulevard (from LOS E to LOS F in a.m. peak hour and would increase V/C by more than 0.05 and remain LOS F in p.m. peak hour)
- SR 99 Northbound Ramps/East Stockton Boulevard (would increase average delay by more than 5 seconds and remain LOS F in p.m. peak hour)
- SR 99 Southbound Ramps/West Stockton Boulevard (LOS D to LOS E in p.m. peak hour)
- Laguna Boulevard/Franklin Boulevard (from LOS D to LOS E in p.m. peak hour)
- Laguna Boulevard/Big Horn Boulevard (from LOS B to LOS E in p.m. peak hour)
- Elk Grove Boulevard/Elk Grove-Florin Road (LOS D to LOS E in p.m. peak hour)

### Mitigation Measures

#### *Elk Grove Boulevard/Auto Center Drive*

**MM 4.2.2d** Right-turn overlap phasing for the northbound right-turn movement shall be provided at the Elk Grove Boulevard/Auto Center Drive intersection. This improvement would require modification of the existing signal equipment and signal phasing.

Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP. Project and/or public facility financing plans and/or programs shall establish the timing of this improvement, to ensure it is in place prior to LOS E operations and recognizing that improvements would require Caltrans approval.

*Timing/Implementation:*      *Prior to approval of subsequent development projects.*

*Enforcement/Monitoring:*      *City of Elk Grove Development Services.*

This improvement is included in the Laguna South Public Facilities Fee Program. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, traffic movement, and water quality impacts and tree removal. The implementation of this improvement would provide LOS C and LOS E operation in the a.m. and p.m. peak hours, respectively. While implementation of this mitigation measure would improve traffic operations, it would not eliminate the deficiency identified based on the City's LOS D threshold and no feasible mitigation exists to improve traffic operations to LOS D or better. Therefore, while operations would be improved, the impact to this intersection would be **significant and unavoidable**.

#### *Elk Grove Boulevard/SR 99 Southbound Ramps*

**MM 4.2.2e** The following lane configurations shall be provided at the Elk Grove Boulevard/SR 99 Southbound Ramps intersection.

## 7.0 UNAVOIDABLE SIGNIFICANT IMPACTS

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- Two right-turn lanes, a shared through/left-turn lane, and an exclusive left-turn lane on the southbound approach.
- One right-turn lane and three through lanes on the eastbound approach.
- Three through lanes on the westbound approach.
- In addition, construct a loop on-ramp in the northwest quadrant of the interchange to replace the westbound left-turn movement.

These improvements will require coordination with Caltrans as well as incorporation into the Laguna South Public Facilities Fee Program. If the additional right-of-way necessary for the improvement cannot be obtained, the project applicant shall pay their fair-share of the estimated cost of the improvement and cost of the right-of-way into the City's Traffic Impact Fund.

*Timing/Implementation:* Prior to approval of subsequent development projects.

*Enforcement/Monitoring:* City of Elk Grove Development Services.

Elimination of the westbound left-turn movement would reduce the on signal phases from three to two, which would reduce delay and improve LOS. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, traffic movement, and water quality impacts and tree removal. The addition of the lane configurations identified above and the southbound loop on-ramp would provide LOS C and LOS D operation in the a.m. and p.m. peak hours, respectively. Some of the cost associated with this improvement (i.e., turn lanes) is included in the Laguna South Public Facilities Fee Program. The deficiency identified at the Elk Grove Boulevard/SR-99 SB Ramps intersection is due to insufficient capacity at the SR-99/Elk Grove Boulevard interchange under existing plus project conditions. Additional improvements to the interchange are currently considered economically infeasible due to right-of-way constraints. The addition of the southbound loop on-ramp would require additional right-of-way. Ultimately, improvements to the SR-99 Ramps would require coordination and approval by Caltrans associated with state right-of-way. Therefore, the impact to this intersection is considered **significant and unavoidable**.

### *Elk Grove Boulevard/Elk Grove-Florin Road*

**MM 4.2.2k** The following lane configurations shall be provided at the Elk Grove Boulevard/Elk Grove-Florin Road intersection.

- A shared through/right-turn lane, one through lane, and two left-turn lanes on the northbound approach.
- In addition, provide protected left-turn phasing on the northbound and southbound approaches.

Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program to include this improvement and by the annexation of the Laguna Ridge Specific Plan into the LSPFFP. Project and/or public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations.



## 7.0 UNAVOIDABLE SIGNIFICANT IMPACTS

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If the additional right-of-way necessary for the improvement cannot be obtained, the project applicant shall pay their fair-share of the estimated cost of the improvement and cost of the right-of-way into the City's Traffic Impact Fund.

*Timing/Implementation:* Prior to approval of subsequent development projects.

*Enforcement/Monitoring:* City of Elk Grove Development Services.

Implementation of this improvement would provide LOS D operation in the p.m. peak hour. This measure would eliminate the deficiency identified based on the City's LOS D threshold. This improvement is not included in the Laguna South Public Facilities Fee Program. Acquisition of additional right-of-way necessary for this improvement may not be feasible due to impacts to existing businesses and uses, therefore, this improvement may not be feasible. However, sufficient right-of-way may exist to construct components of this improvement. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, traffic movement, and water quality impacts. If additional right-of-way were not available, then the LOS would remain at LOS E and the impact would be **significant and unavoidable**.

### Arterial Roadway Segments

**Impact 4.2.3** The projected daily volume on the sections of Laguna Boulevard from Bruceville Road to SR 99, Laguna Boulevard from Franklin Road to Bruceville Road, Elk Grove Boulevard between Bruceville Road and Auto Center Drive, Elk Grove Boulevard from East Stockton Boulevard to Elk Grove-Florin Road, Bruceville Road from Elk Grove Boulevard to Laguna Boulevard, and Bruceville Road north of Laguna Boulevard, with the development of Laguna Ridge Specific Plan, would exceed the City's thresholds for roadway segment operations. This would result in a **significant** impact.

Cumulative plus project daily traffic volumes shown on **Figure 4.2-14** were compared to the capacity criteria for arterial roadway segments presented in **Tables 4.2-1** and **4.2-2**. **Table 4.2-18** displays arterial roadway service levels for cumulative conditions and cumulative plus project conditions.

Based on the information presented in **Table 4.2-18**, the addition of project traffic would create deficiencies on the following roadway segments:

- Laguna Boulevard from Bruceville Road to SR 99 would remain at LOS F and V/C would increase by 0.05.
- Elk Grove Boulevard from Bruceville Road to Auto Center Drive would deteriorate from LOS D to LOS F.
- Elk Grove Boulevard from East Stockton Boulevard to Elk Grove-Florin Road would remain at LOS F and V/C would increase by more than 0.05.
- Bruceville Road from Elk Grove Boulevard to Laguna Boulevard would remain at LOS F and V/C would increase by more than 0.05.
- Laguna Boulevard between Franklin Boulevard and Bruceville Road would decrease from LOS D to LOS E.

## 7.0 UNAVOIDABLE SIGNIFICANT IMPACTS

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- Bruceville Road north of Laguna Boulevard would be reduced from LOS D to LOS E.

### Mitigation Measures

#### *Laguna Boulevard – Bruceville Road to SR 99*

**MM 4.2.3a** The section of Laguna Boulevard between Bruceville Road and SR 99 shall be widened from three to four lanes in each direction.

If the additional right-of-way necessary for the improvement cannot be obtained, the project applicant shall pay their fair-share of the estimated cost of the improvement and cost of the right-of-way into the City's Traffic Impact Fund.

*Timing/Implementation:* Prior to approval of subsequent development projects.

*Enforcement/Monitoring:* City of Elk Grove Development Services.

This improvement would provide sufficient capacity to accommodate the projected daily volume and would provide LOS D operation, resulting in a less than significant impact. This improvement is not included in the Laguna South Public Facilities Fee Program and the City currently does not have thresholds or standards for eight-lane roadways. Sufficient right-of-way to construct this improvement the length of Laguna Boulevard from Bruceville Road to SR 99 may not be available as portions of this roadway are developed with existing businesses and uses. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, traffic movement, and water quality impacts. Therefore, this improvement may not be feasible. If additional right-of-way were not available then the LOS would remain at LOS F and the impact would be **significant and unavoidable**.

#### *Elk Grove Boulevard – Bruceville Road to Auto Center Drive*

**MM 4.2.3b** The section of Elk Grove Boulevard between Bruceville Road and Auto Center Drive shall be widened from three to four lanes in each direction.

If the additional right-of-way necessary for the improvement cannot be obtained, the project applicant shall pay their fair-share of the estimated cost of the improvement and cost of the right-of-way into the City's Traffic Impact Fund.

*Timing/Implementation:* Prior to approval of subsequent development projects.

*Enforcement/Monitoring:* City of Elk Grove Development Services.

This improvement would provide sufficient capacity to accommodate the projected daily volume and would provide LOS D operation, reducing the impact to less than significant. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, traffic movement, and water quality impacts, disturbance to special-status species that may inhabit or forage in the vicinity of the proposed improvement, and tree removal. This improvement is not included in the Laguna South Public Facilities Fee Program and the City currently does not have thresholds or standards for eight-lane roadways. This improvement may not be feasible if additional right-of-way is not available. If additional right-of-way were not available then the LOS would remain at LOS F and the impact would remain **significant and unavoidable**.

## 7.0 UNAVOIDABLE SIGNIFICANT IMPACTS

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### *Elk Grove Boulevard – East Stockton Boulevard to Elk Grove-Florin Road*

**MM 4.2.3c** Widen the section of Elk Grove Boulevard between East Stockton Boulevard and Elk Grove-Florin Road from two to three lanes in each direction.

If the additional right-of-way necessary for the improvement cannot be obtained, the project applicant shall pay their fair-share of the estimated cost of the improvement and cost of the right-of-way into the City's Traffic Impact Fund.

*Timing/Implementation:* Prior to approval of subsequent development projects.

*Enforcement/Monitoring:* City of Elk Grove Development Services.

This improvement would provide sufficient capacity to accommodate the projected daily volume and would provide LOS E operation which would reduce the impact to less than significant. However, this improvement is not included in the Laguna South Public Facilities Fee Program and would also require the acquisition of additional right-of-way. The segment of Elk Grove Boulevard between East Stockton Boulevard and Elk Grove-Florin Road is developed with business, residential, and other uses and right-of-way for the improvement may not be available. This would render the improvement infeasible, with the LOS remaining at LOS F and the impact **significant and unavoidable**.

### *Laguna Boulevard – Franklin Boulevard to Bruceville Road*

**MM 4.2.3e** Laguna Boulevard between Franklin Boulevard and Bruceville Road shall be widened from three to four lanes in each direction.

If the additional right-of-way necessary for the improvement cannot be obtained, the project applicant shall pay their fair-share of the estimated cost of the improvement and cost of the right-of-way into the City's Traffic Impact Fund.

*Timing/Implementation:* Prior to approval of subsequent development projects.

*Enforcement/Monitoring:* City of Elk Grove Development Services.

This improvement would provide sufficient capacity to accommodate the projected daily volume and would provide LOS B operation resulting in a less than significant impact. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, traffic movement, and water quality impacts, disturbance to special-status species that may inhabit or forage in the vicinity of the proposed improvement, and tree removal. However, this improvement would require additional right-of-way and the City currently does not have thresholds or standards for eight-lane roadways. Acquisition of additional right-of-way may not be feasible due to existing residences and businesses along this segment of Laguna Boulevard. If additional right-of-way were not available then the LOS would remain at LOS E and the impact would be **significant and unavoidable**.

### **Bruceville Road – North of Laguna Boulevard**

**MM 4.2.3f** Widen the section of Bruceville Road between Laguna Boulevard and Big Horn Boulevard from two to three lanes in each direction.

## 7.0 UNAVOIDABLE SIGNIFICANT IMPACTS

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If the additional right-of-way necessary for the improvement cannot be obtained, the project applicant shall pay their fair-share of the estimated cost of the improvement and cost of the right-of-way into the City's Traffic Impact Fund.

*Timing/Implementation:* Prior to approval of subsequent development projects.  
*Enforcement/Monitoring:* City of Elk Grove Development Services.

This improvement would provide sufficient capacity to accommodate the projected daily volume and would provide LOS B operation, which would reduce the impact to less than significant. This improvement would eliminate the deficiency identified based on the City's LOS D threshold. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, traffic movement, and water quality impacts. This improvement is not included in the Laguna South Public Facilities Fee Program, but is anticipated in the Draft General Plan Circulation Diagram. Existing residences and businesses along this roadway segment may make the acquisition of additional right-of-way infeasible. If additional right-of-way were not available then the LOS would remain at LOS E and the impact would be **significant and unavoidable**.

### Study Intersections

**Impact 4.2.5** Implementation of the proposed project would degrade operations at the Laguna Boulevard/Franklin Boulevard, Elk Grove Boulevard/Big Horn Boulevard, Elk Grove Boulevard/West Laguna Springs Drive, Elk Grove Boulevard/Auto Center Drive, Elk Grove Boulevard/SR 99 Southbound Ramps, Elk Grove Boulevard/East Stockton Boulevard, Elk Grove Boulevard/Elk Grove-Florin Road, Elk Grove-Florin Road/East Stockton Boulevard, Hood-Franklin Road/I-5 Southbound Ramps, Hood-Franklin Road/I-5 Northbound Ramps, Grant Line Road/West Stockton Boulevard, Grant Line Road/Waterman Road, Laguna Boulevard/Big Horn Boulevard, Laguna Boulevard/West Laguna Springs Drive, Elk Grove Boulevard/Franklin Boulevard, Elk Grove Boulevard/Bruceville Road, and Grant Line Road/Bradshaw Road intersections to unacceptable LOS conditions, resulting in a **cumulative significant** impact.

Cumulative plus project peak hour traffic volumes shown on **Figure 4.2-16** were used to calculate peak hour levels of service at the study intersections. Intersection LOS at each location is presented in **Table 4.2-20**.

The addition of project traffic would create deficiencies at the following study intersections, as shown in **Table 4.2-20** based on the City's thresholds,

- Laguna Boulevard/Franklin Boulevard (LOS E to LOS F in p.m. peak hour)
- Elk Grove Boulevard/Big Horn Boulevard (LOS D to LOS F in both a.m. and p.m. peak hours)
- Elk Grove Boulevard/West Laguna Springs Drive (LOS A to LOS F in a.m. peak hour and LOS C to LOS F in p.m. peak hour)
- Elk Grove Boulevard/Auto Center Drive (LOS F in a.m. and p.m. peak hour)

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- Elk Grove Boulevard/SR 99 Southbound Ramps (would remain at LOS F and average delay would increase by more than 5 seconds in both a.m. and p.m. peak hours)
- Elk Grove Boulevard/East Stockton Boulevard (would increase average delay by more than 5 seconds and remain at LOS F in a.m. peak hour)
- Elk Grove Boulevard/Elk Grove-Florin Road (would increase average delay by more than 5 seconds and remain at LOS F in p.m. peak hour)
- Elk Grove Boulevard/Franklin Boulevard (would increase average delay by more than 5 seconds and remain at LOS E in a.m. peak hour)
- Elk Grove Boulevard/Bruceville Road (would increase average delay by more than 5 seconds and remain at LOS F in p.m. peak hour)
- Elk Grove-Florin Road/East Stockton Boulevard (LOS D to LOS F in p.m. peak hour)
- Hood-Franklin Road/I-5 Southbound Ramps (would increase average delay by more than 5 seconds and remain at LOS F in p.m. peak hour)
- Hood-Franklin Road/I-5 Northbound Ramps (would increase average delay by more than 5 seconds and remain at LOS F in p.m. peak hour)
- Grant Line Road/West Stockton Boulevard (would increase average delay by more than 5 seconds and remain at LOS F in p.m. peak hour)
- Grant Line Road/Waterman Road (LOS D to LOS F in a.m. peak hour and LOS B to LOS F in p.m. peak hour)
- Laguna Boulevard/West Laguna Springs Drive (LOS C to LOS E in p.m. peak hour)
- Grant Line Road/Bradshaw Road (LOS B to LOS E in a.m. peak hour)

### Mitigation Measures

#### *Elk Grove Boulevard/Big Horn Boulevard*

**MM 4.2.5b** The following lane configurations shall be provided at the Elk Grove Boulevard/Big Horn Boulevard intersection.

- One right-turn lane, two through lanes, and two left-turn lanes on the northbound approach.
- One right-turn lane, two through lanes, and two left-turn lanes on the southbound approach.
- One right-turn lane, three through lanes, and two left-turn lanes on the eastbound approach.
- One right-turn lane, three through lanes, and two left-turn lanes on the westbound approach.

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- Right-turn overlap phasing on all approaches to the intersection, which would require modification of the existing signal equipment and signal phasing.

Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP. Project public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations and consistent with the Specific Plan's Infrastructure Phasing Provisions.

*Timing/Implementation:* Prior to approval of subsequent development projects.  
*Enforcement/Monitoring:* City of Elk Grove Development Services.

This improvement is included in the Laguna South Public Facilities Fee Program. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, traffic movement, and water quality impacts. The addition of the exclusive right-turn lane and overlap phasing would provide LOS E operation in both the a.m. and p.m. peak hours. No feasible mitigation exists to improve traffic operations to LOS D or better. While implementation of this mitigation measure would improve intersection operations, operations would remain at a deficient LOS resulting in a **significant and unavoidable** impact.

### *Elk Grove Boulevard/West Laguna Springs Drive*

**MM 4.2.5c** The following lane configurations shall be provided at the Elk Grove Boulevard/West Laguna Springs Drive intersection.

- One right-turn lane, two through lanes, and one left-turn lane on the southbound approach.
- Two right-turn lanes, two through lanes and one left-turn lane on the northbound approach.
- One right-turn lane, three through lanes, and two left-turn lanes on the westbound approach.
- One right-turn lane, three through lanes, and one left-turn lane on the eastbound approach.
- Protected left-turn phasing for the north and southbound left-turn movements.
- Provide right-turn overlap phasing on the northbound and southbound approaches, which would require modification of the existing signal equipment and signal phasing.

Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP. Project public facility financing plans and/or programs shall establish the timing of this

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improvement to ensure it is in place prior to LOS E operations and consistent with the Specific Plan's Infrastructure Phasing Provisions.

*Timing/Implementation:*      *Prior to approval of subsequent development projects.*

*Enforcement/Monitoring:*      *City of Elk Grove Development Services.*

This improvement is included in the Laguna South Public Facilities Fee Program. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, and water quality impacts. The addition of the lane configurations identified above and the overlap phasing would provide LOS E operation in both the a.m. peak hour and LOS F operation in the p.m. peak hour. Consequently, this measure would not eliminate the deficiency identified based on the City's threshold in the p.m. peak hour and the impact would remain **significant and unavoidable**.

### *Elk Grove Boulevard/Auto Center Drive*

**MM 4.2.5d** The following lane configurations shall be provided at the Elk Grove Boulevard/Auto Center Drive intersection.

- Two right-turn lanes, one through lane, and one left-turn lane on the northbound approach.
- Provide protected left-turn phasing on the northbound and southbound approaches.
- Provide right-turn overlap phasing on the northbound approach. Right-turn overlap phasing would require modification of the existing signal equipment and signal phasing.

Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP. Project and/or public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations.

*Timing/Implementation:*      *Prior to approval of subsequent development projects.*

*Enforcement/Monitoring:*      *City of Elk Grove Development Services.*

This improvement is included in the Laguna South Public Facilities Fee. The addition of the lane configurations and signal phasing identified above would provide LOS E and LOS F operation in the a.m. and p.m. peak hours, respectively. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, and water quality impacts. This improvement would reduce the proposed project's contribution to intersection operations to a less than significant impact during the a.m. peak hour, but even though operations would be improved during the p.m. peak hour the City's standard would be exceeded. This facility is anticipated to fail even without implementation of the project. However, this measure would not eliminate the deficiency identified based on the City's LOS D threshold in the p.m. peak hour and the impact would be **significant and unavoidable**.

*Elk Grove Boulevard/SR 99 Southbound Ramps*

- MM 4.2.5e** The following lane configurations shall be provided at the Elk Grove Boulevard/SR 99 Southbound Ramps intersection.
- One right-turn lane and three through lanes on the eastbound approach.
  - Three through lanes on the westbound approach.
  - Construct a loop on-ramp in the northwest quadrant of the interchange to replace the westbound left-turn movement.

This improvement will require coordination and approval of Caltrans. Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP.

*Timing/Implementation:* Prior to approval of subsequent development projects.  
*Enforcement/Monitoring:* City of Elk Grove Development Services.

Elimination of the westbound left-turn movement would reduce the on signal phases from three to two, which would reduce delay and improve LOS. The addition of the lane configurations identified above and the southbound loop on-ramp would provide LOS C and LOS E operation in the a.m. and p.m. peak hours, respectively. The addition of the southbound loop on-ramp would require additional right-of-way. Therefore, this improvement may not be feasible. If additional right-of-way were not available then the LOS would remain at LOS F. Some of the cost associated with this improvement (i.e., turn lanes) is included in the Laguna South Public Facilities Fee Program. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, and water quality impacts. While implementation of this mitigation measure would improve traffic operations, no feasible mitigation exists to improve traffic operations to LOS D or better. Therefore, the impact would be **significant and unavoidable**.

*Elk Grove Boulevard/Bruceville Road*

- MM 4.2.5g** The following lane configuration shall be provided at the Elk Grove Boulevard/Bruceville Road intersection.
- One right-turn lane on the westbound approach.
- Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP. Project and/or public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations.

*Timing/Implementation:* Prior to approval of subsequent development projects.  
*Enforcement/Monitoring:* City of Elk Grove Development Services



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This improvement is not included in the Laguna South Public Facilities Fee Program. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, and water quality impacts. Additional improvements to the intersection are limited due to right-of-way constraints. The implementation of these improvements would reduce the delay in the a.m. peak hour to less than 5 seconds compared to “no project” conditions. However, the LOS in the p.m. peak hour would continue to operate at LOS F. Despite the improvement to traffic operations in the a.m. peak hour, the impact would remain **significant and unavoidable** due to the project’s contribution to deficient operations at the intersection in the p.m. peak hour.

### *Elk Grove Boulevard/Elk Grove-Florin Road*

**MM 4.2.5h** The following lane configurations shall be provided at the Elk Grove Boulevard/Elk Grove-Florin Road intersection.

- A shared through/right-turn lane, one through lane, and one left-turn lane on the northbound approach.
- In addition, provide protected left-turn phasing on the northbound and southbound approaches.

Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program to include this improvement and by the annexation of the Laguna Ridge Specific Plan into the LSPFFP. Project and/or public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations.

*Timing/Implementation:* Prior to approval of subsequent development projects.

*Enforcement/Monitoring:* City of Elk Grove Development Services.

This improvement is not included in the Laguna South Public Facilities Fee Program. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, and water quality impacts. Additional improvements to the intersection are limited due to right-of-way constraints. The implementation of these improvements would reduce the delay in the a.m. peak hour to less than 5 seconds compared to “no project” conditions. However, the LOS in the p.m. peak hour would continue to operate at LOS F. Despite the improvement to traffic operations in the a.m. peak hour, the impact would remain **significant and unavoidable** due to the project’s contribution to deficient operations at the intersection in the p.m. peak hour.

### *Elk Grove-Florin Road/East Stockton Boulevard*

**MM 4.2.5i** A traffic signal shall be installed and the following lane configurations shall be provided at the Elk Grove-Florin Road/East Stockton Boulevard intersection.

- One through lane and one left-turn lane on the southbound approach.
- One right-turn lane and two left-turn lanes on the westbound approach.
- One right-turn lane and one through lane on the northbound approach.

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- This improvement would require 3-phase signal operation.

Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP and to include this improvement. Project and/or public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations.

*Timing/Implementation:* Prior to approval of subsequent development projects.  
*Enforcement/Monitoring:* City of Elk Grove Development Services.

This improvement is not included in the Laguna South Public Facilities Fee Program. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, and water quality impacts. Implementation of these improvements would provide LOS B and LOS E operation in the a.m. and p.m. peak hours, respectively. No feasible mitigation exists to improve the project's contribution to deficient operations to an acceptable level, therefore, the impact would be **significant and unavoidable**.

### *Hood-Franklin Road/I-5 Northbound Ramps*

**MM 4.2.5j** Install a traffic signal and coordinate it with the Hood-Franklin Road/I-5 Northbound Ramps intersection.

This improvement will require coordination and approval from Caltrans and Sacramento County. Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program to include this improvement and by the annexation of the Laguna Ridge Specific Plan into the LSPFFP.

*Timing/Implementation:* Prior to approval of subsequent development projects.  
*Enforcement/Monitoring:* City of Elk Grove Development Services, Sacramento Count, and Caltrans

This improvement is not included in the Laguna South Public Facilities Fee Program. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, and water quality impacts. Implementation of these improvements would provide LOS A and LOS C operation during the a.m. and p.m. peak hours, respectively, and would reduce the impact to less than significant. However, this improvement is outside of the City's jurisdiction and, ultimately, timing and approval of this improvement would be the responsibility of Caltrans. Therefore, this impact would be **significant and unavoidable**.

### *Hood-Franklin Road/I-5 Southbound Ramps*

**MM 4.2.5k** Install a traffic signal and coordinate it with the Hood-Franklin Road/I-5 Southbound Ramps intersection.

This improvement will require coordination and approval from Caltrans and Sacramento County. Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee

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Program to include this improvement and by the annexation of the Laguna Ridge Specific Plan into the LSPFFP.

*Timing/Implementation:* Prior to approval of subsequent development projects.

*Enforcement/Monitoring:* City of Elk Grove Development Services, Sacramento County, and Caltrans

This improvement is not included in the Laguna South Public Facilities Fee Program. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, and water quality impacts. Implementation of these improvements would provide LOS B and LOS C operation during the a.m. and p.m. peak hours, respectively. Implementation of this mitigation measure would reduce the impact to less than significant. However, this improvement is outside of the City's jurisdiction and, ultimately, timing and approval of this improvement would be the responsibility of Caltrans. Therefore, this impact would be **significant and unavoidable**.

### Freeway Mainline Segments

**Impact 4.2.6** Under cumulative plus project conditions, the section of SR-99 north of the Laguna Boulevard interchange would operate at LOS F during the a.m. peak hour (northbound) and LOS F during the p.m. peak hour (southbound) and the section of I-5 north of the Elk Grove Boulevard interchange would operate at LOS E during the a.m. peak hour (northbound). This would be a **cumulative significant** impact.

**Table 4.2-23** presents the LOS on the freeway mainline sections under cumulative plus project conditions. The following freeway segments would operate unacceptably, based on Caltrans' Concept LOS thresholds, with the addition of the proposed project under cumulative conditions.

- I-5 Northbound – north of Hood-Franklin Road (LOS E to LOS F in a.m. peak hour)
- I-5 Southbound – north of Hood-Franklin Road (LOS F increased by more than 0.05 in p.m. peak hour)
- I-5 Northbound – north of Laguna Boulevard (LOS F increased by more than 0.05 V/C in a.m. peak hour)
- I-5 Southbound – north of Laguna Boulevard (LOS F increased by more than 0.05 V/C in p.m. peak hour )
- I-5 Northbound – south of Hood-Franklin Road (LOS D to LOS E in p.m. peak hour)
- I-5 Southbound – south of Hood-Franklin Road (LOS D to LOS E in p.m. peak hour)
- I-5 Northbound – north of Elk Grove Boulevard (LOS D to LOS E in a.m. peak hour)
- I-5 Southbound – north of Elk Grove Boulevard (LOS D to LOS E in p.m. peak hour)

As shown in **Table 4.2-23**, the 1994 HCM method identifies the northbound and southbound segments of SR-99 north of the Laguna Boulevard interchange and the segment of I-5 north of the Elk Grove Boulevard interchange to be deficient, with or without the project.

Mitigation Measures

*I-5 Northbound – north of Hood-Franklin Road*

**MM 4.2.6a** The project shall contribute to the following improvement to I-5:

- Construction of one lane northbound between Hood-Franklin Road and Elk Grove Boulevard.

This improvement will require coordination and approval from Caltrans. Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP as well as through the project's financing program and/or plan.

*Timing/Implementation: Prior to approval of subsequent development projects.*

*Enforcement/Monitoring: City of Elk Grove Development Services and Caltrans*

Improvements to the I-5 mainline are included in the LSPFFP for local contribution to these improvements. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, traffic flow, and water quality impacts. However, I-5 is a state highway facility and this improvement is not currently programmed in the Metropolitan Transportation Plan (MTP). Further, I-5 is under the jurisdiction of Caltrans and it is outside the City's jurisdiction to implement this improvement. Consequently, while this is a viable mitigation measure, the timing of this improvement is not known and will depend on when Caltrans (acting as the lead agency) submits the projects for inclusion into the MTP. As such, this impact is considered to be **significant and unavoidable** until the timing of this improvement is determined.

*I-5 Southbound – north of Hood-Franklin Road*

**MM 4.2.6b** The project shall contribute to the following improvement to I-5:

- Construction of one lane southbound between Hood-Franklin Road and Elk Grove Boulevard.

This improvement will require coordination and approval from Caltrans. Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP as well as through the project's financing program and/or plan.

*Timing/Implementation: Prior to approval of subsequent development projects.*

*Enforcement/Monitoring: City of Elk Grove Development Services and Caltrans.*

Implementation of this improvement would provide LOS C operation in the p.m. peak hour on the identified segment of I-5. This measure would eliminate the deficiency identified and, with construction of the improvement, the impact would be less than significant. Environmental

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impacts associated with this mitigation measure may include temporary air quality, noise, traffic flow, and water quality impacts. Improvements to the I-5 mainline are included in the LSPFFP for local contribution to these improvements. However, I-5 is a state highway facility and this improvement is not currently programmed in the Metropolitan Transportation Plan (MTP). Consequently, while this is a viable mitigation measure, the timing of this improvement is not known and will depend on when Caltrans (acting as the lead agency) submits the projects for inclusion into the MTP. Since I-5 is under the jurisdiction of Caltrans, it is outside the City's jurisdiction to implement this improvement. As such, this impact is considered to be **significant and unavoidable** until the timing of this improvement is determined.

### *I-5 Northbound – north of Laguna Boulevard*

**MM 4.2.6c** The project shall contribute to the following improvement to I-5:

- Construction of one lane northbound between Laguna Boulevard and Pocket Road.

This improvement will require coordination and approval from Caltrans. Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP as well as through the project's financing program and/or plan.

*Timing/Implementation:* Prior to approval of subsequent development projects.

*Enforcement/Monitoring:* City of Elk Grove Development Services and Caltrans.

Implementation of this improvement would provide LOS D operation in the a.m. peak hour on the identified segment of I-5. This measure would eliminate the deficiency identified and, with construction of the improvement, the impact would be less than significant. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, traffic flow, and water quality impacts. Improvements to the I-5 mainline are included in the LSPFFP for local contribution to these improvements. However, I-5 is a state highway facility and this improvement is not currently programmed in the Metropolitan Transportation Plan (MTP). Consequently, while this is a viable mitigation measure, the timing of this improvement is not known and will depend on when Caltrans (acting as the lead agency) submits the projects for inclusion into the MTP. Further, I-5 is under the jurisdiction of Caltrans and it is outside the City's jurisdiction to implement this improvement. As such, this impact is considered to be **significant and unavoidable** until the timing of this improvement is determined.

### *I-5 Southbound – north of Laguna Boulevard*

**MM 4.2.6d** The project shall contribute to the following improvement to I-5:

- Construction of one lane southbound between Laguna Boulevard and Pocket Road.

This improvement will require coordination and approval from Caltrans. Fair-share funding for the above roadway improvement shall be determined by the

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modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP as well as through the project's financing program and/or plan.

*Timing/Implementation:* Prior to approval of subsequent development projects.

*Enforcement/Monitoring:* City of Elk Grove Development Services and Caltrans.

Implementation of this improvement would provide LOS C operation in the p.m. peak hour on the identified segment of I-5. This measure would eliminate the deficiency identified and, with construction of the improvement, the impact would be less than significant. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, traffic flow, and water quality impacts. Improvements to the I-5 mainline are included in the LSPFFP for local contribution to these improvements. However, I-5 is a state highway facility and this improvement is not currently programmed in the Metropolitan Transportation Plan (MTP). Consequently, while this is a viable mitigation measure, the timing of this improvement is not known and will depend on when Caltrans (acting as the lead agency) submits the projects for inclusion into the MTP. Further, I-5 is under the jurisdiction of Caltrans and it is outside the City's jurisdiction to implement this improvement. As such, this impact is considered to be **significant and unavoidable** until the timing of this improvement is determined.

### *I-5 Northbound – south of Hood-Franklin Road*

**MM 4.2.6e** The project shall contribute to the following improvement to I-5:

- Construction one lane northbound (approximately 0.25 miles) south of Hood-Franklin Road.

This improvement will require coordination and approval from Caltrans. Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP as well as through the project's financing program and/or plan.

*Timing/Implementation:* Prior to approval of subsequent development projects.

*Enforcement/Monitoring:* City of Elk Grove Development Services and Caltrans.

Implementation of this improvement would provide LOS C operation in the p.m. peak hour on the identified segment of I-5. This measure would eliminate the deficiency identified and, with construction of the improvement, the impact would be less than significant. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, traffic flow, and water quality impacts. Improvements to the I-5 mainline are included in the LSPFFP for local contribution to these improvements. However, I-5 is a state highway facility and this improvement is not currently programmed in the Metropolitan Transportation Plan (MTP). Consequently, while this is a viable mitigation measure, the timing of this improvement is not known and will depend on when Caltrans (acting as the lead agency) submits the projects for inclusion into the MTP. Further, I-5 is under the jurisdiction of Caltrans and it is outside the City's

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jurisdiction to implement this improvement. As such, this impact is considered to be **significant and unavoidable** until the timing of this improvement is determined.

### *I-5 Southbound – south of Hood-Franklin Road*

**MM 4.2.6f** The project shall contribute to the following improvement to I-5:

- Construction one lane southbound (approximately 0.25 miles) south of Hood-Franklin Road.

This improvement will require coordination and approval from Caltrans. Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP as well as through the project's financing program and/or plan.

*Timing/Implementation:* Prior to approval of subsequent development projects.

*Enforcement/Monitoring:* City of Elk Grove Development Services and Caltrans.

Implementation of this improvement would provide LOS C operation in the p.m. peak hour on the identified segment of I-5. This measure would eliminate the deficiency identified and, with construction of the improvement, the impact would be less than significant. Improvements to the I-5 mainline are included in the LSPFFP for local contribution to these improvements. However, I-5 is a state highway facility and this improvement is not currently programmed in the Metropolitan Transportation Plan (MTP). Consequently, while this is a viable mitigation measure, the timing of this improvement is not known and will depend on when Caltrans (acting as the lead agency) submits the projects for inclusion into the MTP. As such, this impact is considered to be **significant and unavoidable** until the timing of this improvement is determined.

### *I-5 Northbound – north of Elk Grove Boulevard*

**MM 4.2.6g** The project shall contribute to the following improvement to I-5:

- Construction of one lane northbound between Elk Grove Boulevard and Laguna Boulevard.

This improvement will require coordination and approval from Caltrans. Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP as well as through the project's financing program and/or plan.

*Timing/Implementation:* Prior to approval of subsequent development projects.

*Enforcement/Monitoring:* City of Elk Grove Development Services and Caltrans.

Implementation of this improvement would provide LOS C operation in the a.m. peak hour on the identified segment of I-5. This measure would eliminate the deficiency identified and, with

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construction of the improvement, the impact would be less than significant. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, traffic, and water quality impacts. Improvements to the I-5 mainline are included in the LSPFFP for local contribution to these improvements. However, I-5 is a state highway facility and this improvement is not currently programmed in the Metropolitan Transportation Plan (MTP). Consequently, while this is a viable mitigation measure, the timing of this improvement is not known and will depend on when Caltrans (acting as the lead agency) submits the projects for inclusion into the MTP. As I-5 is under the jurisdiction of Caltrans, it is outside the control of the City to implement this improvement. As such, this impact is considered to be **significant and unavoidable** until the timing of this improvement is determined.

### *I-5 Southbound – north of Elk Grove Boulevard*

**MM 4.2.6h** The project shall contribute to the following improvement to I-5:

- Construction of one lane southbound between Elk Grove Boulevard and Laguna Boulevard.

This improvement will require coordination and approval from Caltrans. Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP as well as through the project's financing program and/or plan.

*Timing/Implementation:* Prior to approval of subsequent development projects.

*Enforcement/Monitoring:* City of Elk Grove Development Services and Caltrans

Implementation of this improvement would provide LOS C operation in the p.m. peak hour on the identified segment of I-5. This measure would eliminate the deficiency identified and, with construction of the improvement, the impact would be less than significant. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, traffic, and water quality impacts. Improvements to the I-5 mainline are included in the LSPFFP for local contribution to these improvements. However, I-5 is a state highway facility and this improvement is not currently programmed in the Metropolitan Transportation Plan (MTP). Consequently, while this is a viable mitigation measure, the timing of this improvement is not known and will depend on when Caltrans (acting as the lead agency) submits the projects for inclusion into the MTP. Further, I-5 is under the jurisdiction of Caltrans and it is outside the responsibility of the City to implement this improvement. As such, this impact is considered to be **significant and unavoidable** until the timing of this improvement is determined.

### **Freeway Ramps**

**Impact 4.2.7** Implementation of the proposed project would cause operations on the SR-99 northbound on-ramp junction from Laguna Boulevard to deteriorate from LOS D to F during the a.m. peak hour; on the SR-99 southbound off-ramp junction to Laguna Boulevard to deteriorate from LOS D to F during the p.m. peak hour; on the SR-99 southbound loop on-ramp junction from Grant Line Road to operate at LOS F during the p.m. peak hour; on the I-5 northbound off-ramp to Hood Franklin Road to operate at LOS E during the a.m. peak hour; on the I-5 northbound on-



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ramp from Hood Franklin Road to operate at LOS E during the a.m. peak hour; the I-5 southbound off-ramp to Hood Franklin Road to operate at LOS E during the p.m. peak hour; the I-5 northbound off-ramp to Elk Grove Boulevard to operate at LOS E during the a.m. peak hour and the I-5 northbound on-ramp from Elk Grove Boulevard to operate at LOS F during the a.m. peak hour indicating a **cumulative significant** impact.

Traffic volumes for the freeway ramps within the study area were obtained from the cumulative plus project intersection volumes shown on **Figure 4.2-16**. **Table 4.2-24** presents the LOS at the freeway ramp junctions under cumulative plus project conditions.

As shown in **Table 4.2-24**, the following ramp junctions on I-5 would operate at unacceptable levels of service based on Caltrans' Concept LOS thresholds.

- Hood Franklin Road/I-5 Southbound Off-Ramp (LOS D to LOS E in a.m. peak hour)
- Hood Franklin Road/I-5 Southbound Loop On-Ramp (LOS C to LOS E in a.m. peak hour)

### Mitigation Measures

#### *Hood-Franklin Road/I-5 Southbound Off-Ramp*

**MM 4.2.7a** The project shall contribute to the following improvement to I-5:

- Construction of one lane southbound between Hood-Franklin Road and Elk Grove Boulevard.

This improvement will require coordination and approval from Caltrans. Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP as well as through the project's financing program and/or plan.

*Timing/Implementation:*      *Prior to approval of subsequent development projects.*

*Enforcement/Monitoring:*      *City of Elk Grove Development Services and Caltrans.*

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Implementation of this improvement would provide LOS C operation in the p.m. peak hour on the identified segment of I-5. This measure would eliminate the deficiency identified and, with construction of the improvement, the impact would be less than significant. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, traffic, and water quality impacts. Improvements to the I-5 mainline are included in the LSPFFP for local contribution to these improvements. However, I-5 is a state highway facility and this improvement is not currently programmed in the Metropolitan Transportation Plan (MTP). Consequently, while this is a viable mitigation measure, the timing of this improvement is not known and will depend on when Caltrans (acting as the lead agency) submits the projects for inclusion into the MTP. Since I-5 is under the jurisdiction of Caltrans, it is outside the control of the City to implement this improvement. As such, this impact is considered to be **significant and unavoidable** until the timing of this improvement is determined.

### *Hood-Franklin Road/I-5 Southbound Loop On-Ramp*

**MM 4.2.7b** The project shall contribute to the following improvement to I-5:

- Construction of one lane southbound from the southbound off-ramp at Hood-Franklin Road approximately 0.25 miles south of Hood-Franklin Road.

This improvement will require coordination and approval from Caltrans. Fair-share funding for the above roadway improvement shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the LSPFFP as well as through the project's financing program and/or plan.

*Timing/Implementation:*      *Prior to approval of subsequent development projects.*

*Enforcement/Monitoring:*      *City of Elk Grove Development Services and Caltrans.*

Implementation of this improvement would provide LOS C operation in the p.m. peak hour on the identified segment of I-5. This measure would eliminate the deficiency identified and, with construction of the improvement, the impact would be less than significant. Environmental impacts associated with this mitigation measure may include temporary air quality, noise, traffic, and water quality impacts. Improvements to the I-5 mainline are included in the LSPFFP for local contribution to these improvements. However, I-5 is a state highway facility and this improvement is not currently programmed in the Metropolitan Transportation Plan (MTP). Consequently, while this is a viable mitigation measure, the timing of this improvement is not known and will depend on when Caltrans (acting as the lead agency) submits the projects for inclusion into the MTP. This facility is under the jurisdiction of Caltrans and it is outside the City's control to implement this improvement. As such, this impact is considered to be **significant and unavoidable** until the timing of this improvement is determined.

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### AIR QUALITY

#### Construction Impacts

**Impact 4.3.1** Construction activities associated with the development of the proposed specific plan area would contribute to regional pollutants, such as ROG, NO<sub>x</sub>, and PM<sub>10</sub>. This would result in a **significant impact**.

The SMAQMD guidance documents differentiate between Phase I (clearing, grading, trenching, etc.) and Phase II (actual construction) activities and air pollutant sources. **Table 4.3-3** shows calculated emissions for project Phase I and Phase II activities assuming a 20-year buildout of the Specific Plan area.

Construction activities would be subject to the SMAQMD Rule 403 that requires taking reasonable precautions to prevent the emissions of fugitive dust, such as “using water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the construction of roadways, or the clearing of land” where possible and applying “asphalt, oil, water, or suitable chemicals on dirt roads, materials, stockpiles and other surfaces which can give rise to airborne dust.”

Emissions in Phase I of construction are associated with heavy equipment. Emissions occur from both equipment exhaust and fugitive dust from the disturbed soil surface. Emissions in Phase II of construction are primarily associated with construction employee commute vehicles, asphalt paving, mobile equipment, stationary equipment, and architectural coatings.

The URBEMIS-2001 program was used to estimate emissions during Phase I and Phase II of construction and for calculating the mitigation effect of specific construction practices in reducing impacts. Adjustments were made, where necessary, to account for the 20-year build-out period for the project. As seen in **Table 4.4-3**, the construction emission for NO<sub>x</sub> would exceed SMAQMD’s construction emission threshold. Construction activities would also have the potential to cause local exceedances of the state standards for particulate matter. This impact is significant.

#### Mitigation Measures

**MM 4.3.1a** The project applicant shall require that the contractors water all exposed surfaces, graded areas, storage piles and haul roads at least twice daily during construction. This requirement shall be included as a note in all project construction plans.

*Timing/Implementation:* During all grading and construction phases of the project.

*Enforcement/Monitoring:* City of Elk Grove Development Services and SMAQMD.

**MM 4.3.1b** The project applicant shall require that the contractor minimize the amount of material actively worked, the amount of disturbed area, and the amount of material stockpiled. This requirement shall be included as a note in all project construction plans.

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*Timing/Implementation:* During all grading and construction phases of the project.

*Enforcement/Monitoring:* City of Elk Grove Development Services and SMAQMD.

**MM 4.3.1c** The project applicant shall require that the contractor limit vehicle speed for onsite construction vehicles to 15 mph when winds exceed 20 miles per hour. This requirement shall be included as a note in all project construction plans.

*Timing/Implementation:* During all grading and construction phases of the project.

*Enforcement/Monitoring:* City of Elk Grove Development Services and SMAQMD.

**MM 4.3.1d** The project applicant shall require paved streets adjacent to construction sites to be washed or swept daily to remove accumulated dust. This requirement shall be included as a note in all project construction plans.

*Timing/Implementation:* During all grading and construction phases of the project.

*Enforcement/Monitoring:* City of Elk Grove Development Services and SMAQMD.

**MM 4.3.1e** The project applicant shall require that, when transporting soil or other materials by truck during construction, two feet of freeboard shall be maintained by the contractor, and that the materials be covered. This requirement shall be included as a note in all project construction plans.

*Timing/Implementation:* During all grading and construction phases of the project.

*Enforcement/Monitoring:* City of Elk Grove Development Services and SMAQMD.

**MM 4.3.1f** This mitigation measure shall be implemented by all subsequent projects within the Laguna Ridge Specific Plan. An individual project may be exempt from the following mitigation if it is less than 20 acres in size and will generate less than 400 pounds per day of NO<sub>x</sub>. All other projects (not meeting the two exemption criteria) will be required to implement the following measures.

(a) **Category 1: Reducing NO<sub>x</sub> emissions from off-road diesel powered equipment.**

The prime contractor shall provide a plan for approval by the City of Elk Grove and SMAQMD demonstrating that the heavy-duty (>50 horsepower) off-road vehicles to be used in the construction project, and operated by either the prime contractor or any subcontractor, will achieve a fleet-averaged 20 percent NO<sub>x</sub> reduction and a 45 percent particulate reduction compared to the most recent CARB fleet average. The prime contractor shall submit to the City of Elk Grove and SMAQMD a comprehensive inventory of all off-road construction equipment, equal to or greater than 50 horsepower, that will be used an aggregate of 40 or more hours during the construction project. The inventory shall include the horsepower rating, engine production year, and hours

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of use or fuel throughput for each piece of equipment. The inventory shall be updated and submitted monthly throughout the duration of the project, except that an inventory shall not be required for any 30-day period in which no construction activity occurs; and,

(b) **Category 2: Controlling visible emissions from off-road diesel powered equipment.**

The prime contractor shall ensure that emissions from all off-road diesel powered equipment used on the Specific Plan area do not exceed 40 percent opacity for more than three minutes in any one hour. Any equipment found to exceed 40 percent opacity shall be repaired immediately, and the City of Elk Grove and SMAQMD shall be notified within 48 hours of identification of non-compliant equipment. A visual survey of all in-operation equipment shall be made at least weekly, and a month summary of the visual results shall be submitted to the City and SMAQMD throughout the duration of the project, except that the monthly summary shall not be required for any 30-day period in which no construction activity occurs. The monthly summary shall include the quantity and type of vehicles surveyed as well as the dates of each survey. The SMAQMD and/or other officials may conduct periodic site inspections to determine compliance. Nothing in this section shall supersede other SMAQMD or state rules or regulation.

In the event construction equipment meeting the requirements set forth above is determined not to be available, the project applicant shall notify the City and SMAQMD. Upon verification that required low-emission construction equipment is not available, the City may waive this measure. This requirement shall be included as a note in all project construction plans.

*Timing/Implementation:*            *Prior to and during construction activities.*  
*Enforcement/Monitoring:*        *City of Elk Grove Development Services and SMAQMD.*

### MM 4.3.1g

The project applicant shall require contractors to implement ridesharing programs for construction employees traveling to and from the site. This requirement shall be included as a note in all project construction plans.

*Timing/Implementation:*            *During all grading and construction phases of the project.*  
*Enforcement/Monitoring:*        *City of Elk Grove Development Services and SMAQMD.*

While implementation of these mitigation measures would minimize the project's construction impact, emissions of NO<sub>x</sub> would remain above the SMAQMD threshold and the potential to locally exceed the PM<sub>10</sub> CAAQS would still exist, so this impact would be considered **significant and unavoidable**.

### Operational Impacts

**Impact 4.3.2** Project emissions from mobile and area sources, such as natural gas combustion, fireplaces, and other consumer products, exceed SMAQMD's significance threshold. This would result in a **significant** impact.

Total emissions of criteria pollutants associated with the project are shown in **Table 4.3-4** for the two ozone precursors (reactive organic gases and nitrogen oxides) and PM<sub>10</sub>. Project emissions of ROG and NO<sub>x</sub> exceed the SMAQMD's significance threshold of 65 pounds per day. Based on this criterion, the project would have a significant impact on regional ozone air quality. Project operational emissions of PM<sub>10</sub>, which are dispersed over a large area, are unlikely to result in a violation of the California Ambient Air Quality Standard.

The methodology and assumptions used in the Air Quality Study to calculate regional emissions was based on trip generation rates provided by the project transportation consultant, average trip lengths and vehicle mixes for Sacramento, and an average driving speed of 35 mph. Land uses included a mix of residential and non-residential. Additionally, an ambient summertime temperature of 85 degrees F and an analysis year of 2020 were assumed.

Project traffic would add to carbon monoxide concentrations along surface streets in the vicinity of the Specific Plan area. A screening form of the CALINE-4 computer simulation model was applied to intersections within and near the Specific Plan area to predict worst-case concentrations of carbon monoxide at project buildout. The analysis assumed a year 2025 buildout date for the project. The intersections analyzed were selected based on Level of Service.

**Table 4.3-5** shows predicted concentrations of carbon monoxide near selected intersections. Concentrations are predicted for year 2025 cumulative traffic with and without the proposed project.

The proposed project would increase 1-hour averaged concentrations by up to 1.51 PPM and 8-hour averaged concentrations by up to 1.0 PPM. However, predicted concentrations do not exceed the state/federal ambient air quality standards.

The concentrations in **Table 4.3-5** are based on worst-case meteorology, traffic and location assumptions. Concentrations and project impacts at other locations and under more typical meteorological conditions would be less than those shown. Project impacts on local carbon monoxide concentrations are less-than-significant.

The project applicant has prepared an AQ-15 Management Plan for the Laguna Ridge Specific Plan in compliance with the City of Elk Grove General Plan requirements discussed previously. A summary of the AQ-15 Management Plan is provided below (see **Appendix 4.3** for the full text).

1. A mixture of complementary land uses (i.e., commercial or residential zones for office uses; commercial or office zones for residential uses) is contained within the Specific Plan area. The mix of land uses would eliminate the need for numerous vehicular trips and encourage alternative modes of transportation. The Laguna Ridge Specific Plan is composed of relatively small, well-defined residential neighborhoods. Each neighborhood includes or is near a Neighborhood Commercial Mixed Use shopping

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center. The distribution of shopping centers, commercial uses, schools, and parks within the plan area would reduce the need for vehicular use.

2. The infrastructure of the community would facilitate access to technology, thus enabling residents to work from home and reduce automobile travel. Within the plan area, home occupation would be a permitted use within the residential zones, satellite facilities for large employers would be encouraged, and small neighborhood commercial centers would provide support services for onsite companies and home workers.
3. Within the Specific Plan area, the quadrants are designed to enhance bicycle and pedestrian access between residential uses, local services, schools and parks. The comprehensive bicycle/pedestrian network would be provided to encourage non-vehicular travel within the Specific Plan area. On-street bike lanes are planned along Elk Grove Boulevard, Bruceville Road, Laguna Springs Drive, Bilby Road, Poppy Ridge Road and Big Horn Boulevard. An off-street bicycle trail is designed along the open space corridor, which runs adjacent to Poppy Ridge Road.
4. The Laguna Ridge Specific Plan would provide multiple and/or direct pedestrian access between adjacent, complementary land uses throughout the project. Access would typically be provided by the intersection of a residential street with the collector. The bike lanes and trail would connect the residential neighborhoods with the schools and parks.
5. The internal circulation system would be designed in a grid pattern to preclude major traffic from passing through the neighborhoods.
6. The plan is designed to accommodate the use of a local shuttle transit service and small, low-emission vehicles for transportation within the plan area and to the transit stations planned nearby. It is generally recommended that the walking distance to the bus or shuttle routes should not exceed  $\frac{1}{4}$  mile. This plan locates multi-family and attached or small lot single-family housing within  $\frac{1}{4}$  mile of likely bus routes. The plan additionally supports the use of public transit by achieving an average density of 7 units per acre for a significant portion of the plan area, with a maximum density of 20 dwelling units per acre for the multiple family housing.
7. Presently direct transit service into the Laguna Ridge Specific Plan area does not exist. The closest transit routes provided by Regional Transit (RT) are Routes 56 and 60. RT has identified two conceptual transit corridors near the Laguna Ridge Specific Plan, including Elk Grove Boulevard (Franklin Blvd. to Elk Grove-Florin Road), and Bruceville Road (Poppy Ridge Road to SR-99). These corridors indicate the location for future transit for the area and serve as a trunk for more localized service. Within the plan area, a simple, direct loop system that provides connection to the higher density housing and commercial uses is anticipated. The location of higher density housing near the transit route should ensure that the average density is above 7 units per acre at transit nodes. A shuttle would also operate during non-commute periods. It is to be routed to provide a convenient link between residences and neighborhood/community regional commercial opportunities.
8. Measures to comply with the AQ-15 to be included in the Specific Plan document include the following:
  - a. Bicycle/Pedestrian/Transit Measures: provide bicycle lockers and/or racks; provide an additional 20 percent of required Class I and Class II bicycle parking

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facilities; provide bicycle storage at apartment complexes or condos without garages; the plan area is located within ½ mile of existing Class I or Class II bike lane and provides a comparable bikeway connection to that existing facility.

- b. Parking: provide electric vehicle charging facilities; provide preferential parking for carpool/vanpools.
- c. Mixed-Use: locate residential development, retail development, personal services, open space, and offices onsite or within ¼ mile; locate parks, school and civic uses within ¼ mile of neighborhoods.
- d. Building Components Measures: install lowest emitting commercially available fireplace; install Energy Star labeled roof materials; install category 5 wiring at phone outlets.

### Mitigation Measure

**MM 4.3.2** The project applicant shall implement all measures proposed in the AQ-15 Plan for each subsequent project to reduce the emissions from both mobile and stationary sources. Each subsequent development project shall be checked for compliance with the AQ-15 Plan.

*Timing/Implementation:* During all planning and development phases of the project.

*Enforcement/Monitoring:* City of Elk Grove Development Services and SMAQMD.

Even with implementation of the AQ-15 Plan, operational air quality impacts of the project would be considered **significant and unavoidable**.

### **Cumulative Emissions - Construction**

**Impact 4.3.8** Development of project in combination with cumulative projects would result in emissions that exceed SMAQMD thresholds. This would result in a **cumulative significant** impact.

Construction activities associated with the Grant Line Road interchange project, the development of the South Pointe project, the East Franklin Specific Plan, the Lent Ranch project, the Laguna Ridge Conceptual Study, the Laguna Ridge Specific Plan and other development areas within the City (City of Elk Grove Draft General Plan) and the region could potentially occur simultaneously. Therefore, the potential for combined construction air quality impacts would occur if the activities were occurring simultaneously. While all these projects would implement recommended air quality controls to reduce fugitive dust and engine emissions, the combined effect would be cumulatively significant. Short-term fugitive dust emissions during site preparation and construction (PM<sub>10</sub> and NO<sub>x</sub>) would remain both individually and cumulatively **significant and unavoidable**.

### Mitigation Measures

Project-specific mitigation measures MM 4.3.1a through MM 4.3.1g would apply to cumulative air quality construction impacts, but would not reduce impacts to less than significant. Impacts



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would remain **significant and unavoidable** even with the implementation of these mitigation measures.

### Cumulative Emissions – Operational

**Impact 4.3.9** Proposed project would exceed SMAQMD thresholds for cumulative impacts. This would result in a **cumulative significant** impact.

Implementation of the proposed project would have a significant adverse incremental effect on the region's ability to attain State and Federal air quality standards, and could be considered cumulatively significant.

### Mitigation Measures

Mitigation measure MM 4.3.2a would not be sufficient to reduce cumulative operational air quality impacts to a less-than-significant level. Operational emissions would also remain above the SMAQMD's recommended thresholds for ROG and NO<sub>x</sub> and be both individually and cumulatively **significant and unavoidable**.

NOISE

### Construction Noise

**Impact 4.4.1** The on-site and off-site noise impacts associated with construction for the Laguna Ridge Specific Plan may exceed Elk Grove City Standards. This would result in a **potentially significant** impact.

Activities associated with on-site construction would result in elevated noise levels within the proposed plan area, and could generate noise levels in excess of the City of Elk Grove Draft General Plan noise standards, or expose future residents to substantial short-term increases in ambient noise levels. **Figure 4.4-3** illustrates typical construction equipment noise levels for individual pieces of equipment. Usually, construction noise is of relatively short duration, lasting from a few days to a period of several months. Additionally, project-related offsite construction could result in temporary, elevated noise levels around the plan area. Offsite improvements required for the Laguna Ridge Specific Plan include a connection to the Sacramento Regional Water Treatment Plant for wastewater service and a stormwater drainage channel. The wastewater infrastructure improvements would include a connection to the existing trunk/interceptor sewer system, which extends north and west from the Bruceville Road/Laguna Boulevard intersection to the Regional Treatment Plant. It is anticipated that the necessary wastewater facility improvements would contribute to temporary offsite noise impacts associated with the construction of the necessary infrastructure. Noise sensitive receptors would be those existing residences located along Bruceville Road between the Laguna Ridge Specific Plan area and Laguna Boulevard. If residential units associated with the East Franklin Specific Plan were constructed before the wastewater infrastructure were in place, those residents would also be temporarily impacted by the construction-related noise. Additionally, in order to provide improved stormwater drainage to the Laguna Ridge Specific Plan area, an 80-foot wide channel would be constructed south of the plan area. The construction of the drainage channel would have a temporary impact on the ten existing residences located south of the plan area along Bruceville Road. Noise generated by the wastewater facilities and stormwater drainage channel would be attributed to construction-related activities and would be temporary in nature.

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In general, the first and noisiest stage is site preparation, which involves existing structure removal, earth moving, compaction of soils and the removal of excess materials. High noise levels created during this phase will be associated with the operation of heavy-duty trucks, scrapers, graders, backhoes, and front-end loaders. When construction equipment is operating, noise levels can range from 73 to 96 dBA at a distance of 50 feet from individual pieces of equipment. During the second stage of construction, foundation forms are constructed and concrete foundations are poured. Primary noise sources include heavy concrete trucks and mixers, cranes, and pneumatic drills. At 50 feet from the source, noise levels in the 70 to 90 dBA range are common.

The third and fourth stages consist of interior and facade construction, and site cleanup. Primary noise sources associated with the third phase include hammering, diesel generators, compressors, and light truck traffic. Noise levels are typically in the 60 to 80 dBA range at a distance of 50 feet. The final stages typically involve the use of trucks, landscape rollers and compactors, with noise levels in the 65 to 75 dBA range.

During construction activities, noise level increases could be noticeable to nearby rural residential land uses located to the south and west of the plan area as well as existing urban residential areas north of Elk Grove Boulevard. The residential uses built in association with the East Franklin Specific Plan (EFSP) could also be exposed to construction noise from the Laguna Ridge Specific Plan (LRSP) depending on the timing of the development of the EFSP and the LRSP. These residences could be exposed to periodic noise during demolition and construction activities occurring on and near the project. Additionally, if the onsite (existing or proposed) residential uses are occupied during construction activities, those uses could also be exposed to construction noise.

Construction activities on the plan area as a whole could occur on any one part of the site. The Noise Ordinance would restrict proposed construction activities to 6:00 A.M. to 8:00 P.M. during the weekdays, when residents are less likely to be disturbed, but would allow construction activities on the weekends from 7:00 A.M. to 8:00 P.M., when more residents could be disturbed by construction. Given that there is a potential that some existing, proposed, and potential future residential uses (particularly those further from SR-99) would be exposed to project construction noise, this impact, though temporary, is considered to be potentially significant when construction occurs near those sensitive receptors.

### Mitigation Measures

**MM 4.4.1a** Site preparation and construction activities shall be limited to between the hours of 6:00 A.M. to 8:00 P.M., Monday through Friday, and 7:00 A.M. to 8:00 P.M. on Saturday and Sunday (City of Elk Grove Noise Control Ordinance, Section #6.68.090). Furthermore, construction equipment maintenance shall be limited to the same hours. This requirement shall be included as a note in all project construction plans.

*Timing/Implementation:* During all construction phases of the project.

*Enforcement/Monitoring:* City of Elk Grove Development Services

**MM 4.4.1b** All construction equipment shall be equipped with appropriate mufflers in good working condition. This requirement shall be included as a note in all project construction plans.

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*Timing/Implementation:*      *During all construction phases of the project.*  
*Enforcement/Monitoring:*      *City of Elk Grove Development Services*

**MM 4.4.1c**      Construction staging areas shall be located as far from noise-sensitive uses as is feasible. This requirement shall be included as a note in all project construction plans.

*Timing/Implementation:*      *During all construction phases of the project.*  
*Enforcement/Monitoring:*      *City of Elk Grove Development Services*

**MM 4.4.1d**      Stationary construction equipment shall be located as far from noise sensitive uses as feasible, and temporary or portable acoustic barriers shall be installed around the equipment/work area when within 100 feet or less of residential properties or other sensitive uses. This requirement shall be included as a note in all project construction plans.

*Timing/Implementation:*      *During all construction phases of the project.*  
*Enforcement/Monitoring:*      *City of Elk Grove Development Services*

**MM 4.4.1e**      Construction hours, allowable workdays, and the phone number of the job superintendent shall be clearly posted on a sign no larger than 4 foot by 8 foot at all construction entrances to allow for surrounding and onsite property owners to contact the job superintendent. If the City or the job superintendent receives a complaint, the superintendent shall investigate, take appropriate corrective action, and report the action taken to the reporting party. This requirement shall be included as a note in all project construction plans.

*Timing/Implementation:*      *During all construction phases of the project.*  
*Enforcement/Monitoring:*      *City of Elk Grove Development Services*

Implementation of the above mitigation measures would minimize the construction-related noise impacts, but the impact would remain **significant and unavoidable**.

### **Agricultural Operations Noise**

**Impact 4.4.4**      Noise levels from agriculture operations that currently exist within and adjacent to the proposed plan area would exceed City of Elk Grove Noise Level Standards. This would result in a **significant** impact.

Due to the presence of agricultural-related operations both within and outside of the proposed plan area, and the potential noise-generation associated with agricultural operations, these agricultural operations may exceed the City of Elk Grove noise standards and create an adverse public reaction to agricultural operations from future noise-sensitive developments within the proposed plan area. Two types of impacts would occur as a result on ongoing agricultural uses. Portions of the plan area would be subjected to the noise of existing onsite agricultural operations during the development phases of the Laguna Ridge Specific Plan. However, these impacts would be temporary in nature. The second type of impact would occur

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along the southern edge of the plan area where the proposed onsite residential uses would interface with existing offsite agricultural uses located south of Bilby Road and Poppy Ridge Road. These impacts would be considered long-term. The potential for agricultural operations to generate noise levels exceeding the City's Standards would be greatest if crop-dusting activities and intensive plowing or harvesting operations in close proximity to noise-sensitive areas developed within the proposed plan areas were to occur. As a result, this impact is considered significant.

### Mitigation Measure

**MM 4.4.4** The project proponent shall ensure that a disclosure statement shall be recorded against the property and be provided to all prospective buyers of properties within the proposed plan area notifying such persons of the presence of existing and future noise-producing agricultural-related activities in the immediate Specific Plan area. The disclosure statement shall be reviewed and approved by City of Elk Grove Development Services.

*Timing/Implementation:* Prior to each final subdivision map approval.

*Enforcement/Monitoring:* City of Elk Grove Development Services

Implementation of the above mitigation measure would reduce the magnitude of agricultural noise on the project; however, the impact of agricultural noise remains **significant and unavoidable**.

### **Cumulative Construction Activities**

**Impact 4.4.6** Development within the Laguna Ridge Specific Plan area concurrent with development in other adjacent or nearby development areas could result in a cumulative increase in ambient noise levels due to combined construction activities. This would result in a **cumulative significant** impact.

Construction activities associated with the proposed project, in conjunction with other development in the area, including East Franklin Specific Plan, Lent Ranch, and the proposed South Pointe development, could all or partially occur during the same period. Therefore, the potential for combined construction noise or vibration impacts exists if activities occur simultaneously. While all these projects would implement standard construction techniques to reduce noise and would to the extent feasible adhere to City noise ordinances pertaining to the period when construction activities would occur, the combined noise effect would be cumulatively significant.

### Mitigation Measure

Mitigation measures 4.4.1a through e would apply to cumulative construction noise impacts, but the impact would be considered **significant and unavoidable**.

### **PUBLIC SERVICES AND UTILITIES**

**Impact 4.6.1.2** The project, when considered with other development projects in the area, would result in a cumulative demand for water supply and could impact flows along the Cosumnes River. This is considered a **cumulative significant** impact.

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The proposed project would receive its water from Zone 40. As reported in the *Water Forum Agreement*, to accommodate future demand of 117,600 AFY, Zone 40 would rely on a surface water supply consisting of 45,000 AFY of firm entitlement and 33,000 AFY of intermittent surface supplies (the intermittent supply is subject to reduction in the drier and driest years). The balance of the total demand would be met through the conjunctive use of groundwater supplies. The *Water Forum Agreement* reports a sustainable yield for the groundwater basin of 273,000 AFY, of which approximately 155,000 would support agricultural uses and 117,600 AFY would support South County municipal and industrial use. Of the 117,600 AFY, an average of approximately 41,000 AFY would be available for use in Zone 40 over the long-term. Currently, 250,000 AFY of the 273,000 AFY sustainable yield is being drawn. Conjunctive use is the planned management and use groundwater, surface water, and recycled water in order to improve the overall reliability of a region's total water supply. For example, in wet years when surface water is plentiful, groundwater pumping may be reduced or eliminated and only surface water is used. The groundwater basin would be replenished in these wet years. In dry years when surface water is in short supply, the water that has been accumulating in the basin would be pumped for use and surface water diversions reduced or eliminated.

The *Water Forum Agreement* reports that the amount of groundwater used would vary from approximately 95,100 AFY in the driest years decreasing to approximately 34,000 AFY in the wet years. In either scenario, the average amount of groundwater used over the long term would be less than the sustainable yield of 273,000 AFY. The project would increase the cumulative demand for water supplies. Under buildout conditions, the project's ultimate water demand would be approximately 7,063 AFY; however, 2,700 AFY would be used for irrigating the 471 acres of agricultural land currently existing in the Plan area. The project's ultimate water demand, which included both potable and recycled water sources) would be approximately 4,363 AFY. Of the 4,363 AFY, 1,016 AFY would be supplied through recycled water from the SRWWTP, leaving the ultimate potable water demand for the Laguna Ridge Specific Plan Area at approximately 3,347 AFY, which is approximately 0.03 percent of Zone 40's projected demand through 2030. Based on the above estimates and projections, adequate water supply would be available to serve the project and meet the Zone 40's projected water demands through 2030.

Additionally, development projects within the Urban Service Boundary cannot occur until agreements and financing for water supplies are in place. Each development project in the service area, including the proposed project (see mitigation measure MM 4.6.1.a), would be required to demonstrate water availability as part of the subdivision approval process. Even if subsequent developments demonstrate water availability prior to the project approval, beyond the amount allowed under the Plan area's historical agricultural use (2,700 AFY), subsequent development of the Plan area would contribute to cumulative increases in groundwater production that may adversely affect flows on the Lower Cosumnes River.

As discussed in Section 4.7 (Hydrology and Water Quality), several recent studies have been conducted to identify the interactions between the Cosumnes River, the regional aquifer system, and regional groundwater levels. Usually there is some form of hydraulic connection between a river and the groundwater system (aquifer), which means that changes in pressure or stage in one system may have an effect on the other system and the exchange between the two. Base-flow is contributions to river flow from the groundwater or aquifer system. A hydraulic disconnection means that the groundwater levels lie below the elevation of the river channel bottom for extended reaches of the river. Under hydraulic connection the river can receive flow contributions from the aquifer system and be a gaining or influent river or it can lose flow to the groundwater aquifer and be a losing or effluent river. Additionally, the pumping of groundwater

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may affect baseflow contributions along various reaches of a river; thereby, influencing aquifer and river interactions.

The studies indicated the regional aquifer system and the Lower Cosumnes River are hydraulically disconnected for extended reaches of the river. The hydraulic disconnection is most pronounced in the middle reaches of the river (river miles 11 to 25.8), which is between State Route 99 (SR 99) and Meiss Road. Depth to the regional groundwater table from the river channel elevation steadily increases from 7 to 20 feet in the Dillard Road area (river mile 27.5) to approximately 35 to 55 feet near Wilton Road (river mile 17.3). Between Wilton Road and Highway 99 (river mile 11) depth to the regional groundwater table decreases to approximately 15 to 30 feet and decreases even further to approximately 3 to 15 feet around the Twin Cities Road area (river mile 5). In some portions of the river downstream of Twin Cities Road, the water table (aquifer) lies above the channel elevation and appears to be hydraulically connected with the river.

Increased groundwater pumping or a significant lowering of the groundwater tables in these areas could have an adverse effect on river flows. Results of the studies indicate that there is strong evidence of a causal relationship; however, unequivocal proof of this relationship is difficult to establish due to the limited amount of historical records on ground- and surface-water conditions in Sacramento County. Additionally, the studies indicated that a better understanding of local and regional geologic heterogeneity as well as more reliable numerical models would be needed to accurately assess the river/aquifer interactions. Due to the project's proximity to river's channel near Twin Cities Road, which is more than 2-miles southeast of the site, implementation of the project is not expected to have a direct impact upon Cosumnes River flows, groundwater levels or the regional aquifer system. However, the project would contribute to increased groundwater production under cumulative conditions, which may alter current interactions between groundwater pumping and Cosumnes River flows and result in reduced flows. A reduction in flows within the Cosumnes River could result in adverse impacts to fishery and other aquatic resources as well as potential impacts to riparian habitat conditions along the river. Currently, the Sacramento County Water Agency is conducting detailed groundwater modeling associated with the Zone 40 Master Plan Update to evaluate potential effects on the Cosumnes River from increased groundwater production. However, no results from this modeling effort were available at the time of the release of this document.

### Mitigation Measure

As previously noted above, the Sacramento County Water Agency would provide water service to the Plan area rather than the City. Since the City does not provide water service and does not have direct jurisdiction over water service and facilities, there are no feasible mitigation measures available to the City to avoid this potential significant cumulative impact. Depending upon the County's modeling efforts, this cumulative impact could be **significant and unavoidable**, as is accordingly deemed as such for purposes of this EIR.

## BIOLOGICAL RESOURCES

**Impact 4.8.9** The development of this project would contribute cumulatively to the loss of biological resources in the region and the ongoing urbanization in southern Sacramento County. This would result in a **cumulative significant** impact.

In addition to the Laguna Ridge Specific Plan project, several other developments in southern Sacramento County are currently approved, proposed, under construction or in the preliminary planning stages. These projects include the Lent Ranch Marketplace, East Franklin Specific Plan,

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East Elk Grove Specific Plan, the Grant Line Road/SR-99 interchange improvement, and potential future development of the "Urban Study Areas" identified in the City's Draft General Plan, which all have the potential to adversely affect the biological resources in the region. Future developments would require on- and offsite improvements to provide water, wastewater, storm drainage, solid waste disposal, and other such services at the City's required level of service. Such improvements could contribute to the loss of potential habitat within the region. Offsite improvements required to serve Laguna Ridge Specific Plan area include a 40-foot wide offsite drainage channel, south of the plan area and east of Bruceville Road, as well as necessary wastewater infrastructure, which would be constructed within the Bruceville Road right-of-way extending from the plan area to connect with the existing pipeline north of Elk Grove Boulevard. The impacts of these two offsite facility improvements have been evaluated as project-related impacts.

On a cumulative level, the change in land uses would contribute to a loss of habitat for endangered and protected species, and species of concern, that currently inhabit the plan area, or that could potentially inhabit the plan area in the future. Although the Laguna Ridge Specific Plan area is generally degraded and disturbed as a result of recurring agricultural activities, it provides habitat for a variety of common wildlife species as well as special-status species. While potential direct impacts on biological resources are reduced, the increased human presence would be anticipated to cause potential indirect impacts. These could disturb breeding and foraging behavior of wildlife, and would result in a significant and unavoidable cumulative impact.

Another indirect impact would be stormwater runoff. Each project is required to participate in the NPDES permit program for stormwater runoff, which effectively reduces water quality impacts to below a level of significance. Planned urbanization of the project area would create new sources of light and glare. While project specific measures would be undertaken to orient or shield lights to minimize illumination of adjacent lands, the combined effect of all new developments approved or planned in the area would create a significant and unavoidable cumulative impact associated with increased human presence.

### Mitigation Measures

Implementation of mitigation measures MM 4.8.1a through c, MM 4.8.2a through c, MM 4.8.3, MM 4.8.4a through f, MM 4.8.5a and b, MM 4.8.7a and b, and MM 4.8.8a through c would reduce the direct project-specific impacts on special-status plant and animal species and native trees to a less than significant level. However, on a cumulative level the direct and indirect impacts would be considered **significant and unavoidable**.

## VISUAL RESOURCES/LIGHT AND GLARE

### Local Visual Resource Impacts

**Impact 4.11.1** Implementation of the Laguna Ridge Specific Plan would alter the plan area's visual character from a rural area to a suburban environment. Views of open areas would be replaced by views of residential and commercial uses. This would result in a **significant** impact.

The proposed project would alter the plan area's visual character from a rural area to an urban environment. Views of open areas would be replaced by views of residential and commercial uses. While the setbacks, landscaping, varied building heights and sizes, and varied building locations would provide visual relief, project development as proposed would significantly impact existing views of the area.

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The existing uses and features within the plan area are not considered to be significant visual resources. Additionally, there are no scenic visual resources within the vicinity of the plan area. The Land Use Policy Map of the Draft General Plan designates the majority of the properties north of the plan area as Low Density Residential and Commercial. The Draft Land Use Policy Map designates the properties south of the plan area as the Southeast Policy Area. The Elk Grove Draft General Plan anticipates that the area north of the plan area would be developed, while the properties to the south would be developed residential, office and commercial uses in the near future.

The plan area is undergoing rapid urbanization. While site development would initially be out of character with the existing rural nature of the area, this impact would diminish over time as other development occurs east, west and south of the site. Over time, development of the plan area would become increasingly consistent with the evolving visual character of the area.

### Mitigation Measures

There are no feasible mitigation measures that would mitigate the project's impact on local views. This impact is considered **significant** and **unavoidable**.

### **Light and Glare**

**Impact 4.11.2** Implementation of the Laguna Ridge Specific Plan would introduce new sources of light and glare in and around the plan area. This would result in a **significant** impact.

As proposed, the project would be operational during both the daytime and nighttime hours and would create sources of light and glare not currently present in the plan area. Proposed windows, particularly large areas of glass in commercial structures, could create substantial glare. Light most visible to off-site viewers would include streetlights within the project adjacent to West Stockton Boulevard, Bruceville Road, Elk Grove Boulevard, Bilby Road, Poppy Ridge Road, SR-99, and the proposed Big Horn Boulevard. Also, parking lot lighting, car lights, and lights associated with residential, park, school and commercial structures would be visible and would increase the sky glow within the region. These lights would be visible during nighttime hours and would represent the greatest source of new light to nearby residents.

The surrounding areas north, east and west of the plan area have either been approved for development or have already been developed. Residential development is in progress within the approved East Franklin Specific Plan area adjacent to the plan area west of Bruceville Road. To the north, residential development has already been completed along Elk Grove Boulevard. Phase One of the Elk Grove Automall is in operation at the southwest quadrant of the SR-99/Elk Grove Boulevard intersection and Phase Two, located within the plan area, has been approved and is under construction. These projects will result in a significant amount of illumination within the vicinity, in addition to that already created by significant traffic levels on SR 99. Further conflicts could arise where reflective surfaces on commercial buildings were located in proximity to SR 99 and internal roadways, resulting in reflected glare that could impair the sight of passing motorists, creating a traffic hazard. The addition of lighting and glare from the proposed project would be considered a **significant** impact.

### Mitigation Measures

**MM 4.11.2a** A lighting plan shall be developed and provided with improvement plans for each subsequent non-residential project to ensure that parking lot pole lights and streetlights shall be fully hooded and back shielded to



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reduce the light “spillage” and glare, prohibit the illumination from breaking the horizontal plane, and ensure that lighting not exceed the standard illumination of two-foot candles along the property lines of adjoining land uses. The two-foot candle lighting standard shall also apply to all park and school facilities where stadium lighting may be installed and used.

*Timing/Implementation:* Prior to approval of improvement plans for all subsequent public and private projects.

*Enforcement/Monitoring:* City of Elk Grove Development Services, Elk Grove Community Services District and Elk Grove Unified School District.

### MM 4.11.2b

Non-glare glass shall be used in all non-residential buildings to minimize and reduce impacts from glare. Office and commercial buildings, which are allowed to use semi-reflective glass, must be oriented so that the reflection of sunlight is minimized. This requirement shall be incorporated into the Specific Plan and reflected in subsequent development applications.

*Timing/Implementation:* Types of non-glare glass shall be specified on final development plans for subsequent commercial and office projects, and installed prior to building occupancy.

*Enforcement/Monitoring:* City of Elk Grove Development Services

While the above mitigation measures would reduce the effect of light and glare, the impact would remain **significant and unavoidable**.

### State Route 99 Corridor View Impacts

**Impact 4.11.3** The Laguna Ridge Specific Plan would change the visual character of the plan area from rural residential to suburban mixed-use along scenic corridor SR-99. This would result in a **significant** impact.

As shown on **Figure 3.0-2**, the proposed project is immediately adjacent to SR-99. As discussed above, the Zoning Code establishes standards intended to create a more attractive image of the urban area within 660 feet of freeway right-of-way. However, the character of the area is undergoing a rapid transformation from agricultural to higher density residential and commercial. Therefore, impacts to the freeway scenic corridor would be **significant and unavoidable**.

#### Mitigation Measures

There are no mitigation measures for this impact. Changes to the existing rural landscape would result in a **significant and unavoidable impact**.

### Cumulative Visual Impacts

**Impact 4.11.4** Implementation of the Laguna Ridge Specific Plan in combination with other projects would introduce new development into an agricultural

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area and increase nighttime lighting and glare. These impacts would be considered **cumulatively significant**.

Cumulative impacts from these projects would include the conversion of vacant or agricultural land to urban uses. A cumulative visual impact would exist relative to the loss of vacant undeveloped land as viewed from the public roadways discussed in this section of the EIR. The amount of visible natural vegetation would also decrease. Nighttime illumination and daytime glare would also be increased in the plan area as a result of cumulative project development. Although individual development projects would be responsible for incorporating mitigation to minimize their visual impacts, the net result would still be a general conversion of an area with an open, rural character to a more urban and developed character. This impact would be **cumulatively significant**.

Because the project-specific and cumulative impacts are inherently related to the general conversion of an agricultural area to urban development from the introduction of development structures and lighting sources, both project-specific and cumulative impacts would be **significant and unavoidable**.

### Mitigation Measures

Implementation of mitigation measures MM 4.11.2a and MM 4.11.2b would reduce the project's contribution to cumulative visual impacts, the cumulative impact is considered **significant and unavoidable**.

## LAND USE/POPULATION, EMPLOYMENT, AND HOUSING

### **Land Use Compatibility**

As indicated in Section 4.4, Noise, the proposed project would result in an increase in noise in the area caused by vehicle traffic and construction. Noise levels indicated in **Table 4.4-9** of the Draft EIR would result from implementation of individual developments within the plan area. Noise mitigation measures shall be included in the project design to achieve compliance with the City noise standards. Recommended design features for noise attenuation include open space setbacks (frontage roads, recreational areas, and storage yards) which can reduce noise; barriers (i.e., walls, berms, or structures) to achieve a noise reduction site design (i.e., building location) to reduce noise levels; building design (i.e., location of noise-sensitive uses within a building to reduce the impact of noises on inhabitants; Building façades (i.e., utilizing all features of the building façade including the closed windows) to reduce noise; vegetation (i.e., trees and other vegetation) which can achieve some level of traffic noise attenuation.; and, noise-reducing paving materials (i.e., rubberized asphalt) reduce traffic noise. However, traffic and construction noise would still be considered **significant and unavoidable**, and would result in associated land use compatibility issues.

The proposed project would result in the conversion of an agricultural area to urban uses and significant visual impacts would result. The project could also result in significant light and glare impacts, and would contribute to the overall cumulative change in the open visual character of the plan area. Project-specific and cumulative impacts to the change in views were considered to be **significant and unavoidable**.

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### Cumulative Land Use Conflicts

The Laguna Ridge Specific Plan area is one component of the cumulative development scenario that would change the intensity of land uses in the southwestern portion of the City, which currently consists primarily of agricultural and rural residential uses. The City's Draft General Plan anticipates the loss of agricultural operations in this area, which is accepted as a consequence of the development of Elk Grove. The residential uses proposed in the plan area would be compatible with other similar uses in the East Franklin area and would support commercial, retail, and mixed land uses in both East Franklin and the Lent Ranch Marketplace SPA. Overall, the Laguna Ridge Specific Plan would implement an orderly pattern of development in an area that is planned future urban development. The project would not add significantly to the cumulative loss of such lands.

The proposed project would result in an increase in noise in the area as a result of vehicle traffic and construction. Development of the site would include design features for noise attenuation. Such features include open space setbacks (i.e., frontage roads, recreational areas, and storage yards); physical barriers (i.e., walls, berms, or other structures); site design (i.e., building orientation and location); building design (i.e., location of noise-sensitive uses within a building to reduce the impact of noises on inhabitants; building façades (i.e., utilizing all features of the building façade including closed windows); vegetation (i.e., trees and other landscape materials); and, noise-reducing paving materials (i.e., rubberized asphalt). Even with the implementation of these measures, construction noise would still be considered **significant and unavoidable**.

The proposed project would result in the conversion of a predominantly agricultural area to urban land uses, and significant visual impacts would result. The project would generate significant levels of light and glare, and would contribute to the overall cumulative change in the open visual character of the plan area. The effects of light and glare could be minimized through the implementation of design features and installation of appropriate building materials, such as limiting the use of on-glare glass in all commercial and office buildings, orienting buildings so that the reflection of sunlight is minimized, and installing landscape materials to shade and screen buildings. Nighttime lighting and glare would be minimized by requiring parking lot pole lights and streetlights to be fully hooded and back shielded, and ensuring that lighting not exceed the standard illumination of two-foot candles along the property lines of adjoining land uses. Even with the implementation of these measures, impacts resulting from the generation of light and glare from the plan area would still be considered **significant and unavoidable**.

## 7.2 GROWTH-INDUCING IMPACTS

### INTRODUCTION

CEQA Guidelines Section 15126.2(d) requires that an EIR evaluate the growth-inducing impacts of a proposed action. A "growth-inducing impact" is defined by the CEQA Guidelines as follows:

*...the way in which a proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth...Increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. Also...the characteristic of some projects which may encourage and facilitate other*

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*activities that could significantly affect the environment, either individually or cumulatively* (CEQA Guidelines Section 15126.2[d]).

A project can have direct and/or indirect growth inducement potential. Direct growth inducement would result if a project, for example, involved construction of new housing. A project would have indirect growth inducement potential if it established substantial new permanent employment opportunities (e.g., commercial, industrial or governmental enterprises) or if it would involve a construction effort with substantial short-term employment opportunities that would indirectly stimulate the need for additional housing and services to support the new employment demand. Similarly, a project would indirectly induce growth if it would remove an obstacle to additional growth and development, such as removing a constraint on a required public service. A project providing an increased water supply in an area where water service historically limited growth could be considered growth-inducing.

The CEQA Guidelines further explain that the environmental effects of induced growth are considered indirect impacts of the proposed action. These indirect impacts or secondary effects of growth may result in significant, adverse environmental impacts. Potential secondary effects of growth include increased demand on other public and community services, infrastructure, increased traffic and noise, and adverse environmental impacts such as degradation of air and water quality, degradation or loss of plant and animal habitat, and conversion of agricultural and open space land to developed uses.

The CEQA Guidelines state that it is not assumed that growth in an area is necessarily beneficial, detrimental, or of little significance to the environment (CEQA Guidelines Section 15126.2[d]). However, growth inducement may constitute an adverse impact if the growth is not consistent with or accommodated by the land use plans and growth management plans and policies for the area affected. Local land use plans provide for land use development patterns and growth policies that allow for the orderly expansion of urban development supported by adequate urban public services, such as water supply, roadway infrastructure, sewer service, and solid waste service. A project that would induce "disorderly" growth (growth that conflicts with local land use plans) could indirectly cause additional adverse environmental impacts and other public services impacts. Thus, to assess whether a growth-inducing project will result in adverse secondary effects, it is important to assess the degree to which the growth accommodated by the project would or would not be consistent with applicable land use plans.

### DISCUSSION

#### **Removal of an Impediment to Growth**

Development of the Laguna Ridge Specific Plan would result in infrastructure improvements (e.g., water supply, sewer service, gas and electric utilities, roadways, etc.) in the plan area. These improvements would bring infrastructure to rural, agricultural areas presently not served by urban infrastructure. Some of these areas, including East Franklin Specific Plan and Lent Ranch Marketplace, have approved development entitlements, while other areas, such as South Pointe and the Southeast Policy Area, are respectively proposed for development or planned for development in the Draft General Plan.

Regional access to the plan area is provided by SR-99; local access is provided by Elk Grove Boulevard, Bruceville Road, Big Horn Boulevard, Bilby Road and Poppy Ridge Road. The buildout of the Specific Plan project would include the construction of improvements to Bruceville Road

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and Elk Grove Boulevard, a realignment of Poppy Ridge Road, and the construction of internal roadways, but would not require the construction of new access roadways.

The proposed project would obtain water supply from the Sacramento County Water Agency Zone 40 system. Currently, public water service does not exist within the project area (other than on-site wells). The proposed water distribution system would be generally consistent with the Zone 40 Water Master Plan. As proposed, the project would be served by the construction of three water treatment plants, a grid of transmission/distribution water mains, and an on-site supply well field.

While a reliable supply of groundwater exists in the plan area that could be used to meet the water demands of the proposed project, it is expected that the project would receive its water through the SCWA and its planned facilities. The SCWA has created a long-term Master Plan that identifies a flexible approach to supplying water to customers. Consistent with the *Water Master Plan* and the *Water Forum Agreement*, water demand generated by the Laguna Ridge Specific Plan project would ultimately be met by using a combination of groundwater, surface water, and reclaimed water. Groundwater is intended to meet peak demands, accommodate conjunctive use operations, and act as one source of multiple sources (surface water, reclaimed water) of supply to customers.

The three water treatment plants, Big Horn, Poppy Ridge, and Laguna Ridge Water Treatment Plants, are planned to provide water service to the plan area, as well as support development in the East Franklin Specific Plan, South Pointe, and Lent Ranch Marketplace. A portion of flow from the Big Horn Water Treatment Plant would replace existing wells that will be removed from service by 2006 to meet new arsenic standards and serve existing development to the north.

The plan area would obtain service from the Sacramento County Sanitation District No. 1 and Sacramento Regional County Sanitation District (SRCSD). The project would ultimately be served by a SRCSD South Interceptor to be extended from the SRCSD wastewater treatment plant through the East Franklin Specific Plan area. Preliminary alignments for the South Interceptor have been determined from the plant through the East Franklin Specific Plan and into the Laguna Ridge Specific Plan area. The development of LRSP may precede the construction of the South Interceptor to the area south of Elk Grove Boulevard, including the LRSP area. Interim sewer improvements would need to be constructed to provide sewer service to new development within LRSP.

These interim facilities assume that the 60-inch sewer planned to connect the existing 60-inch dry sewer at the intersection of Dwight Road and Franklin Boulevard with the SRWTP would be constructed to support any development in the LRSP. Per the Water Quality Division, this connection is considered a high priority facility to relieve capacity constraints in 1) the existing system north of Elk Grove Boulevard; and 2) proposed interim connections for EFSP and LRSP south of Elk Grove Boulevard. This connection would allow enough sewer capacity for interim phases in both the EFSP and LRSP to be constructed until the South Interceptor is completed.

In order to serve the LRSP, a lift station would be constructed at the intersection of Bruceville Road and Poppy Ridge Road (north lift station) where the 27-inch trunk sewer extends east into the LRSP area. A 12- to 16-inch force main constructed with this lift station would travel north along Bruceville Road to Laguna Boulevard where it would connect to the existing 42-inch gravity sewer. This lift station and force main would initially be sized based on needed capacity for initial development in the LRSP (approximately 2.0 MGD and 12-inch diameter force main) and then upgraded to 4.1 MGD (16-inch force main) when more capacity is required. When the

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maximum capacity of 4.1 MGD is reached, it is assumed that the South Interceptor would be extended near the intersection of Poppy Ridge and Bruceville Road. The County Sewerage Master Plan anticipates completion of the South Interceptor in 2015.

An additional lift station (south lift station) may be built where the South Interceptor extends into the LRSP. This lift station would be sized for initial development in the southern shed of the LRSP (0.0 to 2.0 MGD). The force main with this lift station would travel north along Bruceville Road to the north lift station. The LRSP south lift station could be upgraded as more capacity is required and would continue pumping to the north lift station.

Expansion of the infrastructure required to serve LRSP area would support additional development in the plan area and be considered growth inducing. Areas likely to grow, or be pressured to grow, as a result of LRSP include East Franklin Specific Plan, Lent Ranch Marketplace, South Pointe, the Southeast Policy Area, and land in the vicinity of the Sacramento County Urban Services Boundary. While improvements associated with the extension of infrastructure into the plan area would provide access to the infrastructure necessary to support future growth, development of additional public facilities and services would also be required to support growth. These include roadway improvements, public schools, parks and recreation facilities, and connections to infrastructure available in the plan area, such as from South Pointe, Lent Ranch Marketplace, or the Southeast Policy Area. Furthermore, additional water supply and wastewater treatment would be necessary to serve full buildout in the project area that is planned for in the Draft General Plan. Environmental impacts associated with development of East Franklin Specific Plan, Lent Ranch Marketplace, South Pointe, and areas adjacent the plan area that may be induced to develop as a result of LRSP are discussed below.

The East Franklin Specific Plan (EFSP) was approved by the Sacramento County Board of Supervisors in 2000 and associated environmental impacts were considered in the East Franklin Specific Plan and Associated Rezones and Subdivision Maps Known as Jungkeit Dairy, Laguna Creek South, Franklin Meadows, Laguna Meadows, and JAS Development Environmental Impact Report, State Clearinghouse Number 1997112030. The EFSP area encompasses 2,495 acres and allows for up to 11,300 dwelling units. Significant and unavoidable impacts associated with this development were identified as: potential land use compatibility with holdover agricultural uses, increases in 100-year floodwater surface elevations and extent of flooding at downstream locations, increased rate and velocity of runoff from the project site, elimination of 33+ acres of on-site floodplain storage, degradation of operations at the Laguna Boulevard/SR 99 southbound ramp intersection from LOS D to F in the p.m. peak hour, degradation of operations at the Elk Grove Boulevard/Franklin Boulevard intersection from LOS D to F in the a.m. peak hour and from LOS C to LOS F in the p.m. peak hour, exacerbation of LOS F operations at the Elk Grove Boulevard/State Route 99 (SR 99) southbound ramp intersection during the p.m. peak hour, increases in temporary emissions of ROG, NO<sub>x</sub>, and PM<sub>10</sub> in excess of the SMAQMD thresholds due to construction activities, operational emissions of ROG, NO<sub>x</sub>, and PM<sub>10</sub> substantially above the significance thresholds for those pollutants, loss of approximately 1700+ acres classified as Farmland of Statewide Importance, and impacts to an existing residence that meets adopted criteria for importance as a representative example of the American Four Square style of rural residence.

Lent Ranch Marketplace, a 295-acre special planning area consisting of a regional shopping mall, community commercial, neighborhood commercial, office and entertainment, visitor commercial, and multifamily residential (280 units) uses was approved by the City of Elk Grove in July 2001. Environmental effects associated with the development of this project were disclosed in the Lent Ranch Marketplace Environmental Impact Report, State Clearinghouse Number

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1997122002. Significant and unavoidable impacts that would result include: conversion of 285 acres of Farmland of Statewide Importance; land use compatibility conflicts; cumulative impairment to agricultural productivity, land use conflicts, and loss of Farmland of Statewide Importance; capacity of Elk Grove Boulevard between East Stockton Boulevard and Elk Grove-Florin Road would be exceeded; Elk Grove Boulevard/Elk Grove-Florin Road intersection operations would change from LOS E to LOS F during the p.m. peak hour; increased delays at the Elk Grove Boulevard/SR 99 southbound ramps, Elk Grove Boulevard/East Stockton Boulevard, Elk Grove Boulevard/Elk Grove-Florin Road, and Poppy Ridge Road/West Stockton Boulevard intersections; deteriorated operation of SR 99 southbound on-ramp and segments of SR 99 (south of Grant Line Road) and Interstate 5 (north of Hood Franklin Road); construction and operational emissions of air pollutants (ROG, NO<sub>x</sub>, and PM<sub>10</sub>) in exceedance of SMAQMD thresholds and cumulative contribution to air pollutant emissions; increased noise levels, including construction noise, ambient noise conditions along Poppy Ridge Road, and cumulative contribution to increased ambient noise; cumulative impacts to biological resources including loss of habitat and connectivity between open space areas, and increased light and glare; and alteration of visual character from rural to suburban; light and glare; cumulative introduction of development into the agricultural area and increased nighttime light and glare; and land use conflicts resulting from agricultural-commercial/residential interfaces, noise, and visual impacts.

The proposed South Pointe project consists of 200 acres and would accommodate approximately 883 single family residential units and 212 multifamily residential units. The Notice of Preparation of an Environmental Impact Report for South Pointe, published in September 2001 indicated the potential to: substantially increase light and/or glare, degrade of existing visual character/quality of the site and its surroundings, convert agricultural land including Prime Farmland and Farmland of Statewide Importance to non-agricultural uses, conflict with agricultural uses and Williamson Act contracts, exceed air quality standards and contribute to existing air quality violations, cumulatively increase non-attainment air pollutants, expose sensitive receptors to substantial air pollutant concentrations, create objectionable odors, adversely effect special-status species, riparian habitat/sensitive communities, and wetlands, conflict with local policies and ordinances protecting biological resources, interfere with movement of native wildlife, impact historical, paleontological, archaeological, and/or human remains, expose people or structures to adverse effects from seismic-related ground failure, landslides, unstable ground units, or expansive soils, result in soil erosion, expose the public to hazardous materials, interfere with an adopted emergency response plan, degrade water quality, deplete groundwater supplies, alter drainage patterns resulting in erosion and/or flooding, create additional runoff, conflict with adopted land use plans, policies, and/or regulations, expose persons to excessive noise levels or vibrations, increase ambient noise levels substantially, induce population growth, result in fire protection, police protection, schools, parks, recreation, water supply, wastewater, drainage, solid waste, electric/natural gas/telephone, and other public facility and service impacts, increase traffic substantially and exceed established levels of service and roadway capacities, increase circulation hazards, result in inadequate parking or emergency access, and result in cumulatively significant impacts.

In addition to the impacts associated with the projects discussed above, the project may also pressure adjacent rural areas, such as the Southeast Policy Area, to develop. Impacts of developing these areas would include conversion of agricultural lands, conflicts between urbanized uses and rural, agricultural uses, including visual and noise impacts, loss of habitat for biological resources, adverse effects to special-status species, increased traffic, degradation of water quality, and increased use of groundwater. Impacts would generally be similar to those discussed above for East Franklin Specific Plan, Lent Ranch Marketplace, and South Pointe.

### ECONOMIC GROWTH

The proposed project would potentially induce growth by introducing employment opportunities from construction and operation of the retail, commercial, and office uses associated with the project proposal. The commercial and office developments would generate about 5,500 to 6,600 total new jobs. This total would represent about 14 to 17 percent of the total projected 38,203 jobs in the City of Elk Grove in 2022, and less than 1 percent of the projected 792,494 jobs in Sacramento County. Given this project's size in relation to the area's work force, the economic contribution of this project alone would be considerable. In addition to the long-term employment, the proposed development would also generate short-term construction jobs.

The new employees could induce growth in two ways: (1) through their spending on goods and services; and (2) through their need for housing. The proposed development would include retail and service uses, as well as a variety of residential uses. These uses could meet most of the needs of the new employees for goods and services.

Where the new employees live will depend on a number of factors, including their income, the availability and prices of housing near the employment relative to other areas, and their current place of residence. Therefore, it cannot be determined whether the new employees would live in the housing proposed in the area. Some employees of the project would already be employees in the area, and would just be changing their jobs to a different location; other employees might be attracted to move into the area by the availability of work.

The City of Elk Grove Draft General Plan anticipates development of land within the City and its Sphere of Influence; approved, planned and other proposed development in the area will result in the construction of about 21,300 single-family residential and about 1,800 multi-family residential units. The proposed project is intended to serve the retail and housing needs of the approved or proposed large residential projects immediately north and west of the project site including the approved East Franklin Specific Plan and the Lent Ranch Marketplace, as well as for existing and future uses within the City. Some employees would purchase new housing in the area; others would rent housing. However, it is possible that some of the employees would generate demand for housing elsewhere (to purchase or rent), or that the project could help to accelerate the construction of housing within areas already planned for development.

The project also includes the construction of approximately 1,500 multi-family residential units. These units could accommodate some of the rental housing demand of project employees, and in that sense, would help to reduce the project's growth-inducing potential. In addition, the proposed commercial uses could help to accommodate the demand for goods and services generated by the new residences, as well as improving the region's job/housing balance.

The project would also generate demand for the products and services that would supply the proposed development. This increase in demand could lead to growth in the areas in which the product manufacturers and service providers are located. However, it would be speculative at this point to determine the locations or extent of such growth.

### PRECEDENT-SETTING ACTION

Changes from a project that could be precedent-setting include (among others) a change in zoning, general plan designation, general plan text or approval of exceptions to regulations that



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could have implications for other properties or that could make it easier for other properties to develop.

The proposed project would be consistent with the commercial, residential, park, school, office, and other land uses indicated for the plan area on the Draft General Plan Land Use Policy Map. The project would not involve any changes to the General Plan text; therefore, it would not be considered growth-inducing from that standpoint.

The project also involves a rezoning from AG-20, AG-80, M-1, and AR-2 to a Specific Plan Area with several land use designations. Among the purposes of the Agricultural Land Use Zones are preserving agricultural land (Section 205-01(b)) and discouraging the premature and unnecessary conversion of agricultural land to urban uses (Section 205-01(c)). Although the rezoning of the AG-20 and AG-80 parcels to urban uses could encourage other requests for rezoning other agriculturally-zoned parcels, each application would be considered by the City on a project-by-project basis. The proposed rezoning for the Laguna Ridge Specific Plan would apply to the plan area only and would not encompass other properties. However, the rezoning and change in land use designation would result in the change of an area that was not planned for urban development prior to 2010 nor was its development considered in the EIR prepared for the General Plan. For these reasons, the project would be considered growth-inducing.

### DEVELOPMENT OF OR ENCROACHMENT ON OPEN SPACE

Development of open space is considered growth-inducing when it occurs on the fringes of built-up areas, but more commonly when urbanization occurs in isolated localities, leaving intervening areas of open space. As discussed earlier in this section, the Draft General Plan intended for development to take place within the entirety of the city limits. In addition to the proposed project, there are also other projects that are either approved, proposed, or planned for the area:

- The East Franklin Specific Plan, approved in April 2000, includes development of about 10,100 residential units in an area roughly bounded by the Union Pacific Railroad tracks, Elk Grove Boulevard, Bruceville Road, and Bilby Road. The specific plan area is about three miles west of the project site, and includes lands on the boundary of both the Urban Service Boundary and Urban Policy Area;
- The proposed South Pointe project, which would include a General Plan Amendment, Rezone, Special Development Permit, and Tentative Subdivision Map, would allow the development of 917 low and medium density residential units on a 200-acre parcel southeast of the plan area. An application resubmittal for this project was submitted to the City in April 2001;
- The approved Lent Ranch Marketplace which would include a General Plan Amendment, and Rezone to allow the development of 3.09 million square feet of retail space and 280 multiple family residential units. The project has recently been approved by the City of Elk Grove and is the subject of a lawsuit; and
- The approved East Elk Grove Specific Plan would involve development of up to 4,300 single-family residences and about 120 acres of other uses within an area bounded by Waterman Road, Grant Line Road, Bradshaw Road, and Bond Road. The Specific Plan

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area is about 1.3 miles east of the project site, and includes lands on the boundary of the Urban Policy Area.

A project can be considered “leap-frogging” if projects are not existing or envisioned within reasonable proximity to the plan area. The proposed project is not the only project located at or near the southern boundary of the Urban Policy Area. Other projects currently precede the proposed project in terms of project review by City or County decision-makers. Because of its location within, and immediately adjacent to existing and planned development, it is not considered to be “leap-frogging.”

The Draft General Plan identifies the plan area for a variety of residential, commercial/multifamily, office, public school, parks, and open space/recreation uses. Adjacent undeveloped areas, including South Pointe, Lent Ranch, and the Southeast Policy Areas, are identified in the Draft General Plan for a variety of urbanized uses, such as residential, office, and commercial development. Urban levels of development within the City are clearly anticipated, evidenced by Policy CAQ-2 which states:

*The loss of agricultural productivity on lands designated for urban uses within the city limits as of January 2002 is accepted as a consequence of the development of Elk Grove. As discussed in the Land Use Element, the City's land use concept for the Planning Area outside the 2002 city limits anticipated the retention of significant areas of agricultural production outside the current city limits.*

The proposed project is located within the Sacramento County Urban Services Boundary (USB) and would result in a conversion to urbanized uses within the USB. As indicated on page 2-10 of General Plan:

*The Urban Services Boundary delimits the outermost extent of future urban services.*

The General Plan also intended for development to take place on the edges of the Urban Policy Boundary as indicated on page 2-10:

*Under the proposed General Plan Update, new development would be strongly encouraged or required to take the form of dense urban development along transit corridors. Infill development would take place as well, but infill development alone was assumed in the draft Plan to account for only a small portion of projected growth; 14 percent of projected residential growth. The bulk of growth would take place in the New Growth Areas on the edges of the Urban Policy Boundary.*

However, the proposed project, together with the other cumulative projects that are approved, planned or proposed in the area, could result in increasing growth pressure on the City or County to modify the Urban Service Boundary. This increase in pressure, particularly to the south across Kammerer Road, may result in agricultural land being converted to urban type use for the economic benefit of the landowner. Any growth beyond the USB would be under the control of the County.

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The Sacramento County General Plan states that the Urban Service Boundary is intended to be a permanent boundary “not subject to modification except under extraordinary circumstances.” It is the ultimate boundary of the urban area in the unincorporated County.

Section III-G of the Sacramento County General Plan Land Use Element provides a procedure for expanding the USB. The County and City must make certain findings with respect to the availability of land within the USB, air quality impacts, water supply, constraints imposed by open space easements, and potential impacts to “important natural resource areas, aquifer recharge lands or prime agricultural lands.” The result of these requirements would be to limit development outside the USB to areas in which environmental impacts would be limited. However, the General Plan also allows for expansion of the USB on a 4/5ths vote, based upon the findings that the expansion would “provide extraordinary environmental, social or economic benefits and opportunities to the County.” Therefore, the USB presents a constraint to growth-inducement south of the project site, but such growth could occur, depending on the City’s or County’s response to pressures in the long term. It should be pointed out that the City and County will retain the land use control within the area outside of the USB.

The demarcation of the Urban Policy and Urban Service Boundary Areas was considered a significant impact in the EIR for the Sacramento County General Plan Update, in that it was considered to result in the potential for induced growth in other counties, or in the outlying areas of Sacramento County. Because the EIR for the Sacramento County General Plan Update considered the designation of the Urban Policy and Urban Service Boundary Areas and assumed development within these areas as significant, the significance finding is hereby incorporated by reference. The Findings of Fact adopted by the Board of Supervisors for the 1993 General Plan Update found that the growth-inducing impacts were significant and unavoidable; however policies LU-2, LU-6, LU-7, LU-8, LU-9, LU-14, LU-15, LU-49, LU-51, LU-52, LU-53, LU-54, LU-55, LU-56, LU-63, LU-64, LU-65, LU-70, LU-70A, LU-71, LU-73, LU-74, LU-75, OS-14, OS-14A, PF-9, PF-10, PF-12, PF-12A, PF-13 and PF-14 would reduce the magnitude of the impacts.

### CONCLUSION

As the proposed project meets several of the growth-inducing criteria specified in this section, the proposed project is considered growth-inducing.

### 7.3 SECONDARY IMPACTS CREATED BY GROWTH

Because the project would support planned growth allowed for in the Sacramento County General Plan, it could result in some secondary effects of growth that are associated with the adopted General Plan. The General Plan EIR identified eight unavoidable and significant impacts associated with the adoption of the General Plan.

Unavoidable and significant impacts identified in the Sacramento County General Plan EIR within the USB included:

- Development would result in the conversion of prime farmland to urban uses;
- Development would result in urbanization of large areas of open space and would contribute to the cumulative loss of agricultural land and open space in the region.

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- Loss of moist grassland, emergent wetland (marsh), and riparian wetland acreage and/or habitat values could result from development of new growth areas.
- Development would result in increased stationary and area source emission rates relative to the Air Resources Board (ARB) 2010 emission projections for non-attainment pollutants.
- Development would result in increased mobile source emission rates relative to the ARB year 2010 emission projections for non-attainment pollutants.
- Development could result in adverse impacts to cultural resources; and growth and development in Sacramento County will contribute incrementally to regional impacts on cultural resources.
- Development of the areas proposed would substantially alter the existing visual character of Sacramento County and limit visual access to large areas of open space, and could conflict with existing character areas of the County relative to height, mass, and scale.
- Development of the proposed area within Sacramento County would reduce the amount of agricultural, open space, and rural lands in the area, thereby contributing to the cumulative loss of existing non-urban views within the region.

Impacts of growth associated with buildout of the area near the plan area can be found in the cumulative analyses for each topic that was conducted in Section 4.0 of this EIR. The cumulative analyses assume buildout of the General Plan including significant General Plan Amendments. Impacts associated with cumulative projects would contribute to those impacts identified above and discussed in the General Plan EIR.

Attempting to determine the environmental impacts created by growth outside the USB area would be speculative in that the size, type, and location of specific, future projects, which may be induced by the project are unknown at the present time. Furthermore, it is presumptuous to state conclusively that implementation of one project alone would induce growth in the surrounding area, as there are many variables that must be considered when examining the mechanics of urban growth (e.g., market forces, demographic trends, etc.). Impacts associated with any future development project that could be influenced by development of the project would be examined in depth during the environmental review conducted for that project as part of its review and approval process. Nonetheless, the proposed project would add growth pressures on the UPA and USB boundaries that could induce growth in land areas not currently planned for such uses. It is anticipated that this growth pressure would be greatest on land areas south of the USB between Interstate 5 and State Route 99. The environmental effects of such growth would result in an increased severity of the impacts previously identified in the General Plan EIR. These increased impacts would likely include, but are not limited to, agricultural resource loss, traffic impacts, biological resources impacts, loss of open space, increased air pollutant emissions, and visual resource impacts.

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### 7.4 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

#### INTRODUCTION

Public Resources Code Section 21100(b)(2), a part of CEQA, requires that certain EIRs must include a discussion of significant irreversible environmental changes of project implementation. CEQA Guidelines Section 15126.2(c) describes irreversible environmental changes as follows:

*Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.*

Public Resources Code Section 21100.1 requires the discussion of significant irreversible environmental changes only in EIRs prepared in connection with the following:

- The adoption, amendment or enactment of a plan, policy or ordinance of a public agency.
- The adoption by a local agency formation commission (LAFCO) of a resolution making determinations.
- A project which will be subject to the requirement for preparing an Environmental Impact Statement pursuant to the requirements of the National Environmental Policy Act (NEPA).

#### DISCUSSION

Buildout of the proposed project would represent a long-term commitment to a more intensive land use than currently occurs in the plan area. The proposed project would, therefore, involve an irreversible commitment to the use of non-renewable resources during the construction and operation phases in the form of refined petroleum-based fuels, natural gas for space and water heating, and mineral resources used in construction materials. Once transformed into fuel or other energy forms, or into construction materials, these resources cannot be recovered. Some reuse of construction materials after the useful life of this project may be possible. It is anticipated that these resources would likely be committed to other projects, if not used for this one.

Irreversible long-term environmental changes would accompany the proposed conversion of agricultural sites to residential and commercial, urban-scale development. These changes would include: the loss of agricultural land; a change in the visual character of the site associated with locating large-scale buildings on a flat landform; an increase in local and regional traffic with associated air pollutant emissions and noise level increases; an increase in the volumes of solid waste and wastewater generated in the area; and an increase in water consumption. Implementation of the project would place a temporary and permanent population in the plan area within the area of the Suburban Propane facility. The increased hazard risk to these people is considered to be acceptable and less-than-significant. The

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project would involve the need for additional school space and the need for a variety of recreational opportunities. Although the project site is partially disturbed, it does contain open land currently used for agricultural production. It is not likely that the existing environment could be restored to its current condition subsequent to project development; however, mitigation measures are proposed throughout Section 4.0 of this EIR to minimize the effects of the development impacts.

The *CEQA Guidelines* also require a discussion of the potential for environmental damage caused by an accident associated with the project. The following discussion identifies the characteristics of the site and proposed future uses which could be sources of potential accidents.

Unique hazards have not been identified in the plan area, and the plan area does not support any uniquely hazardous uses. Conformance with the regulatory provisions of the *Uniform Building Code* pertaining to construction standards would minimize, to the extent feasible, damage and injuries in the event of an accident during construction. Geotechnical hazards can be mitigated by compliance with standard engineering and geotechnical practices, and significant impacts on the site are not expected.

Uses proposed by the project (such as some commercial uses) would be expected to use and store chemicals and/or substances that are typically found in such urban settings. Given the multitude of Federal, State, and local regulations governing the use of such substances, the project development is not expected to involve activities that would damage the environment or pose a risk to public health.

Within the site boundaries, no Proposition 65 pesticides (insecticides, herbicides, and fungicides) would be used in the common and public areas, or in areas that are currently farmed and which would be phased out as development occurs. Humans would not be subject to either acute overexposure or chronic exposure to these substances if used and handled according to State and Federal regulations.

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## **8.0 REPORT PREPARERS**

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**8.1 PREPARERS OF THE ENVIRONMENTAL IMPACT REPORT**

CITY OF ELK GROVE

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# APPENDIX

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Please Note:

**THE TECHNICAL APPENDICES FOR THE  
LAGUNA RIDGE SPECIFIC PLAN REVISED DRAFT ENVIRONMENTAL IMPACT  
REPORT  
ARE AVAILABLE FOR REVIEW AT THE  
CITY OF ELK GROVE PLANNING SERVICES DEPARTMENT**

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