PUBLIC REVIEW DRAFT

LODI ANNEXATION ENVIRONMENTAL IMPACT REPORT

STATE CLEARINGHOUSE NO. 2005092096

LSA

April 2006

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Submitted to the:

City of Lodi
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I. INTRODUCTION

A. PURPOSE OF THE EIR

In compliance with the California Environmental Quality Act (CEQA), this Draft Environmental Impact Report (EIR) describes the environmental consequences of the proposed annexation and development of the Westside project, the Southwest (SW) Gateway project, and the annexation of 12 additional parcels (Other Areas to be Annexed). This EIR is designed to fully inform City decision-makers, responsible agencies, and the general public of the proposed project and the potential consequences of project approval. The EIR also examines various alternatives to the proposed project and recommends a set of mitigation measures to reduce or avoid potentially significant impacts.

The City of Lodi is the lead agency for environmental review of the proposed project. This EIR will be used by City planning staff, the Planning Commission, City Council, and the public in their review of the proposed project. It may also be used by other agencies whose discretionary approval may also be required to allow the project to be constructed.

B. PROPOSED PROJECT

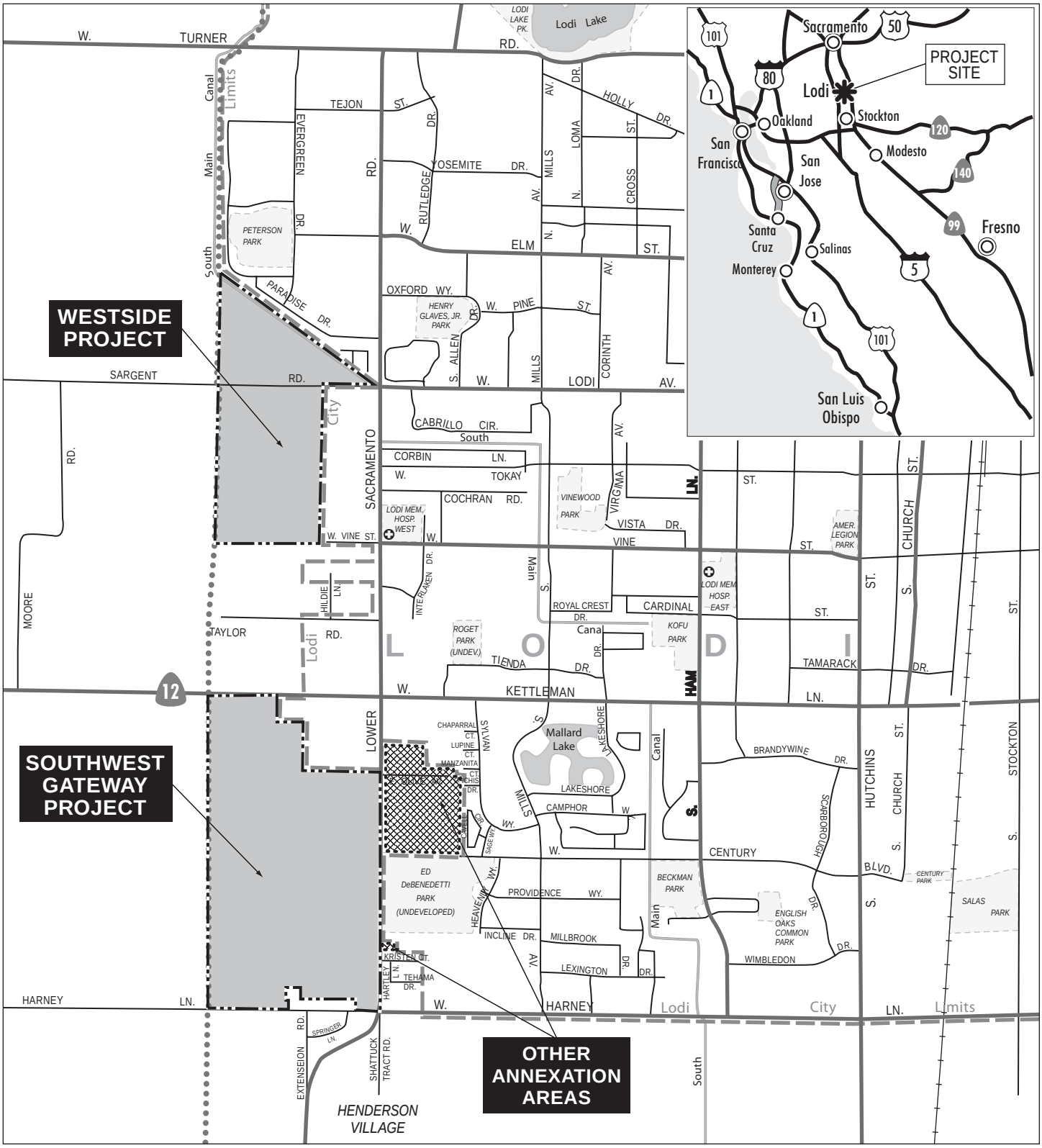
The project areas are shown in Figure I-1 and described below.

The Westside site is generally bound by the Woodbridge Irrigation District (WID) Canal on the north, agricultural land to the east and south, and a shopping center, mini-storage, Temple Baptist Church and the Jim Elliot Christian High School to the east of Lower Sacramento Road. Sargent Road bisects the project site and separates the triangular shaped northern parcel from the rest of the project site.

The SW Gateway site is generally bound by Highway 12 to the north, the Van Ruiten Vineyard to the west, Harney Lane and private residences to the south, and Lower Sacramento Road, private residences, and the future DeBenedetti Park to the east.

The Other Areas to be Annexed site east of Lower Sacramento Road is generally bound by Lower Sacramento Road to the west, Century Boulevard to the south, a residential subdivision to the east, and a commercial area to the north. There is one parcel that is part of Other Areas to be Annexed, but is not located immediately adjacent to the other parcels that will be annexed. The solitary parcel is located along Lower Sacramento Road, north of the Lower Sacramento Road/Kristen Court Intersection.

This EIR considers the annexation and development of all of the project areas (see description above). Development of both the Westside and SW Gateway areas could result in the construction of up to 2,090 residential units. While no specific development is proposed for the Other Areas to be Annexed, the zoning designation would permit approximately 335 units to be developed.



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LEGEND

- WESTSIDE & SOUTHWEST GATEWAY PROJECT AREAS
- OTHER ANNEXATION AREAS
- CITY LIMITS
- SPHERE OF INFLUENCE

N

0 .25 .5
MILES

FIGURE I-1

Lodi Annexation EIR
Project Location and Regional Vicinity

SOURCE: CSAA, 2005; LSA ASSOCIATES, INC., 2005

I:\LOD531 wside wgate\figures\Fig_I1.ai (2/20/06)

Table I-1: Proposed Project Uses and Buildout Assumptions

Area	Acres	Housing Units							Parks/ Basins (Acres)	Schools (Acres)
		Low Density		Medium Density		High Density		Total		
		Units	Overall Density	Units	Overall Density	Units	Overall Density			
Westside	151	370	4.8	195	8.5	175	17.5	740	24.7[a]	10.6
SW Gateways	257	740	4.8	250	8.9	360	18.9	1,350	31.0[b]	14.0
Other Areas to be Annexed	48	–	–	–	–	–	–	335	–	–

[a] 4.7 acres of the park area could be utilized as a site for an aquatic center.
[b] 1 acre of park area may be used for a future fire station.

Source: LSA Associates, Inc., 2006.

The following provides a brief overview of the proposed projects, and Table 1-1 summarizes the project components.

- ***Westside Project.*** This project would develop a 151-acre site with a maximum of 740 units, which would include approximately 370 low-density dwelling units,195 medium-density dwelling units, and 175 high-density dwelling units. Currently, the Westside project includes the following amenities at the proposed acreages: a 10.6-acre school site, a 4.7-acre site for future development of an aquatic center, and approximately 20 acres of parks and park basins.
- ***SW Gateway Project.*** This project would develop a 257-acre site with a maximum of 1,350 units, which would include approximately 740 low-density dwelling units, 250 medium-density dwelling units, and 360 high-density dwelling units. Currently, the SW Gateway project includes the following amenities at the proposed acreages: a 14-acre school site, the site of a future fire station, and approximately 31 acres of parks and park basins. (One acre may be used to accommodate a fire station.)
- ***Other Areas to be Annexed.*** This Draft EIR will also include an analysis of the annexation of approximately 12 parcels adjacent to the Southwest Gateway Project area. While no specific development plans have been proposed for the development of these parcels, it can be assumed that parcels will be developed with residential units.

C. EIR SCOPE

The City of Lodi circulated a Notice of Preparation (NOP) that included a list of potential environmental effects that could result from the proposed project. The NOP was published on September 16, 2005 and was distributed to local, regional, and State agencies.

A public scoping session, which was noticed to all property owners located within 500 feet of the projects, was held on October 12, 2005. Comments received by the City on the NOP and at the public scoping meeting were taken into account during the preparation of the EIR. The NOP and written comments received on the NOP are included in Appendix A.

1. Topics Addressed in this EIR

This Draft EIR focuses on the areas of concern identified in the NOP and comments received on the NOP and at the public scoping session. The following environmental topics are addressed in this EIR:

A. Land Use, Agriculture and Planning Policy
B. Traffic and Circulation
C. Air Quality
D. Noise
E. Cultural and Paleontological Resources
F. Geology, Soils and Seismicity
G. Hydrology and Water Quality
H. Biological Resources
I. Hazards and Hazardous Materials
J. Utilities
K. Public Services
L. Visual Resources
M. Energy

2. Topics Not Addressed in EIR

Two topics, population and housing and minerals resources, were considered, but not addressed in this EIR because it was determined that the project would not cause significant impacts related to these topics.

- **Population and Housing.** The project site is currently open agricultural land and does not currently contain a substantial amount of housing. The proposed project would not displace housing or residents and would actually provide additional housing opportunities.
- **Mineral Resources.** The project site is undeveloped flat agricultural land on the edge of the City of Lodi. According to the City of Lodi General Plan (1991), the project site is not underlain by valuable mineral resources. Development of the project would not result in the loss of mineral resources or reduce access to mineral and energy resources.

D. REPORT ORGANIZATION

This EIR is organized into the following chapters:

- *Chapter I – Introduction*: Discusses the overall EIR purpose; provides a summary of the proposed action and environmental review process; identifies potentially significant issues and concerns; and summarizes the organization of the EIR.
- *Chapter II – Summary*: Provides a summary of the impacts that would result from implementation of the proposed project, and lists mitigation measures recommended to reduce or avoid significant impacts.
- *Chapter III – Project Description*: Provides a description of the project objectives, project site, required approval process, and details of the project itself.
- *Chapter IV – Setting, Impacts and Mitigation Measures*: Describes the following for each environmental technical topic: existing conditions (setting); potential environmental impacts and their

level of significance; and mitigation measures recommended to mitigate identified impacts. Potential adverse impacts are identified by levels of significance, as follows: less-than-significant impact (LTS), significant impact (S), and significant and unavoidable impact (SU). The significance of each impact is categorized before and after implementation of any recommended mitigation measures(s).

- *Chapter V – Alternatives*: Provides an evaluation of three alternatives to the proposed project in addition to the No Project alternative.
- *Chapter VI – CEQA-Required Assessment Conclusions*: Provides the required analysis of growth-inducing impacts; significant irreversible changes; effects found not to be significant; and unavoidable significant effects.
- *Chapter VII – Report Preparation:* Identifies preparers of the EIR, references used, and the persons and organizations contacted.
- *Appendices:* The appendices contain the NOP and comments on the NOP and the Initial Study, technical calculations, and other documentation prepared in conjunction with this EIR.

II. SUMMARY

A. PROJECT UNDER REVIEW

This EIR has been prepared to evaluate the environmental impacts of the proposed annexation and development of the Westside project, the Southwest (SW) Gateway project, and the annexation of 12 additional parcels (Other Areas to be Annexed). The following provides a brief overview of the proposed projects, and Table 1-1 summarizes the project components.

- ***Westside Project.*** This project would develop a 151-acre site with a maximum of 740 units, which would include approximately 370 low-density dwelling units, 195 medium-density dwelling units, and 175 high-density dwelling units. Currently, the Westside project includes the following amenities at the proposed acreages: a 10.6-acre school site, a 4.7 acre aquatic center site, and approximately 20 acres of parks and park basins.
- ***SW Gateway Project.*** This project would develop a 257-acre site with a maximum of 1,350 units, which would include approximately 740 low-density dwelling units, 250 medium-density dwelling units, 360 high-density dwelling units. Currently, the SW Gateway project includes the following amenities at the proposed acreages: a 14-acre school site, the site of a future fire station, and approximately 30 acres of parks and park basins.
- ***Other Areas to be Annexed.*** The Draft EIR will also include an analysis of the annexation of approximately 12 parcels adjacent to the Southwest Gateway Project area. While no specific development plans have been proposed for the development of these parcels, it can be assumed that parcels will be developed with residential units. Based on the policies of the existing Planned Residential designation, the analysis in this EIR assumes the development of approximately 335 units based on seven units per gross acre.

A more detailed description of the project and the project site area is provided in Chapter III, Project Description.

B. SUMMARY OF IMPACTS AND MITIGATION MEASURES

This summary provides an overview of the analysis contained in Chapter IV, Setting, Impacts and Mitigation Measures. CEQA requires a summary to include discussion of: 1) potential areas of controversy; 2) significant impacts; 3) recommended mitigation measures; and 4) alternatives to the project.

1. Potential Areas of Controversy

Comments on the Notice of Preparation (NOP) and comments raised during the scoping period, included concerns regarding the following issue areas: land use, agricultural resources, traffic and circulation; school services; air quality; noise; land use, and utility infrastructure.

In response to comments received on the NOP, as well as the City's identification of potential environmental effects, the scope of the EIR included the following topics: land use, agriculture, and planning policy; traffic and circulation; air quality; noise; cultural and paleontological resources; geology, soils and seismicity; hydrology and water quality; biological resources; hazards and hazardous materials; utilities; public services; visual resources and energy.

2. Significant Impacts Prior to Mitigation

Under CEQA, a significant impact on the environment is defined as: a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise and objects of historic or aesthetic significance.[1] Implementation of the proposed project has the potential to result in adverse environmental impacts in the areas listed below.

- Noise
- Cultural and Paleontological Resources
- Geology, Soils and Seismicity
- Hydrology and Water Quality
- Biological Resources
- Hazards and Hazardous Materials
- Public Services

With the implementation of the mitigation measures recommended in the EIR, these impacts would be reduced to less-than-significant levels.

3. Significant Unavoidable Impacts

Implementation of the proposed project has the potential to result in significant environmental impacts in the areas listed below.

- The proposed projects would result in the conversion of approximately 392 acres of Prime Farmland to non-agricultural uses.
- The proposed projects would result in a conflict with existing Agricultural Use and Williamson Act contracts.
- The proposed project would degrade the Existing Visual Character.
- Operations at the Lodi Avenue/Ham Lane intersection would be at an unacceptable service level under the Cumulative scenario.
- Operations at the Kettleman Lane/Lower Sacramento Road intersection would be at an unacceptable service level under the Cumulative scenario.
- Operations at the Kettleman Lane/Ham Lane intersection would be at an unacceptable service level under the Cumulative scenario.

[1] CEQA Sections 21060.5 and 21068.

- Operations at the Kettleman Lane/Cherokee Lane intersection would be at an unacceptable service level under the Cumulative scenario.
- Operations at the Harney Lane/Hutchins Street-West Lane intersection would be at an unacceptable service level under the Cumulative scenario.
- Project-related regional emissions would exceed the SJVAPCD thresholds of significance for ozone precursors.
- Potential growth-inducing impacts associated with the project's potential to facilitate development to the west if the City decides it wants to grow west.

The City may choose to adopt a statement of overriding consideration for some of the noise and traffic impacts and not implement the recommended mitigation measures/improvements in order to further certain objectives of the General Plan including creating a pedestrian-friendly environment and avoiding walled communities.

4. Cumulative Impacts

Implementation of the proposed project has the potential to result in cumulative environmental impacts in the areas listed below.

- Traffic and Circulation

5. Alternatives to the Proposed Project

The four alternatives to the proposed project that are analyzed in detail in Chapter V, Alternatives of this EIR are described below:

- The **No Project/No Build alternative**, which assumes the Westside and SW Gateway projects would not be annexed by the City and would not be developed. The agricultural use of the project site would continue, and no development would occur on the project site.
- The **Agricultural Residential alternative,** which assumes that the agricultural character of the project site would continue, and would provide one unit per 20 acres, which would allow 20 units. A density bonus would be granted which would allow one additional unit per 10 acres, that would result in a total of 60 units on the Westside and SW Gateway sites. No schools would be developed under this alternative. The aquatic center site and some park area would be incorporated into the project site.
- The **Reduced Density alternative**, which assumes that the Westside site would be developed as is proposed under the project, and that the SW Gateway site would have an average of three units per gross acre. This would result in a total of 1,441 units. The SW Gateway site would not include a school site.
- The **Increased High Density Mix,** which assumes that the high density development would have an average density of 25 dwelling units per acre, and the low density designation would have a density of three dwelling units per acre. This would result in a total of 2,317 units. Under this alternative, there would be no medium density residential units.

C. SUMMARY TABLE

Information in Table II-1, Summary of Impacts and Mitigation Measures, has been organized to correspond with environmental issues discussed in Chapter IV. The table is arranged in four columns: 1) impacts; 2) level of significance prior to mitigation; 3) mitigation measures; and 4) level of significant after mitigation. Levels of significance are categorized as follows: SU = Significant and Unavoidable; S = Significant; and LTS = Less-Than-Significant. A series of mitigation measures are noted where more than one mitigation measure is required to achieve a less-than-significant impact, and alternative mitigation measures area identified when available. For a complete description of potential impacts and recommended mitigation measures, please refer to the specific discussion in Chapter IV, Setting, Impacts, and Mitigation Measures.

Table II-1: Summary of Impacts and Mitigation Measures

Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
A. LAND USE, AGRICULTURE AND PLANNING POLICY			
LU-1: The proposed projects could result in a land use conflict with surrounding land uses.	S	LU-1: To reduce agricultural/residential land use incompatibilities, the following shall be required: a. The applicant shall inform and notify prospective buyers in writing, prior to purchase, about existing and on-going agricultural activities in the immediate area in the form of a disclosure statement. The notifications shall disclose that the residence is located in an agricultural area subject to ground and aerial applications of chemical and early morning or nighttime farm operations which may create noise, dust, et cetera. The language and format of such notification shall be reviewed and approved by the City Community Development Department prior to recordation of final map(s). Each disclosure statement shall be acknowledged with the signature of each prospective owner. Additionally, each prospective owner shall also be notified of the City of Lodi and the County of San Joaquin Right-to-Farm Ordinance. b. The conditions of approval for the tentative map(s) shall include requirements ensuring the approval of a suitable design and the installation of a landscaped open space buffer area, fences, and/or walls around the perimeter of the project site affected by the potential conflicts in land use to minimize conflicts between project residents, non-residential uses, and adjacent agricultural uses prior to occupancy of adjacent houses. c. Prior to recordation of the final map(s) for homes adjacent to existing agricultural operations, the applicant shall submit a detailed wall and fencing plan for review and approval by the Community Development Department.	LTS
LU-2: The proposed projects would result in the conversion of approximately 392 acres of Prime Farmland to non-agricultural uses.	S	LU-2: Prior to issuance of a building permit after the first quarter of the combined building permits for the Westside and SW Gateway have been approved, the applicant shall provide and undertake a phasing and financing plan (to be approved by the City Council) for one of the following mitigation measures:	SU

Table II-1 *continued*

Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
LU-2 *continued*		(1) Identify approximately 392 acres to protect for a period of time to be determined (but not less than 15 years) as an agricultural use in a location as determined appropriate by the City of Lodi in consultation with the Central Valley Land Trust; or (2) Pay a fee equal to the value of 392 acres as determined by an independent qualified consultant retained by the City in consultation with the Central Valley Land Trust. The City will determine to whom the fee shall be paid.	
LU-3: The proposed projects would result in a conflict with existing Agricultural Use and Williamson Act Contracts.	S	LU-3: The applicant shall pay all fees associated with terminating a Williamson Act Contract.	SU
B. TRAFFIC AND CIRCULATION			
TRANS-1: Implementation of the proposed project would significantly impact the level of service at 16 intersections under the Existing with Project scenario.	S	TRANS-1: Each of the following mitigation measures shall be implemented to reduce the project's impact on the identified 16 intersections: 1a: Mitigation Measure AIR-2 identifies measures recommended by the *SJVAPCD's "Guide for Assessing and Mitigating Air Quality Impacts* to reduce vehicle trips and associated air quality impacts. Implementation of the same measures would also reduce associated traffic impacts. The following are considered to be feasible and effective in further reducing vehicle trip generation and resulting emissions from the project and shall be implemented to the extent feasible and desired by the City: • Provide pedestrian enhancing infrastructure that includes: sidewalks and pedestrian paths, direct pedestrian connections, street trees to shade sidewalks, pedestrian safety designs/infrastructure, street furniture and artwork, street lighting and or pedestrian signalization and signage. • Provide bicycle enhancing infrastructure that includes: bikeways/paths connecting to a bikeway system, secure bicycle parking.	LTS / Potentially SU

Table II-1 *continued*

Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
TRANS-1 *continued*		• Provide transit enhancing infrastructure that includes: transit shelters, benches, etc., street lighting, route signs and displays, and/or bus turnouts/bulbs. • Provide park and ride lots. The implementation of an aggressive trip reduction program with the appropriate incentives for non-auto travel can reduce project impacts by approximately 10 to 15 percent. Such a reduction would help minimize the project's impact.	
		1b: The implementation of each of the improvements listed in Table IV.B-6 would reduce the impacts to the identified 16 intersections to a less-than-significant level. To mitigate these impacts, the project applicant shall prepare a Traffic Mitigation Implementation and Financing Plan that detail each of the physical improvements and the timing and geometric changes listed in Table IV.B-6 for both the Existing + Project and Cumulative scenarios (cumulative to address Impact TRANS-2), who will be responsible for implementing the improvement, how the improvement will be funded including a reimbursement program where appropriate; and the schedule or trigger for initiating and completing construction prior to the intersection operation degrading to an unacceptable level. The Plan may include an annual monitoring program of the intersections as a method for determining the schedule for implementing each improvement. The Plan shall take into account whether an improvement is already programmed and/or funded in a City or County program (i.e., Lodi Development Impact Mitigation Fee Program, San Joaquin County Regional Transportation Impact Fee, Measure K (existing or renewal program), and San Joaquin Council of Governments Regional Transportation Improvement Program). If an improvement is included in one or more of these programs, the Plan needs to consider whether the programs schedule for the improvement will meet the needs of the project and if not identify alternatives. The Plan shall be submitted to City staff for review and City Council approval prior to submittal of a Tentative Subdivision Map application.	

Table II-1 *continued*

Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
TRANS-1 *continued*		Implementation of Measure TRANS-1a and TRANS-1b, would mitigate the project's impact on existing conditions to a less-than-significant level. However, the City may decide to not implement select improvements in order to avoid trending towards a community that is too orientated to the automobile, which would conflict with some of the General Plan policies that emphasize pedestrian scale. Additionally some of the improvements identified are short-term solutions that the City may not choose to implement if a more significant long-term improvement is being planned (i.e., reconstruction of the Kettleman Lane/SR 99 interchange). As a result, the project's impact at some intersections may be significant and unavoidable if the City chooses not to implement the recommended mitigation measure.	
TRANS-2: Implementation of the proposed project would significantly impact the LOS at 21 intersections under the 2030 Cumulative scenario.	S	TRANS-2: Implementation of Measure TRANS-1a and TRANS-1b, would mitigate the project's contribution to Cumulative condition to a less-than-significant level at 16 of the 21 intersections that would be significantly impacted in the 2030 Cumulative condition. A significant and unavoidable impact would remain at the intersections of Lodi Avenue/Ham Lane, Kettleman Lane/Lower Sacramento Road, Kettleman Lane/Ham Lane, Kettleman Lane/Cherokee Lane and Harney Lane/Huchins Street - West Lane; no physical improvements are feasible to mitigate the cumulative impact to a less-than-significant level. For the intersections that could be mitigated to a less-than significant level, the City may decide to not implement select improvements in order to avoid trending towards a community that is too orientated to the automobile, which would conflict with some of the General Plan policies that emphasize pedestrian scale. Additionally some of the improvements identified are short-term solutions that the City may not choose to implement if a more significant long-term improvement is being planned (i.e., reconstruction of the Kettleman Lane/SR 99 interchange). As a result, the project's impact at some additional intersections may be significant and unavoidable if the City chooses not to implement the recommended improvement/mitigation measure.	LTS / Potentially SU

Table II-1 *continued*

Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
C. AIR QUALITY			
AIR-1: Demolition and construction period activities could generate significant dust, exhaust, and organic emissions.	S	AIR-1a: Consistent with Regulation VIII, Fugitive PM_{10} Prohibitions of the SJVAPCD, the following controls are required to be implemented at all construction sites and as specifications for the project. • All disturbed areas, including storage piles, which are not being actively utilized for construction purposes, shall be effectively stabilized of dust emissions using water, chemical stabilizer/suppressant, covered with a tarp or other suitable cover or vegetative ground cover. • All on-site unpaved roads and off-site unpaved access roads shall be effectively stabilized of dust emissions using water or chemical stabilizer/suppressant. • All land clearing, grubbing, scraping, excavation, land leveling, grading, cut and fill, and demolition activities shall be effectively controlled of fugitive dust emissions utilizing application of water or by presoaking. • With the demolition of buildings up to six stories in height, all exterior surfaces of the building shall be wetted during demolition. • When materials are transported off-site, all material shall be covered, or effectively wetted to limit visible dust emissions, and at least six inches of freeboard space from the top of the container shall be maintained. • All operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at the end of each workday. (The use of dry rotary brushes is expressly prohibited except where preceded or accompanied by sufficient wetting to limit the visible dust emissions. Use of blower devices is expressly forbidden.) • Following the addition of materials to, or the removal of materials from, the surface of outdoor storage piles, said piles shall be effectively stabilized of fugitive dust emission utilizing sufficient water or chemical stabilizer/suppressant.	LTS

Table II-1 *continued*

Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
AIR-1 *continued*	`	• Within urban areas, trackout shall be immediately removed when it extends 50 or more feet from the site and at the end of each workday. • Any site with 150 or more vehicle trips per day shall prevent carryout and trackout. Additional Control Measures: Construction of the project requires the implementation of control measures set forth under Regulation VIII. The following additional control measures would further reduce construction emissions and should be implemented with the project: • Limit traffic speeds on unpaved roads to 15 mph; • Install sandbags or other erosion control measures to prevent silt runoff to public roadways from sites with a slope greater than 1 percent; • Install wheel washers for all exiting trucks, or wash off all trucks and equipment leaving the site; • Install wind breaks at windward side(s) of construction area; • Suspend excavation and grading activity when winds exceed 20 mph (regardless of windspeed, an owner/operator must comply with Regulation VIII's 20 percent opacity limitation); • Limit area excavation, grading, and other construction activity at any one time; • Install baserock at entryways for all exiting trucks, and wash off the tires or tracks of all trucks and equipment in designated areas before leaving the site; and • Suspend excavation and grading activity when winds (instantaneous gusts) exceed 20 mph.	
		AIR-1b: The following construction equipment mitigation measures are to be implemented at construction sites to reduce construction exhaust emissions: • Use electric equipment for construction whenever possible in lieu of fossil fuel-fired equipment; • Properly and routinely maintain all construction equipment, as recommended by the manufacturer manuals, to control exhaust emissions;	

Table II-1 *continued*

Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
AIR-1 *continued*		• Shut down equipment when not in use for extended periods of time to reduce emissions associated with idling emissions; • Limit the hours of operation of heavy duty equipment and/or the amount of equipment in use; and • Curtail construction during periods of high ambient pollutant concentrations; this may include ceasing of construction activity during the peak-hour of vehicular traffic on adjacent roadways, and "Spare The Air Days" declared by the District. Implementation of these mitigation measures would reduce construction period air quality impacts to a less-than-significant level.	
AIR-2: Project-related regional emissions would exceed the SJVAPCD thresholds of significance for ozone precursors.	S	AIR-2: The *SJVAPCD's "Guide for Assessing and Mitigating Air Quality Impacts"* identifies potential mitigation measures for various types of projects. The following are considered to be feasible and effective in further reducing vehicle trip generation and resulting emissions from the project: • Provide pedestrian enhancing infrastructure that includes: sidewalks and pedestrian paths, direct pedestrian connections, street trees to shade sidewalks, pedestrian safety designs/infrastructure, street furniture and artwork, street lighting and or pedestrian signalization and signage. • Provide bicycle enhancing infrastructure that includes: bikeways/paths connecting to a bikeway system, secure bicycle parking, and/or employee lockers and showers. • Provide transit enhancing infrastructure that includes: transit shelters, benches, etc., street lighting, route signs and displays, and/or bus turnouts/bulbs. • Provide park and ride lots. The implementation of an aggressive trip reduction program with the appropriate incentives for non-auto travel can reduce project impacts by approximately 10 to 15 percent. A reduction of this magnitude would reduce emissions, however, ozone precursors would still exceed the significance thresholds. There is no mitigation available with currently feasible technology to reduce the project's regional air quality impact by an additional 50 percent to a less than significant level. Therefore, the project's regional air quality impacts would remain significant and unavoidable.	SU

Table II-1 *continued*

Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
D. NOISE			
NOI-1: On-site construction activities would potentially result in short-term noise impacts on adjacent residential uses.	S	NOI-1a: Construction activities would need authorization under City issuance of construction permits before any work could commence on-site. Construction activities shall be limited to the hours of 7:00 a.m. to 10:00 p.m. Monday through Sunday, consistent with the City's Ordinance.	LTS
		NOI-1b: All stationary noise generating construction equipment, such as air compressors and portable power generators, shall be located as far as practical from existing residences. By meeting the hours of construction timeframe and minimizing noise from stationary construction equipment, the project will not result in a substantial temporary or periodic increase in ambient noise levels.	
NOI-2: Local traffic would generate long-term noise levels exceeding *Normally Acceptable* and *Conditionally Acceptable* noise levels on the project site.	S	NOI-2a: A 6-foot-high sound wall shall be constructed along the rear property line of all lots adjacent to Kettleman Lane, Lower Sacramento Road and Harney Lane.	LTS/SU
		NOI-2b: Mechanical ventilation (such as air conditioning) shall be installed in the proposed residential units adjacent to Kettleman Lane, Lower Sacramento Road and Harney Lane so that the windows can remain closed for prolonged periods of time.	
		NOI-2c: Windows with a minimum STC rating of STC-32 shall be installed in all units directly exposed to Kettleman Lane, Lower Sacramento Road and Harney Lane.	
		NOI-2d: A sound barrier with a minimum height of 5 feet is recommended for all upper floor outdoor use areas directly adjacent to Kettleman Lane, Lower Sacramento Road and Harney Lane. Should the City determine that sound wall and sound barriers are not appropriate or feasible for the proposed project, the impact would be considered significant and unavoidable.	
E. CULTURAL AND PALEONTOLOGICAL RESOURCES			
CULT-1: Ground-disturbing activities in a portion of the Westside project area could adversely impact a historic archaeological resource.	S	CULT-1: Implementation of either Mitigation Measure CULT-1a or CULT-1b would reduce this impact to a less-than-significant level. In order to avoid possible work stoppage and project delays at the location of the resource, implementation of Mitigation Measure CULT-1(a) is the recommended alternative. The mitigation measure selected, however, shall be determined by the lead agency.	LTS

Table II-1 *continued*

Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
CULT-1 *continued*		1a. Prior to the initiation of any project ground disturbance or any construction activities within 50 feet of archaeological site LAN-1, it shall be recorded on the appropriate State of California Department of Parks and Recreation DPR 523 forms. Prior to ground disturbance at this location, a qualified historical archaeologist shall evaluate the site for its eligibility for listing in the California Register. An evaluation shall include archival research and subsurface archaeological testing. If the site is determined to not be eligible for listing in the California Register, no further study or mitigation of the site is required. Shall the site or intact features within the site be found to be a historic or unique archaeological resource as defined under CEQA, project related impacts to the site shall be mitigated. If the deposits are eligible, they shall be avoided by adverse effects, or, if avoidance is not feasible, the adverse effects shall be mitigated. Mitigation may include, but is not limited to data recovery excavation. If data recovery excavation is appropriate, the excavation must be guided by a data recovery plan prepared and adopted prior to beginning the data recovery work. A report of findings shall be submitted to the project applicant, the City of Lodi, and the Central California Information Center (CCR Title 14(3) §15126.4(b)(3)(C)). This approach would reduce this impact to a less-than-significant level.	
		1b. Prior to any project activities within 50 feet of archaeological site LAN-1, it shall be recorded on the appropriate State of California Department of Parks and Recreation DPR523 forms. A qualified archaeologist shall monitor ground disturbing activities within 50 feet of LAN-1 in the Westside project area. Project activity shall cease in the immediate vicinity of a subsurface find and the discovery evaluated and appropriate treatment options developed. Archaeological monitors shall be empowered to halt construction activities at the location of the discovery to review possible archaeological material and to protect the resource while the finds are being evaluated. Monitoring shall continue until, in the archaeologist's judgment, cultural resources are not likely to be encountered.	LTS

Table II-1 *continued*

Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
CULT-1 *continued*		If subsurface historic archaeological deposits, e.g., wells, privies, and foundations, are encountered during project activities, all work within 25 feet of the discovery shall be redirected until the archaeological monitor can evaluate the finds and make recommendations. It is recommended that adverse effects to archaeological discoveries be avoided by project activities. If such deposits cannot be avoided, they shall be evaluated for their eligibility for listing on the California Register (i.e., it shall be determined whether they qualify as historical or unique archaeological resources under CEQA). If the deposits are not eligible, avoidance is not necessary. If the deposits are eligible, they shall be avoided by adverse effects, or, if avoidance is not feasible, the adverse effects shall be mitigated. If data recovery excavation is appropriate, the excavation must be guided by a data recovery plan prepared and adopted prior to beginning the data recovery work. A report of findings shall be submitted to the project applicant, the City of Lodi, and the Central California Information Center (CCR Title 14(3) §15126.4(b)(3)(C)). It is anticipated that this approach will reduce this impact to a less-than-significant level.	
CULT-2: Ground disturbing activities at the Westside and SW Gateway project areas and Other Areas to be Annexed could adversely impact archaeological resources.	S	CULT-2: If prehistoric or historic archaeological materials are encountered during project activities, all work within 25 feet of the discovery shall be redirected and a qualified archaeologist contacted to evaluate the finds and make recommendations. It is recommended that adverse effects to such deposits be avoided by project activities. If such deposits cannot be avoided, they shall be evaluated for their eligibility for listing on the California Register (i.e., it shall be determined whether they qualify as historical or unique archaeological resources under CEQA). If the deposits are not eligible, avoidance is not necessary. If the deposits are eligible, they shall be avoided by adverse effects, or, if avoidance is not feasible, the adverse effects shall be mitigated. Mitigation may include, but is not limited to, thorough recording on Department of Parks and Recreation form 523 records (DPR 523) or data recovery excavation. If data recovery excavation is appropriate, the excavation must be	LTS

Table II-1 *continued*

Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
CULT-2 *continued*		guided by a data recovery plan prepared and adopted prior to beginning the data recovery work, and a report of findings shall be submitted to FCB, the City of Lodi, and the Central California Information Center (CCR Title 14(3) §15126.4(b)(3)(C)).	
CULT-3: Future development projects at the Other Areas to be Annexed could adversely impact cultural resources.	S	CULT-3: Prior to the implementation of any future discretionary project within the Other Areas to be Annexed, a cultural resources field survey shall be conducted. If cultural resources are identified in the additional annexation parcels, it is recommended that such resources be documented on the appropriate DPR 523 forms and that adverse effects to such resources be avoided by project activities. If impacts to cultural resources cannot be avoided, they shall be evaluated for their eligibility for listing in the California Register (i.e., it shall be determined whether they qualify as historical or unique archaeological resources under CEQA). If the resource(s) is not eligible, avoidance is not necessary. If the resource(s) is eligible, adverse effects shall be avoided, or, if avoidance is not feasible, the adverse effects shall be mitigated. Mitigation may include, but is not limited to, Historic American Buildings Survey (HABS) documentation for built environment resources and data recovery excavation for archaeological sites. If data recovery excavation is appropriate, the excavation must be guided by a data recovery plan prepared and adopted prior to beginning the data recovery work, and a report of findings shall be submitted to the project applicant, the City of Lodi, and the Central California Information Center (CCR Title 14(3) §15126.4(b)(3)(C)).	LTS
CULT-4: Ground-disturbing activities associated with the project could disturb human remains, including those interred outside of formal cemeteries.	S	CULT-4: If human remains are encountered, work within 25 feet of the discovery will be redirected and the County Coroner notified immediately. At the same time, an archaeologist will be contacted to assess the situation. If the human remains are of Native American origin, the Coroner must notify the Native American Heritage Commission within 24 hours of this identification. The Native American Heritage Commission will identify a Most Likely Descendant (MLD) to inspect the site and provide recommendations for the proper treatment of the remains and associated grave goods.	LTS

Table II-1 *continued*

Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
CULT-4 *continued*		Upon completion of the assessment, the archaeologist shall prepare a report documenting the methods and results, and provide recommendations for the treatment of the human remains and any associated cultural materials, as appropriate and in coordination with the recommendations of the MLD. The report shall be submitted to the project applicant, the City of Lodi, and the Central California Information Center. It is anticipated that implementation of Mitigation Measure CULT-4 will reduce impacts to human remains to less-than-significant levels.	
CULT-5: Ground disturbing activities within the project area could adversely impact paleontological resources.	S	CULT-5: If ground disturbing activity is anticipated below the project area soil layer, the initial ground disturbance below that depth in geologic units shall be monitored by a qualified paleontologist. Subsequent to monitoring this initial ground disturbance, the qualified paleontologist will make recommendations regarding further monitoring based on the initial findings. This can include, but is not limited to, continued monitoring, periodic reviews of ground disturbance below project area soil layers, or no further monitoring. Pre-field monitoring preparation by a qualified paleontologist shall take into account specific details of project construction plans as well as information from available paleontological, geological, and geotechnical studies. Limited subsurface investigations may be appropriate for defining areas of paleontological sensitivity prior to ground disturbance. If paleontological resources are encountered during project activities, all work within 25 feet of the discovery shall be redirected until the paleontological monitor has evaluated the resources, prepared a fossil locality form documenting them, and made recommendations regarding their treatment. If paleontological resources are identified, it is recommended that such resources be avoided by project activities. Paleontological monitors must be empowered to halt construction activities within 25 feet of the discovery to review the possible paleontological material and to protect the resource while it is being evaluated. If avoidance is not feasible, adverse effects to such resources shall be mitigated. Mitigation can include data recovery and analysis, preparation of a report and the accession of fossil material recovered to an accredited paleontological repository, such as the UCMP.	LTS

Table II-1 *continued*

Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
CULT-5 *continued*		Monitoring shall continue until, in the paleontologist's judgment, paleontological resources are no longer likely to be encountered. Upon project completion, a report shall be prepared documenting the methods and results of monitoring. Copies of this report shall be submitted to the project applicant, the City of Lodi Planning Department, and to the repository where fossils are accessioned.	
F. GEOLOGY, SOILS AND SEISMICITY			
GEO-1: Seismically-induced ground shaking at the project area could result in risk of loss of property, injury, or death.	S	GEO-1a: Each project's conditions of approval shall require the project be designed according to the most recent CBC and UBC Seismic Zone 3 requirements, applicable local codes, and be in accordance with the generally accepted standard for geotechnical practice for seismic design in Northern California. GEO-1b: Prior to the approval of grading plans, the project applicant shall perform design-level geotechnical investigations and incorporate all recommendations into the project construction documents and grading plans.	LTS
GEO-2: The project area contains soils that are moderately corrosive to buried metal objects.	S	GEO-2: If the project includes buried metal components, a corrosion engineer shall be retained to design corrosion protection systems appropriate for the project sites to be approved by the Community Development Department.	LTS
GEO-3: The SW Gateway site contains undocumented fills which could potentially result in differential compaction.	S	GEO-3: Prior to issuance of a building permit for the SW Gateway site, the project applicant shall include the over-excavation and replacement of the undocumented fills in accordance with the earthwork, grading, filling and compaction recommendations of the Preliminary Geotechnical Investigation of the Gateway Residential Development in Lodi, preformed by Lowney Associates, November 12, 2004.	LTS
G. HYDROLOGY AND WATER QUALITY			
HYD-1: Increased runoff volume resulting from creation of new impervious surfaces could potentially exceed the capacity of downstream storm water conveyance structures, resulting in localized ponding and flooding.	S	HYD-1: Implementation of the following two-part mitigation measure would reduce potential impacts associated with increased peak runoff volumes to a less-than-significant level: 1a: As a condition of approval of the final grading and drainage plans for the projects, the Public Works department shall verify that the Master Utility Plan for the Westside and SW Gateway sites will comply with the City's stormwater requirements.	LTS

Table II-1 *continued*

Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
HYD-1 *continued*		1b: Prior to the approval of the final grading and drainage plans for the SW Gateway and Westside projects and any subsequent development applications that may be proposed for the Other Areas to be Annexed, a hydraulic analysis shall be provided to the Public Works Department for verification that implementation of the proposed drainage plans would comply with the City's storm water requirements.	
HYD-2: Construction activities could result in degradation of water quality of storm water runoff and ground water quality in the Project area.	S	HYD-2: The project proponent for each development project shall prepare a Storm Water Pollution Prevention Plan (SWPPP) designed to reduce potential impacts to surface water quality through the construction period of the project. The SWPPP must be maintained on-site and made available to City inspectors and/or RWQCB staff upon request. The SWPPP shall include specific and detailed BMPs designed to mitigate construction-related pollutants. At minimum, BMPs shall include practices to minimize the contact of construction materials, equipment, and maintenance supplies (e.g., fuels, lubricants, paints, solvents, adhesives) with storm water. The SWPPP shall specify properly designed centralized storage areas that keep these materials out of the rain. An important component of the storm water quality protection effort is the knowledge of the site supervisors and workers. To educate on-site personnel and maintain awareness of the importance of storm water quality protection, site supervisors shall conduct regular tailgate meetings to discuss pollution prevention. The frequency of the meetings and required personnel attendance list shall be specified in the SWPPP. The SWPPP shall specify a monitoring program to be implemented by the construction site supervisor, which must include both dry and wet weather inspections. In addition, in accordance with State Water Resources Control Board Resolution No. 2001-046, monitoring would be required during the construction period for pollutants that may be present in the runoff that are "not visually detectable in runoff." RWQCB and/or City personnel, who may make unan-nounced site inspections, are empowered to levy considerable fines if it is determined that the SWPPP has not been properly prepared and implemented.	LTS

Table II-1 *continued*

Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
HYD-2 *continued*		BMPs designed to reduce erosion of exposed soil may include, but are not limited to: soil stabilization controls, watering for dust control, perimeter silt fences, placement of hay bales, and sediment basins. The potential for erosion is generally increased if grading is performed during the rainy season as disturbed soil can be exposed to rainfall and storm runoff. If grading must be conducted during the rainy season, the primary BMPs selected shall focus on erosion control; that is, keeping sediment on the site. End-of-pipe sediment control measures (e.g., basins and traps) shall be used only as secondary measures. If hydroseeding is selected as the primary soil stabilization method, then these areas shall be seeded by September 1 and irrigated as necessary to ensure that adequate root development has occurred prior to October 1. Entry and egress from the construction site shall be carefully controlled to minimize off-site tracking of sediment. Vehicle and equipment wash-down facilities shall be designed to be accessible and functional during both dry and wet conditions. The City Public Works Department shall review and approve the SWPPP and drainage plan prior to approval of the grading plan. City staff may require more stringent storm water treatment measures, at their discretion. Implementation of this mitigation would reduce the level of significance of this impact to a less-than-significant level.	
HYD-3: Dewatering may contain contaminants and if not properly managed could be detrimental to construction workers and the environment.	S	HYD-3: Each SWPPP shall include provisions for the proper management of construction-period dewatering. At minimum, all dewatering shall be contained prior to discharge to allow the sediment to settle out, and filtered, if necessary to ensure that only clear water is discharged to the storm or sanitary sewer system, as appropriate. In areas of suspected groundwater contamination (i.e., underlain by fill or near sites where chemical releases are known or suspected to have occurred), groundwater shall be analyzed by a State-certified laboratory for the suspected pollutants prior to discharge. Based on the results of the analytical testing, the project proponent shall acquire the appropriate permit(s) from the RWQCB prior to the release of any dewatering discharge into the storm drainage system.	LTS

Table II-1 *continued*

Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
HYD-3 *continued*		Section IV.I, Hazards and Hazardous Materials, of this EIR, includes a discussion of the Remediation Action Plan (RAP) and Health and Safety Plan (HSP) for the site. Implementation of Mitigation Measure HAZ-4a, HAZ-4B, HAZ-4c, HAZ-4d, and HAZ-4e would ensure the safety of construction workers from hazardous concentrations of contaminants from soil and groundwater. Proper implementation of the mitigation measure described above would reduce this impact to a less-than-significant level.	
H. BIOLOGICAL RESOURCES			
BIO-1: Implementation of the project could impact western burrowing owl if this species occupies the SW Gateway or Westside project sites or Other Areas to be Annexed site prior to the start of construction.	S	BIO-1: Implementation of these measures will reduce impacts to western burrowing owl to a less than significant level. 1a: Prior to approval of grading plans, the project proponent shall pay the appropriate fees to SJCOG, in accordance with the SJMSCP conservation strategy, for conversion of undeveloped lands. 1b: No more than 30 days prior to any ground disturbing activities, a qualified biologist shall conduct surveys for burrowing owls. If ground disturbing activities are delayed or suspended for more than 30 days after the initial preconstruction surveys, the site shall be resurveyed. All surveys shall be conducted in accordance with CDFG's Staff Report on Burrowing Owls (CDFG, 1995). 1c: If the preconstruction surveys identify burrowing owls on the site during the non-breeding season (September 1 through January 31) burrowing owls occupying the project site shall be evicted from the project site by passive relocation as described in the CDFG's Staff Report on Burrowing Owls (CDFG, 1995). 1d: If the preconstruction surveys identify burrowing owls on the site during the breeding season (February 1 through August 31) occupied burrows shall not be disturbed and shall be provided with a 75 meter (250-foot) protective buffer until and unless the SJMSCP Technical Advisory Committee (TAC), with the concurrence of CDFG representatives on the TAC; or unless a qualified biologist approved by CDFG verifies through non-invasive means that either: 1) the birds have not begun egg laying, or 2) juveniles from the occupied burrows are foraging independently and are capable of independent survival. Once the fledglings are capable of independent survival, the burrow(s) can be destroyed.	LTS

Table II-1 *continued*

Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
BIO-2: Implementation of the project could impact nesting Swainson hawk or other nesting raptors if these species are present on the SW Gateway or Westside sites or Other Areas to be Annexed site prior to the start of construction.	S	BIO-2: Implementation of these measures will reduce impacts to nesting Swainson's hawk and other nesting raptors to a less-than-significant level. 2a: Prior to approval of grading plans, the project proponent shall pay the appropriate fees to SJCOG, in accordance with the SJMSCP conservation strategy, for conversion of undeveloped lands. 2b: Removal of suitable nest trees shall be completed during the non-nesting season (when the nests are unoccupied), between September 1 and February 15. 2c: If suitable nest trees will be retained and ground disturbing activities will commence during the nesting season (February 16 through August 31), all suitable nest trees on the site will be surveyed by a qualified biologist prior to initiating construction-related activities. Surveys will be conducted no more than 14 days prior to the start of work. If an active nest is discovered, a 100-foot buffer shall be established around the nest tree and delineated using orange construction fence or equivalent. The buffer shall be maintained in place until the end of the breeding season or until the young have fledged, as determined by a qualified biologist. In some instances, CDFG may approve decreasing the specified buffers with implementation of other avoidance and minimization measures (e.g., having a qualified biologist on-site during construction activities during the nesting season to monitor nesting activity). If no nesting is discovered, construction can begin as planned. Construction beginning during the non-nesting season and continuing into the nesting season shall not be subject to these measures. 2d: If future development of the Other Areas to be Annexed will result in the removal of suitable nest trees for Swainson's hawk or other raptors, Mitigation Measures BIO-3a through BIO-3c shall be implemented.	LTS

Table II-1 *continued*

Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
BIO-3: The project will impact one area of vernal marsh (seasonal wetland).	S	BIO-3: Implementation of the following mitigation measures will reduce impacts to wetlands (i.e., vernal marsh) to less-than-significant levels. 3a: Wetlands permanently impacted during construction (approximately 0.02 acres) shall be mitigated through preservation, creation and/or restoration of the impacted resources at a minimum ratio of 1:1. If permits are required by ACOE and/or RWQCB, specific mitigation requirements, if different than described above, shall also become a condition(s) of project approval. 3b: Prior to approval of grading plans, the applicant shall obtain any regulatory permits required from the ACOE and/or RWQCB. 3c: Prior to development of the Other Areas to be Annexed, a formal delineation shall be conducted in accordance with the 1987 Corps of Engineers Wetland Delineation Manual (Routine Method). If wetlands or other jurisdictional waters are identified on the site and will be affected by development, Mitigation Measures BIO-3a and BIO-3b shall be implemented.	LTS
I. HAZARDS AND HAZARDOUS MATERIALS			
HAZ-1: Improper use, storage, or disposal of hazardous materials during construction activities could result in releases affecting construction workers, the public, and the environment.	S	HAZ-1: Preparation and implementation of the required SWPPP (see Mitigation Measures HYD-2 and HYD-3) would reduce the potential impacts of hazardous materials releases during construction to a less-than-significant level. No additional mitigation is required.	LTS
HAZ-2: The pesticide storage buildings at APN 058-030-04 contained pesticide stained asphalt and concrete floors.	S	HAZ-2: As a condition of approval for grading plans for SW Gateway project site, the applicant shall be required to test the soils beneath the stained asphalt floor of the older storage building and complete any clean-up necessary to remediate any identified contamination to an acceptable level.	LTS
HAZ-3: Future development of any portion of the Other Areas to be Annexed site could be associated with hazards.	S	HAZ-3: Prior to the approval of any specific development projects on the Other Areas to be Annexed, the project applicant shall provide the City with an environmental investigation, as necessary, to ensure that soils, groundwater, and buildings affected by hazardous material releases from prior land uses, and lead and asbestos potentially present in building materials, would not have potential to affect the environment or health and safety of future property owners or users.	LTS

Table II-1 *continued*

Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
HAZ-4: Implementation of the SW Gateway project could expose construction workers and/or the public to hazardous materials from contaminants in soils during and following construction activities.	S	HAZ-4: Implementation of the following five-part mitigation measure would reduce these risks to less-than-significant levels. 4a: Prior to the issuance of any demolition or building permits for the project site, a Risk Management Plan (RMP) shall be prepared for the project site. At a minimum, the RMP shall establish soil mitigation and control specifications for grading and construction activities at the site, including health and safety provisions for monitoring exposure to construction workers, procedures to be undertaken in the event that previously unreported contamination is discovered, and emergency procedures and responsible personnel. The RMP shall also include procedures for managing soils removed from the site to ensure that any excavated soils with contaminants are stored, managed, and disposed of in accordance with applicable regulations and permits. The RMP shall also include an Operations and Maintenance Plan component, to ensure that health and safety measures required for future construction and maintenance at the project site shall be enforced in perpetuity. The RMP shall include the following Mitigation Measures. 4b: Prior the approval of a building permit, soil sampling and boring shall be done in the historic circular depression area in the western portion of APN 058-040-02 in order to determine the quality of the fill and to determine if hazardous materials are present below the surface. If the soils investigation determines that hazardous materials are present, they shall be removed and disposed of in accordance with applicable regulations.	LTS
		4c: The soil samples collected from the equipment storage areas (and near the pesticide dispensers) were analyzed for Total Recoverable Petroleum Hydrocarbons (TRPH). Oil and grease were detected at elevated concentrations in both samples collected from the equipment storage areas; 12,000 ppm of oil and grease were detected near the 55-gallon waste oil drums east of the equipment storage buildings on APN 058-030-04 and at 38,000 ppm of oil and grease were detected near the waste oil drums in	

Table II-1 *continued*

Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
HAZ-4 *continued*		the southern portion of APN 058-030-04. Both concentrations detected are above the CVRWQCB threshold concentrations based on protection of ground water quality. The stained area is approximately 10 feet in diameter. Prior to the approval of the building permit, oil and grease stained soil in this area shall be removed and disposed in accordance with the recommendations of the Phase I/II. 4d: Six areas of APN 058-030-04 contain old equipment and various piles of debris and garbage, which can potentially leave lead based paint and other hazardous materials residue in the soils beneath the piles. No obvious soil staining was noticed beneath the piles of debris and garbage; however, soil beneath the piles could potentially contain lead based paint and other hazardous materials. As a condition of approval for a demolition permit for the buildings located on APN 058-030-04, the trash and debris shall be removed. Soils beneath the debris piles shall be tested for lead based paint residues and other possible hazardous materials. If it is determined that lead based paint or other hazardous materials are present in the soils beneath the piles, these soils shall be removed by a qualified lead abatement contractor and disposed of in accordance with existing hazardous waste regulations.	
		4e: The truck scale observed on the eastside of APN 058-030-04 could have soils contaminated with hydraulic fluid, which may contain PCBs. Truck scales often used hydraulic fluid, which can contain PCBs, which can be released during spills and leaks. As a condition of approval for grading plans permit for the SW Gateway site, the soils shall be observed when the scales are removed to determine if there are indications of leakage. If it is determined that leakage has occurred, soils samples shall be collected for laboratory analysis. If it is determined that the soils are contaminated at levels beyond established threshold levels, the contaminated soils shall be removed in accordance with all applicable regulations.	
HAZ-5: Many of the parcels within the project area contain hazardous materials that may be harmful to the public and the environment.	S	HAZ-5: Prior to approval of any demolition or construction permits, ASTs, pesticides, waste oil, equipment maintenance chemicals, discarded trash and debris shall be removed from the individual project site and disposed in accordance with applicable regulations.	LTS

Table II-1 *continued*

Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
HAZ-6: The septic tanks and wells on the Westside and SW Gateway sites could potentially create a significant hazard to the public or the environment.	S	HAZ-6: Prior to approval of any grading plans or construction permits for each individual project, the wells and septic system shall be properly abandoned in accordance with applicable regulations.	LTS
HAZ-7: The reported presence of a possible underground storage tank (UST) within the SW Gateway site could potentially impact construction workers and the environment.	S	HAZ-7: Prior to approval of any demolition or construction permits for the project site, a geophysical survey shall be performed locate the possible UST. Drilling and soil sampling shall be conducted to determine if this UST may have contained petroleum hydrocarbons that may have leaked and affected soil and ground water. Should the sampling indicate a release from the tank has occurred, additional investigation and remediation may be required by San Joaquin County EHD prior to case closure. If the UST is present, it shall be removed and backfilled with engineered fill prior to site development.	LTS
HAZ-8: Demolition of buildings containing lead-based paint and asbestos-containing building materials and the removal of asbestos containing irrigation pipes could release airborne lead and asbestos particles, which may affect construction workers and the public.	S	HAZ-8: Implementation of the following two-part mitigation measure would reduce this impact to a less-than-significant level. 8a: As a condition of approval for a demolition permit for the project site buildings, an asbestos and lead-based paint survey shall be performed. If asbestos-containing materials are determined to be present, the materials shall be abated by a certified asbestos abatement contractor in accordance with the regulations and notification requirements of the San Joaquin Valley Air Quality Control District. If lead-based paints are identified, then federal and State construction worker health and safety regulations shall be followed during renovation or demolition activities. If loose or peeling lead-based paint are identified, they shall be removed by a qualified lead abatement contractor and disposed of in accordance with existing hazardous waste regulations.	LTS
		8b: As a condition of approval for grading plans for the project sites, an asbestos investigation of subsurface structures shall be conducted. If asbestos-containing materials are determined to be present, the materials shall be abated by a certified asbestos abatement contractor in accordance with the regulations and notification requirements of the San Joaquin Valley Air Quality Control District.	
J. UTILITIES			
There are no significant utility impacts.			
K. PUBLIC SERVICES			
There are no significant public services impacts.			

Table II-1 *continued*

Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
L. VISUAL RESOURCES			
VIS-1: The proposed project would degrade the existing visual character.	S	VIS-1: No mitigation is available to reduce this significant and unavoidable impact.	SU
VIS-2: The proposed project would create a new source of light and glare affecting day and nighttime views.	S	VIS-2: Outdoor lighting shall be designed to minimize glare and spillover to surrounding properties. The proposed project shall incorporate non-mirrored glass to minimize daylight glare.	LTS

Source: LSA Associates, Inc., 2006.

III. PROJECT DESCRIPTION

The project considered in this EIR includes three primary components:

- ***Westside project.*** This project proposes to annex approximately 151 acres into the City and to develop the site with up to 740 residential dwelling units, a school site, and other park and open space areas.
- ***Southwest (SW) Gateway project.*** This project proposes to annex approximately 257 acres into the City and to develop the site with up to 1,350 residential dwelling units, a school site, and other park and open space areas.
- ***Other Areas to be Annexed.*** Approximately 12 additional parcels, which total approximately 48 acres, adjacent to the Southwest Gateway project area are also proposed to be annexed into the City as part of this project to avoid the creation of a county island. As part of the annexation, these parcels will be pre-zoned for residential development, but no specific development is proposed at this time.

The nomenclature for referring to the project, the individual components and sites that is used throughout this document is listed in Table III-1.

This chapter describes each of the project components. A description of each project's regional and planning context, objectives, and background is also provided, in addition to a discussion of the intended uses of the EIR, and required project approvals and entitlements. Frontiers Community Builders (FCB) is the applicant for both the Westside and SW Gateway projects.

Table III-1: Project Definitions and Abbreviations

The Frontiers Community Builders (FCB) Annexation and Development Project *or* the Project Refers to the entire project including all three components.
Westside Project Refers to the Westside component.
SW Gateway Project Refers to the Southwest Gateway component.
FCB Project Refers to both the Westside and SW Gateway projects.
Other Areas to be Annexed Refers to the Other Areas to be Annexed component.
Project Area Refers to all three project sites collectively as shown in Figure III-1.
Westside Site Refers to only the Westside portion of the project area.
SW Gateway Site Refers to only the Southwest Gateway portion of the project area.
Other Areas to be Annexed Site Refers to the site area of the 12 additional parcels proposed to be annexed.

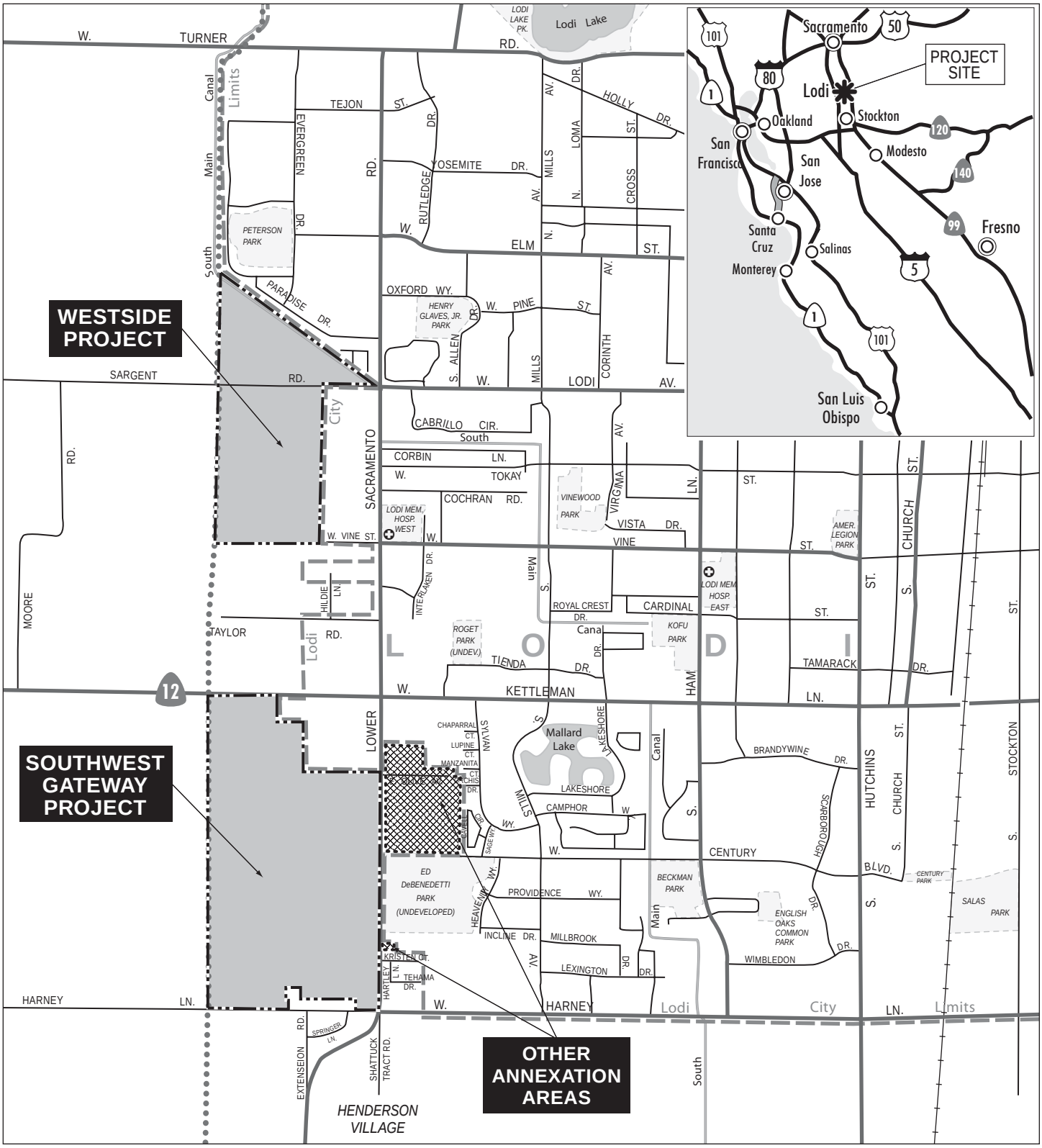
Source: LSA Associates, Inc., 2006.

A. PROJECT SITE

The project area is shown in Figure III-1. This section discusses the location and site characteristics of the projects. An aerial photograph of each project site is shown in Figure III-2 and Figure III-3, respectively.

1. Westside Project Location and Site Characteristics

The Westside site is approximately 151 acres and is located in an unincorporated area of San Joaquin County immediately west of the Lodi jurisdictional boundary, as shown in Figure III-1. The Westside site is within the City of Lodi's Sphere of Influence.



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LEGEND

- WESTSIDE & SOUTHWEST GATEWAY PROJECT AREAS
- OTHER ANNEXATION AREAS
- CITY LIMITS
- SPHERE OF INFLUENCE

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FIGURE III-1

Lodi Annexation EIR
Project Location and Regional Vicinity

SOURCE: CSAA, 2005; LSA ASSOCIATES, INC., 2005

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As shown in Figure III-2, the Westside site is generally bounded by the Woodbridge Irrigation District (WID) Canal on the north; agricultural land to the west and south; and a shopping center, mini-storage facility, Temple Baptist Church, and a high school to the east. Sargent Road bisects the project site which separates the triangular shaped northern parcel from the rest of the project site. As part of the project, the portion of Sargent Road that bisects this property would be renamed Lodi Avenue.

The Westside site is comprised of four parcels. The triangular shaped parcel north of Sargent Road is currently vacant grassland. The most prominent feature of this parcel is a large oak tree. This parcel is accessed off of Sargent Road. The three parcels south of Sargent Road are irrigated vineyards. Access is provided to these parcels from Sargent Road and from the termination of Vine Street, which is located at the southeastern corner of the project site. Figure III-4 shows the location of the various parcels, and Table III-2 presents information about the parcels.

Table III-2: Westside Project Parcel Information

Assessor's Parcel Number	Street Address	Acreage	Current Use
029-380-05	351 E. Sargent Rd.	49.74	Vacant field
027-040-01	70 E. Sargent Rd.	19.85	Irrigated Vineyard
027-04-020	212 E. Sargent Rd.	44.70	Irrigated Vineyard
027-04-030	402 E. Sargent Rd.	37.45	Irrigated Vineyard

Source: City of Lodi, 2005.

Photo 1: Looking west on the Westside site.

Photo 2: Looking southeast from Sargent Road at the Westside site.

2. Southwest Gateway Project Location and Site Characteristics

The SW Gateway site is approximately 257 acres and is located in an unincorporated part of San Joaquin County immediately west of the Lodi jurisdictional boundary, as shown in Figure III-1. The SW Gateway site is within the City of Lodi's Sphere of Influence.

The SW Gateway site is generally bound by Highway 12 to the north, the Van Ruiten Vineyard to the west, Harney Lane and private residences to the south, and Lower Sacramento Road and commercial development to the east, as shown in Figure III-3.

Photo 3: Looking southeast at SW Gateway site.

Photo 4: Orchards and vineyards on SW Gateway site.

The project site is comprised of 10 parcels. These parcels are accessed off of Highway 12, Lower Sacramento Road, and Harney Lane. These parcels are used for a variety of agricultural uses, and also include three houses. Figure III-5 shows the location of various parcels, and Table III-3 presents information about the parcels.

Table III-3: Southwest Gateway Parcel Information

Assessor's Parcel Number	Street Address	Acreage	Current Use
058-030-09	252 E. St. Route 12 Highway	33.68	Agricultural; Irrigated Field Crops
058-030-03	14509 N. Lwr Sacramento Rd.	88.21	Agricultural; Irrigated Vineyards
058-030-04	14499 N. Lwr Sacramento Rd.	1.04	Rural Residence
058-030-05	14433 N. Lwr Sacramento Rd.	8.47	Agricultural; Feed and Grain Mills
058-030-06	14195 N. Lwr Sacramento Rd.	1.76	Residential
058-040-01	14101 N. Lwr Sacramento Rd.	39.09	Agricultural; Orchards w/Residence
058-040-02	13837 N. Lwr Sacramento Rd.	39.07	Agricultural; Orchards w/Residence
058-040-04	13537 N. Lwr Sacramento Rd.	14.28	Agricultural; Irrigated Field Crops
058-040-05	13589 N. Lwr Sacramento Rd.	5.41	Agricultural; Irrigated Field Crops
058-040-14	--	26.75	Agricultural; Irrigated Vineyards

Source: City of Lodi, 2005.

3. Other Areas to be Annexed Locations and Site Characteristics

The project also includes annexation of parcels adjacent to the SW Gateway site (Other Areas to be Annexed) previously described. Highway 12, Lower Sacramento Road, and Harney Lane would also be annexed as part of the project. The purpose of annexing these parcels is to help ensure orderly development pursuant to LAFCO standards. Additionally, annexation will help to avoid creating an unincorporated county island. This area includes parcels adjacent to the SW Gateway project, east of Lower Sacramento Road. The location of the annexation area east of Lower Sacramento Road can be seen in Figure III-1 and an aerial photograph of the area can be seen in Figure III-3.

Photo 5: View of Other Areas to be Annexed.

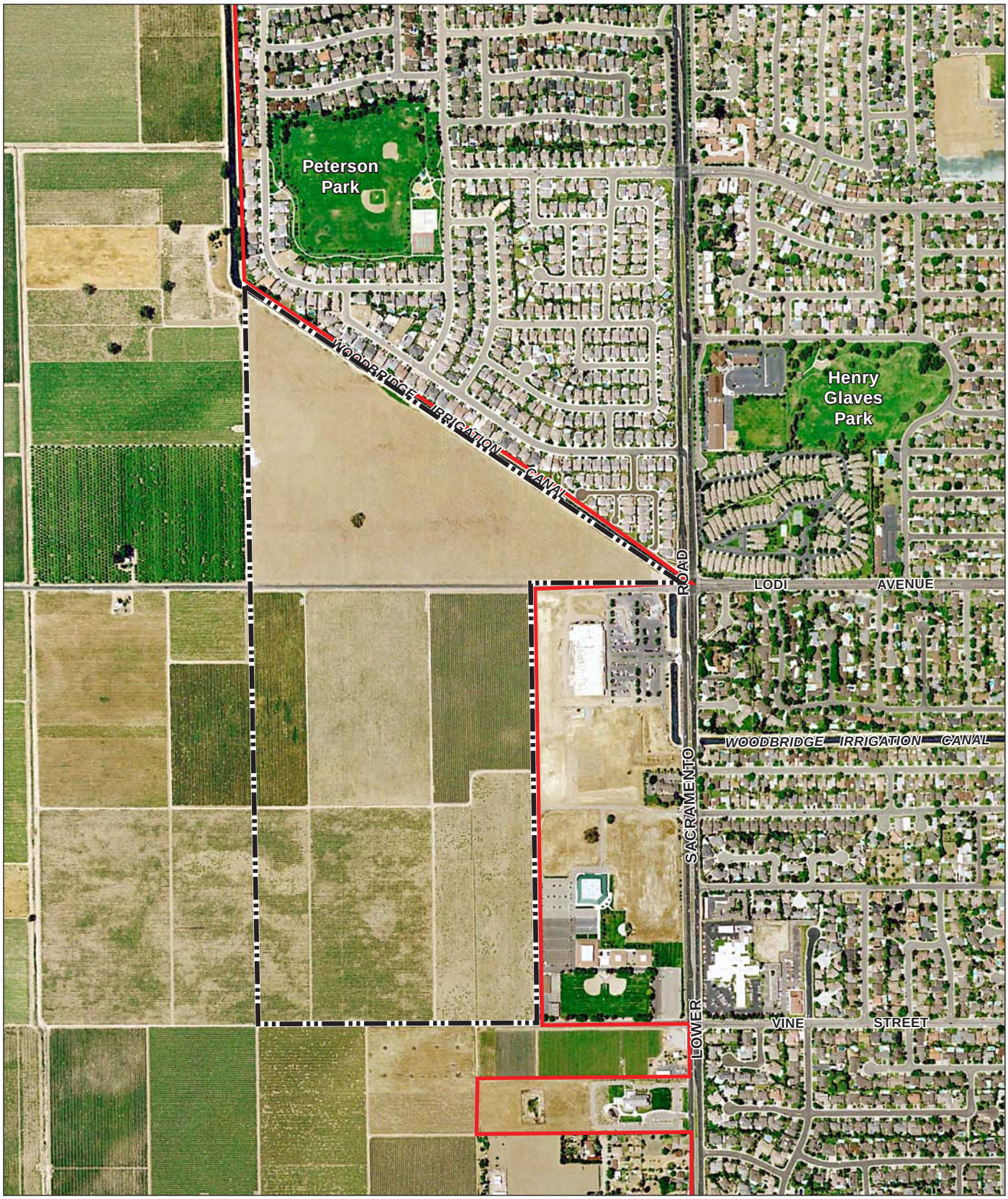

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FIGURE III-2

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WESTSIDE PROJECT SITE

CITY LIMITS

Lodi Annexation EIR

Aerial Photograph of Westside Annexation Area

SOURCE: GLOBEXPLORER, 2005.

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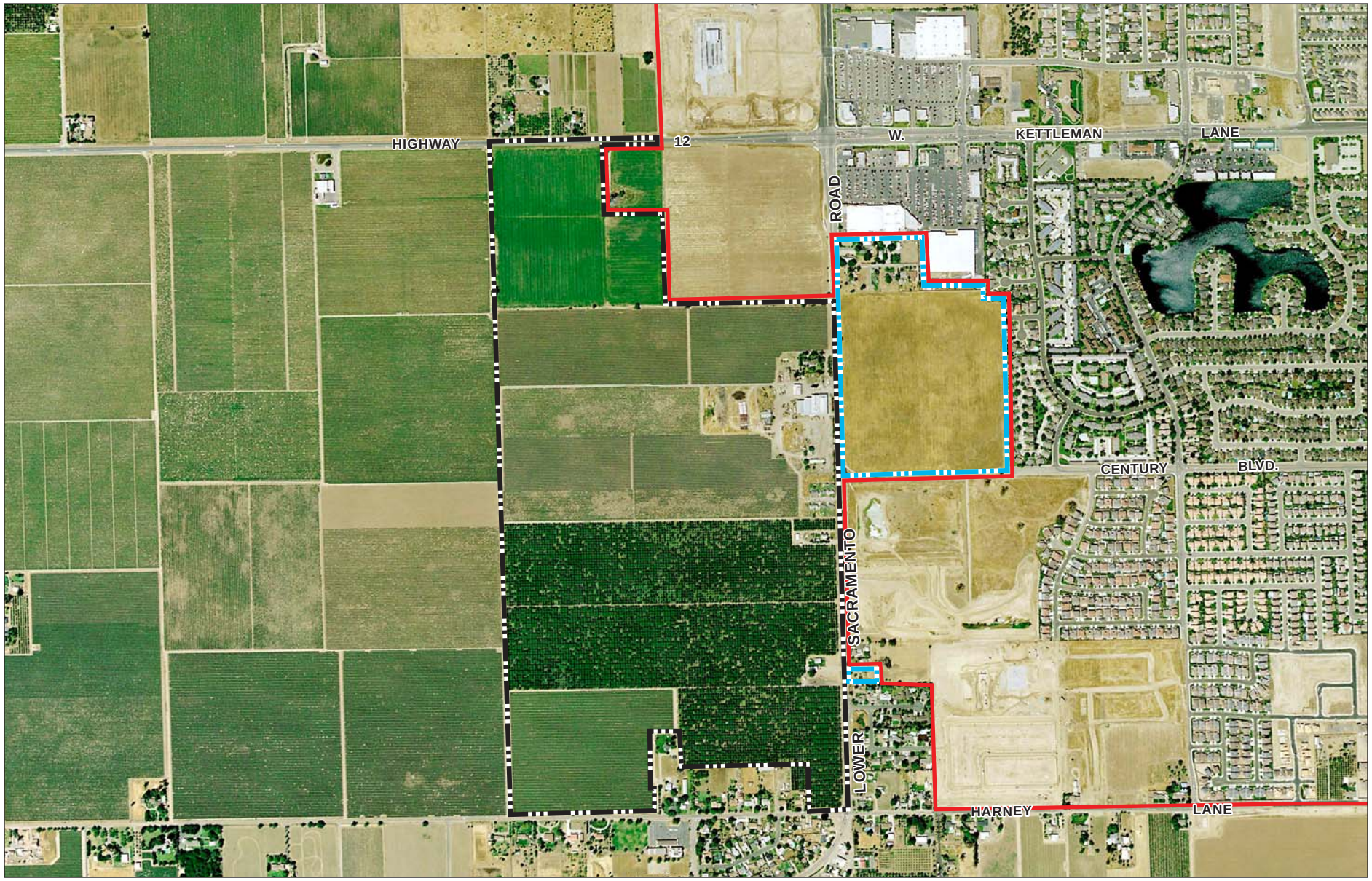

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LEGEND

SOUTHWEST GATEWAY PROJECT SITE

OTHER ANNEXATION AREAS

CITY LIMITS

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SOURCE: GLOBEXPLORER, 2005

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FIGURE III-3

Lodi Annexation EIR

Aerial Photograph of

Southwest Gateway Annexation Areas

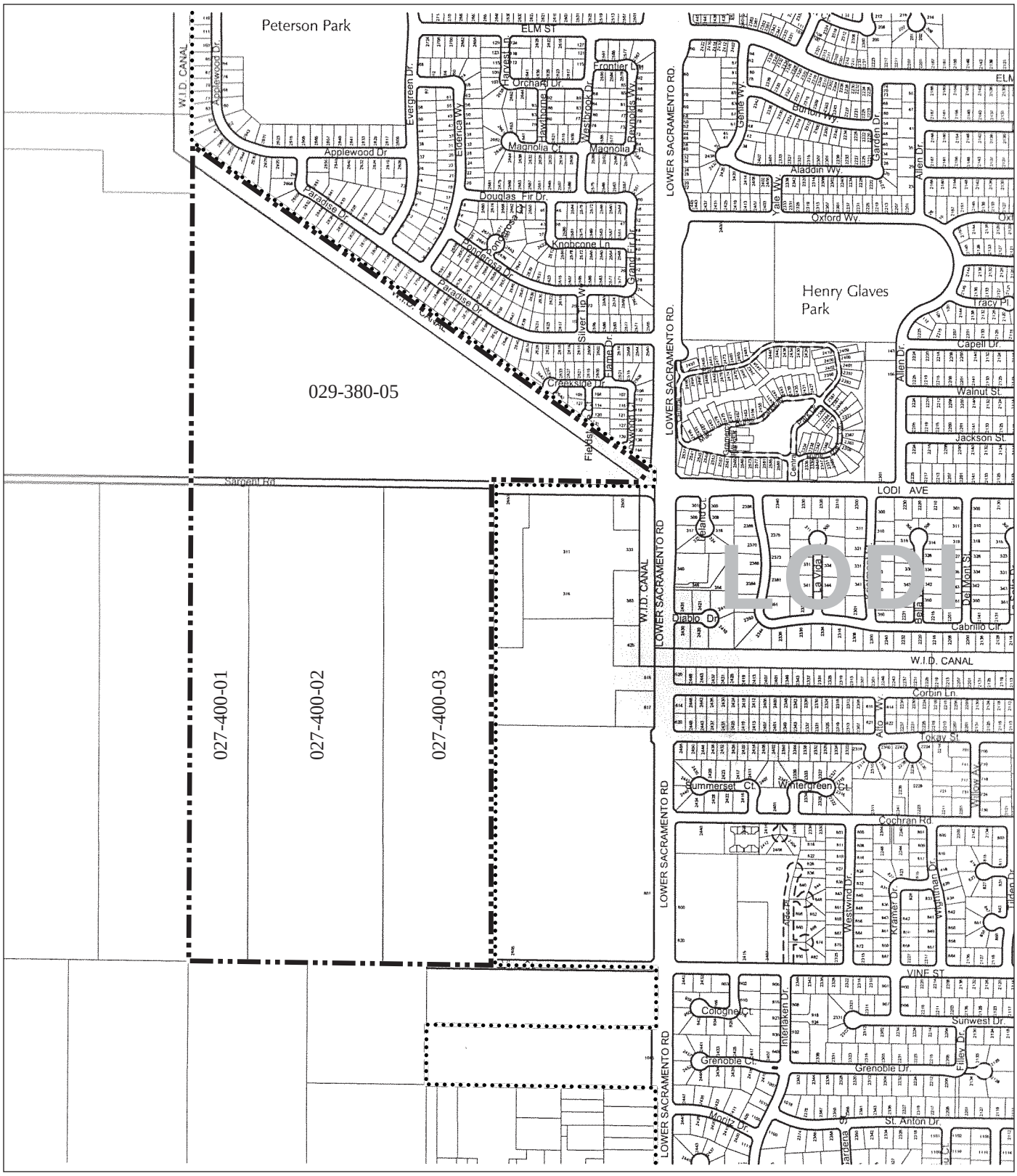

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FIGURE III-4

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WESTSIDE PROJECT SITE

CITY LIMITS

Lodi Annexation EIR

Parcels Within the Westside Project Area

SOURCE: CITY OF LODI, 2005.

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The Other Areas to be Annexed area is approximately 47.79 acres and is located immediately west of the Lodi jurisdictional boundary, within San Joaquin County. These parcels are within the City of Lodi's Sphere of Influence. This area is generally bound by Lower Sacramento Road to the west, Century Boulevard to the south, a residential subdivision to the east, and commercial uses to the north. There is one additional parcel that will be annexed, but is not located adjacent to the other within this area. The solitary parcel is located along Lower Sacramento Road, north of the Lower Sacramento Road/Kristen Court Intersection and is developed with a single-family residence.

The Other Areas to be Annexed area is comprised of 12 parcels. Eleven of these parcels are located northeast of the Lower Sacramento Road/Century Boulevard intersection. These parcels are accessed off of Century Boulevard or Lower Sacramento Road. These parcels have agricultural uses or are considered rural residences. The single parcel located near the Lower Sacramento Road/Kristen Court intersection is accessed off of Lower Sacramento Road and is a residential property. Figure III-5 shows the location of the various parcels, and Table III-4 presents information about the parcels. While there are currently no development plans identified for these parcels, it is anticipated that some or all of these parcels would be developed in the future.

Table III-4: Other Areas to be Annexed Road Parcel Information

Assessor's Parcel #	Street Address	Acreage	Current Use
058-140-04	14752 N. Lower Sacramento Rd.	1.11	Multiple Residential Units
058-140-05	865 E. Olive Avenue	1.48	Rural Residential
058-140-06	800 E. Olive Avenue	0.96	Rural Residential
058-140-07	844 E. Olive Avenue	0.71	Rural Residential
058-140-08	890 E. Olive Avenue	0.71	Single-Family Residential
058-140-09	908 E. Olive Avenue	0.35	Rural Residential
058-140-10	930 E. Olive Avenue	0.35	Rural Residential
058-140-11	777 E. Olive Avenue	0.55	Rural Residential
058-140-12	14500 N. Lower Sacramento Rd.	19.5	Agricultural; Irrigated Field Crops
058-140-13	14320 N. Lower Sacramento Rd.	19.5	Agricultural; Irrigated Field Crops
058-140-14	14620 N. Lower Sacramento Rd.	2.3	Agricultural; Irrigated Field Crops
058-230-04	13786 N. Lower Sacramento Rd.	0.27	Rural Residential

Source: City of Lodi, 2005.

4. Land Use Designations

The Lodi General Plan designates all three sites of the project area as Planned Residential (PR). This designation is only applicable to areas outside the Lodi jurisdictional boundary, but within its Sphere of Influence. When these areas are annexed, the General Plan anticipates that the designation will be changed to some combination of Low-Density Residential (LDR), Medium-Density Residential (MDR), High-Density Residential (HDR), Public/Quasi-Public (PQP), and Detention Basins and Parks (DBP).

The project area does not have a City of Lodi zoning designation since the sites are within the County. As part of the annexation application, the project area will be prezoned Planned Development (P/D), and the Other Areas to be Annexed will be Prezoned Residential Medium-Density (R-MD).

B. PROJECT OBJECTIVES

The objectives for the Westside project, the SW Gateway project, and the Other Areas to be Annexed, are listed below.

1. Westside Project

- Develop a diversity of high quality housing types to meet housing needs within the City of Lodi.
- Provide affordable housing options within the City of Lodi.

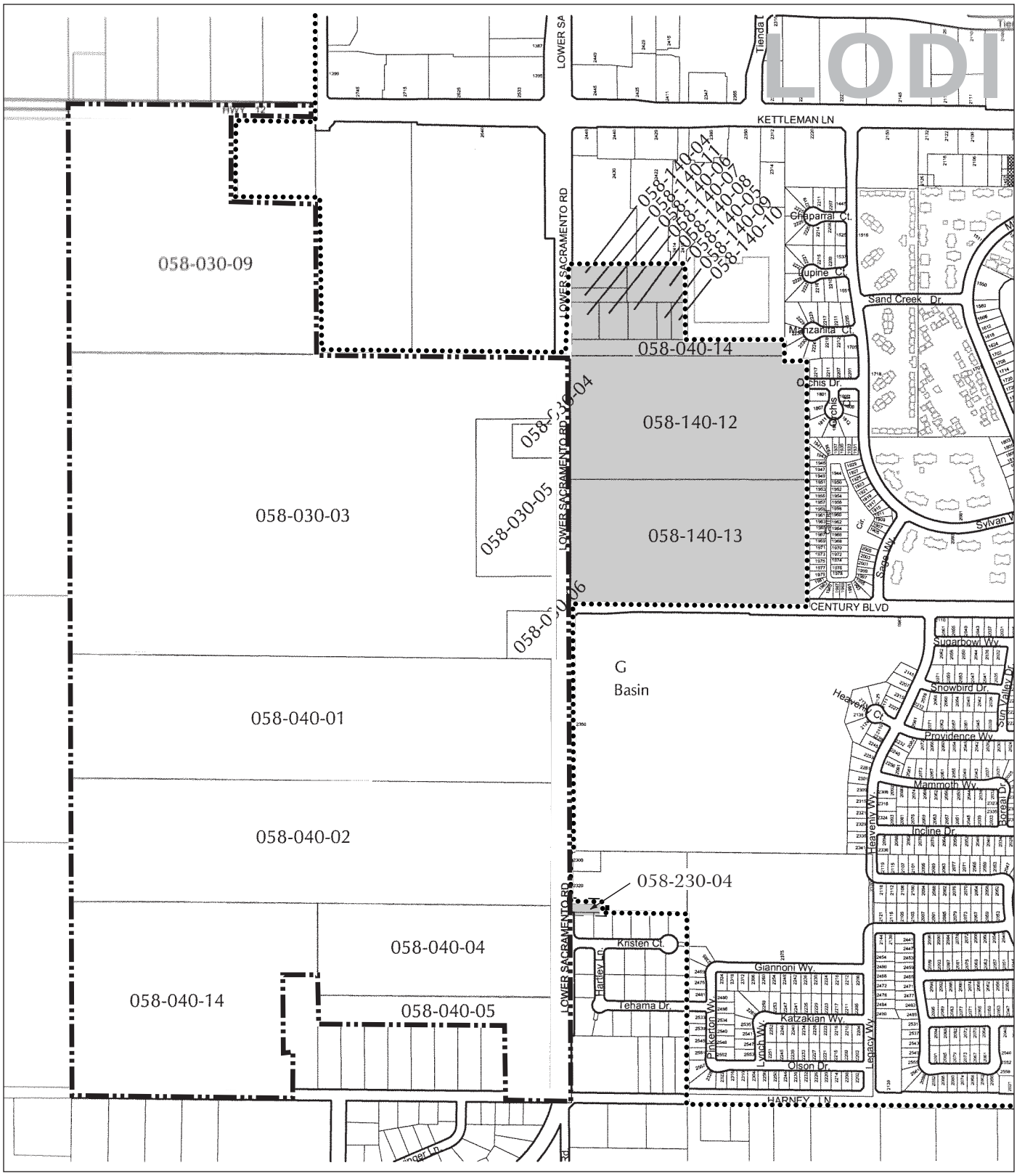

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FIGURE III-5

SOUTHWEST GATEWAY PROJECT SITE

OTHER ANNEXATION AREAS

CITY LIMITS

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Lodi Annexation EIR

Parcels Within the Southwest Gateway Project Area and Other Parcels to be Annexed

SOURCE: CITY OF LODI, 2005.

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- Provide park areas and recreational uses that help meet park standards within the City of Lodi.
- Develop a school site that would serve future residents of the proposed project as well as other Lodi residents.
- Develop an "open space pedestrian/bicycle central spine" within the project site that connects to recreational and pedestrian amenities further south of the project site.
- Provide a site that could accommodate future development of an aquatic center.
- Provide adequate basin capacity for storm water detention.

2. Southwest Gateway Project

- Develop a diversity of high quality housing types to meet housing needs within the City of Lodi.
- Provide affordable housing options within the City of Lodi.
- Provide park areas and recreational uses that help to meet park standards within the City of Lodi.
- Develop a school site that would serve future residents of the proposed project as well as other Lodi residents.
- Develop an "open space pedestrian/bicycle central spine" within the project site that connects to recreational and pedestrian amenities further south of the project site.
- Provide adequate basin capacity for storm water detention.

3. Other Areas to be Annexed

- Ensure orderly development pursuant to LAFCO standards.
- Avoid creation of a County island.
- Facilitate future residential development of these parcels within the City's jurisdiction.

C. PROPOSED PROJECT

The proposed project includes three primary components. The FCB portion of the project includes both the Westside and SW Gateway projects. The Other Areas to be Annexed component is being initiated by the City to avoid creation of County islands. This project could result in the ultimate annexation of approximately 409.5 acres into the City of Lodi; the development of up to 2,090 residential units (approximately 1,110 low-density units, 445 medium-density units, and 535 high-density units); two elementary school sites; approximately 55 acres of parks (including upland, basin and pedestrian trail and open space areas and a site for the aquatic center); and associated roadway and infrastructure improvements.

The Other Areas to be Annexed project would result in the subject properties being incorporated into the City limits and designated/zoned for residential development. Consistent with Housing Element policies, the analysis in this EIR assumes that these properties would develop at a density of approximately seven units per gross acre, resulting in up to 335 additional residential units. A breakdown of the proposed land uses and buildout assumptions utilized for this EIR are shown in Table III-5.

Table III-5: Overview of Anticipated Buildout

	Site Area (Gross Acres)	Residential								School			Parks				Roadway ROWs (Acres)
		Low		Med		High		Total									
		Area (Gross Acres)	Units	Area (Gross Acres)	Units	Area (Gross Acres)	Units	Area (Gross Acres)	Units	Gross Area	Students	Type	Ped Trail/ Open Space	Upland Area	Basin Area	Total Area (Gross)	
Westside	151.74	77	370	23	195	10	175	110	740	10.6	806-876	K-6	2.50	4.45	13.05	24.7[a]	6.44
SW Gateway	257.76	153	740	28	250	19	360	200	1,350	14.0	~900	K-8	4.00	8.00	18.00	31.0[b]	12.76
Other Areas to be Annexed	47.79	–	–	–	–	–	–	47.79	335	–	–	–	–	–	–	–	–
Total	**457.29**	**230**	**1,110**	**51**	**445**	**29**	**535**	**357.79**	**2,425**	**24.6**			**6.50**	**12.45**	**31.05**	**55.70**	**19.20**

Note: The breakdown of uses including the total number of residential units shown for the Westside and SW Gateway are based on a conceptual plan. The final development may vary slightly.

[a] 4.7 acres of the park area could be utilized as a site for an aquatic center.
[b] 1 acre of park area may be used for a future fire station.

Source: Frontier Community Builders and City of Lodi Planning Staff, 2006.

This section details the physical elements of each of the three project components.

1. Westside Project

FCB is requesting approval of the following in association with the Westside project:

- General Plan Amendments
- Prezoning and Zoning
- Amendments to Westside Facilities Master Plan
- Annexation Application
- Growth Management Allocation (2005)
- Vesting Tentative Maps
- Planned Unit Development
- Development Agreement
- Utility Master Plans
- Water system including lines and water hookups
- Storm drainage system
- Sewer connection system and treatment

The approval of these applications would allow approximately 151.74 acres to be annexed into the City and developed with a mix of residential densities, a school site, and other park and open space amenities as described in the following text. Figure III-6 shows the Westside project concept.

a. Residential Uses. Residential uses would be the primary use within the Westside project, occupying approximately 110 gross acres of the site's 151.74 gross acres. The different housing types proposed for the project are described below. The residential area would have an overall density of 6.7 units per acre.

(1) Low-Density Housing. Approximately 370 low-density housing units would be built at an average density of 4.8 units per gross acre as part of the Westside project. The low-density housing would be detached single-family units. The majority of lots for these units would be 5,500 to 6,000 square feet. However, there would be some large lots of up to 9,000 square feet. The units would be a mix of one and two stories and would range from 2,000 to 3,000 square feet and include a two-car garage.

These types of housing units would include a variety of architectural styles. Conceptual drawings of some of the types of architectural detailing that may be incorporated into the low-density housing are illustrated in Figure III-7. Each architectural style would include specific detailing and embellishments. All front yards would be landscaped with automatic sprinklers.

(2) Medium-Density Housing. Approximately 195 medium-density housing units would be built at an average density of 8.48 units per gross acre. The medium density housing units would be detached single family homes designed for two residential lot types. The first lot type is designed at approximately 3,825 square feet with dimensions of 45 x 85 feet. On this type of lot, residential units would range from approximately 1,500 to 2,200 square feet with two-car garages. The second lot type is a cluster of four lots accessed by a common stub alley condition. This second lot type results in each lot size of approximately 3,300 square feet. The residential units would range from 1,300 to 1,800 square feet. Each unit would include a two-car garage. As with the low-density units, distinc-

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FIGURE III-6

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Lodi Annexation EIR

Conceptual Site Plan
for Westside Project

SOURCE: DAHLIN GROUP, MARCH 2006.

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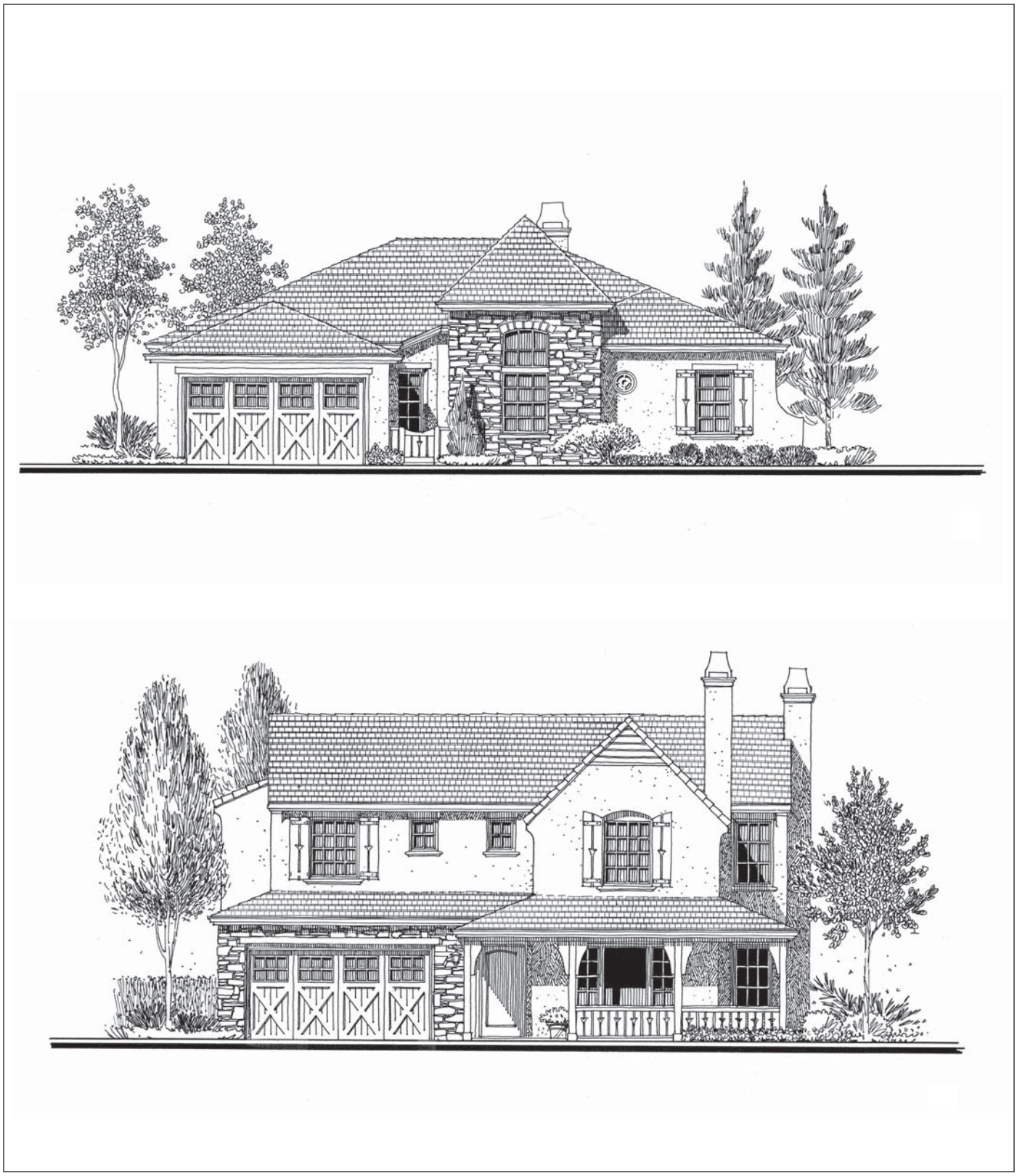

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FIGURE III-7

Lodi Annexation EIR

Conceptual Drawings of Low-Density Residential Housing Units

SOURCE: BASSENIAN LAGONI ARCHITECTS, 2004

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tive architecture is planned. Conceptual drawings of some of the types of architectural detailing that could potentially be incorporated into the medium-density housing are illustrated in Figure III-8. Front yards will be landscaped with automatic sprinklers and garages will be oriented to the alley and away from the neighborhood street.

(3) High-Density Housing. Approximately 175 attached townhome units would be built at an average density of 17.5 units per acre. The townhome units would range from approximately 1,100 to 1,700 square feet with two-car garages under each unit. The architecture would be themed to provide a consistent character in the community. The attached units are grouped in segments of five to seven in each building. Conceptual drawings of some of the types of architectural detailing that could potentially be incorporated into the high-density townhome units are illustrated in Figure III-9.

b. School Site. An approximately 10.6-acre (gross) school site is proposed in the southern portion of the Westside site. This site would be located immediately south of the proposed Tokay Street and north of the park and the site identified for the aquatic center.

While the development plans for the school site have not been finaled, it is expected that the school site would serve approximately 806 to 876 students in grades K to 6. There would be approximately 30 to 38 teachers and staff at the school. The total building area is expected to be between 56,000 and 60,000 square feet, and accommodate 33 to 36 classrooms.

c. Aquatics Center Site. The City of Lodi has plans to construct an Aquatics Facility within the Westside area, although financing has not yet been secured. The Westside Plan includes a site for this facility at the southeast corner of the Westside site. The site encompass approximately 4.7 gross acres. The site may be utilized as parkland until funding is secured. The facility is planned to include three pools: a competition pool, an instructional pool, and an activity pool.

d. Parks and Park Basins. Approximately 20[1] acres of parks (upland and basin) are proposed as part of the Westside project. A linear park and trail system is proposed to transect the project site in a north/south direction. Figure III-6 provides a conceptual plan of these areas.

The park system for the Westside project includes a 4.5-acre park/basin North of Lodi Avenue. This park/basin would be linked with a pedestrian trail/linear park to the elementary school and an 11-acre park/basin on the southern border of the project and the aquatic center site. Both park/basins include upland park area for year round use. The upland park component of the 11-acre park/basin is approximately 2.5 acres and is located adjacent to the aquatic center site. In addition, a neighborhood park of approximately 2 acres is located about midway between the southern boundary of the project and Lodi Avenue at the end of the extension of Tokay Street.

The 2.5-acre central pedestrian trail/linear park feature is proposed to transverse the Westside site in a north/south direction from the Lodi Avenue/Proposed Road C intersection to the southern boundary of the site. The pedestrian trail is approximately 80 feet wide South of Vine Street to the park/basin and aquatic center site, and approximately 40 feet wide north of Vine to Lodi Avenue. Within the pedestrian trail/linear park, there would be an 8-foot-wide paved trail, with a 2-foot-wide decomposed

[1] Does not include 4.7-acre site for the Aquatic Center.

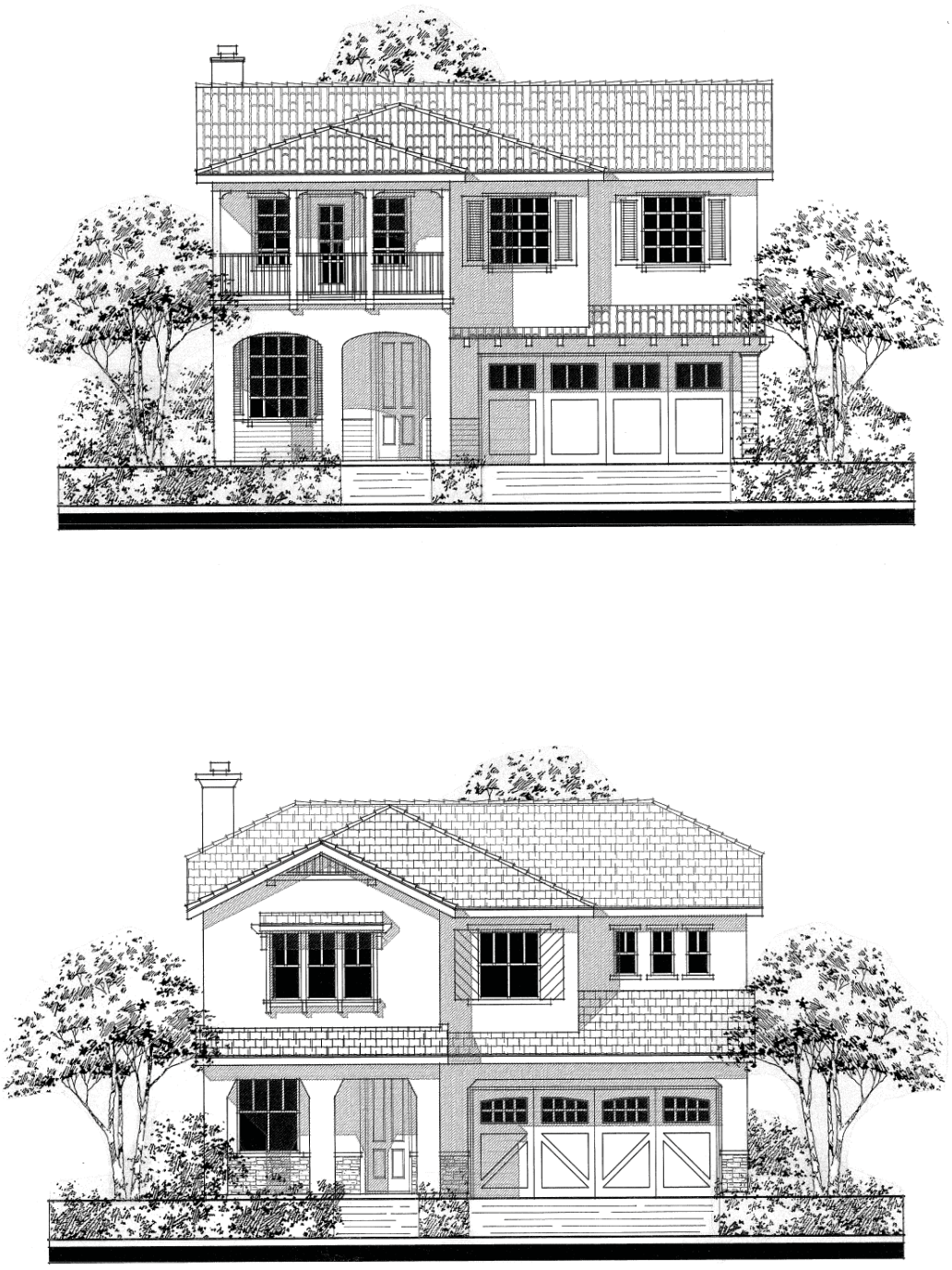

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FIGURE III-8

Lodi Annexation EIR

Conceptual Drawings of Medium-Density Residential Housing Units

SOURCE: BASSENIAN LAGONI ARCHITECTS, 2004

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granite running trail immediately adjacent to the paved trail. Connections to the trail would also be provided from the west as shown in Figure III-6.

The objectives of the Westside park and park/basin system are to:

- Locate the parks along a pedestrian spine to encourage residents to walk to the parks, school, shopping centers, and the aquatic center site.
- Distribute parks and open space throughout the community making them easy to access and use as opposed to one large park.
- Locate the pedestrian trail in the center of the community within a few blocks of every home in the project site to encourage its use.
- Place residential uses facing or siding on to the parks and pedestrian trail. Having "eyes" on the parks and open space promotes a safe and user-friendly system.
- Establish a pedestrian link in the region that future development between Westside and SW Gateway can connect to thereby integrating the entire community west of Lower Sacramento Road from Harney Lane to Lodi Avenue.

e. Circulation and Parking. Proposed streets within the project site can be seen in Figure III-6. Major roads proposed as part of the Westside project include Proposed Road C, which would run in a north/south direction through the area of the Westside site south of Lodi Avenue. Tokay Street would be extended from Lower Sacramento Road to the center of the Westside site and Vine Street would be extended further west to the western boundary of the Westside site. Additionally, the 2.5-acre central pedestrian trail/linear park feature is proposed to transverse the Westside site in a north/south direction from the Lodi Avenue/Proposed Road C intersection to the southern boundary of the site.

Internal roads are proposed throughout the Westside site. Generally, the establishment of cul-de-sacs will be avoided so as to increase connectivity between the neighborhoods. The final street plan will be conditioned to include some opportunities for future connections/linkages to the west. Such connections will allow opportunities for some integration with future development in the event the City decides to extend its sphere for growth to the west.

The neighborhood street network will be designed to allow on-street parking on both sides of the street. The medium- and high-density units would have two enclosed garage spaces per unit and provisions for guest parking including on-street parking.

A roundabout is proposed for the Lodi Avenue/Proposed Road C intersection. The interior of the circle would be landscaped. Lodi Avenue, from Lower Sacramento Road to the roundabout, is four lanes.

f. Utilities. The utility service infrastructure currently on the project site is not adequate for the proposed project. The following is a brief discussion about the provision of utilities to the project site. A more in-depth discussion is found in Section IV.J, Utilities.

(1) Water. The City of Lodi would provide water to the Westside project site. The project site does not currently have water conveyance infrastructure connected to the City water supply system. As part of the project, the applicant will develop a water master plan that shows the proposed

Conceptual Drawing of Apartment Buildings

Conceptual Drawing of Townhouse Units

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FIGURE III-9

Lodi Annexation EIR

Conceptual Drawings of
High Density Residential Unit Types

SOURCE: KTGY GROUP, INC. 10/14/04

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infrastructure to provide water and recycled water to the project site. This master plan would show water pipelines, including transmission mains and utility corridors. Water alignments would be established from Woodbridge Irrigation District Canal to Harney Lane, which is the southern border of the SW Gateway project.

(2) Wastewater. The City of Lodi would provide wastewater service to the Westside site. There is a 21-inch sewer main that crosses Kettleman Lane at Westgate Drive. This main needs to be extended to the existing 48-inch trunk line south of Kettleman Lane that will convey the wastewater to White Slough Water Pollution Control Facility.

(3) Storm Drainage. The City of Lodi maintains the storm drainage system. The proposed project includes underground conveyances to on-site detention basins, which would be connected to the City's storm drainage system. Each basin would drain by gravity to a central pump station which would deliver water to the outfall line in Century Boulevard.

(4) Electric, Phone Service, and Cable. Lodi Electric Utility would provide power to the project site. There are currently no electric services to the project site. The proposed project would connect to utility transmission lines off of Lower Sacramento Road and Lodi Avenue. All electric distribution lines would be placed underground. Any transmission lines would be overhead.

SBC would provide telephone services to the project site. Currently, there is no telephone service at the Westside project site. All telephone lines would be placed underground. Comcast provides cable television service to the City of Lodi. There is currently no cable service to the project site.

g. Construction and Phasing Schedule. Construction and phasing are largely determined by infrastructure design and market demand for housing. The need to develop storm drainage facilities and to access existing sewer and water connections dictate that development of the first phase would include improvements to Vine and Tokay Streets, as well as development of Roads B and C and at least a portion of the 11-acre park basin. The first phase is expected to include the development of approximately 250 low-density and medium-density units. The school site would be available in the first phase. However, the timing of building the actual school would be determined by Lodi Unified School District.

The second phase of the project would include the high-density townhome site, approximately 100 additional medium- and low-density home sites, and improvements to Lodi Avenue.

The third phase would include the remainder of the parcels and all park/basins facilities and infrastructure not otherwise completed in the first two phases.

2. Southwest Gateway Project

FCB is requesting approval of the following in association with the SW Gateway Project:

- General Plan Amendments
- Prezoning and Zoning
- Growth Management Allocation (2005)
- Annexation Application
- Vesting Tentative Maps

- Planned Unit Development
- Development Agreement
- Utility Master Plans
- Water system including lines and water hookups
- Storm drainage system
- Sewer connection system and treatment

The approval of these applications would allow approximately 257.76 acres to be annexed into the City and developed with a mix of residential densities, a school site, and park and recreation amenities described in the following text. Figure III-10 shows the SW Gateway project concept.

a. Residential Uses. Residential uses will be the primary use within the SW Gateway site, occupying 200 acres of the 257.76-acre site. The project incorporates a total of 11 different lot sizes and includes a wide range of housing options. The different types of housing proposed for SW Gateway are described below. The SW Gateway residential uses would have an overall density of 6.75 dwelling units per acre.

(1) Low-Density Residential. Approximately 740 low-density residential units at an average density of approximately 4.84 units per gross acre would be built as part of the SW Gateway project. The standard lots for the units would range in size from 4,500 square feet to 7,350 square feet. Large lots up to 10,000 square feet would also be available. Six different lot sizes are planned to address a broad range of housing types and needs in this category. Homes are expected to range from approximately 1,950 to over 4, 000 square feet. All homes would be single-family detached units with two or more garage spaces. A variety of architectural styles would be incorporated into the project. Conceptual drawings of some of the types of architectural detailing that may be incorporated into the low-density housing are illustrated in Figure III-7. Each unit would be a single-family detached home and be either one or two stories. All front yards would be landscaped and include automatic sprinklers.

(2) Medium-Density Housing. Approximately 250 medium-density residential units at an average density of 8.93 units per gross acre would be constructed as part of the SW Gateway project. As with the low-density units, distinctive architecture is planned. Conceptual drawings of some of the types of architectural detailing may be incorporated into the medium-density housing are illustrated in Figure III-8. The medium-density housing would be detached single family units designed for three residential lot types.

The first lot type would be approximately 45 feet x 80 feet (~ 3,600 square feet). The residential units on this lot type would range from approximately 1,500 to 2,100 square feet and include two-car garages.

The second lot type is a cluster of four lots accessed by a common stub alley condition. This second lot type would average approximately 3,300 square feet. The residential units would range from 1,300 to 1,900 square feet. Each unit would have a two-car garage.

The third lot type is a cluster designed for alley access to the garages. Each home on this type of lot would either front or side on to the neighborhood street. In the instances where lot clusters side on to the street, the front of the homes face a common pedestrian access called a paseo. The lots in this neighborhood would be approximately 2,700 square feet excluding the landscaped paseos. The

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FIGURE III-10

LEGEND

ONE ACRE OF THIS PARK MAY BE USED FOR A FUTURE FIRE STATION

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Lodi Annexation EIR

Conceptual Site Plan for Southwest Gateway Project

SOURCE: DAHLIN GROUP, MARCH 2006.

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dimension of these lots would be 45 feet x 60 feet. The cluster products will have a two-car garage oriented to an alley. Front yards and the paseos would be landscaped with automatic sprinklers.

(3) High-Density Housing. Approximately 360 high-density residential units would be built within the SW Gateway project area. These units would include 120 townhome units and 240 apartment units. The townhomes would have an average density of 17.5 units per gross acre, and the apartments would have an average density of 23.5 units per gross acre. Conceptual drawings of the townhome units and apartment units are shown in Figure III-9.

The townhomes would range from approximately 1,100 to 1,800 square feet with two-car garages under each unit. The architecture would be themed to provide a consistent character in the community. The units would be attached and grouped in segments of five to seven in each building. The townhomes are intended to be for-sale units.

The apartments would be a blend of one, two and three bedroom units. The apartment buildings would be primarily three-story with potentially some two-story elements. The architecture would be themed to compliment the overall community.

b. School. An approximately 14-acre school site would be located north of the Century Boulevard extension along the western border of the project site. While no designs have been finalized for the school site, Lodi Unified School District has indicated the school will serve approximately 900 students between kindergarten and 8th grade. The facility would be approximately 69,000 square feet and have between 35 to 40 classrooms.

c. Fire Station Site. A 1-acre portion of the park located adjacent to the electrical substation could be utilized for a future fire station if the City determines a new station in this area is needed. There are currently no plans for construction, and the 1-acre site would be used as park space until such a time that the fire station is developed. No park amenities or facilities would be built on this 1-acre site.

d. Parks and Park Basins. Approximately 30[2] acres of parks (upland and basin) are proposed for the SW Gateways site. The park and park/basin system for the SW Gateway includes a large central park/basin of approximately 10 acres and two additional park basins of approximately 7.0 and 5.4 acres. All three park basins are designed to include upland park for year round use. There are two additional neighborhood parks of approximately 2 acres so that each quadrant of the community is served by parks.

As with the Westside project, the parks and open space system is distributed throughout the community and linked by a pedestrian trail and linear park that runs the entire length of the project from Harney Lane to Kettleman Lane as well as east to west along Century Boulevard. The width of the trail feature varies along the street frontages. The portion of the trail that runs north and south is generally 35 to 40 feet. The portion of trail that runs east and west along Century Boulevard ranges from 20 feet to nearly 80 feet as it widens out on both sides of the central park. There are approximately 4 acres in the pedestrian trail system.

[2] Does not include the 1-acre that may be utilized for a fire station at some point in the future.

The objectives of the SW Gateway park and park/basin system are to:

- Develop a large central park that acts as a central core for the overall community along with the nearby 14-acre school site.
- Locate the parks along a pedestrian spine to encourage residents to walk to the parks, school, and shopping centers.
- Distribute parks and open space throughout the community making them easy to access and use as opposed to one large park.
- Locate the pedestrian trail in the center of the community within a few blocks of every home in the project site to encourage its use.
- Place residential uses facing or siding on to the parks and pedestrian trail. Having "eyes" on the parks and open space promotes a safe and user friendly system.
- Establish a pedestrian link in the region that future development between the Westside and SW Gateway sites can connect to thereby integrating the entire community west of Lower Sacramento Road from Harney Lane to Lodi Avenue.

e. Circulation and Parking. Major roads proposed as part of the SW Gateway project include an extension of Century Boulevard, which would extend to the western border of the project site. Additionally, Westgate Drive would be extended to serve as a central "spine" which would run in a north/south direction through the center of the project site. This street would form T-stops where it intersects with the central park. Since the street branches at the park site, the south leg will have a different street name.

Internal roads are proposed throughout the SW Gateway site. Generally, the establishment of cul-de-sacs will be avoided so as to increase connections between neighborhoods. The final street plan will be conditioned to include opportunities for future connections/linkages to the west if development were to continue west at some point in the future. As with the Westside project, the parks and open space system is distributed throughout the community and linked by a pedestrian trail and linear park that runs the entire length of the project from Harney Lane to Kettleman Lane as well as east to west along Century Boulevard.

The neighborhood street network is designed to allow on street parking on both sides of the street. The medium and high-density units would have two enclosed garage spaces per unit and provisions for guest parking including on street parking.

On-site parking would be provided for all single-family dwelling units at a rate of two covered spaces per dwelling unit. On-street parking would be allowed except on some streets adjacent to reverse frontage walls.

f. Utilities. The utility service infrastructure currently on the project site is not adequate for the proposed project. The following is a brief discussion about the provision of utilities to the project site. A more in-depth discussion is found in Section IV.J, Utilities.

(1) Water Service. The City of Lodi would provide water to the SW Gateway project site. The project site does not currently have water conveyance infrastructure connected to the City water supply system.

As part of the project, the applicant will develop a water master plan that shows the proposed infrastructure to provide water and recycled water to the project site. This master plan would show water pipelines, including transmission mains and utility corridors. Water alignments would be established from Lodi Avenue to Harney Lane, which is the southern border of the SW Gateway project.

(2) Wastewater. The City of Lodi provides wastewater service to the project site. There is an existing 48-inch sewer trunk line and a 30-inch industrial waste line that extends in a southwesterly direction through the SW Gateway site from the intersection of Lower Sacramento Road and Century Boulevard. These facilities would have to be relocated to accommodate the project. A 21- to 42-inch sewer main is situated beneath Lower Sacramento Road, located along the eastern boundary of the SW Gateway site. The proposed sewer infrastructure for the parcels east of Lower Sacramento Road would connect to this main, and be conveyed to the White Slough Water Pollution Control Facility, located 6 miles west of the City of Lodi. Parcels west of Lower Sacramento Road would be served by the existing 48-inch trunk line and new wastewater facilities to be constructed in Harney Lane. The majority of the southern portion of the SW Gateway project is in the Harney Lane lift station service area.

(3) Storm Drainage. The City of Lodi maintains the storm drainage system. The proposed project includes underground conveyances to on-site detention basins, which would be connected to the City's storm drainage system.

(4) Electric, Phone and Cable Service. Lodi Electric Utility would provide power to the project site. There are currently no electric services to the project site. The proposed project would connect to utility transmission lines off of Lower Sacramento Road and Kettleman Lane. All electric distribution lines would be placed underground. Any transmission lines would be overhead.

SBC would provide telephone services to the project site. Currently, there is limited telephone service at the SW Gateway project area. All telephone lines would be placed underground. Comcast provides cable television service to the City of Lodi. There is currently no cable service to the project site.

(5) Construction and Phasing Schedule. Construction and phasing are largely determined by infrastructure design and market demand for housing. Based on the planned facilities for sewer, water, storm drainage and other utilities, the first phase would include the Century Boulevard entrance extending to the west end of the project site including the central park/basin. The sewer trunk lines would be relocated in the first phase. The exact timing and development of Westgate Drive from the central park to Kettleman Lane will depend on the development of the shopping center site. However, it is anticipated that Westgate Drive would also be improved early on in the project along with the park/basin across from the shopping center. The first phase would include 120 high-density townhome units, 104 medium-density alley loaded cluster units, and approximately 300 low-density residential units. The first phase would facilitate the potential development of the school site in coordination with the development plans of Lodi Unified School District. This phase will be the largest phase due to the critical mass of infrastructure required to initiate the project.

The second phase is expected to include the 240 high-density apartments, and medium-density cluster sites and low-density lots to complete development between Century Boulevard and Kettleman Lane.

The third phase of the project would include the medium-density 45 feet x 80 feet residential lots and approximately 250 low-density lots. The third and final park/basin and the second roadway connection to Lower Sacramento Road is expected in this phase.

The fourth phase would include the remainder of the low- and medium-density lots, the last neighborhood park, and the roadway connection through to Harney Lane.

3. Other Areas to be Annexed

To avoid creating an island of unincorporated County land, the City is proposing to annex approximately 47.79 acres in addition to the 409.5 acres proposed for annexation by FCB. The 47.79 acres is comprised of 12 parcels (see Table III-4 and Figure III-5).

No specific development is proposed on any of these parcels at this time. However, as part of annexing them into the City, each parcel must be given a General Plan land use designation and prezoned. The City is proposing a Medium-Density General Plan land use designation and a prezoning of Residential Medium-Density (R-MD) for these parcels. To evaluate this change at a program level, the analysis in this EIR assumes that these properties will redevelop at some point in the future at an average residential density of seven units per gross acre. Development at this density could result in up to 335 additional residential units.

D. DISCRETIONARY ACTIONS

The proposed projects would require a series of discretionary actions as described in the following text.

1. Approval of Annexation Proposal

The project area is located in an unincorporated area of San Joaquin County, just west of the Lodi jurisdictional boundary. The area is within the City of Lodi's Sphere of Influence, and would require annexation by the City of Lodi. Annexation would require consideration and approval from the San Joaquin Local Agency Formation Committee (LAFCO) following the City's approval of the development proposal.[3]

2. General Plan Amendments and Prezoning

Currently, the project area is designated in the City of Lodi General Plan as Planned Residential (PR). This designation allows for residential and park uses, and is generally applied to largely undeveloped areas in the City's unincorporated Sphere of Influence. As part of the proposed project, the applicant seeks to change the General Plan designations of the Westside site to Low-Density Residential, Medium-Density Residential, High-Density Residential, Public/Quasi-Public, and Detention Basins and Parks. The SW Gateway site designations would be changed to Low-Density Residential,

[3] LAFCO will no longer consider annexations if the local jurisdiction has not yet approved a development proposal except under special circumstances.

Medium-Density Residential, High-Density Residential, Public/Quasi-Public, and Detention Basins and Park.

Other Areas to be Annexed would be annexed with the Westside and SW Gateway sites. These parcels would be designated Medium Residential-Density under the City's General Plan.

Concurrent with approval of the General Plan Amendment, the City Council also needs to consider a zoning map amendment. FCB is proposing to zone the Westside and SW Gateway sites as Planned Development (PD). The Other Areas to be Annexed are proposed to be prezoned as Residential Medium-Density (R-MD). Prezoning would become final upon approval of the annexation application.

3. Approval of Growth Management Allocations

In order to ensure orderly growth with the City of Lodi, the Growth Management Allocation system was established to allow for a controlled amount of residential development each year. A fixed number of allocations are allowed each year for low-density, medium-density, and high-density residential development. Under this allocation system, growth management allocation applications are submitted to the City for review. Applications are approved based on merit, and applications are ranked using criteria established under the growth management system. A more in depth discussion of the Growth Management Ordinance and allocation system can be found in Section IV.A of this EIR.

The project's growth management application requests the following types of allocations:

<u>Westside Project</u>

- 370 Low-Density Residential (50 percent)
- 195 Medium-Density Residential (26 percent)
- 175 High-Density Residential (24 percent)

<u>SW Gateway Project</u>

- 740 Low-Density Residential (55 percent)
- 250 Medium-Density Residential (18 percent)
- 360 High-Density Residential (27 percent)

4. Development Plans

FCB is also seeking approval of Development Plans for both the Westside project and the SW Gateway project areas. The City requires that a Development Plan be approved in conjunction with an application for Growth Management Allocations and/or Planned Development zoning. The Development Plan is subject to the review and approval of the City Council and once approved, development within the project area must comply with the approved Development Plan.

5. Vesting Tentative Map

Subsequent to the City's approval of a Growth Management Allocation and Development Plan, FCB will seek approval from the City of Lodi of a Vesting Tentative Map for both the Westside and SW

Gateway projects, which would allow the applicant to proceed with development in substantial compliance with the ordinances, policies, and standards in effect on the date the map application is determined complete. Approval of the Vesting Tentative Maps will require the submittal of all utility master plans, including engineering calculations and Infrastructure Finance Plan. Improvement plans and grading and soils studies and reports are required prior to approval of a Final Subdivision Map.

6. Development Agreement

The City and FCB are anticipating entering into a Development Agreement.

E. USE OF THIS EIR

A number of permits and approvals, including the discretionary actions discussed above, would be required before the development of projects could proceed. As lead agency for the proposed project, the City of Lodi would be responsible for the majority of approvals required for development. Other agencies also may have some authority related to the project and its approvals. A list of the required permits and approvals that may be required by the City and other agencies is provided in Table III-6. Many of these agencies would use this EIR when deliberating over required permits and approvals.

Table III-6: Required Permits and Approvals

Lead Agency	Permit/Approval
City of Lodi	• Annexation Application • Growth Management Allocation • General Plan Amendments • Zoning and Prezoning • Development Plans • Westside Facilities Master Plan Amendments • Vesting Tentative Map • Development Agreement • Utility Master Plans • Infrastructure Finance Plan • Approval of water lines, water hookups and review of water needs • Approval of storm drainage system • Approval for sewer connection and treatment • Agriculture Preservation Permit/Impact Fee
Responsible Agencies	
San Joaquin Local Agency Formation Committee	• Approval of Annexation Proposal
San Joaquin Council of Governments	• Habitat Conservation Plan
California Regional Water Quality Control Boards (RWQCB)	• Section 401 water quality certification
San Joaquin Valley Air Pollution Control District	• ISR Application
California Department of Transportation	• Encroachment Permit
Trustee Agencies	
California Department of Fish and Game	• Consultation regarding special-status species

Source: LSA Associates, Inc., 2005.

IV. SETTING, IMPACTS AND MITIGATION MEASURES

This chapter contains an analysis of each topic that has been identified through preliminary environmental evaluation of the Westside Project, Southwest (SW) Gateway Project, and Other Areas to be Annexed, and as such, constitutes the major portion of this Draft EIR. Sections A through M of this chapter describe the environmental setting of the proposed project as it relates to each specific environmental topic, the impacts resulting from implementation of the project, and mitigation measures, as appropriate, that would reduce impacts of the project.

DETERMINATION OF SIGNIFICANCE

Under CEQA, a significant effect is defined as a substantial, or potentially substantial, adverse change in the environment.[1] The *CEQA Guidelines* direct that this determination be based on scientific and factual data. Each impact evaluation in this chapter is prefaced by criteria of significance, which are the thresholds for determining whether an impact is significant. These criteria of significance are based on those in Appendix G of the *CEQA Guidelines* and were developed in coordination with City of Lodi staff.

ISSUES ADDRESSED IN THE DRAFT EIR

The following environmental issues are addressed in this chapter:

A. Land Use, Agriculture and Planning Policy
B. Traffic and Circulation
C. Air Quality
D. Noise
E. Cultural and Paleontological Resources
F. Geology, Soils and Seismicity
G. Hydrology and Water Quality
H. Biological Resources
I. Hazards and Hazardous Materials
J. Utilities
K. Public Services
L. Visual Resources
M. Energy

[1] Public Resources Code Section 21068.

FORMAT OF ISSUE SECTIONS

Each environmental issue section has two main subsections: 1) Setting and 2) Impacts and Mitigation Measures. Each impacts and mitigation measures subsection is further divided into an initial discussion of *less-than-significant* impacts and a following discussion of *significant* impacts. Any identified significant impacts are numbered and shown in bold type, and the corresponding mitigation measures are numbered and indented. Significant impacts and mitigation measures are numbered consecutively within each topic and begin with an abbreviation for the impact section (e.g., LU for Land Use). The following abbreviations are used for individual topics:

LU:	Land Use and Planning Policy
TRANS:	Traffic and Circulation
AIR:	Air Quality
NOI:	Noise
CULT:	Cultural and Paleontological Resources
GEO:	Geology, Soils and Seismicity
HYD:	Hydrology and Water Quality
BIO:	Biological Resources
HAZ:	Hazards and Hazardous Materials
UTL:	Utilities
PUB:	Public Services
VIS:	Visual Resources
ENG:	Energy

The following notations are provided after each identified significant impact and after identification of mitigation measures:

SU =	Significant and Unavoidable
S =	Significant
LTS =	Less than Significant

These notations indicate the significance of the impact before and after mitigation.

A. LAND USE, AGRICULTURE AND PLANNING POLICY

This section describes the existing land uses at the project sites and surrounding area, potential land use impacts are identified, and mitigation measures are recommended when necessary. The project sites are unincorporated land within San Joaquin County, and the projects include annexation to the City of Lodi.

While this section contains a discussion of the consistency of the proposed project with relevant land use policies, a policy conflict does not, in and of itself, constitute a significant environmental impact. A policy conflict is considered to be an environmental impact when it would result in a direct physical impact. Land use policies are discussed in this section for informational purposes. All other associated physical impacts are discussed in this EIR in specific topical sections such as noise, air quality, and transportation.

1. Setting

The following section describes the existing land uses at the project sites and the regulatory context.

a. Existing Land Use. Land uses on the Westside project site and surrounding area are shown in Figure IV.A-1, and land uses on the SW Gateway project site, other annexation parcels, and surrounding area are shown in Figure IV.A-2.

(1) Westside Project. The following describes the land uses on the Westside project site and the surrounding area. Illustrative photos are included in the text.

Project Site. The Westside project site is approximately 151.74 acres and is comprised of four separate parcels. These parcels are shown in Figure III-3, and additional information about these parcels is detailed in Table III-1.

This site is divided by Sargent Road.[1] This road has two lanes, is paved, and is maintained by San Joaquin County.

There is one triangular shaped parcel located north of Sargent Road. This parcel is 49.74 acres and is a vacant, unused field. In the past, this field was used in agricultural production. There are no structures on this parcel, and the only distinguishing feature of this parcel is a large oak tree located roughly in the center of the parcel.

Photo 1: View of triangular parcel on the Westside site.

The remaining three parcels, located south of Sargent Road, total 102 acres. These parcels contain irrigated vineyards that are currently in use. There are no structures on the project area south of Sargent Road.

[1] As part of the project, the stretch of Sargent Road adjacent to the project site would be renamed Lodi Avenue.

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FIGURE IV.A-1

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WESTSIDE PROJECT SITE

Lodi Annexation EIR

Westside Project Site
Existing Land Uses

SOURCE: GLOBEXPLORER, 2005.

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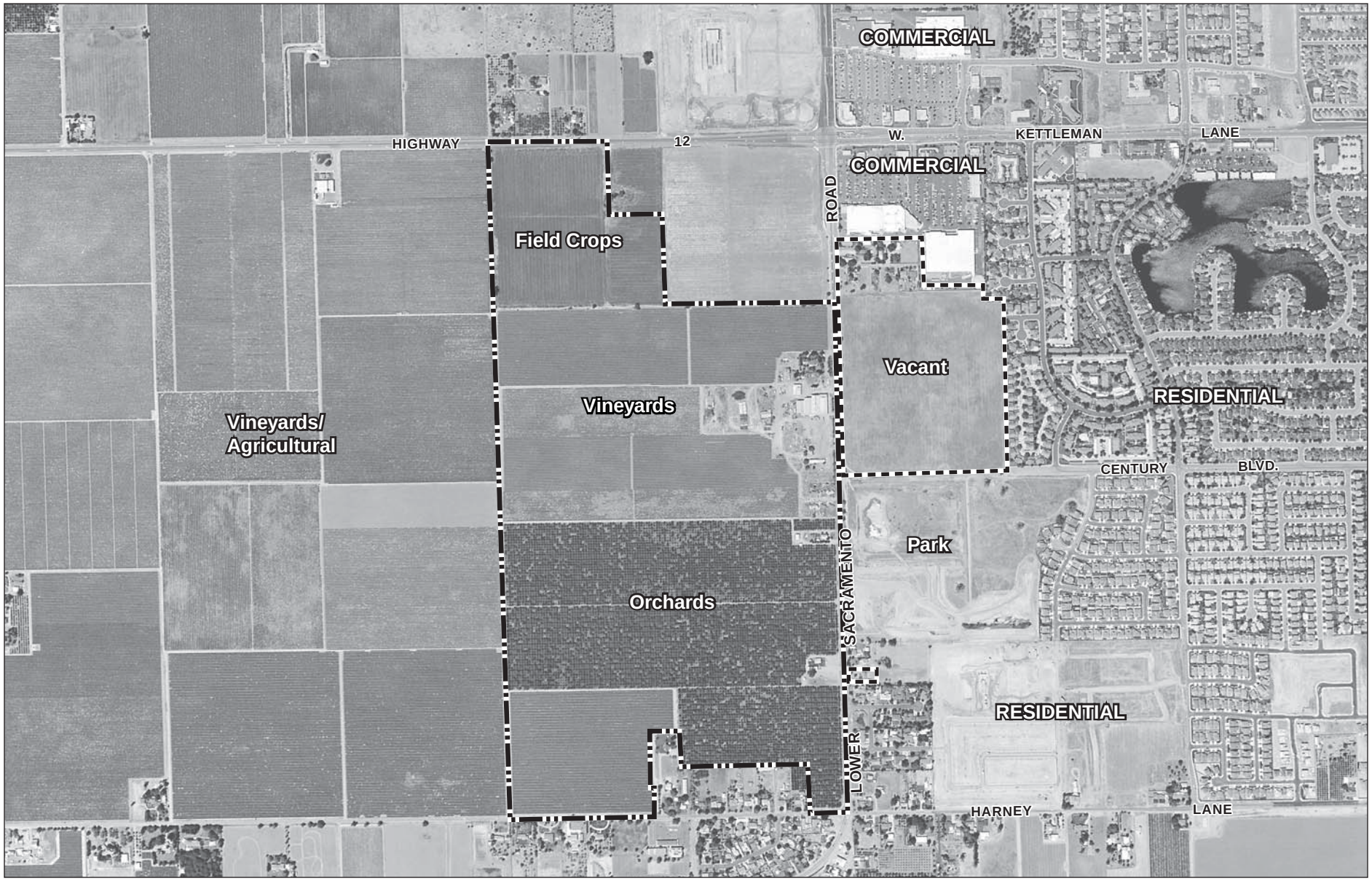

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FIGURE IV.A-2

LEGEND

SOUTHWEST GATEWAY PROJECT SITE

OTHER ANNEXATION AREAS

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Lodi Annexation EIR

Southwest Gateway Project Site

Existing Land Uses

SOURCE: GLOBEXPLORER, 2005

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Surrounding Area. The Woodbridge Irrigation Canal runs along the northern border of the Westside project. Residential uses and Peterson Park are located further north of the project site.

Agricultural uses are located to the west and south of the Westside project site. Almond orchards are located immediately west of the triangular shaped parcel. Irrigated vineyards are located west of the Westside site south of Sargent Road. Agricultural uses and unincorporated San Joaquin County are located to the west of the project site. The SW Gateway project site is located further south.

Photo 2: View of vineyard on Westside site.

Photo 3: View of orchards adjacent to Westside site.

Uses located south of Sargent Road and east of the Westside site include a commercial site that houses a mini-storage facility and a grocery store. Temple Baptist Church and a high school are also located east of the project site. Lower Sacramento Road, residential uses, a hospital, and the City of Lodi are located further east of the Westside site.

(2) SW Gateway Project. The following describes the land uses on the SW Gateway site. Figure IV.A-2 shows land uses and the surrounding area**.**

Project Site. The SW Gateway project site is approximately 257.76 acres and is comprised of 10 parcels. These parcels can be seen in Figure III-4. Additional information about these parcels is presented in Table III-2.

The dominant uses on the project site are agricultural. Field crops are located on the northern part of the project site. Vineyards are found in the central part of the project area, as well as in the southwest corner. A cherry orchard is also located in the central part of the project site, as well as in the southeast corner.

Photo 4: View of orchard and vineyards in SW Gateway site.

There are several structures located on the SW Gateway site. There is a cluster of multi-family housing and a single-family home located off Lower Sacramento Avenue. Also located off Lower Sacramento Avenue is a farm complex used in association with the orchard. This complex contains several structures as well as farm equipment for harvesting.

Interior roads are located throughout the project site. These are unpaved one-lane roads.

Photo 5: View of Other Areas to be Annexed.

Surrounding Area. Irrigated vineyards border the SW Gateway site to the west. Agricultural uses and unincorporated San Joaquin County are located further west of the project site.

Highway 12 borders the northern most part of the SW Gateway site. This is a highway maintained by CalTrans. Agricultural, commercial, and residential uses are located on the north side of Highway 12. The Westside project site is also located further north.

Commercial uses, and the site of a future utility station, are located in the northeastern "notch" that is formed by the SW Gateway site and is located southwest of the Highway 12/Lower Sacramento Road intersection. Commercial uses are located northeast and southeast of the Highway 12/Lower Sacramento Road intersection.

Lower Sacramento Road forms the eastern boundary of much of the SW Gateway site. This road was widened to four lanes in 2005 and is maintained by the City of Lodi and San Joaquin County. The Other Areas to be Annexed, DeBenedetti Park, and residential uses are located east of Lower Sacramento Road. The City of Lodi is located to the east of the SW Gateway site.

Rural residences and Harney Lane form the southern border of the project site. Harney Lane is a two-lane paved road that is maintained by San Joaquin County. Residential uses, agricultural uses, and unincorporated areas of the San Joaquin County are located further south of the SW Gateway site.

(3) Other Areas to be Annexed. The following describes the land uses on the additional parcels that will be annexed. Figure IV.A-2 shows land uses and the surrounding area and Table III-3 provides more information about these parcels.

Existing Land Uses. There are 12 additional parcels, totaling 47.79 acres, proposed to be annexed by the City of Lodi. Eleven of these are clustered together, and one parcel is located to the south of this cluster. Figure IV.A-2 shows existing land uses on and around these parcels.

The two largest of the clustered parcels are currently vacant but have been used for agricultural uses. The remaining smaller parcels are a mix of residential uses and vacant lots. A variety of residential and accessory structures are located on these lots.

The detached parcel that is not part of the cluster contains a single-family residence.

Surrounding Land Uses. The cluster of Other Areas to be Annexed is bordered on the west by Lower Sacramento Road. The SW Gateway project site is located immediately west of Lower Sacramento Road, with unincorporated areas of San Joaquin County located further west.

Photo 6: View of structures on the SW Gateway site.

Commercial uses are located immediately north of the cluster of parcels. Kettleman Lane, commercial uses, and residential uses are located further to the north.

Single-family residential uses are located immediately east of the cluster parcels. The City of Lodi is located further east.

DeBenedetti Park borders the parcel cluster on the south. The additional parcel to be annexed is located further south.

(4) Development Planned Near the Project Sites. The following provides information related to planned projects near the project area.

There are currently no pending or planned projects near the Westside site. The City accepted an application to construct a 158-unit apartment complex immediately east of the project site; however, the project applicant withdrew the application on October 2005.

There are four planned/pending projects near the SW Gateway site and Other Areas to be Annexed. These projects include two regional commercial retail centers to the north of the project site, a 17-unit residential subdivision to north of the project site and a 49-acre community park to the east of the project site.

The City approved a Use Permit to construct a 216,959 square-foot, multi-tenant regional shopping center (Vintner's Square) at the northwest corner of Lower Sacramento Road and Kettleman Lane. The center is located just north and east of the SW Gateway site and is currently under construction; however, there are a few retail stores operating within the center. These uses include a Lowe's Home Improvement Store, Chili's Restaurant and an In-N-Out Burger Restaurant.

The City has also approved a Use Permit to construct a 330,000 square-foot, multi-tenant shopping center (Lodi Shopping Center) at the southwest corner of Lower Sacramento Road and Kettleman Lane. Lodi Shopping Center is located immediately east of the northern half of the SW Gateway site and would include local serving land uses, including Wal-Mart Super Center. The center is not currently under construction and a project completion date is not known.

The City has approved a tentative subdivision map for a 17-unit subdivision west of the northwest corner of Lower Sacramento Road and Kettleman Lane (behind Vintner's Square). This project would be north of the SW Gateway site, across Kettleman Lane and includes 12 half-plex units and five single-family homes. The applicant submitted public improvement plans in February 2006.

The City has approved park plans to construct a 49-acre multi-purpose community park and storm drainage detention basin facility on Lower Sacramento Road, south of Century Boulevard. The Park would be just east of the SW Gateway site, across Lower Sacramento Road. The Park, known as De Benedetti Park, will include baseball, football, soccer, basketball, playground, picnic and parking areas. The detention basin, known as G Basin, will serve an 878-acre watershed east of Lower Sacramento Road.

b. Regulatory Context. There are several regulatory documents that serve as a guide for land use and development on the project sites. The following review of these documents is categorized based on the four jurisdictions that oversee the regulation of the project site: the City of Lodi; the County of San Joaquin; the San Joaquin County Local Agency Formation Commission (LAFCO), and the San Joaquin Council of Governments (SJCOG). Regulations that specifically relate to agricultural use are discussed separately.

(1) City of Lodi. Both project sites, as well as the Other Areas to be Annexed, are located in San Joaquin County, but are within the City of Lodi's Sphere of Influence. As part of the development process, the City would annex these areas into the City. The following City of Lodi documents are discussed: City of Lodi General Plan; City of Lodi Housing Element;[2] City of Lodi Zoning Ordinance;[3] City of Lodi Growth Management Ordinance;[4] Westside Facilities Master Plan;[5] Lodi Bicycle Transportation Master Plan;[6] and the Parks, Recreation, and Open Space Plan.[7]

City of Lodi General Plan. The Lodi General Plan was adopted in June 1991, and represents the official policy regarding the future character and quality of development within the City of Lodi. The General Plan designates the general distribution of different types of land uses within the City, and the document serves as a point of reference for public officials when making land use and planning decisions. The purpose of the General Plan includes:

- Identify the community's land use, circulation, environmental, economic, and social goals and policies as they relate to land use and development;
- Provide the basis for local government decision making;
- Provide citizens with the opportunities to participate in the planning and decision making processes of local government; and

[2] City of Lodi General Plan, 1991.

[3] City of Lodi Zoning Ordinance, Title 17.

[4] City of Lodi Growth Management Ordinance.

[5] RRM Design Group, 2001. *City of Lodi Westside Facilities Master Plan.* January 26.

[6] Cit of Lodi Bicycle Transportation Master Plan, 1994.

[7] City of Lodi, 1994. *Park, Recreation and Open Space Plan,* adopted January 19.

- Inform citizens, developers, decision makers, and other city and county jurisdictions of the ground rules that will guide development within the community.

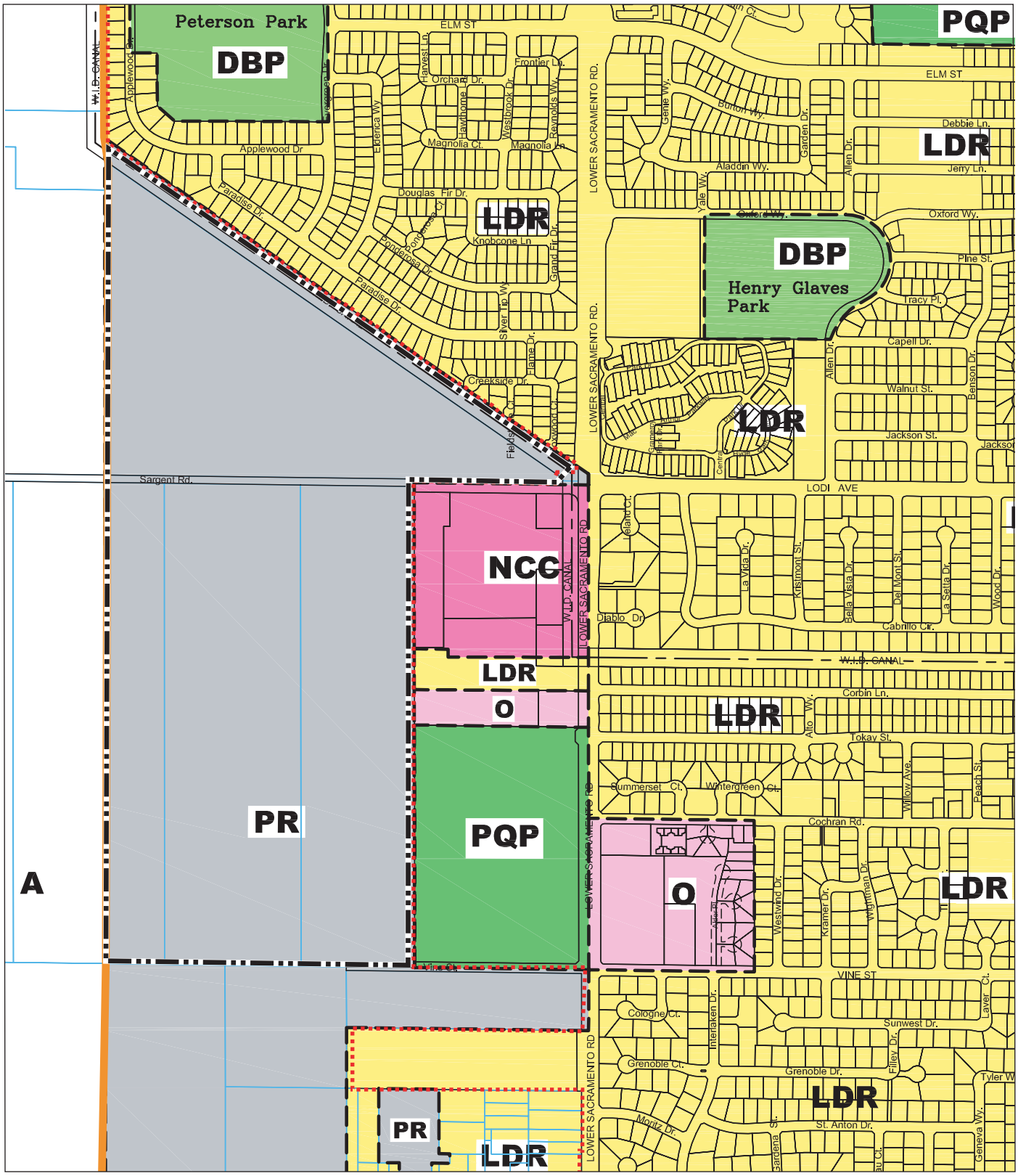
The General Plan includes the following elements: Land Use; Growth Management; Housing (in a stand alone document); Circulation; Noise; Conservation; Parks, Recreation, and Open Space; Health and Safety; Urban Design and Cultural Resources. For each of these elements, the General Plan outlines goals, policies, standards, and implementation programs. A goal is considered a direction-setter, an ideal future end, condition, or state. A policy is a specific statement that guides decision making. A standard is a specific, quantified guideline that is incorporated into a policy or implementation program. An implementation program is an action, procedure, program or technique that carries out general plan policy. The policies applicable to land use and planning, and the project's consistency with these policies, are outlined in Table IV.A-3 at the end of this section. Policies related to other topics are evaluated in other sections within Chapter IV of this EIR.

While the project sites are outside the City of Lodi's jurisdictional boundary, they are within the City's Sphere of Influence. Both project sites and the Other Areas to be Annexed have been given a land use designation in the City's General Plan, and the goals and policies of the General Plan are applicable.

The General Plan designation for both project sites, and the Other Areas to be Annexed, is Planned Residential (PR). Figure IV.A-3 shows the existing general plan designations for the Westside project, and Figure IV.A-4 shows the existing general plan designation for the SW Gateway project and the Other Areas to be Annexed. The PR designation provides for single-family detached and attached homes, secondary residential units, multi-family residential units, parks, open space, public and quasi-public uses, and similar and compatible uses. This designation is applied to largely undeveloped unincorporated areas within the Sphere of Influence. All development under this designation requires approval pursuant to a specific development plan. As specific development plans are approved, the planned residential designation is replaced with a low-, medium-, or high-density residential designation, or a public/quasi public designation based on its approved use and density. New residential units within planned residential areas will be developed according to the general policy goal of maintaining the following mix of residential densities: 65 percent low-density; 10 percent medium-density; and 25 percent high-density. The average residential density shall not exceed 7.0 units per gross acre and this designation assumes an average of 2.60 persons per household.

General Plan amendments are proposed as part of these projects. The Westside project General Amendment proposes the following General Plan land use designations: Low-Density Residential; Medium-Density Residential; High-Density Residential; Public/Quasi-Public; and Detention Basins and Parks. The SW Gateway General Plan Amendment proposes the following general plan designations: Low-Density Residential; Medium-Density Residential; High-Density Residential; Public/Quasi-Public (schools and fire station), and Detention Basins and Parks. The General Plan Amendment for the Other Areas to be Annexed would have a Medium-Density Residential designation. Descriptions of these General Plan designations are found below.

- *Low-Density Residential (LDR):* This designation provides for single-family detached and attached homes, secondary residential units, public and quasi-public uses, and similar and compatible uses. Residential densities range from 0.1 to 7.0 units per gross acre. This designation assumes an average of 2.75 persons per household.



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WESTSIDE PROJECT SITE

CITY LIMITS

SPHERE OF INFLUENCE

LDR	LOW DENSITY RESIDENTIAL
MDR	MEDIUM DENSITY RESIDENTIAL
HDR	HIGH DENSITY RESIDENTIAL
PR	PLANNED RESIDENTIAL
NCC	NEIGHBORHOOD/COMMUNITY COMMERCIAL
GC	GENERAL COMMERCIAL
DC	DOWNTOWN COMMERCIAL
O	OFFICE
PQP	PUBLIC/QUASI PUBLIC
DBP	DETENTION BASINS AND PARKS
A	AGRICULTURE
PRR	PLANNED RESIDENTIAL RESERVE

N

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SOURCE: CITY OF LODI, 2005.

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FIGURE IV.A-3

Lodi Annexation EIR

General Plan Designations

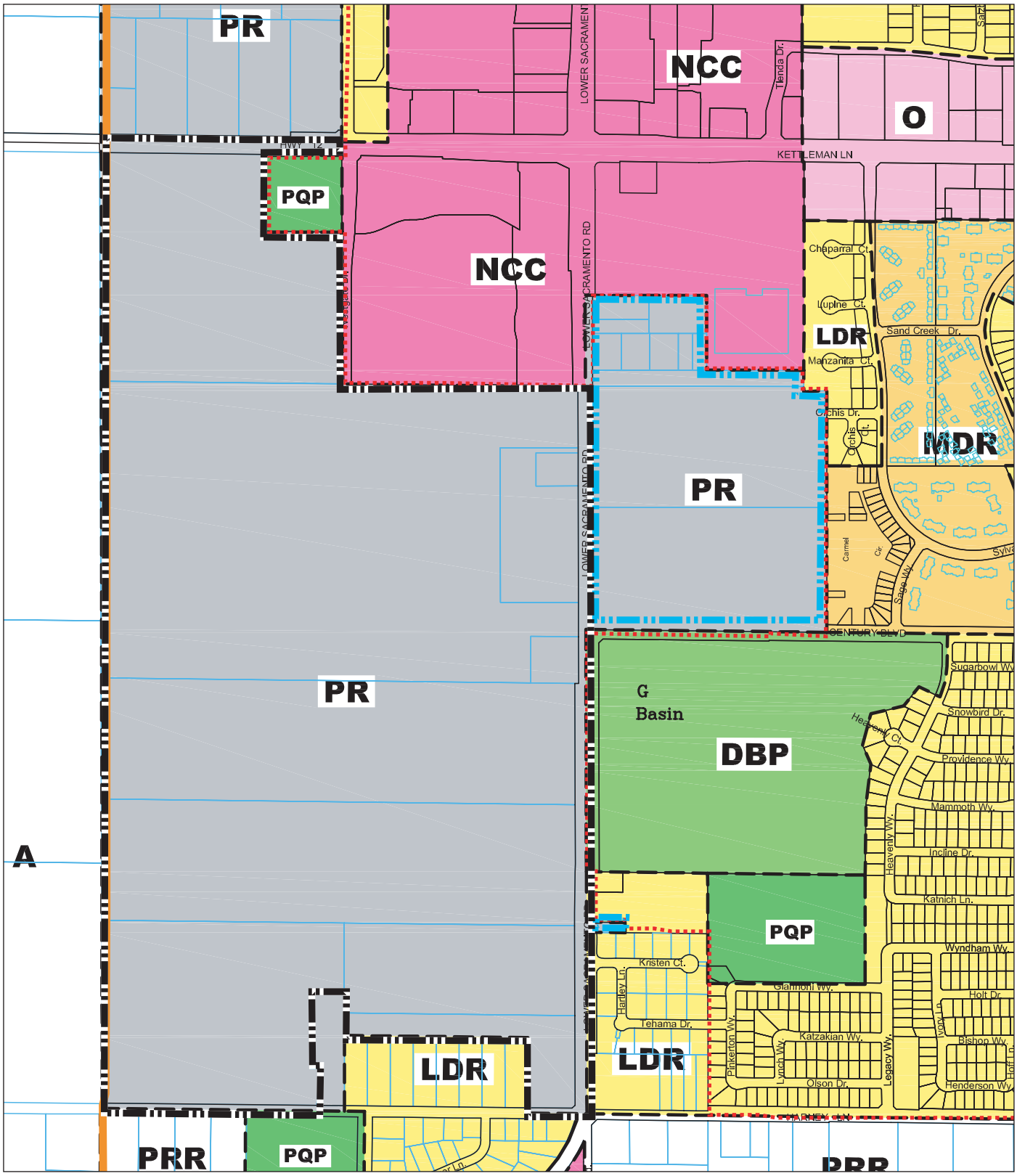

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FIGURE IV.A-4

Lodi Annexation EIR

General Plan Designations

SOUTHWEST GATEWAYS PROJECT SITE

OTHER AREAS TO BE ANNEXED

CITY LIMITS

SPHERE OF INFLUENCE

LDR	LOW DENSITY RESIDENTIAL
MDR	MEDIUM DENSITY RESIDENTIAL
HDR	HIGH DENSITY RESIDENTIAL
PR	PLANNED RESIDENTIAL
NCC	NEIGHBORHOOD/COMMUNITY COMMERCIAL
GC	GENERAL COMMERCIAL
DC	DOWNTOWN COMMERCIAL
O	OFFICE
PQP	PUBLIC/QUASI PUBLIC
DBP	DETENTION BASINS AND PARKS
A	AGRICULTURE
PRR	PLANNED RESIDENTIAL RESERVE

N

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SOURCE: CITY OF LODI, 2005.

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- *Medium-Density Residential (MDR):* This designation provides for single-family and multi-family residential units, public and quasi-public uses, and similar and compatible uses. Residential densities range from 7.1 to 20.0 units per gross acre. This designation assumes an average of 2.25 persons per household.
- *High-Density Residential (HDR):* This designation provides for multi-family residential units, group quarters, public and quasi-public uses, and similar and compatible uses. Residential densities range from 20.1 to 30.0 units per gross acre. This designation assumes an average of 2.00 persons per household.
- *Public/Quasi-Public (PQP):* This designation provides for government-owned facilities, public and private schools, and quasi-public uses such as hospitals and churches. The FAR shall not exceed 0.50.
- *Detention Basins and Parks (DBP):* This designation provides for drainage detention basins and public parks. The FAR in these areas shall not exceed 0.20.

City of Lodi Housing Element. The City of Lodi 2003-2009 Housing Element was adopted in October 2004 as part of the General Plan. This free standing document contains three sections: a community profile; an analysis of resources and constraints; and a housing strategy. The community profile contains an analysis of population, housing, and employment characteristics. The analysis of resources and constraints includes a discussion of availability of land, public and private organization that provide housing and supportive services, and funding to implement the City's housing strategy. The strategy section includes goals, policies, implementing actions, and quantified objectives to meet identified housing needs, reduce constraints, and make effective use of available resources. The Housing Element discusses the desire for the following mix of residential land uses: 65 percent low-density, 10 percent medium-density, and 25 percent high-density. It also states that the overall average density should not exceed seven units per gross acre.

The Housing Element identifies both the Westside and the SW Gateway projects as areas that can accommodate additional residential development. Table IV.A-1 shows the development potential of the project sites, as identified by the Housing Element.

Table IV.A-1: Development Potential Identified in the Housing Element

Property	GP Designation	Potential Housing Units
Westside Area[a]	LDR	730
	MDR	225
	HDR	960
SW Gateway[b]	LDR	851
	MDR	392
	HDR	1,310

[a] The Housing Element includes several parcels in the Westside area that are not included in the project site.
[b] The Housing Element identifies only eight parcels as part of the SW Gateway area. There are currently ten parcels included in the SW Gateway project site.

Source: City of Lodi Housing Element, 2004.

City of Lodi Zoning Ordinance. The City of Lodi Zoning Ordinance is intended to provide a guide for the physical development of Lodi and to encourage the appropriate use of land, and the Zoning Map identifies different zoning districts. As the project area is not within the City of Lodi jurisdictional boundary, zoning designations have not been identified. All parcels that will be annexed will be prezoned as part of this project. The Westside and SW Gateway project sites would be prezoned Planned Development, and the Other Areas to be Annexed would be prezoned Residential Medium-Density. Prezone negotiations would become the final zoning designations upon annexation. The Planned Development and the Residential Medium-Density zoning designations are described below. Figures IV.A-5 and IV.A-6 show the zoning designations for the project sites.

- *Planned Development District (P-D):* The planned development district is designed to accommodate various types of development such as neighborhood and community shopping centers, grouped professional and administrative office areas, senior citizens' centers, multiple housing developments, commercial service centers, industrial parks or any other use or combination of uses which can be made appropriately a part of a planned development. In a P-D zone, any and all uses are permitted; provided, that such use or uses are shown on the development plan for the particular P-D zone as approved by the City Council. Maximum height and bulk, and minimum setback, yard and parking and loading requirements shall be established for each P-D zone by the development plan as approved by the City Council. These development parameters would be consistent with the General Plan designation for the sites.
- *Residential Medium-Density (R-MD):* The residential medium-density designation allows for one- and two-family dwellings, as well as multi-family and group dwellings. With the issuance of a use permit, children's nurseries, nursery schools, rest and convalescent homes, and automobile parking lots are also permitted. The building height permitted in this district is limited to two stories and not to exceed 35 feet. A minimum lot area of 4,000 square feet and 40 feet in width is required for one-family dwellings. Multi-family dwellings require 4,000 square feet for the first dwelling units in each detached building and 1,000 square feet for each additional attached unit with a minimum lot width of 50 feet.

City of Lodi Growth Management Ordinance. The purpose of the Growth Management Ordinance is to provide a growth management system to regulate the character, location, amount and timing of future development to help achieve the policies of the General Plan. This ordinance allows for the number of residential units approved by the City to reflect a 2 percent yearly limitation on growth-based population.

To be eligible to receive a building permit allocation, the applicants must submit a growth management allocation application. The deadline for these applications is May 31st of every year. Each application is given a score based on an established point system.

The growth management allocation point system assigns priority based on a variety of criteria. These criteria include agricultural land conflicts, relationship to public services, open space and site plan, and project design. Projects that receive a high number of points would be projects that would be allocated in areas the City wants to develop or have incorporated beneficial components into the site design.

For the year 2005, there are 291 single-family building permit allocations, 45 medium-density building permit allocations, and 112 high-density building permit allocations. Additionally, allocations not used in previous years may be allocated. There are a total of 3,382 backlogged (1,424 single-family, 298 medium-density and 1,660 high-density) allocations that have not been allocated.

For the Westside project, the applicant has submitted a growth management allocation application for 370 low-density residential units, 195 medium-density residential units, and 175 high-density residential units. For the SW Gateway project, the applicant has submitted a growth management allocation application for 740 low-density units, 250 medium-density units, and 360 high-density units. In total, the Westside and SW Gateway projects would require 1,110 low-density allocations, 445 medium-density allocations, and 535 high-density allocations. No specific new development is proposed for

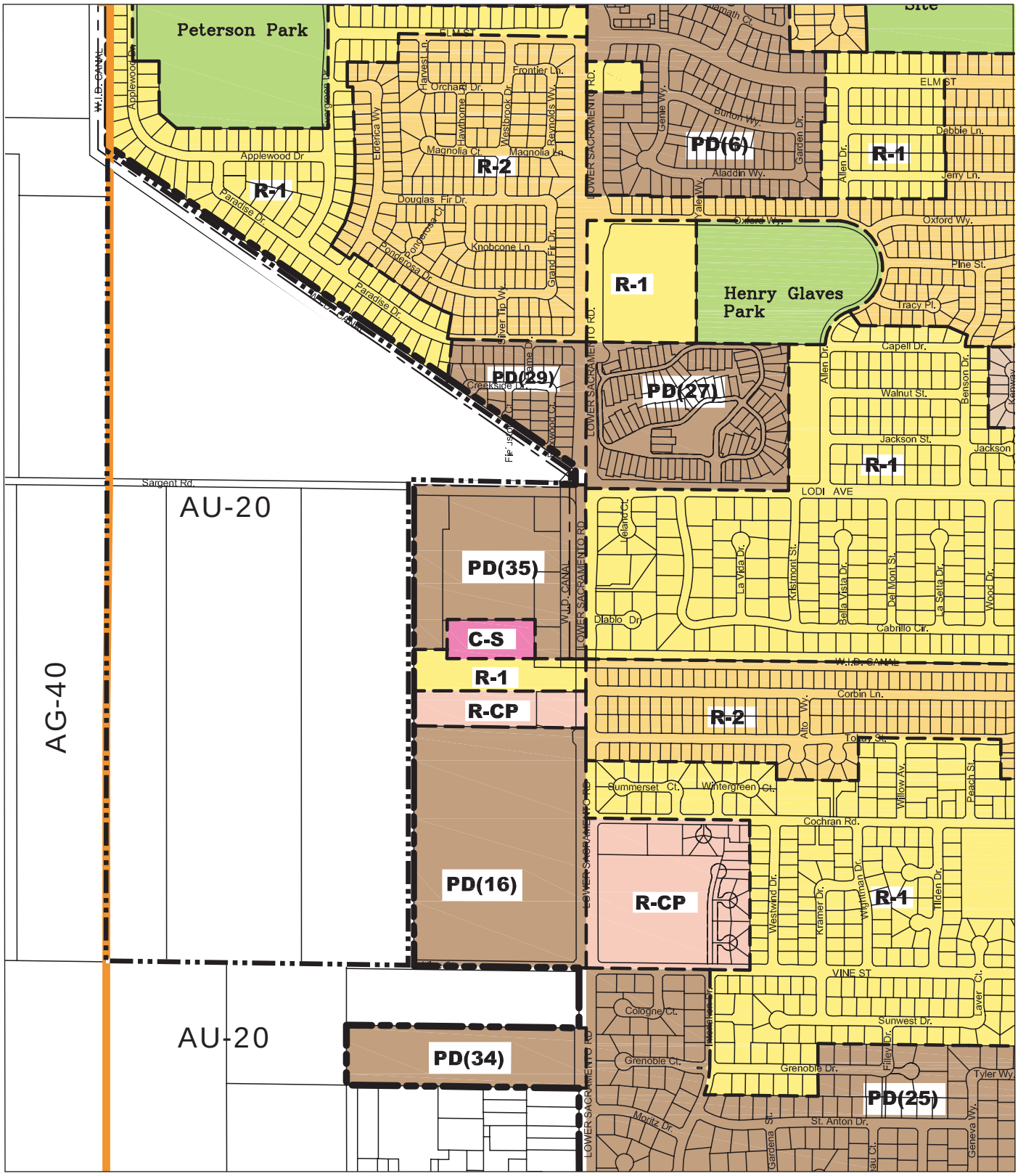

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FIGURE IV.A-5

Lodi Annexation EIR

Zoning Designations

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WESTSIDE PROJECT SITE

CITY LIMITS

SPHERE OF INFLUENCE

LODI ZONING

R-1	SINGLE FAMILY
R-2	SINGLE FAMILY
P-D	PLANNED DEVELOPMENT
R-CP	PROFESSIONAL OFFICES
C-S	SHOPPING CENTER
PUB	PUBLIC

SAN JOAQUIN COUNTY ZONING

AU-20	AGRICULTURE, URBAN RESERVE, MINIMUM 20 ACRES
AG-40	GENERAL AGRICULTURE, MINIMUM 40 ACRES

SOURCE: CITY OF LODI, 2005.

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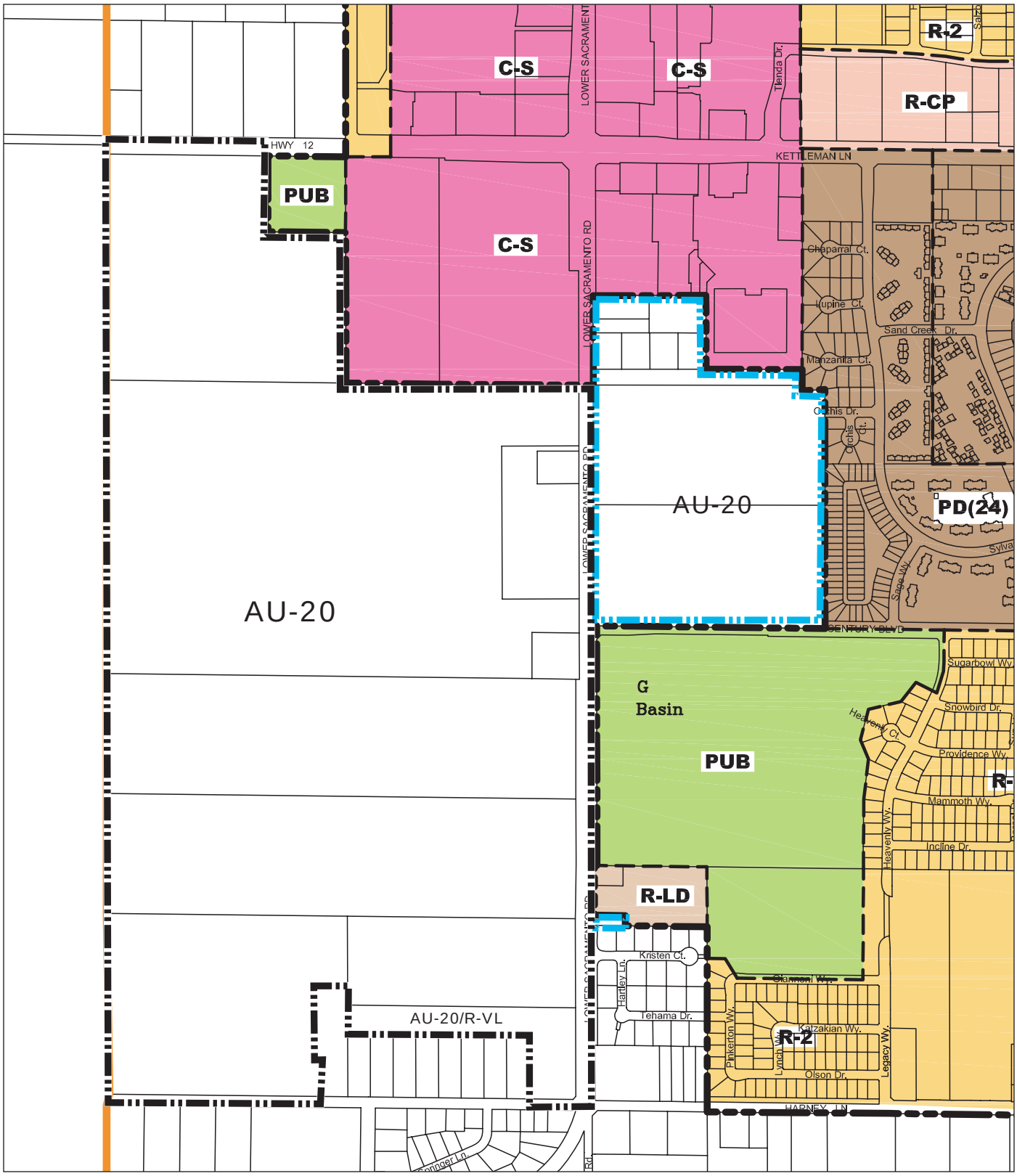

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SOUTHWEST GATEWAYS PROJECT SITE

OTHER AREAS TO BE ANNEXED

CITY LIMITS

SPHERE OF INFLUENCE

N

0 400 800

FEET

LODI ZONING

R-2	SINGLE FAMILY
R-LD	LOW DENSITY
P-D	PLANNED DEVELOPMENT
R-CP	PROFESSIONAL OFFICES
C-S	SHOPPING CENTER
PUB	PUBLIC

SAN JOAQUIN COUNTY ZONING

AU-20	AGRICULTURE, URBAN RESERVE, MINIMUM 20 ACRES
R-VL	VERY LOW DENSITY RESIDENTIAL

FIGURE IV.A-6

Lodi Annexation EIR

Zoning Designations

SOURCE: CITY OF LODI, 2005.

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the Other Areas to be Annexed as part of the project being considered within this EIR, and as such, no growth management application was submitted.

Additionally, there is a priority development map, which shows the City and surrounding area, and assigns a priority classification of 1, 2, or 3. Both the Westside and SW Gateway projects sites fall within priority area 3, which is the designation with the lowest priority. In previous years, the Community Development Department has processed all applications for residential Growth Allocations simultaneously and presented all the requests in one staff report to the Planning Commission and City Council. Due to the total number of allocations being requested and the size of the Westside and SW Gateway applications, the City is processing the Priority 1 applications separate from the Priority 3 applications.

Westside Facilities Master Plan. The Westside Facilities Master Plan Area is located west of the Lodi city limit, and encompasses the Westside project site. The Master Plan sets forth the vision for public facilities to support existing and planned housing and commercial development within the Plan Area. The purpose of the Master Plan is to identify and plan for neighborhood and community parks, circulation, and storm drainage improvement. The plan serves as the basis for formulating and implementing capital improvements plans for public facilities within the Westside Plan Area to meet the needs of growth projected by the City's General Plan.

The Conceptual Land Use/Circulation Plan within the Facilities Master Plan shows planned residential for the large portion of the Westside project area. Other features of the conceptual plan show an elementary school site, an aquatic park, 3-acre water features, and a greenbelt with detention basins that runs along the western border of project site. Figure IV.A7 shows the conceptual Land Use/Circulation Plan from the Westside Facilities Master Plan.

There are no specific policies/objectives listed in the Plan, just applicable General Plan policies.

Lodi Bicycle Transportation Master Plan. The Bicycle Transportation Plan outlines goals for bicycling in Lodi, a proposed network of bikeways within the city, and a set of programs and policies to support bicycling. This Plan seeks to achieve the following goals:

- Provide bicycle facilities to serve the needs of all types of cyclists in Lodi.
- Coordinate the bicycle facilities that exist and are to be constructed in unincorporated San Joaquin County.
- Allow for priority use by cyclists on some trails and streets, just as priority use by motor vehicles is allowed on arterial streets.
- Provide a continuous network of bike lanes on the City's arterial streets, to allow for the safest and most efficient bicycle commuting possible to major destinations. Bike lanes will serve experienced commuting cyclists.
- Provide a second continuous network of dedicated bike paths and designated bikeways on streets with low traffic volumes, to allow for unimpeded flow of bicycles in areas where there are not significant conflicts with vehicular traffic. These bikeways will serve cyclists who prefer quiet, separated bikeways.

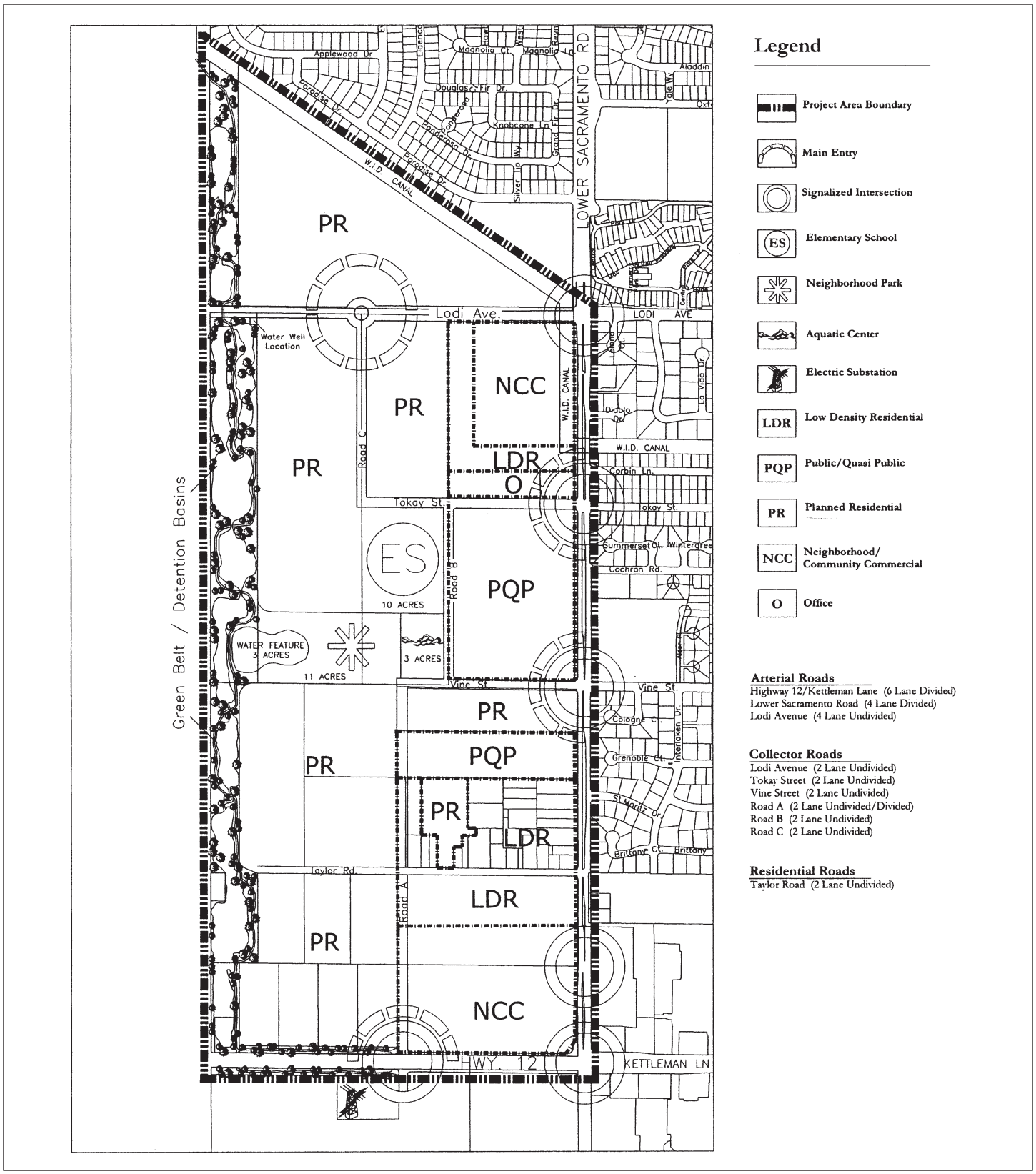

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FIGURE IV.A-7

Lodi Annexation EIR

Conceptual Land Use/Circulation Plan

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SOURCE: RRM DESIGN GROUP, 2001

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- Provide facilities and programs that will support bicycling as a commuting option and recreational activity over the long term. These programs will serve and encourage all types of cyclists.

The Bicycle Master Plan identifies several bike paths within the project area. These include: a Class 1 bike path along the western border of the Westside and SW Gateway projects sites; a bike boulevard which would run in a north/south direction through the Westside and SW Gateway projects; a Class 2 bike lane on Sargent Road; a bike boulevard on Vine Street; and Class 2 bike lanes on Harney Lane, Century Boulevard, Lower Sacramento Road and Highway 12. Bike routes and the Bicycle Master Plan are discussed in more detail in Section IV.B, Traffic and Circulation. A bike boulevard is a street that has low vehicle traffic that is designed to give decided preference to bicycles over motor vehicles.

City of Lodi Park, Recreation, and Open Space Plan. The City of Lodi Park, Recreation, and Open Space Plan identifies the recreational needs in the Lodi area, develops a strategy for meeting these needs and establishes management and operational policies for administering the program. This plan was adopted in 1994, and was intended to serve as a 15-year guide. This plan includes a description of existing park and recreation facilities, as well as providing recommendations with regards to future park and recreational facilities. Parks and recreational facilities are discussed in more detail in Section IV.K, Public Services.

(2) County of San Joaquin. Both the Westside and SW Gateway sites, as well as the Other Areas to be Annexed, lie within unincorporated San Joaquin County. An approval by the San Joaquin County Local Agency Formation Commission (LAFCO) of annexation to the City of Lodi is requested as part of the project.

There are two San Joaquin County regulatory documents that apply to the project sites and the Other Areas to be Annexed: the San Joaquin County General Plan and the Development Regulations. Additionally, a Williamson Act Contract, administered by the County, applies to portions of the project site and is discussed in the Agricultural Land Use section of this chapter.

San Joaquin County General Plan. The San Joaquin County General Plan 2010 was adopted by the Board of Supervisors in 1992. The General Plan expresses long-rang public policy to guide the use of private and public lands within a community's boundaries. The San Joaquin County General Plan is the County's official position on development and resource management. As all the parcels that comprise the Westside and SW Gateway sites, and the Other Areas to be Annexed, are within the county, there are San Joaquin County General Plan designations for these sites. The San Joaquin County General Plan designations are as follows:

- *Westside Site:* Low-Density Residential (R/L)
- *SW Gateway Site:* Low-Density Residential (R/L); Very-Low-Density Residential (R/VL)
- *Other Areas to be Annexed:* Low-Density Residential (R/L); Very-Low-Density Residential (R/VL)

The Low-Density Residential designation allows for single-family dwelling units at 2 to 6 dwelling units per gross acre. The Very-Low-Density Residential designation allows for large lot (0.5 to 1

acre) residential development within urban communities with community sewerage, water, and drainage.

San Joaquin County Title 9 Development Title. The purpose of the Development Title is to implement the San Joaquin General Plan and to achieve the following objectives:

- To encourage the most appropriate use of land and the harmonious relationship among land uses;
- To promote a safe and efficient traffic circulation system;
- To provide open spaces for light and air;
- To prevent overcrowding of land and the undue concentration of population;
- To secure safety from fire and other dangers;
- To facilitate the provision of needed community facilities;
- To conserve and stabilize the value of property; and
- To conserve the County's natural beauty, to improve its appearance, and to enhance its physical character.

The San Joaquin County zoning designations within the project area include: Agriculture – Urban Reserve (AU-20) and Very-Low-Density Residential (R-VL). The Agricultural-Urban Reserve zone (AU-20) is intended to retain in agriculture those areas planned for future urban development in order to facilitate compact, orderly urban development and to assure the proper timing and economical provision of services and utilities. The minimum parcel size within the AU zone is 20 acres. The R-VL zone is intended as a transition from rural to urban areas allowing for detached, single-family dwellings on large lots located in areas with existing large lot development, and within communities around sensitive natural resources or on the urban fringe. Figures IV.A-5 and IV.A-6 show the San Joaquin Zoning designation.

Annexation is proposed as part of these projects. If annexed, the San Joaquin Development Title regulations would no longer apply to the project sites.

(3) San Joaquin Local Agency Formation Commission. The San Joaquin Local Agency Formation Commission (LAFCO) is a county-wide regulatory agency that coordinates changes in local government boundaries. The purpose of LAFCO is to promote orderly growth and prevent the untimely conversion of agricultural land to urban uses. LAFCO approves jurisdictional boundary changes, including annexation of land into a city. The project area would fall under the purview of LAFCO for review of the annexation.

LAFCO has established factors that are considered in the review of proposals. Some of these factors include: population and population density; the need for organized community services; the effect of the proposed action and of alternative actions, on adjacent areas, on mutual social and economic interests, and on the local governmental structures of the county; and the extent to which a proposal will affect a city or cities and the county in achieving their respective fair share of the regional housing needs as determined by the council of governments. The San Joaquin LAFCO would make the final determination as to whether the project sites could be annexed by the City of Lodi.

(4) San Joaquin Council of Governments. The San Joaquin Council of Governments (SJCOG) has developed a San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP). The key purpose of the SJMSCP is to provide a strategy for balancing the need to conserve open space and the need to convert open space to non-open space uses while protecting the region's agricultural economy. The SJMSCP is intended to mitigate impacts to plant, fish and wildlife and to compensate for impacts to recreation, agriculture, and open space.

Under this SJMSCP, new development within the SJMSCP area must pay compensation for the loss of undeveloped land. Both project sites, as well as the Other Areas to be Annexed, fall within the SJMSCP. The SJMSCP identifies different levels of compensation based upon the condition of use of the land that will be developed. The Plan identifies land within the Westside project site as Category B, Other Open Space (Pay Zone A). The Plan identifies the following land categories within the SW Gateway: Category C, Agricultural Habitat Open Spaces (Pay Zone B [Agricultural]); Category B, Other Open Spaces (Pay Zone A); and Category A, Exempt (No Pay Zone). The Other Areas to be Annexed are identified as: Category C, Agricultural Habitat Open Spaces (Pay Zone B [Agricultural]); and Category A, Exempt (No Pay Zone). These land categories are described below:

- *Category A, Exempt, No Pay Zone*
- *Category B, Other Open Spaces (Pay Zone A)*
- *Category C, Agricultural Habitat Open Spaces (Pay Zone B [Agricultural])*

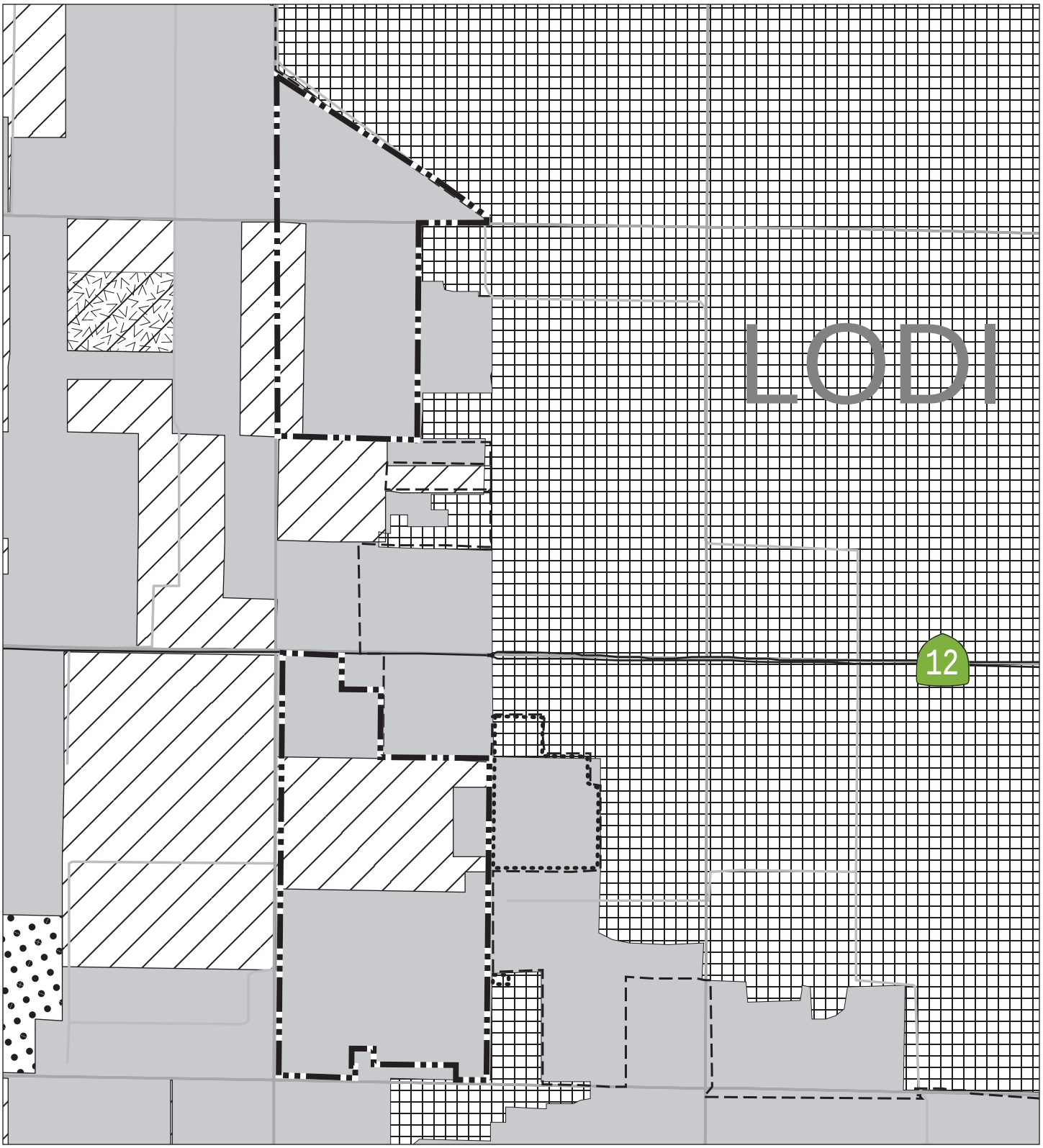
(5) Agricultural Use Regulations. The following section describes regulations that are specifically related to agricultural uses. These include Williamson Act Contracts, the Farmland Mapping and Monitoring Program, and the City of Lodi "Right-to-Farm" Ordinance.

Williamson Act Contract. The California Legislature passed the Williamson Act in 1965 to preserve agricultural and open space lands. The Williamson Act creates an arrangement between private landowners and counties/cities, where the landowner agrees to restrict their land to agricultural or open space uses. In return, these parcels are assessed for property tax purposes at a rate that is consistent with their actual use and not their potential market value. Parcel 027-400-01 (19.85 acres), part of the Westside project site, and parcel 058-030-03 (88.21 acres), part of the SW Gateway project site, are under active Williamson Act Contracts, and are shown in Figure IV.A-8.

The two parcels that are under active Williamson Act contracts would be annexed by the City of Lodi as part of the development plans. When annexation occurs, the City of Lodi would exercise the option not to succeed the rights of the County under the Williamson Act Contract for the parcel within the SW Gateway project (APN 058-030-03).

If cancellation is proposed, notification must be submitted to the Department of Conservation when the City accepts the application, and the City Council must consider the Department's comments prior to approving a tentative cancellation. Required findings must be made by the City Council to approve tentative cancellation.

According to California Code Section 51243.5, a city which annexes land under a Williamson Act Contract may choose to not succeed the Williamson Act Contract if the following occurred prior to December 8, 1971: the land being annexed is within 1 mile of the city boundary when the contract



LSA

FIGURE IV.A-8

LEGEND

- Williamson Act - Farmland Security Zone Land
- Williamson Act - Prime Agricultural Land
- Land in Non-Renewal
- Non-Enrolled Land
- Urban and Built-up Land
- Incorporated City Boundary
- Public Land Survey System
- Highways
- Project Site
- Other Areas to be Annexed

N

0 800 1600
FEET

Lodi Annexation EIR

Williamson Act Lands

SOURCE: CALIFORNIA DIVISION OF LAND RESOURCE PROTECTION, SAN JOAQUIN COUNTY WILLIAMSON ACT LANDS, 2005.

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was executed; the city had filed with the County Board of Supervisors a resolution protesting the execution of the contract.

Additionally, for a city not to succeed the contract, the following must have occurred before January 1, 1991: 1) the land being annexed was within 1 mile of the City's boundary when the contract was executed; 2) the city filed with the local agency formation commission a resolution protesting the execution of the contract; 3) the LAFCO held a hearing to consider the City's protest to the contract; 4) the LAFCO had found that the contract would be inconsistent with the publicly desirable future use and control of the land; and 5) the LAFCO had approved the City's protest**.**

The City of Lodi intended that the project area become developed and has designated the parcels in the Lodi General Plan as Planned Residential. The City is able to execute its right not to succeed the Williamson Act contract for the parcel within the SW Gateway project area because the City protested the contract in 1978. However, the contract for the parcel within the Westside project area was not protested. A Notice of Non-Renewal was filed in October 2005 to begin the non-renewal process for this contract. The non-renewal process will incrementally increase the tax on the property over the next nine years, at which time the contract will be terminated.

Farmland Mapping and Monitoring Program. The California Department of Conservation's Division of Land Resource Protection has developed the Farmland Mapping and Monitoring Program (FMMP), which analyzes impacts on California's agricultural resources. Agricultural resources are rated using a classification system that combines soil ratings and current land use to create Important Farmland Maps. The minimum mapping units for all categories is 10 acres. Smaller units of land are incorporated into the surrounding map classification.

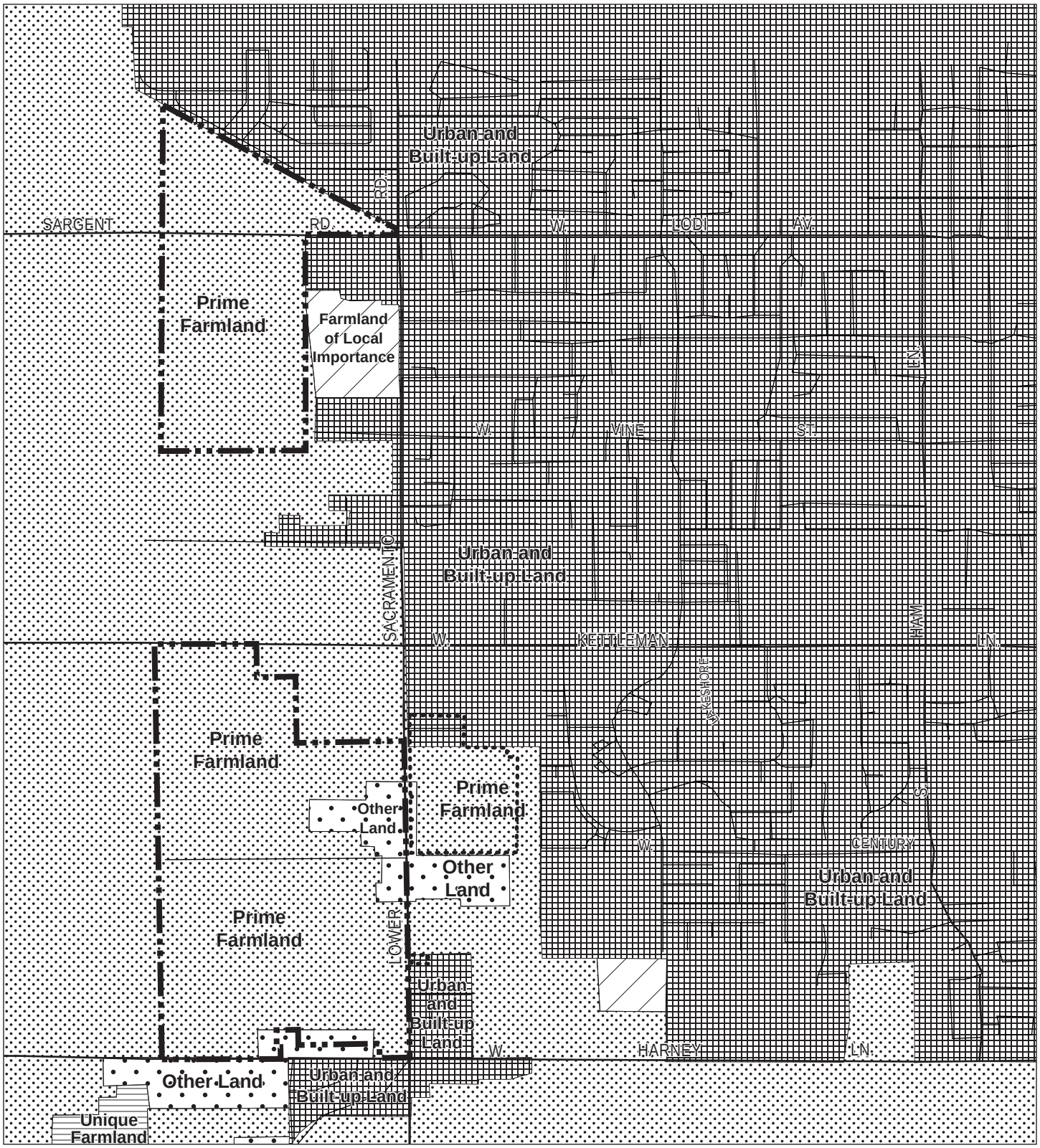
The FMMP designations of the project area include Prime Farmland, Urban and Built-up Land, and Other Land. The FMMP farmland map can be seen in Figure IV.A-9. A description of the farmland types are found below, and are provided by the FMMP.[8]

*Prime Farmland***.** Farmland with the best combination of physical and chemical features able to sustain long term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.

Urban and Built-up Land. Land occupied by structures with a building density of at least one unit to 1.5 acres, or approximately six structures to a 10-acre parcel. This land is used for residential, industrial, commercial, construction, institutional, public administration, railroad and other transportation yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, water control structures, and other developed purposes.

Other Land. Land not included in any other mapping category. Common examples include low-density rural developments; brush, timber, wetland, and riparian areas not suitable for livestock grazing; confined livestock, poultry or aquaculture facilities; strip mines, borrow pits; and water bodies

[8] Department of Conservation Farmland Mapping and Monitoring Program.



LSA

FIGURE IV.A-9

Farmland Designations

- Prime Farmland
- Unique Farmland
- Farmland of Local Importance
- Urban and Built-up Land
- Other Land

- *Project Site*
- *Other Areas to be Annexed*

N

0 1000 2000
FEET

Lodi Annexation EIR

FMMP Farmland Designation

SOURCE: CALIFORNIA DIVISION OF LAND RESOURCE PROTECTION, FARMLAND MAPPING AND MONITORING PROGRAM, 2004.

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smaller than 40 acres. Vacant and nonagricultural land surrounded on all sides by urban development and greater than 40 acres is mapped as Other Land.

The entire Westside site is considered Prime Farmland. Approximately 241 acres of the SW Gateway site is considered Prime Farmland and 16 acres are considered Other Land. Approximately 39 acres of the Other Areas to be Annexed is considered Prime Farmland.

City of Lodi Right-to-Farm Ordinance. Chapter 8.18 of the Lodi Municipal Code provides notice of agricultural operations affecting other properties. It is the policy of the city to protect, preserve and encourage the use of viable agricultural land for the production of food and other agricultural products.

The seller of any real property is required to provide a disclosure statement which states that the City of Lodi permits operation of agricultural operations within the city limits, including those using chemical fertilizers and pesticides. The statement further states that the property may be close to agricultural lands, and that the residents may be subject to inconvenience or discomfort arising from agricultural uses or the use of chemicals and pesticides.

San Joaquin County Right-to-Farm Ordinance. San Joaquin County also has a Right-to-Farm Ordinance. This ordinance requires that all applicants for building permits for new residential construction be provided with a Right-to-Farm Notice. This Notice states that the County recognizes and supports the right to farm agricultural lands, and that residents of property on or near agricultural land should be prepared to accept the inconveniences or discomforts associated with agricultural operations, including noise, odors, insects, fumes, dust, 24-hour operations, and the use of fertilizers.

The County has determined that inconveniences or discomfort associated with agricultural operations shall not be considered a nuisance. The County has established a grievance committee to assist in the resolution of disputes that may arise between residents of the County regarding agricultural operations or activities.

2. Impacts and Mitigation Measures

This subsection analyzes environmental impacts related to land use that could result from implementation of the proposed project. The subsection begins with the criteria of significance, which establish the thresholds for determining whether a land use impact is significant. The latter part of this subsection presents the impacts associated with the proposed project.

As noted earlier, conflicts between a project and applicable policies do not constitute significant physical environmental impacts in and of themselves; as such, the proposed project's consistency with applicable policies is discussed separately from the physical land use impacts associated with the proposed projects. A policy inconsistency is considered to be a significant adverse environmental impact only when it is related to a policy adopted for the purpose of avoiding or mitigating an environmental effect and it is anticipated that the inconsistency would result in a significant adverse physical impact based on the established significance criteria. The proposed project's consistency with regional policies related to physical environmental topics (e.g., air quality, transportation, and noise) is fully analyzed and discussed in those topical sections of this EIR.

a. Criteria of Significance. Implementation of the proposed project would have a significant effect on land use and agriculture if it would:

- Physically divide an established community;
- Result in a fundamental conflict between adjacent or nearby land uses;
- Fundamentally conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan or zoning ordinance), adopted for the purpose of avoiding or mitigating an environmental effect, and if such conflict would actually result in an adverse physical change in the environment;
- Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resource Agency, to non-agricultural use;
- Conflict with existing zoning and agricultural use, or a Williamson Act contract; or
- Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use.

b. Less-than-Significant Impacts. Implementation of the proposed project would result in the less-than-significant impacts described below.

(1) Community Integrity. The physical division of an established community typically refers to the construction of a physical feature (such as an interstate highway or railroad tracks) or removal of a means of access (such as a local road or bridge) that would impair mobility within an existing community, or between a community and outlying area. For instance, the construction of an interstate highway through an existing community may constrain travel from one side of the community to another; similarly, such construction may also impair travel to areas outside of the community.

The proposed project would result in the development of two project areas and the annexation of parcels within the City of Lodi Sphere of Influence. The majority of the land that would be developed is currently in agricultural production.

The development plans would include residential development, as well as public uses such as a park and an aquatic center. The project would include internal roadways, sidewalks, and bicycle paths, which would allow for circulation within the project sites. Several of the roads will be stubbed out on the western boundary. This was done so as not to preclude opportunities for circulation connections to the west if development should occur. The proposed project would not include any features that would prevent or restrict access to or through the project site.

(2) Result in the Conversion of Other Farmland. The Westside and SW Gateway sites are located adjacent to the land that is currently in active agricultural production. Given that the development of these sites would involve the installation of utilities, it may be easier for the conversion of land immediately adjacent to these sites. Additionally, the development plans for both the Westside and SW Gateway sites include stubbed out streets along the western border. However, the area to the west of these sites is in San Joaquin County and is not within the Lodi Sphere of Influence. The County would have jurisdiction over the development of the area. Additionally, the City does not

provide utility services (aside the sewer services to agricultural lands outside of the City) to development within the County.

(3) Applicable City of Lodi Land Use Plans and Policies. Annexation of the project sites to the City of Lodi would occur as part of the project. As such, this section briefly discusses the relationship of applicable City of Lodi plans and policies. An analysis of the Other Areas to be Annexed adherence with the City of Lodi plans and policies is not included as no development has been proposed as part of the annexation and no change to the project sites would occur with the annexation.

City of Lodi General Plan. A discussion of the Westside and SW Gateway projects' adherence to General Plan policies is discussed in Table IV.A-3. In-depth discussions of the Other Areas to be Annexed compliance with General Plan policies is not included as no change in the existing physical condition of the area is proposed. As development is proposed for the Other Areas to be Annexed, project level compliance with the General Plan would be evaluated.

General Plan Policies. There are three distinct topics where the proposed projects may not comply with General Plan policies: the conversion of agricultural land; the lack of an affordable housing component; and the lack of a Greenbelt element in the project.

The proposed project includes the conversion of agricultural land. While the General Plan includes statements of support for agriculture use, both the project sites are designated as Planned Residential (PR), which would indicate the City has planned for these properties to be converted to residential uses.

Neither the Westside nor the SW Gateway projects include an affordable housing component that meets the State's formal definitions of "affordable housing" as part of the project. However, it is intended that the range of housing types provided, including the higher density for-sale units, would provide for unit types that are more affordable to a larger range of Lodi's population than a traditional single-family home. This approach is consistent with the policies of the General Plan and Housing Element.

The General Plan has several policies regarding the establishment of a greenbelt. The City's Greenbelt Task Force is currently discussing implementation plans for a greenbelt along the southern edge of the City's Sphere of Influence. There are currently no plans for a greenbelt within the proposed project area.

General Plan Land Use Designations. A General Plan amendment has been proposed as part of the development application. The applicant proposed three types of residential land use designations: low-density; medium-density; and high-density. According to the General Plan, the low-density residential designation has a density range of 0.1 to 7.0 units per gross acre; the medium-density residential designation has a density range of 7.1 to 20.0 units per gross acre; and the high-density residential designation has a density range of 20.1 to 30 units per gross acre.

- Westside Project. The Westside project proposes an average overall low-density residential density of 4.80 dwelling units per acre, and overall medium-density residential density of 8.48 dwelling units per acre, and an average high-density residential density of 17.5 dwelling units per acre. The proposed townhome units, which have been included in the high-density by the project applicant, do not currently fall within the City's definition of high density (greater than 20 units

per acre). As a result, the average density of the proposed high density units is under 20 units per acre. City staff is currently assessing whether to modify the definition of high density in the City's General Plan to include a wider range and slightly lower densities (maybe anything over 16 units per acre).

- SW Gateway Project: The SW Gateway project proposes an average low-density residential density of 4.83 dwelling units per acre, and overall medium-density residential density of 8.93 dwelling units per acre, and an high-density residential density of 18.95 dwelling units per acre (see discussion of high-density in previous paragraph). The proposed high-density units do not fall within the density range identified in the General Plan.
- Other Areas to be Annexed. The Other Areas to be Annexed would have the Medium-Density designation, which allows for a density range of 7.1 to 20.0 units per gross acre.

City of Lodi Housing Element. The Westside and SW Gateway projects' relationship with applicable Housing Element policies is discussed in Table IV.A-3.

The City of Lodi Housing Element identifies the Westside and SW Gateway sites as areas to be developed with residential uses. The Element generally discusses the potential housing units for these sites.

The Element discusses the desire for the following mix of residential land uses: 65 percent low-density, 10 percent medium-density, and 25 percent high-density. It also states that the overall average density should not exceed seven units per gross acre. The Westside and SW Gateway projects have the following mix of residential land uses:

- Westside project: 50 percent low-density units, 26 percent medium-density units, and 24 percent high-density units.
- SW Gateway project: 55 percent high-density units, 18 percent medium-density units, and 27 percent high-density units.

Together the projects would result in 53 percent low-density, 21 percent medium-density, and 26 percent high-density. The overall density of both projects would be approximately 6.7 units per gross acre. Although the project would not precisely meet the Housing Element's objectives for each individual density range, it would meet the objectives of an overall density below seven units per gross acre and providing a mix of unit types and densities.

Zoning Ordinance. The applicant has applied for a Planned Development (PD) zoning designation for both the Westside and SW Gateway projects. This designation allows more flexibility with the development standards in the Zoning Ordinance. The parameters of the proposed PD designation would be approved by the Planning Commission.

Growth Management Ordinance. The applicant has submitted Growth Management Allocation applications for both the Westside and SW Gateway projects. The applicant has applied for this year's allocation, as well as unused allocations from previous years. The Planning Commission will make the final determination as to whether the applicant will receive the building allocations for the proposed projects.

For the year 2005, there are 291 single-family building permit allocations, 45 medium-density building permit allocations, and 112 high-density building permit allocations. Additionally, allocations not used in previous years may be allocated. There are a total of 3,382 (1,424 single-family, 298 medium-density and 1,660 high-density) allocations that have not been allocated. Information about existing and available allocations is shown in Table IV.A-2.

Table IV.A-2: Growth Management Allocation

Allocations	Single-Family (Low Density) (0.1–7.0)	Medium Density (7.1–20)	High Density (20.1–30)	Total
Total Available	**1,714**	**278[a]**	**1,772**	**3,764**
Requested Westside Allocations	370	195	175	740
Requested SW Gateway Allocations	740	250	360	1,350
Total FCB Requested	**1,110**	**445**	**535**	**2,090**
Allocations Remaining	604	(-167)[a]	1,237	1,674

[a] The City Council granted 65 medium-density allocations (45 from 2005 allocations and 20 from previous years) to the Miller Ranch Development project on February 15, 2006.

[b] The Planning Commission and City Council can grant up to 3 years of future allocations, pursuant to Municipal Code Section 15.34.090.

Source: LSA Associates, Inc., 2006.

For the Westside project, the applicant has submitted a growth management allocation application for 370 low-density residential units, 195 medium-density residential units, and 175 high-density residential units. For the SW Gateway project, the applicant has submitted a growth management allocation application for 740 low-density units, 250 medium-density units, and 360 high-density units. No development has been proposed for the Other Areas to be Annexed, and as such, no growth management allocations are being considered for these parcels.

Westside Facilities Master Plan. The proposed Westside project would generally conform to the Westside Facilities Master Plan. The proposed project includes various densities of residential, a school site, an aquatic center, and parks and detention basins. The proposed project does not include the linear park and storm drainage retention system shown on the conceptual plan; instead a linear trail system is proposed through the middle of the project. City staff is generally supportive of this variation as the proposed plan provides a better solution to storm drainage retention and having the linear trail. A more detailed analysis of the development plan's consistency with the Westside Facilities Master Plan will be provided in subsequent staff reports that discuss the project merits.

Bicycle Transportation Master Plan. Implementation of the development plans for both the Westside and SW Gateway projects would require an amendment to the City's Bicycle Transportation Master Plan.

For the Westside site, the master plan includes Class I bike paths along the westerly project boundary. The plan also includes a Class II bike path on Lodi Avenue and a Class II or III bike path on Vine Street. The proposed projects include bicycle paths on roads throughout the project site; however the proposed locations do not conform to the locations shown in the plan. The City Council will make the final determination regarding amendments to the Bicycle Master Plan.

For the SW Gateway site, the Master Plan includes Class I bike paths along the westerly project boundary and along Century Boulevard (between the westerly project boundary and Westgate Drive). The plan also includes Class II bike paths on Kettleman Lane, Lower Sacramento Road and Century Boulevard (between Westgate Drive and Lower Sacramento Road). The proposed projects include bicycle paths; however, the proposed locations do not conform to the locations shown in the plan. The City Council will make the final determination regarding amendments to the Bicycle Master Plan.

Park, Recreation, and Open Space Plan. The Park, Recreation and Open Space Element of the City of Lodi General Plan provides standards for neighborhood and community parkland per 1,000 population. A detailed discussion of these is included in Section IV.K, Public Services.

c. Significant Land Use Impacts. Implementation of the proposed project would result in the following significant impacts.

(1) Land Use Conflicts. Both the Westside project and the SW Gateway project would generally be adjacent to urban uses (residential/commercial/public uses) to the east, and adjacent to agricultural uses to the west. For the Westside project, residential uses would be located to the north of the project and agricultural uses would be located to the south. The SW Gateway project would be bordered to the north by urban uses. Development of the proposed project would lead to the following impact.

Impact LU-1: The proposed projects could result in a land use conflict with surrounding land uses. (S)

Agricultural uses are located immediately west of both project sites. There are no buffers or physical barriers proposed between the proposed development and the existing agricultural uses. Due to the immediate proximity, and the lack of physical barriers, impacts could include late night agricultural operations, nuisance odors, dust and wind erosion, or vandalism of agricultural areas. The following mitigation measures are proposed to reduce the potential conflicts associated with the proposed projects and the ongoing agricultural operations to the west.

Mitigation Measure LU-1: To reduce agricultural/residential land use incompatibilities, the following shall be required:

a. The applicant shall inform and notify prospective buyers in writing, prior to purchase, about existing and on-going agricultural activities in the immediate area in the form of a disclosure statement. The notifications shall disclose that the residence is located in an agricultural area subject to ground and aerial applications of chemical and early morning or nighttime farm operations which may create noise, dust, et cetera. The language and format of such notification shall be reviewed and approved by the City Community Development Department prior to recordation of final map(s). Each disclosure statement shall be acknowledged with the signature of each prospective owner. Additionally, each prospective owner shall also be notified of the City of Lodi and the County of San Joaquin Right-to-Farm Ordinance.

b. The conditions of approval for the tentative map(s) shall include requirements ensuring the approval of a suitable design and the installation of a landscaped open space buffer area, fences, and/or walls around the perimeter of the project site affected by the potential conflicts in land use to minimize conflicts between project residents, non-residential uses, and adjacent agricultural uses prior to occupancy of adjacent houses.

c. Prior to recordation of the final map(s) for homes adjacent to existing agricultural operations, the applicant shall submit a detailed wall and fencing plan for review and approval by the Community Development Department. (LTS)

(2) Convert Prime Farmland. The Farmland Mapping and Monitoring Program identifies all of the Westside project site (151.74 acres), and the majority of the SW Gateway project site (approximately 241 acres), as Prime Farmland. Additionally, approximately 39 acres of the Other Areas to be Annexed is considered Prime Farmland, but there are currently no development plans which would remove this acreage from production.

Impact LU-2: The proposed projects would result in the conversion of approximately 392 acres of Prime Farmland to non-agricultural uses. (S)

Both the Westside and SW Gateway project sites are primarily used in agricultural production, and are currently designated as Prime Farmland. Development of the proposed project would result in the conversion of Prime Farmland to non-agricultural uses. There are no feasible mitigation measures that would reduce this impact to a less-than-significant level. This impact would be considered significant and unavoidable even with implementation of the following mitigation measure, which would minimize the impact but not to a less-than-significant level:

Mitigation Measure LU-2: Prior to issuance of a building permit after the first quarter of the combined building permits for the Westside and SW Gateway have been approved, the applicant shall provide and undertake a phasing and financing plan (to be approved by the City Council) for one of the following mitigation measures:

(1) Identify approximately 392 acres to protect for a period of time to be determined (but not less than 15 years) as an agricultural use in a location as determined appropriate by the City of Lodi in consultation with the Central Valley Land Trust; or

(2) Pay a fee equal to the value of 392 acres as determined by an independent qualified consultant retained by the City in consultation with the Central Valley Land Trust. The City will determine to whom the fee shall be paid. (SU)

Even with implementation of the above mitigation measure, this impact would still be significant and unavoidable.

(3) Conflict with Zoning, Agricultural Use or Williamson Act Contract. The parcels on the project sites are currently zoned Agriculture – Urban Reserve (AU-20) and Very-Low-Density Residential (R-VL) by the San Joaquin County Development Code. As part of the annexation process, the parcels would be prezoned by the City of Lodi as Planned Development or Medium-Density Residential.

Existing uses on the Westside and SW Gateway sites include active agriculture. Additionally, Parcel 027-400-01, part of the Westside project site, and parcel 058-030-03, part of the SW Gateway project site, are under active Williamson Act Contracts, and are shown in Figure IV.A-7.

Impact LU-3: The proposed projects would result in a conflict with existing Agricultural Use and Williamson Act Contracts. (S)

As is discussed with Impact LU-2, the proposed project sites are defined as Prime Farmland, and their conversion would result in a significant and unavoidable impact. The proposed project would conflict with the existing agricultural use of the project site. However, the project site does fall within the City

of Lodi Sphere of Influence, and the Lodi General Plan designates these areas as Planned Residential, or areas that would be sites of future residential uses.

There are two active Williamson Act Contracts associated with the Westside and SW Gateway project sites. When these parcels are annexed, the City would not extend the Williamson Act Contract. Implementation of Mitigation Measures LU-2 and the following mitigation measure would help minimize this impact, but would not reduce it to a less-than-significant level; the impact would be considered significant and unavoidable.

> Mitigation Measure LU-3: The applicant shall pay all fees associated with terminating a Williamson Act Contract. (SU)

Table IV.A-3: Policy Table

POLICY	PROJECT RELATIONSHIP
GENERAL PLAN GOALS, POLICIES, AND IMPLEMENTATION PROGRAMS	
LAND USE AND GROWTH MANAGEMENT ELEMENT	
Goal A. To provide for orderly, well-planned, and balanced growth consistent with the limits imposed by the City's infrastructure and the City's ability to assimilate new growth.	
Policy 3. The City shall ensure the maintenance of ample buffers between incompatible land uses.	Both the Westside and SW Gateway project sites would be immediately adjacent to active vineyards. Mitigation Measure LU-1 would help to reduce potential land use incompatibility impacts.
Policy 5. The City shall require specific development plans in areas of major new development.	The applicant has submitted development plans for both proposed projects. These plans will be reviewed by the Planning Commission and the City Council.
Goal B. To preserve agricultural land surrounding Lodi and to discourage premature development of agricultural land with nonagricultural uses, while providing for urban needs.	
Policy 1. The City shall encourage the preservation of agricultural land surrounding the City.	Both project sites include areas that are currently in active agricultural use. However, both of these sites are identified as Planned Residential (PR) in the General Plan, which indicates these areas are anticipated to have future residential uses. Additionally, the project applicant will be required to pay agricultural mitigation fees discussed in Mitigation Measure LU-1 and comply with the City's "Right-to-Farm Ordinance."
Policy 2. The City should designate a continuous open space greenbelt around the urbanized area of Lodi to maintain and enhance the agricultural economy.	While both of these projects incorporate open space in the form of parks and basins, neither includes continuous open space are that would be considered a greenbelt to buffer urbanized area from agricultural uses. The proposed project does not include agricultural easements which would buffer development. The City has formed a Greenbelt Task Force to discuss and implement a greenbelt along the southern edge of the City.
Policy 3. The City should cooperate with San Joaquin County and the San Joaquin County Local Agency Formation Commission (LAFCO) to ensure that the greenbelt is maintained.	The City has formed a task force of community members to implement a greenbelt along the southern edge of the City. At this time, the City is not pursuing a greenbelt buffer along the western edge of the City, which would pertain to this property.
Policy 4. The City shall support the continuation of agricultural uses on lands designated for urban uses until urban development is imminent.	The proposed projects are identified as Planned Residential (PR) in the General Plan, which indicates that these are areas identified for future residential use. The Westside project site is surrounded on two sides by urban development, and the SW Gateway project site is surrounded on three sides by urban development.
Policy 5. The City shall promote land use decisions within the designated urbanized area that allow and encourage the continuation of viable agricultural activity around the City.	The project sites are currently in agricultural use. Development of the proposed projects would not allow for the continuation of the agricultural use of the project site.

Table IV.A-4 *continued*

POLICY	PROJECT RELATIONSHIP
Policy 6. The City shall encourage San Joaquin County to retain agricultural uses on lands adjacent to the City.	The project sites are in San Joaquin County but are within the City of Lodi's Sphere of Influence. The Lodi General Plan identifies these project sites as Planned Residential, which indicates the City views these areas as future residential areas. While agricultural uses would not continue at the project site after the Westside and SW Gateway projects are completed, agricultural uses within the county and adjacent to the City would continue. Additionally, Mitigation Measure LU-1 would help to reduce the land use incompatibility impacts that could result from implementation of the projects.
Goal C. To provide adequate land in a range of residential densities to meet the housing needs of all income groups expected to reside in Lodi.	
Policy 1. The City shall maintain an adequate supply of residential land in appropriate land use designations and zoning categories to accommodate a population-based 2.0-percent per year housing growth rate.	The proposed project sites have a Planned Residential (PR) General Plan land use designation, which indicates that they are intended for residential uses. Additionally, the applicant has applied for Growth Management allocations. This Growth Management Ordinance ensures that residential growth is permitted at a 2 percent per year rate.
Policy 2. The City shall promote the development of affordable housing to meet the needs of low- and moderate-income households.	The Westside and SW Gateway projects include a variety of housing types, including both for-rent and for-sale higher density multi-family units, thereby providing a wide variety of purchasing and rental opportunities consistent with the policies and programs identified in the Housing Element.
Policy 3. In evaluating development proposals under the City's growth management ordinance, the City shall grant priority to projects that include units affordable to low- and moderate-income households.	The Westside and SW Gateway projects include a variety of housing types, including both for-rent and for-sale higher density multi-family units, thereby providing a wide variety of purchasing and rental opportunities; however, no officially-monitored affordable housing component is proposed as part of the Westside and SW Gateway projects.
Policy 5. The City shall encourage higher density housing to be located in areas served by the full range of urban services, preferably along collector, arterial, and major arterial streets, and within walking distance of shopping areas.	For the Westside project, high-density residential units are proposed to be located south of Lodi Avenue and immediately west of the commercial center. These high-density units would be located within walking distance of commercial, park, and school uses. The SW Gateway project includes high-density residential uses south of Highway 12 and west of Lower Sacramento Road. These high-density units would be within walking distance of commercial and public uses. Both the Westside and SW Gateway projects include sidewalks and incorporate bike paths.

Table IV.A-4 *continued*

POLICY	PROJECT RELATIONSHIP
Policy 6. The City shall strive to maintain a housing ratio of 65 percent low-density, 10 percent medium-density, and 25 percent high-density in new development.	The following describes the proposed unit types for the Westside and SW Gateway projects. Westside Project: Total Units: 740 Low-Density: 370 units (50 percent) Medium-Density: 195 units (26 percent) High-Density: 175 units (24 percent) SW Gateway Project: Total Units: 1,350 Low-Density: 740 units (55 percent) Medium-Density: 250 units (18 percent) High-Density: 360 units (27 percent) Combined, the projects would result in 53 percent low-density, 21 percent medium-density, and 26 percent high-density with an average residential density of just under seven units per gross acre. The mix of densities provided are close to what the City is striving to maintain and would further the objective of providing a mix of housing types, both for-sale and for-rent. The PR residential designation states that future residential development cannot exceed an overall average density of seven units per acre; this limitation makes it difficult to achieve the exact desired ratio of units.
Goal H. To provide adequate land for development of public and quasi-public uses to support existing and new residential, commercial and industrial land uses.	
Policy 1. The City shall assist the LUSD in designating and reserving or acquiring appropriate sites for new schools and support facilities to accommodate growth, in conjunction with City land use planning and consistent with LUSD planning objectives. Future sites shall be identified on the GP Land Use Diagram and updated, as needed.	One school site has been included within both the Westside and SW Gateway projects.
Policy 2. The City shall promote the clustering of public and quasi-public uses such as schools, parks, libraries, child care facilities, and community activity centers. Joint-use of public facilities shall be promoted, and agreements for sharing costs and operational responsibilities among public service providers shall be encouraged.	For the Westside project, the school site is located immediately north of the Aquatic site identified for a future Aquatic Center and one of the proposed parks. For the SW Gateway project, the school site is located near one of the proposed parks.
Policy 3. The City shall designate adequate, appropriately located land for quasi-public uses such as hospitals, churches, private school facilities, and utility uses.	Public/Quasi-public land has been included in the site plans for both projects. These uses include the aquatic center and the school sites.
Goal I. To provide for new school facilities as they are needed.	
Policy 2. In its review of residential development proposals, the City shall consider the balance of low, moderate and high-income households within school attendance areas and the effects of the socioeconomic composition of neighborhoods on the quality of public schools.	The School District has reviewed the proposed project and has not raised any specific issues regarding the attendance areas.

Table IV.A-4 *continued*

POLICY		PROJECT RELATIONSHIP
Policy 3.	To the extent allowed by law, the City shall condition approval of rezonings, prezonings, and general plan amendments on stipulations by the applicants and their successors in interest that they will coordinate building construction and occupancy with LUSD so as to prevent or minimize overcrowding; provided, however, that prior approval by the LUSD shall not be required before the City can act on applications for development.	The City will implement this policy during the project approval process. To date, LUSD has been involved with the proposed projects by providing review and comment on the size, type and location of the proposed school sites.
Policy 4.	To the extent allowed by law, the City shall ensure that adequate financing for necessary school facilities shall be available in a timely fashion from new construction before approving any development projects; provided that such prior approval of the LUSD shall not be required before the City can act on such applications for development.	The project applicant will pay all appropriate school impact fees. The City will work with the school district to ensure the timely payment of impact fees.
Policy 5.	The City shall not assume the role of negotiator on behalf of the LUSD. It shall be up to the LUSD and the developer to negotiate acceptable measures for providing school facilities, and for the district to then advise the City that it is or is not satisfied that the proposed development application will satisfy all of the goals stated in this general plan having to do with schools.	The project applicant has been negotiating directly with the LUSD regarding school sites and school impact fees. Additionally, the school sites are located next to roadways to ensure adequate circulation to and from the school.
Policy 6.	The City shall support all necessary and reasonable efforts by the LUSD to obtain funding for capital improvements required to accommodate the City's 2007 buildout projections, including adoption and implementation of local financing mechanisms, such as community facility districts.	The project applicant has been negotiating directly with the LUSD regarding school sites and school impact fees.
Policy 7.	The City shall cooperate with the LUSD in the assessment and collection of school facility fees on new or existing development.	The project applicant has been negotiating directly with the LUSD regarding school sites and school impact fees.
Policy 9.	The City shall ensure that new school sites are easily and safely accessible by vehicles, pedestrians, and bicyclists.	The development plans include one school site within both the Westside and SW Gateway projects. These school sites would be accessible by vehicles, pedestrians, and bicyclists.
Policy 10.	The City shall assist the LUSD in locating school facilities as close as possible to the residential areas that these facilities are designed to serve, particularly those residential areas that are expected to generate the largest demand for these facilities.	School sites would be located in both the Westside and SW Gateway properties, and would be immediately adjacent to residential uses. The school district has been consulted regarding the proposed locations and each site is centrally located within its respective residential development.
Policy 11.	The City shall encourage joint use of school facilities for recreation and other public purposes that do not conflict with primary educational uses.	The Parks and Recreation Department will discuss with the Lodi Unified School District the potential use of school facilities for recreation and other public uses.
Goal J. To maintain an adequate level of service in the City's water, sewer collection and disposal, and drainage system to meet the needs of existing and projected development.		
Policy 1.	The City shall develop new facilities, as necessary, to serve new development in accordance with the City's Water, Wastewater, and Drainage Master Plans.	The project applicant will provide water, wastewater, and drainage master plans for review by the City prior to approval of a tentative map.

Table IV.A-4 *continued*

POLICY		PROJECT RELATIONSHIP
Policy 2.	The City shall assess water, wastewater, and drainage development fees on all new residential, commercial, office, and industrial development sufficient to fund required systemwide improvements.	The applicant will pay all applicable water, wastewater, and drainage development fees.
CIRCULATION ELEMENT		
Goal A. To provide for a circulation system that accommodates existing and proposed land uses and provides for the efficient movement of people, goods, and services within and through Lodi.		
Policy 1.	The City shall strive to maintain Level of Service C on local streets and at intersections. *The* acceptable level of service goal will be consistent with the financial resources available and the limits of technical feasibility.	See analysis in Section IV.B, Traffic and Circulation.
Policy 2.	The City shall time the construction of new development such that the time frame for completion of the needed circulation improvements will not cause the level of service goals to be exceeded.	Section IV.B, Traffic and Circulation, includes mitigation measures to reduce potential impacts and maintain LOS at study intersections. However, even with implementation of the identified mitigation measures, some of the intersections may still operate at an undesired level of service.
Policy 4.	The City shall require dedication, widening, extension, and construction of public streets in accordance with the City's street standards. Major street improvements shall be completed as abutting lands develop or redevelop. In currently developed areas, the City may determine that improvements necessary to meet City standards are either infeasible or undesirable.	Both the Westside and SW Gateway projects would include the construction of streets, which would be built to city standards.
Policy 5.	The City shall review new developments for consistency with the GP Circulation Element and the capital improvements program. Those developments found to be consistent with the Circulation Element shall be required to pay their fair share of traffic impact fees and/or charges. Those developments found to be generating more traffic than that assumed in the Circulation Element shall be required to prepare a site-specific traffic study and fund needed improvements not identified in the capital improvements program, in addition to paying their fair share of the traffic impact fee and/or charges.	Section IV.B, Traffic and Circulation, evaluates traffic that would be generated by the proposed projects. The project applicant will pay all applicable traffic impact mitigation fees.
Policy 6.	The City shall require that new local streets be designed to discourage heavy-volume through-traffic within residential neighborhoods, and to ensure direct and adequate access for emergency service vehicles.	The applicant has not finalized street design or street sections. The City of Lodi Public Works Department shall review and approve all proposed streets as part of the design conditions.
Policy 7.	The City shall require that public and private street design and new development access meet applicable City street standards and minimize accident hazards.	The applicant has not finalized street design or street sections. The City of Lodi Public Works Department shall review and approve all proposed streets as part of the design conditions.
Policy 8.	The City shall require that development frontage design be consistent with the classification of the fronting street. For example, single-family residential development should not front arterial streets. Furthermore, all driveways and on-site parking areas fronting arterials should allow two-way access.	The applicant has not finalized street design or street sections, which is anticipated to be completed as part of the design review conditions. Prior to the approval of the vesting tentative map, the City of Lodi Public Works Department shall review and approve all proposed streets.

Table IV.A-4 *continued*

POLICY	PROJECT RELATIONSHIP
Policy 9. The City shall limit or prohibit access adjacent to intersections of major arterials.	The applicant has not finalized street design or street sections, which is anticipated to be completed as part of the design review conditions. Prior to the approval of the vesting tentative map, the City of Lodi Public Works Department shall review and approve all proposed streets.
Policy 10. The City shall require that dead-end streets be terminated or extended in conformance with City design standards.	Dead end streets are proposed in the Westside and SW Gateway projects. These streets shall conform to City design standards.
Policy 11. The City should upgrade existing substandard streets, as needed and when feasible, to accommodate traffic flow and minimize safety hazards.	The applicant has not finalized street design or street sections, which is anticipated to be completed as part of the design review conditions. Prior to the approval of the vesting tentative map, the City of Lodi Public Works Department shall review and approve all proposed streets.
Goal B. To ensure the adequate provision of both on-street and off-street parking.	
Policy 1. The City shall require new developments to provide an adequate number of off-street parking spaces in accordance with City parking standards. These parking standards should be periodically reviewed and updated.	The applicant has not finalized the project design. They will be required to show compliance with parking standards prior to approval of the vesting tentative map.
Goal D. To provide for a safe and convenient pedestrian circulation system.	
Policy 1. The City shall require sidewalks for all developments in accordance with City design standards and encourage additional pedestrian access where applicable.	In accordance with City standards, sidewalks will be provided for in both the Westside and SW Gateway projects. City staff has requested that the width of the sidewalks be increased from the City's standard of 4 feet wide to 5 feet wide.
Policy 3. The City shall consider the need for an interconnected system of pedestrian paths linking major use areas in Lodi.	Pedestrian linkages are proposed as part of the Westside and SW Gateway projects. A pedestrian walkway would be located down the spine of both the Westside and SW Gateway projects in a north/south direction. Connections to this central trail system will also be provided from the east/west direction. Sidewalks will also be included as part of the project, facilitating pedestrian access.
Policy 4. The City shall consider the need to integrate bicycle and pedestrian ways that would support the development of local transportation hubs.	Both the Westside and SW Gateway development plans include bicycle lanes and pedestrian access throughout the project sites; however, the proposed plans do not conform to the locations shown on the City's Bicycle Transportation Master Plan. The plan shall be amended to reflect the proposed location of bicycle lanes.
Goal E. To encourage the use of bicycles as an alternate mode of transportation.	
Policy 3. The City shall consider the need for bicycle facilities in new developments and when such facilities are required, specifications provided in CalTrans' Design Manual, Section1000, or other appropriate standards shall be used.	Bicycle lanes will be located along many of the project roadways as identified necessary by Public Works. The City will also require bike racks to be installed at the various public facilities located throughout the project area.
Goal G. To encourage a reduction in regional vehicle miles traveled.	
Policy 4. The City shall encourage mixed-use developments that promote pedestrian and nonvehicular travel.	While there are no mixed use buildings incorporated into the project site, there will be public uses (parks, schools), located among the residential uses proposed at the Westside and SW Gateway sites. Sidewalks and bike paths will be incorporated into the proposed project to facilitate non-vehicular travel.

Table IV.A-4 *continued*

POLICY	PROJECT RELATIONSHIP
Goal H. To provide a financing program for future circulation improvements.	
Policy 3. The City shall develop a traffic fee schedule to be applied to new development to pay for the pro rata cost of required improvements.	The applicant shall pay all applicable traffic impact fees.
NOISE ELEMENT	
Goal A. To ensure that City residents are protected from excessive noise.	
Policy 1. The City shall use the outdoor CNEL criteria on the land use compatibility chart (Figure 6-4) as a primary guide to determine whether all or part of an existing or proposed development site should be considered "noise impacted"; areas shall be considered noise impacted if current or projected exterior noise levels would classify the area as "conditionally acceptable," "normally unacceptable," or "presumed to be 'unacceptable" for the existing or proposed use.	Anticipated noise impacts are discussed in Section IV.D of this EIR.
Policy 2. The City shall recognize that a CNEL measure does not adequately reflect the disturbance effects of intermittent noise events or noise sources that operate for only pan of a day. Intermittent or discontinuous noise sources should be evaluated on a case-by-case basis to determine appropriate land use compatibility classifications.	Anticipated noise impacts are discussed in Section IV.D of this EIR.
Policy 3. The City shall require a noise impact analysis for development projects on sites that are wholly or partially noise impacted under existing or projected future conditions.	A noise impact analysis is included as Section IV.D of this EIR.
Policy 4. The City shall require a noise impact analysis for development projects that may cause or significantly contribute to adjacent properties becoming noise impacted.	A noise impact analysis is included as Section IV.D of this EIR.
Policy 5. Noise impact analyses required by Policies A-3 and A-4 above shall: • be included in any environmental impact study prepared for the proposed project; • be the responsibility of the project applicant; • be prepared by persons with the experience and training needed to properly address the noise impact and noise mitigation issues that may arise; • include, at the discretion of City staff, ambient noise monitoring of the project site and adjacent areas for sufficient time periods and at appropriate seasons to clarify the land use compatibility status of the property under current conditions; • estimate future noise levels and land use compatibility conditions following buildout of the proposed project;	A noise impact analysis is included as Section IV.D of this EIR. Noise monitoring at 4 locations around the project site was included in the analysis. Two potential noise impacts were identified in the analysis. Both impacts could be reduced to a less-than-significant level with implementation of the identified mitigation measures. However, the City may choose to not require sound walls in some select areas which could result in a significant and unavoidable impact. The applicant would be responsible for implementation of the measures the City decides to implement.

Table IV.A-4 *continued*

POLICY		PROJECT RELATIONSHIP
	• include an evaluation of the magnitude, duration, and temporal pattern of noise impacts associated with intermittent noise sources that will be associated with the proposed project or that will affect the project site; • include identification of noise mitigation measures required to produce "presumed to be acceptable" conditions on the potentially noise-impacted property; • include an evaluation of the effectiveness of berms, sound walls, or wall-berm combinations for areas significantly affected by noise from railroad operations **or** traffic on state highways; • include recommendations regarding feasible noise mitigation measures and an evaluation of their expected effectiveness if it is judged infeasible to reduce noise levels at the noise-impacted property to a "presumed to be acceptable" level; and • include a discussion of mitigation monitoring procedures that can be used to ensure that recommended mitigation measures are implemented.	
Policy 6.	The City shall require a comprehensive, objective analysis of alternative land uses for the proposed site and alternative sites for the proposed uses for: • any development projects that contain areas that would be classified as "normally unacceptable" or "presumed to be unacceptable" after implementation of recommended noise mitigation measures; or • any development projects that would cause adjacent properties to be classified as "normally unacceptable" or "presumed to be unacceptable" even with implementation of recommended noise mitigation measures.	Alternatives to the proposed project are included in Chapter V, Alternatives.
Policy 8.	The City should deny development projects that would be classified as "normally unacceptable" or "presumed to be unacceptable" unless one of the following findings can be made: Finding A: • the uses proposed for the noise-impacted area are not noise-sensitive and are fully contained within enclosed structures that meet or exceed the indoor noise criteria listed in Figure 6-4; • the proposed uses will not expose employees, occupants, or visitors to outdoor noise conditions for longer than required to enter or leave the property; and • the proposed uses will not create or significantly contribute to noise problems on other properties.	Section IV.D, Noise, identifies two potential noise impacts. With implementation of the identified mitigation measures, these impacts would be reduced to a less-than-significant level. However, the City may choose to not require sound walls in some select areas which could result in a significant and unavoidable impact.

Table IV.A-4 *continued*

POLICY		PROJECT RELATIONSHIP
	Finding B: • the uses proposed for the noise-impacted area are not noise-sensitive; • noise exposures inherent in the proposed use will significantly exceed the pre-project ambient noise level; and • the proposed uses will not create or significantly contribute to noise problems on other properties. Finding C: • there are no other reasonable uses for the property; and • the proposed uses will not create or significantly contribute to noise problems on other properties.	
Policy 9.	The City shall apply the State Noise Insulation Standards (California Administrative Code, Title 24) and Chapter 35 of the Uniform Building Code to all new convalescent facilities, hospitals, and single-family residential developments, in addition to the multi-family and transient lodging developments covered by the State Noise Insulation Standards.	The applicant would meet the noise insulation standards as identified by the City of Lodi.
CONSERVATION ELEMENT		
Goal A. To protection water quality in the Mokelumne River, Lodi Lake and in the area's groundwater basin.		
Policy 9.	The City shall provide for an adequate high-quality water supply prior to approving future development.	The City of Lodi 2005 Urban Water Management Plan (UWMP) contains water supply and demand forecasts which include growth projections for the City of Lodi. Based on the demand calculations established in the Water Availability Assessments for the proposed projects, the City of Lodi determined that the proposed projects estimated water demand is included in the 2005 UWMP demand projections, as evaluated in Section IV.J, Utilities.
Goal B. To conserve water resources.		
Policy 1.	The City shall require water conservation in both City operations and private development to minimize the need for the development of new water sources and facilities.	The proposed project would include meters for all new water connections. This will enable future conservation pricing in order to encourage water conservation. The City has restrictions and penalties in place for wasted water and emergency conservation measures in place for water shortage conditions.
Policy 2.	The City shall meter all new residential developments.	All single-family units proposed as part of the Westside and SW Gateway project would be metered.
Policy 4.	The City shall require water-conserving landscaping practices in new City projects and in private developments, such as the use of drought-tolerant plants and irrigation techniques.	The applicant has not finalized landscape plans. Prior to the approval of tentative map, the Community Development Department and Public Works Department will review and approve final landscape plans.

Table IV.A-4 *continued*

POLICY		PROJECT RELATIONSHIP
Goal C. To promote the economic viability of agriculture in and surrounding Lodi and to discourage the premature conversion of agricultural lands to nonagricultural uses, while providing for urban needs.		
Policy 1.	The City shall ensure, in approving urban development near existing agricultural lands, that such development will not constrain agricultural practices or adversely affect the economic viability of adjacent agricultural practices.	Both proposed projects would convert land that is currently used in agricultural production. The residential development proposed as part of the Westside and SW Gateway projects would be immediately adjacent to land that is currently in active agricultural use. Mitigation Measure LU-1 will help reduce potential land use incompatibilities between the proposed project and adjacent land uses.
Policy 2.	The City shall require new development to establish buffers between urban development and productive agricultural uses consistent with the recommendations of the San Joaquin County Department of Agriculture.	Mitigation Measure LU-1 helps to reduce potential land use incompatibilities between the proposed project and adjacent land uses.
Policy 3.	The City shall adopt a “right-to-farm” ordinance for the purpose of protecting agricultural land from nuisance suits brought by surrounding landowners.	Chapter 8.18 of the Lodi Municipal Code provides notice of agricultural operations affecting other properties. The applicants will be required to have future buyers sign disclosure statements regarding the adjacent agricultural uses, as is discussed in Mitigation Measure LU-1.
Goal D. To conserve soil resources.		
Policy 1.	The City shall require developers to prepare an erosion and sediment control plan, prior to approving development that includes features such as mitigation of sediment runoff beyond proposed project boundaries and complete revegetation and stabilization of all disturbed soils (including details regarding seed material, fertilizer, and mulching).	The applicant will prepare an erosion and sediment control plan that will be subject to approval by the Public Works Department.
Goal E. To protect sensitive native vegetation and wildlife habitats and fisheries resources.		
Policy 2.	The City shall regulate the removal of trees that are defined as "heritage trees."	The City of Lodi has not prepared or adopted a Heritage Tree Ordinance; therefore, no definitions are found in City ordinances. The removal of trees on project sites, and how it may impact wildlife on the project site, is evaluated in the IV.H, Biological Resources
Policy 3.	New development shall be sited to maximize the protection of native tree species and sensitive plants and wildlife habitat.	No significant vegetation exists on the project site.
Policy 4.	The City shall encourage the use of native plant species for landscaping roadsides, parks, and urban developments.	This will be required as a condition of approval for the development plans associated with the proposed project.
Policy 5.	The City shall require site-specific surveys to identify significant vegetation and wildlife habitat for development projects located in or near sensitive habitat areas.	No significant vegetation habitat exists on-site; potential wildlife habitat is located on the project site (please see Section IV.H, Biological Resources). Implementation of the mitigation measures discussed in Section IV.H would reduce all potential impacts to a less-than-significant level.

Table IV.A-4 *continued*

POLICY		PROJECT RELATIONSHIP
Policy 10.	For the street tree program identified in Policy C-2 of the Urban Design and Cultural Resources Element, the City shall select native trees based on the following criteria: resistance to pests, microclimate tempering (i.e., shade in summer; sun in winter), water conservation, aesthetics, and maintenance (including impacts on sidewalks and other paving).	City staff will ensure this is implemented in their review of the landscape plan.
Policy 12.	The City shall support strong regulatory action by the State Regional Water Quality Control Board to prevent the discharge of substances harmful to fish in to the Mokelumne River.	The applicant will prepare an erosion and sediment containment plan that will be subject to approval by the Public Works Department.
Policy 14.	The City should work with the California Department of Fish and Game in identifying an area or areas suitable for Swainson's hawk and burrowing owl habitat; this land should be preserved and put into a mitigation land bank to mitigate impacts on existing habitat for these species. A mechanism should be established for developer funding of acquisition and management of lands in the mitigation bank.	The mitigations included in the section IV.H, Biological Resources will mitigate potential impacts to the burrowing owl and Swainson's hawk.
Policy 15.	The City shall manage portions of storm drainage detention ponds and drainage ponds and other appropriate areas as wildlife habitat.	Several park basins are proposed as part of both the Westside and SW Gateway projects. City staff will work with the project applicant in designing the basins to try to incorporate opportunities for wildlife habitat.
Goal F. To promote and, insofar as possible, improve air quality in Lodi and the region.		
Policy 1.	The City shall promote travel by bicycle and foot within Lodi.	The Westside and SW Gateway projects would incorporate sidewalks and bicycle paths to help promote non-vehicular travel. A linear trail system that traverses both the Westside and SW Gateway areas in a north/south direction with some east/west connections together with the bike lanes that will be included on many of the project roadways will promote travel by bicycle and foot.
PARKS, RECREATION AND OPEN SPACE ELEMENT		
Goal A. To establish and maintain a public park system suited to enhancing the livability of the urban environment by meeting the open space and recreation needs of Lodi residents and visitors; providing parks for residential neighborhoods; and preserving significant open space resources.		
Policy 1.	The City shall establish a standard of 8.0 acres of neighborhood and community parkland per 1,000 population, including school parks and storm drainage detention basin parks, and 3.9 acres of neighborhood and community parkland per 1,000 population, excluding school parks and storm drainage detention basin parks. The City shall translate this ratio to dwelling unit equivalents to correspond to the City's fee ordinance.	The proposed project is providing parkland consistent with the standards listed in this policy. A detailed discussion of these is included in Section IV.K, Public Services.
Policy 2.	The City shall assess a park development fee on all new residential, commercial, office, and industrial development sufficient to fund the acquisition and development of new parkland consistent with the City standards identified in the policy above.	The Westside and SW Gateway projects include a number of parks consistent with the standards listed in Policy 1. In addition, the applicant has agreed to fund a portion of the improvement costs for DeBenedetti park.

Table IV.A-4 *continued*

POLICY		PROJECT RELATIONSHIP
Policy 3.	The City shall continue the joint development of parks and drainage detention basins.	Each detention basin proposed will be incorporated into a larger park design.
Policy 4.	The City shall continue the joint use of school facilities and grounds as parkland and shall work toward maintenance needs and concerns through administrative policies and agreements.	The Parks and Recreation Department shall work with the Lodi Unified School District to discuss the use of school facilities for parks and recreation purposes.
Policy 5.	The City shall develop parks that can be used on a year-round basis, and which are not jointly used as drainage detention basins. The City shall examine the feasibility of encouraging small 2- to 5-acre neighborhood parks.	The Westside and SW Gateway projects each will include a mix of different park types and sizes including some parks without drainage basins.
Policy 8.	The City shall consider the need for an interconnected system of pedestrian and bicycle paths linking City parks and open space areas with other uses.	Both the Westside and SW Gateway projects include a pedestrian trail system.
Policy 9.	The City shall expand the neighborhood and community park system with the goal of providing park facilities within reasonable walking distance of all new residential areas.	Both projects include parks and park/basins consistent with the population/park ratio included in the General Plan. These parks will range in size and are scattered throughout the development. These parks would be within walking distance to proposed residential units.
Policy 10.	The City shall design parks to be accessible by pedestrians and a variety of transportation modes including automobile, bus, and bicycle.	Parks would be interspersed throughout both project sites, and would be accessible by a variety of transportation modes.
Policy 14.	The City shall require that more open space be provided within multi-family developments through wider setbacks and greater building separation.	Both projects include high-density development. Final designs of the multi-family development shall be subject to review and approval of the City's Site Plan and Architectural Review Committee (SPARC).
Goal C. To promote the provision of private recreational programs and facilities.		
Policy 1.	The City shall promote the provision of private open space and recreational facilities as part of new large-scale residential developments to meet a portion of the recreation and open space needs that would be generated by the development.	Some private open space and recreation activities may be provided as part of the project. These details will be finalized during the Tentative Map stage.
Goal D. To provide adequate land for open space as a framework for urban development and to meet the active and passive recreational needs of the community.		
Policy 1.	The City shall discourage the premature conversion of agricultural lands to urban uses.	The proposed project would include the conversion of agricultural lands to urban uses. However, the areas to be developed are located adjacent to urban areas within the City of Lodi. Additionally, both areas are in the City's Sphere of Influence and identified on the City's General Plan Land Use Map as Planned Residential (PR). This designation is for land identified as a future residential area.
Policy 2.	The City shall protect lands designated agriculture on the GP Land Use Diagram from urban development.	Both the Westside and SW Gateway sites are currently used in agriculture production. However, both sites have a PR general plan designation and are not currently designated as agriculture on the General Plan Land Use map.
Policy 3.	The City should designate a continuous open space greenbelt around the urbanized area of Lodi to protect open space resources and preventing urban sprawl.	The City has not yet designated any lands to accomplish a continuous open space greenbelt.

Table IV.A-4 *continued*

POLICY		PROJECT RELATIONSHIP
Policy 4.	The City shall promote the provision of public and private open space within urbanized Lodi to provide visual contrast with the already-built environment and to provide for the recreational needs of residents.	Both the Westside and the SW Gateway projects include parks and park/basins. The majority of these parks would be public parks maintained by the City of Lodi Parks and Recreation Department. Private open space will be provided within the high-density areas.
HEALTH AND SAFETY ELEMENT		
Goal A. To prevent loss of lives, injury, and property damage due to flooding.		
Policy 2.	The City shall ensure that storm drainage facilities are constructed to serve new development adequate to store runoff generated by a 100-year storm.	The mitigations included in Chapter IV.G, Hydrology and Water Quality, will ensure that the proposed projects comply with the City's storm water runoff requirements.
Policy 3.	The City shall ensure that storm drainage facilities are provided for all new development to make certain that all surface runoff generated by the development is adequately handled.	The mitigations included in Chapter IV.G, Hydrology and Water Quality, will ensure that the proposed projects provide adequate collection infrastructure and retention basins.
Policy 6.	The City shall not support approval of land uses or projects that have the potential of greatly increasing flood hazards in Lodi.	The mitigations included in Chapter IV.G, Hydrology and Water Quality, will ensure that the proposed projects do not increase flood hazards in Lodi.
Policy 7.	The City shall support the implementation of flood hazard reduction measures in neighboring areas.	The proposed project sites are not located within flood hazard areas, as discussed in Chapter IV.G, Hydrology and Water Quality.
Goal C. To prevent loss of lives, injury, and property damage due to urban fires.		
Policy 1.	The City shall promote the installation of automatic interior sprinkler systems in all new developments.	The City will determine what units should include interior sprinklers when the Tentative Map is processed.
Policy 2.	The City shall require new development to comply with minimum fire flow rates determined jointly by the City Fire Department and the Public Works Department.	The new development will comply with minimum fire flow rates. All new water lines serving the proposed projects will be sized to meet the fire flow requirements of California Fire Code Division III, Appendix III-A.
Policy 5.	The City shall ensure, in approving private streets and access areas, that they are adequate in terms of width and turning radius to facilitate access by City firefighting apparatus. All plans for such streets shall be reviewed by the Fire Department to ensure these standards are met.	The Fire Department has reviewed the proposed projects and has confirmed that the development plans meet City standards pertaining to street design.
Policy 7.	The City shall endeavor through adequate staffing and station locations to maintain the minimum feasible response time for fire and emergency calls. The goal for travel time by the fire department in responding to an emergency shall be 3 minutes. As areas are developed beyond the 3-minute standard, additional fire stations, capital equipment, and personnel shall be provided or alternative fire protection measures shall be required.	The SW Gateway project site includes a one acre site for the development of a future fire station. The mitigations included in Chapter IV.K, Public Services, will ensure that adequate staffing and the new fire station will ensure that emergency travel time goals are met.
Policy 10.	The City shall assess development fees on all new residential, commercial, office, and industrial development sufficient to fund capital improvements and equipment required to provide fire protection.	The applicant will pay all applicable fire protection impact fees.

Table IV.A-4 *continued*

POLICY	PROJECT RELATIONSHIP
Goal D. To prevent crime and promote the personal security of Lodi residents.	
Policy 1. The City shall promote the installation of security equipment aimed at crime prevention in new development.	The installation of security equipment is not proposed as part of the project. Individual homeowners may elect to install security systems.
Policy 3. The City shall encourage developers to incorporate site planning and structural design features that deter crime in new development.	The proposed projects will include adequate street access. The Police Department will be involved in future building specific design review to ensure crime deterring features are included.
Policy 4. The Lodi Police Department shall continue to participate in the development review process to ensure that crime prevention considerations are incorporated into the design of new development.	The Police Department will be involved in future building specific design review to ensure crime deterring features are included.
Policy 5. The City shall endeavor through adequate staffing and patrol arrangements to maintain the minimum feasible police response time for police calls. The goal for average response time for emergency calls shall be 3 minutes and no longer than 40 minutes for non emergency calls.	See discussion in Chapter IV.K, Public Services.
Policy 6. The City shall endeavor to maintain the existing staff ratio of 1.3 officers per 1,000 population. The City shall translate this ratio to dwelling unit equivalents to correspond to the City's fee ordinance.	See discussion in Chapter IV.K, Public Services.
Policy 7. The City shall assess development fees on all new residential, commercial, office and industrial development sufficient to fund capital improvements and equipment required to provide police protection.	The applicant will pay applicable police impact fees.
Goal E. To protect Lodi residents from the effects of hazardous substances.	
Policy 1. The City shall consider the potential for the production, use, storage, and transport of hazardous materials in approving new development and provide for reasonable controls on such hazardous materials.	The proposed projects would be residential in nature and would contain minimal amounts of hazardous materials. All hazardous materials on site during the construction period would be subject to applicable state guidelines. The amount of hazardous materials on site during operation of the development would be related to household use or use associated with the public facilities.
URBAN DESIGN AND CULTURAL RESOURCES DEVELOPMENT ELEMENT	
Goal A. To provide a strong and clear definition to the edges and overall urban form of the City.	
Policy 1. The City should designate a continuous open space greenbelt around the urbanized area of Lodi to maintain visual definition and a clearly delineated edge to the City's urbanized area within its agricultural and rural setting, and to protect the scenic resources of the surrounding rural, agricultural, and natural landscape (including the Lodi Lake Park and the Mokelumne River corridor).	The City has not yet designated any lands to accomplish a continuous open space greenbelt.

Table IV.A-4 *continued*

POLICY	PROJECT RELATIONSHIP
Goal C. To maintain and enhance the aesthetic quality of major streets and public/civic area.	
Policy 1. The City shall develop special design standards to upgrade roadways, including SR 12 and SR 99. Such standards shall include provisions for setbacks, signs, landscaping, parking, and upgrading commercial development along these streets, and screening of visually unattractive commercial and industrial uses.	The applicant will adhere to applicable City and CalTrans roadway design standards except for those that maybe modified by the PD zoning.
Goal F. To preserve existing community character and fabric, and promote the creation of a small-town atmosphere in newly developing areas.	
Policy 2. The City shall promote the creation of well-defined residential neighborhoods in newly developing areas. Each of these neighborhoods should have a clear focal point, such as a park, school, or other open space and community facilities, and should be designed to promote pedestrian convenience.	The proposed projects include a variety of housing types, several parks, and school sites. All residential units are within walking distance to a park or park/basin. Large parks and park/basins within the Westside and SW Gateway will serve as focal points for the project.
Policy 3. The visual impact of automobiles shall be minimized in all new development.	The City will ensure that the objectives listed in this policy are considered and implemented to the extent feasible during the design review process.
Policy 5. Open space provided within new developments shall be configured to link with existing urban open space.	The proposed project would provide links to existing open space.
HOUSING ELEMENT	
Goal A. To provide a range of housing types and densities for all economic segments of the community while emphasizing high quality development, homeownership opportunities, and the efficient use of land.	
Policy 1. The City shall promote the development of a broad mix of housing types through the following mix of residential land uses: 65 percent low-density, 10 percent medium-density, and 25 percent high-density.	Both the Westside and the SW Gateway projects include a broad mix of residential densities. Westside project would be: 58 percent low-density units, 26 percent medium-density units, 24 percent high-density units. SW Gateway project would be: 55 percent low-density units, 18 percent medium-density units, 27 percent high-density units.
Policy 2. The City shall regulate the number of housing units approved each year to maintain a population-based annual residential growth rate of 2.0 percent, consistent with the recommendations of the Mayor's Task Force and the growth management ordinance.	See Policy B.6 under the Land Use and Growth Management Element. The applicant has submitted their Growth Management Allocation applications for the Westside and SW Gateway projects. The applications would seek to use allocations from previous years that have not been used. The Ordinance allows residential building permit allocations equal to 2 percent of the population. Of the 2 percent, 65 percent shall be single-family, 10 percent shall be medium-density residential and 25 percent shall be high-density residential. From 1989 to 2004 the City had granted only 3,260 growth management allocations (2,894 single-family units, 366 medium-density units and, 0 high-density units). Because the units are compounded annually, the City could have granted a total of 6,642 units from the 1989 to 2004. On February 15, 2006, City Council granted 65 medium-density allocations to the Miller Ranch Development

Table IV.A-4 *continued*

POLICY		PROJECT RELATIONSHIP
		project, of which 45 were scheduled for 2005 and 20 were available from previous years. This leaves 3,362 (1,424 single-family units, 278 medium-density units and 1,660 high-density units) allocation units remaining from previous years. The allocations for 2005 include 291 single-family, 45 medium-density (all of which were granted to Miller Ranch) and 112 high-density units for a total of 448 units. Adding the units remaining from the previous years to the 2005 allocations (subtracting the 45 medium-density allocations granted to Miller Ranch) leaves a total of 3,765 units available to date (1,714 single-family, 278 medium-density, and 1,772 high-density). The applicant's growth management applications request a total of 2,090 units (1,110 single-family units, 445 medium-density units and 535 high-density units).
Policy 10.	The City shall seek to intersperse very low- and low-income housing units within new residential developments and shall ensure that such housing is visually indistinguishable from market-rate units.	The proposed projects do not include very low- or low-income housing units as defined by State law.
Policy 11.	The City shall continue to allow and encourage the development of a variety of housing and shelter alternatives, both renter and owner, to meet the diverse needs of the City's population.	The proposed projects do includes a variety of for-sale and for-rent housing types. The Westside project would include single-family and apartment style housing. The SW Gateway project includes single-family, duplex, townhome, and apartment units.
Policy 13.	The City shall encourage infill residential development and higher residential densities within the existing City limits near transit stops, and compact development patterns in annexation areas to reduce public facility and service costs, avoid the premature conversion of natural resource and agricultural lands, and reduce the number of trips from private vehicles.	Areas developed as high-density would be considered compact in design. The average PR designation states that the maximum average residential density shall be less than seven units per acre. The overall average density of the proposed development is 6.74 units per acre. As a result, the development is as compact as permitted by existing City policies.
Goal C. To ensure the provision of adequate public facilities and services to support existing and future residential development.		
Policy 2.	The City shall ensure that new residential development pays its fair share in financing public facilities and services and will pursue financial assistance. techniques to reduce the cost impact on the production of affordable housing.	The applicant will pay all appropriate development and impact fees for public facilities and services. There is no affordable housing component in the proposed project.
Policy 3.	The City shall ensure that all necessary public facilities and services shall be available prior to occupancy of residential units.	The City will ensure public services are in place prior to occupancy.
Policy 4.	The City shall require that park and recreational acquisitions and improvements keep pace with residential development.	Both the Westside and the SW Gateway project will include numerous parks and park/basins of various sizes consistent with the park to population ratios included in the General Plan.
Goal E. To encourage residential energy efficiency and reduce residential energy use.		
Policy 1.	The City shall require the use of energy conservation features in the design and construction of all new residential structures and shall promote the use of energy conservation and weatherization features in existing homes.	The City will work with the applicant to incorporate energy conservation features into the design and construction of the proposed project.
Policy 2.	The City shall require solar access in the design of all residential projects.	Solar access is not shown in current development plans.

Table IV.A-4 *continued*

POLICY	PROJECT RELATIONSHIP
Policy 3. The City shall pursue residential land use and site planning policies, and promote planning and design techniques that encourage reductions in residential energy consumption.	The City will work with the applicant to incorporate energy conservation features into the design and construction of the proposed project.

B. TRAFFIC AND CIRCULATION

This section describes the existing traffic, circulation and transit conditions on the project site and its vicinity, and provides an analysis of the potential impacts of the project. Information for this section is based on a traffic impact analysis prepared on the Lodi Annexation project by Fehr & Peers Associates in December 2005. The traffic report is contained in Appendix B of this EIR.

This analysis evaluates the traffic-related impacts of the Westside Project, the Southwest (SW) Gateway Project, as well as these projects combined with the Other Areas to be Annexed. The analysis discusses weekday morning and evening peak commuter hours. Traffic impacts are assessed at 33 critical intersections for the following scenarios.

- Existing Conditions
- Existing Conditions with Project (including the Westside project, SW Gateway project, and Other Areas to be Annexed)
- Cumulative with Project (including planned and approved projects plus the proposed project including the Westside project, SW Gateway project, and Other Areas to be Annexed)

The project's potential effects on pedestrian and bicycle facilities are also evaluated. Measures that would mitigate those impacts to a less-than-significant level are recommended.

1. Setting

The transportation-related context in which the Westside project, SW Gateway project, and Other Areas to be Annexed would be constructed and would operate is described below, beginning with a description of the study area and the street network that serves the project. Next, existing transit service, bicycle, and pedestrian facilities in the vicinity of the project site are described. Intersection and roadway levels of service are then defined and current conditions are summarized.

a. Study Area. The project sites are illustrated in Figure I-1 and are located west of the City of Lodi, in an unincorporated part of San Joaquin County. The intersections listed in Table IV.B-1 were identified, in consultation with City of Lodi staff, as intersections that could be significantly impacted by the proposed project. The location of these intersections, are shown in Fig-

Table IV.B-1: Study Intersections

Location	Control
1. Turner Road/Lower Sacramento Road – Woodhaven Lane	Signalized
2. Turner Road/SR 99 SB Ramps	Side-street stop-controlled
3. Turner Road/SR 99 NB Ramps	Side-street stop-controlled
4. Elm Street/Lower Sacramento Road	Signalized
5. Lodi Avenue – Sargent Road/Lower Sacramento Road	Signalized
6. Lodi Avenue/Ham Lane	Signalized
7. Tokay Street/Lower Sacramento Road	Signalized
8. Vine Street/Lower Sacramento Road	Signalized
9. Sunwest Market Place/Lower Sacramento Road	Signalized
10. Kettleman Lane/Davis Road	Side-street stop-controlled
11. Kettleman Lane/Westgate Drive	Signalized
12. Kettleman Lane/Lower Sacramento Road	Signalized
13. Kettleman Lane/Tienda Drive	Signalized
14. Kettleman Lane/Mills Avenue	Signalized
15. Kettleman Lane/Ham Lane	Signalized
16. Kettleman Lane/Crescent Avenue	Signalized
17. Kettleman Lane/Hutchins Street	Signalized
18. Kettleman Lane/Church Street	Signalized
19. Kettleman Lane/Stockton Street	Signalized
20. Kettleman Lane/Central Avenue	Signalized
21. Kettleman Lane/Cherokee Lane	Signalized
22. Kettleman Lane/SR 99 SB Ramps	Signalized
23. Kettleman Lane/SR 99 NB Ramps	Signalized
24. Harney Lane/Lower Sacramento Road	All-way stop-controlled
25. Harney Lane/Ham Lane	Side-street stop-controlled
26. Harney Lane/Hutchins Street – West Lane	Signalized
27. Harney Lane/Stockton Street	Signalized
28. Harney Lane/SR 99 SB Ramps	All-way stop-controlled
29. Harney Lane/SR 99 NB Ramps	Side-street stop-controlled
30. Armstrong Road/Davis Road	All-way stop-controlled
31. Armstrong Road/Lower Sacramento Road	Signalized
32. Armstrong Road/SR 99 SB Ramps	All-way stop-controlled
33. Armstrong Road/SR 99 NB Ramps	Side-street stop-controlled

Source: Fehr & Peers, 2006.

ure IV.B-1. Twenty-three of the study intersections are signalized, four intersections are all-way stop-controlled, and six are side-street stop-controlled.

b. Street Network. The main roadways serving the study area are discussed below.

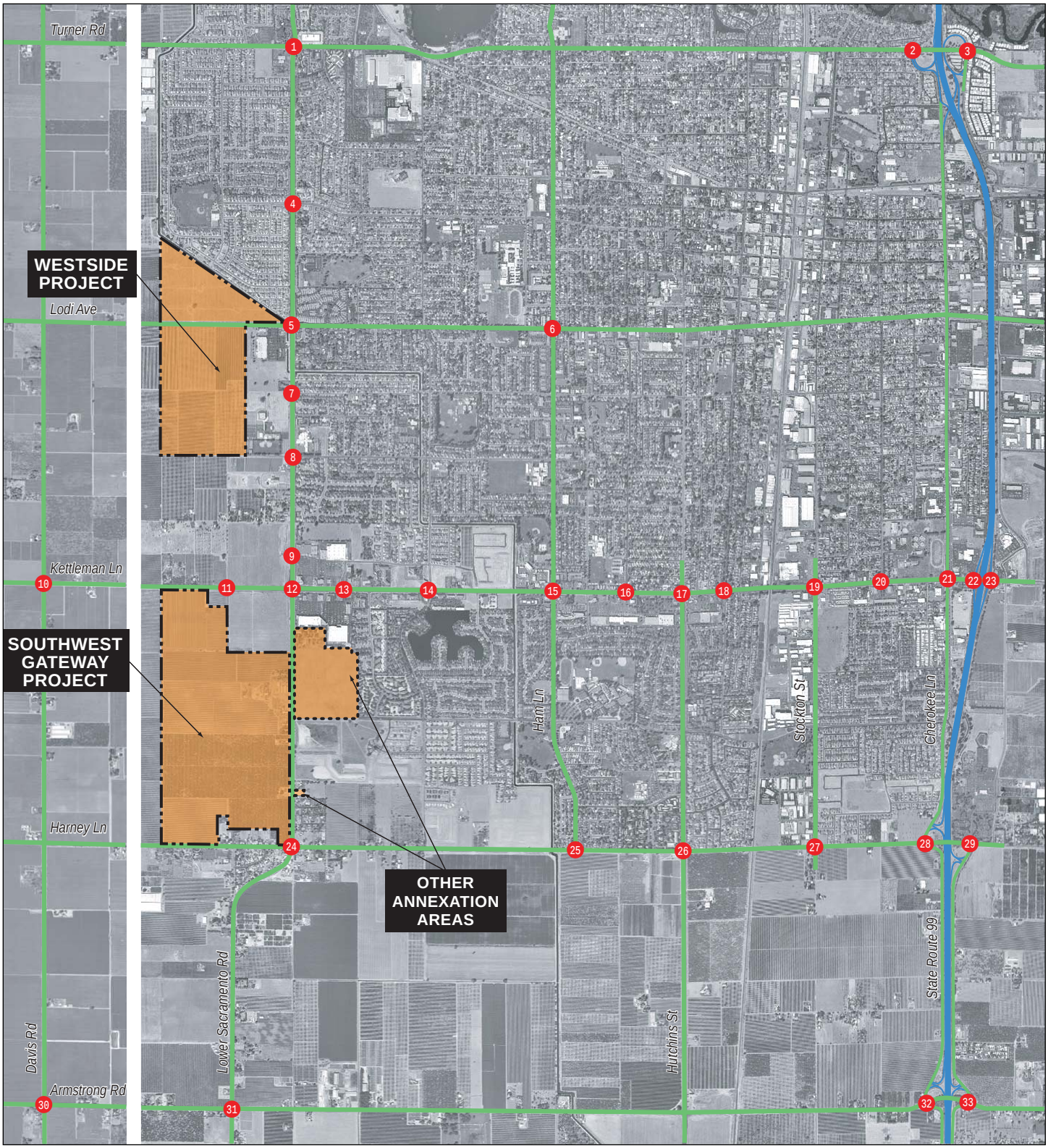
(1) Regional Roadway. The project sites are primarily served by three regional roadways, as described below.

- ***Interstate 5 (I-5)*** is a north-south interstate highway that extends from Southern California into Oregon and Washington. I-5 is located approximately 3.5 miles west of Davis road, which is in the study area. I-5 has six lanes in the immediate vicinity of the project site and four lanes north of State Route 12 (SR 12). Access to and from I-5 is provided by the SR 12 and Turner Road Interchanges.
- ***State Route 99 (SR 99)*** is a north-south limited-access highway that extends from Southern California to Sacramento. SR 99 has four lanes through the study area. Access to the study area is provided by interchanges at Turner Road, Kettleman Lane (SR 12), Victor Road, Harney Lane, and Armstrong Road.
- ***West Kettleman Lane/State Route 12 (SR 12)*** is a State highway centrally located in the study area that extends west toward Interstate 5, Rio Vista and Fairfield, and east past SR-99. Kettleman Lane has one lane in each direction west of Lower Sacramento Road. East of Lower Sacramento Road, Kettleman Lane widens to provide two lanes in each direction all the way to SR-99. Kettleman Lane from Lower Sacramento Road to Sylvan Lane has three lanes in the westbound direction and two lanes in the eastbound direction.
- ***Lower Sacramento Road*** is a north-south four-lane arterial located immediately east of the annexation sites. South of Harney Lane, Lower Sacramento Road is a two-lane facility.

(2) Local Roadways. Descriptions of the local roadways that serve the project site are provided below.

- ***Turner Road*** is an east-west arterial that extends from I-5 to the west to SR-99 to the east. It is a four-lane facility that is located along the northern edge of the study area.
- ***Harney Lane*** is an east-west roadway that extends from Devries Road in the west past SR 99 to the east. It is a two-lane facility with a turn lane along various segments that is located approximately one mile south of Kettleman Lane.
- ***Armstrong Road*** is an east-west roadway that extends from Devries Road to the west past SR 99 to the east. It is a two-lane facility that is located along the southern boundary of the study area.
- ***Ham Lane*** is a north-south roadway located approximately one mile east of Lower Sacramento Road. It is a four-lane facility that extends from Turner Road to Harney Lane.

c. Existing Transit System. The Lodi Grapeline provides transit service in the City of Lodi, and the San Joaquin Regional Transit District provides transit service within the City of Stockton and unincorporated San Joaquin County. Both providers offer fixed-route and Dial-A-Ride services. Regional transit service between Lodi, Galt, and Sacramento is provided by South County Transit (SCT/Link).



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25 STUDY INTERSECTIONS

WESTSIDE & SOUTHWEST GATEWAY PROJECT AREAS

OTHER ANNEXATION AREAS

N

0 1500 3000
FEET

FIGURE IV.B-1

Lodi Annexation EIR
Study Intersections

SOURCE: FEHR & PEERS, 2005

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The Lodi Grapeline operates five local and three express bus routes within the City of Lodi. Grapeline routes 1, 2 and 4 provide service to the western portion of Lodi near the project sites. San Joaquin Bus Route 23 provides service from Stockton to the Lodi Transportation Station and operates along Lower Sacramento Road and Kettleman Lane in the southwestern portion of Lodi.

(1) Bicycle and Pedestrian System. Bicycle facilities include bicycle paths (Class I facilities), bicycle lanes (Class II facilities), and bicycle routes (Class III facilities). Bicycle paths are paved trails that are separated from the roadways. Bicycle lanes are lanes on roadways designated for use by bicycles by striping, pavement legends, and signs. Bicycle routes are roadways that are designated for bicycle use with signs and no designated lanes.

Bicycle lanes are provided on:

- Kettleman Lane between Lower Sacramento Road and Cherokee Lane
- Lower Sacramento Road between Harney Lane and Turner Road
- Hutchins Street between Harney Lane and Lodi Avenue
- Elm Street between Evergreen Drive and Hutchins Street
- Several city collectors also have bicycle lanes or routes

Pedestrian facilities include sidewalks, pedestrian paths, crosswalks, pedestrian signals, and other pedestrian amenities. There are no existing sidewalks on various segments of Kettleman Lane and Lower Sacramento Road. There are no sidewalks provided along Kettleman Lane west of Lower Sacramento Road. There are continuous sidewalks along Kettleman Lane between Tienda Drive and Lower Sacramento Road. There are no sidewalks on the west side of Lower Sacramento Road between Vine Street and north of Taylor Road, and south of Kettleman Lane in the undeveloped areas. Crosswalks and pedestrian signals with push buttons are provided at all signalized study intersections.

d. Existing Conditions. Existing conditions represent traffic conditions prior to completion of the proposed development. Traffic volumes for Existing Conditions include volumes from recent traffic counts conducted by the City of Lodi and the consultant team.

(1) Existing Intersection Operations. Table IV.B-2 presents the intersection operations under Existing Conditions. With current traffic volumes several intersections operate at levels that are inconsistent with the applicable significance criteria. They include:

- Turner Road/SR 99 SB Ramps operates at LOS E during the PM peak hour
- Turner Road/SR 99 NB Ramps operates at LOS D during the PM peak hour
- Lodi Ave/Ham Lane operates at LOS D during the PM peak hour
- Kettleman Lane/Davis Road operates at LOS D during the AM peak hour and LOS F during the PM peak hour
- Kettleman Lane/Ham Lane operates at LOS D during the PM peak hour
- Kettleman Lane/Church Street operates at LOS D during the PM peak hour

Table IV.B-2: Existing Levels of Service

Intersection	Intersection Control	Existing Conditions			
		AM Peak Hour		PM Peak Hour	
		Delay[a]	LOS	Delay[a]	LOS
1. Turner Road/Lower Sacramento Road	Signalized	31.5 sec	C	31.9 sec	C
2. Turner Road/SR 99 SB Ramps	Side-Street Stop Control	5.0 sec (24.7 sec)	A (C)	7.1 sec (47.8 sec)	A (E)
3. Turner Road/SR 99 NB Ramps	Side-Street Stop Control	3.5 sec (16.1 sec)	A (C)	5.8 sec (28.1 sec)	A (D)
4. Elm Street/Lower Sacramento Road	Signalized	22.2 sec	C	22.8 sec	C
5. Lodi Avenue/Lower Sacramento Road	Signalized	21.9 sec	C	24.1 sec	C
6. Lodi Avenue/Ham Lane	Signalized	32.7 sec	C	39.4 sec	D
7. Tokay Street/Lower Sacramento Road	Signalized	7.1 sec	A	8.7 sec	A
8. Vine Street/Lower Sacramento Road	Signalized	12.1 sec	B	11.8 sec	B
9. Sunwest Market Place/ Lower Sacramento Road	Signalized	6.9 sec	A	9.9 sec	A
10. Kettleman Lane/Davis Road	Side-Street Stop Control	7.6 sec (32.4 sec)	A (D)	30.8 sec (>120.0 sec)	D (F)
11. Kettleman Lane/Westgate Dr	Signalized	2.1 sec	A	2.3 sec	A
12. Kettleman Lane/Lower Sacramento Road	Signalized	17.7 sec	B	21.4 sec	C
13. Kettleman Lane/Tienda Dr	Signalized	14.7 sec	B	18.1 sec	B
14. Kettleman Lane/Mills Avenue	Signalized	24.9 sec	C	30.0 sec	C
15. Kettleman Lane/Ham Lane	Signalized	33.5 sec	C	42.4 sec	D
16. Kettleman Lane/Crescent Avenue	Signalized	22.3 sec	C	29.6 sec	C
17. Kettleman Lane/Hutchins Street	Signalized	26.5 sec	C	32.3 sec	C
18. Kettleman Lane/Church Street	Signalized	21.5 sec	C	36.1 sec	D
19. Kettleman Lane/Stockton Street	Signalized	29.3 sec	C	31.7 sec	C
20. Kettleman Lane/Central Avenue	Signalized	9.3 sec	A	19.4 sec	B
21. Kettleman Lane/Cherokee Lane	Signalized	21.9 sec	C	34.2 sec	C
22. Kettleman Lane/SR 99 SB Ramps	Signalized	12.2 sec	B	16.7 sec	B
23. Kettleman Lane/SR 99 NB Ramps	Signalized	14.9 sec	B	19.7 sec	B
24. Harney Lane/Lower Sacramento Road	All-Way Stop Control	29.2 sec	D	49.0 sec	E
25. Harney Lane/Ham Lane	Side-Street Stop Control	8.0 sec (28.9 sec)	A (D)	4.4 sec (19.6 sec)	A (C)
26. Harney Lane/Hutchins Street	Signalized	46.9 sec	D	41.3 sec	D
27. Harney Lane/Stockton Street	Signalized	9.0 sec	A	10.8 sec	B
28. Harney Lane/SR 99 SB Ramps	All -Way Stop Control	27.4 sec	D	38.6 sec	E
29. Harney Lane/SR 99 NB Ramps	Side-Street Stop Control	5.6 sec (15.1 sec)	A (C)	26.2 sec (67.5 sec)	D (F)
30. Armstrong Lane/Davis Road	All -Way Stop Control	8.6 sec	A	9.2 sec	A
31. Armstrong Lane/Lower Sacramento Road	Signalized	15.3 sec	B	16.9 sec	B
32. Armstrong Lane/SR 99 SB Ramps	All -Way Stop Control	8.9 sec	A	8.8 sec	A
33. Armstrong Lane/SR 99 NB Ramps	Side Street Stop Control	6.8 sec (12.7 sec)	A (B)	7.5 sec (13.0 sec)	A (B)

[a] For unsignalized intersections the overall intersection delay and level of service are shown. The worst approach delay and level of service are also shown in parenthesis.

Source: Fehr & Peers, 2006.

- Harney Lane/Lower Sacramento Road operates at LOS D during the AM peak hour and LOS E during the PM peak hour
- Harney Lane/Ham Lane operates at LOS D during the AM peak hour
- Harney Lane/Hutchins Street operates at LOS D during the AM and PM peak hours
- Harney Lane/SR 99 SB Ramps operate at LOS D during the AM peak hour and LOS E during the PM peak hour
- Harney Lane/SR 99 NB Ramps operate at LOS F during the PM peak hour

Signal warrant analysis of existing conditions shows that several of the study area unsignalized intersections meet the Caltrans Peak Hour Signal warrant. The following intersections meet the warrant during at least one peak hour:

- Turner Road/SR 99 SB Ramps – AM peak hour
- Turner Road/SR 99 NB Ramps – PM peak hour
- Kettleman Lane/Davis Road – PM peak hour
- Harney Lane/Lower Sacramento Road – AM and PM peak hours
- Harney Lane/SR 99 SB Ramps – PM peak hour
- Harney Lane/SR 99 NB Ramps – PM peak hour

(2) Planned Circulation Improvements. Under Existing with Project Conditions, several improvements are planned for the roadway network. The following geometric improvements were assumed to be incorporated with the addition of the annexation areas.

- ***Kettleman Lane/Westgate Drive*** – A shared through-right lane will be added to the eastbound approach resulting in a left-turn lane, two through lanes and a shared through-right lane. A left-turn lane will be added to the westbound approach and the existing right turn lane will be converted into a shared though-right lane resulting in a left-turn lane, two through lanes and a shred through-right lane. A northbound approach will be added with a left-turn lane, a through lane and a right-turn lane. A through lane will be added to the southbound approach resulting in a left-turn lane, a through lane, and right-turn lane.
- ***Kettleman Lane/Lower Sacramento Road*** – On the eastbound approach a third through lane and a right-turn lane will be added resulting in two left-turn lanes, three through lanes and a right-turn lane. A third through lane will be added to the westbound approach resulting in two left-turn lanes, three through lanes and a right-turn lane. A third through lane will be added to the southbound approach resulting in two left-turn lanes, three through lanes and a right-turn lane.
- ***Kettleman Lane/Mills Avenue*** – A through lane will be added to the eastbound approach resulting in one left-turn lane, three through lanes and a right-turn lane.
- ***Harney Lane/Lower Sacramento Road*** – On the eastbound approach an exclusive left-turn lane will be added resulting in a left-turn lane and a shared through-right lane. A left-turn lane and a shared through-right lane will be added to the westbound approach. A left-turn lane and a second through lane will be added to the northbound approach resulting in a left-turn lane, two through lanes and a right-turn lane. The southbound approach will gain a shared through-right lane

resulting in one left-turn lane, a through lane and a shared through-right lane. In addition, a traffic signal is under construction at this location.

e. Intersection Level of Service Operations. The intersections within the roadway system are a key component of the roadway system. These are the "nodes" and connect each segment of the system. Intersections are usually the critical elements of the roadway system in assuring adequate capacity, minimizing delays, maximizing safety, and minimizing level of service impacts. Therefore, the analysis of project impacts on the roadway system focuses on intersection operations.

The operating condition of an intersection is typically described in terms of "level of service." Level of service is a quantitative measurement of the effect of various factors on traffic operating conditions, including travel speed, travel time, delay, freedom to maneuver, safety, driving comfort, and convenience. Level of service is measured on a qualitative scale ranging from level of service (LOS) A (the best) to LOS F (the worst). Empirical level of service criteria and methods of calculation have been developed by the Transportation Research Board (TRB) and are documented in the *2000 Highway Capacity Manual (HCM)*. These level of service definitions and calculation methods are the prevailing measurement standard used throughout the United Stated and are used in this study. The use of the 2000 HCM methodology is consistent with Caltrans guidelines.

The level of service at signalized and all-way stop-controlled intersections is based on the average control delay for all vehicles passing though the intersection. The 2000 HCM specifies that the level of service for side-street stop-controlled intersections be based on the delay for vehicles on the side-street approach only. Table IV.B-3 shows the average control delay range for each level of service category for signalized and unsignalized intersections.

Twenty-three of the study intersections are signalized, four intersections are all-way stop-controlled and six are side-street stop-controlled.

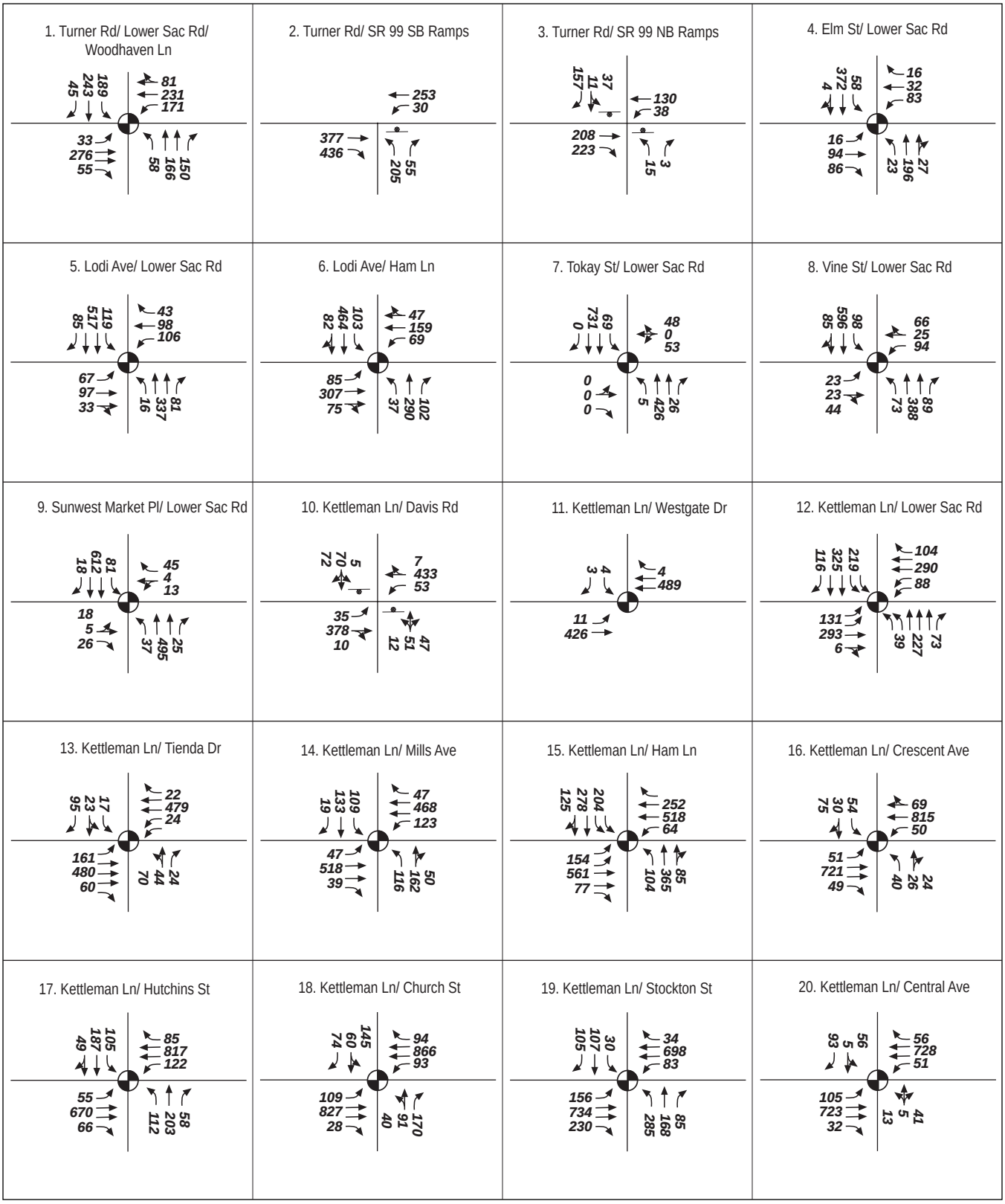
Figures IV.B-2a, IV.B-2b, IV.B-3a, and IV.B-3b show the AM and PM peak hour traffic volumes and lane configurations. Table IV.B-2 shows the existing AM and PM peak hour average delay and level of service at each study intersection. The level of service for side-street stop-controlled intersections is determined by the stop-controlled approach with greater delay (in cases where the intersection has two minor streets).

2. Environmental Analysis

This section of the environmental document contains two subsections:

- A discussion of significance criteria used to determine whether a project's effects would be considered significant.
- A discussion of the projects impacts and mitigation measures.

a. Significance Criteria. Significance criteria is provided for roadway, transit, bike and pedestrian facilities, and parking.



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Intersection Geometry

29 Peak Hour Volume

Stop Control

Signalized Intersection

FIGURE IV.B-2a

Lodi Annexation EIR

Existing Traffic Volumes

AM Peak

SOURCE: FEHR & PEERS, 2005

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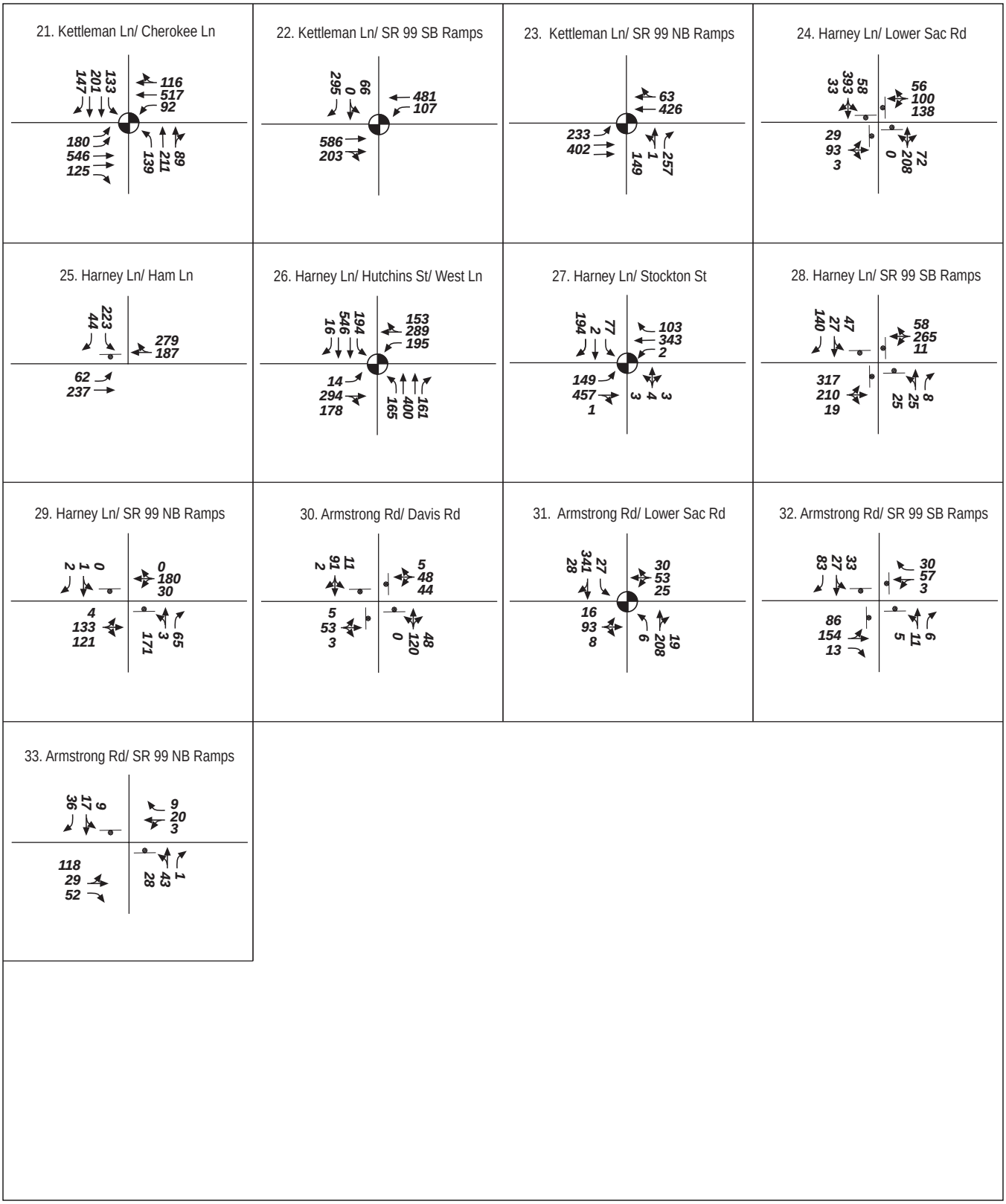

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- Intersection Geometry
- 29 Peak Hour Volume
- Stop Control
- Signalized Intersection

FIGURE IV.B-2b

Lodi Annexation EIR

Existing Traffic Volumes

AM Peak

SOURCE: FEHR & PEERS, 2005

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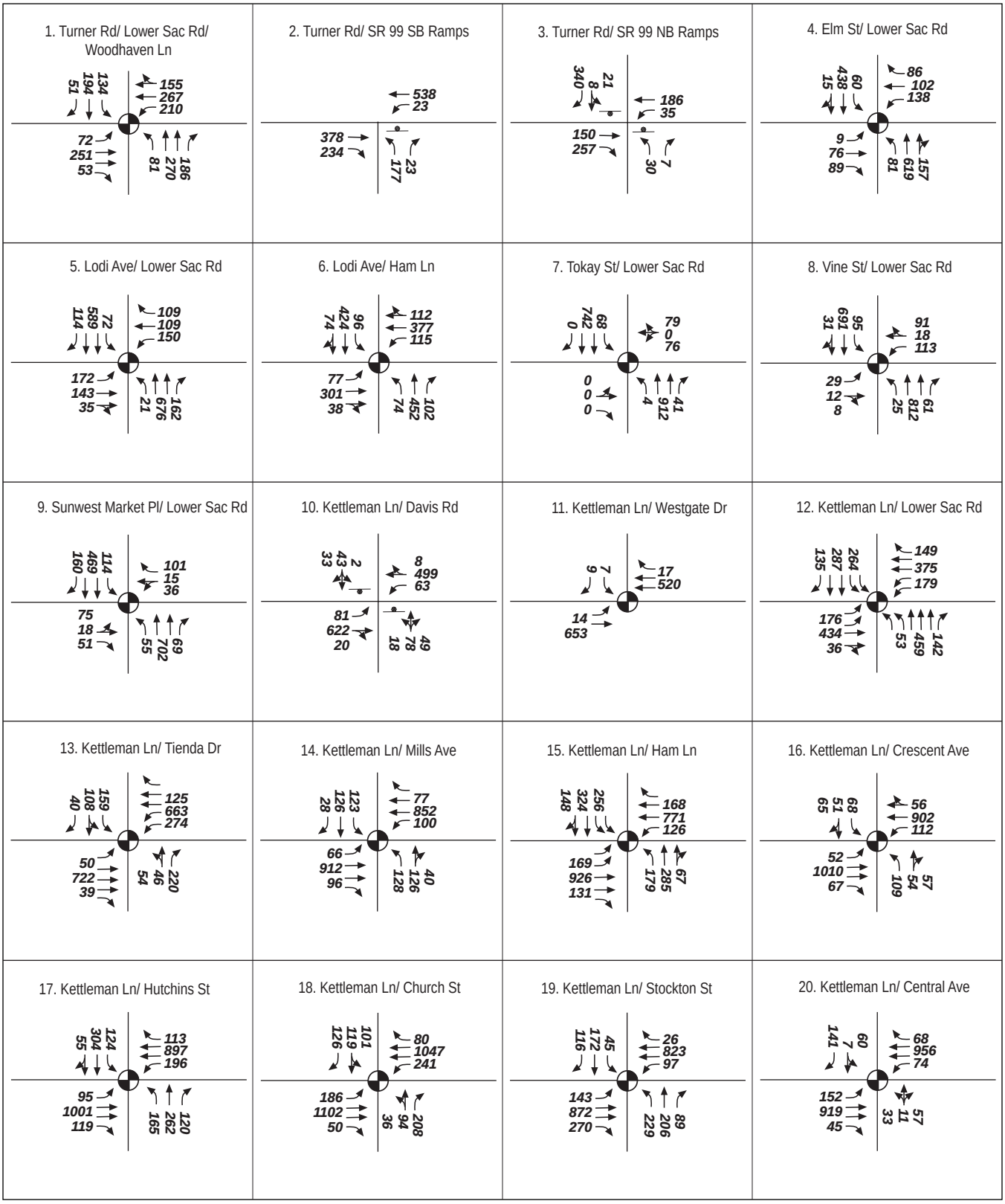

LSA

LEGEND

- Intersection Geometry
- 29 Peak Hour Volume
- Stop Control
- Signalized Intersection

FIGURE IV.B-3a

Lodi Annexation EIR

Existing Traffic Volumes

PM Peak

SOURCE: FEHR & PEERS, 2005

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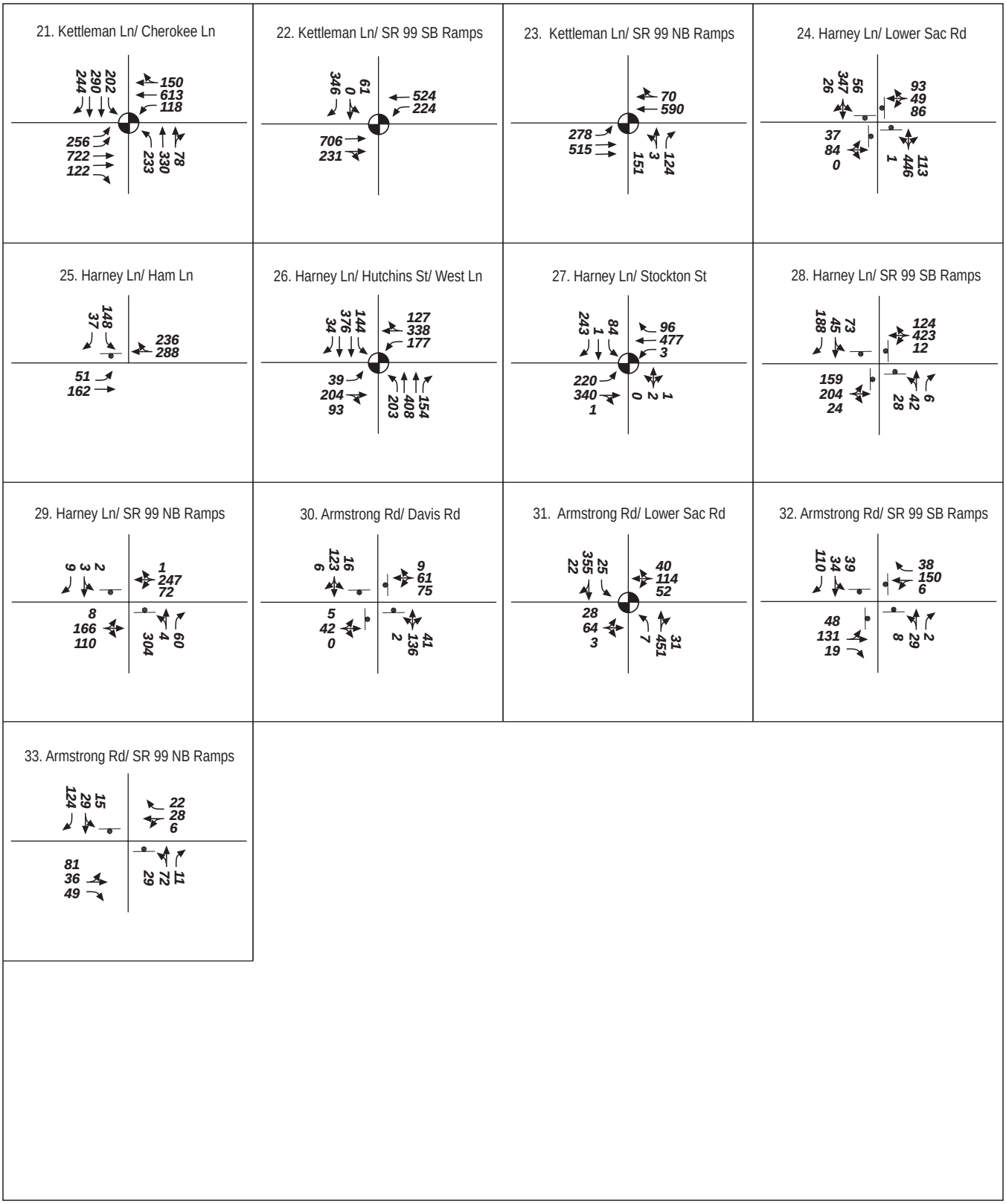

LSA

LEGEND

Intersection Geometry

29 Peak Hour Volume

Stop Control

Signalized Intersection

FIGURE IV.B-3b

Lodi Annexation EIR

Existing Traffic Volumes

PM Peak

SOURCE: FEHR & PEERS, 2005

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Table IV.B-3: Intersection Level of Service Criteria

Level of Service	Average Stopped Delay (Seconds/Vehicle)	Description
Signalized Intersections		
A	< 10	Very low delay. Most vehicles do not stop.
B	10 to 20	Generally good progression of vehicles. Slight delays.
C	20 to 35	Fair progression. Increased number of stopped vehicles.
D	35 to 55	Noticeable congestion. Large portion of vehicles stopped.
E	55 to 80	Poor progression. High delays and frequent cycle failure.
F	> 80	Oversaturation. Forced flow. Extensive queuing.
Unsignalized Intersections		
A	< 10	Little or no conflicting traffic for minor street approach.
B	10 to 15	Minor street approach begins to notice absence of available gaps.
C	15 to 25	Minor street approach begins experiencing delay for available gaps.
D	25 to 35	Minor street approach experiences queuing due to a reduction in available gaps.
E	35 to 50	Extensive minor street queuing due to insufficient gaps.
F	> 50	Insufficient gaps of suitable size to allow minor street traffic demand to cross safely through a major traffic stream.

Source: Highway Capacity Manual, Transportation Research Board, 2000.

The project would be considered to result in a significant traffic and circulation impact if it would:

- **Roadways**
  - Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections).

As noted above, Goal A, Policy 1 of the City's General Plan Circulation Elements states: "The City shall strive to maintain Level of Service C on local streets and at intersections. The acceptable level of service goal will be consistent with the financial resources available and the limits of technical feasibility." Based on a determination by City staff in conjunction with the Vintner's Square Shopping Center EIR (certified May 2003), West Kettleman Lane is not considered to be a "local street." Rather, it is considered to be a major arterial highway providing regional east-west access between the City of Lodi and San Joaquin County.[1]

The following is specified for Caltrans facilities: "The Department required level of service (LOS) 'C' or better at State-owned facilities, including intersection (see Appendix 'C-3' of the TIS guide). If an intersection is currently below LOS 'C,' any increase in delay from project-generated traffic must be analyzed and mitigated. The level of service for operating State highway facilities is based on measurements of effectiveness (MOE) (see Appendix 'C-2' of the Guide). If an existing State highway facility is operating at less than this target level of service, the existing MOE should be maintained.

[1] Vintner's Square Draft EIR, p. 3.2-11.

- **Transit Facilities**
  - Create the demand for public transit service above that which is provided, or planned to be provided.
  - Disrupt or interfere with existing or planned public transit services or facilities.
  - Create an inconsistency with policies concerning transit systems set forth in the General Plan for the City of Lodi.
- **Bicycle and Pedestrian Facilities**
  - Disrupt or interfere with existing or planned bicycle or pedestrian facilities.
  - Create an unmet need for bicycle or pedestrian facilities.
  - Create an inconsistency with policies related to bicycle or pedestrian systems in the General Plan of the City of Lodi.
- **Parking**
  - Result in inadequate parking capacity.

b. Trip Generation. The amount of traffic generated by the Westside Project, SW Gateway Project, and development of Other Areas to be Annexed was estimated using appropriate trip generation rates from *Trip Generation*[2] for the various residential land uses proposed for the project. Trip generation rates for "Single Family Residential" and "Apartment" were applied to the unit total for the appropriate housing unit densities.

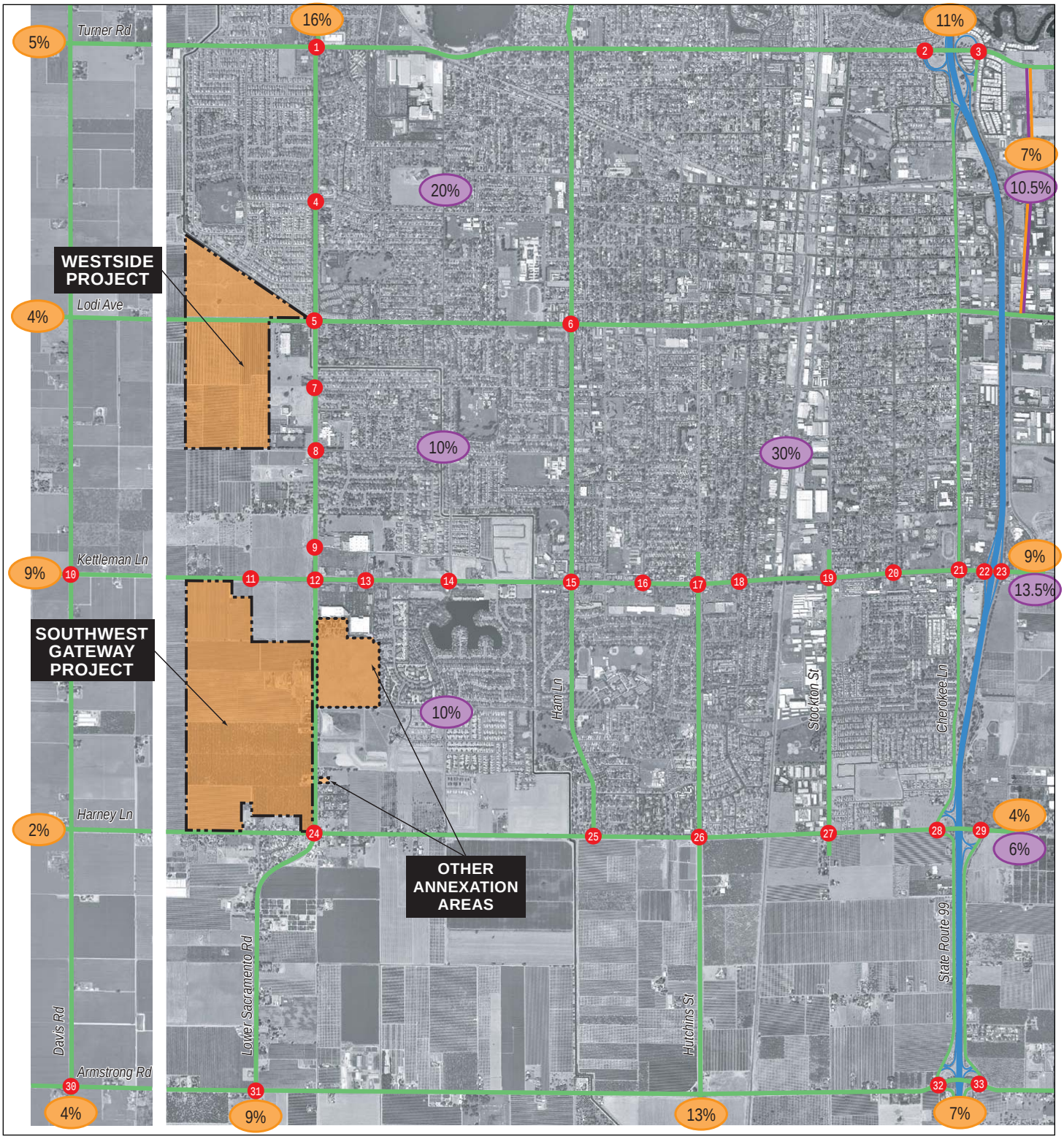
Table IV.B-4 presents the trip generation estimates for the proposed project. Since the project site is predominantly residential areas, all trip generation was assumed to be "new' trips added to the network. No pass-by or diverted link trips were calculated.

The Westside project is estimated to generate 565 new AM peak hour trips (136 inbound and 429 outbound) and 745 new PM peak hour trips (473 inbound and 272 outbound). The SW Gateway project is estimated to generate 1,071 new AM peak hour trips (259 inbound and 812 outbound) and 1,420 new PM peak hour trips (899 inbound and 521 outbound). The Other Areas to be Annexed would generate 751 new AM peak hour trips (337 inbound and 414 outbound) and 392 new PM peak hour trips (237 inbound and 135 outbound).

(1) Trip Distribution and Assignment. The expected distribution of project trips was based on San Joaquin Council of Governments (SJCOG) Travel Demand Model and existing travel patterns thought the study area. The trips generated by the project were divided into two assignments sets: trips internal to the City of Lodi (55 percent) and trips external to the City of Lodi (45 percent). The new peak-hour trips generated by the annexed areas were then assigned to the roadway system based on the trip distributions established for each assignment set. The trip distributions are shown in Figure IV.B-4.

(2) Existing Conditions With All Developments Intersection Operations. The proposed roadway network was analyzed with the addition of all proposed developments. "All developments," for purposes of transportation and circulation analysis, includes the Westside Annex, the Southwest Gateway Annex, and the following additional components:

[2] Institute of Transportation Engineers, 7th Edition, 2003.



LSA

FIGURE IV.B-4

LEGEND

- 25 STUDY INTERSECTIONS
- 7% EXTERNAL DISTRIBUTION
- 10.5% INTERNAL (TO LODI) DISTRIBUTION
- WESTSIDE & SOUTHWEST GATEWAY PROJECT AREAS
- OTHER ANNEXATION AREAS

N

0 1500 3000
FEET

Lodi Annexation EIR
Trip Distribution

SOURCE: FEHR & PEERS, 2005

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Table IV.B-4: Trip Generation Estimates

Land Use	Units[a]	AM Peak Hour				PM Peak Hour			
		Rate	In	Out	Total	Rate	In	Out	Total
Westside Project									
Low/Medium Density Residential[b]	606	0.75	114	341	455	1.01	386	226	612
High Density Residential[c]	215	0.51	22	88	110	0.62	87	46	133
Total	***821***		***136***	***429***	***565***		***473***	***272***	***745***
Internal Trips (55%)			*75*	*236*	*311*		*260*	*150*	*410*
External Trips (45%)			*61*	*193*	*254*		*213*	*122*	*335*
SW Gateway Project									
Low/Medium Density Residential	1,205	0.75	226	678	904	1.01	767	450	1,217
High Density Residential	328	0.51	33	134	167	0.62	132	71	203
Total	***1,533***		***259***	***812***	***1071***		***899***	***521***	***1,420***
Internal Trips (55%)			*143*	*447*	*589*		*494*	*287*	*781*
External Trips (45%)			*116*	*365*	*482*		*405*	*234*	*639*
Other Annexation Components									
Residential Areas[b]	335	0.73	61	183	244	0.95	200	118	318
Internal Trips (55%)			*34*	*101*	*134*		*110*	*65*	*175*
External Trips (45%)			*27*	*82*	*110*		*90*	*53*	*143*
Aquatic Center[d]	124	40%	25	25	50	60%	37	37	74
Internal Trips (55%)			*14*	*14*	*28*		*20*	*20*	*40*
External Trips (45%)			*11*	*11*	*22*		*17*	*17*	*34*
Westside School[e]	850	0.32	147	121	268	-	-	-	-
Southwest Gateway School[e]	900	0.21	104	85	189	-	-	-	-
Other Developments Total			***337***	***414***	***751***		***237***	***155***	***392***

[a] The number of units shown here are slightly greater than what is described in Chapter III, Project Description, as they were based on an earlier concept plan. The traffic analysis was not revised to reflect the new number of units since the number is now lower.
[b] Single-Family Residential Land Use was assumed.
[c] Apartment Land Use was assumed.
[d] Trip generation based on parking turn over and 50/50 split for in and out trips. A 40 percent turnover rate was assumed during the AM peak hour and a 60 percent turnover rate was assumed during the PM peak hour.
[e] Elementary School Land Use was assumed. It was assumed that school traffic would only impact the AM peak hour. For the Westside School it was assumed that 25 percent of the students would live within the Westside Annex. For the Southwest Gateway School is was assumed that 50 percent of the students would live within the Southwest Gateway Annex. These trips were assumed to not impact the study intersections.

Source: Fehr & Peers, 2006.

- **Other Areas to be Annexed**
  47.79 acres at 7 units per acres, or 335 units
- **Aquatic Center**
  3.95 acres (net); 3 pools; 124 parking spaces
- **Parks and Park Basins**
  Westside - 20.41 acres of park and park/basins
  Southwest Gateway - 27.4 acres of parks and park/basins
- **Schools**
  Westside school site:
  8.85 acres (net)
  56,716 - 59,121 square feet (school facility)
  K-6 students
  806-876 students
  30 - 38 teachers

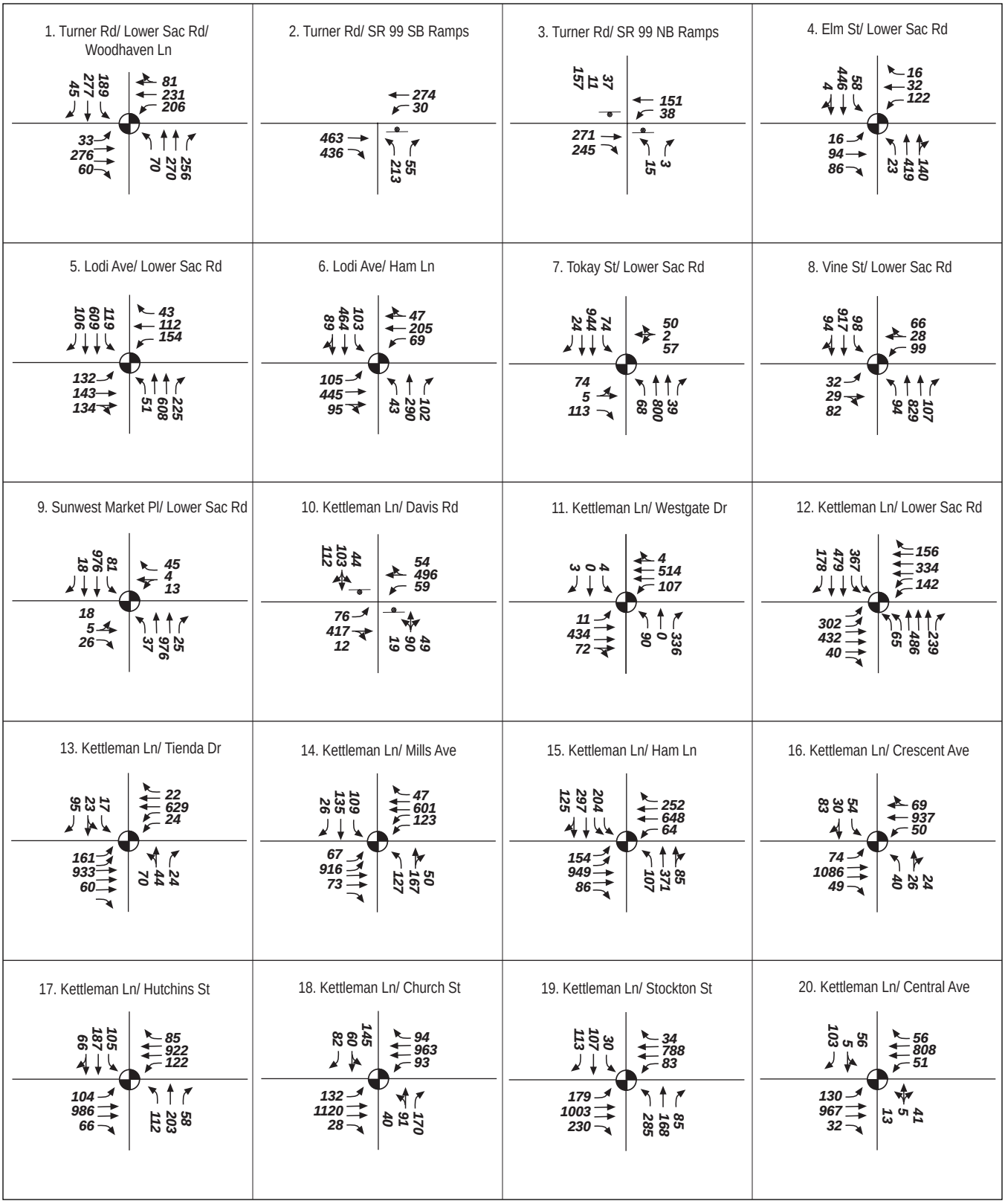
  SW Gateway school sites:
  14.4 acres
  Approx. 69,000 square feet (school facility)
  K-8
  Approx. 900 students

Existing with Project Intersection Operations. Figures IV.B-5a and -5b and Figures IV.B-6a and -6b show the intersection operations under Existing with Project Conditions. Table IV.B-5 shows the Existing Conditions with All Proposed Development Levels of Service. As shown in Table IV.B-5, the project would significantly impact 16 of the 33 intersections that were analyzed. An impact is considered significant if the addition of the project traffic would cause an intersection to become inconsistent with the applicable significance criteria for the intersection, including exacerbating an existing LOS D, E or F condition as well as the degradation of an intersection to LOS D or worse..

<u>Impact TRANS-1</u>: Implementation of the proposed project would significantly impact the level of service at 16 intersections under the Existing with Project scenario. (S)

The 16 intersections that would be significantly impacted are listed below.

- Turner Road/Lower Sacramento Road – Woodhaven Lane (#1)
- Turner Road/SR 99 SB Ramps (#2)
- Turner Road/SR 99 NB Ramps (#3)
- Lodi Avenue – Sargent Road/Lower Sacramento Road (#5)
- Lodi Avenue/Ham Lane (#6)
- Kettleman Lane/Davis Road (#10)
- Kettleman Lane/Ham Lane (#15)
- Kettleman Lane/Hutchins Street (#17)
- Kettleman Lane/Church Street (#18)
- Kettleman Lane/Stockton Street (#19)
- Kettleman Lane/Cherokee Lane (#21)
- Harney Lane/Lower Sacramento Road (#24)



LSA

LEGEND

- Intersection Geometry
- 29 Peak Hour Volume
- Stop Control
- Signalized Intersection

FIGURE IV.B-5a

Lodi Annexation EIR

Existing with Project Conditions (AM)

SOURCE: FEHR & PEHRS, 2005

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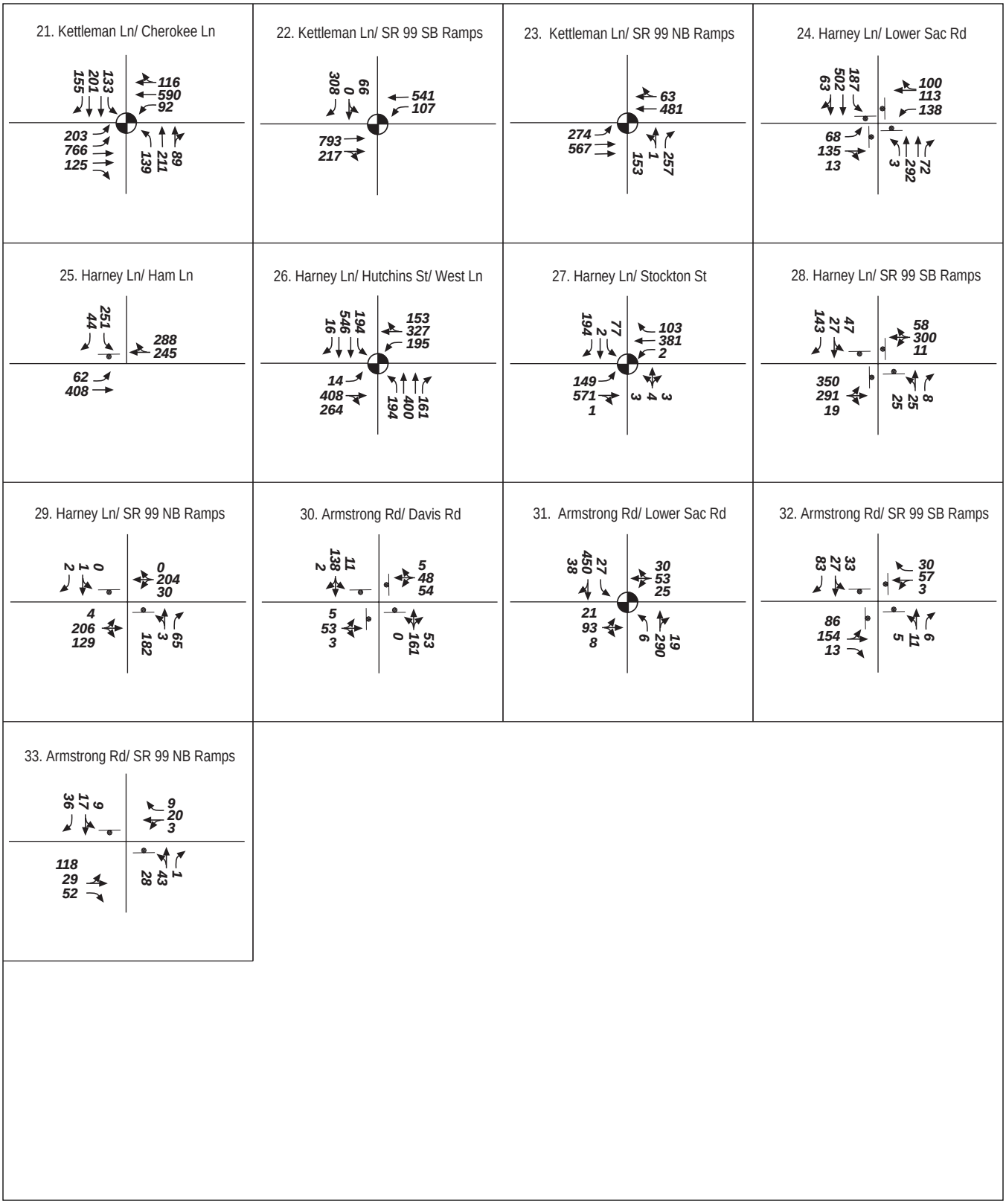

LSA

LEGEND

Intersection Geometry

29 Peak Hour Volume

Stop Control

Signalized Intersection

FIGURE IV.B-5b

Lodi Annexation EIR

Existing with Project Conditions (AM)

SOURCE: FEHR & PEHRS, 2005

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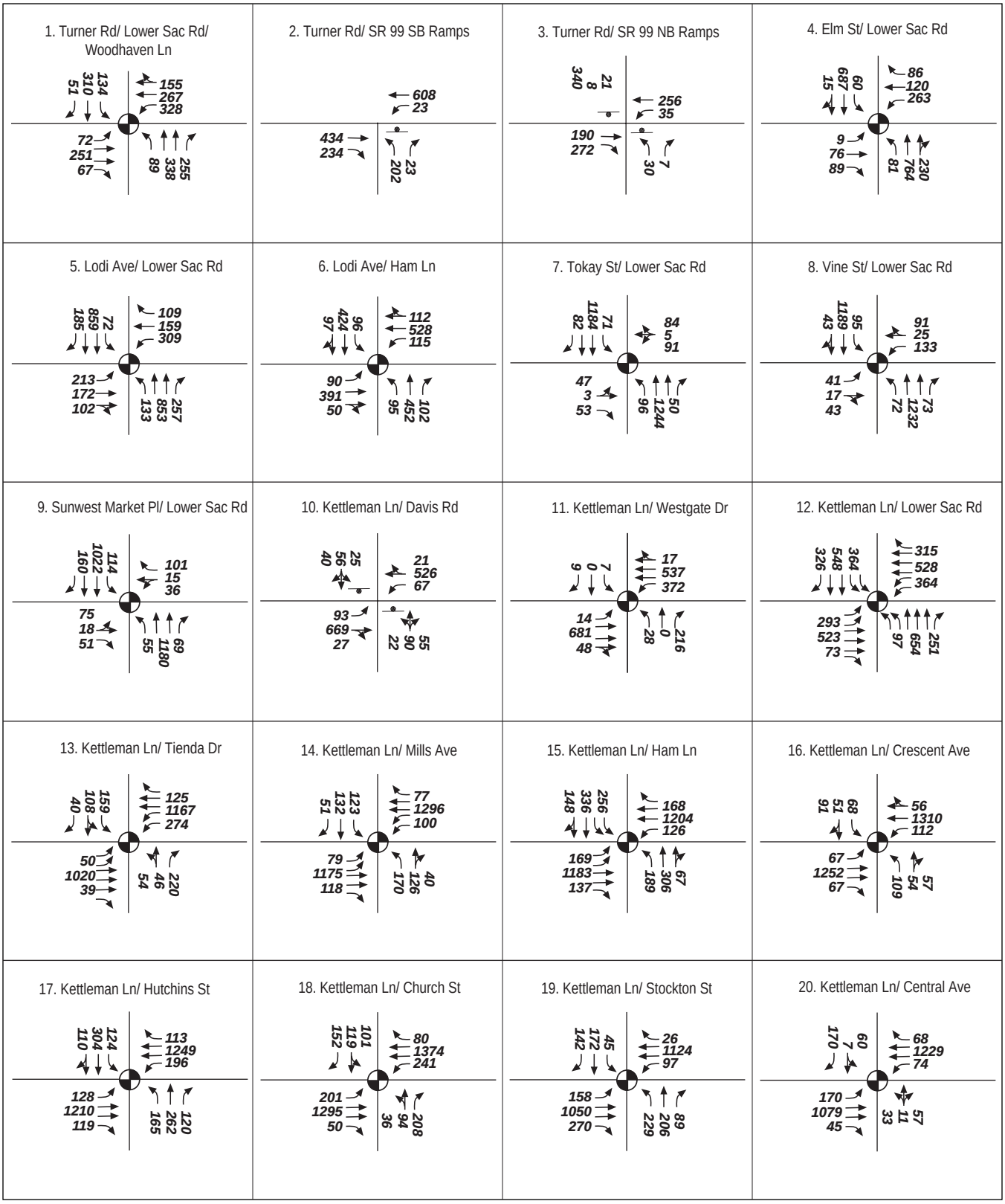

LSA

LEGEND

Intersection Geometry

29 Peak Hour Volume

Stop Control

Signalized Intersection

FIGURE IV.B-6a

Lodi Annexation EIR

Existing with Project Conditions (PM)

SOURCE: FEHR & PEERS, 2005

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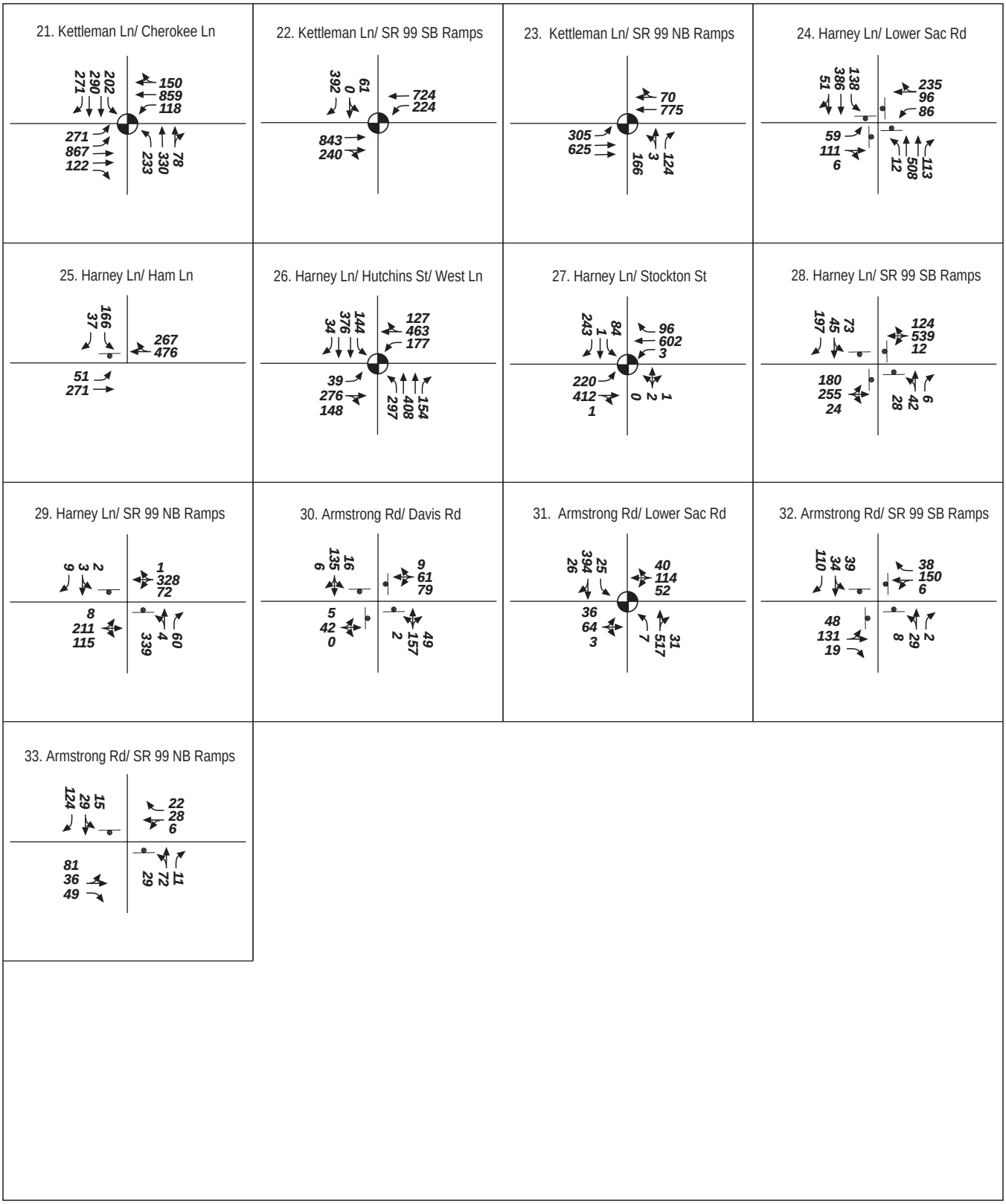

LSA

LEGEND

Intersection Geometry

29 Peak Hour Volume

Stop Control

Signalized Intersection

FIGURE IV.B-6b

Lodi Annexation EIR

Existing with Project Conditions (PM)

SOURCE: FEHR & PEERS, 2005

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Table IV.B-5: Existing Conditions with Project

#	Intersection	Intersection Control	Existing				Existing with Project			
			AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
			Delay[a]	LOS	Delay[a]	LOS	Delay[a]	LOS	Delay[a]	LOS
1	Turner Rd/Lower Sacramento Road – Woodhaven Lane	Signalized	31.5 sec	C	31.9 sec	C	**35.6 sec**	**D**	**41.8 sec**	**D**
2	Turner Rd/SR 99 SB Ramps	Side-Street Stop Control	5.0 sec (24.7 sec)	A (C)	7.1 sec **(47.8 sec)**	A **(E)**	6.7 sec **(35.6 sec)**	A **(E)**	16.1 sec **(107.9 sec)**	B **(F)**
3	Turner Road/SR 99 NB Ramps	Side-Street Stop Control	3.5 sec (16.1 sec)	A (C)	5.8 sec **(28.1 sec)**	A **(D)**	3.2 sec (17.9 sec)	A (C)	6.0 sec **(37.2 sec)**	A **(E)**
4	Elm Street/Lower Sacramento Road	Signalized	22.2 sec	C	22.8 sec	C	20.3 sec	C	26.4 sec	C
5	Lodi Ave. – Sargent Rd./Lower Sacramento Rd	Signalized	21.9 sec	C	24.1 sec	C	25.8 sec	C	**46.4 sec**	**D**
6	Lodi Avenue/Ham Lane	Signalized	32.7 sec	C	**39.4 sec**	**D**	33.0 sec	C	**39.9 sec**	**D**
7	Tokay Street/Lower Sacramento Road	Signalized	7.1 sec	A	8.7 sec	A	11.1 sec	B	13.9 sec	B
8	Vine Street/Lower Sacramento Road	Signalized	12.1 sec	B	11.8 sec	B	14.8 sec	B	15.5 sec	B
9	Sunwest Market Place/Lower Sacramento Road	Signalized	6.9 sec	A	9.9 sec	A	7.3 sec	A	11.6 sec	B
10	Kettleman Lane/ Davis Road	Side-Street Stop Control	7.6 sec **(32.4 sec)**	A **(D)**	30.8 sec **(>120.0 sec)**	D **(F)**	**>120.0 sec (>120.0 sec)**	**F (F)**	**>120.0 sec (>120.0 sec)**	**F (F)**
11	Kettleman Lane/ Westgate Drive	Signalized	2.1 sec	A	2.3 sec	A	20.5 sec	C	21.7 sec	C
12	Kettleman Lane/ Lower Sacramento Road	Signalized	17.7 sec	B	21.4 sec	C	22.1 sec	C	26.4 sec	C
13	Kettleman Lane/ Tienda Drive	Signalized	14.7 sec	B	18.1 sec	B	12.3 sec	B	21.5 sec	C
14	Kettleman Lane/ Mills Avenue	Signalized	24.9 sec	C	30.0 sec	C	25.5 sec	C	29.8 sec	C
15	Kettleman Ln./ Ham Ln.	Signalized	33.5 sec	C	**42.4 sec**	**D**	30.8 sec	C	**44.6 sec**	**D**
16	Kettleman Lane/ Crescent Avenue	Signalized	22.3 sec	C	29.6 sec	C	13.2 sec	B	27.9 sec	C
17	Kettleman Lane/ Hutchins Street	Signalized	26.5 sec	C	32.3 sec	C	25.5 sec	C	**35.3 sec**	**D**
18	Kettleman Lane/ Church Street	Signalized	21.5 sec	C	**36.1 sec**	**D**	22.0 sec	C	**38.8 sec**	**D**
19	Kettleman Lane/ Stockton Street	Signalized	29.3 sec	C	31.7 sec	C	**36.2 sec**	**D**	32.6 sec	C
20	Kettleman Lane/ Central Avenue	Signalized	9.3 sec	A	19.4 sec	B	9.9 sec	A	19.0 sec	B
21	Kettleman Lane/ Cherokee Lane	Signalized	21.9 sec	C	34.2 sec	C	24.3 sec	C	**89.8 sec**	**F**

Table IV.B-5 *continued*

#	Intersection	Intersection Control	Existing				Existing with Project			
			AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
			Delay[a]	LOS	Delay[a]	LOS	Delay[a]	LOS	Delay[a]	LOS
22	Kettleman Lane/ SR 99 SB Ramps	Signalized	12.2 sec	B	16.7 sec	B	13.9 sec	B	30.6 sec	C
23	Kettleman Lane/ SR 99 NB Ramps	Signalized	14.9 sec	B	19.7 sec	B	11.3 sec	B	11.8 sec	B
24	Harney Lane/Lower Sacramento Road	All -Way Stop Control	**29.2 sec**	**D**	**49.0 sec**	**E**	**NA[b]**	**NA[b]**	**NA[b]**	**NA[b]**
25	Harney Lane/Ham Lane	Side-Street Stop Control	8.0 sec **(28.9 sec)**	A **(D)**	4.4 sec (19.6 sec)	A (C)	22.3 sec **(96.0 sec)**	C **(F)**	8.2 sec **(48.7 sec)**	A **(E)**
26	Harney Ln/Hutchins St West Lane	Signalized	**46.9 sec**	**D**	**41.3 sec**	**D**	**71.7 sec**	**E**	**48.3 sec**	**D**
27	Harney Ln./ Stockton St.	Signalized	9.0 sec	A	10.8 sec	B	9.0 sec	A	12.6 sec	B
28	Harney Lane/ SR 99 SB Ramps	All -Way Stop Control	**27.4 sec**	**D**	**38.6 sec**	**E**	**57.5 sec**	**F**	**85.7 sec**	**F**
29	Harney Lane/ SR 99 NB Ramps	Side-Street Stop Control	5.6 sec (15.1 sec)	A (C)	**26.2 sec (67.5 sec)**	**D (F)**	6.1 sec (18.8 sec)	A (C)	**65.5 sec (>120.0 sec)**	**F (F)**
30	Armstrong Lane/ Davis Road	All -Way Stop Control	8.6 sec	A	9.2 sec	A	9.2 sec	A	9.5 sec	A
31	Armstrong Lane/ Lower Sacramento Road	Signalized	15.3 sec	B	16.9 sec	B	16.4 sec	B	17.7 sec	B
32	Armstrong Lane/ SR 99 SB Ramps	All -Way Stop Control	8.9 sec	A	8.8 sec	A	8.9 sec	A	8.8 sec	A
33	Armstrong Lane/ SR 99 NB Ramps	Side-Street Stop Control	6.8 sec (12.7 sec)	A (B)	7.5 sec (13.0 sec)	A (B)	6.8 sec (12.9 sec)	A (B)	7.5 sec (13.0 sec)	A (B)

Bold text indicates an intersection that operates at a level that is inconsistent with the applicable significance criteria.

[a] For unsignalized intersections the overall intersection delay and level of service are shown. The worst approach delay and level of service are also shown in parentheses.

[b] The proposed lane configuration for Harney Ln/Lower Sacramento Rd cannot be analyzed as a four-way stop condition.

Source: Fehr & Peers, 2006.

- Harney Lane/Ham Lane (#25)
- Harney Lane/Hutchins Street – West Lane (#26)
- Harney Lane/SR 99 SB Ramps (#28)
- Harney Lane/SR 99 NB Ramps (#29)

A description of the impact and the improvements necessary to mitigate each impact is also provided below (the improvement/mitigation is shown in *italic type*) and in Table IV.B-6.

- **Turner Road/Lower Sacramento Road-Woodhaven Lane (#1)** would degrade from LOS C with 31.5 seconds of average delay in the AM peak hour and 31.9 seconds of delay in the PM peak hour to LOS D with 35.6 seconds of average delay in the AM peak hour and 41.8 seconds of delay in the PM peak hour in the Existing with Project scenario. *The addition of a second west-bound left-turn lane would improve the average delay to 32.5 seconds and LOS C in the AM peak hour and 31.9 seconds of average delay and LOS C in the PM peak hour and reduce the project's impact to a less-than-significant level.*
- **Turner Road/SR 99 SB ramps (#2)** would degrade to LOS E with 35.6 seconds of average delay in the AM peak hour in the Existing with Project scenario. Additionally, the existing LOS E condition on the northbound approach during the PM peak hour would be exacerbated to LOS F by the project with 107.9 seconds of average delay. The side-street stop controlled intersection of Turner Road/SR 99 southbound ramps currently operates at LOS C during the AM peak hour and LOS E during the PM peak hour. Additionally, it also meets the Peak Hour Signal warrant during the AM peak hour. Under existing conditions a total of 1,356 vehicles travel though the intersection during the AM peak hour and 1,373 vehicles during the PM peak hour. The proposed project would add 115 vehicles to the AM peak hour and 151 vehicles to the PM peak hour. With the added traffic, the intersection meets the Peak Hour Signal Warrant during both peak hours. *The installation of a traffic signal would result in 10.0 seconds of average delay (LOS A) during the AM peak hour and 9.0 seconds of average delay (LOS A) during the PM peak hour and reduce the project's impact to a less-than-significant level.*
- **Turner Road/SR 99 NB ramps (#3)** would further degrade the existing LOS D operations during the PM peak hour to 37.2 seconds of average delay (LOS D) in the Existing with Project scenario. The side-street stop controlled intersection of Turner Road/SR 99 northbound ramps currently operates at LOS C during the AM peak hour and LOS D during the PM peak hour. Additionally, it also meets the Peak Hour Signal warrant during the PM peak hour. Under existing conditions a total of 822 vehicles travel though the intersection during the AM peak hour and 1034 vehicles during the PM peak hour. The proposed project would add 106 vehicles to the AM peak hour and 125 vehicles to the PM peak hour. With the added traffic, the intersection meets the Peak Hour Signal Warrant during the AM and PM peak hours. *The installation of a traffic signal would result in 8.0 seconds of average delay (LOS B) during the PM peak hour and reduce the project's impact to a less-than-significant level.*
- **Lodi Avenue/Lower Sacramento Road (#5)** would degrade to LOS D with 46.4 seconds of average delay in the PM peak hour in the Existing with Project scenario. *Retiming of the signal to a 110.0-second cycle length would result in 30.3 seconds of average delay (LOS C) during the PM peak hour and reduce the project's impact to a less-than-significant level.*

Table IV.B-6: Significant Intersection Impacts and Recommended Mitigation Measures

Intersections	Significant Impact		Recommended Mitigation	
	Existing + Project	Cumulative	Existing + Project	Cumulative
1. Turner Road/Lower Sacramento Road – Woodhaven Lane	√	√	Second westbound left-turn lane (signal retiming would not enhance the signal's performance to LOS C). (LTS)	Second westbound, northbound and southbound left-turn lane. (LTS)
2. Turner Road/SR 99 SB Ramps	√	√	Traffic signal. (LTS)	Traffic signal. (LTS)
3. Turner Road/SR 99 NB Ramps	√	√	Traffic signal. (LTS)	Traffic signal. (LTS)
4. Elm Street/Lower Sacramento Road		√		Second westbound left-turn lane and signal retimed to a 115.0-second cycle length.(LTS)
5. Lodi Avenue – Sargent Road/Lower Sacramento Road	√	√	Retime signal to a 110.0-second cycle length (LTS)	Second left-turn lane in the eastbound and westbound directions and retime to a 110.0-second cycle length. (LTS)
6. Lodi Avenue/Ham Lane	√	√	Retime signal to an 80.0-second cycle length. (LTS)	In the PM peak hour, retime signal to a 90.0-second cycle length resulting in 39.2 seconds of average delay (LOS D). (SU in PM peak)
10. Kettleman Lane/Davis Road	√	√	Traffic signal. *The County and Caltrans are currently planning for a signal at this location.* (LTS)	Traffic signal and an additional westbound and eastbound through lane. (LTS)
12. Kettleman Lane/ Lower Sacramento Road		√		(SU) (*Timing improvements additional geometric improvements are not feasible.*)
15. Kettleman Lane/Ham Lane	√	√	Adjust the amount of time given to each signal phase during the PM peak hour and improve intersection coordination offset to better fit traffic conditions. (LTS, but not acceptable LOS)	Add a second northbound left-turn lane. (SU)
17. Kettleman Lane/Hutchins Street	√	√	Add northbound second left-turn lane. (LTS)	Add northbound, southbound and westbound second left-turn lane. (LTS)
18. Kettleman Lane/Church Street	√	√	Adjust the southbound lane geometries to a left-turn lane and a shared through-right lane. (LTS, but not acceptable LOS)	A westbound and eastbound second left-turn lanes. (LTS)
19. Kettleman Lane/Stockton Street	√	√	Adjust signal phasing splits during the AM peak hour. (LTS)	A northbound second left-turn lane. (LTS)
21. Kettleman Lane/Cherokee Lane	√	√	Add a second northbound and southbound left-turn lane. (LTS)	(SU)
24. Harney Lane/Lower Sacramento Road	√	√	Traffic signal is under construction by the county.(LTS)	A traffic signal is under construction by the county.(LTS)

Note: √ indicates that the project would result in a significant impact.

Table IV.B-6 *continued*

Intersections	Significant Impact		Recommended Mitigation	
	Existing + Project	Cumulative	Existing + Project	Cumulative
25. Harney Lane/Ham Lane	√	√	Traffic signal. (LTS)	Traffic signal and a westbound right-turn lane. (LTS)
26. Harney Lane/Hutchins Street – West Lane	√	√	A eastbound and westbound second through lane and dedicated right-turn lane. (LTS)	A second eastbound and westbound through lane in the directions; a second northbound, southbound, and westbound left-turn lane. (SU)
27. Harney Lane/Stockton Street		√		A eastbound and westbound second through lane. (LTS)
28. Harney Lane/SR 99 SB Ramps	√	√	Traffic signal. (LTS)	Traffic signal and a eastbound left-turn lane and a westbound second through lane. (LTS)
29. Harney Lane/SR 99 NB Ramps	√	√	Traffic signal. (LTS)	Traffic signal shall be installed and westbound left-turn lane and a eastbound right-turn lane and modify the northbound approach lane configuration to a left-turn lane and a shared through-right lane. (LTS)
31. Armstrong Road/Lower Sacramento Road		√		Retime signal to a 60.0-second cycle length. (LTS)
33. Armstrong Road/SR 99 NB Ramps		√		Change operation to an All-Way Stop Control. (LTS)

Note: √ indicates that the project would result in a significant impact.

Source: LSA and Fehr & Peers, 2006.

- **Lodi Avenue/Ham Lane (#6)** during the PM peak hour would further degrade the existing LOS D to 39.9 seconds of average delay (LOS D) in the Existing with Project scenario. *Retiming of the signal to an 80.0-second cycle length would result in 31.9 seconds of average delay (LOS C) during the PM peak hour and reduce the project's impact to a less-than-significant level.*
- **Kettleman Lane/Davis Road (SB approach) (#10)** would degrade to LOS F with over 120.0 seconds of average delay in the AM peak hour in the Existing with Project scenario. Additionally the existing LOS F condition on the northbound approach during the PM peak hour would be exacerbated to over 120.0 seconds of average delay. The side-street stop controlled intersection of Kettleman Lane/Davis Road currently operates at LOS D during the AM peak hour and LOS F during the PM peak hour. Additionally, it also meets the Peak Hour Signal warrant during the PM peak hour. Under existing conditions, a total of 1,176 vehicles travel though the intersection during the AM peak hour and 1,516 vehicles during the PM peak hour. The project will add 355 vehicles to the AM peak hour and 173 vehicles to the PM peak hour. With the added traffic, the intersection meets the Peak Hour Signal Warrant during the AM and PM peak hours. *The installation of a traffic signal would result in 13.2 seconds of average delay (LOS B) during the AM peak hour and 14.2 seconds of average delay (LOS B) during the PM peak hour and reduce this impact to a less-than-significant. The County and Caltrans are currently planning for a signal at this location.*
- **Kettleman Lane/Ham Lane (#15)** would further degrade the existing LOS D during the PM peak hours to 44.6 seconds of average delay in the Existing with Project scenario. *The amount of time given to each signal phase should be adjusted during the PM peak hour. Also, the intersection's coordination offset should be adjusted to better fit traffic conditions. The total average delay during the PM peak hour cannot be reduced to LOS C conditions, but it can be reduced to 40.7 seconds of average delay. This is less delay compared to existing conditions and as a result the project's impact would be considered less than significant.*
- **Ketteleman Lane/Hutchins Street (#17)** would degrade to LOS D with 35.3 seconds of average delay during the PM peak hour. Adjusting the phasing splits of the signal during the PM peak hour, would not improve operations to LOS C conditions. *Installation of a second left-turn lane in the northbound direction would result in a total average delay of 34.6 seconds and LOS C during the PM peak hour and reduce the project's impact to a less-than-significant level.*
- **Kettleman Lane/Church Street (#18)** would further degrade the existing LOS D to 38.8 seconds of average delay during the PM peak hour in the Existing with Project scenario. Adjusting the phasing splits of the signal would not improve the signal to LOS C. *Adjustment of the southbound approach lane geometrics to a left-turn lane and a shared through-right lane would result in a total average delay of 35.4 seconds and LOS D conditions during the PM peak hour. This is less delay compared to existing conditions and, as a result, this project's impact would be considered less than significant.*
- **Kettleman Lane/ Stockton Street (#19)** would degrade to LOS D with 36.2 seconds of average delay during the AM peak hour in the Existing with Project scenario. *Adjustment of the phasing splits of the signal during the AM peak hour would result in an average delay of 31.9 seconds and LOS C and reduce the project's impact to a less-than-significant level.*
- **Kettleman Lane/Cherokee Lane (#21)** would degrade to LOS F with 89.8 seconds of average delay during the PM peak hour in the Existing with Project scenario. Adjusting the timing of the signal would not improve performance to LOS C or better than existing conditions. *Installation of*

a second northbound and southbound left-turn lane would result in 32.4 seconds of average delay and LOS C condition and reduce the project's impact to a less-than-significant level.

- **Harney Lane/Lower Sacramento Road (#24)** currently operates at LOS D with 29.2 seconds of average delay during the AM peak hour and LOS E with 49.0 seconds of average delay during the PM peak hour in the Existing with Project scenario. The proposed future geometry of the Harney Lane/Lower Sacramento Road intersection with the addition of the project is not able to be analyzed as a four-way stop controlled intersection. With the addition of the project, it can be assumed that the operations at the intersection would degrade. Additionally, it also meets the Peak Hour Signal warrant during both peak hours. Under existing conditions a total of 1,183 vehicles travel though the intersection during the AM peak hour and 1335 vehicles during the PM peak hour. The project would add 500 vehicles to the AM peak hour and 463 vehicles to the PM peak hour. With the added traffic, the intersection would meet the Peak Hour Signal Warrant during both peak hours. *A traffic signal is under construction by the County. Implementation of this improvement would result in 31.5 seconds of average delay (LOS C) during the AM peak hour and 16.4 seconds of average delay (LOS B) during the PM peak hour and reduce the project's impact to a less-than-significant level.*
- **Harney Lane/Ham Lane (southbound approach) (#25)** would degrade to LOS F with 96.0 seconds of average delay during the AM peak hour and LOS E with 48.7 seconds of average delay during the PM peak hour in the Existing with Project scenario. The side-street stop controlled intersection of Harney Lane/Ham Lane currently operates at LOS D during the AM peak hour and LOS C during the PM peak hour. It currently does not meet the Peak Hour Signal warrant. Under existing conditions a total of 1,032 vehicles travel though the intersection during the AM peak hour and 922 vehicles during the PM peak hour. The project would add 266 vehicles to the AM peak hour and 346 vehicles to the PM peak hour. With the added traffic, the intersection meets the Peak Hour Signal Warrant during both peak hours. *Installation of a traffic signal would result in 11.7 seconds of average delay (LOS B) during the AM peak hour and 15.6 seconds of average delay (LOS B) during the PM peak hour and reduce the project's impact to a less-than-significant level. This intersection is on the Signal Priority List.*
- **Harney Lane/Hutchins Street (#26)** would further degrade the existing LOS D to 71.7 seconds of average delay during the AM peak hour and 48.3 seconds of average delay during the PM peak hour in the Existing with Project scenario. Retiming the signal would not achieve LOS C conditions or conditions equal to existing. *A second through lane and a dedicated right-turn lane in the eastbound and westbound directions would improve operations and result in an average total delay of 33.7 seconds and LOS C during the AM peak hour and 33.0 seconds and LOS C during the PM peak hour and reduce the project's impact to a less-than-significant level.*
- **Harney Lane/SR 99 SB ramps (#28)** would degrade to a LOS F with 57.5 seconds of average delay during the AM peak hour and 85.7 seconds of average delay during the PM peak hour in the Existing with Project scenario. The four-way stop controlled intersection of Harney Lane/SR 99 southbound ramps currently operates at LOS D during the AM peak hour and LOS E during the PM peak hour. Additionally, it also meets the Peak Hour Signal warrant during the PM peak hour. Under existing conditions a total of 1,152 vehicles travel though the intersection during the AM peak hour and 1,328 vehicles during the PM peak hour. The project would add 152 vehicles to the AM peak hour and 197 vehicles to the PM peak hour. With the added traffic, the intersection meets the Peak Hour Signal Warrant during both peak hours. *Installation of a traffic signal would result in 13.0 seconds of average delay (LOS B) during the AM peak hour and 10.0 sec-*

onds of average delay (LOS B) during the PM peak hour and reduce the project's impact to a less-than-significant level.

- **Harney Lane/SR 99 NB ramps (#29)** would further degrade the existing LOS F condition during the PM peak hour to greater than 120.0 seconds of average delay in the Existing with Project scenario. The side-street stop controlled intersection of Harney Lane/SR 99 northbound ramps currently operates at LOS C during the AM peak hour and LOS F during the PM peak hour. Additionally, it also meets the Peak Hour Signal warrant during the PM peak hour. Under existing conditions a total of 710 vehicles travel though the intersection during the AM peak hour and 986 vehicles during the PM peak hour. The project developments would add 116 vehicles to the AM peak hour and 166 vehicles to the PM peak hour. With the added traffic, the intersection meets the Peak Hour Signal Warrant during the PM peak hour. *Installation of a traffic signal would result in 10.5 seconds of average delay (LOS B) during the PM peak hour and reduce the project's impact to a less-than-significant level.*

Mitigation Measure TRANS-1: Each of the following mitigation measures shall be implemented to reduce the project's impact on the identified 16 intersections:

1a: Mitigation Measure AIR-2 identifies measures recommended by the *SJVAPCD's "Guide for Assessing and Mitigating Air Quality Impacts* to reduce vehicle trips and associated air quality impacts. Implementation of the same measures would also reduce associated traffic impacts. The following are considered to be feasible and effective in further reducing vehicle trip generation and resulting emissions from the project and shall be implemented to the extent feasible and desired by the City:

- Provide pedestrian enhancing infrastructure that includes: sidewalks and pedestrian paths, direct pedestrian connections, street trees to shade sidewalks, pedestrian safety designs/infrastructure, street furniture and artwork, street lighting and or pedestrian signalization and signage.
- Provide bicycle enhancing infrastructure that includes: bikeways/paths connecting to a bikeway system, secure bicycle parking.
- Provide transit enhancing infrastructure that includes: transit shelters, benches, etc., street lighting, route signs and displays, and/or bus turnouts/bulbs.
- Provide park and ride lots.

The implementation of an aggressive trip reduction program with the appropriate incentives for non-auto travel can reduce project impacts by approximately 10 to 15 percent. Such a reduction would help minimize the project's impact.

1b: The implementation of each of the improvements listed in Table IV.B-6 would reduce the impacts to the identified 16 intersections to a less-than-significant level. To mitigate these impacts, the project applicant shall prepare a Traffic Mitigation Implementation and Financing Plan that details each of the physical improvements and the timing and geometric changes listed in Table IV.B-6 for both the Existing + Project and Cumulative scenarios (cumulative to address Impact TRANS-2), who will be responsible for implementing the improvement, how the improvement will be funded including a reimbursement program where appropriate; and the schedule or trigger for

initiating and completing construction prior to the intersection operation degrading to an unacceptable level. The Plan may include an annual monitoring program of the intersections as a method for determining the schedule for implementing each improvement. The Plan shall take into account whether an improvement is already programmed and/or funded in a City or County program (i.e., Lodi Development Impact Mitigation Fee Program, San Joaquin County Regional Transportation Impact Fee, Measure K (existing or renewal program), and San Joaquin Council of Governments Regional Transportation Improvement Program). If an improvement is included in one or more of these programs, the Plan needs to consider whether the programs schedule for the improvement will meet the needs of the project and if not identify alternatives. The Plan shall be submitted to City staff for review and City Council approval prior to submittal of a Tentative Subdivision Map application.

Implementation of Measure TRANS-1a and TRANS-1b, would mitigate the project's impact on existing conditions to a less-than-significant level. However, the City may decide to not implement select improvements in order to avoid trending towards a community that is too orientated to the automobile, which would conflict with some of the General Plan policies that emphasize pedestrian scale. Additionally some of the improvements identified are short-term solutions that the City may not choose to implement if a more significant long-term improvement is being planned (i.e., reconstruction of the Kettleman Lane/SR 99 interchange). As a result, the project's impact at some intersections may be significant and unavoidable if the City chooses not to implement the recommended mitigation measure. **(Potentially SU)**

Existing Transit Service. The proposed project will introduce additional residential area to be served by the local transit operators. Existing Grapeline Routes 1, 2, and 4 cannot provide fixed route bus service to the annexation areas without significantly impacting the existing level of service (headways) and therefore cannot adequately serve this increase.

A transit study needs to be conducted to look at new routes or modified routes to serve area as the current routes do not serve the proposed area. The study would be conducted as part of the development plan. A minimum of seven transit stops would be incorporated into the proposed projects. Two of these stops would be in the Westside project and five stops would be in the SW Gateway project. The final placement of these stops may change, but the general vicinity is marked on Figure IV.B-7 and IV.B-8.

Bicycle/Pedestrian Circulation. The addition of the project introduces additional residential area to locations where there currently are no facilities. These areas would need connections to the existing bicycle/pedestrian facilities. The bicycle and pedestrian facilities proposed as part of the project would provide ample and convenient connections to the existing bicycle and pedestrian infrastructure.

(3) Cumulative Analysis. The proposed roadway network was analyzed with the addition of the project under cumulative (2030) conditions (cumulative scenario). The original approach for 2030 volumes was based on the 2030 San Joaquin County Council of Governments (SJCOG) travel

LSA

FIGURE IV.B-7

N

0 400 800
FEET

LEGEND

○ BUS STOP POLE

X BUS STOP POLE, SHELTER, GARBAGE CAN, BENCH AND CONCRETE PADS

Lodi Annexation EIR

Proposed Transit Stops for Westside Project

SOURCE: DAHLIN GROUP, MARCH 2006.

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LSA

FIGURE IV.B-8

LEGEND

BUS STOP POLE

BUS STOP POLE, SHELTER, GARBAGE CAN, BENCH AND CONCRETE PADS

N

0 400 800

FEET

Lodi Annexation EIR

Proposed Transit Stop for Southwest Gateway Project

SOURCE: DAHLIN GROUP, MARCH 2006.

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demand forecasting model. After inspecting the model network, land use assumptions, and turning movement forecasts, we determined that the model could not accurately forecast peak hour volumes within the Lodi study area. This is primarily attributable to relatively large traffic zones that lack the disaggregation necessary for turning movement forecasts.

The adopted approach utilizes other methods to provide future volumes, relying on a number of well-accepted projection techniques. A key component of the approach is recognition of Lodi's 2.0 percent annual growth cap. The process began by identifying the geographic location of new development that would impact the study intersections – these areas should experience more significant increases in peak hour traffic compared to built-up portions of the City. The primary focus of new development (that will impact study intersections) is south and west of Lodi. In addition, existing counts and the projected number of lanes on each street in 2030 were used to identify study intersections where there would be a constraint in growth.

This graduated and intersection specific approach towards the increase of traffic through the year 2030 takes a comprehensive look at factors such as land use changes, roadway network capacities, and existing volumes. Thus it allows the projected growth to be flexible over a large area given the fact that growth will not be uniform over the roadway network. An exhaustive review of historical traffic count data yielded the following projection methodology (all percentages represent annual growth rates between 2005 and 2030):

- Intersections in the southern portion of the study area along Armstrong Road and Harney Lane were assigned a 2.5 percent growth factor.
- A 2.5 percent growth factor was assigned to the Kettleman Lane/Davis Road intersection.
- A 1.5 percent growth factor was assigned to intersections along Lower Sacramento Road from Turner Road to Kettleman Lane.
- A 1.5 percent growth factor was assigned to the Kettleman Lane/Westgate Drive intersection.
- A 1.0 percent rate was assigned to the intersection of Lodi Avenue/Ham Lane and the Turner Road Interchange with SR 99.

After these factors were assigned to the intersection as a whole, individual turning movements were adjusted down if the movement wasn't anticipated to grow at the same rate as other intersection movements. Special attention was paid to the intersections along Kettleman Lane east of Lower Sacramento Road. At a number of locations along Kettleman Lane, through lanes are approaching capacity under existing conditions. It is therefore unlikely that this roadway will sustain large annual growth increases, especially as you travel east toward SR 99. With this in mind, it was decided that through volumes along Kettleman Lane would grow at 0.25 percent annually. This rate was also applied to all turning movements at the intersections of Church Street, Stockton Street, Central Avenue, Cherokee Lane and SR 99. A 0.5 percent growth factor was applied to the turning movements at the remaining intersections along Kettleman.

The factors are intended to reflect both planned growth within Lodi, as well as growth on roadway facilities with origins and destinations outside the City. Approved development *within* Lodi inherent in the growth factors include the following:

- Mills Avenue Medical Offices, Mills Avenue north of Kettleman Lane
- Target Expansion on Kettleman Lane, east of Lower Sacramento Road
- Sunwest Professional Center, Kettleman Lane west of Mills Avenue
- Westgate Plaza Expansion on Lower Sacramento Road, south of Lodi Avenue
- Bezug Lane Properties on Tienda Drive, west of Lakeshore Drive
- Century Meadows One, Units 2 and 3, on Harney Lane east of Mills Avenue
- Kirst Estates Unit No. 5, on Harney Lane west of Mills Avenue
- Lalazar Estates on Lakeshore Drive, south of Kettleman Lane
- Legacy Estates Subdivisions on Harney Lane, west of Mills Avenue
- Mills Avenue Townhomes on Mills Avenue, south of Kettleman Lane
- Sasaki Property on Tienda Drive, west of Lakeshore Drive
- Sunwest Cottages on Tienda Drive, west of Mills Avenue
- The Villas on Harney Lane, west of Highway 99 Frontage Road
- Vintner's Square, at the northwest corner of Lower Sacramento Road and Kettleman Lane
- Lodi Shopping Center, at the southwest corner of Lower Sacramento Road and Kettleman Lane

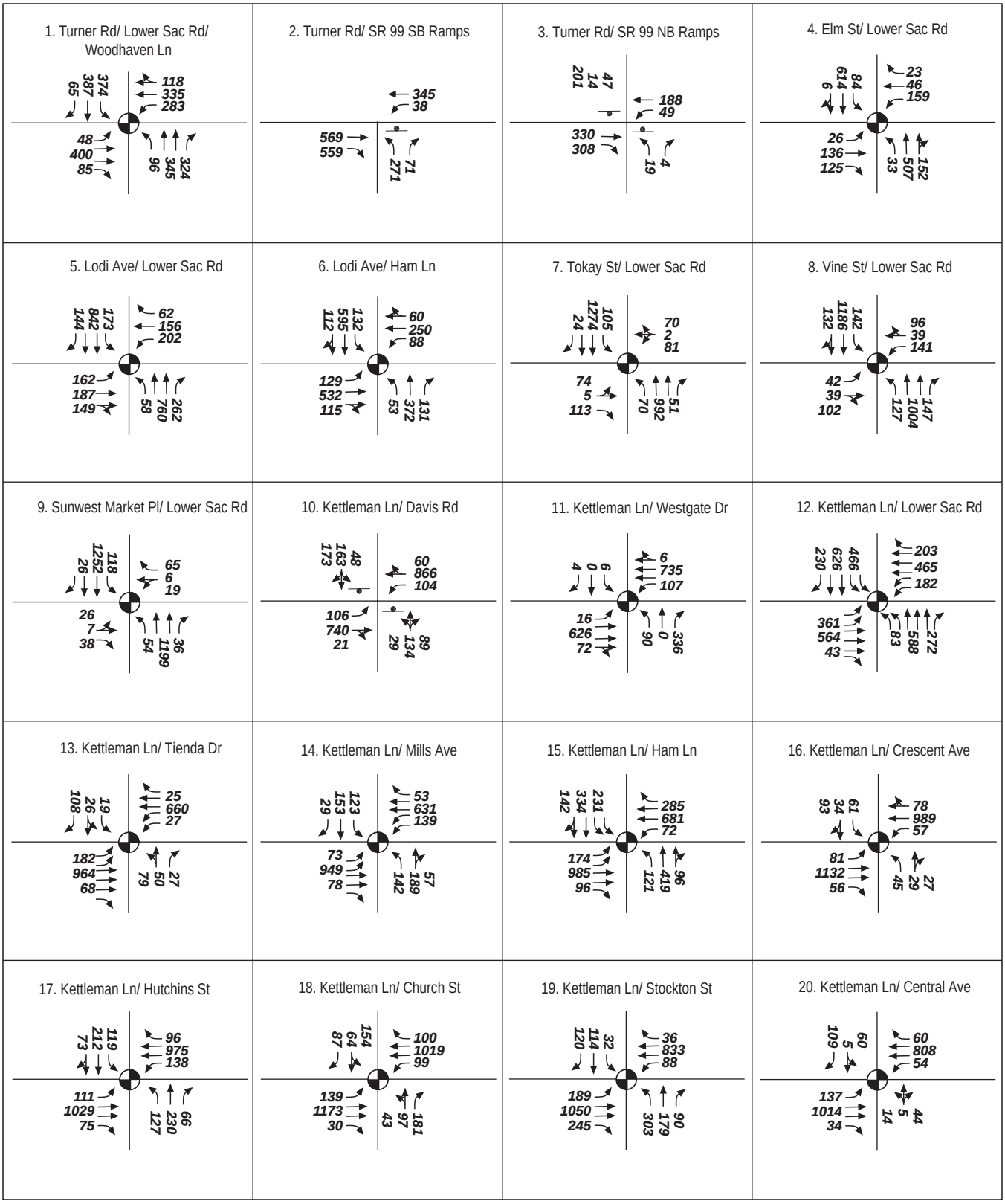
Intersection Operations under the Cumulative Scenario. Figures IV.B-9a and -9b and Figures IV.B-10a and -10b show the AM and PM peak hour traffic volumes and lane configurations for the Cumulative scenario. Table IV.B-7 presents the intersection operations under Cumulative with Project conditions compared to Existing with Project conditions.

The following summarizes the potentially significant cumulative impacts of future growth including the proposed project on the roadway. An impact is considered anything that causes an intersection to become inconsistent with the applicable significance criteria for the intersection. This includes exacerbating an existing LOS D, E or F condition as well as the degradation of an intersection to LOS D or worse.

<u>Impact TRANS-2</u>: Implementation of the proposed project would significantly impact the LOS at 21 intersections under the 2030 Cumulative scenario. (S)

The 21 intersections that would be significantly impacted are listed below. A description of the impact and the improvements necessary to mitigate the impact is also provided in Table IV.B-6 and the improvement/mitigation is shown in *italic type*.

- Turner Road/Lower Sacramento Road – Woodhaven Lane (#1)
- Turner Road/SR 99 SB Ramps (#2)
- Turner Road/SR 99 NB Ramps (#3)
- Elm Street/Lower Sacramento Road (#4)
- Lodi Avenue – Sargent Road/Lower Sacramento Road (#5)
- Lodi Avenue/Ham Lane (#6)
- Kettleman Lane/Davis Road (#10)
- Kettleman Lane/Lower Sacramento Road (#12)
- Kettleman Lane/Ham Lane (#15)
- Kettleman Lane/Hutchins Street (#17)
- Kettleman Lane/Church Street (#18)
- Kettleman Lane/Stockton Street (#19)
- Kettleman Lane/Cherokee Lane (#21)
- Harney Lane/Lower Sacramento Road (#24)



LSA

LEGEND

Intersection Geometry

29 Peak Hour Volume

Stop Control

Signalized Intersection

FIGURE IV.9a

Lodi Annexation EIR

Cumulative With Project Conditions (AM)

SOURCE: FEHR & PEERS, 2005

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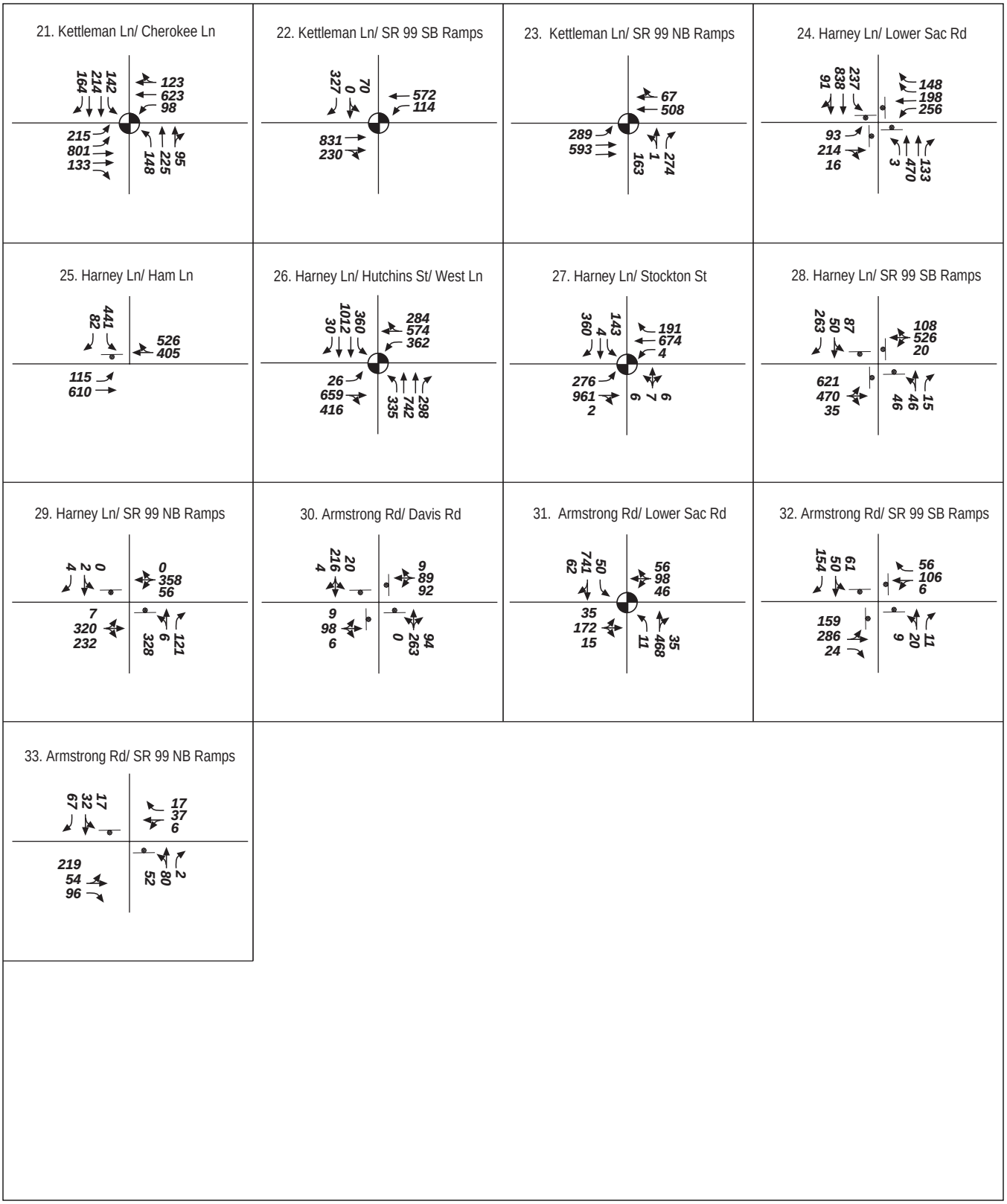

LSA

LEGEND

Intersection Geometry

29 Peak Hour Volume

Stop Control

Signalized Intersection

FIGURE IV.B-9b

Lodi Annexation EIR

Cumulative With Project Conditions (AM)

SOURCE: FEHR & PEERS, 2005

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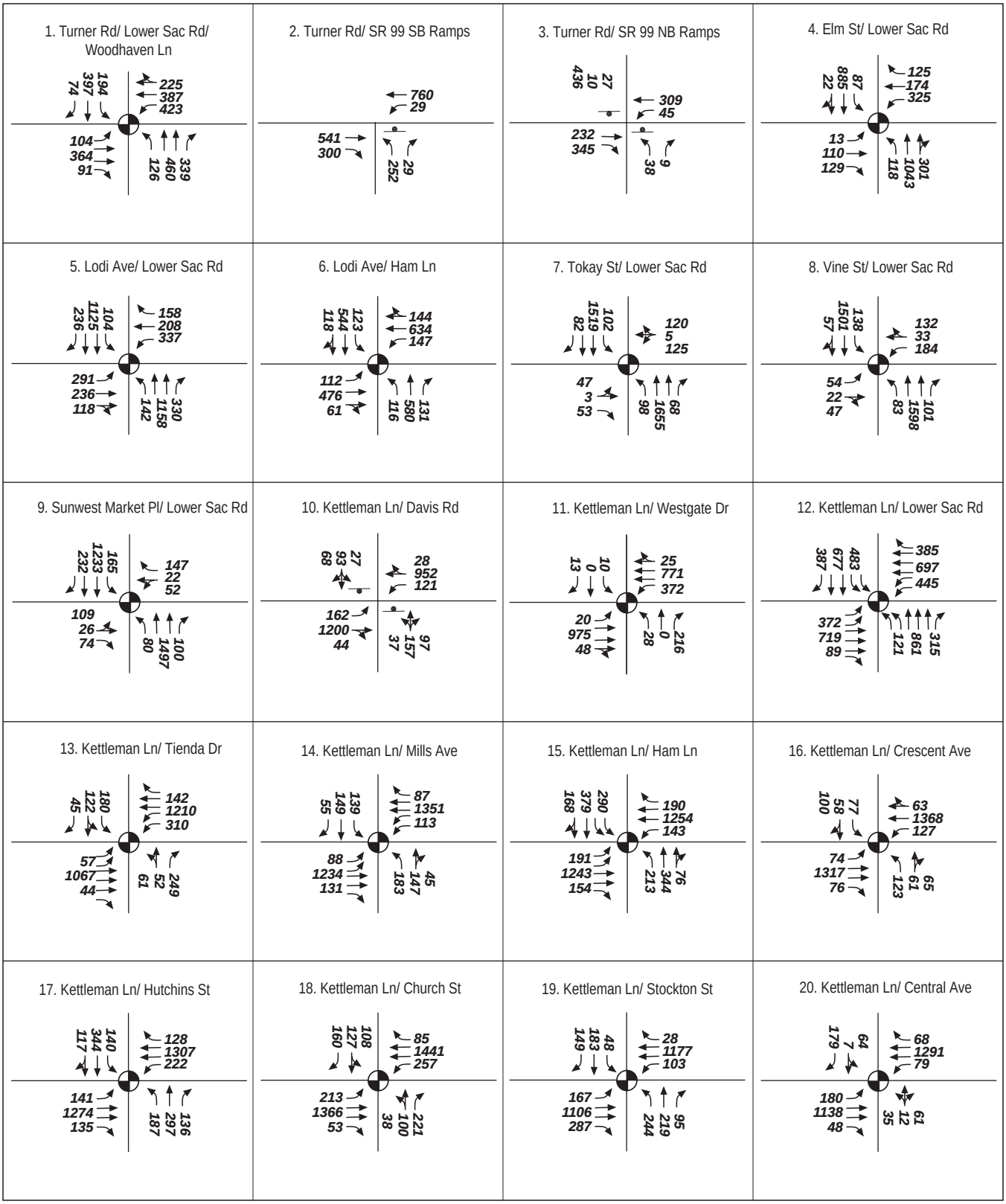

LSA

LEGEND

Intersection Geometry

29 Peak Hour Volume

Stop Control

Signalized Intersection

FIGURE IV.B-10a

Lodi Annexation EIR

Cumulative with Project Conditions (PM)

SOURCE: FEHR & PEERS, 2005

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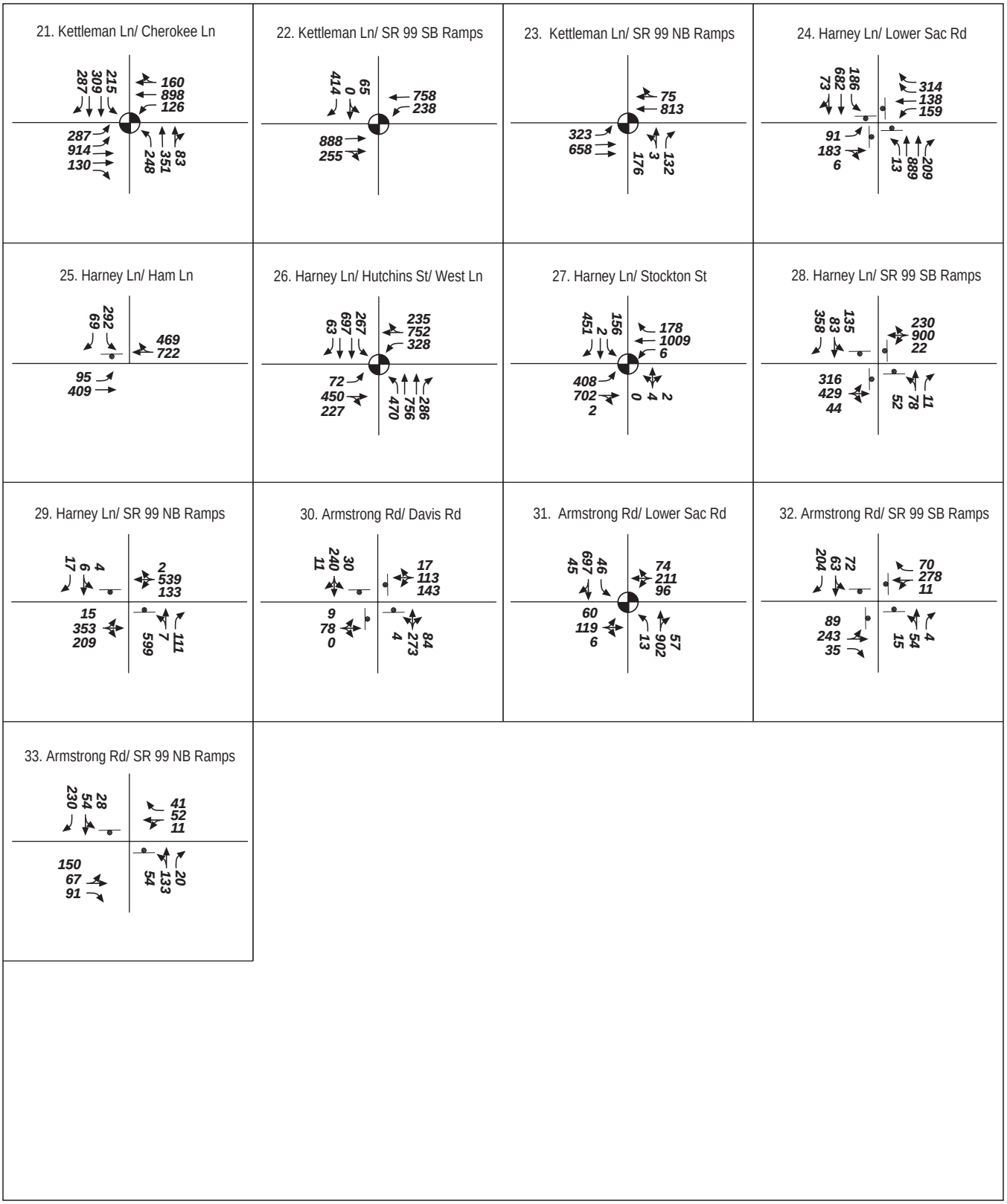

LSA

LEGEND

Intersection Geometry

29 Peak Hour Volume

Stop Control

Signalized Intersection

FIGURE IV.B-10b

Lodi Annexation EIR

Cumulative with Project Conditions (PM)

SOURCE: FEHR & PEERS, 2005

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Table IV.B-7: Cumulative Levels of Service

#	Intersection	Intersection Control	Existing With Project				2030 Cumulative			
			AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
			Delay[a]	LOS	Delay[a]	LOS	Delay[a]	LOS	Delay[a]	LOS
1	Turner Road/ Lower Sacramento Road – Woodhaven Lane	Signalized	**35.6 sec**	**D**	**41.8 sec**	**D**	**50.9 sec**	**D**	**60.4 sec**	**E**
2	Turner Road/ SR 99 SB Ramps	Side-Street Stop Control	6.7 sec **(35.6 sec)**	A **(E)**	16.1 sec **(107.9 sec)**	B **(F)**	**28.1 sec (>120.0 sec)**	**D (F)**	**67.1 sec (>120.0 sec)**	**F (F)**
3	Turner Road/ SR 99 NB Ramps	Side-Street Stop Control	3.2 sec (17.9 sec)	A (C)	6.0 sec **(37.2 sec)**	A **(E)**	3.8 sec (24.7 sec)	A (C)	11.0 sec **(>120.0 sec)**	B **(F)**
4	Elm Street/ Lower Sacramento Road	Signalized	20.3 sec	C	26.4 sec	C	23.9 sec	C	**45.8 sec**	**D**
5	Lodi Ave. – Sargent Rd./ Lower Sacramento Road	Signalized	25.8 sec	C	**46.4 sec**	**D**	32.0 sec	C	**63.8 sec**	**E**
6	Lodi Avenue/Ham Lane	Signalized	33.0 sec	C	**39.9 sec**	**D**	**40.2 sec**	**D**	**54.2 sec**	**D**
7	Tokay Street/ Lower Sacramento Road	Signalized	11.1 sec	B	13.9 sec	B	13.3 sec	B	25.4 sec	C
8	Vine Street/ Lower Sacramento Road	Signalized	14.8 sec	B	15.5 sec	B	21.4 sec	C	26.3 sec	C
9	Sunwest Market Place/ Lower Sacramento Road	Signalized	7.3 sec	A	11.6 sec	B	9.1 sec	A	18.4 sec	B
10	Kettleman Lane/ Davis Road	Side-Street Stop Control	**>120.0 sec (>120.0 sec)**	**F (F)**	**>120.0 sec (>120.0 sec)**	**F (F)**	**>120.0 sec (>120.0 sec)**	**F (F)**	**>120.0 sec (>120.0 sec)**	**F (F)**
11	Kettleman Lane/ Westgate Drive	Signalized	20.5 sec	C	21.7 sec	C	22.5 sec	C	31.1 sec	C
12	Kettleman Lane/ Lower Sacramento Road	Signalized	22.1 sec	C	26.4 sec	C	27.2 sec	C	**36.4 sec**	**D**
13	Kettleman Lane/ Tienda Drive	Signalized	12.3 sec	B	21.5 sec	C	15.8 sec	B	30.0 sec	C
14	Kettleman Lane/ Mills Avenue	Signalized	25.5 sec	C	29.8 sec	C	28.1 sec	C	32.9 sec	C
15	Kettleman Lane/Ham Lane	Signalized	30.8 sec	C	**44.6 sec**	**D**	33.3 sec	C	**50.3 sec**	**D**
16	Kettleman Lane/ Crescent Avenue	Signalized	13.2 sec	B	27.9 sec	C	21.3 sec	C	33.8 sec	C
17	Kettleman Lane/ Hutchins Street	Signalized	25.5 sec	C	**35.3 sec**	**D**	**40.0 sec**	**D**	**43.6 sec**	**D**
18	Kettleman Lane/ Church Street	Signalized	22.0 sec	C	**38.8 sec**	**D**	25.9 sec	C	**43.1 sec**	**D**
19	Kettleman Lane/ Stockton Street	Signalized	**36.2 sec**	**D**	32.6 sec	C	**39.4 sec**	**D**	**36.6 sec**	**D**

Table IV.B-7 *continued*

#	Intersection	Intersection Control	Existing With Project				2030 Cumulative			
			AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
			Delay[a]	LOS	Delay[a]	LOS	Delay[a]	LOS	Delay[a]	LOS
20	Kettleman Lane/ Central Avenue	Signalized	9.9 sec	A	19.0 sec	B	9.6 sec	A	19.9 sec	B
21	Kettleman Lane/ Cherokee Lane	Signalized	24.3 sec	C	**89.8 sec**	**F**	26.5 sec	C	**109.6 sec**	**F**
22	Kettleman Lane/ SR 99 SB Ramps	Signalized	13.9 sec	B	30.6 sec	C	14.6 sec	B	31.2 sec	C
23	Kettleman Lane/ SR 99 NB Ramps	Signalized	11.3 sec	B	11.8 sec	B	14.7 sec	B	21.1 sec	C
24	Harney Lane/ Lower Sacramento Road	All -Way Stop Control	**NA[b]**	**NA[b]**	**NA[b]**	**NA[b]**	**NA[b]**	**NA[b]**	**NA[b]**	**NA[b]**
25	Harney Lane/Ham Lane	Side-Street Stop Control	22.3 sec **(96.0 sec)**	C **(F)**	8.2 sec **(48.7 sec)**	A **(E)**	**>120.0 sec (>120.0 sec)**	**F (F)**	**>120.0 (>120.0 sec)**	**F (F)**
26	Harney Lane/ Hutchins St.–West Lane	Signalized	**71.7 sec**	**E**	**48.3 sec**	**D**	**>120.0 sec**	**F**	**>120.0 sec**	**F**
27	Harney Lane/ Stockton Street	Signalized	9.0 sec	A	12.6 sec	B	19.1 sec	B	**70.0 sec**	**E**
28	Harney Lane/ SR 99 SB Ramps	All -Way Stop Control	**57.5 sec**	**F**	**85.7 sec**	**F**	**>120.0 sec**	**F**	**>120.0 sec**	**F**
29	Harney Lane/ SR 99 NB Ramps	Side-Street Stop Control	6.1 sec (18.8 sec)	A (C)	**65.5 sec (>120.0 sec)**	**F (F)**	**87.1 sec (>120.0 sec)**	**F (F)**	**>120.0 sec (>120.0 sec)**	**F (F)**
30	Armstrong Lane/ Davis Road	All -Way Stop Control	9.2 sec	A	9.5 sec	A	13.2 sec	B	15.8 sec	C
31	Armstrong Lane/ Lower Sacramento Road	Signalized	16.4 sec	B	17.7 sec	B	25.5 sec	C	**43.6 sec**	**D**
32	Armstrong Lane/ SR 99 SB Ramps	All -Way Stop Control	8.9 sec	A	8.8 sec	A	17.4 sec	C	15.0 sec	B
33	Armstrong Lane/ SR 99 NB Ramps	Side-Street Stop Control	6.8 sec (12.9 sec)	A (B)	7.5 sec (13.0 sec)	A (B)	9.9 sec (24.9 sec)	A (C)	12.7 sec **(32.1 sec)**	B **(D)**

Bold text indicates an intersection that operates at a level that is inconsistent with the applicable significance criteria.

[a] For unsignalized intersections the overall intersection delay and level of service are shown. The worst approach delay and level of service are also shown in parentheses.

[b] The proposed lane configuration for Harney Lane/Lower Sacramento Road cannot be analyzed as a four-way stop condition.

Source: Fehr & Peers, 2006.

- Harney Lane/Ham Lane (#25)
- Harney Lane/Hutchins Street – West Lane (#26)
- Harney Lane/Stockton Street (#27)
- Harney Lane/SR 99 SB Ramps (#28)
- Harney Lane/SR 99 NB Ramps (#29)

- Armstrong Road/Lower Sacramento Road (#31)
- Armstrong Road/SR 99 NB Ramps (#33)

A description of the impact and the improvements necessary to mitigate each impact is also provided below (the improvement/mitigation is shown in *italic type*) and in Table IV.B-7 above.

- **Turner Road/Lower Sacramento Road – Woodhaven Lane (#1)** would further degrade the existing LOS D operations to 50.9 seconds of average delay in the AM peak hour and LOS E with 60.4 seconds of average delay in the PM peak hour in the Cumulative scenario. Retiming the signal will not enable it to operate at the same level as Existing with Project. *The addition of a second left-turn lane in the westbound, northbound and southbound directions would result in 33.4 seconds of average delay and LOS C in the AM peak hour and 32.4 seconds of average delay and LOS C in the PM peak hour and reduce the project's contribution to this cumulative impact to a less-than-significant level.*
- **Turner Road/SR 99 SB ramps (#2)** would further degrade the LOS F operations to greater than 120.0 seconds average delay in both the AM and PM peak hours in the Cumulative scenario. The side-street stop controlled intersection of Turner Road/SR 99 southbound ramps operates at LOS E during the AM peak hour and LOS F during the PM peak hour with the proposed developments added. Additionally, it also meets the Peak Hour Signal warrant during both the AM and PM peak hours. *Installation of a traffic signal would result in 10.7 seconds of average delay (LOS B) during the AM peak hour and 10.9 seconds of average delay (LOS B) during the PM peak hour and reduce the project's contribution to this cumulative impact to a less-than-significant level.*
- **Turner Road/SR 99 NB ramps (#3)** would degrade to a LOS F with greater than 120.0 seconds average delay in the PM peak hour under cumulative conditions. The side-street stop controlled intersection of Turner Road/SR 99 northbound ramps operates at LOS C during the AM peak hour and LOS E during the PM peak hour with the proposed developments added. Additionally, it also meets the Peak Hour Signal warrant during both the AM and PM peak hours. *The installation of a traffic signal would result in 7.5 seconds of average delay (LOS A) during the PM peak hour and reduce the project's contribution to this cumulative impact to a less-than-significant level.*
- **Elm Street/Lower Sacramento Road (#4)** would degrade to LOS D with 45.8 seconds of average delay in the PM peak hour under cumulative conditions. Retiming the signal would not provide for operating conditions equal to those under Existing with Project conditions. *The installation of a second westbound left-turn lane and retiming the signal to a 115.0-second cycle length would result in 30.1 seconds of average delay (LOS C) during the PM peak hour and reduce the project's contribution to this cumulative impact to a less-than-significant level.*
- **Lodi Avenue/Lower Sacramento Road (#5)** would degrade to LOS E with 63.8 seconds of average delay in the PM peak hour under cumulative conditions. Retiming the signal would not provide for operating conditions equal to those under Existing with Project conditions. *Installation of a second left-turn lane in the eastbound and westbound directions and retiming the signal to a 110.0-second cycle length would result in 31.6 seconds of average delay (LOS C) during the PM peak hour and reduce the project's contribution to this cumulative impact to a less-than-significant level.*
- **Lodi Avenue/Ham Lane (#6)** would degrade to LOS D with 40.2 seconds of average delay in the AM peak hour and LOS D with 54.2 seconds of average delay in the PM peak hour under

cumulative conditions. *Retiming the signal to an 80.0-second cycle length would result in 27.9 seconds of average delay (LOS C) during the AM peak hour. In the PM peak hour, retiming the signal to a 90.0-second cycle length would result in 39.2 seconds of average delay (LOS D). This is less delay than the intersection would be experiencing under Existing with Project conditions. However, it would not reduce the project's cumulative impact to a less-than-significant level; this impact would remain significant and unavoidable.*

- **Kettleman Lane/Davis Road (#10)** would remain at LOS F with more than 120.0 seconds of average delay in the AM and PM peak hours under the cumulative condition. The side-street stop controlled intersection of Kettleman Lane/Davis Road operates at LOS F during the AM and PM peak hours with the proposed developments added. Additionally, it also meets the Peak Hour Signal warrant during the AM and PM peak hours. *Installation of a traffic signal and an additional through lane in the westbound and eastbound directions would result in 14.0 seconds of average delay (LOS B) during the AM peak hour and 14.3 seconds of average delay (LOS C) during the PM peak hour and reduce the project's contribution to this cumulative impact to a less-than-significant level.*
- **Kettleman Lane/Lower Sacramento Road (#12)** would degrade to LOS D with 36.4 seconds of average delay in the PM peak hour under cumulative conditions. *Timing improvements will not provide for LOS C operating conditions. Additional geometric improvements are not feasible. As a result, this impact would remain* ***significant and unavoidable.***
- **Kettleman Lane/Ham Lane (#15)** would further degrade LOS E operations in the PM peak hour to 50.3 seconds average delay under cumulative conditions. Adjusting the phasing splits of the signal would not reduce the average delay to LOS C conditions. *The average delay during the PM peak hour can be reduced to 42.7 seconds (LOS D) with the additions of a second left-turn lane in the northbound direction which would result in less delay than the intersection would experience under Existing with Project condition, but not to a less-than-significant level; this impact would remain* ***significant and unavoidable.***
- **Kettleman Lane/Hutchins Street (#17)** would degrade to LOS D with 40.0 seconds of average delay in the AM peak hour and are exacerbated to 43.6 seconds average delay at LOS D in the PM peak hour under cumulative conditions. Adjusting the phasing splits of the signal would not enable the signal to operate at LOS C conditions. *Adding a second left-turn lane in the northbound, southbound and westbound directions would result in a total average delay of 29.5 seconds (LOS C) during the AM peak hour and 34.0 seconds (LOS C) during the PM peak hour and reduce the project's contribution to this cumulative impact to a less-than-significant level.*
- **Kettleman Lane/Church Street (#18)** would further degrade the LOS D condition to 43.1 seconds of average delay during the PM peak hour under cumulative conditions. *A second left-turn lane shall be added in the westbound and eastbound directions. Implementation of this improvement would result in an average delay of 32.4 seconds (LOS C) and reduce the project's contribution to this cumulative impact to a less-than-significant level.*
- **Kettleman Lane/Stockton Street (#19)** would exacerbate to 39.4 seconds of average delay (LOS D) during the AM peak hour and 36.6 seconds of average delay (LOS D) during the PM peak hour under cumulative conditions. *The addition of a second left-turn lane in the northbound direction would result in 25.1 seconds of average delay (LOS C) during the AM peak hour and 32.3 seconds of average delay (LOS C) during the PM peak hour and reduce the project's contribution to this cumulative impact to a less-than-significant level.*

- **Kettleman Lane/Cherokee Lane (#21)** would exacerbate to 109.6 seconds of average delay (LOS F) during the PM peak hour under cumulative conditions. *With the consideration of the mitigation measures for Existing with All Projects conditions of adding an additional northbound and southbound left-turn lane, the average delay decreases to 36.4 seconds (LOS D). This is less delay than the intersection would be experiencing under Existing with Project conditions, but not to a less-than-significant level; this impact would remain* ***significant and unavoidable****.*
- **Harney Lane/Lower Sacramento Road (#24)** currently operates at LOS D during the AM peak hour with 29.2 seconds of average delay and LOS E with 49.0 seconds of average delay during the PM peak hour. The proposed future geometry with the addition of the project is not able to be analyzed as a four-way stop controlled intersection. With the addition of project-generated traffic and the growth of background traffic through 2030, it can be assumed that the operations at the intersection will degrade. The four-way stop controlled intersection of Harney Lane/Lower Sacramento Road currently operates at LOS D during the AM peak hour and LOS D during the PM peak hour. Additionally, it also meets the Peak Hour Signal warrant during both peak hours. *A traffic signal is under construction by the county. Implementation of this improvement would result in 26.3 seconds of average delay (LOS C) during the AM peak hour and 26.1 seconds of average delay (LOS C) during the PM peak hour and reduce the project's contribution to this cumulative impact to a less-than-significant level.*
- **Harney Lane/Ham Lane (#25)** would further degrade to over 120.0 seconds of average delay (LOS F) during both the AM and PM peak hours under cumulative conditions. The side-street stop controlled intersection of Harney Lane/Ham Lane operates at LOS F during the AM peak hour and LOS E during the PM peak hour with the proposed developments added. Additionally, it meets the Peak Hour Signal warrant during both peak hours. *Installation of a traffic signal and a right-turn lane in the westbound direction would result in 13.9 seconds of average delay (LOS B) during the AM peak hour and 15.6 seconds of average delay (LOS B) during the PM peak hour and reduce the project's contribution to this cumulative impact to a less-than-significant level. (This intersection is on the Signal Priority List.)*
- **Harney Lane/Hutchins Street – West Lane (#26)** would further degrade to over 120.0 seconds of average delay (LOS F) during both the AM and PM peak hours under cumulative conditions. *To improve operations to levels at least equal to those under Existing with Project conditions the following geometric improvements are necessary. A second through lane in the eastbound and westbound directions shall be added. Also, a second left-turn lane shall be added in the northbound, southbound, and westbound directions as well as a right-turn lane in the eastbound and westbound directions. These improvements would result in 55.9 seconds of average delay (LOS E) during the AM peak hour and 43.6 seconds of average delay (LOS D) during the PM peak hour. This is less delay than the intersection would experience under Existing with Project conditions , but not to a less-than-significant level; this impact would remain* ***significant and unavoidable.***
- **Harney Lane/Stockton Street (#27)** would degrade to over 70.0 seconds of average delay (LOS F) during the PM peak hour under the cumulative conditions. *The addition of a second through lane in both the eastbound and westbound directions shall be added to provide for acceptable operating conditions. Implementation of this improvement would result in 19.5 seconds of average delay (LOS B) during the PM peak hour and reduce the project's contribution to this cumulative impact to a less-than-significant level.*

- **Harney Lane/SR 99 SB ramps (#28)** would degrade to over 120.0 seconds of average delay (LOS F) during both the AM and PM peak hours under cumulative conditions. The four-way stop controlled intersection of Harney Lane/SR 99 southbound ramps operates at LOS F during both peak hours with all developments added. Additionally, it also meets the Peak Hour Signal warrant during both peak hours. *The addition of a traffic signal and a left-turn lane in the eastbound direction and a second through lane in the westbound direction would result in 21.5 seconds of average delay (LOS C) during the AM peak hour and 23.2 seconds of average delay (LOS C) during the PM peak hour and reduce the project's contribution to this cumulative impact to a less-than-significant level.*
- **Harney Lane/SR 99 NB ramps (#29)** would degrade to LOS F with over 120.0 seconds of average delay during the AM peak hour and remain at over 120.0 seconds of average delay (LOS F) during the PM peak hour under cumulative conditions. The side-street stop controlled intersection of Harney Lane/SR 99 northbound ramps operates at LOS C during the AM peak hour and LOS F during the PM peak hour with all developments added. Additionally, it also meets the Peak Hour Signal warrant during the PM peak hour. *Addition of a traffic signal, additional geometric improvement, a left-turn lane in the westbound direction, and a right-turn lane in the eastbound direction; and a revised lane configuration of the northbound approach to a left-turn lane and a shared through-right lane would result in 11.7 seconds of average delay (LOS B) during the AM peak hour and 28.0 seconds of average delay (LOS C) during the PM peak hour and reduce the project's contribution to this cumulative impact to a less-than-significant level.*
- **Armstrong Lane/Lower Sacramento Road (#31)** would degrade to 43.6 seconds of average delay (LOS D) during the PM peak hour under cumulative conditions. *Retiming the to a 60.0-second cycle length would result in 26.5 seconds of average delay (LOS C) during the PM peak hour and reduce the project's contribution to this cumulative impact to a less-than-significant level*
- **Armstrong Lane/SR 99 NB ramps (33)** would degrade to LOS D with 32.1 seconds of delay on the northbound approach during the PM peak hour under cumulative conditions. The side-street stop controlled intersection of Armstrong Lane/SR 99 northbound ramps operates at LOS D during the PM peak hour with all developments added. Additionally, it does not meet the Peak Hour Signal warrant. *Changing the operation of this intersection to an All-Way Stop Control would result in 10.2 seconds of delay (LOS B) during the PM peak hour and reduce the project's contribution to this cumulative impact to a less-than-significant level.*

<u>Mitigation Measure TRANS-2</u>: Implementation of Measure TRANS-1a and TRANS-1b, would mitigate the project's contribution to Cumulative condition to a less-than-significant level at 16 of the 21 intersections that would be significantly impacted in the 2030 Cumulative condition. A significant and unavoidable impact would remain at the intersections of Lodi Avenue/Ham Lane, Kettleman Lane/Lower Sacramento Road, Kettleman Lane/Ham Lane, Kettleman Lane/Cherokee Lane, and Harney Lane/Huchins Street - West Lane; no physical improvements are feasible to mitigate the cumulative impact to a less-than-significant level. For the intersections that could be mitigated to a less-than significant level, the City may decide to not implement select improvements in order to avoid trending towards a community that is too orientated to the automobile, which would conflict with some of the General Plan policies that emphasize pedestrian scale. Additionally some of the improvements identified are short-term solutions that the City may not choose to implement if a more significant long-term improvement is being planned (i.e., reconstruction of the Kettleman Lane/SR 99 interchange).

As a result, the project's impact at some additional intersections may be significant and unavoidable if the City chooses not to implement the recommended improvement/mitigation measure. **(Potentially SU)**

Existing Transit Service. The addition of growth of background traffic through 2030 indicates additional residential development outside the area served by the local transit operators. The existing fixed transit route will not adequately service these areas. New transit service or re-routing of existing transit service will be necessary to serve the future demand areas.

Existing Bicycle/Pedestrian Circulation. The addition of growth of background traffic through 2030 indicated additional residential locations where there currently are no facilities. These areas would need connections to the existing bicycle/pedestrian facilities. Bicycle and pedestrian facilities will need to be constructed in these areas to provide ample and convenient connections to the existing bicycle and pedestrian infrastructure.

C. AIR QUALITY

This section has been prepared using methodologies and assumptions recommended in the air quality impact assessment guidelines of the San Joaquin Valley Air Pollution Control District.[1] In keeping with these guidelines, this chapter describes existing air quality, impacts of future traffic on local carbon monoxide levels and impacts of land use related vehicular emissions that have regional effects. Mitigation measures to reduce or eliminate potentially significant air quality impacts are identified, where appropriate.

1. Setting

The following discussion provides an overview of existing air quality conditions in the region and the Lodi area. Air quality standards and the regulatory framework relating to air quality are summarized. Climate, air quality conditions, and typical air pollutant types and sources are described.

a. Air Quality Standards, Regulatory Framework and Attainment Status. Air quality standards, the regulatory framework, and State and federal attainment status are discussed below.

(1) Air Quality Standards. Both the State and federal governments have established health-based Ambient Air Quality Standards for six air pollutants: carbon monoxide (CO), ozone (O_3), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), lead (Pb), and suspended particulate matter (PM). In addition, the State has set standards for sulfates, hydrogen sulfide, vinyl chloride and visibility reducing particles. These standards are designed to protect the health and welfare of the populace with a reasonable margin of safety.

In addition to primary and secondary Ambient Air Quality Standards, the State of California has established a set of episode criteria for O_3, CO, NO_2, SO_2, and PM. These criteria refer to episode levels representing periods of short-term exposure to air pollutants that actually threaten public health. Health effects are progressively more severe as pollutant levels increase from Stage One to Stage Three.

California Ambient Air Quality Standards and National Ambient Air Quality Standards for the criteria air pollutants are listed in Table IV.C-1. Health effects of these criteria pollutants are described in Table IV.C-2.

(2) Regulatory Framework. The San Joaquin Valley Air Pollution Control District (SJVAPCD) is primarily responsible for regulating air pollution emissions from stationary sources (e.g., factories) and indirect sources (e.g., traffic associated with new development), as well as for monitoring ambient pollutant concentrations. The District's jurisdiction encompasses eight counties: San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings, Tulare and Kern. The California Air Resources Board (ARB) and the U.S. Environmental Protection Agency (EPA) regulate direct emissions from motor vehicles.

[1] San Joaquin Valley Air Pollution Control District, 1998. *Guide for Assessing and Mitigating Air Quality Impacts*.(Revised 2002)

Table IV.C-1: Air Quality Standards

Pollutant	Averaging Time	California Standards	Federal Standards
Carbon Monoxide (CO)	8-hour	9 ppm	9 ppm
	1-hour	20 ppm	35 ppm
Nitrogen Dioxide (NO_2)	1-hour	0.25 ppm	—
	Annual Arithmetic Mean	—	0.053 ppm
Ozone (O_3)	1-hour	0.09 ppm	—
	8-hour	0.07 ppm	0.08 ppm
Lead (Pb)	30-day	1.5 $\mu g/m^3$	—
	Quarterly	—	1.5 $\mu g/m^3$
Particulate Matter (PM_{10})	24-hour	50 $\mu g/m^3$	150 $\mu g/m^3$
	Annual Arithmetic Mean	20 $\mu g/m^3$	50 $\mu g/m^3$
Particulate Matter ($PM_{2.5}$)	24-hour	—	65 $\mu g/m^3$
	Annual Arithmetic Mean	12 $\mu g/m^3$	15 $\mu g/m^3$
Sulfur Dioxide (SO_2)	24-hour	0.04 ppm	0.14 ppm
	3-hour	—	0.50 ppm
	1-hour	0.25 ppm	—
	Annual Arithmetic Mean	—	0.03 ppm

ppm = parts per million $\mu g/m^3$ = micrograms per cubic meter

Source: U.S. EPA and ARB, 2005.

Rules implemented by the SJVAPCD that specifically address residential development include Rule 4901 which puts limits on wood-burning devices in new homes to reduce the public's exposure to harmful wintertime particulates from wood smoke. To allow for fireplaces in new homes, developments must meet density ratios established by the SJVAPCD. Generally, when a project has a density ratio of more than two homes per acre, open-hearth fireplaces are not allowed. EPA Phase II-certified wood-burning heaters or pellet stoves are allowed at a rate of one per home and two per acre. The proposed project is subject to compliance with Rule 4901 and other relevant rules and regulations.

Additionally, the project would be subject to Rule 9510, which requires developers of larger residential, commercial and industrial projects to reduce smog-forming and particulate emissions generated by their projects. The rule encourages developers to reduce as much air pollution as possible through on-site mitigation, or incorporating air-friendly designs and practices into the project.

The project proponent must file an Indirect Source Review application with the SJVAPCD prior to – or concurrent with – the project's land use application.

Federal Clean Air Act. The Federal 1970 Clean Air Act authorized the establishment of national health-based air quality standards and also set deadlines for their attainment. The Federal Clean Air Act Amendments of 1990 changed deadlines for attaining National Ambient Air Quality Standards as well as the remedial actions required of areas of the nation that exceed the standards. Under the Clean Air Act, State and local agencies in areas that exceed the National Ambient Air

Table IV.C-2: Health Effects of Major Criteria Pollutants

Pollutants	Sources	Primary Effects
Carbon Monoxide (CO)	• Incomplete combustion of fuels and other carbon-containing substances, such as motor exhaust. • Natural events, such as decomposition of organic matter.	• Reduced tolerance for exercise. • Impairment of mental function. • Impairment of fetal development. • Death at high levels of exposure. • Aggravation of some heart diseases (angina).
Nitrogen Dioxide (NO_2)	• Motor vehicle exhaust. • High temperature stationary combustion. • Atmospheric reactions.	• Aggravation of respiratory illness. • Reduced visibility. • Reduced plant growth. • Formation of acid rain.
Ozone (O_3)	• Atmospheric reaction of organic gases with nitrogen oxides in sunlight.	• Aggravation of respiratory and cardiovascular diseases. • Irritation of eyes. • Impairment of cardiopulmonary function. • Plant leaf injury.
Lead (Pb)	• Contaminated soil.	• Impairment of blood function and nerve construction. • Behavioral and hearing problems in children.
Suspended Particulate Matter ($PM_{2.5}$ and PM_{10})	• Stationary combustion of solid fuels. • Construction activities. • Industrial processes. • Atmospheric chemical reactions.	• Reduced lung function. • Aggravation of the effects of gaseous pollutants. • Aggravation of respiratory and cardiorespiratory diseases. • Increased cough and chest discomfort. • Soiling. • Reduced visibility.
Sulfur Dioxide (SO_2)	• Combustion of sulfur-containing fossil fuels. • Smelting of sulfur-bearing metal ores. • Industrial processes.	• Aggravation of respiratory diseases (asthma, emphysema). • Reduced lung function. • Irritation of eyes. • Reduced visibility. • Plant injury. • Deterioration of metals, textiles, leather, finishes, coatings, etc.

Source: ARB, 2004.

Quality Standards are required to develop State Implementation Plans to show how they will achieve the National Ambient Air Quality Standards for O_3 by specific dates.

The Clean Air Act requires that projects receiving federal funds demonstrate conformity to the approved State Implementation Plan and local air quality attainment plan for the region. Conformity with the State Implementation Plan requirements would satisfy the Clean Air Act requirements.

California Clean Air Act. In 1988, the California Clean Air Act required that all air districts in the State endeavor to achieve and maintain California Ambient Air Quality Standards for O_3, CO, SO_2 and NO_2 by the earliest practical date. Plans for attaining California Ambient Air Quality Stand-

ards were submitted to the California Air Resource Board by June 30, 1991, 1994, 1997, 2000, and 2004. The California Clean Air Act provides districts with new authority to regulate indirect sources and mandates that air quality districts focus particular attention on reducing emissions from transportation and area-wide emission sources. Each district plan is to achieve a 5 percent annual reduction, averaged over consecutive 3-year periods, in district-wide emissions of each nonattainment pollutant or its precursors. Additional physical or economic development within the region would tend to impede the emissions reduction goals of the California Clean Air Act. The SJVAPCD prepared an Air Quality Attainment Plan for the San Joaquin Valley Air Basin in compliance with the requirements of the Act. The Clean Air Act and the Air Quality Attainment Plan also identify transportation control measures as methods of reducing emissions from mobile sources. The California Clean Air Act defines transportation control measures as "any strategy to reduce vehicle trips, vehicle use, vehicle miles traveled, and vehicle idling or traffic congestion for the purpose of reducing motor vehicle emissions."

(3) Attainment Status Designations. The California Air Resources Board is required to designate areas of the State as attainment, nonattainment or unclassified for all State standards. An "attainment" designation for an area signifies that pollutant concentrations did not violate the standard for that pollutant in that area. A "nonattainment" designation indicates that a pollutant concentration violated the standard at least once, excluding those occasions when a violation was caused by an exceptional event, as defined in the criteria. An "unclassified" designation signifies that data does not support either an attainment or nonattainment status. The California Clear Air Act divides districts into moderate, serious, and severe air pollution categories, with increasingly stringent control requirements mandated for each category.

The U.S. EPA designates areas for O_3, CO, and NO_2 as either "does not meet the primary standards," or "cannot be classified" or "better than national standards." For SO_2, areas are designated as "does not meet the primary standards," "does not meet the secondary standards," "cannot be classified" or "better than national standards." In 1991, new nonattainment designations were assigned to areas that had previously been classified as Group I, II, or III for PM_{10} based on the likelihood that they would violate national PM_{10} standards. All other areas are designated "unclassified."

Table IV.C-3 provides a summary of the attainment status for the San Joaquin Valley with respect to national and State ambient air quality standards. San Joaquin County is considered to be in non-attainment of ozone, PM_{10} and $PM_{2.5}$ standards.

(4) City of Lodi General Plan Goal and Policies. The following policies from the City of Lodi General Plan specifically address air quality and are applicable to the proposed project.

Goal F: To promote and, insofar as possible, improve air quality in Lodi and the region.

- The City shall promote travel by bicycle and foot within Lodi.
- The City shall promote transit for trips within Lodi and for regional trips.
- The City shall promote ridesharing for Lodi residents commuting to employment centers outside of Lodi.
- The City shall promote employment opportunities within Lodi to reduce commuting to areas outside of Lodi.

Table IV.C-3: Standards and San Joaquin Valley Attainment Status

Pollutant	Averaging Time	California Standards[a]		National Standards[b]	
		Concentration	Attainment Status	Concentration	Attainment Status
Carbon Monoxide (CO)	8-Hour	9.0 ppm (10 mg/m^3)	Attainment	9 ppm (10 mg/m^3)	Attainment
	1-Hour	20 ppm (23 mg/m^3)	Attainment	35 ppm (40 mg/m^3)	Attainment
Nitrogen Dioxide (NO_2)	Annual Mean	Not Applicable	Not Applicable	0.053 ppm (100 µg/m^3)	Attainment
	1-Hour	0.25 ppm (470 µg/m^3)	Attainment	Not Applicable	Not Applicable
Ozone (O_3)	8-Hour	0.07 ppm (137 µg/m^3)[c]	Not Established	0.08 ppm (157 µg/m$^{3)}$	Nonattainment
	1-Hour	0.09 ppm (180 µg/m^3)	Nonattainment	Not Applicable	Not Applicable [d]
Suspended Particulate Matter (PM_{10})	Annual Mean	30 µg/m^3	Not Applicable	50 µg/m^3	Nonattainment
	24-Hour	50 µg/m^3	Nonattainment	150 µg/m^3	Unclassified
Suspended Particulate Matter ($PM_{2.5}$)	Annual Mean	12 µg/m^3	Nonattainment	15 µg/m^3	Nonattainment
	24-Hour	Not Applicable	Not Applicable	65 µg/m^3	Nonattainment
Sulfur Dioxide (SO_2)	Annual Mean	Not Applicable	Not Applicable	80 µg/m^3 (0.03 ppm)	Attainment
	24-Hour	0.04 ppm (105 µg/m^3)	Attainment	365 µg/m^3 (0.14 ppm)	Attainment
	1-Hour	0.25 ppm (655 µg/m^3)	Attainment	Not Applicable	Not Applicable

[a] California standards for 0_3, CO (except Lake Tahoe), SO_2 (1-hour and 24-hour), NO_2 and PM_{10} are values that are not to be exceeded. If the standard is for a 1-hour, 8-hour, or 24-hour average, then some measurements may be excluded. In particular, measurements are excluded that ARB determines would occur less than once per year on the average.

[b] National standards other than for O_3 and those based on annual averages or annual arithmetic means are not exceeded more than once a year. For example, the O_3 standard is attained if, during the most recent 3-year period, the average number of days per year with maximum hourly concentrations above the standard is equal to or less than 1.

[c] These concentrations were approved by the Air Resources Board on April 28, 2005 and are expected to become effective in early 2005

[d] The National 1-hour ozone standard was revoked by U.S. EPA on June 15, 2005.

Notes: Lead (Pb) is not listed in the above table because it has been in attainment since the 1980s.
ppm = parts per million mg/m^3 = milligrams per cubic meter µg/m^3 = micrograms per cubic meter

Source: San Joaquin Valley Air Pollution Control District, Attainment Status 2005.

b. Existing Climate and Air Quality. Regional air quality, local climate and air quality in the San Joaquin Valley, and air pollution climatology are described next.

(1) Regional Air Quality. The City of Lodi is located in the San Joaquin Valley, a large air basin that includes mountain ranges to the east, west, and south, and a relatively flat valley floor.

The City of Lodi is within the jurisdiction of the SJVAPCD, which regulates air quality in the San Joaquin Valley. The EPA designated the entire San Joaquin Valley as non-attainment for two pollutants: ozone and particle matter.

More recently, on April 24, 2004, the EPA reclassified the San Joaquin Valley ozone nonattainment area from its previous severe status to "extreme" at the request of the San Joaquin Air Pollution Control District Board. On December 17, 2004, EPA took action to designate attainment and non-attainment areas under the more protective national air quality standards for fine particles or $PM_{2.5}$.
Levels of PM_{10} in the San Joaquin Valley currently exceed California Clean Air Act standards; therefore, the area is considered a nonattainment area for this pollutant relative to the State standards. PM_{10} levels monitored at the Stockton-Hazelton Street ambient air quality monitoring station, the closest monitoring station with PM_{10} data, exceeded the State's standard at three times per year in 2003 and 2004. The standard was exceeded ten times in 2002.
No exceedances of the State or federal CO standards have been recorded at any of the region's monitoring stations in the last three years. The San Joaquin Valley is currently considered a maintenance area for State and federal CO standards.

The District adopted an Ozone Attainment Demonstration Plan (2004) and a PM_{10} Attainment Demonstration Plan (2003). In addition, to meet California Clean Air Act requirements, the District adopted the California Clean Air Act Triennial Progress Report and Plan Revision 1997-1999, adopted in 2001 to address the California ozone standard. A broad range of actions to improve air quality are set forth in the adopted plans to reduce CO, O_3 precursor emissions, and particulate matter. Generally, the State standards for these pollutants are more stringent than the national standards. Exceedances of air quality standards occur primarily during meteorological conditions conducive to high pollution levels, such as cold, windless winter nights or hot, sunny summer afternoons.

(2) Local Climate and Air Quality. Air quality is a function of both local climate and local sources of air pollution. Air quality is the balance of the natural dispersal capacity of the atmosphere and emissions of air pollutants from human uses of the environment. The City of Lodi is located in the northern San Joaquin Valley Air Basin. The basin is approximately 250 miles long and runs from northern San Joaquin County to southern Kern County. It is shaped like a narrow bowl, while the sides of the "bowl" are bordered by mountain ranges.

The valley is characterized by long, hot, dry summers, and short, foggy winters. The topographic features of the valley contribute to air quality conditions when heat and sunlight transform volatile organic compounds and nitrogen oxides from vehicle exhaust, industrial processes and other operations into ground-level ozone, also known as smog. The mountains surrounding the region trap smog in the Valley, not allowing it to dissipate easily.

The San Joaquin Valley has an "inland Mediterranean" climate averaging over 260 sunny days per year. The valley floor is characterized by warm, dry summers and cooler winters. Summer high temperatures in the Lodi area average in the mid 90's. Winters in Lodi are mild and humid. Average high temperatures in the winter are in the 50's, but highs in the 30's and 40's can occur on days with persistent fog and low cloudiness.

Pollutant monitoring results for the years 2002 to 2004 (see Tables IV.C-4 and IV.C-5) at the Stockton-Hazelton Street ambient air quality monitoring station indicate that air quality in the project area has generally been moderate. As indicated in the monitoring results, ten monitoring violations occurred in 2002, while in 2003 and 2004 each had three exceedances per year of the State PM_{10} standard during the 3-year period. No violations of the federal PM_{10} standard were recorded during the same period. The federal $PM_{2.5}$ standard was not exceeded during the 3-year period. The State

Table IV.C-4: Results from the Stockton-Hazelton Street Ambient Air Quality Monitoring Station Exceeded Standards, 2002 to 2004

Year	Ozone			Carbon Monoxide		Nitrogen Dioxide		PM_{10}		
	Max. 1-Hour (ppm)	National D-O-S	California D-O-S	Max. 1-Hour (ppm)	California D-O-S	Max. 1-Hour (ppm)	California D-O-S	Max. 24-Hour (mg/m^3)	National D-O-S	California D-O-S
2002	0.102	NA	2	6.0	0	0.076	0	87.0	0	10
2003	0.104	NA	3	5.8	0	0.088	0	88.0	0	3
2004	0.096	NA	1	3.7	0	0.079	0	60.0	0	3

D-O-S = Days Over Standard mg/m^3 = milligrams per cubic meter ppm = parts per million
NA = Not Applicable. Federal 1-hour ozone standard was revoked in June 2005.

Source: U.S. EPA and ARB, 2002 to 2004.

Table IV.C-5: Results from the Stockton-Hazelton Street Ambient Air Quality Monitoring Station Exceeded Standards, 2002 to 2004

Year	Ozone		Carbon Monoxide		$PM_{2.5}$		
	Max. 8-Hour (ppm)	National D-O-S	Max. 8-Hour (ppm)	California D-O-S	Max. 24-Hour (mg/m^3)	National D-O-S	California D-O-S
2002	0.081	0	3.2	0	64.0	0	NA
2003	0.088	1	3.1	0	45.0	0	NA
2004	0.080	0	2.5	0	41.0	0	NA

D-O-S = Days Over Standard mg/m^3 = milligrams per cubic meter ppm = parts per million
NA = Not Applicable. No State Standard.
Source: U.S. EPA and ARB, 2002 to 2004.

1-hour O_3 standard has been exceeded every year at this monitoring station. The federal 8-hour ozone standard was exceeded once within the past 3 years at this monitoring station, in 2003. CO, SO_2, and NO_2 standards were not exceeded in this area during the 3-year period.

(3) Air Pollution Climatology. The amount of a given air pollutant in the atmosphere is determined by the amount of pollutant released and the atmosphere's ability to transport and/or dilute that pollutant. The major determinants of transport and dilution are wind, atmospheric stability, terrain and for photochemical pollutants, sunshine.

c. Air Quality Issues. Five key air quality issues – CO hotspots, vehicle emissions, fugitive dust, odors, and construction equipment exhaust – are described below.

(1) Local Carbon Monoxide Hotspots. Local air quality is most affected by CO emissions from motor vehicles. CO is typically the pollutant of greatest concern because it is created in abundance by motor vehicles and it does not readily disperse into the air. Because CO does not readily disperse, areas of vehicle congestion can create "pockets" of high CO concentration called "hot spots." These pockets have the potential to exceed the State 1-hour standard of 20 ppm and/or the 8-hour standard of 9.0 ppm.

While CO transport is limited, it does disperse over time and with distance from the source under normal meteorological conditions. However, under certain extreme meteorological conditions, CO concentrations near congested roadways or intersections may reach unhealthful levels affecting local sensitive receptors (e.g., residents, schoolchildren, the elderly, and hospital patients). Typically, high CO concentrations are associated with roadways or intersections operating at unacceptable levels of service or with extremely high traffic volumes. In areas with high ambient background CO concentration, modeling is recommended to determine a project's effect on local CO levels.

(2) Vehicle Emissions. Long-term air emission impacts are those associated with changes in automobile travel within the City. Mobile source emissions would result from vehicle trips associated with increased vehicular travel. As is true throughout much of the U.S., motor vehicle use is projected to increase substantially in the region. The SJVAPCD, local jurisdictions, and other parties responsible for protecting public health and welfare are continually seeking ways of minimizing the air quality impacts of growth and development in order to avoid further exceedances of the standards.

(3) Fugitive Dust. Fugitive dust emissions are generally associated with agriculture operations, demolition, land clearing, exposure of soils to the air, and cut and fill operations. Dust generated during construction varies substantially on a project-by-project basis, depending on the level of activity, the specific operations and weather conditions.

The U.S. EPA has developed an approximate emission factor for construction-related emissions of total suspended particulate of 1.2 tons per acre per month of activity. This factor assumes a moderate activity level, moderate silt content in soils being disturbed and a semi-arid climate. The California Air Resources Board estimates that 64 percent of construction-related total suspended particulate emissions occur in the form of PM_{10}. Therefore, the emission factors for uncontrolled construction-related PM_{10} emissions are:

- 0.77 tons per acre per month of PM_{10}; or
- 51 pounds per acre per day of PM_{10}.

However, construction emissions can vary greatly depending on the level of activity, the specific operations taking place, the equipment being operated, local soils, weather conditions, and other factors. There are a number of feasible control measures that can be reasonably implemented to significantly reduce PM_{10} emissions from construction. Rather than attempting to provide detailed quantification of anticipated construction emissions from projects, the SJVAPCD suggests the following:

> "The SJVAPCD has established regulations governing various activities that contribute to the overall PM_{10} problem. The SJVAPCD has adopted a set of PM_{10} Fugitive Dust Rules collectively called Regulation VIII. Several components of Regulation VIII specifically address fugitive dust generated by construction related activities. Therefore, the SJVAPCD has determined that any determination of significance with respect to construction emissions should be based on a consideration of the control measures to be implemented. From the perspective of the SJVAPCD, compliance with Regulation VIII for all sites and implementation of all other control measures indicated in Tables 6-2 and 6-3 (as appropriate, depending on the size and location of the project site) will constitute sufficient mitigation to reduce PM_{10} impacts to a level considered less-than-significant."[2]

[2] San Joaquin Valley Air Pollution Control District, 1998. op. cit.

(4) Odors. Odors are also an important element of local air quality conditions. Specific activities allowed within each of the major general plan land use categories can raise concerns on the part of nearby neighbors. Major sources of odors include restaurants, manufacturing plants, and agricultural operations. Other odor producers include the industrial facilities within the Carquinez Strait Region. While sources that generate objectionable odors must comply with air quality regulations, the public's sensitivity to locally produced odors often exceeds regulatory thresholds.

(5) Construction Equipment Exhaust. Construction activities cause combustion emissions from utility engines, heavy-duty construction vehicles, equipment hauling materials to and from construction sites and motor vehicles transporting construction crews. Exhaust emissions from construction activities vary daily as construction activity levels change. The use of construction equipment results in localized exhaust emissions.

2. Impacts and Mitigation Measures

This section evaluates potential impacts to air quality resulting from implementation of the proposed project. The evaluation of environmental effects presented in this section focuses on potential air quality impacts associated with consistency with air quality management plans, construction emissions, odors and development-related traffic emissions. Mitigation measures are proposed as necessary.

a. Criteria of Significance. A significant impact would occur with implementation of the proposed project if it would:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation;
- Result in a cumulatively considerable net increase of any criteria pollutant for which the region is nonattainment under applicable federal or State ambient air quality standards (including releasing emissions which exceed quantitative thresholds for ozone precursors);
- Expose sensitive receptors to substantial pollutant concentrations;
- Create objectionable odors affecting a substantial number of people;
- Result in a cumulative impact. Any project that would individually have a significant air quality impact would also be considered to have a significant cumulative air quality impact. Impacts of local pollutants are cumulatively significant when modeling shows that the confined emissions from the project and other existing planned projects will exceed air quality standards.

The SJVAPCD provides various quantitative thresholds that can be used to better define the above criteria. For ROG and NOx, a net increase of 10 tons per year is considered significant, while for CO, an increase that leads to or contributes to CO concentrations exceeding the State Ambient Air Quality Standard of 9 ppm averaged over 8 hours and 20 ppm for 1 hour (i.e., if it creates a "hot spot") is considered significant. Generally, if a project results in an increase in ROG or NOx of 10 tons per year, then it would also be considered to contribute considerably to a significant cumulative effect. For projects that would not lead to a significant increase of ROG, NOx, or PM_{10} emissions, the cumula-

tive effect is evaluated based on a determination of the consistency of the project with the regional Clean Air Plan.

Impacts from $PM_{2.5}$ emissions have not been analyzed quantitatively as there are no recommended significance thresholds from the SJVAPCD. Also, the air quality models that are used to estimate emissions of ROG, NOx, CO and PM_{10} currently do not have the capability to estimate $PM_{2.5}$ separately. Therefore, impacts from $PM_{2.5}$ emissions from the implementation of the proposed project (particularly the diesel particulate matter) have been analyzed qualitatively.

It should be noted that the emission thresholds were established based on the attainment status of the air basin in regard to air quality standards for specific criteria pollutants. Because the concentration standards were set at a level that protects public health with an adequate margin of safety (EPA), these emission thresholds are regarded as conservative and would overstate an individual project's contribution to health risks.

b. Less-than-Significant Impacts. A discussion of less-than-significant impacts of the proposed project follows.

(1) Consistency with the Air Quality Attainment Plan. The proposed project is an annexation of 457.4 total acres that would include residential, educational and recreational uses. The project allows for the growth to occur that has been planned for by the City. The project applicant for the Westside and SW Gateway elements of the project has applied for building allocations under the Growth Management Ordinance. This ordinance allows for the number of residential units approved by the city to reflect a two percent yearly limitation on growth based population. The applicant would apply for this year's allocation, as well as unused allocations from previous years, and potentially some for future years.

The Air Quality Attainment Plan recognized growth of the population within the air basin. The plan evaluated vehicle miles traveled (VMT) resulting from the San Joaquin County Council of Government's Regional Transportation Plan: Vision 2030 (RTP). The RTP development of VMT estimates were based on a predicted growth in population of 24,718 people for the 30-year period from 2000 to 2030.[3] The Westside and SW Gateway projects together with the Other Areas to be Annexed can be viewed as continued growth that was anticipated by the Plan. Therefore the project is consistent with the Air Quality Attainment Plan.

(2) Odors Emissions. The project would not contain any major sources of odor, and would not be located in an area with existing odors. It therefore would not have the "potential to frequently expose members of the public to objectionable odors" and would be deemed to have a less-than-significant impact.

(3) Toxic Air Contaminants. The implementation of the proposed project would not result in any new sources of Toxic Air Contaminants and the project land uses would not be located near any existing major sources of Toxic Air Contaminants. The project would not have the potential to

[3] San Joaquin Council of Governments, 2004. *2004 San Joaquin Council of Governments Regional Transportation Plan: Vision 2030.*

"expose sensitive receptors or the general public to substantial levels of Toxic Air Contaminants" and would be deemed to have a less-than-significant impact.

(4) Operational Emissions – CO Analysis. Vehicular traffic associated with the proposed project would emit carbon monoxide (CO) into the air along roadway segments and nearby intersections. Areas of vehicle congestion can create pockets of high CO concentrations, called "hot spots." Typically, high CO concentrations are associated with roadways or intersections operating at deficient levels of service (LOS) or with extremely high traffic volumes. Table IV.C-6 lists the 1-hour and 8-hour CO concentrations under the existing (2005) and existing with the proposed project (including all three project components) at 12 intersections in the project area. Table IV.C-7 lists the CO concentrations under the cumulative (2030) conditions for the entire study area with the proposed project.

Based on the methodology suggested by the U.S. EPA and California Department of Transportation, the higher of the second highest CO concentrations monitored at the nearest air monitoring station in the past 2 years (in this case, 5.2 ppm for the 1-hour period and 3.2 ppm for the 8-hour period), were used as the background CO concentrations.

Table IV.C-6 shows that all of the existing 1-hour and 8-hour CO concentrations are below the federal and State CO standards. The 1-hour CO level ranges for the proposed project range from 6.4 ppm to 8.4 ppm, much lower than the State standard of 20 ppm and the federal standard of 35 ppm. The 8-hour CO level ranges from 4.0 ppm to 5.2 ppm, also much lower than the State and federal standards of 9 ppm.

Table IV.C-7 shows that all of the future (2030) 1-hour and 8-hour CO concentrations are below the federal and State CO standards. The 1-hour CO level ranges from 7.6 ppm to 11 ppm, much lower than the State standard of 20 ppm and the federal standard of 35 ppm. The 8-hour CO level ranges from 4.3 ppm to 6.7 ppm, which is lower than the State standards of 9 ppm.

Therefore, the proposed project would not lead to significant CO impacts, nor would the proposed project, in combination with other cumulative development, lead to CO concentrations that exceed federal or State standards.

c. Significant Impacts. The proposed project would result in the following significant impact related to air quality as described below.

<u>Impact AIR-1</u>: Demolition and construction period activities could generate significant dust, exhaust, and organic emissions. (S)

Development of the SW Gateway project area and Other Areas to be Annexed would require demolition of existing buildings. Both areas would require excavation/removal of substantial amounts of soil and debris from the site. The physical demolition of existing structures and excavation of soil and other existing infrastructure improvements are construction activities with a high potential for creating air pollutants. In addition to the dust created during demolition and excavation, substantial dust emissions could be created as debris and soil is loaded into trucks for disposal.

Table IV.C-6: Existing (2005) with Project Weekday Peak Hour CO Concentrations

Intersection	Receptor Distance to Road Centerline (Meters)	Project Related Increase 1-hr/8-hr (ppm)	Without/ With Project 1-Hour CO Concentration (ppm)	Without/ With Project 8-Hour CO Concentration (ppm)	Exceeds State Standards[a]	
					1-Hr	8-Hr
Lower Sacramento Rd. & Turner Rd.	17	0.6 / 0.5	5.2 / 7.1	3.2 / 4.5	No	No
	15	0.7 / 0.5	5.2 / 6.9	3.2 / 4.4	No	No
	14	0.8 / 0.6	5.2 / 6.8	3.2 / 4.3	No	No
	14	0.6 / 0.4	5.2 / 6.8	3.2 / 4.3	No	No
SR 99 SB Ramps & Turner Rd.	12	0.2 / 0.1	5.2 / 6.9	3.2 / 4.4	No	No
	12	0.2 / 0.2	5.2 / 6.8	3.2 / 4.3	No	No
	10	0.1 / 0.1	5.2 / 6.8	3.2 / 4.3	No	No
	10	0.2 / 0.1	5.2 / 6.7	3.2 / 4.3	No	No
SR 99 NB Ramps & Turner Rd.	12	0.2 / 0.1	5.2 / 6.6	3.2 / 4.2	No	No
	12	0.2 / 0.2	5.2 / 6.5	3.2 / 4.1	No	No
	10	0.2 / 0.2	5.2 / 6.5	3.2 / 4.1	No	No
	8	0.1 / 0.1	5.2 / 6.5	3.2 / 4.1	No	No
Kettleman Lane & Davis Rd.	12	0.2 / 0.2	5.2 / 7.8	3.2 / 5.0	No	No
	12	0.3 / 0.2	5.2 / 7.6	3.2 / 4.9	No	No
	12	0.2 / 0.1	5.2 / 7.6	3.2 / 4.9	No	No
	12	0.2 / 0.1	5.2 / 7.6	3.2 / 4.9	No	No
Ham Lane & Kettleman Lane	17	1.1 / 0.8	5.2 / 8.4	3.2 / 5.4	No	No
	17	1.1 / 0.8	5.2 / 8.4	3.2 / 5.4	No	No
	14	1.2 / 0.8	5.2 / 8.2	3.2 / 5.3	No	No
	14	1.1 / 0.8	5.2 / 8.2	3.2 / 5.3	No	No
Church N & Kettleman Lane	17	0.9 / 0.6	5.2 / 8.3	3.2 / 5.4	No	No
	17	0.8 / 0.5	5.2 / 8.3	3.2 / 5.4	No	No
	15	0.7 / 0.5	5.2 / 8.2	3.2 / 5.3	No	No
	15	0.6 / 0.5	5.2 / 8.1	3.2 / 5.2	No	No
Stockton Street & Kettleman Lane	17	0.5 / 0.3	5.2 / 8.3	3.2 / 5.4	No	No
	17	0.5 / 0.3	5.2 / 7.9	3.2 / 5.1	No	No
	15	0.3 / 0.2	5.2 / 7.9	3.2 / 5.1	No	No
	15	0.4 / 0.2	5.2 / 7.7	3.2 / 5.0	No	No
Cherokee Lane & Kettleman Lane	17	0.5 / 0.4	5.2 / 8.1	3.2 / 5.2	No	No
	17	0.3 / 0.2	5.2 / 8.1	3.2 / 5.2	No	No
	15	0.6 / 0.4	5.2 / 7.8	3.2 / 5.0	No	No
	14	0.6 / 0.4	5.2 / 7.8	3.2 / 5.0	No	No
Lower Sacramento Rd. & Harney Lane	12	0.9 / 0.7	5.2 / 7.4	3.2 / 4.7	No	No
	10	0.8 / 0.5	5.2 / 7.3	3.2 / 4.7	No	No
	10	0.7 / 0.5	5.2 / 7.2	3.2 / 4.6	No	No
	10	0.6 / 0.4	5.2 / 7.2	3.2 / 4.6	No	No
Ham Lane & Harney Lane	12	0.4 / 0.3	5.2 / 6.6	3.2 / 4.2	No	No
	10	0.6 / 0.5	5.2 / 6.4	3.2 / 4.0	No	No
	8	0.5 / 0.4	5.2 / 6.4	3.2 / 4.0	No	No
	8	0.1 / 0.1	5.2 / 6.4	3.2 / 4.0	No	No
Huchins St. & Harney Lane	17	0.4 / 0.2	5.2 / 7.7	3.2 / 5.0	No	No
	15	0.5 / 0.3	5.2 / 7.6	3.2 / 4.9	No	No
	15	0.5 / 0.3	5.2 / 7.6	3.2 / 4.9	No	No
	12	0.5 / 0.4	5.2 / 7.5	3.2 / 4.8	No	No
SB 99 SB & Harney Lane	10	0.2 / 0.1	5.2 / 7.0	3.2 / 4.5	No	No
	10	0.2 / 0.2	5.2 / 6.8	3.2 / 4.3	No	No
	10	0.2 / 0.1	5.2 / 6.7	3.2 / 4.3	No	No
	8	0.1 / 0.0	5.2 / 6.7	3.2 / 4.3	No	No

[a] Includes ambient 1-hour concentration of 5.2 ppm and ambient 8-hour concentration of 3.2 ppm. Measured at the Hazelton Road, Stockton Monitoring station.

Source: LSA Associates, Inc., November 2005.

Table IV.C-7: Future (2030) Plus Project Weekday Peak Hour CO Concentrations

Intersection	Receptor Distance to Road Centerline (Meters)	With Project 1-Hour CO Concentration (ppm)	With Project 8-Hour CO Concentration (ppm)	Exceeds State Standards	
				1-Hr	8-Hr
Lower Sacramento Rd. & Turner Rd.	15	9.4	5.6	No	No
	14	9.3	5.5	No	No
	14	9.3	5.5	No	No
	14	9.3	5.5	No	No
SR 99 SB Ramps & Turner Rd.	12	8.8	5.2	No	No
	12	8.7	5.1	No	No
	10	8.6	5.0	No	No
	10	8.5	5.0	No	No
SR 99 NB Ramps & Turner Rd.	12	7.8	4.5	No	No
	12	7.7	4.4	No	No
	10	7.6	4.3	No	No
	8	7.6	4.3	No	No
Kettleman Lane & Davis Rd.	12	10.7	6.5	No	No
	12	10.6	6.4	No	No
	12	10.4	6.3	No	No
	12	10.4	6.3	No	No
Ham Lane & Kettleman Lane	17	10.9	6.6	No	No
	17	10.9	6.6	No	No
	14	10.8	6.6	No	No
	14	10.8	6.6	No	No
Church N & Kettleman Lane	17	10.3	6.2	No	No
	17	10.2	6.1	No	No
	15	10.1	6.1	No	No
	15	10.0	6.0	No	No
Stockton Street & Kettleman Lane	17	9.8	5.9	No	No
	17	9.4	5.6	No	No
	15	9.2	5.4	No	No
	15	9.2	5.4	No	No
Cherokee Lane & Kettleman Lane	17	9.7	5.8	No	No
	17	9.5	5.7	No	No
	15	9.3	5.5	No	No
	14	9.3	5.5	No	No
Lower Sacramento Rd. & Harney Lane	10	10.8	6.6	No	No
	10	10.5	6.4	No	No
	10	10.3	6.2	No	No
	10	10.1	6.1	No	No
Ham Lane & Harney Lane	12	9.6	5.7	No	No
	12	9.2	5.4	No	No
	12	9.1	5.4	No	No
	8	9.1	5.4	No	No
Huchins St. & Harney Lane	17	11.0	6.7	No	No
	15	10.9	6.6	No	No
	15	10.7	6.5	No	No
	12	10.6	6.4	No	No
SB 99 SB & Harney Lane	10	9.7	5.8	No	No
	10	9.4	5.6	No	No
	10	9.2	5.4	No	No
	8	9.2	5.4	No	No

[a] Includes ambient one-hour concentration of 5.2 ppm and ambient eight-hour concentration of 3.2 ppm. Measured at the Hazelton Road - Stockton.

After removal of existing structures, construction dust would also continue to affect local air quality during construction of the project. Construction activities would generate exhaust emissions from vehicles/equipment and fugitive particulate matter emissions that would affect local air quality.

Construction activities are also a source of organic gas emissions. Solvents in adhesives, non-water-based paints, thinners, some insulating materials and caulking materials would evaporate into the atmosphere and would participate in the photochemical reaction that creates urban ozone. Asphalt used in paving is also a source of organic gases for a short time after its application.

The effects of construction activities would increase dustfall and locally elevated levels of PM_{10} downwind of construction activity. Construction dust would be generated at levels that would create an annoyance to nearby properties.

Mitigation Measure AIR-1a: Consistent with Regulation VIII, Fugitive PM_{10} Prohibitions of the SJVAPCD, the following controls are required to be implemented at all construction sites and as specifications for the project.

- All disturbed areas, including storage piles, which are not being actively utilized for construction purposes, shall be effectively stabilized of dust emissions using water, chemical stabilizer/suppressant, covered with a tarp or other suitable cover or vegetative ground cover.
- All on-site unpaved roads and off-site unpaved access roads shall be effectively stabilized of dust emissions using water or chemical stabilizer/suppressant.
- All land clearing, grubbing, scraping, excavation, land leveling, grading, cut and fill, and demolition activities shall be effectively controlled of fugitive dust emissions utilizing application of water or by presoaking.
- With the demolition of buildings up to six stories in height, all exterior surfaces of the building shall be wetted during demolition.
- When materials are transported off-site, all material shall be covered, or effectively wetted to limit visible dust emissions, and at least six inches of freeboard space from the top of the container shall be maintained.
- All operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at the end of each workday. (The use of dry rotary brushes is expressly prohibited except where preceded or accompanied by sufficient wetting to limit the visible dust emissions. Use of blower devices is expressly forbidden.)
- Following the addition of materials to, or the removal of materials from, the surface of outdoor storage piles, said piles shall be effectively stabilized of fugitive dust emission utilizing sufficient water or chemical stabilizer/suppressant.
- Within urban areas, trackout shall be immediately removed when it extends 50 or more feet from the site and at the end of each workday.
- Any site with 150 or more vehicle trips per day shall prevent carryout and trackout.

Additional Control Measures: Construction of the project requires the implementation of control measures set forth under Regulation VIII. The following additional control measures would further reduce construction emissions and should be implemented with the project:

- Limit traffic speeds on unpaved roads to 15 mph;
- Install sandbags or other erosion control measures to prevent silt runoff to public roadways from sites with a slope greater than 1 percent;
- Install wheel washers for all exiting trucks, or wash off all trucks and equipment leaving the site;
- Install wind breaks at windward side(s) of construction area;
- Suspend excavation and grading activity when winds exceed 20 mph (regardless of windspeed, an owner/operator must comply with Regulation VIII's 20 percent opacity limitation);
- Limit area excavation, grading, and other construction activity at any one time;
- Install baserock at entryways for all exiting trucks, and wash off the tires or tracks of all trucks and equipment in designated areas before leaving the site; and
- Suspend excavation and grading activity when winds (instantaneous gusts) exceed 20 mph.

Mitigation Measure AIR-1b: The following construction equipment mitigation measures are to be implemented at construction sites to reduce construction exhaust emissions:

- Use electric equipment for construction whenever possible in lieu of fossil fuel-fired equipment;
- Properly and routinely maintain all construction equipment, as recommended by the manufacturer manuals, to control exhaust emissions;
- Shut down equipment when not in use for extended periods of time to reduce emissions associated with idling emissions;
- Limit the hours of operation of heavy duty equipment and/or the amount of equipment in use; and
- Curtail construction during periods of high ambient pollutant concentrations; this may include ceasing of construction activity during the peak-hour of vehicular traffic on adjacent roadways, and "Spare The Air Days" declared by the District.

Implementation of these mitigation measures would reduce construction period air quality impacts to a less-than-significant level. (LTS)

Impact AIR-2: Project-related regional emissions would exceed the SJVAPCD thresholds of significance for ozone precursors. (S)

Long-term air emission impacts would be those associated with changes in permanent usage of the project site. Mobile source emissions would result from vehicle trips associated with the proposed project. The Urban Emission Model (URBEMIS 2002) computer program, which is the most current air quality model available in California for estimating emissions associated with land use develop-

ment projects, was used to calculate long-term mobile and area source emissions associated with the proposed project.

The SJVAPCD has established thresholds of significance for ozone precursors of 10 tons per year for reactive organic gases (ROG) and nitrogen oxides (NO_x) (two precursors of ozone). Proposed emissions for each of the annexation areas are shown in Table IV.C-8 and Table IV.C-9. Results indicate the project would exceed these thresholds of significance for ROG and NO_x and therefore, the proposed projects individually and cumulatively would have a significant effect on regional air quality. The following mitigation measure shall be incorporated and would minimize the project's impact on air quality, but they would not reduce the effect to less than significant.

Table IV.C-8: Project Regional Emissions in Tons/Year – Westside Annexation Area

	Reactive Organic Gases	Nitrogen Oxides
Operational Emissions	16.21	1.84
Area Source Emissions	11.77	22.67
Total Unmitigated Emissions	**27.99**	**24.51**
SJVAPCD Significance Threshold	**10**	**10**
Exceed?	**Yes**	**Yes**

Source: LSA Associates, Inc., 2005.

Table IV.C-9: Project Regional Emissions Tons/Year – Southwest Gateway Annexation Area

	Reactive Organic Gases	Nitrogen Oxides
Operational Emissions	28.33	39.58
Area Source Emissions	20.62	3.20
Total Unmitigated Emissions	**48.95**	**42.78**
SJVAPCD Significance Threshold	**10**	**10**
Exceed?	**Yes**	**Yes**

Source: LSA Associates, Inc., 2005.

Mitigation Measure AIR-2: The *SJVAPCD's "Guide for Assessing and Mitigating Air Quality Impacts"* identifies potential mitigation measures for various types of projects. The Guide identifies a number of measures to further reducing vehicle trip generation and resulting emissions. The following measures shall be implemented to the extent feasible (it is noted that many of these features are already incorporated into the project).

- Provide pedestrian enhancing infrastructure that includes: sidewalks and pedestrian paths, direct pedestrian connections, street trees to shade sidewalks, pedestrian safety designs/infrastructure, street furniture and artwork, street lighting and or pedestrian signalization and signage.
- Provide bicycle enhancing infrastructure that includes: bikeways/paths connecting to a bikeway system, secure bicycle parking.
- Provide transit enhancing infrastructure that includes: transit shelters, benches, etc., street lighting, route signs and displays, and/or bus turnouts/bulbs.
- Provide park and ride lots.

The plans for each phase of the proposed project shall implement these measures to the extent feasible and appropriate. The implementation of an aggressive trip reduction program with the appropriate incentives for non-auto travel can reduce project impacts by approximately 10 to 15 percent. A reduction of this magnitude could reduce emissions, however, ozone precursors would still exceed the significance thresholds. There is no mitigation available with currently feasible technology to reduce the project's regional air quality impact by an additional 50 percent to a less-than-significant level. Therefore, the project's regional air quality impacts would remain significant and unavoidable. (SU)

Despite great progress in air quality improvement, approximately 146 million people nationwide lived in counties with pollution levels above the NAAQS in 2002. Out of the 230 nonattainment areas

identified during the 1990 Clean Air Act Amendment designation process, 124 areas remain as non-attainment today. In these nonattainment areas, however, the severity of air pollution episodes has decreased. Air quality in the San Joaquin Valley Air Basin in the past 20 years has improved steadily, even with the tremendous increase in population and vehicles and other sources.

As shown in Table IV.C-2, long term exposure to elevated levels of criteria pollutants could result in potential health effects. However, as stated in the thresholds of significance, emission thresholds established by the air district are used to manage total regional emissions within an air basin, based on the air basin attainment status for criteria pollutants. These emission thresholds were established for individual projects that would contribute to regional emissions and pollutant concentrations that may affect or delay the projected attainment target year for certain criteria pollutants.

Because of the conservative nature of the thresholds and the basin-wide context of individual project emissions, there is no direct correlation of a single project to localized health effects. One individual project having emissions exceeding a threshold does not necessarily result in adverse health effects for residents in the project vicinity. This condition is especially true when the criteria pollutants exceeding thresholds are those with regional effects, such as ozone precursors like NOx and ROG.

Based on the above discussion, the potential for an individual project to significantly deteriorate regional air quality or contribute to significant health risk is small, even if the emission thresholds are exceeded by the project. Because of the overall improvement trend on air quality in the air basin, it is unlikely the regional air quality or health risk would worsen from the current condition due to emissions from an individual project.

D. NOISE

This section describes existing noise conditions in the vicinity of the site, describes criteria for determining the significance of noise impacts, and estimates the likely noise that would result from construction activities, vehicular traffic, aircraft, and other noise sources. Where appropriate, mitigation measures are recommended to reduce project-related noise impacts to a less-than-significant level.

1. Setting

The setting section begins with an introduction to several key concepts and terms that are used in evaluating noise. It then explains the various agencies that regulate the noise environment in the City of Lodi and summarizes key standards that are applied to proposed development. This setting section concludes with a description of current noise sources that affect the project site and the noise conditions that are experienced in the project vicinity.

a. Characteristics of Sound. To the human ear, sound has two significant characteristics: pitch and loudness. A specific pitch can be an annoyance, while loudness can affect our ability to hear. Pitch is the number of complete vibrations or cycles per second of a wave that results in the range of tone from high to low. Loudness is the strength of a sound that describes a noisy or quiet environment, and it is measured by the amplitude of the sound wave. Loudness is determined by the intensity of the sound waves combined with the reception characteristics of the human ear. Sound intensity refers to how hard the sound wave strikes an object, which in turn produces the sound's effect. This characteristic of sound can be precisely measured with instruments.

Noise is usually defined as unwanted sound. Noise consists of any sound that may produce physiological or psychological damage and/or interfere with communication, work, rest, recreation or sleep.

Several noise measurement scales exist which are used to describe noise in a particular location. A *decibel* (dB) is a unit of measurement which indicates the relative intensity of a sound. The 0 point on the dB scale is based on the lowest sound level that the healthy, unimpaired human ear can detect. Changes of 3.0 dB or less are only perceptible in laboratory environments. Audible increases in noise levels generally refer to a change of 3.0 dB or more, as this level has been found to be barely perceptible to the human ear in outdoor environments. Sound levels in dB are calculated on a logarithmic basis. An increase of 10 dB represents a 10-fold increase in acoustic energy, while 20 dB is 100 times more intense, 30 dB is 1,000 times more intense. Each 10-dB increase in sound level is perceived as approximately a doubling of loudness. Sound intensity is normally measured through the *A-weighted sound level* (dBA). This scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. Table IV.D-1 shows representative outdoor and indoor noise levels in units of dBA.

Noise impacts can be described in three categories. The first is audible impacts, which refers to increases in noise levels noticeable to humans. Audible increases in noise levels generally refer to a change of 3.0 dB or greater, since this level has been found to be barely perceptible in exterior environments. The second category, potentially audible, refers to a change in the noise level between 1.0 and 3.0 dB. This range of noise levels has been found to be noticeable only in laboratory environments. The last category is changes in noise level of less than 1.0 dB, which are inaudible to the

Table IV.D-1: Typical A-Weighted Sound Levels

Noise Source	A-Weighted Sound Level in Decibels	Noise Environments	Subjective Evaluations
Near Jet Engine	140	Deafening	128 times as loud
Civil Defense Siren	130	Threshold of Pain	64 times as loud
Hard Rock Band	120	Threshold of Feeling	32 times as loud
Accelerating Motorcycle at a few feet away	110	Very Loud	16 time as loud
Pile Driver; Noisy Urban Street/Heavy City Traffic	100	Very Loud	8 times as loud
Ambulance Siren; Food Blender	95	Very Loud	
Garbage Disposal	90	Very Loud	4 times as loud
Freight Cars; Living Room Music	85	Loud	
Pneumatic Drill; Vacuum Cleaner	80	Loud	2 times as loud
Busy Restaurant	75	Moderately Loud	Reference Level
Near Freeway Auto Traffic	70	Moderately Loud	
Average Office	60	Moderate	1/2 as loud
Suburban Street	55	Moderate	
Light Traffic; Soft Radio Music in Apartment	50	Quiet	1/4 as loud
Large Transformer	45	Quiet	
Average Residence Without Stereo Playing	40	Faint	1/8 as loud
Soft Whisper	30	Faint	
Rustling Leaves	20	Very Faint	
Human Breathing	10	Very Faint	Threshold of Hearing

Source: Compiled by LSA Associates, Inc., 2005.

human ear. Only audible changes in existing ambient or background noise levels are considered potentially significant.

As noise spreads from a source, it loses energy so that the farther away the noise receiver is from the noise source, the lower the perceived noise level would be. Geometric spreading causes the sound level to attenuate or be reduced, resulting in a 6-dB reduction in the noise level for each doubling of distance from a single point source of noise to the noise sensitive receptor of concern. There are many ways to rate noise for various time periods, but an appropriate rating of ambient noise affecting humans also accounts for the annoying effects of sound. Equivalent continuous sound level (L_{eq}) is the total sound energy of time-varying noise over a sample period. However, the predominant rating scales for human communities in the State of California are the L_{eq} and community noise equivalent level (CNEL) or the day-night average level (L_{dn}) based on A-weighted decibels (dBA). CNEL is the time-varying noise over a 24-hour period, with a 5 dBA weighting factor applied to the hourly L_{eq} for noises occurring from 7:00 p.m. to 10:00 p.m. (defined as relaxation hours) and a 10 dBA weighting factor applied to noise occurring from 10:00 p.m. to 7:00 a.m. (defined as sleeping hours). L_{dn} is similar to the CNEL scale but without the adjustment for events occurring during the evening hours. CNEL and L_{dn} are within one dBA of each other and are normally exchangeable. The noise adjustments are added to the noise events occurring during the more sensitive hours. The City of Lodi uses the CNEL noise scale for long-term noise impact assessments.

Other noise rating scales of importance when assessing the annoyance factor include the maximum noise level (L_{max}), which is the highest exponential time-averaged sound level that occurs during a stated time period. The noise environments discussed in this analysis are specified in terms of maximum levels denoted by L_{max} for short-term noise impacts. L_{max} reflects peak operating conditions and addresses the annoying aspects of intermittent noise.

Another noise scale often used together with the L_{max} in noise ordinances for enforcement purposes is noise standards in terms of percentile noise levels. For example, the L_{10} noise level represents the noise level exceeded 10 percent of the time during a stated period. The L_{50} noise level represents the median noise level. Half the time the noise level exceeds this level, and half the time it is less than this level. The L_{90} noise level represents the noise level exceeded 90 percent of the time and is considered the background noise level during a monitoring period. For a relatively constant noise source, the L_{eq} and L_{50} are approximately the same.

b. Noise Regulatory Framework. The following section summarizes the regulatory framework related to noise, including federal, State, and City of Lodi's plans, policies and standards.

(1) U.S. Environmental Protection Agency (EPA). In 1972 Congress enacted the Noise Control Act. This act authorized the EPA to publish descriptive data on the effects of noise and establish levels of sound "requisite to protect the public welfare with an adequate margin of safety." These levels are separated into health (hearing loss levels) and welfare (annoyance levels) as shown in Table IV.D-2. The EPA cautions that these identified levels are not standards because they do not take into account the cost or feasibility of the levels. For protection against hearing loss, 96 percent of the population would be protected if sound levels are less than or equal to an $L_{eq(24)}$ of 70 dB. The "(24)" signifies an L_{eq} duration of 24 hours. The EPA activity and interference guidelines are designed to ensure reliable speech communication at about 5 feet in the outdoor environment. For outdoor and indoor environments, interference with activity and annoyance should not occur if levels are below 55 dBA and 45 dBA, respectively.

Table IV.D-2: Summary of EPA Noise Levels

Effect	Level	Area
Hearing loss	$L_{eq}(24) \leq 70$ dB	All areas.
Outdoor activity interference and annoyance	$L_{dn} \leq 55$ dB	Outdoors in residential areas and farms and other outdoor areas where people spend widely varying amounts of time and other places in which quiet is a basis for use.
	$L_{eq}(24) \leq 55$ dB	Outdoor areas where people spend limited amounts of time, such as school yards, playgrounds, etc.
Indoor activity interference and annoyance	$L_{eq} \leq 45$ dB	Indoor residential areas.
	$L_{eq}(24) \leq 45$ dB	Other indoor areas with human activities such as schools, etc.

Source: U.S. Environmental Protection Agency. "Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety." March 1974.

The noise effects associated with an outdoor L_{dn} of 55 dB are summarized in Table IV.D-3. At 55 dB L_{dn}, 95 percent sentence clarity (intelligibility) may be expected at 3.5 meters, and no community reaction. However, 1 percent of the population may complain about noise at this level and 17 percent may indicate annoyance.

(2) State of California. The State of California has established regulations that help prevent adverse impacts to occupants of buildings located near noise sources. Referred to as the "State Noise Insulation Standard," it requires buildings to meet performance standards through design and/or building materials that would offset any noise source in the vicinity of the receptor. State regulations include requirements for the construction of new hotels, motels, apartment houses, and dwellings other than detached single-family dwellings that are intended to limit the extent of noise transmitted into habitable spaces. These requirements are found in the California Code of Regulations, Title 24 (known as the Building Standards Administrative Code), Part 2 (known as the California Building Code), Appendix Chapters 12 and 12A. For limiting noise transmitted between adjacent dwelling units, the noise insulation standards specify the extent to which walls, doors, and floor ceiling assemblies must block or absorb sound. For limiting noise from exterior noise sources, the noise insulation standards set an interior standard of 45 dBA CNEL in any habitable room with all doors and windows closed. In addition, the standards require preparation of an acoustical analysis demonstrating the manner in which dwelling units have been designed to meet this interior standard, where such units are proposed in an area with exterior noise levels greater than 60 dBA CNEL.

Table IV.D-3: Summary of Human Effects in Areas Exposed to 55 dBA Ldn

Type of Effects	Magnitude of Effect
Speech – Indoors	100 percent sentence intelligibility (average) with a 5 dB margin of safety.
Speech – Outdoors	100 percent sentence intelligibility (average) at 0.35 meters. 99 percent sentence intelligibility (average) at 1.0 meters. 95 percent sentence intelligibility (average) at 3.5 meters.
Average Community Reaction	None evident; 7 dB below level of significant complaints and threats of legal action and at least 16 dB below "vigorous action."
Complaints	1 percent dependent on attitude and other non-level related factors.
Annoyance	17 percent dependent on attitude and other non-level related factors.
Attitude Towards Area	Noise essentially the least important of various factors.

Source: U.S. Environmental Protection Agency, "Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety." March 1974.

The State has also established land use compatibility guidelines for determining acceptable noise levels for specified land uses. However, the City has adopted and modified the State's land use compatibility guidelines, as discussed below.

(3) City of Lodi. The City of Lodi addresses noise in the Noise Element of the General Plan and in the Noise Ordinance. The Noise Element of the General Plan adopts the Land Use Compatibility Chart which is shown in Table IV.D-4 below. The Noise Element also lists goals and policies for the City related to noise.

The following are the City of Lodi Goals, Policies and Implementation Programs from the Noise Element of the General Plan that are related to the proposed project.

Goal A: To ensure that City residents are protected from excessive noise.

- Policy 1: The City shall use the outdoor CNEL criteria on the land use compatibility chart (Figure 6-4) as a primary guide to determine whether all or part of an existing or proposed development site should be considered "noise impacted"; areas shall be considered noise impacted if current or projected exterior noise levels would classify the area as "conditionally acceptable," "normally unacceptable," or "presumed to be unacceptable" for the existing or proposed use. [*Also see Table IV.D-4 in this section for the land use compatibility chart.*]
- Policy 2: The City shall recognize that a CNEL measure does not adequately reflect the disturbance effects of intermittent noise events or noise sources that operate for only part of a day. Intermittent or discontinuous noise sources should be evaluated on a case-by-case basis to determine appropriate land use compatibility classifications.

Table IV.D-4: Land Use Compatibility Standards for Noise Element of the City of Lodi General Plan

	Land Use Compatibility by Outdoor L_{dn} or CNEL Value							Supplemental Indoor Noise Criteria (Outdoor Noise Sources)
	Below 55 dB	55-60 dB	60-65 dB	65-70 dB	70-75 dB	75-80 dB	Over 80 dB	
Residential, including Apartments and Mobile Homes								Ldn or CNEL <45 dB in sleeping quarters
Motels, Hotels, Other Transient Lodgings, Hospitals, and Convalescent Facilities								Ldn or CNEL <45 dB in sleeping quarters
Schools, Libraries, Churches, and Meeting Halls								Leq >40 dBA for the noisiest our of the day
Theaters, Auditoriums, and Concert Halls								Leq <35 dBA for the noisiest hour of the day
Business Offices, Medical and Dental Offices, Retail and Wholesale Facilities								Ldn or CNEL <50 dB in fully enclosed portions of the building
Manufacturing and Other Industrial Facilities								Indoor criteria for outdoor noise sources not applicable
Sports Areas, Amusement Parks, and Outdoor Spectator Sports								Indoor criteria for outdoor noise sources not applicable
Parks, Playgrounds, Golf Courses, Riding Stables, Outdoor Amphitheaters, and Passive Open Space								Indoor criteria not applicable

Presumed To Be Acceptable; no special noise mitigation required.

Conditionally Acceptable; acceptability depends on specific property uses and the extent of noise mitigation provided.

Normally Unacceptable; acceptability requires specific findings outlined in Policy A-1 of the Noise Element text.

Presumed To Be Unacceptable; adequate mitigation measures unlikely to be available.

Notes: CNEL criteria apply to outdoor noise from sources that operate continuously or that operate frequently throughout most of a 24-hour period.

CNEL criteria should be applied to noise conditions that are typical for the noise source, not to conditions reflecting temporary peak activity periods.

Land use compatibility classifications for areas affected primarily by intermittent or discontinuous noise sources must be made on a case-by-case basis, reflecting the magnitude, duration, and temporal pattern of ambient noise.

Supplemental indoor noise criteria represent minimum performance standards to be met through building design and acoustic insulation.

Source: City of Lodi General Plan Section 6. Noise Element.

- Policy 3: The City shall require a noise impact analysis for development projects on sites that are wholly or partially noise impacted under existing or projected future conditions.
- Policy 4: The City shall require a noise impact analysis for development projects that may cause or significantly contribute to adjacent properties becoming noise impacted.
- Policy 5: Noise impact analyses required by Policies A-3 and A-4 above shall:
  - be included in any environmental impact study prepared for the proposed project;
  - be the responsibility of the project applicant;
  - be prepared by persons with the experience and training needed to properly address the noise impact and noise mitigation issues that may arise;
  - include, at the discretion of City staff, ambient noise monitoring of the project site and adjacent areas for sufficient time periods and at appropriate seasons to clarify the land use compatibility status of the property under current conditions;
  - estimate future noise levels and land use compatibility conditions following buildout of the proposed project;
  - include an evaluation of the magnitude, duration, and temporal pattern of noise impacts associated with intermittent noise sources that will be associated with the proposed project or that will affect the project site;
  - include identification of noise mitigation measures required to produce "presumed to be acceptable" conditions on the potentially noise-impacted property;
  - include an evaluation of the effectiveness of berms, sound walls, or wall-berm combinations for areas significantly affected by noise from railroad operations or traffic on state highways;
  - include recommendations regarding feasible noise mitigation measures and an evaluation of their expected effectiveness if it is judged infeasible to reduce noise levels at the noise-impacted property to a "presumed to be acceptable" level; and
  - include a discussion of mitigation monitoring procedures that can be used to ensure that recommended mitigation measures are implemented.
- Policy 6: The City shall require a comprehensive, objective analysis of alternative land uses for the proposed site and alternative sites for the proposed uses for:
  - any development projects that contain areas that would be classified as "normally unacceptable" or "presumed to be unacceptable" after implementation of recommended noise mitigation measures; or
  - any development projects that would cause adjacent properties to be classified as "normally unacceptable" or "presumed to be unacceptable" even with implementation of recommended noise mitigation measures.
- Policy 7: The City shall recognize residential uses (including apartments and mobile homes), motels, hotels, other transient lodgings, hospital, convalescent facilities, and schools as noise-sensitive land uses.
- Policy 8: The City should deny development projects that would be classified as "normally unacceptable" or "presumed to be unacceptable" unless one of the following findings can be made:

  Finding A:
  - the uses proposed for the noise-impacted area are not noise-sensitive and are fully contained within enclosed structures that meet or exceed the indoor noise criteria listed in Figure 6-4; *[see Table IV.D-4]*
  - the proposed uses will not expose employees, occupants, or visitors to outdoor noise conditions for longer than required to enter or leave the property; and
  - the proposed uses will not create or significantly contribute to noise problems on other properties.

  Finding B:
  - the uses proposed for the noise-impacted area are not noise-sensitive;
  - noise exposures inherent in the proposed use will significantly exceed the pre-project ambient noise level; and
  - the proposed uses will not create or significantly contribute to noise problems on other properties.

Finding C:

- there are no other reasonable uses for the property; and
- the proposed uses will not create or significantly contribute to noise problems on other properties.

- Policy 9: The City shall apply the State Noise Insulation Standards (California Administrative Code, Title 24) and Chapter 35 of the Uniform Building Code to all new convalescent facilities, hospitals, and single-family residential developments, in addition to the multifamily and transient lodging developments covered by the State Noise Insulation Standards.

The City of Lodi Municipal Code[1] addresses noise limits that would constitute a noise disturbance and limits noise generation. The following are sections are within Chapter 9.24 Noise Regulation of the City of Lodi Municipal Code:

- 9.24.020 a. General Noise Regulations. Notwithstanding any other provision of this chapter, and in addition thereto, it is unlawful for any persons to willfully make or continue or permit or cause to be made or continued, any loud, unnecessary or unusual noise which unreasonably disturbs the peace and quite of any neighborhood or which causes discomfort or annoyance to any reasonable person of normal noise sensitivity.
- 9.4.030 c. It is unlawful for any person, firm or corporation to cause, permit or generate any noise or sound as described herein between the hours of 10:00 p.m. and 7:00 a.m. which exceeds the ambient noise level at the property line of any residential property as determined at the time of such reading by more than five decibels. This section shall be applicable whether such noise or sound is of a commercial or noncommercial nature.

The City of Lodi Municipal Code exempts any sound equipment under a City license or permit. Construction activities would need authorization under City issuance of construction permits before any work could commence on-site. The municipal code does not establish the time period that this exempted activity may occur. However, limits to construction hours would be determined in the special provisions for construction activities by the City Building Inspector.

For the purposes of this analysis, an exterior noise level of up to 65 dBA CNEL will be allowed provided exterior noise levels have been substantially mitigated through a reasonable application of the best available noise reduction technology and interior noise exposure does not exceed 45 dBA CNEL with windows and doors closed. Requiring that windows and doors remain closed to achieve an acceptable interior noise level will necessitate the use of air conditioning or mechanical ventilation.

c. Existing Noise. Existing noise levels in Lodi and their effect on the City's quality of life are affected by the three key noise sources, which are described below.

(1) Existing Ambient Noise. Short-term ambient noise measurements were conducted by LSA Associates, Inc. on November 1, 2005 to document the existing noise environment at four locations in the project area. Noise measurements were performed using a Larson Davis model 720 Type 2 sound level meter. Table IV.D-5 describes the location of the noise monitoring sites and the monitoring results. Currently the project site is located in a relatively quiet area. The existing noise levels in the project range from 54.0 to 59.3 dBA L_{eq}.

[1] City of Lodi Municipal Code Noise Regulation Chapter 9.4.

(2) Existing Stationary Sources. Stationary noise sources associated with the existing commercial uses within the proposed Westside site include car wash activities, loading and unloading activity and parking lot activity. Based on a field review of the SW Gateway site, existing stationary sources in the area include generators used for the adjacent farming operations.

Table IV.D-5: Ambient Noise Monitoring Results

Location	Time	L_{eq}	Source
Westside			
West of Lower Sacramento Road, North of Lodi Avenue (Lot 42)	11:37 a.m. - 11:52 a.m.	54.5	Vehicles, car wash
South of Lodi Avenue	12:02 p.m. – 12:17 p.m.	55.8	Vehicles, helicopter
SW Gateway			
South of Highway 12 – Kettleman Lane (Northern portion of Village 10)	12:40 p.m. – 12:55 p.m.	59.3	Vehicles
North of Harney Lane, East of Lower Sacramento Road (Village 2)	1:03 p.m. – 1:18 p.m.	54.0	Vehicles, farm equipment/generator

Source: LSA Associates, Inc., November 2005.

(3) Existing Vehicular Traffic. Vehicular traffic is an existing noise source due to vehicles traveling on existing transportation facilities near the proposed project area. The existing traffic noise levels in the study area are listed in Table IV.D-6. The FHWA highway traffic noise prediction model (FHWA RD-77-108) was used to evaluate traffic-related noise conditions along Lower Sacramento Road, Kettleman Lane (SR 12), Harney Lane, Lodi Avenue and Vine Street. This model requires various parameters, including traffic volumes, vehicle mix, vehicle speed, and roadway geometry to compute typical equivalent noise levels during daytime, evening, and nighttime hours. Traffic volumes were obtained from the traffic study prepared for the project by Fehr and Peers Associates, Inc. The resultant noise levels are weighted and summed over 24-hour periods to determine the CNEL values. As shown in Table IV.D-6, traffic noise along these roadway segments is generally low to moderate. The 70 dBA CNEL and 65 dBA CNEL traffic noise contours are confined within the right-of-way for all roadway segments analyzed.

Existing groundborne vibrations are mostly associated with passenger vehicles and heavy-duty trucks in the project area. Because rubber tires and suspension systems of passenger vehicles and heavy-duty vehicles provide vibration isolation, it is unusual for passenger vehicles or heavy-duty trucks to cause effects such as rattling of windows, and the source is almost always airborne noise. Most causes of passenger vehicle and heavy-duty truck-related vibration can be directly related to a pothole, bump, expansion joint, or other discontinuity in the road surface. Smoothing the bump or filling the pothole will usually solve the problem.

2. Impacts and Mitigation Measures

a. Criteria of Significance. A project will normally have a significant effect on the environment related to noise if it will substantially increase the ambient noise levels for adjoining areas or conflict with adopted environmental plans and goals of the community in which it is located. The applicable noise standards governing the project site are the State's noise criteria. For the purposes of this project, a noise impact is considered significant if the project would result in:

- Exposure of persons to, or generation of, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- Exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels;

Table IV.D-6: Existing (2005) Baseline Traffic Noise Levels

Roadway Segment	ADT	Centerline to 70 CNEL (feet)	Centerline to 65 CNEL (feet)	Centerline to 60 CNEL (feet)	CNEL (dBA) 50 Feet from Outermost Lane
Lower Sacramento Road					
Between Elm Street and Lodi Avenue	17,400	< 50[a]	109	232	68.2
Between Lodi Avenue to Vine Street	17,500	51	109	233	68.7
Between Vine Street and Kettleman Lane	14,700	< 50	99	208	67.1
Between Kettleman Lane and Harney Lane	10,100	< 50	62	133	65.7
Vine Street					
East of Lower Sacramento Road	3,900	< 50	< 50	< 50	58.5
West of Lower Sacramento Road	1,300	< 50	< 50	< 50	53.7
Kettleman Lane					
Between Davis Road and Lower Sacramento Road	12,500	< 50	< 50	96	63.6
Between Lower Sacramento Road and Mills Avenue	15,500	< 50	84	177	66.4
Harney Lane					
Between Davis Road and Lower Sacramento Road	2,000	< 50	< 50	< 50	55.6
Between West Lane and Lower Sacramento Road	4,900	< 50	< 50	52	59.5
Lodi Avenue					
Lower Sacramento Road to Ham Lane	7,500	< 50	< 50	69	61.3

[a] Traffic noise within 50 feet of roadway centerline requires site specific analysis.

Source: LSA Associates, Inc., November 2005.

- A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project;
- A substantial temporary or periodic increase in ambient noise levels in the project vicinity above the levels existing without the project;
- For a project located within an airport land use plan, or (where such a plan has not been adopted) within 2 miles of a public airport or public use airport, exposure of people residing or working in the project area to excessive noise levels; or
- For a project within the vicinity of a private airstrip, exposure of people residing or working in the project area to excessive noise levels.

The Lodi General Plan standards were used to determine acceptable noise environment for proposed residential uses. Residential areas must meet a 65 dBA CNEL to comply with the Land Use Compatibility Standards of the Noise Element of the City of Lodi General Plan. An interior noise standard of 45 dBA CNEL has been established for residential uses.

b. Less-Than-Significant Noise Impacts. The following noise source would produce less-than-significant effects on residents on the project site:

(1) Aircraft Noise. The project site is located approximately 1.75 miles south of the Lodi Airpark. The runway is oriented running east-west, and the incoming and outgoing flight paths of air-

craft would not run directly over the SW Gateway project site. Airport operational statistics estimate an average of 20 aircraft operations per day at the Lodi Airport. The project site is outside the 60 dBA CNEL impact zone of the airport and, therefore, would not be exposed to significant aircraft noise. However, future residents may experience relatively high single event noise exposure level from airport landing and takeoff operations.

c. Significant Noise Impacts. Construction- and operation-period significant impacts that would result from implementation of the project are described below.

(1) Construction-Period Impacts. The majority of the project site is surrounded by vacant land. Therefore, impacts of construction noise to adjacent land uses would be minimal. However, there are existing residences located within 50 feet of the project site. These sites include the low density residential area located north of the Woodbridge Irrigation District canal, north of the Westside site. Additionally, existing homes located south of the proposed SW Gateway area would be impacted by construction noise. Project construction would result in short-term noise impacts, as described below.

<u>Impact NOI-1</u>: On-site construction activities would potentially result in short-term noise impacts on adjacent residential uses. (S)

Noise levels from construction activities such as finished grading and building erection for the proposed project may range up to 91 dBA L_{max} at 50 feet from the active construction area for a limited time period.

The transport of workers and construction equipment and materials to the project site would incrementally increase noise levels on access roads leading to the site. Workers and construction equipment would use existing routes. Therefore, noise from passing trucks (87 dBA L_{max} at 50 feet) would be similar to existing truck-generated noise. Short-term, intermittent noise from trucks would be minor and less than significant when averaged over a longer time period. In addition, noise associated with on-road vehicles is regulated by federal and state governments and is exempted from local government regulations.

Noise generated during excavation, grading, and building erection on the project site would result in potential noise impacts to off-site uses and to on-site uses if they were to occupy the site while later phases of construction were continuing. Existing tenants in the project vicinity may also experience short-term noise generated by construction equipment and activities on the project site when construction occurs near the project boundary.

Construction of the proposed project is expected to require the use of earthmovers such as bulldozers and scrapers, loaders and graders, water trucks, and pickup trucks. Pile drivers and rock drills are not expected to be used on a regular basis during construction. As shown in Table IV.D-7, the typical maximum noise level generated by each earthmover on the proposed project site is assumed to be 88 dBA L_{max} at 50 feet from the operating earthmover. The maximum noise level generated by water and pickup trucks is approximately 86 dBA L_{max} at 50 feet from these vehicles. Each doubling of the sound sources with equal strength would increase the noise level by 3 dBA. Assuming each piece of construction equipment operates at some distance apart from the other equipment, the worst-case

combined noise level at the nearest residences during this phase of construction would be 91 dBA L_{max} at a distance of 50 feet from an active construction area.

The closest existing sensitive receptors would be the residences located east of the proposed project site at a distance of approximately 50 feet or residents that occupy the site before construction is complete. At this distance the existing residences would be exposed to construction noise levels of up to 91 dBA L_{max}.

Table IV.D-7: Typical Construction Equipment Noise Level

Type of Equipment	Range of Sound Levels Measured (dBA at 50 feet)	Suggested Sound Levels for Analysis (dBA at 50 feet)
Pile Drivers	81 to 96	93
Rock Drills	83 to 99	96
Jackhammers	75 to 85	82
Pneumatic Tools	78 to 88	85
Pumps	68 to 80	77
Dozers	85 to 90	88
Tractors	77 to 82	80
Front-End Loaders	86 to 90	88
Hydraulic Backhoe	81 to 90	86
Hydraulic Excavators	81 to 90	86
Graders	79 to 89	86
Air Compressors	76 to 86	86
Trucks	81 to 87	86

Source: Bolt, Beranek & Newman, 1987. *Noise Control for Buildings and Manufacturing Plants.*

Implementation of the following multi-part mitigation measure for project construction within 500 feet of an existing residence or residences of the project that are occupied before the completion of total project construction, would reduce potential construction period noise impacts to less-than-significant levels:

> Mitigation Measure NOI-1a: Construction activities would need authorization under City issuance of construction permits before any work could commence on-site. Construction activities shall be limited to the hours of 7:00 a.m. to 10:00 p.m. Monday through Sunday, consistent with the City's Ordinance.
>
> Mitigation Measure NOI-1b: All stationary noise generating construction equipment, such as air compressors and portable power generators, shall be located as far as practical from existing residences.
>
> By meeting the hours of construction timeframe and minimizing noise from stationary construction equipment, the project will not result in a substantial temporary or periodic increase in ambient noise levels. (LTS)

(2) Operation-Period Impacts. The project site is exposed to noise levels generated by traffic on Kettleman Lane, Lower Sacramento Road, Harney Lane and Vine Street. Depending on where buildings are situated and how they are constructed, the interior of some buildings and associated outdoor spaces may experience noise levels that exceed appropriate noise standards.

Impact NOI-2: Local traffic would generate long-term noise levels exceeding *Normally Acceptable* and *Conditionally Acceptable* noise levels on the project site. (S)

The FHWA highway traffic noise prediction model (FHWA RD-77-108) was used to evaluate traffic-related noise conditions in the vicinity of the proposed project site. The existing plus all projects traffic noise levels are shown in Table IV.D-8. The cumulative (2030) traffic noise levels without the project are shown in Table IV-D-9. The cumulative (2030) traffic noise levels with the project (including all three components) are shown in Table IV-D-10.

Table IV.D-8: Existing Plus Project Traffic Noise Levels

Roadway Segment	ADT	Centerline to 70 (CNEL) (feet)	Centerline to 65 (CNEL) (feet)	Centerline to 60 (CNEL) (feet)	CNEL (dBA) 50 Feet from Centerline of Outermost Lane	Increase from Baseline Conditions
Lower Sacramento Road						
Between Elm Street and Lodi Avenue	23,000	63	131	279	69.4	1.2
Between Lodi Avenue to Vine Street	27,000	68	144	310	70.6	1.9
Between Vine Street and Kettleman Lane	25,000	68	139	295	69.4	2.3
Between Kettleman Lane and Harney Lane	13,800	< 50[a]	78	164	65.9	0.2
Vine Street						
East of Lower Sacramento Road	4,400	< 50	< 50	< 50	59.0	0.5
West of Lower Sacramento Road	2,500	< 50	< 50	< 50	56.6	2.9
Kettleman Lane						
Between Davis Rd. and Lower Sacramento Rd.	13,700	< 50	< 50	102	64.0	0.4
Between Lwr. Sacramento Rd. and Mills Ave.	23,500	62	114	235	67.1	0.7
Harney Lane						
Between Davis Rd. and Lower Sacramento Rd.	3,400	< 50	< 50	< 50	57.9	2.3
East of Lower Sacramento Road	7,800	< 50	< 50	70	61.5	2.0
Lodi Avenue						
Lower Sacramento Road to Ham Lane	10,800	< 50	< 50	87	62.9	1.6

[a] Traffic noise within 50 feet of roadway centerline requires site specific analysis.

Source: LSA Associates, Inc., November 2005.

Table IV.D-9: Cumulative (2030) Without Project Traffic Noise Levels

Roadway Segment	ADT	Centerline to 70 (CNEL) (feet)	Centerline to 65 (CNEL) (feet)	Centerline to 60 (CNEL) (feet)	CNEL (dBA) 50 Feet from Centerline of Outermost Lane
Lower Sacramento Road					
Between Elm Street and Lodi Avenue	25,200	66	139	297	69.8
Between Lodi Avenue to Vine Street	25,400	68	140	298	69.4
Between Vine Street and Kettleman Lane	22,600	67	132	277	68.4
Between Kettleman Lane and Harney Lane	18,700	< 50	93	200	68.3
Vine Street					
East of Lower Sacramento Road	5,700	< 50	< 50	57	60.1
West of Lower Sacramento Road	1,800	< 50	< 50	< 50	55.1
Kettleman Lane					
Between Davis Rd. and Lower Sacramento Rd.	22,200	< 50	66	141	66
Between Lower Sacramento Rd. and Mills Ave.	23,900	54	111	236	68.3
Harney Lane					
Between Davis Rd. and Lower Sacramento Rd.	2,800	< 50	< 50	< 50	57.1
East of Lower Sacramento Rd.	6,800	< 50	< 50	64	60.9
Lodi Avenue					
Lower Sacramento Road to Ham Lane	9,400	< 50	< 50	80	62.3

[a] Traffic noise within 50 feet of roadway centerline requires site specific analysis.

Source: LSA Associates, Inc., November 2005.

Table IV.D-10: Cumulative (2030) Plus Project Traffic Noise Levels

Roadway Segment	ADT	Centerline to 70 (CNEL) (feet)	Centerline to 65 (CNEL) (feet)	Centerline to 60 (CNEL) (feet)	CNEL (dBA) 50 Feet from Centerline of Outermost Lane	Increase from Baseline Conditions
Lower Sacramento Road						
Between Elm Street and Lodi Avenue	30,800	75	158	339	70.7	0.9
Between Lodi Avenue to Vine Street	36,200	85	177	377	71.0	1.6
Between Vine Street and Kettleman Lane	31,700	81	163	346	69.9	1.5
Between Kettleman Lane and Harney Lane	22,400	< 50[a]	105	226	69.1	0.8
Vine Street						
East of Lower Sacramento Road	6,100	< 50	< 50	60	60.4	0.3
West of Lower Sacramento Road	3,000	< 50	< 50	< 50	57.4	2.3
Kettleman Lane						
Between Davis Rd. and Lower Sacramento Rd.	24,300	< 50	70	150	66.4	0.4
Between Lwr. Sacramento Rd. and Mills Ave.	30,500	62	130	277	69.4	1.1
Harney Lane						
Between Davis Rd. and Lower Sacramento Rd.	5,100	< 50	< 50	53	59.7	2.6
East of Lower Sacramento Rd.	11,900	< 50	< 50	93	63.3	2.4
Lodi Avenue						
Lower Sacramento Road to Ham Lane	12,400	< 50	< 50	96	63.5	1.2

[a] Traffic noise within 50 feet of roadway centerline requires site specific analysis.

Source: LSA Associates, Inc., November 2005.

Modeling results indicate that implementation of the proposed project would result in relatively minor changes in traffic noise levels. The largest project-related increase in traffic noise is along Vine Street, which would experience a 2.9 dBA increase over the cumulative no project and the cumulative with project scenario. This increase is less than the 3 dBA increase that is normally perceptible to the human ear in an outdoor environment. Therefore, no mitigation is required for off-site areas.

Results also indicate that portions of the project site would be exposed to noise levels between 60 and 65 dBA CNEL. Anticipated on-site noise impacts are discussed below.

The proposed homes located adjacent to Kettleman Lane, Lower Sacramento Road and Harney Lane will be exposed to traffic noise levels of up to 63.9 dBA CNEL for the existing plus project scenario. Future noise levels of up to 69.9 dBA CNEL are expected at these sites. This noise level exceeds the *conditionally acceptable* exterior noise standard of 65 dBA CNEL. To reduce the exterior noise level, a sound barrier with a minimum height of 6 feet shall be constructed along the rear property line of these lots. This 6-foot-high sound wall or sound wall/berm combination would provide 5 dBA or more in noise reduction for ground-floor bedrooms facing the road when the direct line of sight to the traffic is blocked. Based on the EPA's Protective Noise Levels (EPA 550/9-79-100, November 1978), with a combination of walls, doors, and windows, standard construction for northern California residential buildings would provide more than 25 dBA in exterior to interior noise reduction with windows closed and 15 dBA or more with windows open. With windows open, the ground floor rooms would not meet the interior noise standard (i.e., 64.9 dBA – 15 dBA = 49.9 dBA). Therefore, a form of mechanical ventilation such as air conditioning systems would be required to ensure that windows can remain closed for a prolonged period of time.

Second floor balconies or decks directly exposed to Kettleman Lane, Lower Sacramento Road and Harney Lane would exceed the exterior standard of 65 dBA CNEL.

Second floor bedrooms directly exposed to traffic noise levels exceeding 65 dBA CNEL would not meet the interior noise standard (i.e., 65 dBA – 15 dBA = 50 dBA). Therefore, in addition to mechanical ventilation, windows with a minimum STC-32 rating are recommended for all upper floor bedrooms associated with residential units directly exposed to Kettleman Lane, Lower Sacramento Road and Harney Lane.

Implementation of the following multi-part mitigation measure would reduce the interior and exterior noise levels to below the exterior noise threshold of 65 dBA CNEL and the interior noise threshold of 45 dBA CNEL:

> Mitigation Measure NOI-2a: A 6-foot-high sound wall shall be constructed along the rear property line of all lots adjacent to Kettleman Lane, Lower Sacramento Road and Harney Lane.
>
> Mitigation Measure NOI-2b: Mechanical ventilation (such as air conditioning) shall be installed in the proposed residential units adjacent to Kettleman Lane, Lower Sacramento Road and Harney Lane so that the windows can remain closed for prolonged periods of time.
>
> Mitigation Measure NOI-2c: Windows with a minimum STC rating of STC-32 shall be installed in all units directly exposed to Kettleman Lane, Lower Sacramento Road and Harney Lane.
>
> Mitigation Measure NOI-2d: A sound barrier with a minimum height of 5 feet is recommended for all upper floor outdoor use areas directly adjacent to Kettleman Lane, Lower Sacramento Road and Harney Lane.
>
> Should the City determine that sound wall and sound barriers are not appropriate or feasible for the proposed project, the impact would be considered significant and unavoidable. (LTS if mitigation implemented; SU if not implemented)

E. CULTURAL AND PALEONTOLOGICAL RESOURCES

This section evaluates the proposed projects' potential impacts to cultural and paleontological resources. This section is based on *A Cultural and Paleontological Resources Survey for the Westside and Southwest Gateways Projects,* completed by LSA Associates, Inc. in January 2006. Cultural resources are sites, buildings, structures, objects, and districts that have traditional or cultural value for the historical significance they possess. Paleontological resources are the fossilized remains of plants and animals. The California Environmental Quality Act (CEQA) requires that effects to cultural and paleontological resources by discretionary projects be considered in the planning process.

CEQA §15064.5 details appropriate measures for the evaluation and protection of cultural resources. The blanket CEQA term used for cultural resources is "historical resource," which is defined as any resource which is: (1) eligible for listing on the California Register of Historical Resources (California Register); (2) listed in a local register of historical resources (as defined at PRC §5020.1(k)); (3) identified as significant in a historical resource survey meeting the requirements of §5024.1(g) of the Public Resources Code; or (4) determined to be a historical resource by a project's lead agency (§15064.5(a)). The subsection further states that "A project with an effect that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment" (§15064.5(b)).

CEQA also applies to archaeological sites (§15064.5(c)). CEQA requires a lead agency to determine if an archaeological cultural resource fits into one of three legal categories (§15064.5(c)(1-3)). A lead agency applies a two-step screening process to determine if an archaeological cultural resource meets the definition of a historical resource, a unique archaeological resource, or neither. Prior to considering potential impacts, the lead agency must determine whether an archaeological cultural resource meets the definition of a historical resource in §15064.5(c)(1). If the archaeological cultural resource meets the definition of a historical resource, then it is treated like any other type of historical resource in accordance with §15126.4. If the archaeological cultural resource does not meet the definition of a historical resource, then the lead agency applies the second screen to determine if the resource meets the definition of a unique archaeological resource as defined at §21083.2(g). Should the archaeological cultural resource meet the definition of a unique archaeological resource, then it must be treated in accordance with §21083.2. If the archaeological cultural resource does not meet the definition of a historical resource or an archaeological resource, then effects to the resource are not considered significant effects on the environment (§15064.5(c)(4)).

Section 7050.5 of the California Health and Safety Code states that in the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the remains are discovered has determined whether or not the remains are subject to the coroner's authority. If the human remains are of Native American origin, the Coroner must notify the Native American Heritage Commission within 24 hours of this identification. The Native American Heritage Commission will identify a Native American Most Likely Descendant (MLD) to inspect the site and provide recommendations for the proper treatment of the remains and associated grave goods.

CEQA also addresses impacts to paleontological resources (*CEQA Guidelines* Appendix G(V)(c)). Paleontological resources consist of fossils and fossiliferous deposits.[1]

Public Resources Code (PRC) §5097.5 provides for the protection of cultural and paleontological resources. PRC §5097.5 prohibits the removal, destruction, injury, or defacement of archaeological and paleontological features on any lands under the jurisdiction of state or local authorities.

1. Setting

Record searches, literature reviews, field surveys, and contacts with potentially interested parties occurred to prepare the description of the cultural and paleontological resources of the project areas and vicinity.

a. Cultural Resources. This cultural resources analysis included a records search, literature review, field survey, and consultation with potentially-interested parties. These tasks were done to: (1) identify cultural resources and cultural resource studies within or adjacent to the project areas; and (2) gather archaeological, ethnographic, and historical information necessary to prepare the cultural overview.

(1) Methods. Background research was conducted to: (1) identify previously recorded or otherwise known cultural resources and cultural resource studies in or adjacent to the project area; and (2) obtain information about the archaeological, ethnographic, and environmental history of the project area. A field survey was conducted to identify unrecorded cultural resources within or adjacent to the project area. Consultation was conducted with organizations that may have information on cultural resources in the project areas.

Records Search. A records search (#5955L) was conducted at the Central California Information System (CCIS) of the California Historical Resources Information System, Stanislaus State University, of the project areas and a ¼-mile radius for LSA on October 11, 2005. The CCIS, an affiliate of the State of California Office of Historic Preservation, is the official state repository of cultural resources records and reports for San Joaquin County.

No cultural resources are recorded within the project areas. A portion of the Woodbridge Irrigation Canal (P-39-004236), constructed in 1891 to divert water from the Mokelumne River, is recorded west of the Westside project area and adjacent to Lower Sacramento Road. The portion of the canal adjacent to the northern boundary of the Westside project area has not been recorded.

Buildings over 50 years old were identified in the SW Gateway project area and the additional annexation areas east of Lower Sacramento Road (see Table IV.K-1). In 2002, the State Office of Historic Preservation determined that the properties identified in the SW Gateway project area were ineligible for listing in the National Register. These properties also do not meet the criteria for listing in the California Register. The California Office of Historic Preservation also determined that two properties in the additional annexation parcels, at 13786 and 14752 Lower Sacramento Road, are ineligible for listing in the National Register.

[1] Society of Vertebrate Paleontology, 1995. Conformable Impact Mitigation Guidelines. *Society of Vertebrate Paleontology News Bulletin* 163:January.

The windshield survey of the additional annexation parcels also identified residences at 777, 800, 844, 865, 890, 908, and 930 East Olive Avenue. Access to these parcels was not granted for this project and no architectural properties in the additional annexation areas were evaluated for their eligibility for listing in the California Register. There are currently no development plans for these parcels.

The *Directory of Properties in the Historic Property Data File* [2] lists properties in the SW Gateway project area (including the Van Ruiten farmstead home that is located on Lower Sacramento Road) and other annexation areas east of Lower Sacramento Avenue that have been evaluated for their eligibility for listing in the National Register of Historic Places (see Table IV.E-1).[3] In 2002, The State Office of Historic Preservation assigned these properties a National Register of Historic Places (National Register) status code of 6Y: determined ineligible for listing in the National Register by consensus. The California Office of Historic Preservation Technical Assistance Series 6 *California Register and National Register: A Comparison (for purposes of determining eligibility for the California Register)*, states that "Because the California Register was consciously designed on the model of the National Register, the two programs are extremely similar." Although the properties listed in Table IV.E-1 were evaluated under the National Register, these determinations are generally applicable to California Register eligibility also. Technical Assistance Series 6 also points out that there are three special considerations whereby a cultural resource may be eligible for the California Register, but not the National Register:

- A building that has been moved to prevent its demolition.
- A resource less than 50 years old may be considered for listing in the California Register if it can be demonstrated that sufficient time has passed to understand its historical importance.
- A reconstructed building less than 50 years old may be eligible if it embodies traditional building methods and techniques that play an important role in a communities historical rooted beliefs, customs, and practices.

There was no indication that any of the buildings in the project area fulfilled the above listed special considerations

One cultural resources study[4] has been completed of a small portion of the SW Gateway project area located in the SE¼ of NW¼ of NW¼ of Section 15, Township 3 North, Range 6 East for a proposed shopping center and storm water detention pond. No cultural resources were identified in the project area. No cultural resources studies of the Westside project area or the additional annexation areas east of Lower Sacramento Road were on file at the CCIS.

Literature Review. LSA reviewed prehistoric, ethnographic, and historical information about the project area.

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[2] California Office of Historic Preservation, *Directory of Properties in the Historic Property Data File.* (Sacramento: California Office of Historic Preservation, August 8, 2005)

[3] No Historic Resources Inventory (HRI) or California Department of Parks and Recreation (DPR) 523 forms for these resources were on file at the CCIS.

[4] Colin I. Busby, *Archaeological/Paleontological Resources Assessment, Lodi Shopping Center Project, City of Lodi, San Joaquin County*. (San Leandro: Basin Research Associates, 2004).

Table IV.E-1: Directory of Properties Listings for Buildings and Structures in the Project Areas

Street Address	APN	Year Constructed	Property Description	National Register Status Code
14101 N. Lower Sacramento Rd.	058-040-01	1920	Residence	6Y
14167 N. Lower Sacramento Rd.	058-030-06	1942	Residence	6Y
14169 N. Lower Sacramento Rd.	058-030-06	1942	Residence	6Y
14171 N. Lower Sacramento Rd.	058-030-06	1942	Residence	6Y
14191 N. Lower Sacramento Rd.	058-030-06	1942	Residence	6Y
14195 N. Lower Sacramento Rd.	058-030-06	1942	Residence	6Y
14197 N. Lower Sacramento Rd.	058-030-06	1942	Residence	6Y
14433/14499 N. Lower Sacramento Rd.	058-030-04	1906-1960	1906 residence; 1930 two-car garage; 1940 barn and utility building; 1950 storage buildings and grain silo; and 1960 barn	6Y
13786 N. Lower Sacramento Rd.	058-230-04	1937	Residence	6Y
14752 N. Lower Sacramento Rd.	058-140-04	1965	1965 residence and a storage facility, residence, and garages of unknown construction dates	6Y

Source: LSA Associates, Inc., 2006.

Field Survey. LSA conducted a field survey of the Westside and SW Gateway project areas on November 1 and 2, 2005. Permission to access Other Areas to be Annexed east of Lower Sacramento Road was not granted, and a field survey was not conducted of these parcels. A "windshield survey" of these additional annexation parcels was completed on November 2, 2005; such a survey is acceptable for a program-level review when no specific development is proposed.

A historic archaeological site (assigned a field identifier LAN-1), consisting of a low-density surface scatter of ceramics, glass, and metal, was identified in the Westside project area. The deposit corresponds with the approximate location of two buildings (no longer extant) indicated on the USGS 1910 *Woodbridge* quad. The survey also confirmed the presence of built environment properties over 50 years old in the SW Gateway and additional annexation parcels east of Lower Sacramento Road (see Table IV.E-1).

Consultation. LSA sent letters and maps to potentially-interested parties to solicit public involvement in this environmental review. No concerns about the proposed project were expressed by those contacted. The parties contacted and the results of the contacts are provided below.

On October 20, 2005, LSA sent a letter with maps depicting the project areas to the Native American Heritage Commission (NAHC) in Sacramento requesting a review of their sacred lands file for any Native American cultural resources that might be affected by the proposed project. Debbie Pilas-Treadway, NAHC Environmental Specialist III, responded in a faxed letter on October 26, 2005, that

a review of the sacred lands file did not indicate the presence of Native American cultural resources "in the immediate project area."

On October 20, 2005, LSA sent a letter with maps depicting the project areas to the San Joaquin County Historical Society and Museum (Society) requesting information or concerns regarding the project areas. On October 31, 2005, LSA contacted Michael Bennett of the Society via e-mail to determine if the organization had any concerns or information on historical sites within the project areas. Michael Bennett e-mailed LSA on October 31, 2005, stating that he was not aware of any historical resources that will be impacted by the project. Mr. Bennett stated, however, that the Society does not have the funds to perform the research to confirm this.

On October 20, 2005, LSA sent a letter with maps depicting the project areas to the Lodi Historical Society requesting information or concerns regarding the proposed project. On October 31, 2005, LSA contacted the Museum via e-mail to determine if it had any concerns or information on historical sites within the project areas. No response from the Lodi Historical Society has been received to date.

(2) Prehistory and Ethnography. The Paleo-Archaic-Emergent cultural sequence developed by Frederickson[5] is commonly used to interpret the prehistoric occupation of Central California. The sequence is broken into three broad periods: the Paleoindian Period (10,000-6000 B.C.); the three-staged Archaic Period, consisting of the Lower Archaic (6000-3000 B.C.), Middle Archaic (3000-500 B.C.), and Upper Archaic (500 B.C.-A.D. 1000); and the Emergent Period (A.D. 1000-1800).

The Paleo Period began with the first entry of people into California. These people probably subsisted mainly on big game, minimally processed plant foods, and had no trade networks. The Archaic period is characterized by increased use of plant foods, elaboration of burial and grave goods, and increasingly complex trade networks. The Emergent Period is marked by the introduction of the bow and arrow, the ascendance of wealth-linked social status, and the elaboration and expansion of trade networks, signified in part by the appearance of clam disk bead money.[6, 7]

Archaeological evidence from the northern San Joaquin Valley indicates Native American settlement beginning by ca. 3,300 B.C.[8] and possibly earlier, as it is likely much of the evidence for pre circa 4000-5000 B.C. habitation lies buried beneath alluvium. The San Joaquin Valley has had many population movements and waves of cultural influence from neighboring regions; Hokan populations may have been the early occupants of the San Joaquin Valley, eventually displaced by migrating Penutian groups (which include ancestral Plains Miwok), who possibly migrated from the Great Basin.[9] Penutian groups most likely entered the San Joaquin Valley in several minor waves, slowly

[5] David A. Fredrickson, "Cultural Diversity in Early Central California: A View from the North Coast Ranges," *Journal of California Anthropology* 1(1) (1974):41-53.

[6] Ibid.

[7] Michael J. Moratto, *California Archaeology*. (Orlando: Academic Press, 1984).

[8] Ibid.

[9] Albert B. Elsasser, "Development of Regional Prehistoric Cultures." In *California*, edited by Robert F. Heizer, pp. 37-57. Handbook of North American Indians, Volume 8; William C. Sturtevant, general editor. (Washington D.C.: Smithsonian Institution, 1978).

replacing the original Hokan populations, causing them to migrate to the periphery of the valley.[10,11] By about A.D. 300-500, the Penutian settlement of the San Joaquin Valley was complete. At the time of European contact, the study area was within the territory of the *Muqueleme* tribelet of the Plains Miwok.

At the time of Euro-American contact, the project area was within the territory of the Plains Miwok.[12, 13] Plains Miwok territory encompassed the watersheds of the lower reaches of the Cosumnes, Mokelumne, and Sacramento rivers. Although sources differ as to the ethnographic territory of the Plains Miwok,[14, 15] the boundary extended approximately from the Delta near Rio Vista in the southwest to just south of Sacramento in the northwest. The foothills of the Sierra formed the eastern boundary while the western boundary extended to the Yolo Basin.[16] Linguistically, the Plains Miwok were part of the Eastern group of the two subdivisions of Miwokan speakers.[17] Four *Muqueleme* villages were located on the Mokelumne River, one of which was just north of Lodi, on the south bank of the river.[18] Plains Miwok dwellings were circular thatched structure, with some underground structures belonging to wealthier individuals.[19]

By the early 1800s, Spanish expeditions into the interior and the establishment of the Spanish mission system contributed to the rapid disappearance of the native inhabitants. Studies of mission records indicate that the *Muqueleme* were taken to Mission San Jose between 1817 and 1836, although most resisted until 1834.[20] Introduced diseases, particularly the epidemic of 1833, claimed thousands of lives and wiped out entire communities of San Joaquin Valley Indians. In 1834, the Mexican government secularized the missions, and the language and culture of the Miwok had been permanently disrupted by this time. Many natives abandoned missions and returned to their former territories where they survived by hunting and gathering; others worked on ranches as laborers or house servants.

(3) Historical Background. During the California Gold Rush (c. 1848-1856), various trails led through Lodi to the gold fields. Some miners recognized the potential for agricultural development and settled along the Mokelumne River and within today's City of Lodi. In 1869, the Central Pacific Railroad reached Lodi, connecting the town with Stockton and Oakland to the south and Sacramento to the north. Lodi was laid out parallel to the tracks. The town of Mokelumne, Lodi's original name, changed its name at that time to avoid confusion with other towns along the river with the

[10] Ibid.

[11] William F. Shipley, "Native Languages of California." In *California*, edited by Robert F. Heizer, pp. 80-90. Handbook of North American Indians, Volume 8; William C. Sturtevant, general editor. (Washington D.C.: Smithsonian Institution, 1978).

[12] James A. Bennyhoff, *Ethnography of the Plains Miwok*. (Davis: Center for Archaeological Research, 1977).

[13] Richard Levy, "Eastern Miwok." In *California*, edited by Robert F. Heizer, pp. 398-413. Handbook of North American Indians, Volume 8; William C. Sturtevant, general editor. (Washington D.C.:Smithsonian Institution, 1978).

[14] James A. Bennyhoff, op. cit.

[15] Richard Levy, op. cit.

[16] James A. Bennyhoff, op. cit.

[17] Richard Levy, op. cit.

[18] James A. Bennyhoff, op. cit.

[19] Richard Levy, op. cit.

[20] James A. Bennyhoff, op. cit.

same name. The Ivory Store, at the corner of Pine and Sacramento streets, was established in 1869, and other merchant's soon followed with their businesses.[21]

Local industries, including the Lodi Land and Lumber Company and the Lodi Flouring Mill, and agriculture helped the City grow. Access to rail transportation allowed crops and products to be transported throughout the country. Lodi was the watermelon capital of the world from 1880 until 1900, and grape growing began in the 1860s. In 1885, Japanese immigrant settled the area to work on ranches. Over time, they purchased lands and grew grapes. In the late 1890s German nationals settled Lodi and also participated in the grape industry. By 1900, Lodi had over two million grapevines and a population of 1,500.[22,23]
The City incorporated in 1906 and today Lodi has 75,000 acres of grapes, 60 wineries and is the largest grape growing region in the state. In 2004 over 134,000 tons of grapes were produced. The City retains a small-town atmosphere and is primarily a single-family residential community with a population of 56,000.

(4) Archaeological Site. Historic archaeological site LAN-1 is in the Westside project area. The site corresponds to the approximate location of two buildings (no longer extant) shown on the 1910 USGS *Woodbridge* quad. The surface distribution of materials at this location has been affected by plowing. Preliminary evaluation indicates that the scatter lacks integrity and is probably not eligible for listing in the California Register. It was not determined, however, if the site contains deposits (e.g., backfilled privies, wells, and building foundations) that may meet the criteria for listing in the California Register.

b. Paleontological Resources. This section describes the research for the paleontological analysis, and then describes the project areas' paleontological setting and sensitivity.

(1) Methods. Background research for this paleontological resources analysis consisted of a fossil locality search and literature review. This research was conducted to: (1) identify fossil localities within or adjacent to the project area; and (2) identify the geological formations within and adjacent to the project area, as well as the types of fossils that may occur within such formations.

Fossil Locality Search. An online fossil locality search was conducted by LSA paleontologist Benjamin Matzen on November 15, 2005 using the Berkeley Natural History Museum (BNHM) online database, specifically data from the University of California Museum of Paleontology (UCMP), Berkeley. The purpose of this search was to: (1) identify previous studies and known paleontological sites within and near the project area; and (2) identify the formations and types of fossils that might be expected within and adjacent to the project area based on the existing geological and paleontological data.

There are no fossil localities within or directly adjacent to the project area. However, one vertebrate fossil locality lies within 10 miles of the project area. The vertebrate fossils from this locality are from Late Pleistocene sediments of the Rancholabrean land mammal age (between approximately

[21] Naomi McCallum Carey, *Mountain Men to Astronauts*. (Lodi: Lodi Centennial Citizens Advisory Committee, 1969).

[22] Ibid.

[23] City of Lodi, *History of the City of Lodi*. (http://www.lodi.gov/clerk/history.htm)

10,000 to 30,000 years old), from the same geologic formation as the sediments that underlie the project area. The vertebrate fossil taxa commonly found in these sediments can include bison, mammoth, ground sloths, saber-toothed cats, dire wolves, cave bears, rodents, birds, reptiles and amphibians.[24,25, 26] Rancholabrean fossils are very common within Modesto Formation sediments throughout the San Joaquin Valley.

Literature Review. LSA reviewed paleontological and geological literature relevant to the project area and its vicinity. This literature was reviewed to: (1) identify locations where paleontological resources are known to occur; and (2) identify the geological formations and paleontological resources that may occur in the project area.

(2) Paleontological Setting. The project area lies in northern San Joaquin Valley. Within and adjacent to the project area, the soils have an average depth of 5 to 6 feet. The sediments underlying the soil are Quaternary alluvium generally derived from the east by the erosion of the Sierra Nevada Range. This alluvium consists of Modesto Formation sediments underlain by Early Tertiary marine sediments.

The project area and much of the San Joaquin Valley lie on Late Pleistocene Modesto Formation sediments.[27,28] Sediments of this age and formation in the vicinity of the project area have produced significant vertebrate fossils from the Rancholabrean land mammal age.[29] Common examples of Rancholabrean vertebrate fossils include ground sloth, dire wolf, saber-toothed cat, camel, bison, mammoth, horse, rodent, bird, reptile and amphibian fossils.[30, 31, 32] Modesto Formation sediments, which are hundreds of feet thick, directly underlie the soil layer within and adjacent to the project area and fossils can be encountered just below the soil.

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[24] C.J. Bell, E.L. Lundelius, Jr., A.D. Barnosky, R.W. Graham, E.H. Lindsay, D.R. Ruez, Jr., H.S. Semken, Jr., S.D. Webb, and R.J. Zakrzewski, "The Blancan, Irvingtonian, and Rancholabrean Mammal Ages." In *Late Cretaceous and Cenozoic Mammals of North America*, Edited by M.O. Woodburne, pp. 232-314. (New York: Columbia University Press, 2004).

[25] D. Savage, Late Cenozoic Vertebrates of the San Francisco Bay Region. *UC Publications, Bulletin of the Department of Geological Sciences* 28(10) (1951):215-314.

[26] R.A. Stirton, Prehistoric Land Animals of the San Francisco Bay Region. In *Geology Guidebook of the San Francisco Bay Counties: History, Landscape, Geology, Fossils, Minerals, Industry, and Routes to Travel*, prepared by Olaf P. Jenkins, pp. 177-186, Bulletin 154. (San Francisco: California Division of Mines, 1951).

[27] D. Marchand and B. Atwater, *Preliminary Geologic Map showing Quaternary Deposits of the Lodi Quadrangle, CA*. United States Geological Survey Open File Report 79-933. (Washington D.C.: United States Geological Survey, 1979).

[28] D.L. Wagner, C.W. Jennings, T.L. Bedrossain, and E.J. Bortugno, *Geologic Map of the San Francisco-San Jose Quadrangle*, California, 1:250,000. Regional Geologic Map Series, San Francisco-San Jose Quadrangle-Map No. 5A. (Sacramento: California Division of Mines and Geology, 1987).

[29] Marchand, D., and A. Allwardt, *Late Cenozoic Stratigraphic Units Northeastern San Joaquin Valley, California*. United States Geological Survey Open File Report 77-748. (Washington D.C.: United States Geological Survey, 1977).

[30] Bell et al., op. cit.

[31] D. Savage, op. cit.

[32] R.A. Stirton, op. cit.

In and near the project area, Modesto Formation sediments are underlain at extreme depth by Tertiary (65-2 million years old) marine sediments.[33] Little is known about these marine deposits because they are buried beneath hundreds of feet of younger alluvium. The likelihood of encountering these marine deposits in or near the project area is very low to non-existent.

2. Impacts and Mitigation Measures

This section analyzes the impacts related to cultural resources that could result from implementation of the proposed project (Westside, SW Gateway and Other Areas to be Annexed). The subsections begin with the criteria of significance, which establish the thresholds for determining whether a project impact is significant. The latter part of this section presents the potential cultural impacts associated with the proposed project. Mitigation measures are provided as appropriate.

a. Criteria of Significance. Implementation of the proposed project would have a significant impact on cultural resources if it would:

- Cause a substantial adverse change in the significance of a historical resource as defined in *CEQA Guidelines* §15064.5. Specifically, substantial adverse changes include physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of the historical resource would be materially impaired;
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to *CEQA Guidelines* §15064.5;
- Directly or indirectly destroy a unique paleontological resource or site; or
- Disturb any human remains, including those interred outside of formal cemeteries.

b. Significant Cultural and Paleontological Resources Impacts. The following describes potentially significant impacts to cultural resources that could result from implementation of the proposed project.

(1) Archaeological Deposits. Potentially significant impacts to archaeological resources are discussed below.

<u>Impact CULT-1</u>: Ground-disturbing activities in a portion of the Westside project area could adversely impact a historic archaeological resource. (S)

A low density deposit (LAN-1) of historic ceramics, glass, and metal was identified in the Westside project area north of Sargent Road. The deposit corresponds to the approximate location of two buildings that appear on the 1910 USGS *Woodbridge* quad. There is a possibility that intact, temporally discrete deposits and features exist at this location. If such unidentified archaeological deposits qualify as a historical or unique archaeological resource, disturbance by construction activity may result in a significant impact to a cultural resource.

<u>Mitigation Measure CULT-1</u>: Implementation of either Mitigation Measure CULT-1a or CULT-1b would reduce this impact to a less-than-significant level. In order to avoid possible

[33] Wagner et al, op. cit.

work stoppage and project delays at the location of the resource, implementation of Mitigation Measure CULT-1(a) is the recommended alternative. The mitigation measure selected, however, shall be determined by the lead agency.

1a. Prior to the initiation of any project ground disturbance or any construction activities within 50 feet of archaeological site LAN-1, it shall be recorded on the appropriate State of California Department of Parks and Recreation DPR 523 forms. Prior to ground disturbance at this location, a qualified historical archaeologist shall evaluate the site for its eligibility for listing in the California Register. An evaluation shall include archival research and subsurface archaeological testing. If the site is determined to not be eligible for listing in the California Register, no further study or mitigation of the site is required. Shall the site or intact features within the site be found to be a historic or unique archaeological resource as defined under CEQA, project related impacts to the site shall be mitigated. If the deposits are eligible, they shall be avoided by adverse effects, or, if avoidance is not feasible, the adverse effects shall be mitigated. Mitigation may include, but is not limited to data recovery excavation. If data recovery excavation is appropriate, the excavation must be guided by a data recovery plan prepared and adopted prior to beginning the data recovery work. A report of findings shall be submitted to the project applicant, the City of Lodi, and the Central California Information Center (CCR Title 14(3) §15126.4(b)(3)(C)). This approach would reduce this impact to a less-than-significant level. (LTS)

1b. Prior to any project activities within 50 feet of archaeological site LAN-1, it shall be recorded on the appropriate State of California Department of Parks and Recreation DPR523 forms. A qualified archaeologist shall monitor ground disturbing activities within 50 feet of LAN-1 in the Westside project area. Project activity shall cease in the immediate vicinity of a subsurface find and the discovery evaluated and appropriate treatment options developed. Archaeological monitors shall be empowered to halt construction activities at the location of the discovery to review possible archaeological material and to protect the resource while the finds are being evaluated. Monitoring shall continue until, in the archaeologist's judgment, cultural resources are not likely to be encountered.

If subsurface historic archaeological deposits, e.g., wells, privies, and foundations, are encountered during project activities, all work within 25 feet of the discovery shall be redirected until the archaeological monitor can evaluate the finds and make recommendations. It is recommended that adverse effects to archaeological discoveries be avoided by project activities. If such deposits cannot be avoided, they shall be evaluated for their eligibility for listing on the California Register (i.e., it shall be determined whether they qualify as historical or unique archaeological resources under CEQA). If the deposits are not eligible, avoidance is not necessary. If the deposits are eligible, they shall be avoided by adverse effects, or, if avoidance is not feasible, the adverse effects shall be mitigated. If data recovery excavation is appropriate, the excavation must be guided by a data recovery plan prepared and adopted prior to beginning the data recovery work. A report of findings shall be submitted to the project applicant, the City of Lodi, and the Central California Information Center (CCR Title 14(3) §15126.4(b)(3)(C)). It is anticipated that this approach will reduce this impact to a less-than-significant level. (LTS)

Impact CULT-2: Ground disturbing activities at the Westside and SW Gateway project areas and Other Areas to be Annexed could adversely impact archaeological resources. (S)

While no archaeological resources except LAN-1 have been identified, nor are any anticipated, at the Westside, SW Gateway, and additional annexation parcels along Lower Sacramento Road, the presence of an archaeological site at project areas outside of LAN-1 cannot be discounted. If such unidentified archaeological resources qualify as a historical or unique archaeological resource, disturbance by construction activity may result in a significant impact to cultural resources. Mitigation Measure CULT-2 would reduce this impact to a less-than-significant level.

> Mitigation Measure CULT-2: If prehistoric or historic archaeological materials are encountered during project activities, all work within 25 feet of the discovery shall be redirected and a qualified archaeologist contacted to evaluate the finds and make recommendations. It is recommended that adverse effects to such deposits be avoided by project activities. If such deposits cannot be avoided, they shall be evaluated for their eligibility for listing on the California Register (i.e., it shall be determined whether they qualify as historical or unique archaeological resources under CEQA). If the deposits are not eligible, avoidance is not necessary. If the deposits are eligible, they shall be avoided by adverse effects, or, if avoidance is not feasible, the adverse effects shall be mitigated. Mitigation may include, but is not limited to, thorough recording on Department of Parks and Recreation form 523 records (DPR 523) or data recovery excavation. If data recovery excavation is appropriate, the excavation must be guided by a data recovery plan prepared and adopted prior to beginning the data recovery work, and a report of findings shall be submitted to FCB, the City of Lodi, and the Central California Information Center (CCR Title 14(3) §15126.4(b)(3)(C)). (LTS)

Impact CULT-3: Future development projects at the Other Areas to be Annexed could adversely impact cultural resources. (S)

Although no ground disturbing activities within the additional annexation parcels are proposed for this project, future projects at these locations may impact cultural resources (e.g., buildings and structures over 50 years old and archaeological sites). Buildings over 50 years old exist in the additional annexation parcels and, although unlikely, the possibility of archaeological sites at these locations cannot be discounted. Future disturbance by construction activity at the additional annexation parcels may result in a significant impact to cultural resources. Mitigation Measure CULT-3 would reduce impacts to archaeological sites to a less-than-significant level; however, impacts to built environment resources that are eligible for the California Register, may, depending on their historical values, be significant.

> Mitigation Measure CULT-3: Prior to the implementation of any future discretionary project within the Other Areas to be Annexed, a cultural resources field survey shall be conducted. If cultural resources are identified in the additional annexation parcels, it is recommended that such resources be documented on the appropriate DPR 523 forms and that adverse effects to such resources be avoided by project activities. If impacts to cultural resources cannot be avoided, they shall be evaluated for their eligibility for listing in the California Register (i.e., it shall be determined whether they qualify as historical or unique archaeological resources under CEQA). If the resource(s) is not eligible, avoidance is not necessary. If the resource(s) is eligible, adverse effects shall be avoided, or, if avoidance is not feasible, the adverse effects shall be

mitigated. Mitigation may include, but is not limited to, Historic American Buildings Survey (HABS) documentation for built environment resources and data recovery excavation for archaeological sites. If data recovery excavation is appropriate, the excavation must be guided by a data recovery plan prepared and adopted prior to beginning the data recovery work, and a report of findings shall be submitted to the project applicant, the City of Lodi, and the Central California Information Center (CCR Title 14(3) §15126.4(b)(3)(C)). (LTS)

(2) Human Remains. Construction activities associated with the projects require soil excavation and grading for building foundations and utilities. Although unlikely, these project activities have the possibility of disturbing human remains.

Impact CULT-4: Ground-disturbing activities associated with the project could disturb human remains, including those interred outside of formal cemeteries. (S)

Mitigation Measure CULT-4: If human remains are encountered, work within 25 feet of the discovery will be redirected and the County Coroner notified immediately. At the same time, an archaeologist will be contacted to assess the situation. If the human remains are of Native American origin, the Coroner must notify the Native American Heritage Commission within 24 hours of this identification. The Native American Heritage Commission will identify a Most Likely Descendant (MLD) to inspect the site and provide recommendations for the proper treatment of the remains and associated grave goods.

Upon completion of the assessment, the archaeologist shall prepare a report documenting the methods and results, and provide recommendations for the treatment of the human remains and any associated cultural materials, as appropriate and in coordination with the recommendations of the MLD. The report shall be submitted to the project applicant, the City of Lodi, and the Central California Information Center.

It is anticipated that implementation of Mitigation Measure CULT-4 will reduce impacts to human remains to less-than-significant levels. (LTS)

(3) Paleontological Resources. Potentially significant impacts related to paleontological resources are discussed below.

Impact CULT-5: Ground disturbing activities within the project area could adversely impact paleontological resources. (S)

While no paleontological resources (fossils) were identified within or adjacent to the project areas by this study, there is a possibility that significant paleontological resources can be encountered during project ground-disturbing construction below the soil layer, which is approximately 6 feet deep within the project area. Project ground disturbing construction below this depth may encounter and damage paleontological resources. Should this occur, project construction may result in the destruction of a unique paleontological site. Mitigation Measure CULT-5 would reduce this impact to a less-than-significant level.

Mitigation Measure CULT-5: If ground disturbing activity is anticipated below the project area soil layer, the initial ground disturbance below that depth in geologic units shall be monitored

by a qualified paleontologist. Subsequent to monitoring this initial ground disturbance, the qualified paleontologist will make recommendations regarding further monitoring based on the initial findings. This can include, but is not limited to, continued monitoring, periodic reviews of ground disturbance below project area soil layers, or no further monitoring.

Pre-field monitoring preparation by a qualified paleontologist shall take into account specific details of project construction plans as well as information from available paleontological, geological, and geotechnical studies. Limited subsurface investigations may be appropriate for defining areas of paleontological sensitivity prior to ground disturbance.

If paleontological resources are encountered during project activities, all work within 25 feet of the discovery shall be redirected until the paleontological monitor has evaluated the resources, prepared a fossil locality form documenting them, and made recommendations regarding their treatment. If paleontological resources are identified, it is recommended that such resources be avoided by project activities. Paleontological monitors must be empowered to halt construction activities within 25 feet of the discovery to review the possible paleontological material and to protect the resource while it is being evaluated. If avoidance is not feasible, adverse effects to such resources shall be mitigated. Mitigation can include data recovery and analysis, preparation of a report and the accession of fossil material recovered to an accredited paleontological repository, such as the UCMP.

Monitoring shall continue until, in the paleontologist's judgment, paleontological resources are no longer likely to be encountered. Upon project completion, a report shall be prepared documenting the methods and results of monitoring. Copies of this report shall be submitted to the project applicant, the City of Lodi Planning Department, and to the repository where fossils are accessioned. (LTS)

F. GEOLOGY, SOILS AND SEISMICITY

This section assesses potential impacts from ground shaking, liquefaction, landslide and lateral slope deformation and differential settlement that could result from seismic activity, and provides feasible mitigation measures, as appropriate.

The following information related to geologic conditions at the project site is based on a site inspection, published and unpublished geologic reports and maps, and geotechnical investigation reports (Geotechnical Services Report for the Proposed Westside Project, Lodi, Kleinfelder, Inc., 2005; The Addendum to the Geotechnical Report Westside, Lodi, Kleinfelder Inc., 2005; Preliminary Geotechnical Investigation for the Lodi Gateway Residential Development, Lodi, Lowrey Associates, 2004;and the Geotechnical Services Reports prepared for the Aquatics Center, Kleinfelder, 2003.)

Geology conditions on the Other Areas to be Annexed have not been documented in a geotechnical report. As specific developments are proposed, a site-specific geotechnical investigation would be conducted at that time.

1. Setting

The project sites are located in the southern portion of the Sacramento Valley, which is bordered by the Sierra Nevada Range to the east and the Diablo Range tier of the Coast Ranges to the west. Large coalescing alluvial fans have developed along each side of the valley. The larger and more gently sloping fans occur on the east side and consist of deposits derived from rock sources in the Sierra Nevada. This region is characterized by a 400-mile long and 50-mile-wide northwest-southeast trending valley. The valley has been filled with a thick sequence of marine and nonmarine sediments from the late Jurassic to Holocene. The uppermost strata of the valley consist of alluvial, flood and delta plains of two major rivers (Sacramento and San Joaquin rivers) and their tributaries. The Sacramento-San Joaquin Delta is located west of the project sites.

The valley deposits are derived from the Coast Ranges to the west and the Sierra Nevada to the east. Granitic and metamorphic rocks outcrop along the eastern and southeastern flanks of the valley. Marine sedimentary rocks outcrop along most of the western, southwestern, southern and southeastern flanks; and volcanic rocks and deposits outcrop along the northeastern flanks of the valley. The valley geomorphology includes dissected uplands, low alluvial plains and fans, river flood plains and channels, and overflow lands and lake bottoms.

a. Geologic Setting. The project sites are located on alluvial flatland deposits which were formed by the streams draining from the nearby mountains and foothills of the Sierra Nevada Mountains. The geologic setting of the Westside and SW Gateway are discussed below.

(1) Westside. The existing topography of the Westside site slopes gently towards the southwest from approximately 42 feet above mean sea level in the northeastern portion of the site to 33 feet above mean sea level in the southwestern portion of the site. Groundwater is located at least 40 feet below ground level. The site is bordered on the northeast by the Woodbridge Irrigation District (WID) Canal.

(2) SW Gateway. The existing topography of the SW Gateway site slopes gently towards the southwest from approximately 30.5 feet above mean seal level in the northeast portion of the site to

approximately 26 feet above mean sea level in the southwestern corner of the site. Ground water was not encountered in any of the borings taken to maximum depths of 45 feet below ground level, and ground water is expected to be encountered at 60 feet below ground level. No stream channels cross the site.

Surficial soils at the project sites are predominately composed of silty sands.[1,2] These soils are described as moderately well drained, with moderate permeability, and low shrink-swell potential.[3]

b. Seismic Conditions. The SW Gateway and the Westside sites are located in a region characterized by low to moderate seismic activity. The San Andreas fault is located approximately 72 miles southwest of the project sites. This right-lateral, strike-slip fault forms a portion of the boundary between the Pacific Plate to the west and North American Plate to the east. In the San Francisco Bay area, movement across this plate boundary is concentrated on the San Andreas fault; however, it is distributed to a lesser extent across a number of faults which include the Calaveras, Concord-Green Valley, Clayton-Marsh Creek-Greenville, Rodgers Creek, and Hayward faults among others, as shown in Table IV.F-1.

Table IV.F-1: Faults Located Nearest to the Project Site

Fault Name	Closest Distance To Site (Miles)	Magnitude of Maximum Earthquake at Epicenter	Peak Ground Acceleration (g) above Epicenter
Great Valley (Segment 7)	26	6.7	0.12
Greenville-Marsh Creek	36	6.9	0.11
Foothills Fault System	29	6.5	0.10
Calaveras (Northern)	45	6.8	0.09
Concord/Green Valley	41	6.9	0.10
Hayward	54	7.1	0.09
Ortigalita	58	6.9	0.07
San Andreas (1906 Event)	72	7.9	0.10

Source: Kleinfelder, 2005.

Several secondary or potentially active fault traces are located in the general vicinity of the project sites. The closest of these are the Great Valley fault system, located approximately 26 miles to the southwest, and the more conjectural Foothills fault system located about 29 miles to the northeast. The Great Valley fault system is characterized by a zone of concealed thrust faulting, reverse faults, and folds that extend for several hundred miles from the southern San Joaquin Valley in Kern County northward to the northern San Joaquin Valley in Tehama County. Although not exposed at the surface, regional studies have suggested that the Great Valley fault system may be comprised of between 18 and 25 segments ranging from about 7 to 35 miles in length, with most segments between 12 to 19 miles.

The Foothills fault system consists of the Bear Mountains fault zone representing the western-most portions of the Foothills fault system and the Melones fault zone representing the eastern boundary. This system of faults has been considered non-capable for years. However, the 1975 Oroville earthquake prompted new discussions regarding the capability of the fault segments. This event was concluded to be associated with ground rupture along the Cleveland Hill fault, mapped as a portion of the extreme northern terminus of the Foothills fault system.

[1] Kleinfelder, Inc., 2005. Addendum to Geotechnical Report Westside, Lodi. October 24.

[2] Lowney Associates, 2004. Preliminary Geotechnical Investigation, Lodi Gateway Residential Development, Lodi. November 12.

[3] City of Lodi General Plan, 1991.

Recent evaluations indicate that tectonic compression occurs across the boundary as the Coast Range is tectonically pushed beneath the Sierran Block to the east. The result of this compression is the development of folds and thrust faults which do not typically propagate to the surface and are, therefore, called "blind thrusts." Because the faults are not expressed on the surface, identification of precise locations of the faults cannot typically be determined on the basis of geomorphic evidence. However, the compressional zone is considered to be capable of generating moderate to large earthquakes that can induce strong seismic shaking throughout the region, including the project sites.

(1) Surface Rupture. Surface rupture occurs when the ground surface is broken due to fault movement during an earthquake. The location of surface rupture generally can be assumed to occur along an active or potentially active major fault trace. No active faults have been mapped across the project sites. Therefore, the potential for fault rupture at the sites is negligible, and no portions of the sites are located within an Alquist-Priolo Earthquake Fault Zone. The closest known active faults to the project sites is the Clayton-Marsh Creek-Greenville fault, located approximately 36 miles to the southwest. The closest fault considered potentially capable of surface fault rupture is Segment 7 of the Great Valley fault located about 26 miles to the southwest of the project sites.

(2) Ground Shaking. Ground shaking is a general term referring to all aspects of motion of the earth's surface resulting from an earthquake, and is normally the major cause of damage in seismic events. The extent of ground shaking is controlled by the magnitude and intensity of the earthquake, distance from the rupture, and local geologic conditions. Magnitude is a measure of the energy released by an earthquake; it is assessed by seismographs that measure the amplitude of seismic waves.

Intensity is a subjective measure of the perceptible effects of seismic energy at a given point and varies with distance from the epicenter of the earthquake and local geologic conditions. The Modified Mercalli Intensity Scale (MMI) (see Table IV.F-2) is the most commonly used scale for measurement of the subjective effects of earthquake intensity. Intensity can also be quantitatively measured using accelerometers (strong motion seismographs) that record ground acceleration at a specific location, a measure of force applied to a structure under seismic shaking. Acceleration is measured as a percentage of the acceleration under gravity (g). A rupture of the Great Valley fault is considered capable of generating a magnitude 6.7 earthquake and a rupture at the Greenville-Marsh Creek fault is considered capable of generating a magnitude 6.9 earthquake.[4] An earthquake matching this scenario is estimated to be capable of generating very strong seismic shaking (i.e., MMI VII) at the project site.[5]

Estimates of the peak ground acceleration have been made for the project area based on probabilistic models that account for multiple seismic sources. Under these models, consideration of the probability of expected seismic events is incorporated into the determination of the level of ground shaking at a particular location. The expected peak horizontal acceleration generated by any of the seismic sources potentially affecting the area, including the project site, is estimated by the California Geological Survey as 0.07 to 0.12 gpeak ground acceleration.[6] This level of ground shaking at the project site is a potentially serious hazard.

[4] Kleinfelder, Inc., 2005, op. cit.

[5] Ibid.

[6] Ibid.

Table IV.F-2: Modified Mercalli Scale[a]

	Intensity	Effects	v,[b] cm/s	g[c]
M[d]	I.	Not felt. Marginal and long-period effects of large earthquakes.		
3	II.	Felt by persons at rest, on upper floors, or favorably placed.		
	III.	Felt indoors. Hanging objects swing. Vibration like passing of light trucks. Duration estimated. May not be recognized as an earthquake.		0.0035-0.007
4	IV.	Hanging objects swing. Vibration like passing of heavy trucks; or sensation of a jolt like a heavy ball striking the walls. Standing motor cars rock. Windows, dishes, doors rattle. Glasses clink. Crockery clashes. In the upper range of IV wooden walls and frame creak.		0.007-0.015
	V.	Felt outdoors; direction estimated. Sleepers wakened. Liquids disturbed, some spilled. Small unstable objects displaced or upset. Doors swing, close, open. Shutters, pictures move. Pendulum clocks stop, start, change rate.	1-3	0.015-0.035
5	VI.	Felt by all. Many frightened and run outdoors. Persons walk unsteadily. Windows, dishes, glassware broken. Knickknacks, books, etc., off shelves. Pictures off walls. Furniture moved or overturned. Weak plaster and masonry D cracked. Small bells ring (church, school). Trees, bushes shaken (visibly, or heard to rustle - CFR).	3-7	0.035-0.07
6	VII.	Difficult to stand. Noticed by drivers of motor cars. Hanging objects quiver. Furniture broken. Damage to masonry D, including cracks. Weak chimneys broken at roof line. Fall of plaster, loose bricks, stones, tiles, cornices (also unbraced parapets and architectural ornaments - CFR). Some cracks in masonry C. Waves on ponds; water turbid with mud. Small slides and caving in along sand or gravel banks. Large bells ring. Concrete irrigation ditches damaged.	7-20	0.07-0.15
	VIII.	Steering of motor cars affected. Damage to masonry C; partial collapse. Some damage to masonry B; none to masonry A. Fall of stucco and some masonry walls Twisting, fall of chimneys, factory stacks, monuments, towers, elevated tanks. Frame houses moved on foundations if not bolted down; loose panel walls thrown out. Decayed piling broken off. Branches broken from trees. Changes in flow or temperature of springs and wells. Cracks in wet ground and on steep slopes.	20-60	0.15-0.35
7	IX.	General panic. Masonry D destroyed; masonry C heavily damaged, sometimes with complete collapse; masonry B seriously damaged. (General damage to foundations - CFR.) Frame structures, if not bolted, shifted off foundations. Frames racked. Serious damage to reservoirs. Underground pipes broken. Conspicuous cracks in ground. In alluviated areas sand and mud ejected, earthquake foundations, sand craters.	60-200	0.35-0.7
8	X.	Most masonry and frame structures destroyed with their foundations. some well-built wooden structures and bridges destroyed. Serious damage to dams, dikes, embankments. Large landslides. Water thrown on banks of canals, rivers, lakes, etc. Sand and mud shifted horizontally on beaches and flat land. Rails bent slightly.	200-500	0.7-1.2
	XI.	Rails bent greatly. Underground pipelines completely out of service.		>1.2
	XII.	Damage nearly total. Large rock masses displaced. Lines of sight and level distorted. Objects thrown into the air.		

[a] From Richter (1958).
[b] Average peak ground velocity, centimeters per second (cm/s).
[c] Average peak acceleration (away from source).
[d] Richter magnitude correlation.

Note: *Masonry A, B, C, D.* To avoid ambiguity of language, the quality of masonry, brick or otherwise, is specified by the following lettering (which has no connection with the conventional Class A, B, C construction):

- *Masonry A:* Good workmanship, mortar, and design, reinforced, especially laterally, and bound together by using steel, concrete, etc; designed to resist lateral forces.
- *Masonry B:* Good workmanship and mortar, reinforced, but not designed to resist lateral forces.
- *Masonry C:* Ordinary workmanship and mortar; no extreme weaknesses such as non-tied-in corners, but masonry is neither reinforced nor designed against horizontal forces.
- *Masonry D:* Weak materials, such as adobe; poor mortar; low standards of workmanship; weak horizontally.

Lodi is located in a region characterized by low to moderate seismic activity and no faults that displace valley alluvium are known to exist near the project sites. The 1997 Uniform Building Code (UBC) indicates that the site lies within the Seismic Zone 3.

(3) Liquefaction. Liquefaction is the temporary transformation of loose, saturated granular sediments from a solid state to a liquefied state as a result of seismic ground shaking. In the process the soil undergoes a temporary loss of strength, which commonly causes ground displacement or ground failure to occur. Since saturated soils are a necessary condition for liquefaction, soil layers in areas where the groundwater table is near the surface have higher liquefaction potential than those in which the water table is located at greater depths.

Westside. Kleinfelder, Inc., performed a liquefaction analysis for the Westide site. The potential for an earthquake with the capability of promoting liquefaction is a possibility during the design life of the project. However, since the subgrade soils encountered during soil boring are generally medium dense silts, sands and clays and groundwater is about 40 feet below the site grade, the potential for liquefaction is considered to be low.[7]

SW Gateway. Lowney Associates determined that based on the medium dense to dense soils encountered during borings and that groundwater is at a depth greater than 45 feet, the risk of liquefaction is low.[8]

c. Slope Stability and Lateral Spreading. Slope failure can occur as either rapid movement of large masses of soil ("landslide") or slow, continuous movement ("creep"). The primary factors influencing the stability of a slope are: 1) the nature of the underlying soil or bedrock; 2) the geometry of the slope (height and steepness); 3) rainfall; and 4) the presence of previous landslide deposits. The project sites are generally flat and the risk of landslides is relatively low.

Lateral spreading is a form of horizontal displacement of soil toward an open channel or other "free" face such as an excavation boundary. The Westside site currently has a slight slope to the southwest, such that slopes across the project site are less than about 3 percent. Since the project sites are nearly flat, the risk of lateral spreading is limited to areas of artificial slopes created by construction or areas adjacent to water bodies, such as the WID Canal.

The SW Gateway project site is relatively flat and no landsliding or lateral spreading is expected to occur on the project site.

d. Differential Settlement. Differential settlement or subsidence could occur if buildings or other improvements were built on low-strength foundation materials (including imported fill). Pilings are often used to anchor structures to firmer deposits below the surface in these situations. Although differential settlement generally occurs slowly enough that its effects are not dangerous to inhabitants, it can cause significant building damage over time. Areas of the project sites that contain loose or uncontrolled (non-engineered) fill may be susceptible to settlement. The Preliminary Geotechnical Investigation concluded that outside of the areas of undocumented fills, the probability of differential

[7] Ibid.

[8] Lowney Associates, 2004, op. cit.

compaction at the SW Gateway site would be considered low.[9] Since the near-surface soils on the Westside site consist of loose sands which would be recompacted during grading operations, the potential for dynamic settlement as a result of ground shaking is low.[10]

e. Corrosive Soils. Corrosion potential of soil is affected by soils moisture content, resistively, permeability, pH levels, as well as chloride and sulfate concentrations. Soils with corrosive characteristics have the potential to be corrode buried metal objects, such as exposed metal pipes. The soils on the Westside site are potentially moderately corrosive to buried metal objects.[11] The soils on the SW Gateway site are considered slightly to moderately corrosive to buried metal objects.[12] It is recommended that further testing and designs for corrosion protection systems be preformed by a corrosion engineer.

f. City of Lodi General Plan Policies. The following policies from the Health and Safety Element of the City of Lodi General Plan[13] specifically address soils and geology and are applicable to the proposed project.

Goal B: To prevent the loss of lives, injury, and property damage due to the collapse of buildings and critical facilities and to prevent disruption of essential services in the event of an earthquake.

- Policy 3: The City shall ensure that all public facilities, such as buildings, water tanks, underground utilities, and levees, are structurally sound and able to withstand seismic activity.
- Policy 4: The City shall require that geotechnical investigations be prepared for all proposed critical structures (such as police stations, fire stations, emergency equipment, storage buildings, water towers, wastewater lift stations, electrical substations, fuel storage facilities, large public assembly buildings, designated emergency shelters, and buildings three or more stories high) before construction or approval of building permits, if deemed necessary. The investigation shall included estimation of the maximum credible earthquake, maximum ground acceleration, duration, and the potential for ground failure because of liquefaction or differential settlement.

2. Impacts and Mitigation Measures

This section identifies potential impacts related to geology, soils and seismicity and recommends mitigation measures. The criteria of significance are listed below, then less-than-significant impacts are discussed, followed by significant impacts.

a. Criteria of Significance. The proposed project would result in a significant geologic, soils or seismic impact if it would have any of the following effects:

- Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:
  - a) 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 of a known fault;
  - b) Strong seismic ground shaking;

[9] Ibid.

[10] Kleinfelder, 2005. op. cit.

[11] Ibid.

[12] Lowney Associates, 2004, op. cit.

[13] City of Lodi, 1991, op. cit.

c) Seismic-related ground failure (including liquefaction); and/or

d) Landslides.

- Result in substantial soil erosion or the loss of topsoil;
- 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; or
- 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.

b. Less-than-Significant Geology, Soils and Seismicity Impacts. The proposed project area is not located on unstable geologic units, the development of which would result in on- or off-site landslide, lateral spreading, shrinking or swelling, subsidence, fault induced surface rupture, liquefaction or collapse.

As stated earlier, a site-specific analysis for the Other Areas to be Annexed has not been completed. As specific developments are proposed for these areas, a site-specific geology investigation would be conducted.

c. Significant Impacts. The following three significant impacts associated with the project were identified.

<u>Impact GEO-1</u>: Seismically-induced ground shaking at the project area could result in risk of loss of property, injury, or death. (S)

Ground shaking from earthquakes along the known active faults in the site vicinity and general region could cause damage to people and property unless properly mitigated. The amount of ground shaking depends on the magnitude of the earthquake, the distance from the epicenter, the type of earth materials between the site and the fault rupture, and the structural design of the site. Ground shaking potential is estimated on a worst-case basis by assessing the maximum expected earthquakes and designing for peak accelerations that may be generated. Each development project and subsequent projects that may occur in the Other Areas to be Annexed parcels will be required to meet the California Building Standards Code (CBC), incorporating the 1997 edition of the Uniform Building Code (UBC), and City of Lodi design requirements and guidelines for buildings constructed in areas of high seismic risk. The adverse effects of seismically-induced ground shaking on future development and its users would be reduced to generally accepted levels by completing the project design and construction in conformance with current best standards for earthquake resistant construction in accordance with the CBC and City Code. Implementation of the following mitigation measures will ensure that site specific conditions are appropriately addressed and that no significant impacts related to seismic conditions result.

> <u>Mitigation Measure GEO-1a</u>: Each project's conditions of approval shall require the project be designed according to the most recent CBC and UBC Seismic Zone 3 requirements, applicable local codes, and be in accordance with the generally accepted standard for geotechnical practice for seismic design in Northern California.

Mitigation Measure GEO-1b: Prior to the approval of grading plans, the project applicant shall perform design-level geotechnical investigations and incorporate all recommendations into the project construction documents and grading plans. (LTS)

It is acknowledged that seismic hazards cannot be completely eliminated, even with site-specific geotechnical investigation and advanced building practices (as provided in the mitigation measure above). However, exposure to seismic hazards is a generally accepted part of living in the seismically active areas of California, and therefore the mitigation measure described above reduces the potential hazards associated with seismic activity to a less-than-significant level.

Impact GEO-2: The project area contains soils that are moderately corrosive to buried metal objects. (S)

Mitigation Measure GEO-2: If the project includes buried metal components, a corrosion engineer shall be retained to design corrosion protection systems appropriate for the project sites to be approved by the Community Development Department. (LTS)

Impact GEO-3: The SW Gateway site contains undocumented fills which could potentially result in differential compaction. (S)

Mitigation Measure GEO-3: Prior to issuance of a building permit for the SW Gateway site, the project applicant shall include the over-excavation and replacement of the undocumented fills in accordance with the earthwork, grading, filling and compaction recommendations of the Preliminary Geotechnical Investigation of the Gateway Residential Development in Lodi, preformed by Lowney Associates, November 12, 2004. (LTS)

G. HYDROLOGY AND WATER QUALITY

This section describes the existing hydrological setting for the project site, including runoff, drainage, and water quality, based on available information included with the application, consultation with City staff, review of geotechnical and environmental investigation reports, and other published materials. Based on information collected, this section identifies impacts that may result from implementation of the project and suggests mitigation measures to reduce potential impacts.

1. Setting

A description of the existing conditions related to hydrology and water quality is provided below.

a. Climate. The climate in Lodi is characterized by long, dry hot summers and mild winters. The mean annual rainfall in the vicinity of the project site, for the period between 1948 and 2005, is approximately 17.6 inches, with the vast majority of rainfall between November and March.[1] Analysis of long-term precipitation records indicates that wetter and drier cycles lasting several years are common in the region.

b. Local Hydrology. Lodi and its surrounding areas are underlain by alluvial soils deposited by runoff from surrounding mountain ranges. Soils were transported to this area through rivers and streams and deposited in floodplain areas. The alluvium is underlain with sedimentary layers that contain a major aquifer system that extends throughout the Central Valley. The alluvium is saturated below a relatively shallow depth, making the sedimentary layers underneath the area part of the major aquifer system that extends throughout the Central Valley.

The Mokelumne River flows along the northern boundary of the City of Lodi. The river serves to recharge groundwater aquifers, and further to the west, provides drinking water and irrigation water to agricultural lands and communities.

Impoundment of the Mokelumne River at Woodbridge forms Lodi Lake, which serves as a diversion for the Woodbridge Irrigation District (WID) Canals. The WID Canal provides irrigation water to agricultural land west and south of Lodi. The WID South Main Canal runs through the southern and western portions of the City from southeast to the northwest and forms the northern border of the Westside site.

The Westside project area is generally level, with a slight slope running from higher ground in the northeast portion of the site towards lower areas the southwest, with an elevation ranging from 38 above sea level to 30 feet above sea level. The SW Gateway project area is also generally level, with a slight slope running from the higher northeastern portion of the site towards the lower areas in the southwest, an elevation ranging from 30 feet above sea level to 25 feet above sea level.
The Other Areas to be Annexed are similar flat agricultural lands with elevations ranging between 25 and 35 feet above sea level.

c. Runoff and Drainage. The project area is located west of the City of Lodi. The Woodbridge Irrigation District (WID) Canal runs along the northern edge of the Westside Gateway project site. There are no creeks or streams crossing either the Westside or SW Gateway project sites.

[1] Western Regional Climate Center, 2005. Website: http://www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?calodi+nca

The City of Lodi municipal storm drainage system consists of an integrated system of trunk lines, retention basins, and pump stations. Surface infrastructure such as gutters, alley, and storm ditches provide for collection of storm water into the system. Ultimate discharge of collected storm water within Lodi is into the Mokelumne River or the WID Canal. Due to capacity limitations in the canal, the City's overall discharge rate to the canal is limited to 160 cubic feet per second (cfs) during the winter, with a maximum rate of 60 cfs per discharge site.[2] Since this is only a small fraction of the peak storm runoff rate for the City, the excess must be temporarily stored in a system of retention basins so that discharge into the Mokelumne River and WID Canal can be done gradually, reducing potential flooding impacts. Most of these basins also serve as City parks and playing fields during the dry season.

Currently, the project area is not served by any improved storm drainage facilities. Most rain falling on the area is either absorbed into the soil or evaporates into the atmosphere. Roadside ditches along Harney Lane carry some runoff towards the west.

d. Water Resources. The City of Lodi draws fresh water from both surface and ground sources. Surface water is provided from the Mokelumne River and WID Canal. Surface water is not currently used for human consumption in Lodi, but the City recently secured a long-term contract (40 years) for approximately 6,000 acre-feet of water per year from the Mokelumne for municipal use. The City's water supply primarily comes from groundwater via 26 municipal wells. Information related to municipal water use and the Water Supply Assessment is located in Section IV.J, Utilities.

(1) Groundwater. Groundwater is the primary source of municipal water for the City of Lodi. The water is supplied by wells located throughout the City that are activated, as required, to serve municipal demand. The City of Lodi overlies the Eastern San Joaquin Groundwater Basin, which is an integral, interconnected part of the Central Valley Groundwater Basin. The supply of groundwater in the basin is contained in the Mehrten formation and overlying younger aquifer units below the City. The aquifer underlying Lodi is largely unconfined. Groundwater is encountered nearest to the surface in the northwestern portion of Lodi near Woodbridge at approximately 20 feet and is encountered at greater depths in areas located in the southeast, at approximately 60 feet below ground surface. Primary sources of recharge to the aquifer underlying Lodi include seepage from the Mokelumne River, deep percolation of rainfall, regional sources including the Delta and along the Sierra mountain-front, and percolation of irrigation water particularly in the areas to the west which receive surface water from the WID.[3]

Dibromochloropropane (DBCP) contamination is the most significant groundwater quality problem in the area. DBCP was used by area farmers to kill nematodes in vineyards. DBCP was banned in California in 1977, but is still present in trace levels in some groundwater. Eleven of Lodi's active wells have no detectable DBCP and six wells have filters to remove DBCP. The levels of DBCP found in the City's drinking water supplied by the wells are in compliance with US EPA and the State of California Department of Health Services.[4] PCE (Tetrachloroethylene) and TCE (Trichloroethylene) have been detected in samples taken in soils and groundwater. The City, working with regulatory

[2] City of Lodi, 2003. Storm water Management Program. Prepared by Black and Veatch, January.

[3] Schlumberger Water Services, 2005. Water Availability Assessment, Lodi Westside Annexation. March 30.

[4] City of Lodi, 2005. Annual Water Quality Report for 2004, April.

agencies and potentially responsible parties in a cooperative manner, is pursuing a resolution to a PCE and TCE groundwater contamination problem in the north and central Lodi area. No operating wells are out of compliance with any drinking water standards. Cleanup work in portions of the contamination area has commenced and the City expects additional areas to commence cleanup work in the near future.

(2) Surface Water. The Mokelumne River is the only source of above-ground water in the community. Water drawn from the Mokelumne River provides irrigation for agricultural lands in and around the City, as well as for recreational uses and freshwater habitat. Water quality tests have indicated that the levels of fecal coliform are beyond the maximum concentration levels allowed by the State for drinking water. This surface water is not currently used for human consumption in Lodi, but the City has recently secured a long-term contract for approximately 6,000 acre-feet of water from the Mokelumne River for municipal use. The City is currently examining alternatives to either create a groundwater recharge basin system or a water treatment plant in order to utilize the raw WID surface water allotment.[5]

e. Flooding. According to the Federal Emergency Management Agency (FEMA) Flood Insurance Map (FIRM) for the City of Lodi, San Joaquin County California, the project site is located in FEMA Flood Zone X, which is defined as areas determined to be areas of 500-year flood, areas of 100-year flood with average depths of less than 1-foot or with drainage areas less than 1 square mile and areas protected by levees from 100-year flood.[6]

Several large and small dams are located east of the City of Lodi in the Sierra foothills, receiving rain and snow runoff from Sierra Nevada watersheds, creating flows for agricultural irrigation systems, recreational activities, and water treatment facilities and city water systems. Catastrophic failure of the Pardee or Camanche dam and dikes systems along the Mokelumne River can cause inundation to the entire City of Lodi and surrounding flat areas.[7]

f. Water Quality. The quality of surface water and groundwater in the vicinity of the project site is affected by past and current land uses at the site and within the watershed and the composition of geologic materials in the vicinity. Water quality in surface and groundwater bodies is regulated by the California Department of Water Resources (DWR) and the Central Valley Regional Water Quality Control Board (CVRWQCB), which are charged with maintaining water quality and reducing potential impacts to water quality within the region. The California DWR controls use of rivers and other surface waters, while the CVRWQCB monitors water quality and remediation. The CVRWQCB is responsible for implementation of State and federal water quality protection guidelines in the Central Valley and implements the Water Quality Control Plan (Basin Plan), a master policy document for managing water quality issues in the region. The Basin Plan establishes beneficial water uses for waterways and water bodies within the region.

(1) Storm Water Quality. Runoff water quality is regulated by the National Pollutant Discharge Elimination System (NPDES) Nonpoint Source Program (established through the Clean Water

[5] West Yost & Associates, 2005. City of Lodi, Full Surface Water Implementation Study. May 23.

[6] Federal Emergency Management Agency (FEMA), 1987. Flood Insurance Rate Map (FIRM), City of Lodi, San Joaquin County, California, Community Panel Numbers 060300 0001E, Revised May 7, 2002.

[7] San Joaquin County Office of Emergency Services, 2003. Dam Failure Plan, December 19.

Act); the NPDES program objective is to control and reduce pollutants to water bodies from nonpoint discharges. The program is administered by the California Regional Water Quality Control Boards. The project site would be under the jurisdiction of the CVRWQCB.

In addition, the proposed project would disturb more than one acre of land[8] during construction and would therefore be required to file a Notice of Intent (NOI) with the RWQCB to be covered under the State NPDES General Construction Permit for discharges of storm water associated with construction activity. A developer must propose control measures that are consistent with the State General Permit. A Storm Water Pollution Prevention Plan (SWPPP) must be developed and implemented for each site covered by the general permit. A SWPPP should include Best Management Practices (BMPs) designed to reduce potential impacts to surface water quality during the construction of the project.

g. Relevant General Plan Policies. The following implementing programs from the Land Use and Growth Management, Conservation, and Health and Safety Elements of the City of Lodi General Plan would apply to the project:

Land Use and Growth Management Element

Goal J. To maintain an adequate level of service in the City's water, sewer collection and disposal, and drainage system to meet the needs of existing and projected development.

- Policy 1. The City shall develop new facilities, as necessary, to serve new development in accordance with City's Water, Wastewater, and Drainage Master Plans.
- Policy 2. The City shall assess water, wastewater, and drainage development fees on all new residential, commercial, office, and industrial development sufficient to fund required systemwide improvements.

Conservation Element

Goal D. To conserve soil resources.

- Policy 1. The City shall require developers to prepare an erosion and sediment control plan, prior to approving the development, that includes features such as mitigation of sediment runoff beyond proposed project boundaries and complete revegetation and stabilization of all disturbed soils (including details regarding seed material, fertilizer, mulching).

Health and Safety Element

Goal A. To prevent loss of lives, injury, and property damage due to flooding.

- Policy 2. The City shall ensure that storm drainage facilities are constructed to serve new development adequate to store runoff generated by a 100-year storm.
- Policy 3. The City shall ensure that storm drainage facilities are provided for all new development to make certain that all surface runoff generated by the new development is adequately handled.

[8] The State Water Resources Control Board, Water Quality Order 99-08-DWQ, National Pollutant Discharge Elimination System (NPDES), General Permit for Storm Water Discharges Associated with Construction Activity (General Permit) states that: The regulations provide that discharges of storm water to waters of the United States from construction projects that encompass five or more acres of soil disturbance are effectively prohibited unless the discharge is in compliance with an NPDES Permit. Regulations (Phase II Rule) that became final on December 8, 1999 expand the existing NPDES program to address storm water discharges from construction sites that disturb land equal to or greater than 1 acre and less than 5 acres (small construction activity). The regulations require that small construction activity, other than those regulated under an individual or Regional Water Quality Control Board General Permit, must be permitted no later than March 10, 2003.

h. Relevant Storm Water Master Plan Policies. The City of Lodi Master Plan for the Development of Storm Water Collection and Disposal Facilities (1963) requires that permanent storm water basins have a design flow capacity to detain runoff volume equivalent to the flows generated from a 100-year 48-hour storm event.

2. Impacts and Mitigation Measures

This section analyzes the impacts related to hydrology and water quality that could result from implementation of the proposed project. The subsection begins with criteria of significance, which establish the thresholds for determining whether a project impact is significant. The latter part of this section presents the potential hydrology and water quality impacts associated with the proposed project. Mitigation measures are provided as appropriate. Implementation of the proposed project with the access variant would have similar impacts as the proposed project.

a. Criteria of Significance. The project would have a significant effect on hydrology or water quality if it would:

- Violate any water quality standards or waste discharge requirements.
- Create or contribute runoff that would be an additional source of water quality degradation.
- Result in substantial erosion or sedimentation on- or off-site that would affect the quality of receiving water.
- Create or contribute runoff that would exceed the capacity of existing or planned storm water drainage systems and/or increase upstream or downstream flooding and require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.
- Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map.
- Expose people or structures to a substantial risk of loss, injury or death involving flooding.
- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a significant net deficit in aquifer volume or a lowering of the local groundwater table level.

b. Less-than-Significant Impacts. According to the most recent FEMA mapping, the project sites are not located within the 100-year flood hazard zone, and therefore, placement of housing or other structures in a flood hazard zone would not occur under the proposed project. In addition, due to the location of the proposed project, the impacts associated with seiches, tsunami, and extreme high tides or sea level change would be considered low.

The project sites, as well as the entire City of Lodi, are located in a dam inundation area for the Pardee and Camanche Dam and dike system. Flood water from the Pardee dam would take 4 hours and 20 minutes to reach west Lodi, and flood water from the Camanche Dam and dike system would take 4 to 6 hours to reach Lodi.[9]

[9] San Joaquin County Office of Emergency Services, 2003, op. cit.

The proposed project would provide on-site retention of storm water runoff. Each project site would include a series of three retention basins that would retain a 100-year, 48-hour storm event. Residual storm water in the retention basins would be pumped into the City's outfall system during off-peak levels to ensure that the flow levels in the City's storm water system do not substantially exceed the system's capacity. Increased numbers of vehicles and outdoor parking facilities at the project site would likely result in increased leaks of fuel, lubricants, tire wear, and fallout from exhaust, which will contribute petroleum hydrocarbons, heavy metals, and sediment to the pollutant load in runoff being transported to receiving waters. Runoff from landscaped areas at the site may contain residual pesticides and nutrients. The City's use of retention basins provides the opportunity for storm water treatment to occur during the retention and percolation process. The details of the stormwater retention system for each site would be detailed in the Utility Master Plan that would be prepared subsequent to the City granting growth allocations for the project, but prior to approval of a Vesting Tentative Map.

No development is currently proposed for the Other Areas to be Annexed. When development plans are proposed, the storm water runoff impacts of these projects would be assessed during the application process and would be required to comply with the City's runoff and retention requirements.

c. Significant Impacts. Three significant impacts are described below.

Impact HYD-1: Increased runoff volume resulting from creation of new impervious surfaces could potentially exceed the capacity of downstream storm water conveyance structures, resulting in localized ponding and flooding. (S)

Development of the project area would significantly increase local impervious surface coverage. It is estimated that approximately 85 percent of the area would be impervious.

Mitigation Measure HYD-1: Implementation of the following two-part mitigation measure would reduce potential impacts associated with increased peak runoff volumes to a less-than-significant level:

1a: As a condition of approval of the final grading and drainage plans for the projects, the Public Works department shall verify that the Master Utility Plan for the Westside and SW Gateway sites will comply with the City's stormwater requirements.

1b: Prior to the approval of the final grading and drainage plans for the SW Gateway and Westside projects and any subsequent development applications that may be proposed for the Other Areas to be Annexed, a hydraulic analysis shall be provided to the Public Works Department for verification that implementation of the proposed drainage plans would comply with the City's storm water requirements. (LTS)

Impact HYD-2: Construction activities could result in degradation of water quality of storm water runoff and ground water quality in the Project area. (S)

Implementation of the proposed project could result in storm water pollution from construction activities conducted on the site. Construction and grading within the project site would require temporary disturbance of surface soils. As discussed in Section IV.I, Hazards and Hazardous Materials, the project site has been subject to previous environmental investigations and remediation activities are required. However, following the completion of remedial activities, concentrations of compounds of potential concern that are below clean-up standards will remain in the soil and groundwater in areas of the site. During the construction period, grading and excavation activities would result in exposure of soil to runoff, potentially causing erosion and entrainment of sediment and contaminants in the runoff. Soil stockpiles and excavated areas on the project site would be exposed to runoff and, if not managed properly, the runoff could cause erosion and increased sedimentation and pollutants in storm water.

As a part of the compliance with NPDES requirements, a Notice of Intent (NOI) would need to be prepared and submitted to the CVRWQB providing notification and intent to comply with the General Permit to Discharge Storm Water Associated with Construction Activity for each individual project. Prior to construction and site grading, a Storm Water Pollution Prevention Plan (SWPPP) is required for construction activities and remediation on-site. The SWPPP outlines the source control and /or treatment control Best Management Practices (BMPs) that would avoid or mitigate runoff pollutants at the construction site to the "maximum extent practicable." Implementation of the following mitigation measure would reduce potential impacts to less-than-significant levels.

> Mitigation Measure HYD-2: The project proponent for each development project shall prepare a Storm Water Pollution Prevention Plan (SWPPP) designed to reduce potential impacts to surface water quality through the construction period of the project. The SWPPP must be maintained on-site and made available to City inspectors and/or RWQCB staff upon request. The SWPPP shall include specific and detailed BMPs designed to mitigate construction-related pollutants. At minimum, BMPs shall include practices to minimize the contact of construction materials, equipment, and maintenance supplies (e.g., fuels, lubricants, paints, solvents, adhesives) with storm water. The SWPPP shall specify properly designed centralized storage areas that keep these materials out of the rain.
>
> An important component of the storm water quality protection effort is the knowledge of the site supervisors and workers. To educate on-site personnel and maintain awareness of the importance of storm water quality protection, site supervisors shall conduct regular tailgate meetings to discuss pollution prevention. The frequency of the meetings and required personnel attendance list shall be specified in the SWPPP.
>
> The SWPPP shall specify a monitoring program to be implemented by the construction site supervisor, which must include both dry and wet weather inspections. In addition, in accordance with State Water Resources Control Board Resolution No. 2001-046,[10] monitoring would be required during the construction period for pollutants that may be present in the runoff that

[10] State Water Resources Control Board, 2001. Modification of Water Quality Order 99-08-DWQ State Water Resources Control Board (SWRCB) National Pollutant Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction Activity.

are "not visually detectable in runoff."[11] RWQCB and/or City personnel, who may make unannounced site inspections, are empowered to levy considerable fines if it is determined that the SWPPP has not been properly prepared and implemented.

BMPs designed to reduce erosion of exposed soil may include, but are not limited to: soil stabilization controls, watering for dust control, perimeter silt fences, placement of hay bales, and sediment basins. The potential for erosion is generally increased if grading is performed during the rainy season as disturbed soil can be exposed to rainfall and storm runoff. If grading must be conducted during the rainy season, the primary BMPs selected shall focus on erosion control; that is, keeping sediment on the site. End-of-pipe sediment control measures (e.g., basins and traps) shall be used only as secondary measures. If hydroseeding is selected as the primary soil stabilization method, then these areas shall be seeded by September 1 and irrigated as necessary to ensure that adequate root development has occurred prior to October 1. Entry and egress from the construction site shall be carefully controlled to minimize off-site tracking of sediment. Vehicle and equipment wash-down facilities shall be designed to be accessible and functional during both dry and wet conditions.

The City Public Works Department shall review and approve the SWPPP and drainage plan prior to approval of the grading plan. City staff may require more stringent storm water treatment measures, at their discretion. Implementation of this mitigation would reduce the level of significance of this impact to a less-than-significant level. (LTS)

Impact HYD-3: Dewatering may contain contaminants and if not properly managed could be detrimental to construction workers and the environment. (S)

Groundwater within the project area is likely to be encountered at 30 to 60 feet below the ground surface (and on a seasonal basis may be present at shallower depths) and may therefore be encountered during excavation for building foundations, utilities, and other improvements.

There are two general classes of pollutants that may result from dewatering operations; sediment, and chemical compounds (including toxics and petroleum hydrocarbons). High sediment content in dewatering discharges is common because of the nature of the operation in which soil and water mixes in the turbulent flow of high volume pump intakes. Chemical pollutants are most commonly found in dewatering in areas with a history of groundwater contamination (e.g. leaks to the subsurface from industrial sites). Much of the project site is located in an area of confirmed historic chemical releases (refer to Section IV.I, Hazards and Hazardous Materials, of this Draft EIR for discussion of identified areas of potential subsurface contamination). Direct discharge of dewatering to the storm drainage system could result in water quality impacts to ground water.

Mitigation Measure HYD-3: Each SWPPP shall include provisions for the proper management of construction-period dewatering. At minimum, all dewatering shall be contained prior to discharge to allow the sediment to settle out, and filtered, if necessary to ensure that only clear water is discharged to the storm or sanitary sewer system, as appropriate. In areas of suspected

[11] Construction materials and compounds that are not stored in water-tight containers under a water-tight roof or inside a building are examples of materials for which the discharger may have to implement sampling and analysis procedures.

groundwater contamination (i.e., underlain by fill or near sites where chemical releases are known or suspected to have occurred), groundwater shall be analyzed by a State-certified laboratory for the suspected pollutants prior to discharge. Based on the results of the analytical testing, the project proponent shall acquire the appropriate permit(s) from the RWQCB prior to the release of any dewatering discharge into the storm drainage system.

Section IV.I, Hazards and Hazardous Materials, of this EIR, includes a discussion of the Remediation Action Plan (RAP) and Health and Safety Plan (HSP) for the site. Implementation of Mitigation Measure HAZ-4a, HAZ-4b, HAZ-4c, HAZ-4d, and HAZ-4e would ensure the safety of construction workers from hazardous concentrations of contaminants from soil and groundwater.

Proper implementation of the mitigation measure described above would reduce this impact to a less-than-significant level. (LTS)

H. BIOLOGICAL RESOURCES

This section addresses existing biological resources in the project area. Potentially occurring special status species and sensitive habitats such as wetlands are described. Potential impacts to biological resources associated with implementation of the proposed projects are also outlined and mitigation measures are provided where necessary.

1. Setting

This section provides a discussion of methods, a description of vegetation communities and wildlife habitats, the regulatory context for the projects, and a discussion of special status species.

a. Methods. In order to assess the potential presence of special status species on the project sites and Other Areas to be Annexed, LSA searched the California Natural Diversity Database (CNDDB 2005), California Native Plant Society (CNPS) Online Inventory (2005), and the U.S. Fish and Wildlife Service (USFWS) online list, referencing the Lodi North, Lodi South quadrangles, and surrounding quadrangles.

The special status species lists obtained from the CNDDB, CNPS, and USFWS were reviewed to determine which species could potentially occur within the vicinity of the project sites and Other Areas to be Annexed. The cumulative list (shown in Table IV.H-1) includes numerous species representing a variety of habitat types. The list includes each species' protection status, habitat information, status on the project sites and Other Areas to be Annexed, and supporting comments as necessary. The determination of whether a species could potentially occur on the project sites or Other Areas to be Annexed was based on the availability of suitable habitat within the species' known range. Species requiring specific habitat not present in the vicinity of the projects (e.g., vernal pools, etc.) were eliminated as potentially occurring and are not discussed further. Those species that could potentially occur on the project sites or Other Areas to be Annexed, from a habitat suitability standpoint, are discussed in Section IV.H.e, Special Status Species, below.

In addition, prior to conducting field studies, LSA reviewed biological evaluations for the project sites prepared by the San Joaquin Council of Governments (SJCOG) in accordance with the San Joaquin Multi-Species Habitat Conservation and Open Space Plan. The evaluations documented habitats on the project sites and listed Incidental Take Minimization Measures that would need to be implemented.

LSA biologists conducted a survey of the Westside and Southside Gateway project sites on October 18, 2005. The survey included general plant and wildlife surveys, plant communities mapping, habitat assessments, and a jurisdictional waters delineation. Wildlife and plant species observed on the project sites were recorded and are included in Appendix E. An assessment of the oak trees on the Westside and SW Gateway sites was prepared.[1] LSA also conducted a reconnaissance level survey of the Other Areas to be Annexed on October 18, 2005. Review of the Other Areas to be Annexed was conducted from existing public roads and was limited to general plant communities mapping.

All potential waters of the U.S. on the project sites were delineated in accordance with the 1987 Corps of Engineers Wetland Delineation Manual (Routine Method). The limit of California Depart-

[1] Gianelli Company, Certified Consulting Arborist, 2005. *Tree Assessment.*

ment of Fish and Game jurisdiction was also delineated. The Other Areas to be Annexed were not delineated due to the lack of access.

b. Vegetation Communities/Land Uses. Vegetation communities/land uses on the project sites consist primarily of agricultural crops, including vineyards, orchards and row and field crops, also present are vernal marsh (seasonal wetlands), ruderal and built (developed) areas. Vegetation communities/land uses on the Other Areas to be Annexed consist of valley grassland and built (developed) areas. The vegetation communities/land uses are described in detail below. Figure IV.H-1 and Figure IV.H-2 show the distribution of vegetation communities on the project sites and Other Areas to be Annexed.

Vegetation communities and land uses are defined in accordance with Biological Analysis for the SJMSCP (1996)[2], as appropriate; botanical nomenclature conforms to Hickman (1993).[3]

(1) Orchards and Vineyards. This community consists of trees of major fruit and nut crops (e.g., almonds, walnuts, cherries, etc.) and grapes grown for wine, table grapes, or raisins (and associated disturbed areas). The soils in these communities are typically heavily cultivated and irrigated. Understory vegetation in these communities consist of mostly ruderal species including Bermuda grass (*Cynodon dactylon*), dove weed (*Eremocarpus setigerus*), prickly lettuce (*Lactuca serriola*), and field bindweed (*Convolvulus arvensis*).

Generally, orchard and vineyard communities do not provide high quality habitat for wildlife species. This is due to several factors, including the extensive land manipulation required to establish these crops, the high density of planting typical of orchards and vineyards, and the intensive maintenance of the crop areas. Wildlife species observed in these communities during the field surveys include California ground squirrel (*Spermophilus beechyi*), northern mockingbird (*Mimus polyglottos*), Western scrub jay (*Aphelocoma coerulescens*), and western fence lizard (*Sceloporus occidentalis*). Other wildlife species likely to occur in these areas include raccoon (*Procyon lotor*), coyote (*Canis latrans*), Botta's pocket gopher (*Thomomys bottae*), western harvest mouse (*Reithrodontomys megalotis*), and California meadow vole (*Microtus californicus*).

Orchards occur on the southern portion of the SW Gateway project site, and extend the width of the site. Vineyards occur on the central and southwestern portions of the SW Gateway project site, and on the portion of the Westside project site south of Sargent Road. A total of 206.79 acres of orchards and vineyards occur on the SW Gateway project site, and a total of 102.89 acres occur on the Westside project site.[4]

(2) Row and Field Crops (Unditched). This community includes crops such as alfalfa, sugar beets and tomatoes (and associated disturbed areas) that have not been ditched to lower the

[2] San Joaquin Council of Governments. 1986. Biological Analysis for the San Joaquin Multi-Species Habitat Conservation and Open Space Plan (SJMSCP), prepared by Toyon Environmental Consultants, Inc. August 15, 1996

[3] Hickman, J.C.(Ed.), 1993. The Jepson Manual, Higher Plants of California. University of California Press, Berkeley, CA, 1,400 pp.

[4] The area of the orchards and vineyards community and field and row crops community on the project sites, as presented in this document, differ somewhat from the area of these communities documented in SJCOG's biological evaluation of the project sites. The differences in areas is attributed to mapping discrepancies.

LSA

FIGURE IV.H-1

N

0 400 800
FEET

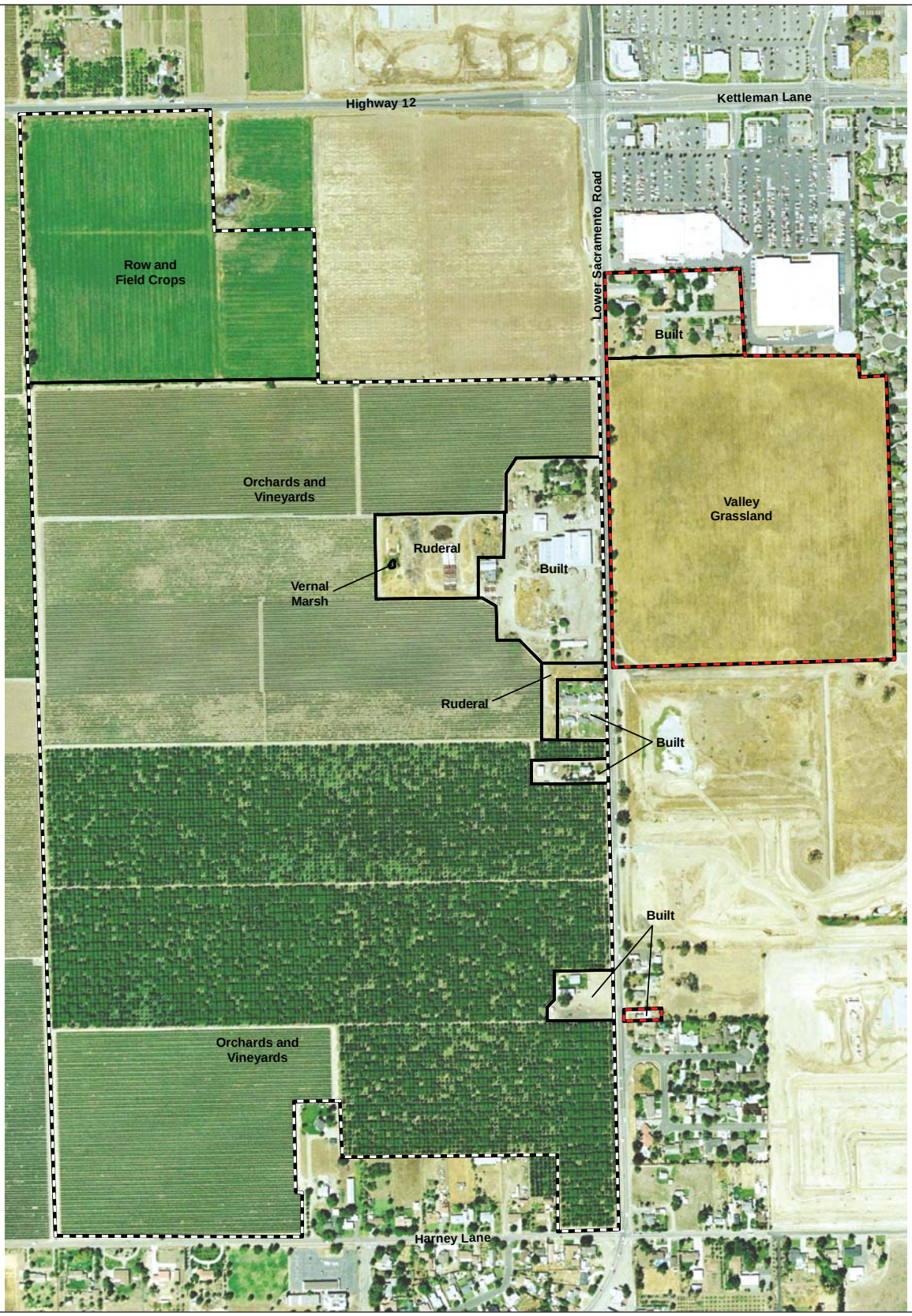
WESTSIDE PROJECT BOUNDARY

Lodi Annexation EIR

Vegetation Communities / Land Uses
Westside Project Site

SOURCE: AirPhoto USA, 2004.

I:\LOD531 wside swgate\figures\Fig_IVH1.ai (11/17/05)



LSA

FIGURE IV.H-2

N

0 400 800
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SOUTHWEST GATEWAY PROJECT BOUNDARY

OTHER ANNEXATION AREA BOUNDARIES

Lodi Annexation EIR

Vegetation Communities / Land Uses
Southwest Gateways Project Site
and Other Annexation Area

SOURCE: AirPhoto USA, 2004.

I:\LOD531 wside swgate\figures\Fig_IVH2.ai (3/9/06)

groundwater table. Also included in this community are fallow fields, provided they are obviously part of an ongoing agricultural operation, and fields that have been recently tilled or disked but where little (i.e., stubble) or no crop growth is evident. Ruderal plant species observed in the inactive croplands include dove week, field bindweed, prickly lettuce, Chinese thorn-apple (*Datura ferox*), and tumbleweed (*Amaranthus albus*). In addition to this understory vegetation, several mature trees occur in the row and field crop communities. A single valley oak (*Quercus lobata*) occurs on the Westside project site, near the center of the field. On the SW Gateway project site, the trees occur along the western and southern edge of the croplands, and include three valley oaks, four California black walnuts (*Juglans californica*), and two English walnuts (*Juglans regia*).

Similar to orchards and vineyards, row and field crops do not typically provide high quality wildlife habitat. However, row and field crops are typically grown seasonally and therefore can provide different opportunities for wildlife depending on the stage of growth. Wildlife species observed in these communities during the field surveys include California ground squirrel, northern mockingbird, yellow-billed magpie (*Pica nuttalli)*, western scrub jay, American crow (*Corvus brachyrhynchos*), American kestrel (*Falco sparverius)*, red-tailed hawk (*Buteo jamaicensis*), and western fence lizard. In addition, a large stick nest was observed on the east side of the valley oak on the Westside project site and a pair of red-tailed hawks was also observed roosting in the same tree. Other wildlife species likely to occur in these areas are similar to those that might occur in orchards and vineyards.

Row and field crops occur on both the project sites, although no active operations were evident during the October 2005 field survey. A disked field, totaling 52.75 acres, occurs on the Westside project site north of Sargent Road, and a fallow field, totaling 32.59 acres, occurs on the northern portion of the SW Gateway project site.[5]

(3) Vernal Marsh. Vernal marsh, more commonly referred to as seasonal wetlands, are communities that become inundated or saturated during the winter and early spring, and then dry out during the late spring and summer. Vernal marsh communities can be very diverse and the extent of inundation or saturation can vary greatly. Plant species occurring in these areas are adapted to the annual cycle of wetting and drying. Typical plant species occurring in the vernal marsh areas on the project sites include nutsedge (*Cyperus eragrostis*), Italian wild-rye (*Lolium multiflorum*), curly dock (*Rumex crispus*), cocklebur (*Xanthium strumarium*), rabbitfoot grass (*Polypogon monspeliensis*), cattail (*Typha* sp.), and willow (*Salix* sp.).

One small vernal marsh feature, totaling 0.02 acre, occurs on the SW Gateway project site. The vernal marsh is located in the east-central portion of the project site near the agricultural buildings, and appears to be supported by seasonal irrigation runoff from the adjacent vineyard. Due to its small size, the vernal marsh feature does not provide high quality wildlife habitat.

(4) Valley Grassland. Valley grassland communities were historically comprised primarily of native perennial grass species but are now dominated by annual, nonnative grasses such as oat (*Avena* spp.), brome (*Bromus* spp.), and Italian wild-rye. Other nonnative herbaceous species that typically grow in nonnative grassland include groundsel (*Senecio* sp.), prickly lettuce, storksbill (*Erodium* sp.), and yellow star-thistle (*Centaurea solstitialis*).

[5] Ibid.

No nonnative grassland occurs on the project sites, but the Other Areas to be Annexed is comprised almost entirely of valley grassland. Approximately 42.07 acres of valley grassland occurs in the Other Areas to be Annexed.

Valley grassland communities provide cover for many small mammal species and foraging habitat for raptors. Wildlife species typically associated with valley grassland include black-tailed jackrabbit (*Lepus californicus*), California ground squirrel, California meadow vole, coyote, American kestrel, white-tailed kite (*Elanus leucurus*), and red-tailed hawk.

(5) Ruderal. Ruderal communities typically occur in disturbed areas near urban or other development, often in vacant lots or fields, levee slopes, etc., where native plant species have been replaced by nonnative weedy species.

Ruderal communities occur on the SW Gateway site, in the east-central portion of the site near the agricultural buildings. The ruderal community is located west of and adjacent to the agricultural buildings. Typical plant species occurring in the ruderal communities include black mustard (*Brassica nigra*), prickly lettuce, field bindweed, ripgut brome (*Bromus diandrus*), yellow star-thistle, dove weed, Bermuda grass, and Russian thistle (*Salsola tragus*). A total of 4.83 acres of ruderal vegetation occurs on the SW Gateway project site

Ruderal communities provide similar wildlife habitat value as valley grassland. However, wildlife habitat value is often lower in ruderal areas that are very disturbed (e.g., support only sparse vegetation).

(6) Built (Developed). Built or developed areas include all artificial structures such as buildings, parking lots, roadways and associated ornamental or cultivated landscaping.

Built areas occur in 3 locations along the east-central portion of the SW Gateway project site, adjacent to Lower Sacramento Road, at the site of the agricultural buildings and two homesteads. On the Westside project site, Sargent Road bisects the site and constitutes built area. A portion of the other annexation area is built out. A total of 15.12 acres of built (developed) area occurs on the SW Gateway and Westside project site, and a total of 5.99 acres of built (developed area) occurs on the additional annexation areas.

Man-made structures associated with built areas may provide roosting habitat for various bat species, and trees associated with residences may provide nesting or foraging habitat for birds. In addition, a variety of bird species are known to occur in built or developed settings including scrub jay American robin (*Turdus migratorius*), house finch *(Carpodacus mexicanus*), house sparrow (*Passer domesticus*), starling (*Sturnus vulgaris*), Brewer's black bird (*Euphagus cyanocephalus*), northern mockingbird, and mourning dove (*Zenaida macroura*).

c. Aquatic Resources. Other than the vernal marsh community occurring on the SW Gateway project site, as described above, no other aquatic resources occur on the project sites or the Other Areas to be Annexed. The vernal feature appears to be associated with the agricultural operations on the site and is not associated with a natural drainage.

d. Oak Trees. A tree assessment of the oak trees on the project site was prepared in July 2005. There is one valley oak tree on the Westside site. This tree is 55 feet tall with a limb spread of 65 feet. An arborist report has identified oak pit scale infestation and basal and main-stem decay in this tree.

There are approximately nine valley oak trees on the SW Gateway site. These trees range in height from 20 to 70 feet. No oak tree in either the Westside or SW Gateway site are proposed to be included in the landscape plans.

e. Regulatory Context. The following section describes the regulatory context of the project.

(1) Special Status Species. Special status plants and wildlife are those species that are: 1) listed as rare, threatened, or endangered by USFWS or CDFG under State or federal endangered species acts; 2) are on formal lists as candidates for listing as threatened or endangered; 3) are on formal lists as species of concern; or 4) are otherwise recognized at the federal, State, or local level as sensitive.

Federal and California Endangered Species Acts. Under the Federal Endangered Species Act (FESA), it is unlawful to "take any species listed as threatened or endangered. "Take" is defined as to "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct." An activity is defined as "take" even if it is unintentional or accidental. Take provisions under FESA apply only to listed fish and wildlife species under the jurisdiction of the USFWS and/or the National Oceanic & Atmospheric Administration, National Marine Fisheries Service (NMFS). Consultation with USFWS or NMFS is required if a project "may affect", or result in "take" of a listed species.

When a species is listed, the USFWS and/or the NMFS, in most cases, must officially designate specific areas as critical habitat for the species. Consultation with USFWS and/or the NMFS is required for projects that include a federal action or federal funding if the project will modify designated critical habitat.

Under the California Endangered Species Act (CESA), it is unlawful to "take" any species listed as rare, threatened, or endangered. "Take" means to "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." CESA take provisions apply to fish, wildlife, and plant species. Take may result whenever activities occur in areas that support a listed species. Consultation with CDFG is required if a project will result in "take" of a listed species.

Magnusen-Stevens Fishery Conservation And Management Act. Under the Magnusen-Stevens Fishery Conservation and Management Act (MSA), essential fish habitat (EFH) must be designated in every fishery management plan. EFH includes "…those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity." The MSA requires consultation with NMFS for projects that include a federal action or federal funding and may adversely modify EFH.

Migratory Bird Treaty Act. The Migratory Bird Treaty Act (MBTA) prohibits actions that will result in "take" of migratory birds, their eggs, feathers, or nests. "Take" is defined in the MBTA as any means or any manner to hunt, pursue, wound, kill, possess, or transport, any migratory bird, nest, egg, or part thereof. Migratory birds are also protected, as defined in the MBTA, under Section 3513 of the California Fish and Game Code.

California Fish and Game Code (Breeding Birds). Section 3503 of the California Fish and Game Code prohibits the take, possession, or needless destruction of the nest or eggs of any bird, except as otherwise provided by the California Fish and Game Code or other regulation.

(2) Waters of the U.S. and Other Jurisdictional Waters.

Army Corps of Engineers. Under Section 404 of the Clean Water Act (CWA), the Army Corps of Engineers (ACOE) regulates the discharge of dredged or fill material into waters of the U.S. Waters of the U.S. are those waters that have a connection to interstate commerce, either direct via a tributary system or indirect through a nexus identified in the ACOE regulations. In non-tidal waters, the lateral limit of jurisdiction under Section 404 extends to the ordinary high water mark (OHWM) of a waterbody or, where adjacent wetlands are present, beyond the OHWM to the limit of the wetlands. The OHWM is defined as "that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear natural line impressed on the bank, shelving, changes in the 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 area" (33 CFR 328.3). In tidal waters, the lateral limit of jurisdiction extends to the high tide line or, where adjacent wetlands are present, beyond the high tide line to the limit of the wetlands.

Wetlands. Wetlands are defined as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for a life in saturated soil conditions."

Non-Wetland Waters. Non-wetland waters essentially include any body of water, not otherwise exempted, that displays an OHWM.

Regional Water Quality Control Board. Under Section 401 of the CWA, the State Water Resources Control Board must certify all activities requiring a 404 permit. The Regional Water Quality Control Board (RWQCB) regulates these activities and issues water quality certification for those activities requiring a 404 permit. In addition, the RWQCB has authority to regulate the discharge of "waste" into waters of the State pursuant to the Porter-Cologne Water Quality Control Act (Porter-Cologne).

California Department of Fish and Game. CDFG, through provisions of Sections 1600-1616 of the State of California Code of Regulations, is empowered to issue agreements for any alteration of a river, stream, or lake where fish or wildlife resources may be substantially adversely affected. Streams (and rivers) are defined by the presence of a channel bed and banks, and at least an ephemeral or intermittent flow of water. CDFG regulates wetland areas only to the extent that those wetlands are part of a river, stream, or lake as defined by CDFG. CDFG generally includes, within the jurisdictional limits of streams and lakes, any riparian habitat present. Riparian habitat includes willows, cottonwoods, and other vegetation typically associated with the banks of a stream or lake shoreline.

(3) City of Lodi General Plan. The City of Lodi General Plan Policy Document, adopted June 12, 1991, includes one goal (Goal E) in Section 7 of the Conservation Element pertaining to the protection of biological resources. Goal E and its associated policies are listed below

Goal E: To protect sensitive native vegetation and wildlife habitats and fisheries resources.

- Policy 1. The City shall protect the river channel, pond and marsh, and riparian vegetation and wildlife communities and habitats in the Mokelumne River and floodplain areas.
- Policy 2. The City shall regulate the removal of trees that are defined as "heritage trees."
- Policy 3. New development shall be sited to maximize the protection of native tree species and sensitive plants and wildlife habitat.
- Policy 4. The City shall encourage the use of native plant species for landscaping roadsides, parks, and urban developments.
- Policy 5. The City shall require site-specific surveys to identify significant vegetation and wildlife habitat for development projects located in or near sensitive habitat areas.
- Policy 6. The City shall support federal and state laws and policies preserving rare, threatened, and endangered species by ensuring that development does not adversely affect such species or by fully mitigating adverse effects consistent with the recommendations of the U.S. Fish and Wildlife Service and California Department of Fish and Game.
- Policy 7. The City shall prohibit the development of facilities and trails in Lodi Lake Park that will degrade or destroy riparian habitat values.
- Policy 8. The City shall direct park use away from sensitive habitat areas through careful placement of facilities and trails in Lodi Lake Park.
- Policy 9. The City shall explore the purchase of or establishment of a joint agreement for open space preservation and habitat enhancement in the WID'S property located north of the Mokelumne River.
- Policy 10. For the street tree program identified in Policy C-2 of the Urban Design and Cultural Resources Element, the City shall select native trees based on the following criteria: resistance to pests, microclimate tempering (i.e., shade in summer; sun in winter), water conservation, aesthetics, and maintenance (including impacts on sidewalks and other paving).
- Policy 11. The City shall prohibit any activity that will disturb bottom sediments containing zinc deposits in the Mokelumne River, because such disturbance could cause fish kills.
- Policy 12. The City shall support strong regulatory action by the State Regional Water Quality Control Board to prevent the discharge of substances harmful to fish into the Mokelumne River.
- Policy 13. The City shall prohibit activities that could disturb anadromous fish in the Mokelumne River during periods of migration and spawning.
- Policy 14. The City should work with the California Department of Fish and Game in identifying an area or areas suitable for Swainson's hawk and burrowing owl habitat; this land should be preserved and put into a mitigation land bank to mitigate impacts on existing habitat for these species. A mechanism should be established for developer funding of acquisition and management of lands in the mitigation bank.
- Policy 15. The City shall manage portions of storm drainage detention ponds and drainage ponds and other appropriate areas as wildlife habitat.

(4) San Joaquin County Multi-Species Habitat Conservation and Open Space Plan. The San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP), in accordance with ESA Section 10(a)(1)(B) and CESA Section 2081(b) Incidental Take Permits, provides compensation for the Conversion of Open Space to non-Open Space uses which affect the plant, fish and wildlife species covered by the SJMSCP. The SJMSCP compensates for Conversions of Open Space for the following activities: urban development, mining, expansion of existing urban bounda-

ries, non-agricultural activities occurring outside of urban boundaries, levee maintenance undertaken by the San Joaquin Area Flood Control Agency, transportation projects, school expansions, non-federal flood control projects, new parks and trails, maintenance of existing facilities for non-federal irrigation district projects, utility installation, maintenance activities, managing Preserves, and similar public agency projects. These activities will be undertaken by both public and private individuals and agencies throughout San Joaquin County and within the County's incorporated cities of Escalon, Lathrop, Lodi, Manteca, Ripon, Stockton and Tracy. Public agencies including Caltrans (for transportation projects), and the San Joaquin Council of Governments (for transportation projects) also will undertake activities which will be covered by the SJMSCP.

f. Special Status Species Potentially Occurring on the Project Sites or Other Areas to be Annexed. As described above in methods, Table IV.H-1 includes the cumulative list of special status species that could potentially occur on the project site or Other Areas to be Annexed based on geographical location. Those species that could potentially occur on the project sites or Other Areas to be Annexed from a habitat suitability standpoint are discussed in Special Status Wildlife and Special Status Plants.

(1) Special Status Wildlife. The following special status wildlife species potentially occur on the project sites or Other Areas to be Annexed.

Bats. The Pacific western big-eared bat (*Corynorhinus townsendii townsendii*) is a federal species of concern and a State species of special concern. This species occurs throughout California and roosts in caves, mines, tunnels, buildings, and other human-made structures, and occasionally roosts in tree hollows or under bark.

The greater western mastiff bat (*Eumops perotis californicus*) is a federal species of concern and a State species of special concern. This species is found in many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, and chaparral. The greater western mastiff bat roosts in crevices in cliff faces, high buildings, and tunnels.

The Yuma myotis (*Myotis yumanensis*) is a federal species of concern. This species is common and widespread throughout California. Optimal habitat for this species includes open forests and woodlands with sources of water over which to feed. The Yuma myotis roosts in caves, buildings, mines and crevices, and occasionally roosts in tree hollows or under bark.

Potential roosting sites are present on the project sites, including mature trees on both sites and the abandoned barn on the SW Gateway project site. These potential roosting sites were evaluated for bats or bat sign (e.g., guano, staining from urine and/or body oils, etc.) but neither were observed. Consequently, these bat species are not expected to roost on the project sites. The vineyards, orchards, and row and field crops on the project sites provide marginal foraging habitat for these bat species. No roosting or foraging habitat is present on the Other Areas to be Annexed. The CNDDB does not include records for Pacific western big-eared bat, greater western mastiff bat, or Yuma myotis within 5 miles of the project site. However, these species could forage on the project sites if individuals are roosting in the vicinity.

No suitable roosting sites or foraging habitat occurs in the Other Areas to be Annexed. As a result, these bat species are not expected to be present in the Other Areas to be Annexed.

Table IV.H-1: Special Status Species Potentially Occurring Westside and SW Gateway Project Sites or Other Areas to be Annexed

Scientific Name	Common Name	Status	Habitat Requirements	Habitat Present (Y/N)	Species Present (Y/N/U)	Rationale
Mammals						
Corynorhinus townsendii townsendii	Pacific western big-eared bat	FSC; CSC	Roosts in lava tubes, caves, buildings, mines, etc.	Y	U	Potential roost sites and foraging habitat present on the project sites. No suitable habitat is present in the annexation areas. See discussion in Section H.1.e.(1).
Eumops perotis californicus	Greater western mastiff-bat	FSC; CSC	Found in many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, chaparral, etc. Roosts in crevices in cliff faces, high buildings, trees, and tunnels.	Y	U	Potential roost sites and foraging habitat present on the project sites. No suitable habitat is present in the annexation areas. See discussion in Section H.1.e.(1).
Myotis ciliolabrum	Small-footed myotis bat	FSC	Generally inhabits desert, badland, and semiarid habitats; more mesic habitats in southern part of range. Hibernates in caves and mines. Maternity colonies often are in abandoned houses, barns, or similar structures.	N	N	No suitable habitat present on the project sites or annexation areas.
Myotis volans	Long-legged myotis bat	FSC	Most common in woodland and forest habitats above 4000 feet (1219 meters). Trees are important day roosts, and caves and mines are night roosts. Nursery colonies usually found under bark or in hollow trees but occasionally in crevices or buildings.	N	N	Project site not within elevation range of species.
Myotis yumanensis	Yuma myotis bat	FSC	Optimal habitats are open forests and woodlands with sources of water over which to feed. Distribution is closely tied to bodies of water. Maternity colonies in caves, mines, buildings, or crevices.	Y	U	Potential roost sites and foraging habitat present on the project sites. No suitable habitat is present in the annexation areas. See discussion in Section H.1.e.(1).
Perognathus inornatus	San Joaquin pocket mouse	FSC	Typically found in dry open grasslands and scrub areas on fine textured, friable soils in the Central and Salinas Valleys.	N	N	No suitable habitat present on the project sites or annexation areas.
Birds						
Agelaius tricolor	Tricolored blackbird	FSC; CSC	Nests in freshwater marshes with tules or cattails, or in other dense vegetation such as thistle, blackberry thickets, etc. in close proximity to open water. Forages in a variety of habitats including pastures, agricultural fields, rice fields, and feedlots.	Y	U	Suitable foraging habitat present on the project site and annexation areas, but no suitable nesting habitat is present. See discussion in Section H.1.e.(1).

Table IV.H-1 *continued*

Scientific Name	Common Name	Status	Habitat Requirements	Habitat Present (Y/N)	Species Present (Y/N/U)	Rationale
Athene cunicularia hypugaea	Western burrowing owl	FSC; CSC	Burrow sites in open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, California ground squirrel.	Y	U	Potential habitat present on the project sites and annexation area. See discussion in Section H.1.e.(1).
Branta canadensis leucopareia	Aleutian Canada goose	FD	During migration and on wintering grounds, the geese are commonly found in marshes, harvested agriculture fields, and flood-irrigated and non-irrigated land. Forages on natural pasture or cultivated to grain; loafs on lakes, reservoirs and ponds.	N	N	No suitable habitat present on the project sites or annexation areas.
Buteo regalis	Ferruginous hawk	FSC; CSC	Winters in open grasslands, sagebrush flats, desert scrub, low foothills, and fringes of pinyon-juniper habitats. Mostly eats lagomorphs, ground squirrels, and mice. Population trends may follow lagomorph population cycles.	Y	U	Suitable wintering habitat present on the project sites and annexation area. See discussion in Section H.1.e.(1).
Buteo swainsoni	Swainson's hawk	ST	Breeds in stands with few trees in juniper-sage flats, riparian areas and oak savannahs. Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations.	Y	U	Suitable nesting and foraging habitat present on the project sites and annexation area (foraging habitat only). See discussion in Section H.1.e.(1).
Carduelis lawrencei	Lawrence's goldfinch	FSC	Nests in open oak woodland, chaparral, riparian woodland, pinyon-juniper association, and weedy areas in arid regions but usually near water. Often nests in dense foliage in conifers, 3 - 39 ft (1 – 12 m) above ground.	N	N	No suitable habitat present on the project sites or annexation areas.
Chaetura vauxi	Vaux's swift	FSC; CSC	Nests in redwood, Douglas fir, and other coniferous forests. Nests in large hollows of tree snags; often in flocks. Forages over most terrains and habitats but shows a preference for foraging over rivers and lakes.	N	N	No suitable habitat present on the project sites or annexation areas.
Charadrius montanus	Mountain plover	FPT; CSC	Wintering in short grasslands, freshly plowed fields, newly sprouting grain fields, and sometimes sod farms. Prefers short vegetation, bare ground and flat topography. Prefers grazed areas and areas with burrowing rodents.	Y	U	Suitable winter foraging habitat is present on the project sites and annexation area, but no nesting habitat is present. See discussion in Section H.1.e.(1).

Table IV.H-1 *continued*

Scientific Name	Common Name	Status	Habitat Requirements	Habitat Present (Y/N)	Species Present (Y/N/U)	Rationale
Elanus leucurus	White-tailed kite	FSC	Nests on rolling foothills/valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodlands. Found in open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching.	Y	U	Suitable nesting and foraging habitat present on the project sites and annexation area (foraging habitat only). See discussion in Section H.1.e.(1).
Empidonax traillii brewsteri	Little willow flycatcher	SE	Extensive thickets of low, dense willows on the edge of wet meadows, at elevations from 2,000 – 8,000 ft (610 – 2438 m).	N	N	No suitable habitat present on the project sites or annexation areas.
Falco peregrinus anatum	American peregrine falcon	FD; SE	Nesting near wetlands, lakes, rivers, or other water; on cliffs, banks, dunes, mounds, also human-made structures. Nest consists of a scrape on a depression or ledge in an open site.	N	N	No suitable habitat present on the project sites or annexation areas.
Grus canadensis tabida	Greater sandhill crane	ST	Nests in wetland habitats in northeastern California, and winters in the Central valley. Prefers grain fields or irrigated pastures within 4 mi (6 km) of shallow water used as a roost site.	N	N	No suitable habitat present on the project sites or annexation areas.
Haliaeetus leococephalus	Bald eagle	FT; SE	Nests in large, old growth, or dominant live tree with open branches near ocean shore, lake margins, and rivers. Usually nests within 1 mi (1.6 km) of water.	N	N	No suitable habitat present on the project sites or annexation areas.
Lanius ludovicianus	Loggerhead shrike	FSC; CSC	Nests in broken woodlands, savannah, pinyon-juniper, Joshua tree, and riparian woodlands, desert oases, scrub and washes. Prefers open country for hunting, with perches for scanning and fairly dense shrubs and brush for nesting.	Y	U	Suitable foraging habitat present on the project sites and annexation area; no suitable nesting habitat is present. See discussion in Section H.1.e.(1).
Melanerpes lewis	Lewis' woodpecker	FSC	Open deciduous and coniferous forests with brushy understory, and scattered snags, logged forests, river groves, or foothills.	N	N	No suitable habitat present on the project sites or annexation areas.
Numenius americanus	Long-billed curlew	FSC; CSC	Nests in dry prairies and moist meadows near water. Nests on ground usually in flat area with short grass, sometimes on more irregular terrain, often near rock or other conspicuous object.	N	N	No suitable habitat present on the project sites or annexation areas.
Picoides nuttallii	Nuttall's woodpecker	FSLC	Oak forest and woodland, chaparral and riparian (especially willow-cottonwood) woodland. In the Sierra Nevada foothills, extensively uses interior live oak, blue oak and foothill pine outside the breeding season.	N	N	No suitable habitat present on the project sites or annexation areas.

Table IV.H-1 *continued*

Scientific Name	Common Name	Status	Habitat Requirements	Habitat Present (Y/N)	Species Present (Y/N/U)	Rationale
Plegadis chihi	White-faced ibis	FSC; CSC	Marshes, swamps, ponds and rivers, mostly in freshwater habitats. Nests in marshes and dense tule thickets; in low tree, on the ground in bulrushes or reeds, or on a floating mat.	N	N	No suitable habitat present on the project sites or annexation areas.
Selasphorus rufus	Rufous hummingbird	FSC	Coniferous forest, second growth, thickets and brushy hillsides, foraging in adjacent scrubby areas and meadows. During migration in winter they prefer open situations where rich in nectar-producing flowers are present.	N	N	No suitable habitat present on the project sites or annexation areas.
Reptiles						
Anniella pulchra pulchra	Silvery legless lizard	CSC	Found predominantly in the Coast Ranges, Transverse Mountains, and Peninsular Ranges and in northwest Baja California. Also found in scattered occurrences on the floor of the San Joaquin Valley. Forages at the base of shrubs, usually on moist substrate with plenty of leaf litter.	N	N	No suitable habitat present on the project sites or annexation areas.
Clemmys marmorata	Western pond turtle	CSC	Occurs in permanent or nearly permanent water sources, ponds, marshes, rivers, streams and irrigation ditches with emergent vegetation and basking sites. Lay eggs in upland habitat consisting of sandy banks or grassy, open fields.	N	N	No suitable habitat present on the project sites or annexation areas.
Phrynosoma coronatum frontale	California horned lizard	FSC; CSC	Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes. Found in open areas for sunning, bushes for cover, patches of loose soil for burial, and abundant supply of ants and other insects.	N	N	No suitable habitat present on the project sites or annexation areas.
Thamnophis gigas	Giant garter snake	FT; ST	Streams and sloughs, usually with mud bottom. One of the most aquatic of garter snakes; usually in areas of freshwater marsh and low-gradient streams with emergent vegetation, also drainage canals, irrigation ditches, ponds, and small lakes.	N	N	No suitable habitat present on the project sites or annexation areas.

Table IV.H-1 *continued*

Scientific Name	Common Name	Status	Habitat Requirements	Habitat Present (Y/N)	Species Present (Y/N/U)	Rationale
Amphibians						
Ambystoma californiense	California tiger salamander	FT; CSC	Most commonly found in grasslands or open woodland habitats. Lives in vacant or mammal-occupied burrows (e.g., California ground squirrel, valley pocket gopher), and occasionally other underground retreats, throughout most of the year. Lays eggs on submerged stems and leaves, usually in shallow ephemeral or semi-permanent pools and ponds that fill during heavy winter rains, sometimes in permanent ponds.	N	N	No suitable habitat present on the project sites or annexation areas.
Rana boylii	Foothill yellow-legged frog	FSC	Partially-shaded, shallow streams and riffles with a rocky substrate in a variety of habitats. Need at least some cobble-sized substrate for egg-laying, with at least 15 weeks of running water to attain metamorphosis.	N	N	No suitable habitat present on the project sites or annexation areas.
Rana aurora draytonii	California red-legged frog	FT; CSC	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation.	N	N	No suitable habitat present on the project sites or annexation areas.
Spea hammondii	Western spadefoot toad	FSC; CSC	Occurs primarily in grassland habitats but also found in valley-foothill hardwood woodlands. Vernal pools or ephemeral streams are essential for breeding and egg-laying.	N	N	No suitable habitat present on the project sites or annexation areas.
Fish						
Acipenser medirostris	Green sturgeon	FSC; CSC	Most often in marine waters; estuaries, lower reaches of large rivers, salt or brackish water off river mouths.	N	N	No suitable habitat present on the project sites or annexation areas.
Hypomesus transpacificus	Delta smelt	FT; ST	Sacramento-San Joaquin delta. Seasonally in Suisun bay, Carquinez strait, and San Pablo bay. Seldom found at salinities greater than 10 ppt. Most often in salinities less than 2 ppt.	N	N	No suitable habitat present on the project sites or annexation areas.
Lampetra ayresi	River lamprey	FSC; CSC	Lower Sacramento River, San Joaquin River, and Russian River. May occur in coastal streams north of San Francisco Bay. Adults inhabit clean, gravelly riffles; ammocoetes require sandy backwaters or stream edges. Both stages require good water quality and temperatures less than 25 C (77 F).	N	N	No suitable habitat present on the project sites or annexation areas.

Table IV.H-1 *continued*

Scientific Name	Common Name	Status	Habitat Requirements	Habitat Present (Y/N)	Species Present (Y/N/U)	Rationale
Lampetra hubbsi	Kern brook lamprey	FSC; CSC	San Joaquin River system and Kern River. Adults require gravel-bottomed areas for spawning and ammocoetes need muddy-bottomed areas for burrowing and feeding.	N	N	No suitable habitat present on the project sites or annexation areas.
Lampetra tridentata	Pacific lamprey	FSC	Upper drainages of the Sacramento-San Joaquin system. Spawning locations include, but are not limited to the following locations: below Friant Dam on the San Joaquin River; below Nimbus Dam and above Howe Avenue bridge crossing of the American River; and below Red Bluff dam on the Sacramento River.	N	N	No suitable habitat present on the project sites or annexation areas.
Oncorhynchus mykissirideus	Central Valley steelhead	FT	Populations occur and spawn in the Sacramento and San Joaquin rivers and their tributaries.	N	N	No suitable habitat present on the project sites or annexation areas.
Oncorhynchus tshawytscha	Central Valley spring-run chinook salmon	FT; ST	Sacramento and San Joaquin Rivers and tributaries. Primarily found in Butte, Big Chico, Deer, and Mill creeks. Adult numbers depend on pool depth and volume, amount of cover, and proximity to gravel.	N	N	No suitable habitat present on the project sites or annexation areas.
Oncorhynchus tshawytscha	Central Valley fall/late fall-run chinook salmon	FC; CSC	Found mainly in the Sacramento River and its tributaries, and most spawning and rearing of juvenile's takes place in the reach between Red Bluff and Redding (Keswick Dam). Adult numbers depend on pool depth and volume, amount of cover, and proximity to gravel.	N	N	No suitable habitat present on the project sites or annexation areas.
Oncorhynchus tshawytscha	Central Valley winter-run chinook salmon	FE; SE	Sacramento River below Keswick Dam. Spawns in the Sacramento River but not in tributary streams.	N	N	No suitable habitat present on the project sites or annexation areas.
Pogonichthys macrolepidotus	Sacramento splittail	FSC; CSC	Largely confined to the Delta, Suisun Bay, Suisun Marsh, Napa River, Petaluma River, and other parts of the Sacramento-San Joaquin estuary. Occurs in slow moving river sections and dead end sloughs. Requires flooded vegetation for spawning and foraging for young.	N	N	No suitable habitat present on the project sites or annexation areas.
Spirinchus thaleichthys	Longfin smelt	FSC; CSC	Coastal waters near shore, bays, estuaries, and rivers, and landlocked in some lakes. In estuaries usually found in middle or bottom of water column.	N	N	No suitable habitat present on the project sites or annexation areas.

Table IV.H-1 *continued*

Scientific Name	Common Name	Status	Habitat Requirements	Habitat Present (Y/N)	Species Present (Y/N/U)	Rationale
Invertebrates						
Anthicus antiochensis	Antioch Dunes anthicid beetle	FSC	Known only from the Antioch Dunes.	N	N	No suitable habitat present on the project sites or annexation areas.
Anthicus sacramento	Sacramento anthicid beetle	FSC	Restricted to sand dune areas of the Sacramento-San Joaquin Delta.	N	N	No suitable habitat present on the project sites or annexation areas.
Branchinecta lynchi	Vernal pool fairy shrimp	FT	Endemic to the grasslands of the Central Valley, Central Coast Mountains and South Coast Mountains, in astatic rain-filled pools. Inhabit small, clear-water sandstone-depression pools and grassed swales, earthen slumps, or basalt-flow depression pools.	N	N	No suitable habitat present on the project sites or annexation areas.
Branchinecta mesovallensis	Midvalley fairy shrimp	FSC	Occurs in seasonal vernal pools or other topographic depressions throughout the Central Valley.	N	N	No suitable habitat present on the project sites or annexation areas.
Desmocerus californicus dimorphus	Valley elderberry long-horn beetle	FT	Occurs only in the Central Valley of California, in association with blue elderberry (*Sambucus mexicana*). Prefers branches greater than 1 in (2.5 cm) in diameter.	N	N	No elderberry plants occur on the project sites or annexation areas, or within 100 feet. As a result, this species is considered absent.
Lepidurus packardi	Vernal pool tadpole shrimp	FE	Found in a variety of natural, and artificial, seasonally ponded habitat types including: vernal pools, swales, ephemeral drainages, stock ponds, reservoirs, ditches, backhoe pits, and ruts caused by vehicular activities. Within the Sacramento Valley.	N	N	No suitable habitat present on the project sites or annexation areas.
Linderiella occidentalis	California linderiella	FSC	Seasonal pools in unplowed grasslands with old alluvial soils underlain by hardpan or in sandstone depressions. Water in the pools has very low alkalinity and conductivity.	N	N	No suitable habitat present on the project sites or annexation areas.
Plants						
Castilleja compestris ssp. *succulenta*	Fleshy owl's-clover	FT; SE; CNPS 1B	Vernal pools in valley and foothill grasslands 82 – 2461 ft (25 – 750 m).	N	N	No suitable habitat present on the project sites or annexation areas.
Legenere limosa	Legenere	FSC; CNPS 1B	In wet areas and beds of vernal pools. 1-880m.	N	N	No suitable habitat present on the project sites or annexation areas.

Table IV.H-1 *continued*

Scientific Name	Common Name	Status	Habitat Requirements	Habitat Present (Y/N)	Species Present (Y/N/U)	Rationale
Lilaeopsis masonii	Mason's lilaeopsis	FSC; CNPS 1B	Freshwater and brackish water marshes, and riparian scrub in regularly flooded tidal zones, on mud-banks and flats along creek banks. Often found with *Limosella subulata*,*Aster lentus*, and *Lathyrus jepsonii var. jepsonii* (0-10m).	N	N	No suitable habitat present on the project sites or annexation areas.

Notes:

Federal
FT = Threatened
FPE = Proposed Endangered
FPT = Proposed Threatened
FC = Candidate
FSC = Species of Concern
FD = Delisted

State
SE = Endangered
ST = Threatened
SR = Rare
CSC = Species of Special Concern

CNPS
CNPS 1A = Presumed extinct in California
CNPS 1B = Rare or Endangered in California and elsewhere
CNPS 2 = Rare or Endangered in California, more common elsewhere

Source: LSA Associates, 2005.

Tricolored Blackbird. The tricolored blackbird (*Agelaius tricolor*) is a federal species of concern and State species of special concern. Tricolored blackbirds are highly colonial and nomadic, and are largely endemic to the lowlands of California. They prefer to nest in freshwater marshes with dense growths of emergent vegetation such as cattail or tules. The are also known to nest in upland areas in dense patches of mustard, thistle, or blackberry (i.e., thickets) in close proximity to water. Tricolored blackbird forage in a variety of habitats including pastures, agricultural fields, rice fields, and feedlots.

The row and field crops on the project sites and the valley grassland in the Other Areas to be Annexed provide suitable foraging habitat for tricolored blackbird. No suitable nesting habitat occurs on the project sites or Other Areas to be Annexed. No tricolored blackbirds were observed during the field surveys, and the CNDDB does not contain any records for this species within 5 miles of the project site. However, since suitable foraging habitat occurs on the project sites and the Other Areas to be Annexed, this species could be present.

Western Burrowing Owl. The burrowing owl (*Athene cunicularia*) is a federal species of concern and State species of special concern. Burrowing owls prefer annual and perennial grasslands with low growing vegetation. The owls typically use rodent burrows for nesting and cover, and forage in adjacent open areas.

Suitable foraging habitat for burrowing owl occurs in the row and field crops on both project sites, and in the valley grassland on the Other Areas to be Annexed. California ground squirrel burrows were identified on the Westside site, on the west levee of the Woodbridge Irrigation Canal that flows along (but outside of) the north boundary of the project site. Ground squirrel burrows were also identified on the SW Gateway site along the roads that run along the west and south boundaries of the row and field crop community; burrows were also identified around a concrete foundation in the ruderal community located in the east-central portion of the project site. No burrowing owl or sign of burrowing owl (e.g., feathers, white wash, pellets, etc.) were observed at or near any of the burrows, and the CNDDB does not contain any records for this species within 5 miles of the project site. However, this species could potentially migrate onto the project sites prior to construction and utilize the existing burrows.

Since site access was not available for the Other Areas to be Annexed, it is not known if suitable burrows are present. If suitable burrows are present, burrowing owls could potentially occupy the valley grassland community in the Other Areas to be Annexed.

Ferruginous Hawk. Ferruginous hawk (*Buteo regalis*) is a federal species of concern and State species of special concern. This species is a winter resident found in open grasslands, sagebrush flats, desert scrub, low foothills, and fringes of pinyon-juniper habitats.

The row and field crops on the project sites and the valley grassland in the Other Areas to be Annexed provide suitable foraging habitat for ferruginous hawk. This species was not observed during the field surveys, and the CNDDB does not contain any records for ferruginous hawk within 5 miles of the project site. However, since suitable foraging (winter) habitat occurs on the project sites and Other Areas to be Annexed, this species could be present.

Swainson's Hawk. Swainson's hawk (*Buteo swainsoni*) is a State threatened species; it has no federal status. Swainson's hawks are long distance migrants, wintering primarily in South America, and returning north to breed. In California, Swainson's hawks occur in the northeastern portion of the state, in the Great Basin Province, and in the Central Valley. They return to the Central Valley in mid-March, and begin migrating south in August. Nests are built in the tops of large trees, primarily those associated with riparian habitats. They are known to forage up to 10 miles from their nest sites.[6]

The mature trees on the Westside and SW Gateway project sites provide suitable nesting habitat for Swainson's hawk. In addition, suitable foraging habitat occurs in the row and field crops on both the project sites, and in the grassland community on the Other Areas to be Annexed. No Swainson's hawks were observed during the field surveys, but the CNDDB contains numerous records for Swainson's hawk within 5 miles of the project sites, the closest being approximately 0.5 mile south of the SW Gateway site. Since suitable nesting and foraging habitat occur on the project sites and Other Areas to be Annexed (foraging habitat only), this species could be present.

White-Tailed Kite. The white-tailed kite (*Elanus leucurus*) has no federal status, but is a State fully protected species. This species occurs throughout most of the state, primarily in the central valley and west to the coast. White-tailed kite typically are found in open grasslands or savannahs, often near marshes or river bottomlands. This species usually nests in isolated trees near foraging habitat.

The mature trees on the Westside and SW Gateway project sites provide suitable nesting habitat for white-tailed kite. In addition, suitable foraging habitat occurs in the row and field crops on both the project sites, and in the grassland community on the Other Areas to be Annexed. No white-tailed kites were observed during the field surveys and the CNDDB does not contain records for white-tailed kite within 5 miles of the project site. However, since suitable nesting and foraging habitat occur on the project sites and Other Areas to be Annexed (foraging habitat only), this species could be present.

Mountain Plover. The mountain plover (*Charadrius montanus*) is a federal species of concern and a State species of special concern. This species is a winter resident found on short grasslands and plowed fields of the Central Valley. This species was not observed during the field surveys and the CNDDB does not contain records for mountain plover within 5 miles of the project site. However, since suitable foraging (winter) habitat occurs on the project sites and the Other Areas to be Annexed, this species could be present.

Loggerhead Shrike. The loggerhead shrike (*Lanius ludovicianus*) is a federal species of concern and a State species of special concern. This species inhabits open areas with scattered shrubs, trees, posts, fences, utility lines, or other perches. Shrikes nest in densely-foliated shrubs or trees.

No suitable nesting habitat for loggerhead shrike occurs on the project sites or Other Areas to be Annexed, but suitable foraging habitat occurs on the project sites in the row and field crop community, and in the Other Areas to be Annexed in the valley grassland community. Loggerhead shrikes were not observed during the field surveys and the CNDDB does not contain records for this species within 5 miles of the project site. However, since suitable foraging habitat occurs on the project sites and Other Areas to be Annexed, this species could be present.

[6] Estep, James A. 1989. Biology, movements, and habitat relationships of the Swainson's hawk in the Central Valley of California. 1986-87. California Department of Fish and Game. Sacramento, CA.

(2) Special Status Plants. Habitat for special status plants does not occur on the project sites or Other Areas to be Annexed and no special status plants are expected to occur.

g. Potential Jurisdictional Waters.

(1) Waters of the U.S.[7] Areas potentially meeting ACOE criteria for wetlands or other waters of the U.S. are limited to the two vernal marsh (seasonal wetland) features on the SW Gateway project site. A total of 0.02 acre of potential wetlands occur in these area; no nonwetland waters are present.

The vernal marsh areas were dominated by hydrophytes including Lady's thumb, nutsedge, pale spikerush, Italian wild-rye, cattail, and willow. Consequently, the ACOE vegetation criteria for wetlands is met. Review of aerial photos revealed inundation during the growing season (i.e., April 2004), and field indicators for wetlands hydrology and hydric soils were present. Consequently, the ACOE wetlands criteria for hydrology and soils are met. Wetland data sheets are included in Appendix E.

As mentioned above, neither vernal marsh area is part of natural drainage or has any hydrologic connection to a natural drainage, and thus appear to be isolated. Such isolated features are not typically regulated by the ACOE. In addition, the vernal marsh area at the north end of the SW Gateway project site appears to be man-made feature excavated in uplands. The preamble to the ACOE regulations states that this type of feature is typically not considered a water of the U.S., but that the ACOE reserves the right to make this determination on a case by case basis. As a result, consultation with the ACOE will be required to determine the jurisdictional status of the wetlands on the SW Gateway project site.

(2) Waters of the State. In addition to its regulatory authority under Section 401 of the CWA, the RWQCB regulates the discharge of waste into waters of the State under Porter-Cologne. Waters of the State are not clearly defined under Porter-Cologne; however, the Regional Boards typically regulate any body of water as a water of the State. It is likely that the aquatic features on the project site fall under the jurisdiction of the Central Valley RWQCB.

(3) CDFG Waters. No waters (streams, lakes, etc.) under CDFG jurisdiction occur on the project sites or Other Areas to be Annexed.

2. Impacts and Mitigation Measures

The following section provides the criteria of significance and presents a discussion of potential impacts to biological resources that could result from the implementation of the proposed project.

a. Criteria of Significance. The proposed development of the project would have a significant effect on biological resources if it would:

[7] Wetlands," as noted in this document, refer to areas determined by LSA to meet ACOE criteria for wetlands in accordance with the Corps 1987 Wetlands Delineation Manual; these areas have not been verified by the ACOE. The extent and jurisdictional status of wetlands and other waters of the U.S. on the project sites, as discussed in this document, should be considered preliminary until verified by the Corps.

- Result in substantial reduction in numbers of, restriction in range for, or loss of habitat for a population of any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFG or USFWS;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFG or USFWS;
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act through direct removal, filling, hydrological interruption, or other means;
- Create substantial interference 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 the provisions of an approved local, regional, or state policy or ordinance protecting biological resources; or
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan.

b. Less-than-Significant Biological Resources Impacts. Less-than-significant impacts to biological resources associated with implementation of the project are discussed below.

(1) Vegetation Communities. Impacts from the proposed project to vegetation communities and associated wildlife habitat are considered less-than-significant.

SW Gateway and Westside Sites. The proposed project would remove 309.68 acres of vineyard and orchard community, 85.34 acres of field and row crops, 0.02 acre of vernal marsh, and 4.83 acres of ruderal area. Due to the disturbed nature of these communities, the proximity to existing development, the overall habitat value for wildlife is low. As a result, the loss of these communities is considered less than significant.

Other Areas to be Annexed. Future development of the Other Areas to be Annexed would remove a maximum of 42.07 acres of valley grassland. Due to the relatively small size of this area and the adjacent development on three sides, the overall habitat value for wildlife is low. As a result, the loss of this community is considered less than significant.

(2) Special Status Species. Impacts from the proposed project to the following special status species are considered less than significant.

Foraging Habitat for Bats. The project will result in the loss of 395.08 acres of vineyard, orchard and row and field crops within the project area that could provide marginal foraging habitat for Pacific western big-eared bat, greater western mastiff-bat, and Yuma myotis. Due to the abundance of these agricultural communities in the region and the marginal value of the habitat for these species, the loss of this foraging habitat is considered less than significant.

Foraging Habitat for Tricolored Blackbird, Swainson's Hawk, Ferruginous Hawk, White-tailed Kite, Mountain Plover and Loggerhead Shrike. The project will result in the loss of 85.34 acres of row and field crops that could provide foraging habitat for these species. Due to the abun-

dance of these agricultural communities in the region, the loss of this foraging habitat is considered less than significant.

The valley grassland community on the Other Areas to be Annexed could also provide foraging habitat for these species. Development on this site would remove a maximum of 42.07 acres of foraging habitat for these species. Due to the relatively small size of the valley grassland community and the abundance of this and other suitable foraging habitat for these species in the region, the loss of this foraging habitat from future development is considered less than significant.

c. Significant Biological Resources Impacts. The proposed project could result in potentially significant impacts to special-status wildlife species and wetlands/jurisdictional waters. The following discussion describes and evaluates significant impacts to these resources and proposes measures that would mitigate these impacts to less than significant levels.

Impact BIO-1: Implementation of the project could impact western burrowing owl if this species occupies the SW Gateway or Westside project sites or Other Areas to be Annexed site prior to the start of construction. (S)

SW Gateway or Westside Sites. Development of these two site will remove suitable burrows and 85.34 acres of row and field crops that is suitable foraging habitat for western burrowing owl.

Other Areas to be Annexed. Future development on the Other Areas to be Annexed could impact western burrowing owl if suitable burrows occur on the site, as well as 42.07 acres of valley grassland that is suitable foraging habitat for this species.

Direct take of nesting burrowing owls would be in violation of the Fish and Game Code and MBTA, and western burrowing owl is a covered species under the SJMSCP. The following mitigation measures are consistent with the SJMSCP Incidental Take Minimization Measures for western burrowing owl and the provisions of the MBTA.

Mitigation Measure BIO-1: Implementation of these measures will reduce impacts to western burrowing owl to a less than significant level.

1a: Prior to approval of grading plans, the project proponent shall pay the appropriate fees to SJCOG, in accordance with the SJMSCP conservation strategy, for conversion of undeveloped lands.

1b: No more than 30 days prior to any ground disturbing activities, a qualified biologist shall conduct surveys for burrowing owls. If ground disturbing activities are delayed or suspended for more than 30 days after the initial preconstruction surveys, the site shall be resurveyed. All surveys shall be conducted in accordance with CDFG's Staff Report on Burrowing Owls (CDFG, 1995).

1c: If the preconstruction surveys identify burrowing owls on the site during the non-breeding season (September 1 through January 31) burrowing owls occupying the project site shall be evicted from the project site by passive relocation as described in the CDFG's Staff Report on Burrowing Owls (CDFG, 1995).

1d: If the preconstruction surveys identify burrowing owls on the site during the breeding season (February 1 through August 31) occupied burrows shall not be disturbed and shall be provided with a 75 meter (250-foot) protective buffer until and unless the SJMSCP Technical Advisory Committee (TAC), with the concurrence of CDFG representatives on the TAC; or unless a qualified biologist approved by CDFG verifies through non-invasive means that either: 1) the birds have not begun egg laying, or 2) juveniles from the occupied burrows are foraging independently and are capable of independent survival. Once the fledglings are capable of independent survival, the burrow(s) can be destroyed. (LTS)

Impact BIO-2: Implementation of the project could impact nesting Swainson hawk or other nesting raptors if these species are present on the SW Gateway or Westside sites or Other Areas to be Annexed site prior to the start of construction. (S)

SW Gateway and Westside Sites. Development of the project sites may remove mature trees which provide suitable nesting habitat for Swainson's hawk and other raptors.

Other Areas to be Annexed. Future development of the valley grassland portion of the Other Areas to be Annexed may remove mature trees which provide suitable nesting habitat for Swainson's hawk and other raptors.

Direct take of nesting Swainson's hawk or other raptors would be in violation of the Fish and Game Code and MBTA. In addition, Swainson's hawk and white-tailed kite are covered species under the SJMSCP. The following mitigation measures are consistent with the SJMSCP Incidental Take Minimization Measures for these species and the provisions of the MTBA.

Mitigation Measure BIO-2: Implementation of these measures will reduce impacts to nesting Swainson's hawk and other nesting raptors to a less-than-significant level.

2a: Prior to approval of grading plans, the project proponent shall pay the appropriate fees to SJCOG, in accordance with the SJMSCP conservation strategy, for conversion of undeveloped lands.

2b: Removal of suitable nest trees shall be completed during the non-nesting season (when the nests are unoccupied), between September 1 and February 15.

2c: If suitable nest trees will be retained and ground disturbing activities will commence during the nesting season (February 16 through August 31), all suitable nest trees on the site will be surveyed by a qualified biologist prior to initiating construction-related activities. Surveys will be conducted no more than 14 days prior to the start of work. If an active nest is discovered, a 100-foot buffer shall be established around the nest tree and delineated using orange construction fence or equivalent. The buffer shall be maintained in place until the end of the breeding season or until the young have fledged, as determined by a qualified biologist.

In some instances, CDFG may approve decreasing the specified buffers with implementation of other avoidance and minimization measures (e.g., having a qualified biologist on-

site during construction activities during the nesting season to monitor nesting activity). If no nesting is discovered, construction can begin as planned. Construction beginning during the non-nesting season and continuing into the nesting season shall not be subject to these measures.

2d: If future development of the Other Areas to be Annexed will result in the removal of suitable nest trees for Swainson's hawk or other raptors, Mitigation Measures BIO-3a through BIO-3c shall be implemented. (LTS)

Impact BIO-3: The project will impact one area of vernal marsh (seasonal wetland). (S)

SW Gateway and Westside Sites. Development of the project sites will remove 0.02 acre of vernal marsh on the SW Gateway project site. Wetland functions and values, primary limited to groundwater, will be lost. Although any wetland impact is generally considered potentially significant, the quality of wetland habitat, and functions provided by this habitat is low on the project site.

A Section 404 permit may be required from the ACOE for any discharge of fill material into the vernal marsh area. As noted previously, the vernal marsh area on the SW Gateway project site does not appear to be within ACOE jurisdiction. However, the RWQCB will likely regulate the vernal marsh area regardless of ACOE jurisdiction. Consultation with these agencies is required to determine jurisdictional status and any permit requirements.

Other Areas to be Annexed. Although reconnaissance level surveys did not reveal potential jurisdictional waters on the Other Areas to be Annexed, a formal delineation was not conducted.

Mitigation Measure BIO-3: Implementation of the following mitigation measures will reduce impacts to wetlands (i.e., vernal marsh) to less-than-significant levels.

3a: Wetlands permanently impacted during construction (approximately 0.02 acres) shall be mitigated through preservation, creation and/or restoration of the impacted resources at a minimum ratio of 1:1. If permits are required by ACOE and/or RWQCB, specific mitigation requirements, if different than described above, shall also become a condition(s) of project approval.

3b: Prior to approval of grading plans, the applicant shall obtain any regulatory permits required from the ACOE and/or RWQCB.

3c: Prior to development of the Other Areas to be Annexed, a formal delineation shall be conducted in accordance with the 1987 Corps of Engineers Wetland Delineation Manual (Routine Method). If wetlands or other jurisdictional waters are identified on the site and will be affected by development, Mitigation Measures BIO-3a and BIO-3b shall be implemented. (LTS)

I. HAZARDS AND HAZARDOUS MATERIALS

This section provides an overview of the potential presence of hazardous materials[1] and other hazards on and near the project site and assesses potential impacts to public health and safety that could result from the development of the project. Information for this section is taken from the Phase I/Phase II Environmental Site Assessment for the Lodi Gateway Residential Development prepared by Lowney Associates on November 16, 2004 and the Phase I Environmental Site Assessment for the Westside Project prepared August 11, 2005 by Kleinfelder, Inc.

Hazards and hazardous materials on the Other Areas to be Annexed have not been evaluated in a Phase I document. When a specific development is proposed for these parcels, a site specific hazards analysis would then occur.

1. Hazardous Materials Setting

The following section describes hazardous materials, the regulatory framework that governs each hazard, and the characteristics of the project area which relate to these hazards.

a. Regulatory Agency Setting. In California, U.S. EPA has granted most enforcement authority over federal hazardous materials regulations to the California Environmental Protection Agency (Cal EPA). In turn, a local agency, the Environmental Health Department (EHD) of San Joaquin County, has been granted responsibility for implementation and enforcement of many hazardous materials regulations in San Joaquin County under the Certified Unified Program Agency (CUPA) Program (California Health and Safety Code Chapter 6.11).

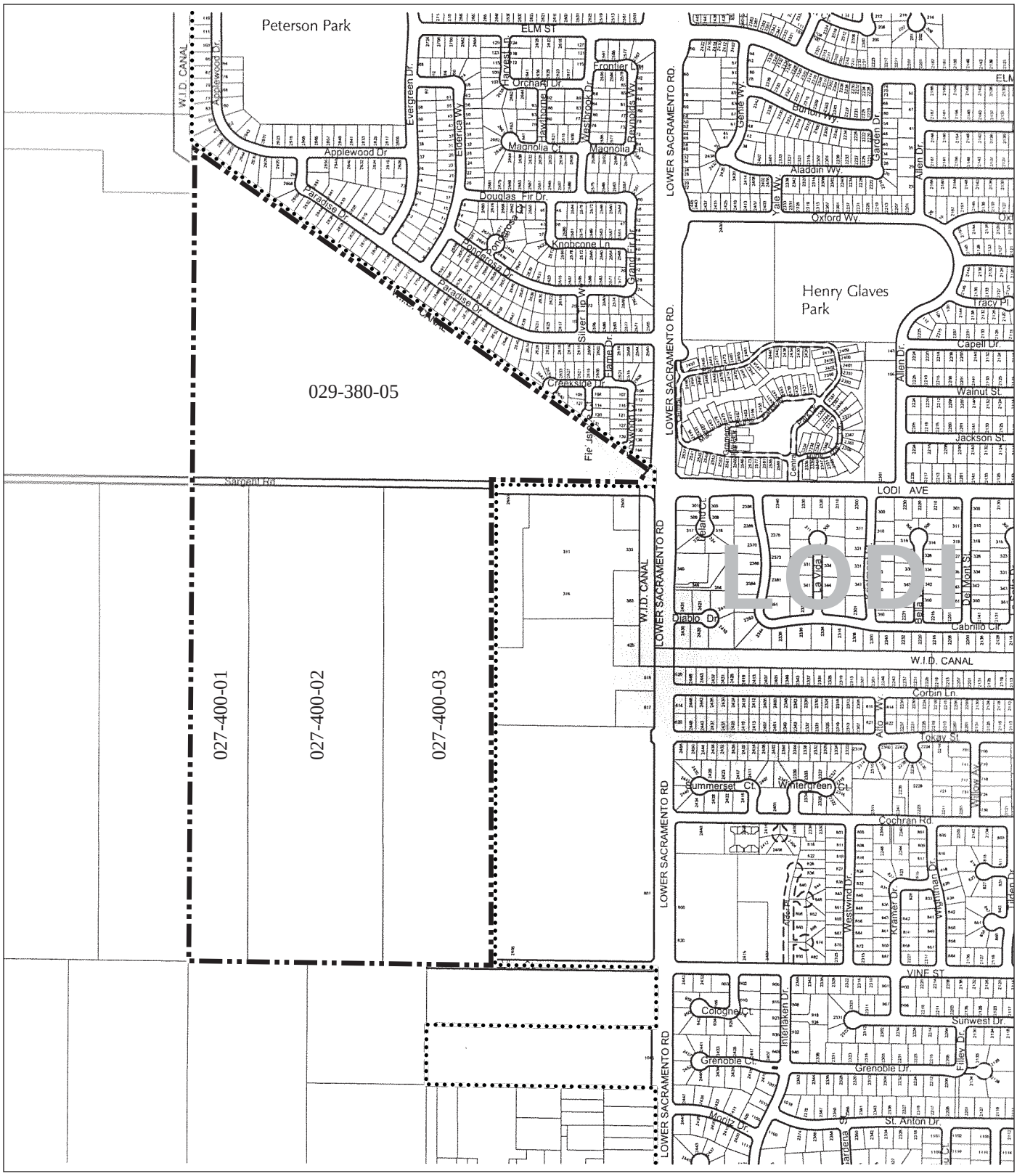
In California, regional agencies are responsible for programs regulating emissions to the air and surface and groundwater. At the project site, the San Joaquin Valley Air Quality Control District has oversight over air emissions, and the Central Valley Regional Water Quality Control Board (CVWQCB) regulates discharges and releases to surface and groundwater.

b. Hazardous Materials Setting. Potential hazardous materials issues at the Westside and SW Gateway project sites were evaluated in Phase I/Phase II Environmental Site Assessments (Phase I/II) preformed in 2004 and 2005. The Phase I/Phase II activities included reviews of historical land use information, site surveys, interviews with persons familiar with the property, review of regulatory information regarding hazardous materials, and collection and laboratory analysis of soils samples.

(1) Westside. Four parcels are associated with the Westside project site: 029-380-05, 027-040-01, 02 and 03, shown in Figure IV.I-1.

History. Historical review of the project site was based on Polk City directories and Haines Criss-Cross directories at the San Joaquin County Caesar Chavez Library, aerial photographs (dated

[1] The California Health and Safety Code defines a hazardous material as "...any material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety, or to the environment. Hazardous materials include, but are not limited to, hazardous substances, hazardous waste, radioactive materials, and any material which a handler or administering agency has a reasonable basis for believing would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment." (Health and Safety Code Section 25501).



LSA

FIGURE IV.I-1

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WESTSIDE PROJECT SITE

CITY LIMITS

Lodi Annexation EIR

Parcels Within the Westside Project Area

SOURCE: CITY OF LODI, 2005.

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1957, 1963, 1984, 1993 and 1998) and historic topographic maps (1910, 1947, 1953, 1968, 1976) depicting historical land uses and changes in development on the project site over time.

Based on the aerial photographs and topographic maps, the project site was primarily vacant and agricultural land with the northwest/southeast trending canal along the northeastern border of the site.

An undeveloped road is shown along the western and southern boundary of the project site. Also depicted is an east/west trending road located where Sargent Road is currently located. From 1910 to 1957, two residences are shown located on the northern side of this road. However, one structure is not shown in the 1957 aerial photograph and the other is gone by 1968 in the historic topographic map. The site has been used for agricultural purposes since 1947.

Buildings, Tanks and Other Structures. A site survey of the Westside project site was conducted on July 11, 2005, by a Kleinfelder staff member.

029-038-05 (Parcel north of Sargent Road). At the time of the site survey, this parcel consisted of a disked agricultural field with irrigation control valves located along the canal on the northeastern boundary. A small pool of water was located at one irrigation control structure in the northwest portion of the site. Three pole mounted transformers (PMT's) were located along Sargent Road. There did not appear to be any leaking, staining, or stressed vegetation associated with the PMT's. Four debris piles were located along the western border, consisting of household trash, a refrigerator, tires, a washer, couches, recliner and small container of an apparent petroleum type product.

027-040-01, 02, 03 (Parcels south of Sargent Road). These parcels consist of vineyards. Three irrigation wells and pumps are located in the northern portion of the parcels along Sargent Road. Soil staining was noted at the based on the irrigation wells located on 027-040-01 and 027-040-02. The stain appeared to be deminimus per the American Society of Testing Materials (ASTM) Standard. A locked fence surrounded the eastern irrigation well on 027-040-03 and soil staining was noticed at the base of the irrigation well. A polyvinyl pesticide/fertilizer AST is located adjacent to the eastern irrigation well within the fenced area. No staining, leakage or stressed vegetation was noted in association with the pesticide/fertilizer tank. Approximately four concrete standpipes are located in the southern portion of the site. A refrigerator and a debris pile of wood clippings and wood cabinets are located in the southern portion of the site.

Phase II Soil Quality Evaluation. To evaluate soil quality on the Westside site, 28 soil samples were taken from throughout the project area to evaluate shallow soil for the presence of residual organochlorine pesticides. Samples were taken at a depth of 0 to 6-inches below ground surface.

Results. The pesticides DDE and/or DDT were detected in 13 of the 28 soil samples. Detected values of DDE ranged from .0034 parts per million (ppm) to .053 ppm. Detected values of DDT ranged from .0038 ppm to .024 ppm. The pesticide endrin aldehyde was detected in 2 of the 28 samples with reported concentrations of .004 ppm and .0038 ppm. The pesticide beta-BHC was detected in one of the 28 soils samples with a reported concentration of .0023 ppm.

The analytical results for organochlorine pesticides were compared to the United States Environmental Protection Agency (EPA) Region IX Preliminary Remediation Goals (PRGs) for residential sites. The concentration of DDE and DDT detected in soil samples for the project site were found to

be below both the associated Residential PRG (1.7 ppm) for each pesticide. The detected concentrations of endrin aldehyde and beta-BHC were also below the associated PRGs of 18 ppm and .320 ppm, respectively.[2]

Database Review. A review of federal and State regulatory agency lists of hazardous materials sites, including sites compiled pursuant to California Government Code Section 65962.5, did not identify any hazardous material sites within the Westside site.

USA Petroleum, located at 2500 West Lodi Avenue, adjacent to the east of the project site, is listed on the Leaking Underground Storage Tank (LUST) and Cortese database. The released material is reported as gasoline and the leak was discovered on March 24, 1987. The release is reported to have impacted the upper aquifer and MTBE was detected on the site. Remediation and monitoring is currently taking place under the regulatory oversight of the San Joaquin County EHD and the RWQCB. The groundwater flow direction is to the south-southeast and it does not appear that the contaminant plume has migrated beneath the Westside site. This site was not identified by the Phase I/II for the SW Gateway site conducted by Lowney Associates (2004).

Database Review. A review of Federal and state regulatory agency lists of hazardous materials sites, including sites compiled pursuant to California Government Code Section 65962.5, did not identify any hazardous material sites within the Westside site.

USA Petroleum, located at 2500 West Lodi Avenue, adjacent to the east of the project site, is listed on the Leaking Underground Storage Tank (LUST) and Cortese database. The released material is reported as gasoline and the leak was discovered on March 24, 1987. The release is reported to have impacted the upper aquifer and methyl tertiary butyl ether (MTBE) was detected on the site. Remediation and monitoring is currently taking place under the regulatory oversight of the San Joaquin County EHD and the RWQCB. The groundwater flow direction is to the south-southeast and it does not appear that the contaminant plume has migrated beneath the Westside site. This site was not identified by the Phase I/II for the SW Gateway site conducted by Lowney Associates (2004).

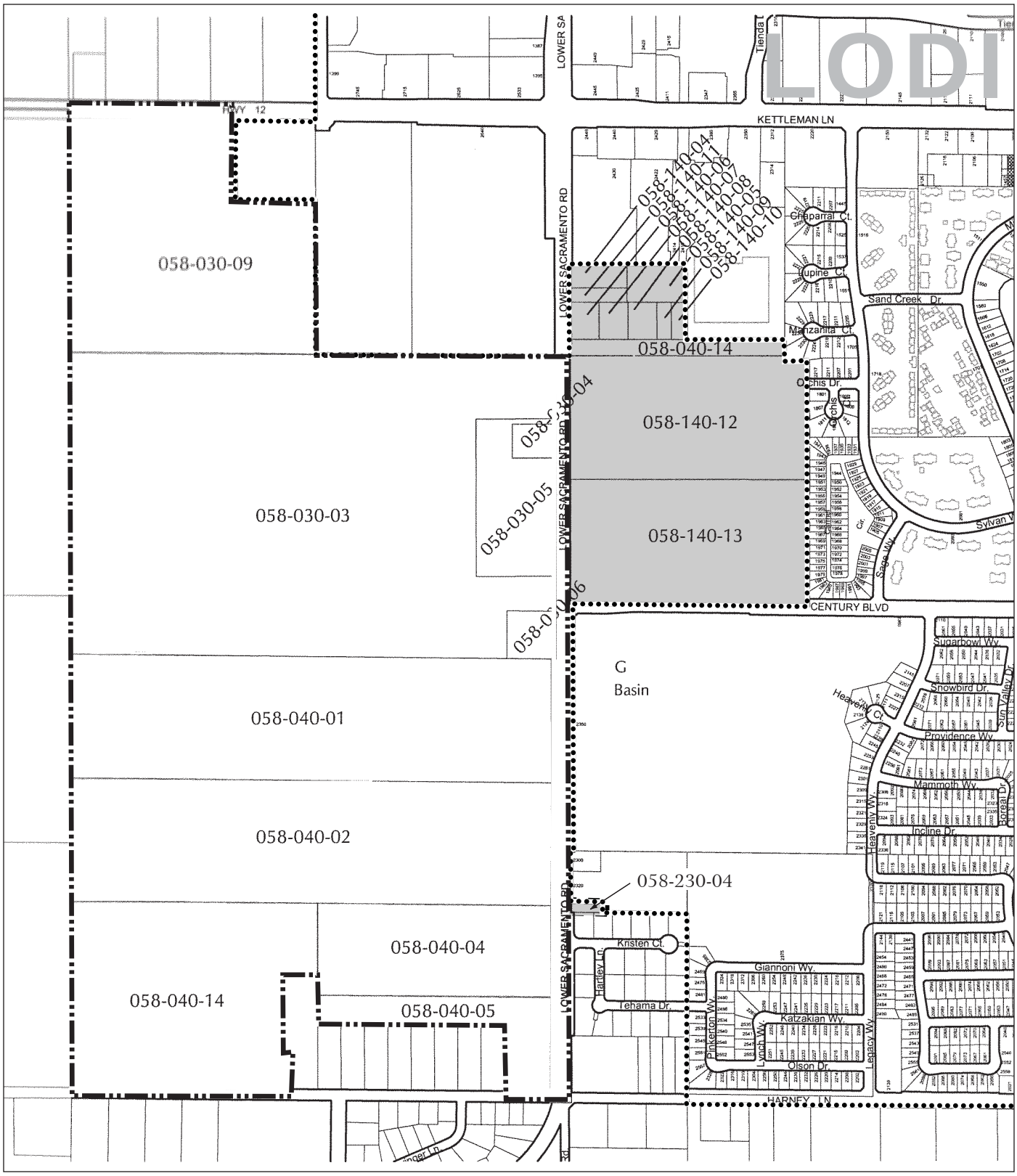
(2) Southwest Gateway. This section assesses the hazards setting of the SW Gateway project site. This project site is shown in Figure IV.I-2.

Site History. Historical review of the project site was based on aerial photographs (dated 1957, 1982, and 1993) and USGS topographic maps (1947, 1953, 1968, and 1976) depicting historical land uses and changes to development on the project site over time.

From 1947 through 1976, large portions of the site were shown as occupied by orchards, and a few other sections appeared as row crops. Residential and farm related buildings appear in the early maps of the site on the eastern side of the site along Lower Sacramento Road.

Up to 12 buildings were also visible in the aerial photographs from 1957 through 1993. Large structures that may have been barns were located in the middle of the site just south of the access road and

[2] Kleinfelder, 2005. Limited Soil Sampling and Analysis, Proposed Westside Project, APN's 029-380-05, 027-040-01, 027-040-02, and 027-040-03, December 15.



LSA

FIGURE IV.I-2

SOUTHWEST GATEWAY PROJECT SITE

OTHER ANNEXATION AREAS

CITY LIMITS

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Lodi Annexation EIR

Parcels Within the Southwest Gateway Project Area and Other Parcels to be Annexed

SOURCE: CITY OF LODI, 2005.

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unknown structures were observed in the 1957 aerial photograph along the western side of the site, just south of the access road. These larger structures appear to be removed and replaced with row crops in the 1982 aerial photograph.

A residence was observed on the APN 058-040-01 property in the topographic maps from 1947 through 1976. An additional farm building appeared in the 1957 aerial photograph along with row crops on the rest of the site. Two additional structures were observed in the 1982 aerial photograph.

A large structure and residence were observed on the APN 058-040-02 property in the topographic maps from 1947 through 1976, along with row crops on the remaining portion of the site. The large structure on the southwestern side of the site appears to have been removed by 1982 in the aerial photograph, and two structures are shown in the southwestern portion of this site. An additional residence was observed south of APN 058-040-02. This structure is not present in the 1982 and 1993 aerial photographs and appears to have been replaced with row crops.

A circular feature, most likely a shallow depression, approximately 350 to 400 feet in diameter, was observed on the western side of the site in the 1957 aerial photograph and in the 1947, 1968, and 1976 topographic maps. The depression was not observed in the 1953 topographic map. The origin of this feature is not known.

Two agricultural wells are shown on the site in the 1968 and 1976 topographic maps.

Buildings, Tanks, and Structures. The SW Gateway site has been used for orchard and row crops since at least 1947. At the time of the Phase I/Phase II investigation on November 1, 2004, the site contained an open and vacant field in the northern section. The middle section of the site is developed with vineyards and associated buildings are located along the eastern side of the boundary. Associated residential and farm related buildings are located on the eastern side of APN 058-030-04. The southern section of the site is primarily cherry orchards with associated buildings and a vineyard in the southwestern corner of the site. Two residences and associated farm buildings are located on APN 058-040-01.

<u>APNs 058-030-04, 058-030-05, and Portions of 058-030-03</u>. This area is approximately 16 acres and used for a variety of farming activities. Ten buildings are located in this area in addition to several concrete pads. The developed portion of the site consists of the following areas: 1) the western area with a soil excavation pit, farm storage sheds and U-shaped concrete pad, 2) the northern area with the residence, equipment and oil storage areas, former dairy site and a concrete pad, 3) the middle area with equipment storage buildings and soil stockpiles, and 4) the southern area with pesticide storage building and above ground storage tanks, as shown in Figure IV.I-3. For a more detailed description of the site, please refer to the Phase I/II ESA prepared by Lowney Associates (2004), available for public review at the City of Lodi Public Works Department.

Farm Equipment Storage Buildings and Excavation Pit. The western portion of the developed area contains a farm equipment storage building. Adjacent to the building is a concrete block structure that appears to have been a vehicle wash area, and is currently full of soil and debris. Small areas of apparent hydrocarbon staining were observed on the soil in the area. Piles of old tires and truck parts are located throughout the area.

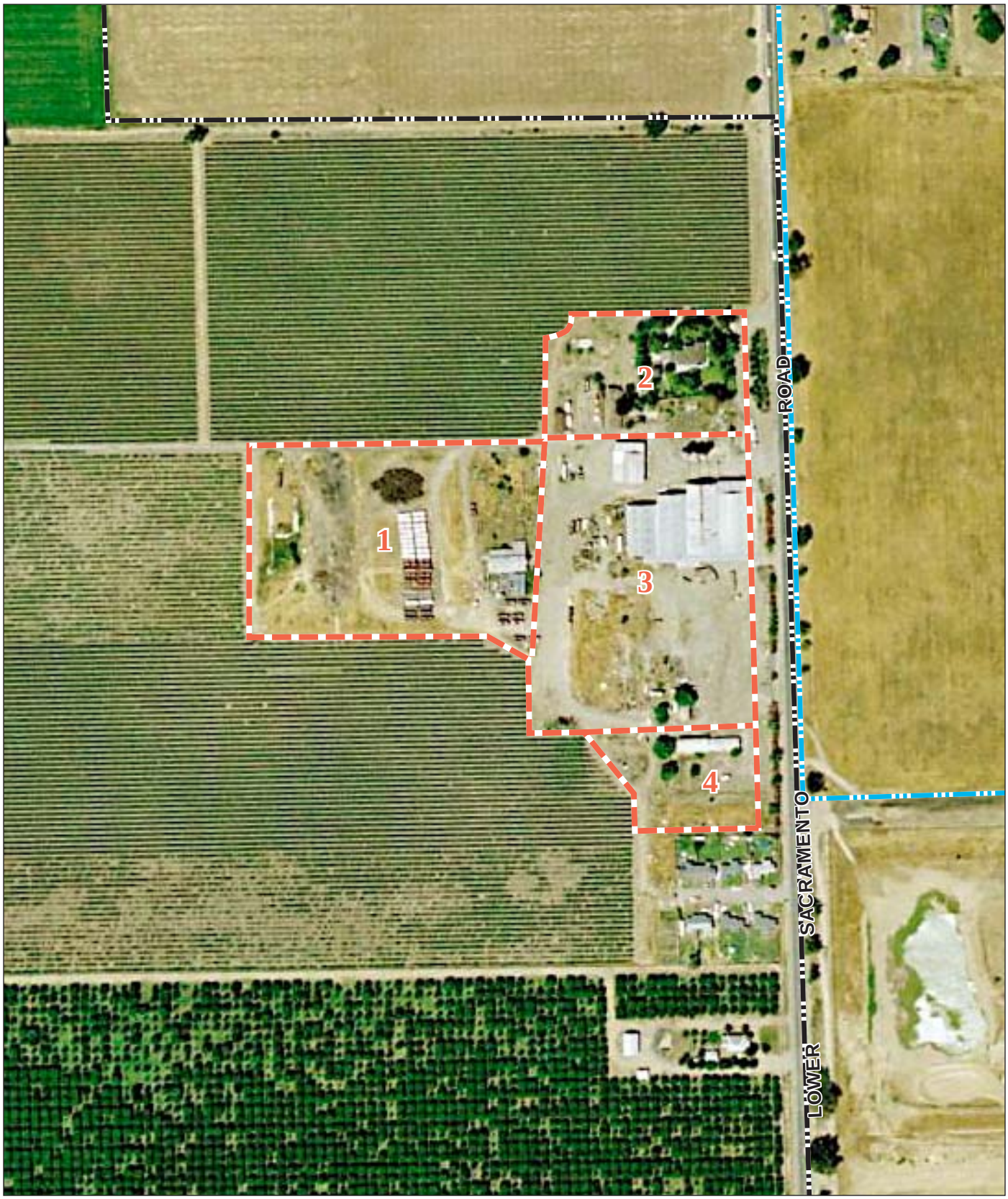

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FIGURE IV.I-3

LEGEND

SOUTHWEST PROJECT SITE

OTHER ANNEXATION AREAS

DEVELOPED PARTIONS

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FEET

Lodi Annexation EIR

Developed Partitions of

APN 058-030-04 and 058-030-05

SOURCE: GLOBEXPLORER, 2005

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The western portion also contains a recently excavated pit approximately 100 by 200 feet in size and 20 feet deep. During the site visit, small pieces of burnt wood were observed around the excavation.

*Residence, Former Dairy Site, and Oil Storage***.** The northern portion of this parcel consists of a residence, a concrete slab, empty silos, and several farm equipment storage buildings with concrete floors. A concrete slab at the site was reported to be the floor of a former dairy that was destroyed by fire. There are 55-gallon drums of waste oil are stored in this portion of the parcel.

Soils Stockpiles and Equipment Storage Areas. The central area of the developed portion consists of a large paved parking area along Lower Sacramento Road with a relatively large soil stockpile approximately 10 feet high. Minor garbage, old farm equipment and debris are adjacent to the soil stockpile. This area contains buildings used for the storage of farm equipment. Five full waste oil drums, several empty waste oil drums, buckets of waste oil, and scrap metal debris are located around the buildings. During the site visit, hyrdocarbon soil staining was observed around the waste oil drums and waste oil buckets. An active above ground storage tank (AST), with approximately a few hundred gallons of fuel, is located in this area. The AST was located on soil but no staining was observed during the site survey. An additional large active steel AST (approximately 12,000 gallons) is located in this area, which appears to contain gasoline or diesel fuel and is placed on soil. A concrete pad is located in this area, with moderate staining.

Concrete blocks that appear to have formerly supported an AST are located in the area with no visible staining. Seven 55-gallon drums filled with various amounts of unknown fluid and heaps of debris ware located around the concrete pad. An apparent underground storage tank (UST) supply pipe is located on the adjacent to the silos. Site personnel stated that a railcar sized UST was present in this area that was reportedly used by the former dairy for the storage of molasses.

A farm storage building, located in the middle portion of the property, contains various vehicle fluids and tools. A truck scale, which no longer appears to be used, is located in this area. Old farm equipment, old trucks, waste oil drums and buckets, scrap metal, garbage, inactive ASTs and debris are located adjacent to the storage buildings, with soil staining around the waste oil drums and buckets.

Pesticide Storage Buildings and ASTs. The southern portion of this area contains two storage buildings with hazardous material placards used for pesticide storage. The older storage area (approximately 1,300 square feet) has an apparent residue on an asphalt floor and contains four drums and bags of pesticides, equipment maintenance chemicals, an old above-ground storage tank (AST) and an old inactive water supply well. Mr. John Van Ruiten of the Van Ruiten Family Winery stated that the drinking water well has not been used for some time and that all on-site drinking is now supplied by the residential water well located west of APN 058-030-04. The newer pesticide storage building (approximately 450 square feet) has a concrete floor with some apparent pesticide related staining. Small quantities of pesticides in containers are stored in this building. An equipment maintenance building with a concrete floor adjacent to the pesticide storage buildings contains various amounts of grease and motor oil. During the site visit, staining was observed on the concrete floor and the asphalt outside the building, apparently from hydrocarbons spilled during equipment maintenance activities.

The southern area of this property contains two fuel ASTs, several 55-gallon drums of waste oil, and one inactive AST. During the site visit, no significant staining was observed in the area of the ASTs, but staining was observed on the soil beneath the waste oil storage area.

Six areas of old equipment, various debris, and household garbage are dispersed in the southern area of the parcel. The piles of debris include stockpiles of metal fence post and stakes, old farm equipment, inactive ASTs, garbage, tires, old appliances, and rolls of discarded carpet. Old camping trailers and a small plywood structure are located near the newer pesticide storage shed. During the site visit, the trailers and the structure were occupied by tenants and a portable toilet was observed adjacent to the trailers.

The remaining westerly portion of the site is planted with vineyards and a power transmission line is located along the eastern boundary.

APN 058-040-01. This parcel contains four buildings and a small pump house/storage structure. An old house and garage are located on the eastern side of the property. Both are painted wood structures. The paint appears to be chipped and exposed soil was observed around both of the structures. A residential water supply well and pressure tank is located in a small wooden pump house west of the garage.

Two newer metal buildings located on concrete pads are located on the western side of the developed area. Both of the structures have hazardous material storage placards and were locked during the time of the site visit. The interiors of the structures were not observed. The smaller structure on the southwestern side of the area has a 3- to 4-inch diameter hose extending through the roof and hanging down the northern side of the building. The building appears to be where the pesticides are stored and mixed.

The remaining westerly portion of the property consists of cherry orchards.

APN 058-040-02. This parcel contains four structures and an AST. The structures include an older house, a well pump house/storage shed, and two newer farm structures. The well and pump house are painted wood structures. The paint appears to be chipped and exposed soils were observed around both of the structures. A residential water supply well is located west of the residence.

The newer metal buildings on concrete pads are located on the western side of the developed area. Both of the structures have hazardous material storage placards and were locked during the time of the site visit. The interiors of the structures were not observed. The smaller structure on the southwestern side of the area has a 3- to 4-inch diameter hose extending through the roof and hanging down the northern side of the building. The building appears to be where the pesticides are stored and mixed.

An AST labeled “diesel” and “unleaded” is located on the northern side of the larger farm building. The AST is located on a concrete pad with secondary containment curbs. The dispensers are located on the southern side of the AST.

The remaining portion of the property consists of cherry orchards.

Database and Agency Review. The San Joaquin County Office of Emergency Services (SJOES) was contacted on November 4, 2004, to request any hazardous materials files associated with the SW Gateway site. The SJOES had not responded to Lowney Associates by the time the report was issued.

As a part of the Phase I/Phase II Environmental Site Assessment, Lowney Associates obtained a regulatory agency database report to establish whether contamination incidents have been reported on the site and in the vicinity of the site. No significant hazardous materials spills or releases with the potential to significantly impact the site were reported.

A review of regulatory agency lists of hazardous materials sites compiled pursuant to California Government Code Section 65962.5, did not identify any sites at or adjacent to the project site that have used, stored, disposed of, or released hazardous materials. One hazardous material release site was reported over two miles away, at the Lodi Central Plume Contamination area centered on the intersection of School Street and Lodi Avenue in Downtown Lodi. The City of Lodi has recognized this hazardous materials site and is in the process of mitigating potential impacts to the City's municipal water supply.[3]

As some of the buildings on the project site could have been constructed prior to 1978, there may be a potential for lead and asbestos to be in building materials at the site. Prior to 1978, lead compounds were commonly used in interior and exterior paints. Prior to the 1980s, building materials often contained asbestos fibers, which were used to provide strength and fire resistance. Demolition or renovation of structures constructed prior to these dates has the potential to release lead particles and/or asbestos fibers to the air, where they may be inhaled by construction workers and the general public.

Phase II Soil Quality Evaluation. To evaluate soil quality in the current and former agricultural fields, 31 samples were randomly collected from the surface to a depth of approximately 6 inches. The soils were analyzed for organochlorine pesticides and pesticide associated metals (arsenic, lead, and mercury). These analyses were selected to evaluate potential impacts from agricultural activities at the site.

Sixteen additional soil samples were collected from selected areas of potential concern observed on the site. Five samples were collected from the pit excavation on the western side of the 14499 Lower Sacramento Road area, along with a four-point composite sample from the material generated from the sloping back sides of the excavation. Three of the samples were collected from the sides of the excavation.

The samples collected from the pit excavation were analyzed for halogenated VOCs, organochlorine pesticides, California Title 22 (CAM 17) metals, and polycyclic aromatic hydrocarbons (PAH). Samples were collected from the pit excavation because of the unknown material that was excavated and removed from the site. It was reported by site personnel that the debris from the reported dairy building fire were placed in the pit.

[3] City of Lodi, 2005. Annual Water Quality Report for 2004. Published April 2005.

Two soil samples were collected from around the apparent pesticide dispenser buildings at 14101 and 13837 Lower Sacramento Road and were analyzed for organochlorine pesticides, pesticide associated metals (arsenic, lead, mercury) and total recoverable petroleum hydrocarbons.

One soil sample was collected from a possible vehicle wash area located on the western side of a barn structure on the western side of 14499 Lower Sacramento Road. The soil sample was collected from inside the concrete structure at approximately 5 feet below the top of the structure. In addition, one four-point composite sample was collected from the on-site stockpile of soil located in the middle of 14499 Lower Sacramento Road area of the site. The samples collected from the possible wash area and the soil stockpile were analyzed for organochlorine pesticides and pesticide associated metals (arsenic, lead, mercury).

Results. Of the 31 samples collected that had detectable concentrations of pesticides, the greatest concentration of total DDT detected was 0.055 parts per million (ppm). Other organochlorine pesticides were not detected. This concentration is well below the United States Environmental Protection Agency (USEPA) residential preliminary remediation goals (PRGs) of 1.7 ppm and the hazardous waste concentration of 1 ppm. Therefore, the concentrations of DDT detected do not pose a significant environmental concern in the agricultural areas of the SW Gateway site.

The concentrations of arsenic, lead and mercury detected in the 31 soil samples from the agricultural areas of the site generally appear to be consistent with typical background concentrations. Naturally-occurring lead, arsenic, and mercury concentrations for Central Valley soils are generally in the range of less than 20 ppm, 10 ppm , 0.25 ppm respectively. Naturally occurring arsenic in site soils exceed USEPA residential RPG standards of 0.39, which is common over large areas of California. Lead exceeded background levels in one sample location (32 ppm) in the agricultural areas on the western side of the project site, above 14101 Lower Sacramento Road. Arsenic may be slightly elevated above naturally-occurring back ground concentrations in one sample (14 ppm) collected from a suspected pesticide dispenser at 14101 Lower Sacramento Road. No other contaminants were located with arsenic in this sample and the result may represent the upper end of naturally occurring concentrations.

In six of the soil samples tested for PAH compounds from the pit excavation, flouranthene (0.0066 ppm) and pyrene (0.0086 ppm) were detected in the samples collected from the stockpile material around the pit. These concentrations are well below the USEPA residential PRGs of 2,300 ppm for flouranthene and 2,300 ppm for pyrene. PAHs were not detected in the other soil samples analyzed. The source of the PAHs is likely the reported burned debris removed from the excavation. Based on these results, it appears that the soil removal was adequate.

The soil samples collected from the pit excavation and the equipment storage areas were analyzed for CAM 17 metals. Concentrations of lead (up to 64 ppm), copper (up to 360 ppm) and zinc (up to 1,100 ppm) were detected in the two samples collected from the equipment storage areas. Although above naturally occurring background concentrations, these concentrations are below the regulatory thresholds for residential use, as well as below hazardous waste concentrations.

The soil samples collected from the equipment storage areas (and near the pesticide dispensers) were analyzed for Total Recoverable Petroleum Hydrocarbons (TRPH). Oil and grease were detected at elevated concentrations in both samples collected from the equipment storage areas; 12,000 ppm of oil and grease were detected near the 55 gallon waste oil drums east of the equipment storage build-

ings at 14499 Lower Sacramento Road and at 38,000 ppm of oil and grease were detected near the waste oil drums in the southern portion of 14499 Lower Sacramento Road. Both concentrations detected are above the Central Valley RWQCB threshold concentrations based on protection of ground water quality.

(3) City of Lodi Policies and Ordinances. As described above, most of the regulatory authority for hazardous materials is vested in the State and County. The storage and manufacturing of hazardous materials is necessary for agricultural and industrial operations in Lodi. Storage of hazardous substances is regulated by the Uniform Fire and Building Codes and the San Joaquin County Office of Emergency Services oversees inventory reporting requirements for local businesses.

The City of Lodi General Plan, Section 9, Health and Safety Element, contains two policies related to hazards:

Goal E: To protect Lodi residences from the effects of hazardous substances

- Policy 1. The City shall consider the potential for the production, use, storage, and transport of hazardous materials in approving new development and provide for reasonable controls on such hazardous materials.
- Policy 2. Within its authority, the City shall regulate the production, use, storage, and transport of hazardous material to protect the health of Lodi residents.

The City of City Municipal Code, Title 7, also contains a Hazard Abatement Ordinance (Chapter 15.20.100) which empowers the City Fire Chief to take such steps necessary to abate hazards for the protection of the public health and safety.

2. Impacts and Mitigation Measures

This section outlines potential impacts related to public health and safety and recommends mitigation measures. Criteria of significance for public health and hazards are listed first. Less-than-significant impacts are then discussed, followed by significant impacts.

a. Criteria of Significance. The proposed project would have a significant impact to public health and safety if it would:

- 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.
- Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment.
- For a project located within an airport land use plan, or where such a plan has not been adopted, within 2 miles of a public airport, would result in a safety hazard for people residing or working in the project area.
- For project in the vicinity of a private airstrip, result in a safety hazard for people residing or working in the project area.

- Create a significant hazard to the public or environment through exposure to hazardous materials present in soils, surface water, ground water, and or/building materials as a result of historical land uses in the project vicinity.
- Impair implementation of or physically interfere with, an adopted emergency response plan or emergency evacuation plan.
- Result in an increased risk of exposure to wildland or urban fire hazards.

b. Less-than-Significant Public Health and Hazard Impacts. Less-than-significant impacts related to public health and hazards are discussed below.

(1) Government Code Section 65962.5. According to the Lowney Associates, which conducted the Phase I/Phase II (2004) for the SW Gateway site, the nearest hazardous material site listed in compliance with Government Code Section 65962.5 is over 2 miles east of the SW gateway site. The City is currently in the process of mitigating these hazardous materials sites and impacts associated with the groundwater contamination area would significantly impact the proposed project. The SW Gateway site is not listed on any hazardous materials sites list.

However, according to the Kleinfelder Phase I (2005) conducted for the Westside site, the nearest hazardous materials site at the former USA Petroleum site, located at 2500 West Lodi Avenue, east of the Westside site. The USA Petroleum site is listed on the Leaking Underground Storage Tank (LUST) and Cortese database. The released material is reported as gasoline and the leak was discovered on March 24, 1987. The release is reported to have impacted the upper aquifer and MTBE was detected on the site. Remediation and monitoring is currently taking place under the regulatory oversight of the San Joaquin County EHD and the RWQCB. The groundwater flow direction is to the south-southeast and it does not appear that the contaminant plume has migrated beneath the Westside site. The Westside project site is not listed on any hazardous materials sites list.

(2) SW Gateway Soils Samples. Of the 31 samples collected at the SW Gateway site that had detectable concentrations of pesticides, the greatest concentration of total DDT detected was 0.055 parts per million (ppm). Other organochlorine pesticides were not detected. This concentration is well below the United States Environmental Protection Agency (USEPA) residential preliminary remediation goals (PRGs) of 1.7 ppm and the hazardous waste concentration of 1 ppm. Therefore, the concentrations of DDT detected do not pose a significant environmental concern in the agricultural areas of the SW Gateway site.

The concentrations of arsenic, lead and mercury detected in the 31 soil samples from the agricultural areas of the site generally appear to be consistent with typical background concentrations. Naturally-occurring lead, arsenic, and mercury concentrations for Central Valley soils are generally in the range of less than 20 ppm, 10 ppm, and 0.25 ppm, respectively. Naturally occurring arsenic in site soils exceed USEPA residential RPG standards of 0.39, which is common over large areas of California. Lead exceeded background levels in one sample location (32 ppm) in the agricultural areas on the western side of the project site, above APN 058-040-01. Arsenic may be slightly elevated above naturally-occurring back ground concentrations in one sample (14 ppm) collected from a suspected pesticide dispenser at APN 058-040-01 Lower Sacramento Road. No other contaminates were co-located with arsenic in this sample and the result may represent the upper end of naturally occurring concen-

trations. No other contaminants were co-located with arsenic in this sample and the result may represent the upper end of naturally occurring concentrations.

The soil samples collected from the pit excavation and the equipment storage areas were analyzed for PAH compounds and CAM 17 metals. Although above naturally occurring background concentrations, these concentrations are below the regulatory thresholds for residential use, as well as below hazardous waste concentrations.

(3) Westside Soil Samples. To evaluate soil quality on the Westside site, 28 soil samples were taken from throughout the project area to evaluate shallow soil for the presence of residual organochlorine pesticides. Samples were taken at a depth of 0 to 6-inches below ground surface.

The pesticides DDE and/or DDT were detected in 13 of the 28 soil samples. Detected values of DDE ranged from .0034 parts per million (ppm) to .053 ppm. Detected values of DDT ranged from .0038 ppm to .024 ppm. The pesticide endrin aldehyde was detected in 2 of the 28 samples with reported concentrations of .004 ppm and .0038 ppm. The pesticide beta-BHC was detected in one of the 28 soils samples with a reported concentration of .0023 ppm.

The analytical results for organochlorine pesticides were compared to the United States Environmental Protection Agency (EPA) Region IX Preliminary Remediation Goals (PRGs) for residential sites. The concentration of DDE and DDT detected in soil samples for the project site were found to be below both the associated Residential PRG (1.7 ppm) for each pesticide. The detected concentrations of endrin aldehyde and beta-BHC were also below the associated PRGs of 18 ppm and .320 ppm, respectively.[4]

(4) Emergency Response and Evacuation Plan. The proposed project would not substantially interfere with the City of Lodi Emergency Plan (December, 1999). The location of the proposed project and the compliance with all the Uniform Fire Code and related public safety regulations will ensure that the proposed project does not impair implementation of or physically interfere with any emergency response or evacuation plan.

(5) Proximity to the Lodi Airpark. The Lodi Airpark is located approximately 1.75 miles south of the SW Gateway site. The runway is oriented running east-west, and the incoming and outgoing flight paths of aircraft would not run directly over the SW Gateway project site. The proposed project would not result in substantial light, glare, or attract birds which could create a safety hazard for the airstrip. There are no other public or private airstrips in the vicinity of the project sites.

(6) Urban or Wildland Fire Risk. The project sites are located adjacent to irrigated agricultural areas and do not have unusual fire hazards which could potentially increase the risk of wildand or urban fire hazards.[5]

[4] Kleinfelder, 2005. Limited Soil Sampling and Analysis, Proposed Westside Project, APN's 029-380-05, 027-040-01, 027-040-02, and 027-040-03, December 15.

[5] Pretz, Michael, 2005. Fire Chief, City of Lodi Fire Department. Personal communications with LSA Associates Inc, October 26.

c. Significant Public Health and Hazards Impacts. The following discussion describes the significant impacts related to public health and hazards that could result from the proposed project.

(1) Release of Improperly Stored Hazardous Materials. Potentially significant impacts related to the release of hazardous materials which have been improperly used, stored, or disposed of are discussed below.

Impact HAZ-1: Improper use, storage, or disposal of hazardous materials during construction activities could result in releases affecting construction workers, the public, and the environment. (S)

Construction of residences, roadways, and landscaping features at the project site will require the use and transport of hazardous materials. These materials will include fuels, oils, and other chemicals used during construction activities. Improper use and transportation of hazardous materials could result in accidental releases or spills, potentially posing health risks to workers, the public, and environment.

The project site is greater than one acre in size; therefore, construction activities would be regulated under the National Pollutant Discharge Elimination System (NPDES) Construction Activity General Permit, which would require preparation of a Storm Water Pollution Prevention Plan (SWPPP). Requirements of the SWPPP are discussed in Section IV.G, Hydrology and Water Quality, of this DEIR. The SWPPP would incorporate current Best Management Practices (BMPs) for construction and site operation. The SWPPP will include BMPs for site housekeeping practices, hazardous material storage, inspections, maintenance, worker training in pollution prevention measures, and containment of releases to prevent run off into existing storm drains and sewers. Although designed to protect storm water quality, the SWPPP would also serve to mitigate potential hazardous material releases that could affect construction workers, the public, and the environment.

Implementation of the following mitigation measure would reduce this impact to a less-than-significant level.

> Mitigation Measure HAZ-1: Preparation and implementation of the required SWPPP (see Mitigation Measures HYD-2 and HYD-3) would reduce the potential impacts of hazardous materials releases during construction to a less-than-significant level. No additional mitigation is required. (LTS)

Impact HAZ-2: The pesticide storage buildings at APN 058-030-04 contained pesticide stained asphalt and concrete floors. (S)

Pesticides do not readily penetrate asphalt and concrete. However, if a greater degree of confidence is desired, consideration should be given to sampling beneath the asphalt floor of the older storage building.

> Mitigation Measure HAZ-2: As a condition of approval for grading plans for SW Gateway project site, the applicant shall be required to test the soils beneath the stained asphalt floor of the older storage building and complete any clean-up necessary to remediate any identified contamination to an acceptable level. (LTS)

(2) Potentially Hazardous Soils on the Other Areas to be Annexed Site. As previously discussed, no specific development proposals are considered in this EIR for the Other Areas to be Annexed site. Each of the parcels shall be evaluated for potential hazards if and when future development is proposed.

Impact HAZ-3: Future development of any portion of the Other Areas to be Annexed site could be associated with hazards. (S)

Mitigation Measure HAZ-3: Prior to the approval of any specific development projects on the Other Areas to be Annexed, the project applicant shall provide the City with an environmental investigation, as necessary, to ensure that soils, groundwater, and buildings affected by hazardous material releases from prior land uses, and lead and asbestos potentially present in building materials, would not have potential to affect the environment or health and safety of future property owners or users. (LTS)

(3) Potentially Hazardous Soils on the SW Gateway Site.

Impact HAZ-4: Implementation of the SW Gateway project could expose construction workers and/or the public to hazardous materials from contaminants in soils during and following construction activities. (S)

The Phase I/II for the SW Gateway site identified hazardous and potentially hazards materials in soils at the project site. Hazardous and potentially hazardous materials identified in the Phase I/II include lead, PCBs, and oil and grease.

An area of the SW Gateway site has historically been used to store tires, and there is an indication that a fire may have occurred, which may have affected soil quality on APNs 058-040-02 and 058-040-14. Additionally, this area contained a depression that is currently level and farmed. Backfilling of this depression is not documented, nor is the source and quality of the fill known.

Future construction workers and maintenance workers would have direct contact with surface and subsurface soils and future residents at the project site may also be exposed to contaminants in surface soils. These residents may be exposed to contaminants via inhalation of dust and vapor, direct dermal contact with soils, and/or accidental ingestion.

Mitigation Measure HAZ-4: Implementation of the following five-part mitigation measure would reduce these risks to less-than-significant levels.

4a: Prior to the issuance of any demolition or building permits for the project site, a Risk Management Plan (RMP) shall be prepared for the project site. At a minimum, the RMP shall establish soil mitigation and control specifications for grading and construction activities at the site, including health and safety provisions for monitoring exposure to construction workers, procedures to be undertaken in the event that previously unreported contamination is discovered, and emergency procedures and responsible personnel. The RMP shall also include procedures for managing soils removed from the site to ensure that any excavated soils with contaminants are stored, managed, and disposed of in accordance with applicable

regulations and permits. The RMP shall also include an Operations and Maintenance Plan component, to ensure that health and safety measures required for future construction and maintenance at the project site shall be enforced in perpetuity. The RMP shall include the following Mitigation Measures.

4b: Prior the approval of a building permit, soil sampling and boring shall be done in the historic circular depression area in the western portion of APN 058-040-02 in order to determine the quality of the fill and to determine if hazardous materials are present below the surface. If the soils investigation determines that hazardous materials are present, they shall be removed and disposed of in accordance with applicable regulations.

4c: The soil samples collected from the equipment storage areas (and near the pesticide dispensers) were analyzed for Total Recoverable Petroleum Hydrocarbons (TRPH). Oil and grease were detected at elevated concentrations in both samples collected from the equipment storage areas; 12,000 ppm of oil and grease were detected near the 55-gallon waste oil drums east of the equipment storage buildings on APN 058-030-04 and at 38,000 ppm of oil and grease were detected near the waste oil drums in the southern portion of APN 058-030-04. Both concentrations detected are above the CVRWQCB threshold concentrations based on protection of ground water quality. The stained area is approximately 10 feet in diameter. Prior to the approval of the building permit, oil and grease stained soil in this area shall be removed and disposed in accordance with the recommendations of the Phase I/II.[6]

4d: Six areas of APN 058-030-04 contain old equipment and various piles of debris and garbage, which can potentially leave lead based paint and other hazardous materials residue in the soils beneath the piles. No obvious soil staining was noticed beneath the piles of debris and garbage; however, soil beneath the piles could potentially contain lead based paint and other hazardous materials. As a condition of approval for a demolition permit for the buildings located on APN 058-030-04, the trash and debris shall be removed. Soils beneath the debris piles shall be tested for lead based paint residues and other possible hazardous materials. If it is determined that lead based paint or other hazardous materials are present in the soils beneath the piles, these soils shall be removed by a qualified lead abatement contractor and disposed of in accordance with existing hazardous waste regulations.

4e: The truck scale observed on the eastside of APN 058-030-04 could have soils contaminated with hydraulic fluid, which may contain PCBs. Truck scales often used hydraulic fluid, which can contain PCBs, which can be released during spills and leaks. As a condition of approval for grading plans for the SW Gateway site, the soils shall be observed when the scales are removed to determine if there are indications of leakage. If it is determined that leakage has occurred, soils samples shall be collected for laboratory analysis. If it is determined that the soils are contaminated at levels beyond established threshold levels, the contaminated soils shall be removed in accordance with all applicable regulations. (LTS)

(4) Presence of Hazardous Materials. Many of the parcels within the project area contain pesticides, waste oil, equipment maintenance chemicals, discarded trash and debris, and ASTs.

[6] Lowney Associates, 2004. op. cit.

Impact HAZ-5: Many of the parcels within the project area contain hazardous materials that may be harmful to the public and the environment. (S)

The SW Gateway and Westside sites contain ASTs, pesticides, waste oil, equipment maintenance chemicals, discarded trash and debris, as disclosed in the Phase I investigations. Similar conditions have been observed in the Other Areas to be Annexed. Implementation of the following mitigation measure will would reduce these risks to less-than-significant levels.

> Mitigation Measure HAZ-5: Prior to approval of any demolition or construction permits, ASTs, pesticides, waste oil, equipment maintenance chemicals, discarded trash and debris shall be removed from the individual project site and disposed in accordance with applicable regulations. (LTS)

(5) Presence of Septic Tanks and Water Wells. Potentially significant impacts related to abandonment of well and septic systems on the project sites are discussed below.

Impact HAZ-6: The septic tanks and wells on the Westside and SW Gateway sites could potentially create a significant hazard to the public or the environment. (S)

There are three existing wells on the Westside site and five wells and existing septic systems on the SW Gateway site. Septic tanks and wells also exist on the Other Areas to be Annexed site. The presence of these elements represents a potential impact to public health or the environment. Implementation of the following mitigation measure would reduce this impact to a less-than-significant level.

> Mitigation Measure HAZ-6: Prior to approval of any grading plans or construction permits for each individual project, the wells and septic system shall be properly abandoned in accordance with applicable regulations. (LTS)

(6) Underground Storage Tank (UST). Potentially significant impacts related to the release of hazardous material in the soils are discussed below.

Impact HAZ-7: The reported presence of a possible underground storage tank (UST) within the SW Gateway site could potentially impact construction workers and the environment. (S)

The presence of a possible buried railcar UST was reported along the western side of the APN 058-030-04, which was reported to have been associated with the former dairy on the site. Based on the Phase I/Phase II[7], it was unclear if the UST is present or what it contained. Should releases of diesel occurred, soils and/or groundwater may have been affected. In addition to potential adverse impacts on the environment, construction workers may potentially come into contact with diesel-contaminated soils and groundwater during excavation activities at the project site. This potential condition would constitute an impact of the environment on the project.

Implementation of the following mitigation measure would reduce this impact to a less-than-significant level.

[7] Lowney Associates, 2004. op. cit.

Mitigation Measure HAZ-7: Prior to approval of any demolition or construction permits for the project site, a geophysical survey shall be performed locate the possible UST. Drilling and soil sampling shall be conducted to determine if this UST may have contained petroleum hydrocarbons that may have leaked and affected soil and ground water. Should the sampling indicate a release from the tank has occurred, additional investigation and remediation may be required by San Joaquin County EHD prior to case closure. If the UST is present, it shall be removed and backfilled with engineered fill prior to site development. (LTS)

(7) Asbestos and Lead Paint. Due to the age of the on-site buildings in the SW Gateway area, lead and asbestos containing materials may be present. Demolition and removal of these buildings could potentially release lead and asbestos. Additionally, concrete irrigation pipelines commonly contain asbestos, which is a known human carcinogen. If asbestos-containing materials and/or lead-based paint are present in concrete irrigation pipelines, construction workers and nearby residents and workers could be exposed to asbestos fibers and lead-based paint dust during the demolition and removal of these pipelines.

Lead is a suspected human carcinogen, a known teratogen (i.e., causes birth defects), and a reproductive toxin. Federal and State regulations govern the renovation and demolition of structures where lead or materials containing lead are present. Regulations pertaining to demolition of structures with lead-based paint are promulgated by federal and State agencies.

Asbestos is a known human carcinogen. Federal, State, and local requirements also govern the removal of asbestos or suspected asbestos-containing materials, including the renovation and demolition of structures where asbestos is present. These requirements have been promulgated by the federal and State agencies and the San Joaquin Valley Air Quality Control District.

Potentially significant impacts related to the release of hazardous materials during the demolition of structures are discussed below.

Impact HAZ-8: Demolition of buildings containing lead-based paint and asbestos-containing building materials and the removal of asbestos containing irrigation pipes could release airborne lead and asbestos particles, which may affect construction workers and the public. (S)

If asbestos-containing materials and/or lead-based paint are present in structures planned for demolition or renovation, construction workers and nearby residents and workers could be exposed to asbestos fibers and lead-based paint dust during the demolition of existing structures.

Mitigation Measure HAZ-8: Implementation of the following two-part mitigation measure would reduce this impact to a less-than-significant level.

8a: As a condition of approval for a demolition permit for the project site buildings, an asbestos and lead-based paint survey shall be performed. If asbestos-containing materials are determined to be present, the materials shall be abated by a certified asbestos abatement contractor in accordance with the regulations and notification requirements of the San Joaquin Valley Air Quality Control District. If lead-based paints are identified, then federal and State construction worker health and safety regulations shall be followed during renovation or demolition activities. If loose or peeling lead-based paint are identified, they shall be

removed by a qualified lead abatement contractor and disposed of in accordance with existing hazardous waste regulations.

8b: As a condition of approval for grading plans for the project sites, an asbestos investigation of subsurface structures shall be conducted. If asbestos-containing materials are determined to be present, the materials shall be abated by a certified asbestos abatement contractor in accordance with the regulations and notification requirements of the San Joaquin Valley Air Quality Control District. (LTS)

J. UTILITIES

This section describes the existing utilities which serve the project site including water, wastewater, solid waste, telecommunication and natural gas. This section includes a discussion of potential impacts, and mitigation measures are presented when necessary. Impacts to the stormwater system are discussed in Section IV.G, Hydrology and Water Quality. Electricity is discussed in Section IV.M, Energy.

1. Setting

The following section describes the existing utilities, capacities, and expansion possibilities. Additionally, regulations and requirements of each utility service are outlined.

a. Water Supply. The following discussion provides background information on the City's sources of water, water treatment, and the water distribution system. It also summarizes the City's General Plan policies related to water supply.

Information related to water supply and demand is from the City of Lodi 2005 Urban Water Management Plan (UWMP) which was adopted March 15, 2006.

Water Availability Assessments for the proposed project were prepared by Schlumberger Water Services in April of 2005, and are available for public review at the City of Lodi Public Works Department. However, these Water Availability Assessments were based on outdated water supply information contained in the City of Lodi 2001 UWMP, and did not include more recent water supply information contained in the City of Lodi 2005 UWMP. These Water Availability Assessments do provide information on the current water use on the project sites and demand figures for the proposed project, which are used in this EIR. However, the basis for determining that the City could provide water to the project is the 2005 UWMP. Updated Water Availability Assessments are being prepared and will be available for review during the 45-day public review period.

Water Sources. The project site overlies the Eastern San Joaquin Groundwater Basin, which is a part of the Central Valley Groundwater Basin. With a combined capacity of 50.7 million gallons per day (mgd), groundwater from 26 wells is the primary source of water supply for the City of Lodi.[1] The wells operate automatically on demand and pump directly into the distribution system. Seven of the wells are fitted with emergency diesel-powered generators to maintain water pressure during power outages. Historical groundwater levels measured within the City's service area indicate that regionally more groundwater is extracted annually than is replenished. Groundwater levels fluctuate over time depending on precipitation, aquifer recharge and groundwater pumping. The City of Lodi 2005 UWMP provides an estimate of the City's sustainable groundwater supply of approximately 15,000 acre-feet per year. The 2005 UWMP notes an overall average annual decrease in groundwater levels from 1927 to 2004 of 0.39 feet per year within the City. The average annual groundwater level fluctuates depending on variations in recharge and extraction, but the long term trend has shown a general decline in groundwater levels.[2] According to the 2005 UWMP, average annual water use in the City of Lodi in 2004 was 17,011 acre-feet (15.19 million gallons per day).

[1] City of Lodi, 2006. Draft Urban Water Management Plan.

[2] Ibid.

In May 2003, the City of Lodi contracted with the Woodbridge Irrigation District (WID) to provide an additional 6,000 acre-feet per year of untreated surface water for 40 years. The City is currently examining its options for developing this water supply, which may include groundwater recharge or a water treatment plant.[3,4]

The project sites currently contain irrigated vineyards, orchards, and vacant fields with a few dozen rural residences and agricultural buildings. One 50-acre vineyard in the Westside project area is currently irrigated with WID surface water. All other vine and orchard crops are irrigated with groundwater pumped at a net average of 1.36 acre-feet per acre to meet crop requirements in excess of rainfall.[5]

The SW Gateway site currently has five wells used for residential and agricultural irrigation purposes. The Westside site has three agricultural irrigation wells.

The Other Areas to be Annexed consists of open agricultural and rural residences.

(1) Water Distribution System. The City of Lodi's distribution system consists of an elevated storage tank, one ground level storage facility and pumping station, and the piping system. A one million gallon ground storage tank, located east of Highway 99 on Thurman Street, stores groundwater from nearby wells to meet peak hour demands and fire flows. A 100,000-gallon elevated storage tank is located on North Main Street.

The water is periodically chlorinated three to six weeks in one time period as a proactive step to keep the water system in compliance with water quality standards. In 2004, Lodi's drinking water achieved or exceeded all federal and state water quality standards. Several of the wells have granular activated carbon (GAC) treatment to remove dibromochloropropane (DBCP).

The water distribution system within the City of Lodi includes pipes ranging in size from 14-inch mains down to 2-inch mains. The entire distribution system consists of approximately 210 miles of pipe. The City has commenced a pipe replacement program to improve fire flow service and reduce system leaks within the existing City water service area. Residential uses are not currently metered. The City is initiating a program to retrofit existing non-metered users and automatically install meters for all new water users.

The project sites do not currently have water conveyance infrastructure connected to the City water supply system. There is a 10-inch water line located beneath Lower Sacramento Road (east of the SW Gateway site). The Master Utility Plan for the SW Gateway site includes a proposed 1 million gallon storage tank on the site of the future electrical substation and an additional well east of the western boundary of the SW Gateway site (near Century Boulevard and Heavenly Way). In addition, a new well at DeBenedetti Park would provide water for the project.

[3] Ibid.

[4] West Yost & Associates, 2005. City of Lodi, Full Surface Water Implementation Study.

[5] Schlumberger Water Services, 2005. Water Availability Assessment, Lodi Westside Annexation. Prepared for the City of Lodi, April 11.

(2) City of Lodi General Plan Policies Related to Water Supply. The following City of Lodi General Plan policies are applicable to the proposed project.

Land Use and Growth Management Element

Goal J: To maintain an adequate level of service in the City's water, sewer collection and disposal, and drainage system to meet the needs of existing and projected development.

- Policy 1. The City shall develop new facilities, as necessary, to serve new development in accordance with the City's Water, Wastewater, and Drainage Master Plans.
- Policy 2. The City shall assess water, wastewater, and drainage development fees on all new residential, commercial, office, and industrial development sufficient to fund required systemwide improvements.

Conservation Element

Goal B: To conserve water resources.

- Policy 1. The City shall require water conservation in both City operations and private development to minimize the need for the development of new water sources and facilities.
- Policy 2. The City shall meter all new residential development.
- Policy 4. The City shall require water-conserving landscaping practice in new City projects and in private development, such as the use of drought tolerant plants and irrigation techniques.

b. Wastewater. The City of Lodi Public Works Department provides wastewater collection and treatment services to areas within the City of Lodi. The collection system includes separate domestic, industrial and storm sewers and related pumping facilities. Untreated sewage is piped to the City's treatment plant using both gravity flow and lift stations.

(1) Collection and Conveyance System. There is an existing 48-inch sewer trunk line and a 30-inch industrial waste line that extend in a southwesterly direction through the SW Gateway site from the intersection of Lower Sacramento Road and Century Boulevard. These facilities will have to be relocated to accommodate the project. A 21- to 42-inch sewer main is situated beneath Lower Sacramento Road, located along the eastern boundary of the SW Gateway site.

(2) Wastewater Treatment Facilities. The Public Works Department operates the White Slough Water Pollution Control Facility (WSWPCF), located 6 miles west of the City of Lodi. Since its construction in 1966, the WSWPCF has been expanded and improved to meet increasingly stringent environmental protection standards. Residential and commercial wastewater undergoes conventional secondary and tertiary treatment. All of the treated effluent is recycled during the irrigation season (May to August), as described in the following water recycling section. During the winter months, treated effluent that is not recycled is discharged to White Slough, which is part of the San Joaquin River Delta.

In 1992, the facility was expanded to a design capacity of 8.5 million gallons per day (mgd) and the capacity permitted by RWQCB is the permitted capacity is 7.0 mgd. Current estimated dry weather waste generation in the City of Lodi is 6.4 mgd. The WSWPCF is currently operating at approximately 91 percent of the RWQCB permitted capacity and 75 percent of the design capacity of the WSWPCF. The City discharge permit is presently being updated by the RWQCB and the City has submitted a Waste Discharge Report requesting the permitted capacity be increased to 8.5 mgd. The

remaining capacity of the facility is anticipated to accommodate growth in the City of Lodi up to the year 2020.[6]

The facility is currently in compliance with the water quality requirements of Regional Water Quality Control Board for the protection of the environmentally sensitive Sacramento-San Joaquin River Delta.

The City utilizes a process called anaerobic digestion to convert the solids removed from the wastewater into a useful byproduct known as biosolids. This material meets federal regulations for safe use. Biosolids are reused by the City as a nutrient source and soil conditioner on City-owned land.

(3) Water Recycling And Reuse. The City of Lodi recycles and reuses part of the treated wastewater from the WSWPCF. This recycled water is filtered and disinfected to meet or exceed State requirements for recycled water to destroy bacteria, viruses, or other disease-causing organisms. In recent years, the City has also supplied recycled water to produce steam for a 49-megawatt power generator, and to replenish mosquito fish-rearing ponds. If a process upset were to occur, the domestic flow can be stored in holding ponds and further treated before discharging water to the Delta.

Adjacent to the WSWPCF, the City owns in excess of 1,000 acres of land and leases 900 acres to local farmers for the cultivation of feed and fodder crops not intended for human consumption. The agricultural and industrial reuse on land surrounding the WSWPCF does not replace the groundwater pumped by the City but does reduce the amount of groundwater and surface water used in the area. The additional source of treated wastewater offsets some of the regional demand for groundwater, allowing groundwater which would otherwise be withdrawn from the aquifer to be conserved.

The City is currently in the process of developing a Reclaimed Water Master Plan, which will identify future uses of recycled water supplies, primarily for landscape irrigation.

(4) City of Lodi General Plan Policies Related to Wastewater. The following City of Lodi General Plan policies are applicable to the proposed project.

Land Use and Growth Management Element

Goal J: To maintain an adequate level of service in the City's water, sewer collection and disposal, and drainage system to meet the needs of existing and projected development.

- Policy 1. The City shall develop new facilities, as necessary, to serve new development in accordance with the City's Water, Wastewater, and Drainage Master Plans.
- Policy 2. The City shall assess water, wastewater, and drainage development fees on all new residential, commercial, office, and industrial development sufficient to fund required systemwide improvements.

c. Solid Waste. Central Valley Waste Services, a subsidiary of Waste Management, Inc., provides solid waste collection services to the City of Lodi. Central Valley Waste collects solid waste from residential, commercial and industrial properties in the City of Lodi and transports the waste to a Transfer Station and Materials Recovery Facility (MRF). The waste is then transferred to large haul vehicles that transport the waste to the North County Landfill.

[6] Del Kerlin, 2005. Assistant Wastewater Treatment Plant Superintendent. Personal communications with LSA Associates, Inc. October 20.

The North County Landfill is a Class III facility[7] that is owned and operated by San Joaquin County Public Works Department.[8] The landfill is permitted to accept 825 tons of solid waste per day. On average, the landfill currently receives an average of 402 tons of waste per day.[9] The estimated closure date of the landfill is 2035.

Central Valley Waste Services offers a full range of collection, disposal and recycling services for their residential and commercial customers. Central Valley Waste Services provides on-site recycling bins and pick up services. At the Materials Recovery Facility (MRF) recyclables collected from both residential and commercial customers are sorted, processed and shipped. In addition, the Central Valley Waste Services also operates a Buy Back Recycling Center that allows customers to drop off recyclable materials.

d. Telecommunications and Cable. Cable services in the City of Lodi are currently provided by Comcast Cable. Since the proposed project is adjacent to areas which are currently developed, it is likely that cable infrastructure would be readily available in the vicinity of the project sites. Comcast seeks to expand their customer base and work to provide service to new customers in order to gain new accounts.

AT&T/SBC Communications (SBC) provides telephone service within the City of Lodi. AT&T/SBC also provides or hosts a variety of other telecommunications services, including Digital Subscriber Line (DSL), Internet Service Provider (ISP), web hosting, virtual private networking, and wireless/cellular paging services.

The Westside site does not currently have any telecommunication infrastructure. Residences within the SW Gateway site are currently served by AT&T/SBC.

e. Natural Gas. Pacific Gas & Electric (PG&E) provides natural gas services to the City of Lodi. A natural gas line is located along Lower Sacramento Road, which would serve the Westside and SW Gateway sites.

2. Impacts and Mitigation Measures

This section discusses potential impacts to utility systems that could result from implementation of the proposed project. This section begins with criteria of significance, which establish the thresholds used to determine whether an impact is significant. The latter part of this section presents the impacts associated with the proposed project and identifies mitigation measures, if appropriate. Less-than-significant impacts to infrastructure and utilities are discussed first, followed by significant impacts.

a. Significance Criteria. The proposed project would have a significant impact on the City's utility system if it would:

[7] A Class III facility is designed to accept municipal waste and is not permitted to accept hazardous waste.

[8] Integrated Waste Management Board, 2004. Facility/Site Details, North County Landfill. Website: http://www.ciwmb.ca.gov/swis/

[9] San Joaquin County, 2005. North County Recycling and Sanitary Landfill. Website: www.sjgov.org/solidwaste/.

- Exceed wastewater treatment requirements of the Central Valley Regional Water Quality Control Board.
- Require or result in construction of new wastewater treatment facilities, or expansion of existing facilities, construction of which could cause significant environmental effects.
- Require or result in construction of new water facilities, or expansion of existing facilities, construction of which could cause significant environmental effects.
- Cause there to be insufficient water supplies to serve the project from existing entitlements and resources, requiring new and expanded entitlements.
- Violate applicable federal, State, and local statues and regulations related to solid waste.

(1) Less-than-Significant Utilities Impacts. The following discussion describes less-than-significant impacts to utility systems that would result from the implementation of the proposed project.

Water Supply. In accordance with Water Code Section 10910 (Senate Bill [SB] 610), and Government Code Section 66473.7 (SB 221), a city or county is required to provide assurances that there is adequate water supply prior to the approval of large new developments. SB 610 mandates a water supply assessment for all projects subject to CEQA which would demand an amount of water equal to, or greater than, the equivalent amount of water required by a 500 dwelling unit project. SB 211 creates a new requirement that cities and counties include a condition of approval on the tentative subdivision map approval requiring that a subdivider demonstrate that a sufficient water supply be available to serve the proposed subdivision. Said condition must be satisfied before the final subdivision map can be approved.

Information related to water supply and demand is from the City of Lodi 2005 Urban Water Management Plan (UWMP), which was adopted March 15, 2006.

Schlumberger Water Services developed a Water Availability Assessment for the Westside[10] and SW Gateway project,[11] which included projections of the water supply needed to serve the proposed project. These analyses used data related to the Westside and SW Gateway sites that included demand projections based on the highest General Plan Densities for the proposed land uses,[12] in addition to estimated projected water demand for the maximum permissible General Plan Densities in the Other Areas to be Annexed. However, these Water Availability Assessments were based on outdated water supply information contained in the City of Lodi 2001 UWMP, and did not include more recent water supply information contained in the City of Lodi 2005 UWMP. These Water Availability Assess-

[10] Schlumberger Water Services, 2005. Water Availability Assessment, Lodi Westside Annexation. Prepared for the City of Lodi, April 11.

[11] Schlumberger Water Services, 2005. Water Availability Assessment, Lodi Southwest Gateway Annexation. Prepared for the City of Lodi, April 11.

[12] The Westside Water Availability Assessment was based on the assumption that 852 units could be constructed at the highest allowable General Plan densities and for the SW Gateway site, the Water Availability Assessment assumed 1,903 dwelling units could be constructed. The Water Availability Assessments assume the proposed project could result in 2,410 dwelling units in the Westside and SW Gateway sites while the applicant has currently proposed building 2,138 dwelling units within these areas. An additional 345 units could be constructed on the Other Areas to be Annexed if built at the 7 units/acre density called for in the City of Lodi General Plan.

ments do provide demand calculations for the proposed project, which are used in the following analysis and are available for public review at the City of Lodi Public Works Department. However, the basis for determining the City could provide water to the project is the 2005 UWMP.

The Westside and SW Gateway sites are currently occupied by irrigated row crops, orchards, vacant fields and associated rural residences and farm buildings.

According to the 2005 UWMP, average annual water use in the City of Lodi in 2004 was 17,011 acre-feet (15.19 million gallons per day).

City per capita water use has been trending downward for 30 years. Water demand increased at an average rate of 1.2 percent per year from 1980 through 2003. Population grew at more than twice this rate over the same time period, indicating significant reductions in per capita use. Gross per capita water demand averaged about 250 gallons per capita per day in the period 2001-2003. According the 2005 UWMP, historical water use in the City has seen a slight decline in per capita water use.

The Water Availability Assessments used demand estimates based on maximum densities described in the 1991 General Plan, which entail the estimated construction of 2,410 dwelling units, in addition to schools, parks and recreational spaces within the Westside and SW Gateway sites. The highest combined water demand projection for the proposed Westside and SW Gateway developments was 1,640 acre feet per year, based on a citywide rate of 250 gallons per day per capita. The projected water demand is based on a conservative estimate of 2,410 dwelling units based on the maximum densities described in the 1991 *General Plan*.

Including the potential development of 345 dwelling units on the Other Areas to be Annexed, the Water Availability Assessments estimated water demand for the Westside, SW Gateway and Other Areas to be Annexed based on 2,755 dwelling units. The highest estimated water demand projection for the proposed project including the Other Areas to be Annexed was 1,890 acre feet per year.

The City of Lodi 2005 UWMP supply and demand comparisons determined that the existing water supply entitlements and allotments are adequate to provide water to the proposed project during normal, dry and multiple dry years. Even in a multiple dry year scenario, the City will have a surplus ranging from 5,320 acre-feet per year in 2005 to a surplus of 5,700 acre-feet per year in 2025. The supply and demand comparisons in the 2005 UWMP include the increase in water demand that would be generated by the implementation of the proposed project as a part of the demand projections for the City.

According to the 2005 UWMP, total water supply demands of the two annexation areas and Other Annexation Areas would be met with the City's existing allotments and entitlements and would not require new or expanded entitlements.

The City's Water Conservation Ordinance and Water Conservation Rebate Program are designed to ensure that per capita water demand continues to decrease in accordance with historical trends. The Water Availability Assessments state that continued efficiency may mean per capita uses of 225 gpd and 230 gpd as likely possibilities. In accordance with the General Plan policies, new residential development would be metered for future conservation pricing and water conserving-landscaping practices would be required in future development. Consistent with the downward trend in per capita

water use in the City of Lodi, further reductions in per capita use could reduce water supply requirements by approximately 40- to 70 acre-feet per year.[13]

The Water Availability Assessments identified opportunities to use 1,900 acre-feet per year for irrigation of residential yards, parks greenbelts, and schools in new development areas throughout the City of Lodi.[14] Proportioned to the 415 acres of the proposed project, potable water demand would be reduced 450-acre feet per year through the use of recycled water for irrigation. Based on a more detailed land-use based analysis of recycled water use potential to account for the relatively large proportion of irrigated open space anticipated for the proposed project, it was determined that the total potential for recycled water use could be 700 acre-feet per year for the proposed project.[15] The City is currently in the process of developing a Reclaimed Water Master Plan, which will identify future uses of recycled water supplies, primarily for landscape irrigation. A 24-inch reclaimed water line is planned to run through the SW Gateway site, connecting to existing stubs on Century Drive and Kettlemen Lane.

The increased use of recycled water for irrigation and implementation of water conservation practices would ensure that the proposed project would have a less-than-significant impact on existing water supplies. The City's UWMP includes a water conservation ordinance and its provisions will apply to this project.

Wastewater. Average wastewater flows for residential land uses in the City of Lodi are 100 gallons per capita per day and 1,500 gallons per acre per day for Commercial Land Uses.[16]

The average wastewater flow for residential land uses in the City of Lodi is 100 gallons per capita per day and the wet weather peaking factor for residential wastewater flow is approximately 1.75.[17] Based on a projected population of 5,829 new residents, the proposed project would generate an average wastewater flow of approximately 582,900 gpd, and a peak wet weather flow of approximately 1.02 mgd.

Based on the current estimated dry weather flow of 6.4 mgd,[18] the WSWPCF has a remaining design treatment capacity of 2.1 mgd and a RWCQCB remaining permitted capacity of 600,000 gpd. The City discharge permit is presently being updated by the RWQCB and the City has submitted a Waste Discharge Report requesting the permitted capacity be increased to the existing design capacity of 8.5 mgd. The WSWPCF currently has effluent holding ponds with a capacity of approximately 300 acre-feet (approximately 98 million gallons) in order to retain effluent during contingencies in order to

[13] Schlumberger Water Services, 2005. op cit.

[14] Schlumberger Water Services, 2005. op cit.

[15] Schlumberger Water Services, 2005. op cit.

[16] Black & Veatch, 1990. Sanitary Sewer System Technical Report for the 1990 General Plan Update for the City of Lodi. Page 3-3.

[17] Black & Veatch, 1990. Sanitary Sewer System Technical Report for the 1990 General Plan Update for the City of Lodi.

[18] Del Kerlin, 2005. Assistant Wastewater Treatment Plant Superintendent. Personal communications with LSA Associates, Inc. October 20.

comply with RWQCB discharge requirements. The White Slough Treatment facility has the capacity to treat the additional wastewater generated by the proposed project.[19]

Natural Gas. Development of the proposed project would increase the demand for natural gas in order to service the additional residences, recreation center and school facilities. However, new construction associated with the implementation of the proposed project would take place adjacent to developed areas currently served by natural gas lines.

Telecommunications and Cable. Development of the proposed project would increase the demand for telecommunication and cable services in order to service the additional residences, recreation center and school facilities. New construction associated with the implementation of the proposed project would take place adjacent to developed areas currently served by telecommunications and cable lines. Comcast seeks to expand their customer base and works to provide service to new customers in order to gain new accounts.

The California Public Utilities Commission requires that SBC/AT&T anticipate and serve new growth. To meet this requirement, AT&T/SBC continually upgrades its facilities and infrastructure, adding new facilities and technology to remain in conformance with the California Public Utilities Commission tariffs and regulations and to serve customer demand in the City.

Additions to the City's infrastructure and proposals for development would result in a need for expansion or changes to AT&T/SBC's infrastructure, which would involve suitable siting for equipment placement. Suitable sites must meet requirements for the physical transmission of telecommunication services and conform to the City's guidelines. AT&T/SBC also works with the City to ensure that construction of new facilities does not interfere with any new or newly paved streets.

Further refinement of the proposed project will determine the communication needs of proposed project and which type of infrastructure AT&T/SBC Communications would utilize to service the project site. The extension of telecommunications and cable services to serve new development would not constitute a significant impact.

(2) Significant Utility Impacts. The proposed project would not result in any potentially significant adverse impacts to infrastructure and utilities.

[19] Ibid.

K. PUBLIC SERVICES

This section analyzes the proposed project's potential impacts to public services including: fire protection, police services, schools, parks and recreation and libraries. Potential impacts to public services that could result from the proposed project are identified, and mitigation measures are recommended, as appropriate.

1. Setting

In this setting section, current service locations, capacities, and expansion possibilities are discussed, as are the City's General Plan policies relating to public services.

a. Fire Protection. The Lodi Fire Department provides fire protection, basic emergency medical services, and related safety services for the City of Lodi. The Lodi Fire Department is currently authorized for a staffing level of 62 personnel. The staff includes a fire chief, two division chiefs, four battalion chiefs, a fire marshal, support personnel, an inspector, and fire fighters/engineers (including captains). The department operates 24 hours a day seven days a week, with three rotating shifts. There are a minimum of 16 firefighters and officers and one shift commander on duty at all times.[1]

In 2004, the Department answered 4,201 calls for service with an average response time for all calls of 4:05 minutes. In the southwest and southeast corners of the city, the average drive time was 4:24 minutes and 5:04 respectively. Response times to the southwest and southeast corners of the city have been increasing since 2001.[2]

The Fire Administration building, which is located at 25 East Pine Street, houses the Fire Chief, the Fire Division Chief of Resources Administration, the Fire Division Chief of Administrative Services, the Battalion Chief of Physical Resources, and the Department Secretary. Also located in the administration building are fire prevention services, including the Fire Marshal, the Fire Inspector and an Administrative Clerk.

Fire Station 1 is located at 210 West Elm Street, as shown in Figure IV.K-1. Station 1 is staffed with a captain, fire engineer and two fire fighters. Station 1 is equipped with a 75-foot ladder truck and a brush truck.

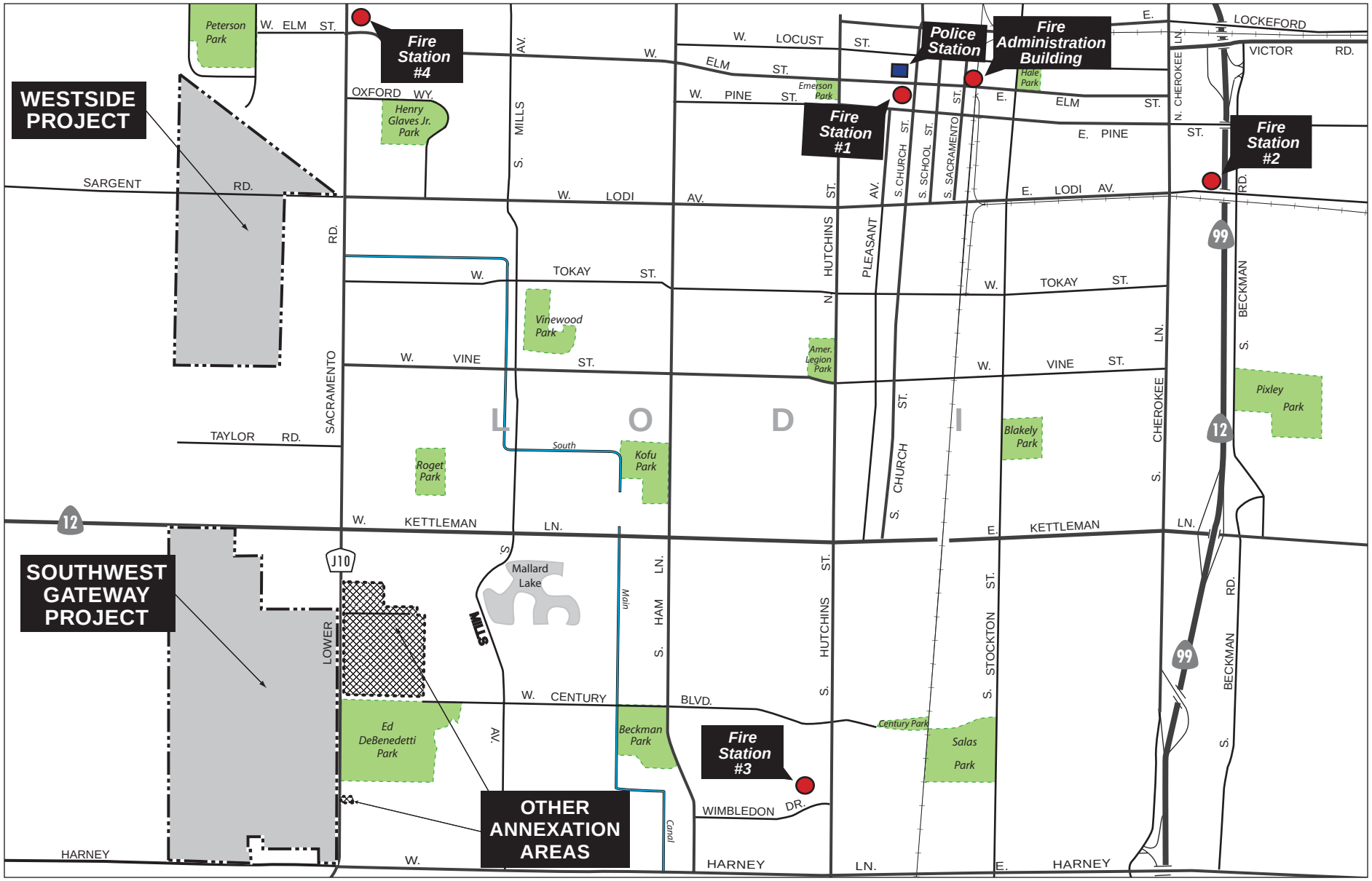
Fire Station 2 is located at 705 East Lodi Avenue and is staffed with a captain, a fire engineer, and a fire fighter. Station 2 is equipped with a Fire Engine, Hazardous Materials Unit and a reserve 1981 Fire Engine.

Fire Station 3 is located at 2141 South Ham Lane and is single engine company staffed with a captain, a fire engineer, and a fire fighter.

Fire Station 4 is located at 180 North Lower Sacramento Road. At any given time, Station 4 is staffed with a captain, a fire engineer, and a fire fighter. Station 4 is equipped with one Fire Engine.

[1] Pretz, Michael, 2005. Fire Chief, City of Lodi Fire Department. Personal communications with LSA Associates, Inc. October 25.

[2] Ibid.



LSA

FIGURE IV.K-1

LEGEND

- FIRE STATION
- POLICE STATION
- SOUTHWEST PROJECT SITE
- OTHER ANNEXATION AREAS

N

0 1000 2000
FEET

SOURCE: CSAA; LSA ASSOCIATES, INC., 2006.

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Lodi Annexation EIR

Location of Police Department and Fire Stations

The Lodi Fire Department has the goal to respond to all emergency calls within four minutes of receiving the call and within three minutes of travel time. The City of Lodi Fire Department has mutual aid agreements with the Delta Fire Protection District and the Woodbridge Fire Protection District. During major emergencies, the Woodbridge and Delta Fire Districts would provide assistance to the City of Lodi Fire Department if requested.

All City of Lodi firefighters and engineers are licensed Emergency Medical Technicians (EMTs), and are trained to provide basic emergency services. Paramedic services in the City is provided by a private company, American Medical Response (AMR). Medical emergencies are treated at either Lodi Memorial Hospital or San Joaquin County General Hospital.

The following policies from the Health and Safety Element of the City of Lodi General Plan are related to Fire protection services:

Health and Safety Element

Goal C: To prevent the loss of lives, injury, and property damage due to urban fires.

- Policy 1: The City shall promote the installation of automatic interior sprinkler systems in all new developments.
- Policy 2: The City shall require new development to comply with minimum fire flow rates determined jointly by the City Fire Department and the Public Works Department.
- Policy 7: The City shall endeavor through adequate staffing and station locations to maintain the minimum feasible response time for fire and emergency calls. The goal for travel time by the fire department in responding to an emergency shall be 3 minutes. As areas are developed beyond the 3-minute standard, additional fire stations, capital equipment, and personnel shall be provided or alternative fire protection measures shall be required.
- Policy 8: The City shall endeavor to maintain a firefighting staff level consistent with the provision of three-person companies and a 3-minute emergency travel time. The City shall translate this ratio to land use equivalents to correspond to the City's fee ordinance.
- Policy 9: The City shall attempt to offset the need for new fire department staff and equipment and to improve fire safety by promoting the installation of built-in fire protection equipment in all new development.
- Policy 10: The City shall assess development fees on all new residential, commercial, office, and industrial development sufficient to fund capital improvements and equipment required to provide fire protection.

b. Police Services. Currently, the project sites are under the jurisdiction of the San Joaquin County Sheriff's Department. When the project sites are annexed to the City of Lodi, the City of Lodi Police Department would then provide police services. The Lodi Police Department consists of two divisions: Support Services and Operations. Support Services includes: the Dispatch, Jail, and Records Unit; the Special Investigations Unit; and the General Detectives Unit. The department is currently budgeted for 78 sworn officers and 39 civilian staff.[3] The Lodi Police Department operates one central police station located at 215 West Elm Street.

The Operations Division is divided into five police districts that are in charge of patrolling various areas of the City. Officers and supervisors are assigned to a specific district in order to stay abreast of specific problems that are unique to each district. The Westside site is located in the north sector of the Sunset District and the SW Gateway site and Other Areas to be Annexed are located in the south

[3] Sandy Myers, 2005. Chief Secretary, Lodi Police Department. Personal communications with LSA Associates, Inc., November 9.

sector of the Sunset District. The Police Department patrols the district 24 hours a day and seven days a week.

In accordance with the Lodi General Plan, the Lodi Police Department has the goal to respond to all emergency calls within three minutes and all non-emergency calls within 40 minutes.

The San Joaquin County Sheriff's Department provides law enforcement services to rural and unincorporated areas of the County which surround the City of Lodi. The Sheriff's Department would assist the Lodi Police Department during major emergencies if requested.

The following policies from the Health and Safety Element of the City of Lodi General Plan are related to Police protection services:

Health and Safety Element

Goal D: To prevent crime and promote the personal security of Lodi residents.

- Policy 1: The City shall promote the installation of security equipment aimed at crime prevention in new development.
- Policy 3: The City shall encourage developers to incorporate site planning and structural design features that deter crime in new development.
- Policy 4: The Lodi Police Department shall continue to participate in the development review process to ensure that crime prevention considerations are incorporated into the design of new development.
- Policy 5: The City shall endeavor through adequate staffing and patrol arrangements to maintain the minimum feasible police response times for police calls. The goal for average response time for emergency calls shall be 3 minutes and no longer than 40 minutes for non-emergency calls.
- Policy 6: The City shall endeavor to maintain the existing staff ratio of 1.3 officers per 1,000 population. The City shall translate this ratio to dwelling unit equivalents to correspond to the City's fee ordinance.
- Policy 7: The City shall assess development fees on all new residential, commercial, office, and industrial development sufficient to fund capital improvements and equipment required to provide police protection.

c. Schools. The City of Lodi is served by the Lodi Unified School District. The Lodi Unified School District (LUSD) encompasses 350 square miles and serves the cities of Lodi, North Stockton and the unincorporated communities of Acampo, Clements, Lockeford, Victor and Woodbridge.

The LUSD has a total student enrollment is 26,700 in kindergarten through the twelfth grade. There are 37 school sites, 28 elementary, five middle schools, three high schools, and two continuation high schools. In addition, the district offers two elementary community day schools, and one middle community day school, a Middle College High School,[4] an adult school, a career center, children's center, a developmental center for the handicapped, and several pre-school programs. The top five primary languages other than English are Spanish, Hmong, Urdu, Cambodian and Vietnamese. Due to the large student population, the district maintains a multi-track year-round education calendar for grades K-8. The high schools, rural schools, and community day schools operate on a modified traditional calendar.

[4] The Middle College High school is a collaborative high school located at the San Joaquin Delta College campus in Stockton and provides high school students with the opportunity to benefit from access to college faculty.

The Westside project is within the Vinewood Elementary School, Millswood Middle School and Lodi High School attendance areas. Enrollment for 2005 and the existing capacity of these schools are shown in Table IV.K-1.

The SW Gateway project and Other Areas to be Annexed south of Vine Street are within the Larson Elementary School, Lodi Middle School and Tokay High School attendance areas.

The LUSD has a maximum student to teacher ratio of 20 for kindergarten through 3rd grade, 31 students per teacher for 4th through 6th grades, and 30 for 7th through 12th grade.[5]

Table IV.K-1: LUSD School Enrollment and Capacity

	Enrollment (2005)	Capacity
Westside		
Vinewood Elementary	551	585
Reese Elementary	737[a]	
Millswood Middle School	824	830
Lodi High School	2,443	1,800
SW Gateway		
Larson Elementary	577	806
Lodi Middle School	838	840
Tokay High School	2,455	1,800

[a] As of school year 2006-7, Reese Elementary School enrollment is projected at 622 with a capacity of 624.

Source: Gary Yocum, 2005. Facility Planning Manager, Lodi Unified School District.

The following policies from the City of Lodi General Plan are related to public school services and facilities:

Land Use and Growth Management Element

Goal H: To provide adequate land for development of public and quasi-public uses to support existing and new residential, commercial, and industrial land uses.

- Policy 1: The City shall assist the LUSD in designating and reserving or acquiring appropriate sites for new schools and support facilities to accommodate growth, in conjunction with City land use planning and consistent with LUSD planning objectives. Future sites shall be identified on the GP Land Use Diagram and updated, as needed.
- Policy 2: The City shall promote the clustering of public and quasi-public uses such as schools, parks, libraries, child care facilities, and community activity centers. Joint use of public facilities shall be promoted, and agreements for sharing costs and operational responsibilities among public service providers shall be encouraged.
- Policy 3: The City shall designate adequate, appropriately located land for quasi-public uses such as hospitals, churches, private school facilities, and utility uses.

Goal I: To provide for new school facilities as they are needed.

- Policy 3: To the extent allowed by law, the City shall condition approval of rezonings, prezonings, and general plan amendments on stipulations by the applicants and their successors in interest that they will coordinate building construction and occupancy with LUSD so as to prevent or minimize overcrowding; provided, however, that prior approval by the LUSD shall not be required before the City can act on applications for development.
- Policy 4: To the extent allowed by law, the City shall ensure that adequate financing for necessary school facilities shall be available in a timely fashion from new construction before approving any development projects; provided that such prior approval of the LUSD shall not be required before the City can act on such applications for development.
- Policy 5: The City shall not assume the role of negotiator on behalf of the LUSD. It shall be up to the LUSD and the developer to negotiate acceptable measures for providing school facilities, and for the district to then advise the City that it is or is not satisfied that the proposed development application will satisfy all of the goals stated in this general plan having to do with schools.

[5] Yocum, Gary, 2005. Facility Planning Manager, Lodi Unified School District. Personal communications with LSA Associates, Inc. November.

- Policy 6: The City shall support all necessary and reasonable efforts by the LUSD to obtain funding for capital improvements required to accommodate the City's 2007 buildout projections, including adoption and implementation of local financing mechanisms, such as community facility districts.
- Policy 7: The City shall cooperate with the LUSD in the assessment and collection of school facility fees on new or existing development.
- Policy 9: The City shall ensure that new school sites are easily and safely accessible by vehicles, pedestrians, and bicyclists.
- Policy 10: The City shall assist the LUSD in locating school facilities as close as possible to the residential areas that these facilities are designed to serve, particularly those residential areas that are expected to generate the largest demand for these facilities.
- Policy 11: The City shall encourage joint use of school facilities for recreation and other public purposes that do not conflict with primary educational uses.

d. Parks and Recreation. The City of Lodi operates a total of 27 parks, natural open space areas, and sports field, as shown in Table IV.K-3. Park facilities in Lodi range from mini-parks and tot lots to larger regional parks and natural open space areas, in accordance with the City of Lodi Park development standards, as shown in Table IV.K-4. Several parks serve the dual purpose of a park facility and a storm drainage detention basin during the winter rainy season. The City of Lodi General Plan established a standard of 8 acres of neighborhood and community parkland per 1,000 population, including school parks and storm drainage detention basin parks, and 3.9 acres of neighborhood and community parkland per 1,000 population, excluding school parks and storm drainage detention basin parks.

The current park ratio (including existing and approved parks, basins, and school parks) for neighborhood and community parks is 5.37 acres per 1,000 residents. The current ratio (excluding basins and schools) for existing and approved neighborhood and community parks is 1.38 acres per resident. Both of these ratios are below city standards, and are shown in Table IV.K-2.

Table IV.K-2: Park Standards and Existing Conditions

	City Standards		Existing Conditions		Existing +Approved	
	Ratio (Acres/ 1,000 Pop.)[a]	Acres Needed to Meet Standard	Ratio (Acres/ 1,000 Pop.)[a]	Acres	Ratio (Acres/ 1,000 Pop.)[a]	Acres
Neighborhood and Community Park (including basins and schools parks)	8.0	499.74	4.04	252.62	5.37	335.62
Neighborhood and Community Park (excluding basins and schools parks)	3.9	243.62	0.74	46.29	1.38	86.29

[a] Assumes a population of 62,467.

Source: LSA Associates, Inc., 2006.

The following policies from the Parks, Recreation, and Open Space Element of the City of Lodi General Plan are related to the provision of parks and recreational services:

Parks Recreation and Open Space Element

Goal A. To establish and maintain a public park system suited to enhancing the livability of the urban environment by meeting the open space and recreation needs of Lodi residents and visitors; providing parks for residential neighborhoods; and preserving significant open space resources.

- Policy 1: The City shall establish a standard of 8 acres of neighborhood and community parkland per 1,000 population, including school parks and storm drainage detention basins parks, and 3.9 acres of neighborhood and community parkland per 1,000 population, excluding school parks and storm drainage detention basin parks. The City shall translate this ratio to dwelling unit equivalents to correspond to the City's fee ordinance.

Table IV.K-3: Existing Park Inventory

Name	Park Type	Developed / Undeveloped	Parks	Park/ Basins	Total Developed	Total Approved
Van Buskirk Park	Neighborhood	Developed	1.00		1.00	
Peterson Park	Neighborhood	Developed	2.20	19.80	22.00	
Glaves Park	Neighborhood	Developed	2.75	11.25	14.00	
Emerson Park	Neighborhood	Developed	3.00		3.00	
Hale Park	Neighborhood	Developed	3.13		3.13	
Vinewood Park	Neighborhood	Developed	0.80	15.20	16.00	
Legion Park	Neighborhood	Developed	6.00		6.00	
Blakely Park	Neighborhood	Developed	10.00		10.00	
Century Meadows	*Neighborhood*	*Under construction*	*2.66*		*2.66*	
Beckman Park	Neighborhood	Developed	0.80	15.80	16.60	
English Oaks Park	Neighborhood	Developed	3.70		3.70	
Borchardt Park	Neighborhood	Green space	0.75		0.75	
Katzakian Park	Neighborhood	Developed	5.00		5.00	
Kofu Park	Community	Developed	2.00	8.00	10.00	
Salas Park	Community	Developed	2.50	23.50	26.00	
Candy Cane Park	Mini	Developed	0.20		0.20	
Century Park	Mini	Developed	2.50		2.50	
Armory Park	Special Use	Developed	3.2		3.20	
Grape Bowl	Special Use	Developed	15.0		15.00	
Hutchins Street Sq.	Special Use	Developed	10		10.00	
Park and Rec. Office	Special Use	Developed	1.3		1.30	
Softball Complex	Special Use	Developed	7.6		7.60	
Tony Zupo Field	Special Use	Developed	3.3		3.30	
DeBenedetti	Community	Approved	~26	~23		49.00
Pixley Park	Community	Approved	~7	~20		27.00
Roget Park	Neighborhood	Approved	7			7.00
Indoor Sports Complex (Downtown)	Special Use	Approved	1.25			1.25
				Total Developed	**182.94**	
				Total Approved		**84.25**
				Total Developed and Approved Parks		**267.19**
School Parks						112.78
Total all park types (including planned and under construction) plus school parks						379.97

Source: City of Lodi Parks & Recreation Department, 2005.

- Policy 2: The City shall assess park development fees on all new residential, commercial, office, and industrial development sufficient to fund the acquisition and development of new parkland consistent with the City standards identified in the policy above.
- Policy 3: The City shall continue the joint development of parks and drainage detention basins.

Goal C. To promote the provision of private recreational programs and facilities.

- Policy 1: The City shall promote the provision of private open space and recreational facilities as a part of new large-scale residential developments to meet a portion of the recreation and open space needs that would be generated by the development.

Table IV.K-4: Summary of Park Development Standards

Type	Service Area	Size	Standard	Characteristics
Mini-Parks/Tot Lots	¼-mile radius of most residences	Less than 3 acres	None	Small, very few facilities
Neighborhood Parks	½-mile radius of most residences	5-15 acres	2.5 acres per 1,000 population	50% of site should be flat and usable; contains active and passive spaces
Community Parks	½-mile radius of most residences	20-30 acres	1.8 acres per 1,000 population	At least 10 acres should be utilized for active recreation
Regional Parks	Community or region	50 acres or more	0.8 acres per 1,000 population	Centered around a unique feature
Natural Open Space Areas	Community	Varies	2.1 acres per 1,000 population	Environmentally sensitive areas and agricultural lands
Special Use Areas	Community or region	Varies	0.8 acres per 1,000 population	Areas that contain indoor facilities, single-use facilities and miscellaneous areas

Source: City of Lodi Parks and Recreation Master Plan, 1994.

The following policies from the Parks Recreation and Open Space Plan[6] are related to the proposed project.

Park and Open Space System

Goal: To provide a high quality park system offering a wide variety of recreational opportunities.

Objectives:

1. Develop a neighborhood park system that is conveniently located to most residents of Lodi.
2. Develop and maintain a high quality of improvements for park areas and facilities.
3. Develop different types of parks to meet specific community needs.
4. Develop facilities that are interesting to visit and area an attractive part of the community.
5. Actively seek ways to provide neighborhood park opportunities in developed portions of the community.
6. Develop a multi-use trail system to serve as linkages between parks, neighborhoods and other parts of Lodi.
7. Upgrade existing parks to meet neighborhood and ADA requirements.
8. Preserve areas along the Mokelumne River for nature preservation and public enjoyment. Increase the number of public access points to the River.

e. Libraries. The City of Lodi Public Library is located at 201 West Locust Street. The library provides additional community services such as small business workshops, adult literacy services and public internet access. There are no general plan policies related to library services.

2. Impacts and Mitigation Measures

This section discusses potential impacts to public services that could result from the proposed project. The section begins with the significance criteria, which establish the thresholds used to determine

[6] City of Lodi, 1994. *Park, Recreation and Open Space Plan.* Adopted January 19.

whether an impact is significant. The latter part of this section presents the impacts associated with the proposed project and identifies mitigation measures, if appropriate. Less-than-significant impacts are discussed first, followed by significant impacts.

a. Significance Criteria. The project would have a significant impact on the environment related to public services if it would:

- Result in substantial adverse physical impacts associated with the provision of or need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:

  a) Fire protection,
  b) Police protection,
  c) Schools,
  d) Parks, or
  e) Other public facilities.

- Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated; or
- Include recreational facilities or require the construction or expansion of recreational facilities that would have an adverse physical effect on the environment.

b. Less-than-Significant Public Services Impacts. Less-than-significant impacts for each of the following public services could result from implementation of the proposed project.

(1) Fire Protection. As buildout of the proposed project occurs, the Fire Department may need an additional fire station and personnel to adequately serve the new development. Standard fire formulas for Lodi indicate that additional staff would be required to ensure that the Department would be able to provide adequate service ratios of three personal per engine company at all times. With a current staff of 48 firefighters, the Department would require a staff of 60 (3.9 personal per position in order to maintain 24/7 staffing) in order maintain service ratios of three firefighters per engine company under existing conditions.[7] The City is currently working with the Fire Department to update its Master Plan and assess the availability and efficiency of service and determine where new stations should be located.

The proposed project would decrease the ability of the Fire Department to meet existing response time goals in the southwestern area of the City.[8] Population in the southwestern area of Lodi has been increasing, which has resulted in a 14 percent increase in calls for service in one year (265 calls in 2004 and 302 calls in 2005).[9] Prior to the connection of Century Avenue to Lower Sacramento, the Department's average response time was 4:04 minutes, which exceeds the General Plan standards for a 3-minute response time.

[7] Ibid.

[8] Ibid.

[9] Ibid.

The proposed project includes a 1-acre parcel set aside for future development of a fire station within the SW Gateway site. In the event the City determines an additional station in this area is needed. This parcel will be utilized as parkland until it is determined by the City to be needed for a fire station. The City will fund additional staffing via the General Fund[10] and other available revenues from the project, which are being negotiated via a Development Agreement outside of the CEQA process. Since the site for a fire station is considered in this EIR as part of the proposed project and the addition of equipment and personnel, no significant physical impacts would result.

In accordance with City and State requirements, the subdivider will be required to install fire hydrants in accordance with the requirements of the city fire chief. The sizes of the water mains will be calculated to meet the water flow requirements of California Fire Code Division III, Appendix III-A.

(2) Police Protection. The proposed project would result in an increase in demand for police services. With a current staff of 78 sworn officers[11] and a current population of 62,467, the current ratio of officers per 1,000 population is 1.23. The General Plan establishes a ratio of 1.3 officers per 1,000 population. Assuming an average household of 2.789 persons per unit, the proposed project would generate approximately 2,064 additional residents on the Westside site and 3,765 residents on the SW Gateway site, for a total of 5,829 new residents.

The addition of approximately 5,829 new residents would result in inadequate service ratios for police services. Because the Police Department's current ratio of 1.23 officers per 1,000 population does not currently meet the 1.3 officers per 1,000 population ratio established in the General Plan, the additional population generated by the proposed project would result in an service ratio below the existing service ratio and the ratio established in the General Plan. In order to maintain the existing ratio of 1.23 officers per 1,000 population or to achieve the ratio of 1.3 officers per 1,000 as established in the General Plan, the Department will need to add additional staff. Although the need for additional staff would result in a fiscal impact, it would not result in a significant physical impact. As a result, no mitigation measures are required. The City will fund the additional officers via its General Fund.

(3) Schools. The proposed project includes the potential for up to 740 dwelling units on the Westside site and 1,350 dwelling units on the SW Gateway site. A student generation ratio is an estimate of the average number of students that would live in each dwelling unit, and is used to calculate anticipated student yields from new residential development. According to the LUSD, single family development generates 0.31 K-6th grade students per unit, 0.08 7th-8th grade students per unit, and 0.15 9th-12th grade students per unit. Multi-family dwelling units generate 0.05 K-6th grade students per unit and 0.02 7th-12th grade students per unit.[12]

Westside. With a total of 565 single-family homes[13] and 175 multi-family units, the Westside site would generate approximately 185 K-6th grade students, 50 7th-8th grade students, and 89 9th-12th grade students, as shown in Table IV.K-5.

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[10] King, Blair, City Manager, City of Lodi, 2006. Personal communication with LSA Associates, Inc.

[11] Captain David Main, 2006. Lodi Police Department. Personal communications with LSA associates, Inc. February 2.

[12] Ibid.

[13] For this analysis, it is assumed that both Low Density and Medium Density units would be single-family homes.

Table IV.K-5: Projected Students That Would be Generated by the Proposed Westside Project

Dwelling Units	Elementary (K-6)		Middle (7-8)		High (9-12)	
	Generation Rate[a]	Projected Students	Generation Rate[a]	Projected Students	Generation Rate[a]	Projected Students
565 Single-Family [b]	0.31	176	0.08	46	0.15	85
175 Multi-Family	0.05	9	0.02	4	0.02	4
Total (740 DU)		**185**		**50**		**89**

[a] Student generation ratios provided by Gary Yokum , Facility Planning Manager, Lodi Unified School District, 2005.

[b] This category is based on the assumption that lower and medium density residential areas will be utilized for single-family dwelling units.

Source: LSA Associates, Inc., 2005.

Under current conditions, students from the Westside project site would attend the Vinewood Elementary K-6 School and the Millswood Middle School (7-8). The proposed project would exceed the capacity of the Vinewood Elementary School by 142 students and would exceed the capacity of the Millswood Middle School by approximately 44 students. The Westside site would be within the Lodi High School attendance area. The Lodi High School is currently operating beyond its capacity, due to a current enrollment of 2,443 students and a capacity of 1,800 students.[14] The Westside project would increase enrollment at the Lodi High School by approximately 89 students, which is currently operating beyond its capacity through the use of temporary classroom structures.

High school students from north Stockton who currently attend Tokay High School will eventually attend the new McNair High school in north Stockton. As these students from north Stockton shift to the McNair High School, the LUSD will adjust attendance boundaries within Lodi to ensure even enrollment between the Lodi and Tokay High Schools. However, even with the resulting reduction of enrollment at the Lodi High School, the projected enrollment at the Lodi High School will remain above 2,100 students through 2008, beyond the original capacity of 1,800 students.[15]

Preliminary plans for the 10.6-acre school site in the Westside project site would include development of a K-6 school with the capacity to contain 806 to 876 students.

The LUSD is authorized by State law (Government Code § 65995-6) to levy a new residential construction fee of $3.75/square foot, for the purpose or funding the reconstruction of construction of new school facilities. In accordance with the City of Lodi General Plan, the LUSD and the developer would negotiate the specific method of payment of a school impact fee. Pursuant to Section 65995(3)(h) of the California Government Code, the payment of statutory fees is "deemed to be full and complete mitigation of the impacts of any legislative or adjudicative act, or both, involving, but not limited to, the planning use, or development of real property, or any change in governmental organization or reorganization as defined in Section 56021 or 56073, on the provision of adequate school facilities." The school impact fees and the provision of a school site within the Westside site for a future K-6 school would offset the potential impacts of increased student enrollment related to the implementation of the proposed project. Pursuant to Section 65995(3)(h) of the California Government Code, this impact would not be considered significant.

SW Gateway. With a total of 990 single-family homes and 360 multi-family units, the SW Gateway site would generate approximately 325 K-6th grade students, 87 7th-8th grade students, and 157 9th-12th grade students, as shown in Table IV.K-6. Under current conditions, students from the

[14] Yocum, Gary, 2005, op. cit.

[15] Vickie Brum, 2006. Planning Analyst, Lodi Unified School District. Personal communications with LSA Associates, Inc. March 10.

SW Gateway project site would attend the Larson Elementary K-6 School and the Lodi Middle School (7-8). The proposed project would exceed the capacity of the Larson Elementary School by 96 students and would exceed the capacity of the Lodi Middle School by approximately 85 students. The SW Gateway site is within the Tokay High School attendance area. The Tokay High School is currently operating beyond its capacity, with a current enrollment of 2,455 students and a capacity of 1,800 students.[16] The SW Gateway project would increase enrollment at the Tokay High School by approximately 157 students. Tokay High School is currently operating beyond its capacity through the use of temporary classroom structures.

Table IV.K-6: Projected Students that would be Generated by the Proposed SW Gateway Project

Dwelling Units	Elementary (K-6)		Middle (7-8)		High (9-12)	
	Generation Rate[a]	Projected Students	Generation Rate[a]	Projected Students	Generation Rate[a]	Projected Students
990 Single-Family[b]	0.31	307	0.08	79	0.15	149
360 Multi-Family	0.05	18	0.02	8	0.02	8
Total (1,350 DU)		**325**		**87**		**157**

[a] Student generation ratios provided by Gary Yokum, Facility Planning Manager, Lodi Unified School District, 2005.

[b] This category is based on the assumption that lower and medium density residential areas will be utilized for single-family dwelling units.

Source: LSA Associates, Inc., 2005.

High school students from north Stockton who currently attend Tokay High School will eventually attend the new McNair High School in north Stockton. As these students from north Stockton shift to the McNair High School, the LUSD will adjust attendance boundaries within Lodi to ensure even enrollment between the Lodi and Tokay High Schools. However, even with the resulting reduction of enrollment at the Tokay High School, the projected enrollment at the Tokay High School will remain above 2,000 students through 2008, beyond the original capacity of 1,800 students.[17]

Preliminary plans for the school site in the SW Gateway project include a 14-acre school site within the western portion of the site for the development of a school with the capacity of approximately 900 students. The grades which would attend this school have not been determined at this time.

The LUSD is authorized by State law (Government Code § 65995-6) to levy a new residential construction fee of $3.75/square foot, for the purpose of funding the reconstruction or construction of new school facilities. In accordance with the City of Lodi General Plan, the LUSD and the developer would negotiate the specific method of payment of a school impact fee. Pursuant to Section 65995(3)(h) of the California Government Code, the payment of statutory fees is "deemed to be full and complete mitigation of the impacts of any legislative or adjudicative act, or both, involving, but not limited to, the planning use, or development of real property, or any change in governmental organization or reorganization as defined in Section 56021 or 56073, on the provision of adequate school facilities." The school impact fees and the provision of a school site within the SW Gateway site for a future K-6 school would offset the potential impacts of increased student enrollment related to the implementation of the proposed project.

At this time, there are no development plans for the Other Areas to be Annexed. As such, no additional students would be generated since no development is currently proposed for these areas. Assuming approximately 335 units would be developed on the Other Areas to be Annexed, there

[16] Yocum, Gary, 2005, op. cit.

[17] Vickie Brum, 2006. Planning Analyst, Lodi Unified School District. Personal communications with LSA Associates, Inc. March 10.

would be approximately 104 elementary students, 27 middle school students, and 51 high school students associated with the potential future development. However, there are currently no development plans for this area. Should development plans for this area be prepared, LUSD would review the potential increase in students at that time.

(4) Parks and Recreation. The Parks, Recreation and Open Space Element of the City of Lodi General Plan provides a standard of 8 acres of neighborhood and community parkland per 1,000 population, including school parks and storm drainage detention basins parks, and 3.9 acres of neighborhood and community parkland per 1,000 population, excluding school parks and storm drainage detention basin parks.

The proposed Westside and SW Gateway projects include the construction of 2,090 dwelling units. Utilizing the Department of Finance population estimate of 2.789 people per household, the proposed project would increase the demand for park and recreation space for approximately 5,829 people, requiring the provision of approximately 46.6 acres of neighborhood and community parkland (including detention basins and school parks) and 22.73 acres of neighborhood and community parkland (excluding detention basins and school parks). The proposed project would provide adequate community and neighborhood parkland to meet both of these ratios.

The current park ratio (including existing and approved parks, basins, and school parks) for neighborhood and community parks is 5.37 acres per 1,000 residents. The current ratio (excluding basins and schools) for existing and approved neighborhood and community parks is 1.38 acres per resident. Both of these ratios are below the current City standards. While the proposed project would help to improve the Citywide ratios to 5.72 acres of community and neighborhood parks (including basins and schools) per 1,000 residents, and 1.61 acres of community and neighborhood parks (excluding basins and schools) per 1,000, these ratios would still fall below City standards, as is shown in Table IV.K-7.

Table IV.K-7: Park to Population Ratios

	City Standards		FCB Projects		Existing +Approved + FCB	
	Ratio (Acres/ 1,000 Pop.)	Acres Needed to Meet Standard[a]	Ratio (Acres/ 1,000 Pop.)[b]	Acres[c]	Ratio (Acres/ 1,000 Pop.)[d]	Acres
Neighborhood and Community Park (including basins and schools parks)	8.0	499.74	9.43	9.38	5.72	390.32
Neighborhood and Community Park (excluding basins and schools parks)	3.9	243.62	4.05	23.65	1.61	109.94

[a] Based on City's existing population, assumes a population of 62,467 (Department of Finance).
[b] Assumes a project population of 5,829.
[c] No park area has been assumed for the school sites; includes site for Aquatic Center.
[d] Assumes population of 62,467 + 5,829 = 68,296
[e] See Table IV.K-2 for approved parks.

Source: LSA Associates, Inc., 2006.

c. Significant Impacts to Public Services. Implementation of the proposed project would not result in any significant impacts to public services.

L. VISUAL RESOURCES

This section assesses the effects that implementation of the Westside and SW Gateway projects could have on public views of the project site. The analysis considers the visual quality of the sites, views from the project sites, and public views of the project sites. Public views are defined as views from public locations such as roadways, sidewalks, parks and public buildings.

1. Setting

This section describes the visual characteristics of the project sites, views from the project sites, and views of the project site. The section discusses the Westside site, SW Gateway site, and the Other Areas to be Annexed separately.

a. Visual Character of Westside Site and Vicinity. The following discussion of the Westside site is divided into the area north of Lodi Avenue and the area south of Lodi Avenue. Additionally, the visual character of the surrounding area is also discussed.

(1) Parcel North of Lodi Avenue. The triangular parcel north of Lodi Avenue is approximately 50 acres and is located within the City of Lodi Sphere of Influence. The triangular parcel is a flat disked field. The parcel contains a scattering of vegetation and trash. There are telephone poles located on the parcel that run along Lodi Avenue. The most prominent feature of this parcel is an oak tree located roughly in the center of the parcel, shown in Photo 1. This is the only substantial tree on this parcel, and there are no structures located on this parcel.

Photo 1: View of the triangular parcel on the Westside site.

Adjacent Area. This parcel is bordered on the south by Lodi Avenue, a two lane paved road. A dirt service road runs along the western boundary of the property, perpendicular to Lodi Avenue. A mature almond orchard (Photo 2) is located immediately east of this dirt service road. The triangular parcel is bordered to the north by the Woodbridge Irrigation District (WID) Canal. The canal has two raised berms on both sides of the canal, and the water in the canal is not visible from the triangular parcel. Single-family residential units are visible on the other side of the WID canal, as is shown in Photo 3.

Photo 2: View of almond orchard and dirt service road located immediately west of the Westside site.

(2) Parcel South of Lodi Avenue. There are three rectangular shaped parcels south of Lodi Avenue (approximately 102 acres) which are located within the City of Lodi Sphere of Influence. All the parcels located south of Lodi Avenue contain vineyards and are relatively flat. The grape vines within these vineyards are approximately 6 feet high, with the rows running in a north/south direction. Telephone poles are visible along the northern part of these parcels. Photo 4 shows the vineyards from Lodi Avenue.

Photo 3: View of the WID Canal berms and residential units located north of the Westside site.

Photo 4: View of vineyards located on the Westside site, south of Lodi Avenue.

Adjacent Area. The parcel is bordered by Lodi Avenue to the north. A dirt service road borders the property to the west. Vineyards are located immediately adjacent and to the west of the service road. Vineyards and row fields are located to the south. The Raley's shopping center, a single-story self-serve storage facility, vacant land, and the Lodi Temple Baptist Church and associated high school are located to the east. The church and high school are immediately adjacent to the southeast corner of the project site, and include one story structures, parking areas, and play fields.

Photo 5: View of uncultivated parcel located on the SW Gateway site, south of Highway 12.

b. Visual Character of the SW Gateway Site and Vicinity. There are 10 parcels in the SW Gateway site. The northernmost parcel, immediately south of Highway 12, is an uncultivated field that contains ground covering vegetation and is shown in Photo 5. There are no structures on this parcel, and there are some mature trees located along the western border of this parcel.

The parcel immediately south of the uncultivated field is the largest parcel of the SW Gateway site. This parcel contains vineyard rows that run in an east/west direction. This parcel's western border is a dirt road separating the SW Gateway site and the adjacent land. The eastern border is Lower Sacramento Road. There are three smaller parcels located off of Lower Sacramento Road that are surrounded by this large parcel. Two of these parcels are adjacent to each other, and include farm

buildings, accessory structures, and residential dwellings. These structures vary in current maintenance level, and Photo 6 shows some of the structures onsite. Farm equipment is stored or staged throughout the property, depending on what farming activities are underway. There are also piles of dirt, scattered trash, and parked cars on the site.

Photo 6: View of existing structures located off of Lower Sacramento Road.

The third smaller parcel contains several single story residential units. These small bungalows front onto the small cul-de-sac located on the parcel.

There are four parcels that make up the cherry orchards south of the large parcel. These cherry trees are mature and are shown in Photo 7. There are two small areas within the cherry orchards that contain residences. These small residential areas front onto Lower Sacramento Road.

Photo 7: View of cherry orchard.

The parcel located in the southwest corner of the SW Gateway site contains vineyards, with vines running in an east/west direction.

Adjacent Area. The SW Gateway site is bordered on the west by a dirt service road that runs the length of the project site from Highway 12 to Harney Lane. Vineyards are located immediately west of the dirt service road.

Harney Lane forms the western portion of the southern boundary of the SW Gateway site. Harney Lane is a two lane paved road. There are nine parcels north of Harney Lane that form the eastern portion of the southern boundary for the SW Gateway site. These parcels contain a variety of rural residences and accessory buildings. A school and residential units are located south of Harney Lane.

Highway 12 forms the western part of the northern border of the project site. Highway 12 is a paved highway. There are two parcels, not part of the project site, that form the “notch” in the northeast corner of the site. These parcels are located southwest of the Highway 12/Lower Sacramento intersection, and are currently vacant. A utility substation and commercial development have been planned for the sites. Further north of Highway 12 are rural residences and commercial development.

Lower Sacramento Road forms the eastern border of the SW Gateway site. This road is a four-lane paved roads with numerous traffic lights. The area east of Lower Sacramento includes retail development, residential uses, and undeveloped land.

c. Other Areas to be Annexed. The Other Area to be Annexed can be divided into two visual characteristics groups: (1) small parcels that contain residential uses in the northern part of the Other Areas to be Annexed; and (2) large parcels that are currently vacant fields. The smaller parcels contain a variety of single-family homes and landscaping. The majority of these parcels are clumped in the northern portion of the Other Areas to be Annexed site. There is one parcel that is not included in this grouping, and it is located at Lower Sacramento Road, north of the Lower Sacramento Road/Kristen Court Intersection.

The two large parcels are currently vacant fields, as is shown in Photo 8. As of November 2005, a portion of the field along Lower Sacramento Road was used as a staging area for improvements being made to Lower Sacramento Road.

Photo 8: View of large undeveloped fields that are part of the Other Areas to be Annexed.

d. Views from Project Sites. There is a radio/cell phone tower that is visible north of the Westside site. Otherwise, due to the relatively flat topography of the project sites, and Lodi in general, views from the project site consist mainly of adjacent development or adjacent farmland, orchards, vineyards, or fields, depending on where the viewer is located.

e. Views of Project Sites. Given the level topography of the project site and surrounding area, there are no significant views of the project area from public vantages other than areas and roads adjacent to the project sites.

f. Relevant Policies. The Lodi General Plan includes several policies that are relevant to visual resources. These policies are listed below:

Circulation Element

- Goal A, Policy 8: The City shall require that development frontage design be consistent with the classification of the fronting street. For example, single family residential development should not front arterial streets. Furthermore, all driveways and on-site parking areas fronting arterials should allow two-way access.

Parks, Recreation, and Open Space Element

- Goal C, Policy 4: The City shall promote the provision of public and private open space within urbanized Lodi to provide visual contrast the with already-built environment and to provide for the recreational needs of residents.

Urban Design and Cultural Resources Element

- Goal A, Policy 1: The City should designate a continuous open space greenbelt around the urbanized area of Lodi to maintain visual definition and a clearly delineated edge to the City's urbanized area within its

agricultural and rural setting, and to protect the scenic resources of the surrounding rural, agricultural, and natural landscape (including the Lodi Lake Park and the Mokelumne River corridor).

- Goal A, Policy 2: The City shall formulate an Urban Design Plan to guide the overall three-dimensional organization and quality of the physical development. This plan shall be designed to achieve the following objectives:
  - identify and protect the major physical features that serve to define Lodi's small-town character, such as the parks, boulevards, public and civic areas, historic downtown, and historic/older buildings;
  - identify and maintain the primary physical features that give the City its overall visual image and scenic quality, such as the street trees, older residential neighborhoods, surrounding agricultural lands, river corridor, and civic buildings;
  - identify and enhance the principal physical elements that give the City its basic form and structure, such as the Central Business District (CBD), key major streets, and railroad corridors;
  - organize the open space areas into a coherent system, including parks, schools, civic area, open-space, and greenbelts within developments; and
  - establish an interconnected system of pedestrian and bicycle paths linking scenic resources with other uses.
- Goal B, Policy 1: The City shall upgrade the principal roads entering the City at strategic entry points through landscaping, signage, light standards, and other physical elements that identify and enhance them as gateways to the community. Entry points should be identified and designated on SR 99; SR 12; Kettleman Lane; Lodi Avenue; Lower Sacramento Road; Pine Street; Turner Road; and Hutchins Street; and screening of visually unattractive commercial and industrial uses.
- Goal C, Policy 1: The City shall develop special design standards to upgrade roadways, including SR 12 and SR 99. Such standards shall include provisions for setbacks, signs, landscaping, parking, and upgrading commercial development along these streets, and screening of visually unattractive commercial and industrial uses.
- Goal C, Policy 2: The City shall develop a street tree program, with an emphasis on enhancing major arterial streets and unifying the CBD, civic center, and other public areas. The street tree program should include strategies for providing street trees through boulevard plants on City property, developer-provided plantings on either City property or private property (front yards), and city-furnished, planted, and maintained trees on private property (front yards).
- Goal F, Policy 2: The City shall promote the creation of well-defined residential neighborhoods in newly developing areas. Each of these neighborhoods should have a clear focal point, such as a park, school, or other open space and community facilities, and should be designed to promote pedestrian convenience.
- Goal F, Policy 3: The visual impact of automobiles shall be minimized in all new development.
- Goal F, Policy 5: Open space provided within new developments shall be configured to link with existing urban open space.

2. Impacts and Mitigation Measures

This section analyzes visual resource impacts that could result from implementation of the proposed project. This section begins with criteria of significance, which establish the thresholds to determine when an impact is significant. The latter part of this section presents the impacts associated with the proposed project and identifies mitigation measures, as appropriate.

a. Criteria of Significance. The proposed project would have a significant impact on visual resources if it would:

- 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;
- Substantially degrade the existing visual character or quality of the site and its surrounding; or
- Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

b. Less-than-Significant Impact. The following discussion describes the less-than-significant visual resource impacts that would result from implementation of the proposed project.

No development of the Other Areas to be Annexed is proposed as part of this project. As such, there would be no change in the existing visual characteristics of these parcels.

(1) Effect a Scenic Vista. While the Lodi General Plan states that the agricultural lands surrounding Lodi constitute an "important scenic resource," the General Plan does not identify a scenic vista within the project sites or immediately adjacent to the project sites. Due to the level topography of the City, views within Lodi are generally of adjacent development or adjacent farmland. The project would have a less-than-significant effect on scenic vistas.

(2) Damage a Scenic Resource within a State Scenic Highway. Interstate 580 (I-580) is the only designated State Scenic Highway within San Joaquin County. This highway is not visible from the project site, and the project would not damage a scenic resource within a State scenic highway.

c. Significant Impact. The following significant impacts has been identified.

<u>Impact VIS-1</u>: The proposed project would degrade the existing visual character. (S)

The development of the Westside and SW Gateway sites would dramatically change the visual character of the project area. Both project sites are largely undeveloped, with agricultural uses (orchards, vineyards, or fields) comprising the majority of the visual character. There are some areas on the SW Gateway site that include structures and farm equipment, but these areas comprise a small portion of the total area. The agricultural uses on both sites would be replaced with urban uses including residential development, parks, schools, and an aquatic facility. There would be no change to the visual character of the Other Areas to be Annexed.

Several features will be included in the development to contribute to a more pleasant urban visual environment. These will include the undergrounding of all utilities, the installation of street trees and landscaping, and the development of parks and pedestrian walkways within the sites.

The Urban Design and Cultural Resources Element of the General Plan states that "…rural and agricultural lands surrounding Lodi constitute an important scenic resource that helps to visually define and enhance the City." While removing land in agricultural production and replacing it with

residential development could be considered an action that would degrade the existing visual character of the project sites, the City's General Plan recognizes that these lands would be developed, as these sites have a "PR" designation on the General Plan map which allows for residential development. Additionally, urban development of similar types and densities are located east of the both the Westside and SW Gateway sites. However, the conversion would still represent a significant unavoidable impact, and no mitigation measures are available to reduce this impact as all agricultural uses would be removed from the project site.

> Mitigation Measure VIS-1: No mitigation is available to reduce this significant and unavoidable impact. (SU)

Impact VIS-2: The proposed project would create a new source of light and glare affecting day and nighttime views. (S)

Most homes emit some light and glare during the day and evening hours, as is typical in a suburban environment. The proposed development would include indoor lighting and outdoor lighting for safety purposes, which could be visible from a distance at night. Additionally, sun reflecting off of the windows of the proposed development could create daytime glare. Implementation of the following mitigation measures would help to ensure that light and glare created by the proposed development would be minimized, comparable to that of the adjacent neighborhoods, and would reduce the impact to a less-than-significant level.

> Mitigation Measures VIS-2: Outdoor lighting shall be designed to minimize glare and spillover to surrounding properties. The proposed project shall incorporate non-mirrored glass to minimize daylight glare. (LTS)

M. ENERGY

Appendix F of the *CEQA Guidelines* requires that an EIR include information on the potentially significant energy implications of a project, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy. This section describes the existing energy resources available within the project site and analyzes the impacts related to these resources that would result from the implementation of the proposed project. Where appropriate, mitigation measures are recommended.

1. Setting

The following section discusses existing energy sources, as well as the planning and regulatory framework that governs energy use.

a. Electrical Service. The Lodi Electric Utility provides electrical services to the City of Lodi. The Lodi Electric Utility is a city-owned and operated utility that provides electrical service for residential, commercial and industrial customers in Lodi.

For 30 years, the Lodi Electric Utility has been member of the Northern California Power Agency (NCPA), which is a collective comprised of utilities that own and operate their own power plants. The NCPA is a California Joint Action Agency, with membership open to municipalities, rural electric cooperatives, irrigation districts and other publicly owned entities interested in the purchase, aggregation, scheduling and management of electrical energy. The NCPA allows the Lodi Electric Utility to purchase and supply electricity at cost.

The NCPA owns and operates a variety of electric generation facilities which include the following.

- Five quick-response Combustion Turbine units (G.E. frame 5) located in the cities of Alameda, Roseville, and Lodi.
- Combustion Turbine Project No. 2, a 49 megawatt (MW) steam-injected gas turbine (STIG) plant located near Lodi.
- The North Fork Stanislaus River Hydroelectric Development Project (Project) is a hydroelectric project on the North Fork of the Stanislaus River. The Project, which generates 250 megawatts of power, includes the New Spicer Meadow Dam and Reservoir, two diversion dams and tunnels, the McKay's Point Reservoir with a power tunnel to the main powerhouse, one of two powerhouses, and two transmission lines.
- Two geothermal power plants and associated steam field. The two NCPA power plants have two generators each and the project produces 147 megawatts. Dry, superheated steam is delivered to the power plants from 65 to 70 production wells via approximately eight miles of pipeline.

A total of 12 NCPA members, including the Lodi Electric Utility, own shares of the NCPA's electric generation facilities.

The most recent data for total electricity use in the City of Lodi is from 2004, in which Lodi used a total of 445 gigawatt-hours[1] (GWH) of electricity. The most recent peak electric system demand of

[1] One gigawatt is equivalent to one million kilowatts (1,000,000 kW).

129.6 megawatt-hurs[2] occurred in July 2003. The average household in Lodi uses between 6,800 to 7,000 kW-hours of electricity per year. Electricity use for new school facilities average 538,400 kW-hours per year. The Lodi Electric Utility has projected that the electrical demand will grow at an average annual rate of between 2 to 2.5 percent per year from 2007 to 2011.[3]

(1) Electrical Infrastructure. Overhead electrical lines are located along Lower Sacramento Road. The construction of an electrical substation is planned for a parcel located adjacent to the north portion of the SW Gateway site and south of Kettleman Lane (APN 058-030-10). The substation would service the western part of the City, including the project sites. It is anticipated that the substation will be the terminus of two new 60 kV circuits mounted on a single pole line, paralleling Kettleman Lane (Highway 12). The substation would also be linked to an existing 60 kV overhead circuit paralleling Lower Sacramento Road. All 12 kV distribution lines from the substation would be placed underground.

(2) Regulatory Framework. Public electricity providers (such as the Lodi Electric Utility) within the State are subject to both State and local jurisdictions' utilities regulations. California's recent energy crisis prompted the Lodi Electric Utility to begin efforts to promote energy conservation, energy efficiency, and alternative energy sources to achieve greater self-sufficiency and system reliability. The Lodi Electric Utility provides the following measures to encourage energy conservation:

- A Residential Energy Efficient Appliance Rebate Program;
- Residential Air Duct Testing;
- An Energy Audit Program; and
- The Lodi Solar Rooftops Pilot Project (which provides rebates for the installation of photovoltaic/solar panels on residential properties within the City of Lodi).

The California Electrical Code (Title 24, of the California Code of Regulations, California's Energy Efficiency Standards for Residential and Nonresidential Buildings), provides energy conservation standards for new and renovated commercial and residential buildings constructed in California. The provisions of the California Energy Code apply to the building envelope, space-conditioning systems, water-heating and lighting systems of buildings and appliances, and give guidance on construction techniques to maximize energy conservation. Minimum efficiency standards are given for a variety of building elements including appliances, water and space heating and cooling equipment, and insulation for doors, pipes, walls and ceilings. Compliance with Title 24 standards is verified and enforced through the local building permit process.

b. Transportation Energy. In the year 2005, transportation activity accounted for 28 percent of the total energy consumed in the U.S.[4] Transportation accounts for 87 percent of the increase in petroleum consumption, dominated by growth in fuel use for light-duty vehicles.[5] In California,

[2] One megawatt is equivalent to 1,000 kW.

[3] John VanderJack, 2006. Electrical Estimator, Lodi Electrical Utility. Personal communications with LSA Associates, Inc. February.

[4] U.S. Department of Energy, 2006. Monthly Energy Review, February 2006.

[5] U.S. Department of Energy, 2006. Annual Energy Outlook 2006.

roughly half of the energy Californians consume is for transportation.[6] To meet this demand, the state relies almost exclusively on petroleum. The California Energy Commission has recommended measures to improve fuel economy standards and diversify California's fuel supply to include ethanol, bio-diesel, electricity, natural gas, liquefied petroleum gas, and hydrogen.[7] Additional statewide measure to increase vehicle efficiency include policies to increase public and private use of hybrid-electric vehicles, light duty diesels, low-rolling resistance tires and truck anti-idling regulations.

The Federal Energy Policy and Conservation Act of 1992 established fuel economy standards for on-road vehicles in the United States. This law places responsibility to the National Highway Traffic and Safety Administration (a part of the U.S. Department of Transportation) for establishing vehicle standards and for revising existing standards. The U.S. Environmental Protection Agency (US EPA) administers the Corporate Average Fuel Economy (CAFE) program, which determines vehicle manufactures' compliance with existing fuel economy standards. The "California Greenhouse Bill" (AB 1493) signed into law in July 2002 is intended to reduce production of "greenhouse gases," and its implementation may also result in use of more fuel-efficient vehicles.

2. Impacts and Mitigation Measures

The following section evaluates impacts related to energy resources that could result from the proposed project.

a. Criteria of Significance. Implementation of the proposed project would have significant impacts on energy resources if it would have any of the following effects:

- Result in a substantial increase in the demand for energy supplies or transmission services; or
- Use energy in a wasteful, inefficient, or unnecessary manner.

b. Less-than-Significant Energy Impacts. Less-than-significant energy impacts of the proposed project are discussed below.

(1) Substantially Increase Demand or Use Energy in a Wasteful Manner. Implementation of the proposed project would use more energy than the existing on-site conditions. The implementation of the project would consume a large amount of energy in both the short-term during project construction and in the long-term during project operation. The proposed project would consume energy in three forms: (1) the fuel energy consumed by construction vehicles; (2) bound energy in construction materials, such as asphalt, steel, concrete, pipes, and manufactured or processed materials such as lumber and glass; and (3) ongoing energy required for interior and exterior lighting, heating/ventilating/air conditioning (HVAC), computer and home electronics systems, electric cooking ranges, refrigerators, freezers, and security systems.

Construction Vehicles. Fossil fuels used for construction vehicles and other energy consuming equipment would be used during project construction. Implementation of Mitigation Measure AIR-1b

[6] California Energy Commission, 2005. 2005 Integrated Energy Policy Report.

[7] Ibid.

would ensure that fuel energy consumed in the construction phase would not be wasted through unnecessary idling or through the operation of poorly maintained equipment.

Construction Materials. The incremental increase in the use of energy bound in construction materials such as asphalt, steel, concrete, pipes and manufactured or processed materials such as lumber and gas would not substantially increase demand for energy compared to overall local and regional demand for construction materials. Construction materials would not be used in a wasteful manner in order to reduce project construction costs.

Operational Energy Requirements. In accordance with California Energy Code Title 24, the proposed project would not use energy in a wasteful manner. Minimum efficiency standards for household appliances, water and space heating and cooling equipment and insulation for doors, pipes, walls and ceilings would ensure that the proposed project would not use energy in a wasteful manner. Additional energy conservation measures to improve energy efficiency by the Lodi Electric Utility, such as energy efficient appliance rebates, energy auditing, air duct testing and the Solar Rooftops Pilot Project would further reduce the overall demand for electricity from the proposed project.

Implementation of the proposed project would result in an increase in demand for electricity to serve the new residences and the new school facilities. Using the Lodi Electric Utility annual household average use figure of 7,000 kW-hours per year, the construction of up to 2,090 new households would increase the demand for electricity by approximately 14.63 megawatt-hours per year. The construction of two new school facilities would increase the demand for electricity by approximately 1.1 megawatts per year. The total increase in electricity use for the proposed project would be approximately 15.73 megawatt-hours per year. With an annual electrical demand of 445 gigawatt-hours in Lodi during 2004, the proposed project would result in an increase of approximately 3.5 percent from the 2004 electrical demand figures. The Lodi Electric Utility is currently in the process of designing a substation to serve the additional electrical demand of the proposed project and would have the additional capacity to serve the proposed project.[8]

Transportation Energy. Implementation of the proposed project would require additional energy for transportation uses within the City of Lodi. State and federal regulations regarding fuel efficiency standards for vehicles in California are designed to reduce wasteful, unnecessary and inefficient use of energy for transportation. In accordance with Mitigation Measure AIR-2, the proposed project would include pedestrian enhancing infrastructure such as sidewalks, pedestrian paths, crosswalks, pedestrian signals and other pedestrian amenities to reduce overall vehicle miles traveled. Bicycle lanes are provided within the City to reduce overall vehicle miles traveled. The inclusion of school sites and park areas within walkable distances in the project areas would reduce the energy consumption related to vehicle miles traveled associated with the implementation of the proposed project.

c. Significant Energy Impacts. No significant adverse impacts related to energy would result from the proposed project.

[8] John VanderJack, 2006, op. cit.

V. ALTERNATIVES

The *CEQA Guidelines* require the analysis of a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the project's basic objectives and avoid or substantially lessen any of the significant effects of the project. The range of alternatives required in an EIR is governed by a "rule of reason" that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice.[1] An EIR need not consider every conceivable alternative to a project. Rather, it must consider a reasonable range of potentially feasible alternatives that will foster informed decision-making and public participation.

The proposed project and the project objectives are described in detail in Chapter III, Project Description, and the potential environmental effects of implementing the proposed project are analyzed in Chapter IV, Settings, Impacts and Mitigation Measures. Impacts associated with the following environmental topics would be significant for the proposed project without the implementation of mitigation measures, but would be reduced to a less-than-significant level if the mitigation measures recommended in this EIR are implemented:

- Noise
- Cultural and Paleontological Resources
- Geology, Soils and Seismicity
- Hydrology and Water Quality
- Biological Resources
- Hazards and Hazardous Materials
- Utilities
- Public Services

The following impacts are significant and unavoidable, and can not be reduced to a less-than-significant level with implementation of mitigation measures. After mitigation, the revised project would result in the following significant unavoidable impacts:

- The proposed projects would result in the conversion of approximately 392 acres of Prime Farmland to non-agricultural uses.
- The proposed projects would result in a conflict with existing Agricultural Use and Williamson Act contracts.
- The proposed project would degrade the Existing Visual Character.
- Operations at the Lodi Avenue/Ham Lane intersection would be at an unacceptable service level under the Cumulative scenario.

[1] *CEQA Guidelines*, 1998, Section 15126.6.

- Operations at the Kettleman Lane/Lower Sacramento Road intersection would be at an unacceptable service level under the Cumulative scenario.
- Operations at the Kettleman Lane/Cherokee Lane intersection would be at an unacceptable service level under the Cumulative scenario.
- Operations at the Kettleman Lane/Ham Lane intersection would be at an unacceptable service level under the Cumulative scenario.
- Operations at the Harney Lane/Hutchins Street-West Lane intersection would be at an unacceptable service level under the Cumulative scenario.
- Project-related regional emissions would exceed the SJVAPCD thresholds of significance for ozone precursors.
- Potential growth-inducing impacts associated with the project's potential to facilitate development to the west if the City decides it wants to grow west.

The City may choose to adopt a statement of overriding consideration for some of the noise and traffic impacts and not implement the recommended mitigation measures/improvements in order to further certain objectives of the General Plan including creating a pedestrian-friendly environment and avoiding walled communities.

The following discussion is provided to meet the requirement of the *CEQA Guidelines* and provide the public and decision makers with information that will help them understand the adverse impacts and benefits associated with four potential alternatives to the proposed project. A discussion of the environmentally superior alternative is also provided, as required by CEQA.

Each of these alternatives listed below only discusses the development of the Westside and SW Gateway project sites. It is assumed for each of these alternatives that the Other Areas to be Annexed would not be developed at this time. The four alternatives are as follows:

- The **No Project/No Build alternative**, which assumes the Westside and SW Gateway projects would not be annexed by the County and would not be developed. The agricultural use of the project site would continue, and no development would occur on the project site.
- The **Agricultural Residential alternative,** which assumes that the agricultural character of the project site would continue, and would provide one unit per 20 acres, which would allow 20 units. A density bonus would be granted which would allow 1 additional unit per 10 acres, that would result in a total of 60 units on the Westside and SW Gateway sites. No schools would be developed under this alternative. The aquatic center and some park area would be incorporated into the project site.
- The **Reduced Density alternative**, which assumes that the Westside site would be developed as is proposed under the project, and that the SW Gateway site would have an average of three units per gross acre. This would result in a total of 1,441 units. The SW Gateway site would not include a school site.
- The **Increased High Density Mix alternative,** which assumes that the high density development would have an average density of 25 dwelling units per acre, and the low density designation would have a density of three dwelling units per acre. This would result in a total of 2,317 units. Under this alternative, there would be no medium density residential units.

A. NO PROJECT/NO BUILD ALTERNATIVE

1. Principle Characteristics

The No Project/No Build alternative assumes that the project sites would generally remain in their existing conditions and would not be subject to development. Under this alternative, the project sites would not be incorporated into the City of Lodi, and existing agricultural use of the project site would continue. There would be no structures constructed on the project sites, and all existing structures would remain. The schools, aquatic center, parks, and park basins would not be built.

2. Relationship with Project Objectives

The No Project/No Build alternative would not achieve the following objectives:

a. Westside Project

- Develop a diversity of high quality housing types to meet housing needs within the City of Lodi.
- Provide affordable housing options within the City of Lodi.
- Provide park areas and recreational uses that help meet park standards within the City of Lodi.
- Develop a school site that would serve future residents of the proposed project as well as other Lodi residents.
- Develop an “open space pedestrian/bicycle central spine” within the project site that connects to recreational and pedestrian amenities further south of the project site.
- Provide a site that could accommodate future development of an aquatic center.
- Provide adequate basin capacity for storm water detention.

b. Southwest Gateway Project

- Develop a diversity of high quality housing types to meet housing needs within the City of Lodi.
- Provide affordable housing options within the City of Lodi.
- Provide park areas and recreational uses that help to meet park standards within the City of Lodi.
- Develop a school site that would serve future residents of the proposed project as well as other Lodi residents.
- Develop an “open space pedestrian/bicycle central spine” within the project site that connects to recreational and pedestrian amenities further south of the project site.
- Provide adequate basin capacity for storm water detention.

3. Analysis of the No Project/No Build Alternative

The potential impacts of the No Project/No Build alternative are described in the following section.

a. Land Use, Agriculture, and Planning Policy. Under the No Project/No Build alternative, there would not be any construction or the introduction of new land uses on the project site. All the significant land use impacts that are identified in the Land Use, Agriculture, and Planning Policy section would not occur under this alternative. This alternative would not result in a conflict between agricultural and residential uses. The No Project/No Build would not result in a conflict with an existing Williamson Act Contract or the conversion of prime farmland. This alternative would not result in any significant land use, agriculture, or planning policy impacts.

b. Transportation, Circulation and Parking. The No Project/No Build alternative would not change the existing traffic conditions. The existing 10 intersections within the study area that operate at unacceptable levels of services would continue to do so. This alternative would not increase the delays at any intersection, and the applicant would not contribute to the improvements of any intersections.

c. Air Quality. This alternative would not change the existing air quality. Under this alternative, there wouldn't be construction or an increase in vehicle trips that is associated with the proposed project. However, while this project would not contribute to regional emissions, the San Joaquin Valley would still be in nonattainment status for ozone, PM_{10} and $PM_{2.5}$.

d. Noise. The No Project/No Build alternative would not result in noise impacts associated with the construction of the proposed project. Additionally, under this alternative there would be no new residential units exposed to traffic noise sources. Noise currently generated on the project site, such as noise from agricultural equipment, would continue.

e. Cultural and Paleontological Resources. Implementation of the No Project/No Build alternative would not result in the construction of any structures on site. As such, this alternative would not have any associated grading or digging associated with construction. Because no ground-disturbing activities would occur as part of the No Project/No Build alternative, subsurface archaeological, paleontological, and Native American resources that could occur within the project site would not be disturbed.

f. Geology, Soils, and Seismicity. Under the No Project/No Build alternative, the residential units, school structures, and park facilities would not be developed. The project sites would still be susceptible to seismic ground shaking and differential compaction, as are identified under the proposed project. However, given that the project sites would continue in agricultural production, potential residents associated with the proposed project would not be exposed to potential seismic ground shaking.

g. Hydrology and Water Quality. The No Project/No Build alternative would not result in the construction of any new structures, and the project sites would remain undeveloped and in agricultural production. This alternative would not result in an increased amount of runoff that could affect stormwater conveyance systems. As dewatering would not occur on the project site, construction workers and the public would not be exposed to potential contaminants in the soil and groundwater.

h. Biological Resources. The No Project/No Build alternative would keep the project sites in their existing conditions. Under this alternative, the potential impact to the western burrowing owl, Swainson hawk or other nesting raptors, would not occur. As the project site would remain

unchanged, there would be no impact to wildlife species that could be located onsite. Additionally, under this alternative, the vernal marsh would not be impacted.

i. Hazards and Hazardous Materials. Implementation of the No Project/No Build alternative would keep the site in its existing conditions. As such, it would not create significant hazards to the public or the environment through the routine transport, use, or disposal of hazardous materials, or create a significant hazard to the public or the environment through reasonable foreseeable upset or accident conditions involving the release of hazardous materials into the environment. This alternative would not expose construction workers or the public to hazardous materials from contaminants in the soil during and following construction activities, or expose workers or the public to airborne toxics, (e.g., lead-based pain and asbestos) during demolition, but would forego the opportunities to improve conditions as provided by the project.

j. Utilities. The No Project/No Build alternative would not result in any development on the project site. There would be no increase in demand for water, wastewater, or other utility services.

k. Public Services. The No Project/No Build alternative would not result in any residential development on the project site. As such, there would be no increase demand for school or recreational facilities.

l. Aesthetics. Under the No Project/No Build alternative, the project site would remain in agricultural use, and would be maintained as vineyards, orchards, or vacant fields. Existing structures currently located on the project site would remain. As no development would result under the No Project/No Build alternative, there would be no impacts related to light and glare. The visual character of the project site under this alternative would be the same as the current conditions.

m. Energy. The No Project/No Build alternative would not result in an increased demand for energy.

B. AGRICULTURAL RESIDENTIAL ALTERNATIVE

1. Principal Characteristics

The Agricultural Residential alternative would retain the agricultural character of the project site, and would provide residential housing at a density of 1 unit per 20 acres. A density bonus would be granted which would allow 1 additional unit per 10 acres. This would result in a total of 60 units, with approximately 20 units on the Westside site and 40 units on the SW Gateway site. Agricultural uses would still occur on the project site, but the acreage would be reduced so as to accommodate the 60 units. Both the Westside and SW Gateway sites would be annexed by the City of Lodi.

This alternative would not include the construction of any schools on the project site. The aquatic center and some park area would be incorporated into the project site. However, no park/basins would be included on the project sites.

2. Relationship with Project Objectives

The Agricultural Residential alternative would not achieve the following objectives:

a. Westside Project.

- Develop a diversity of high quality housing types to meet housing needs within the City of Lodi.
- Provide affordable housing options within the City of Lodi.
- Develop a school site that would serve future residents of the proposed project as well as other Lodi residents.
- Develop an "open space pedestrian/bicycle central spine" within the project site that connects to recreational and pedestrian amenities further south of the project site.
- Provide a site that could accommodate future development of an aquatic center.
- Provide adequate basin capacity for storm water detention.

b. Southwest Gateway Project.

- Develop a diversity of high quality housing types to meet housing needs within the City of Lodi.
- Provide affordable housing options within the City of Lodi.
- Develop a school site that would serve future residents of the proposed project as well as other Lodi residents.
- Develop an "open space pedestrian/bicycle central spine" within the project site that connects to recreational and pedestrian amenities further south of the project site.
- Provide adequate basin capacity for storm water detention.

3. Analysis of the Agricultural Residential Alternative

The potential impacts of the Agricultural Residential alternative are described in the following section.

a. Land Use, Agriculture, and Planning Policy. Under the Agricultural Residential alternative, there would be approximately 60 residential units built on the project site. Agricultural uses on the project sites would continue, but total farmland acreage would be reduced so as to accommodate the new residential units. Under this alternative there would still be land use conflicts associated with residential uses immediately adjacent to active agricultural uses. However, this conflict could be reduced with the implementation of the mitigation measures discussed in Section IV.A, Land Use, Agriculture, and Planning Policy. This alternative would result in the conversion of farmland to non-agricultural uses and could conflict with Williamson Act Contract. However, this alternative would convert significantly fewer acres in agricultural production than the proposed project.

b. Transportation, Circulation and Parking. The Agricultural Residential alternative would not significantly change the existing traffic conditions. Under this alternative, there would only be 60 units constructed on the project site, which is approximately 3 percent of proposed project's units. As such, the potential impact to intersection LOS would be significantly reduced from the proposed project, which would construct 2,090 units.

c. Air Quality. This alternative would slightly reduce the potential impacts to the existing air quality. Under this alternative, construction would be limited to 60 units, and the mitigation measures identified for construction related dust, exhaust, and organic emissions would reduce the potential

construction related air quality impact to a less-than-significant level. Additionally, as there would be 2,030 fewer homes under this alternative, the exhaust that would be generated from trips associated with the proposed project would be significantly reduced. However, while this project would not significantly contribute to regional emissions, the San Joaquin Valley would still be in nonattainment status for ozone, PM_{10} and $PM_{2.5}$.

d. Noise. The Agricultural Residential alternative would result in the construction of 60 units. As such, the duration of the construction period noise would be significantly reduced when compared to the proposed project, which would construct 2,090 houses. The implementation of the construction related mitigation measures would reduce the potential impact to a less-than-significant level. Similar to the proposed project, this alternative could expose new residential units to traffic noise sources. However, the mitigation measures identified in the EIR, in addition to a revised site plan that could move the residential units further away from traffic sources, could reduce the potential impact to a less-than-significant level. Noise currently generated on the project site, such as noise from agricultural equipment, would still exist under this alternative.

e. Cultural and Paleontological Resources. This alternative would result in a reduced amount of ground disturbing activities associated with construction. However, because these construction activities would occur, subsurface archaeological, paleontological, and Native American resources that may occur within the project site could be disturbed. The mitigation measures pertaining to cultural resources, which were outlined in the Section IV.E, Cultural and Paleontological Resources, would reduce the potential impact to a less-than-significant level.

f. Geology, Soils, and Seismicity. Sixty residential units would be constructed under the Agricultural Residential alternative. As such, residents would still be exposed to seismic ground shaking, corrosive soils, and potentially filled sites which could potentially impact proposed developments. However, as with the proposed project, these potential impacts would be reduced to a less than significant level, with mitigation measures. Additionally, as the majority of the project sites would remain in agricultural production, the potential area that would be impacted would be limited.

g. Hydrology and Water Quality. The Agricultural Residential alternative would result in the construction of 60 units on the project site, and an associated increase in impervious surface. However, the majority of the project site would remain in agricultural production, resulting in substantially less runoff than the proposed project. Construction activities could result in the degradation of water quality, and dewatering could expose construction workers to water that may contain contaminants. However, these impacts could be reduced to a less-than-significant level with implementation of the mitigation measures discussed in Section IV.G, Hydrology and Water Quality.

h. Biological Resources. This alternative would result in the construction of 60 units, which could potentially impact the burrowing owl, nesting Swainson hawks, or other nesting raptors. The site design of the Agricultural Residential alternative would avoid impacting the vernal marsh on the SW Gateway site. Implementation of the biological resources mitigation measures identified for the proposed project would reduce the potential impact to a less than significant level. Additionally, majority of the project site would remain in agricultural production, thus incrementally reducing the potential impact to biological resources.

i. Hazards and Hazardous Materials. Implementation of the Agricultural Residential alternative would result in the construction of 60 homes. Construction would occur under this alternative, and could expose construction workers or the public to hazardous materials from contaminants in the soil during and following construction activities, or expose workers or the public to airborne toxics, (e.g., lead-based pain and asbestos) during demolition. Implementation of the mitigation measures outlined in Section IV.I, Hazards and Hazardous Materials, would reduce the potential impact to a less-than-significant level.

j. Utilities. This alternative would result in an increased demand for utility services to the site. However, the demand for water service, wastewater service, and solid waste removal would be significant less than the proposed project, as this alternative would result in the construction of only 60 units. Irrigation of the agricultural uses that would stay on the project site would likely use more water than the proposed units.

k. Public Services. This alternative would result in a significant reduction in the demand for police and fire service than the proposed project. The Agricultural Residential alternative would generate a total of 33 students, which would have less of an impact on the school district. However, this alternative would not include sites for schools, which are currently proposed. This alternative would include the construction of the aquatic center and some park facilities.

l. Aesthetics. Under the Agricultural Residential alternative, agricultural uses would be maintained on the project site. While there would be the construction of 60 units, the majority of the site would remain as agricultural use, and would reduce the magnitude of the visual impact the proposed project, and the conversion of agricultural land, would have.

m. Energy. This alternative would result in the construction of 60 units, which would result in an increased demand for energy as well as energy expended during construction. However, this alternative would result in significantly less energy consumption than the proposed project.

C. REDUCED DENSITY ALTERNATIVE

1. Principal Characteristics

The Reduced Density alternative would reduce the density of the SW Gateway project and develop the Westside project site as the proposed project would. The Westside project would include 370 low density units, 195 medium density units, and 175 high density units. In addition, the Westside project would include the aquatic center, 20 acres of parks and park/basins, and 10.6 acres school site. The SW Gateway site would have approximately 681 low density homes, which would average three units per gross acre. The SW Gateway site would include approximately 30 acres of parks and park/basins, but would not include a school site.

2. Relationship with Project Objectives

The Westside component of the Reduced Density alternative would meet all the objectives of the proposed project. The Reduced Density alternative would not achieve the following objectives for the SW Gateways project:

a. SW Gateway Project.

- Develop a diversity of high quality housing types to meet housing needs within the City of Lodi.
- Provide affordable housing options within the City of Lodi.
- Develop a school site that would serve future residents of the proposed project as well as other Lodi residents.
- Provide adequate basin capacity for storm water detention.

3. Analysis of the Reduced Density Alternative

The potential impacts of the Reduced Density alternative are described in the following section.

a. Land Use, Agriculture and Planning Policy. This alternative proposes to reduce the overall density on the SW Gateway site to three units per gross acre, which would result in construction of 681 units. Under this alternative, the Westside component and the proposed project would be identical.

Under this alternative there would still be land use conflicts associated with placing residential uses immediately adjacent to active agricultural uses. However, this conflict could be reduced with the implementation of the identified mitigation measures. This alternative would result in the conversion of farmland to nonagricultural uses and could conflict with Williamson Act Contracts. This alternative would convert roughly the same amount of acreage, and would result in the same level of land use impacts as the proposed project.

b. Transportation, Circulation and Parking. The Reduced Density alternative would result in the construction of 1,421 units, which is approximately 68 percent of the proposed project's units. As such, the potential impact to intersection LOS would be slightly less than that of the proposed project. However, given the number of trips that would be associated with this alternative, it is likely that several intersections would be significantly impacted, requiring the incorporation of mitigation measures. The Reduced Density alternative would likely have a slightly reduce traffic impact than the proposed project.

c. Air Quality. Under this alternative, construction related air impacts would be similar to the proposed project, and the mitigation measures identified for construction related dust, exhaust, and organic emissions would reduce the potential construction related air quality impact to a less-than-significant level. The exhaust that would be generated from trips associated with the proposed project would not be significantly reduced under this alternative. Additionally, under this alternative, the San Joaquin Valley would still be in nonattainment status for ozone, PM_{10} and $PM_{2.5}$.

d. Noise. Construction noise associated with this alternative would be similar to the proposed project. The implementation of the construction related mitigation measures would reduce the potential noise impact to a less-than-significant level. Similar to the proposed project, this alternative could expose new residential units to traffic noise sources. The mitigation measures identified in the EIR could reduce the potential impact to a less-than-significant level**.**

e. Cultural and Paleontological Resources. This alternative would result in ground disturbing activities associated with construction. Because these construction activities would occur under the Reduced Density alternative, subsurface archaeological, paleontological, and Native American

resources that could occur within the project site could be disturbed. The mitigation measures pertaining to cultural resources, which were outlined in the EIR, would reduce the potential impact to a less-than-significant level.

f. Geology, Soils, and Seismicity. Under the Reduced Density alternative, residents would still be exposed to seismic ground shaking, corrosive soils and potentially filled sites could potentially impact proposed developments. However, as with the proposed project, these potential impacts would be reduced to a less than significant level with mitigation measures.

g. Hydrology and Water Quality. The Reduced Density alternative would result in the construction of 1,421 units on the project site. While development under this alternative would not be as intense at the proposed project, it can be assumed that the impervious surface and runoff associated with this alternative would be similar to the proposed project. Construction activities could result in the degradation of water quality, and dewatering could expose construction workers to water that may contain contaminants. However, these impacts could be reduced to a less-than-significant level with implementation of the mitigation measures discussed in Section IV.G, Hydrology and Water Quality.

h. Biological Resources. Under the Reduced Density alternative, all the existing farmland and habitat would be removed so as to allow for construction. As with the proposed project, this alternative could potentially impact the burrowing owl, nesting Swainson hawks, or other nesting raptors. Additionally, this alternative would remove a vernal marsh on the SW Gateway site. Implementation of the biological resources mitigation measures identified for the proposed project would reduce the potential biological impact to a less than significant level for this alternative.

i. Hazards and Hazardous Materials. Construction would occur under this alternative, and could expose construction workers or the public to hazardous materials from contaminants in the soil during and following construction activities, or expose workers or the public to airborne toxics, (e.g., lead-based pain and asbestos) during demolition. Implementation of the mitigation measures outlined in Section IV.I, Hazards and Hazardous Materials, would reduce the potential impact to a less-than-significant level. This alternative would have a similar level of hazards impact as the proposed project.

j. Utilities. This alternative would result in an increased demand for utility services to the site, but it would be slightly less than the proposed project. As with the proposed project, utility infrastructure would need to be installed to serve the project.

k. Public Services. This alternative would result in the construction of approximately 70 percent of the proposed project's units. As such, this alternative would result in a reduction of the demand for public services when compared to the project. This alternative would generate a total of 694 students, which would have less of an impact on the school district. However, this alternative would not include sites for a school on the SW Gateway site, or a fire station in the Westside site, both which are currently proposed. This alternative would include the construction of the aquatic center and some park facilities.

l. Aesthetics. This alternative would have comparable aesthetics impacts to the proposed project. Under this alternative, all agricultural farmland would be removed, which is considered a significant and unavoidable impact. This alternative would also introduce new sources of light and glare to the site, which could be reduced to a less-than-significant level.

m. Energy. This alternative would result in the construction of 1,421 units, which is approximately 68 percent of proposed project units. This alternative would result in a reduction of energy consumed when compared to the proposed project.

D. INCREASED HIGH DENSITY ALTERNATIVE

1. Principal Characteristics

This alternative would change the mix of housing units on both the Westside and SW Gateway sites. These sites would have low density units at a density of 3 dwelling units per acre, and high density units at a density of 25 dwelling units per acre. This would result in 717 low density units and 1,600 high density units, for a total of 2,317 units. There would be no medium density units incorporated into the project sites. The Westside project site would include the following components: 258 low density units (86 acres); 600 high density units (24 acres); one school site; one aquatic center; one site for a future fire station; and 20 acres of parks and park/basins. The SW Gateway site would include the following components: 459 low density units (153 acres); 1,000 high density units (40 acres); one school site; and 30 acres of parks and park/basins.

2. Relationship with Project Objectives

This alternative would meet all the objectives identified for the proposed project.

3. Analysis of the Increased High Density Alternative

The potential impacts of the Increased High Density alternative are described in the following section.

a. Land Use, Agriculture, and Planning Policy. Under this alternative there would still be land use conflicts associated with placing residential uses immediately adjacent to active agricultural uses. However, this conflict could be reduced with the implementation of the identified mitigation measures. This alternative would result in the conversion of farmland to nonagricultural uses and could conflict with Williamson Act Contract. This alternative would convert roughly the same amount of acreage, and would result in the same level of land use impacts as the proposed project.

b. Transportation, Circulation and Parking. The Increased High Density alternative would result in the construction of 2,317 units, which is approximately 237 more units than the proposed project. As such, the potential impact to intersection LOS would be more than that of the proposed project. However, it is likely that several intersections would be significantly impacted, requiring the incorporation of mitigation measures. The Increased High Density alternative would likely have an increased impact than the proposed project.

c. Air Quality. This alternative would increase the potential impacts to the existing air quality. Under this alternative, construction related air impacts would be slightly increased when compared to the proposed project, and the mitigation measures identified for construction related dust, exhaust, and organic emissions would reduce the potential construction related air quality impact to a less-than-significant level. The exhaust that would be generated from trips associated with the proposed project would increase under this alternative. Additionally, under this alternative, the San Joaquin Valley would still be in nonattainment status for ozone, PM_{10} and $PM_{2.5}$.

d. Noise. Construction noise associated with this alternative would be similar to the proposed project. The implementation of the construction related mitigation measures would reduce the potential impact to a less-than-significant level. Similar to the proposed project, this alternative could expose new residential units to traffic noise sources. The mitigation measures identified in the EIR could reduce the potential impact to a less-than-significant level**.**

e. Cultural and Paleontological Resources. This alternative would result in ground disturbing activities associated with construction. Because these construction activities would occur under the Increased High Density alternative, subsurface archaeological, paleontological, and Native American resources that could occur within the project site could be disturbed. The mitigation measures pertaining to cultural resources, which are outlined in the EIR, would reduce the potential impact to a less-than-significant level.

f. Geology, Soils, and Seismicity. Under the Increased High Density alternative, residents would still be exposed to seismic ground shaking, and corrosive soils and potential filled sites could impact proposed developments. However, as with the proposed project, these potential impacts would be reduced to a less than significant level with mitigation measures.

g. Hydrology and Water Quality. The Reduced Density alternative would result in the construction of 1,441 units on the project site, and an increase in impervious surface. The amount of runoff associated with this alternative would be similar to the proposed project. Construction activities could result in the degradation of water quality, and dewatering could expose construction workers to water that may contain contaminants. However, these impacts could be reduced to a less-than-significant level with implementation of the mitigation measures discussed in Section IV.G, Hydrology and Water Quality.

h. Biological Resources. Under the Increased High Density alternative, all the existing farmland and habitat would be removed so as to allow for construction. As with the proposed project, this alternative could potentially impact the burrowing owl, nesting Swainson hawks, or other nesting raptors. Additionally, this alternative would remove a vernal marsh on the SW Gateway site. Implementation of the biological resources mitigation measures identified for the proposed project would reduce the potential impact to a less than significant level for this alternative.

i. Hazards and Hazardous Materials. Construction would occur under this alternative, and could expose construction workers or the public to hazardous materials from contaminants in the soil during and following construction activities, or expose workers or the public to airborne toxics, (e.g., lead-based pain and asbestos) during demolition. Implementation of the mitigation measures outlined in Section IV.I, Hazards and Hazardous Materials, would reduce the potential impact to a less-than-significant level. This alternative would have a similar level of hazards impact as the proposed project.

j. Utilities. This alternative would result in an increased demand for utility services to the site to a slightly greater level than the proposed project. As with the proposed project, utility infrastructure would be required to be installed to serve the project.

k. Public Services. The Increased High Density alternative would result in the construction of 2,317 units, which is approximately 237 more units than the proposed project. While this alternative would result in an increase of the demand for police and fire services given there are more units and more residents, this alternative would actually decrease the number of school students. Because multi-family house generates fewer students, this alternative is anticipated to generate 531 students, which is 362 fewer students than the proposed project. This alternative would include the construction of the aquatic center, school sites, and park and park/basin facilities.

l. Aesthetics. This alternative would have comparable aesthetics impacts to the proposed project. Under this alternative, all agricultural farmland would be removed, which is considered a significant and unavoidable impact. This alternative would also introduce new sources of light and glare to the site, which could be reduced to a less-than-significant level.

m. Energy. This alternative would result in the construction of 2,317 units, which is more units than the proposed project. As such, this alternative would result in the consumption of more energy than the proposed project.

E. ENVIRONMENTALLY-SUPERIOR ALTERNATIVE

CEQA requires the identification of the environmentally superior alternative in an EIR. Of the four alternatives analyzed above, the No Project/No Build alternative is considered the environmentally superior alternative in the strict sense that the environmental impacts associated with its implementation would be the least of all the scenarios examined (including the proposed project). While this alternative would be environmentally superior in the technical sense that contribution to these aforementioned impacts would not occur, this alternative would not meet many of the project objectives, nor offer the environmental benefits identified, such as improved stormwater management, lighting control, aesthetics (landscaping), and groundwater/soil clean-up.

In cases like this where the No Project/No Build alternative is the environmentally superior alternative, CEQA requires that the second most environmentally superior alternative be identified. The Agricultural Residential alternative would be considered the second most environmentally superior alternative. Under this alternative, there would be a reduction in potential land use impacts as the majority of the site would remain in agricultural production. This alternative would result in significantly fewer trips, and associated air quality emission, than compare to the proposed project. As there would be limited development on the site, the potential impact to biological resources and water quality would be reduced. Additionally, this alternative would create significantly reduced demand on public services and utilities than the proposed project. However, this project would not meet the project objectives of providing increased residential opportunities is the City of Lodi, as well as providing parks and public facilities.

VI. CEQA REQUIRED ASSESSMENT CONCLUSIONS

As required by the California Environmental Quality Act (CEQA), this chapter discusses the following types of impacts that could result from implementation of the Westside Project, Southwest Gateway Project, and Other Areas to be Annexed: effects found not to be significant; growth-inducing impacts; unavoidable significant environmental impacts; significant irreversible changes; and cumulative impacts.

A. EFFECTS FOUND NOT TO BE SIGNIFICANT

Meetings among representatives of City of Lodi departments involved in project planning and review, consultants for the City, and the project applicant were held to preliminarily determine the scope of the Lodi Annexation EIR. In addition to these meetings, a Notice of Preparation (NOP) was circulated on September 16, 2005 and a public scoping meeting was held on October 12, 2005 in conjunction with a Planning Commission meeting to solicit comments from the public about the scope of this EIR. Written comments received on the NOP and public comments received during the scoping meeting were considered in the preparation of the final scope for this document and evaluation of the proposed project.

The environmental topics analyzed in Chapter IV, Setting, Impacts, and Mitigation Measures, represent those topics which generated the greatest potential controversy and expectation of adverse impacts among the project team and members of the public. Two topics typically considered in an EIR of this type and scale were determined to be less-than-significant during the scoping phase: Mineral Resources and Population and Housing.

The City of Lodi General Plan does not identify the project sites as mineral resources. Additionally, the San Joaquin County General Plan does not identify the project sites as significant sand and gravel aggregate resource areas or as generalized aggregate extraction sites. The project sites do not contain know mineral resources, and the majority of the project sites are in active agricultural uses.

The City of Lodi Housing Element was adopted by the City in 2004. The Housing Element anticipated the development of the Westside and SW Gateway sites. As such, housing and population impacts were addressed within this Element, and the environmental impact associated with Population and Housing were addressed in the EIR that was completed for the Housing Element.[1]

B. GROWTH-INDUCING IMPACTS

This section summarizes the project's growth-inducing impacts on the surrounding community. According to CEQA, a project is typically considered growth-inducing if it would foster economic or

[1] Cotton/Bridges/Associates, 2004. City of Lodi, Housing Element Update, Environmental Impact Report, September.

population growth. Examples of projects likely to have significant growth-inducing impacts include extensions or expansions of infrastructure systems beyond what is needed to serve project-specific demand, and development of new residential subdivisions or industrial parks in areas that are currently only sparsely developed or are undeveloped.

The Westside project would include 740 units, and the SW Gateway project would include 1,350 units and when development is subsequently proposed within the Other Areas to be Annexed an additional 335 units could be developed. While the project sites are currently undeveloped, suburban development of a similar type and density is located just east and north of the project sites.

The development of the project area was contemplated in the City of Lodi General Plan, adopted in 1991, and discussed in the Housing Element of the General Plan. The proposed project would bring utilities infrastructure into an area where it currently does not exist, which could ultimately facilitate development west of the project area, which is currently outside the City's Sphere of Influence. The local street system is being designed to facilitate some future growth to the west in the event the City determines that it will expand its Sphere of Influence to the west as part of the General Plan update. This would be considered a potentially significant and unavoidable growth-inducing impact.

C. UNAVOIDABLE SIGNIFICANT ENVIRONMENTAL IMPACTS

After mitigation, the revised project would result in the following significant unavoidable impacts:

- The proposed projects would result in the conversion of approximately 392 acres of Prime Farmland to non-agricultural uses.
- The proposed projects would result in a conflict with existing Agricultural Use and Williamson Act contracts.
- The proposed project would degrade the Existing Visual Character.
- Operations at the Lodi Avenue/Ham Lane intersection would be at an unacceptable service level under the Cumulative scenario.
- Operations at the Kettleman Lane/Lower Sacramento Road intersection would be at an unacceptable service level under the Cumulative scenario.
- Operations at the Kettleman Lane/Ham Lane intersection would be at an unacceptable service level under the Cumulative scenario.
- Operations at the Kettleman Lane/Cherokee Lane intersection would be at an unacceptable service level under the Cumulative scenario.
- Operations at the Harney Lane/Hutchins Street-West Lane intersection would be at an unacceptable service level under the Cumulative scenario.
- Project-related regional emissions would exceed the SJVAPCD thresholds of significance for ozone precursors.
- Potential growth-inducing impacts associated with the project's potential to facilitate development to the west if the City decides it wants to grow west.

The City may choose to adopt a statement of overriding consideration for some of the noise and traffic impacts and not implement the recommended mitigation measures/improvements in order to further certain objectives of the General Plan including creating a pedestrian-friendly environment and avoiding walled communities.

D. SIGNIFICANT IRREVERSIBLE CHANGES

CEQA requires that EIRs assess whether the proposed project would result in significant irreversible changes to the physical environment. The *CEQA Guidelines* discuss three categories of significant irreversible changes that should be considered. Each is discussed below.

1. Changes In Land Use Which Commit Future Generations

The project would commit future generations to development on approximately 410 acres of the project site. While part of the project site would be maintained as park space, a significant amount of the area would be developed with residential, school, and park uses. The project would convert land used for prime agriculture to residential and public uses. This would result in agricultural land being permanently taken out of production, and would commit future generations to non-agricultural use.

2. Irreversible Damage From Environmental Accidents

No significant environmental damage, such as accidental spills or explosion of a hazardous material, is anticipated with implementation of the proposed residential project. The use of hazardous materials (beyond standard construction supplies and household hazardous waste) is not proposed. While there are hazardous materials on the site, mitigation measures are presented to reduce potential impacts associated with these hazards. No other potential environmental effect of the project (e.g., traffic, air quality, water quality) would reach the point of creating irreversible damage from foreseeable accidents given the land uses proposed.

3. Consumption of Nonrenewable Resources

Consumption of nonrenewable resources includes increased energy consumption, conversion of agricultural lands, and lost access to mining reserves. Because the site has not been used for mineral extraction, loss of access to any minerals that historically occurred on-site would not be considered significant. The proposed project would require electricity and natural gas. However, the scale of such consumption for the proposed project would be typical for a residential development of this size.

The project would convert land used for prime agriculture to residential and public uses. This would result in the consumption of a nonrenewable resource, as agricultural land would be permanently taken out of production. The conversion of the prime farmland on the project sites has been identified as a significant and unavoidable impact.

E. CUMULATIVE IMPACTS

CEQA defines cumulative impacts as “two or more individual effects which, when considered together, are considerable, or which can compound or increase other environmental impacts.” Section 15130 of the CEQA Guidelines requires that an EIR evaluate potential environmental impacts that are individually limited, but cumulatively significant.

1. Methodology

When evaluating cumulative impacts, CEQA allows the use of either a list of past, present, or reasonably anticipated relevant projects, including projects outside the control of the lead agency, or a summary of the projections in an adopted planning document. This cumulative impacts analysis considers development that is likely to occur under the buildout of the General Plan. It also considers the specific development projects listed below.

- Mills Avenue Medical Offices, Mills Avenue north of Kettleman Lane
- Target Expansion on Kettleman Lane, east of Lower Sacramento Road
- Sunwest Professional Center, Kettleman Lane west of Mills Avenue
- Westgate Plaza Expansion on Lower Sacramento Road, south of Lodi Avenue
- Bezug Lane Properties on Tienda Drive, west of Lakeshore Drive
- Century Meadows One, Units 2 and 3, on Harney Lane east of Mills Avenue
- Kirst Estates Unit No. 5, on Harney Lane west of Mills Avenue
- Lalazar Estates on Lakeshore Drive, south of Kettleman Lane
- Legacy Estates Subdivisions on Harney Lane, west of Mills Avenue
- Mills Avenue Townhomes on Mills Avenue, south of Kettleman Lane
- Sasaki Property on Tienda Drive, west of Lakeshore Drive
- Sunwest Cottages on Tienda Drive, west of Mills Avenue
- The Villas on Harney Lane, west of Highway 99 Frontage Road
- Vintner's Square, at the northwest corner of Lower Sacramento Road and Kettleman Lane
- Lodi Shopping Center, at the southwest corner of Lower Sacramento Road and Kettleman Lane

2. Cumulative Effects of the Proposed Projects

The following analysis examines the cumulative effects of the proposed projects. The potential cumulative effects of the proposed project are summarized below for each of the topics that are analyzed in Chapter IV of the EIR.

a. Land Use and Planning Policy. The proposed project includes the development of the Westside and SW Gateways project sites, as well as the annexation of other parcels within the City's Sphere of Influence. While no development has been proposed for the additional annexation areas, it is assumed that these sites would be developed in the future at an average density of approximately 7 units per acre.

While the proposed project would develop land that is currently in agricultural production, this land is designated as "Planned Residential" within the City's General Plan. Additionally, the Housing Element of the General Plan identifies these sites as areas to be developed. As such, the project would not contribute to any significant cumulative land use impacts.

b. Transportation, Circulation, and Parking. Section IV.B, Transportation, Circulation, and Parking, includes a detailed analysis of the cumulative and future conditions related to transportation. Please refer to that discussion for cumulative transportation impacts resulting from the implementation of the proposed project.

c. Air Quality. A number of individual projects in the City of Lodi may be under construction simultaneously with the proposed project (see list above). Depending on construction schedules and actual implementation of projects in the area, generation of fugitive dust and pollutant emissions during construction may result in short-term air pollutants, which would contribute to short-term cumulative air quality impacts. However, each individual project would be subject to SJVAPCD rules, regulations, and other mitigation requirements during construction.

Currently, the San Joaquin Valley is in non-attainment for ozone, PM_{10} and $PM_{2.5}$ standards. Construction of the proposed projects, in conjunction with other planned developments within the study area, would contribute to the non-attainment status. Thus, the proposed projects would exacerbate nonattainment of air quality standards within the San Joaquin Valley. Section IV.C, Air Quality, includes a discussion of cumulative and future conditions related to air quality.

d. Noise. Implementation of the proposed project and cumulative projects would result in noise increase in the City of Lodi due to construction-period activity and increased traffic on City streets. However, noise increases associated with construction of the proposed project would be reduced to a less-than-significant level through the implementation of Mitigation Measure NOISE-1, which would restrict construction activities to daytime hours, reduce unnecessary idling of construction equipment, and require muffling of combustion engines. It is anticipated that cumulative projects in Lodi would incorporate these standard noise-reduction measures and that the project construction would not result in substantial adverse cumulative noise impacts. Cumulative traffic noise is discussed in Section IV.D, Noise. Implementation of the proposed project would not be anticipated to significantly change noise levels.

e. Cultural and Paleontological Resources. Construction activities associated with the proposed project and cumulative projects could result in significant impacts to unidentified archaeological and paleontological resources, and human remains. However, like the proposed projects, the cumulative projects would be subject to extensive mitigation measures designed to protect unidentified cultural and paleontological resources. Such mitigation would include the monitoring of construction areas and ensuring that the recovery of human remains is reported to the proper authorities. With implementation of the proposed mitigation measures, the proposed projects would not result in any significant and unavoidable impact. The project would not contribute to any significant cumulative cultural and paleontological resources impact.

f. Geology, Soils, and Seismicity. The potential cumulative impact for geology does not generally extend far beyond a project's boundaries, since geological impacts are confined to discrete spatial locations and do not combine to create an extensive cumulative impact condition. The exception to this generalization would occur where a large geologic feature (e.g., fault zone, massive landslide) might affect an extensive area, or where the development effects from the project could affect the geology of an off-site location. These circumstances are not present on the project site, and implementation of the project would not make a considerable contribution to a significant cumulative geologic impact.

g. Hydrology and Water Quality. The proposed project would result in an increase in impervious surface area and an increase in the amount of storm water generated on the project sites. Construction and operational impacts to stormwater that would result from implementation of the proposed project would be minimized through implementation of the SWPPP. The runoff from the project sites, in combination with other sites, could exceed the capacity of conveyance structures. The project applicant must incorporate design features and show the projects ability to contain and convey stormwater on the project site. It is anticipated that other cumulative projects in Lodi would be required to undergo the same water quality maintenance measures and would not result in cumulative adverse impacts to water quality.

h. Biological Resources. Impacts to biological resources from the proposed project would consist primarily of loss agricultural lands (row crops and orchards) and nonnative grassland, which provide foraging habitat for several special status species, and potential impacts to burrowing owl, Swainson's hawks nesting habitat, and seasonal wetlands. Except for the potential impacts to seasonal wetlands, impacts to biological resources resulting from project implementation will be offset through the City's implementation of the SJMSCP conservation strategy. The SJMSCP conservation strategy was developed in consideration of projected growth in San Joaquin County, and thus was developed to minimize cumulative impacts to SJMSCP covered species. In addition, other projects in the area with similar impacts to biological resources are also likely to implement the SJMSCP conservation strategy. Consequently, with implementation of the SJMSCP conservation strategy, the project will not result in significant cumulative impacts to SJMSCP covered species.

Potential project impacts to seasonal wetlands will be minor due to the small area affected, the low habitat value associated with the seasonal wetlands on the project site, and the proposed mitigation that will reduce impacts to a level less than significant. Consequently, although other projects in the area could result in impacts to similar wetlands, the project will not result in significant cumulative affect to seasonal wetlands.

i. Hazards and Hazardous Materials. As two of several residential developments within the City of Lodi, the project would contribute to increase in the generation of household hazardous wastes in the City. Implementation of the proposed projects would help to ensure that existing hazardous materials contamination on the project site is remediated. Given the residential nature of the proposed projects, it is unlikely that the project would involve the use or storage of large quantities of hazardous materials or waste. The proposed project would not result in significant cumulative hazardous materials impact.

j. Utilities. Development of the proposed project, in addition to other future development in the area would cumulatively increase the demand on utility providers and infrastructures in the project area. None of the various public services or utilities analyzed would experience significant impacts that could not be mitigated to a less-than-significant level. As such, no significant cumulative impact would result. A water analysis has determined that there is enough water to serve the proposed projects. Additionally, there is enough capacity within the City's wastewater system to serve the project site. The proposed project would require the construction of connections to the water system, wastewater system, and storm drainage facilities. The project applicant would be required to pay its fair share to construct any improvements needed to serve the project, and would therefore not contribute to a cumulative impact.

k. Public Services. Development of the proposed project, in conjunction with planned future area development would cumulatively increase the demand on public services in the project area. None of the public services analyzed would experience significant unavoidable impacts with the implementation of mitigation measures. In addition to paying applicable school impact fees, acreage is provided within the Westside and SW Gateway sites for school facilities. It is assumed that other cumulative projects would be required to pay school mitigation fees, which would reduce the cumulative impact to school services to a less-than-significant level.

l. Aesthetics. The proposed project would transform an area that is currently land in agricultural use to residential and public uses. This development would be considered similar in type and density to development immediately adjacent to the west. Removing land in agricultural production and replacing it with residential development would result in a significant and unavoidable visual impact. However, the City of Lodi General Plan identifies the project sites as areas to be developed. As such, the project site would not result in a significant cumulative visual impact.

m. Energy. Implementation of the proposed project would result in an increase in energy consumption. Demolition and construction activities associated with the project would result in the nonreversible use of energy resources such as fuel and bound energy in the form of construction materials. The installation of the new electrical substation, located on a parcel adjacent to the north portion of the SW Gateway site and south of Kettleman Lane, would be designed to accommodate the additional electrical demand of the proposed project. Energy conservation standards contained in the California Code of Regulations (Title 24) for new residential and commercial development would ensure that the new development would be designed to reduce wasteful, inefficient and unnecessary use of electricity.

Energy consumed for transportation would be subject to the fuel efficiency standards for vehicles in California, which are designed to reduce wasteful and inefficient energy use in private vehicles. The project would include pedestrian and bicycle design elements to further reduce the consumption of energy for transportation. The inclusion of parks and schools within walkable distances from the residential areas within the project sites would reduce vehicle miles traveled associated with the implementation of the proposed project.

The proposed project would result in an increase in demand for energy, but established State and federal standards are in place to curtail wasteful, inefficient and unnecessary use of energy.

VII. REPORT PREPARATION

A. REPORT PREPARERS

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APPENDIX A

NOP AND SCOPING COMMENT LETTERS

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P1

FILE

CITY COUNCIL
JOHN BECKMAN, Mayor
SUSAN HITCHCOCK,
Mayor Pro Tempore
LARRY D. HANSEN
BOB JOHNSON
JOANNE MOUNCE

CITY OF LODI

CITY HALL, 221 WEST PINE STREET
P.O. BOX 3006
LODI, CALIFORNIA 95241-1910
Community Development Department
(209) 333-6714

BLAIR KING, City Manager
SUSAN J. BLACKSTON
City Clerk
D. STEPHEN SCHWABAUER
City Attorney

September 16, 2005

NOTICE OF PREPARATION (NOP) OF A DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE WESTSIDE PROJECT, SOUTHWEST GATEWAY PROJECT, AND OTHER AREAS TO BE ANNEXED

As the Lead Agency, the City of Lodi will prepare an Environmental Impact Report (EIR) for the Westside project, Southwest Gateway project, and Other Areas to be Annexed, and would like your views regarding the scope and content of the environmental information to be addressed in the EIR. The EIR may be used by your agency when considering approvals for this project. A brief description of the proposed projects, the site areas, and a summary of the potential environmental effects are attached.

The City will hold a Scoping Session during a regularly scheduled Planning Commission meeting on October 12, 2005.

The City of Lodi invites you to comment on the proposed scope of the Draft EIR. Due to the time limits mandated by State law, your response must be sent at the earliest possible date, but *no later than 5pm on* October 17, 2005. Please identify a contact person, and send your response to:

City of Lodi
Community Development Department
Attn: Lynette Dias
221 West Pine Street
PO Box 3006
Lodi, California 95241
Lynette.Dias@lsa-assoc.com
510-540-7331

A. INTRODUCTION

The City of Lodi will be the Lead Agency and prepare an EIR for the development of the Westside and Southwest Gateway project areas, and the future development of additional parcels which will be annexed as part of the Southwest Gateway Annexation application. These project areas are shown in Figure I.

As the Lead Agency, the City of Lodi has decided to prepare one EIR that evaluates each of these projects. The purpose of the EIR is to inform decision-makers and the general public of the environmental effects of the proposed project. The EIR process is intended to provide environmental information sufficient to evaluate a proposed project and its potential for

significant impacts on the environment; examine methods of reducing adverse environmental impacts; and consider alternatives to the project.

The EIR will be prepared and processed in accordance with the California Environmental Quality Act (CEQA) of 1970, as amended, and the *CEQA Guidelines*. In accordance with CEQA requirements, the EIR will include the following:

- Summary of the proposed projects and their potential environmental effects;
- Description of the proposed projects;
- Description of the existing environmental setting, potential environmental impacts, and mitigation measures;
- Cumulative impacts;
- Alternatives to the proposed projects; and
- CEQA-required assessment conclusions, including: 1) the growth-inducing impacts of the proposed projects; 2) any significant environmental effects which cannot be avoided if the projects are implemented; 3) any significant irreversible and irretrievable commitments of resources; and 4) effects found not to be significant.

B. PROJECT LOCATION

The project areas are shown in Figure I. The Westside project site is generally bound by the Woodbridge Irrigation District (WID) Canal on the north, agricultural land to the east and south, and a shopping center, mini-storage, and Temple Baptist Church to the east of Lower Sacramento Road. Sargent Road (Lodi Avenue) bisects the project site and separates the triangular shaped northern parcel from the rest of the project site.

The Southwest Gateway project is generally bound by Highway 12 to the north, the Van Ruiten Vineyard to the west, Harney Lane and private residences to the south, and Lower Sacramento Road, private residences, and the future DeBenedetti Park to the east.

The Other Area to be Annexed is adjacent to the Southwest Gateway project area on east of Lower Sacramento Road and is generally bound by Lower Sacramento Road to the west, Century Boulevard to the south, a residential subdivision to the east, and a commercial area to the north. There is one parcel that is part of this annexation area, but is not located immediately adjacent to the other parcels that will be annexed. The solitary parcel is located along Lower Sacramento Road, north of the Lower Sacrament Road/Kristin Court Intersection.

C. PROJECTS DESCRIPTIONS

The EIR would analyze both the annexation and development of the various projects. The following provides a brief outline of the proposed projects.

Westside project. This project would develop a 151-acre site with 452 low-density dwelling units, 154 medium-density dwelling units, and 167 high-density dwelling units. This project would include a 10-acre school site, a 4.7-acre site for the City-planned aquatic center, and approximately 18 acres of parks and park basins. A conceptual land use plan is shown in Figure 2.

Southwest Gateway project. This project would develop a 257-acre site with 941 low-density dwelling units, 82 medium-density dwelling units, and 340 high-density dwelling units. This

project would include a 15-acre school site, and approximately 38 acres of parks and park basins. A conceptual land use plan is shown in Figure 3.

Other Areas to be Annexed. The Draft EIR will also include an analysis of the annexation of 12 additional parcels, a total of 47 acres, adjacent to the Southwest Gateway project area. No specific development plans are proposed for these parcels at this time. These parcels are proposed for annexation to avoid the creation of a county island. As part of the annexation these parcels will be pre-zoned for residential development.

D. POTENTIAL ENVIRONMENTAL EFFECTS OF THE PROJECT

This EIR will identify the significant environmental effects anticipated to result from the implementation of the proposed project. Specific environmental topics that will be evaluated include:

- Land Use and Planning Policy
- Transportation, Circulation and Parking
- Air Quality
- Noise
- Cultural and Paleontological Resources
- Geology, Soils and Seismicity
- Hydrology and Water Quality
- Biological Resources
- Hazards and Hazardous Materials
- Utilities
- Public Services
- Aesthetic Resources

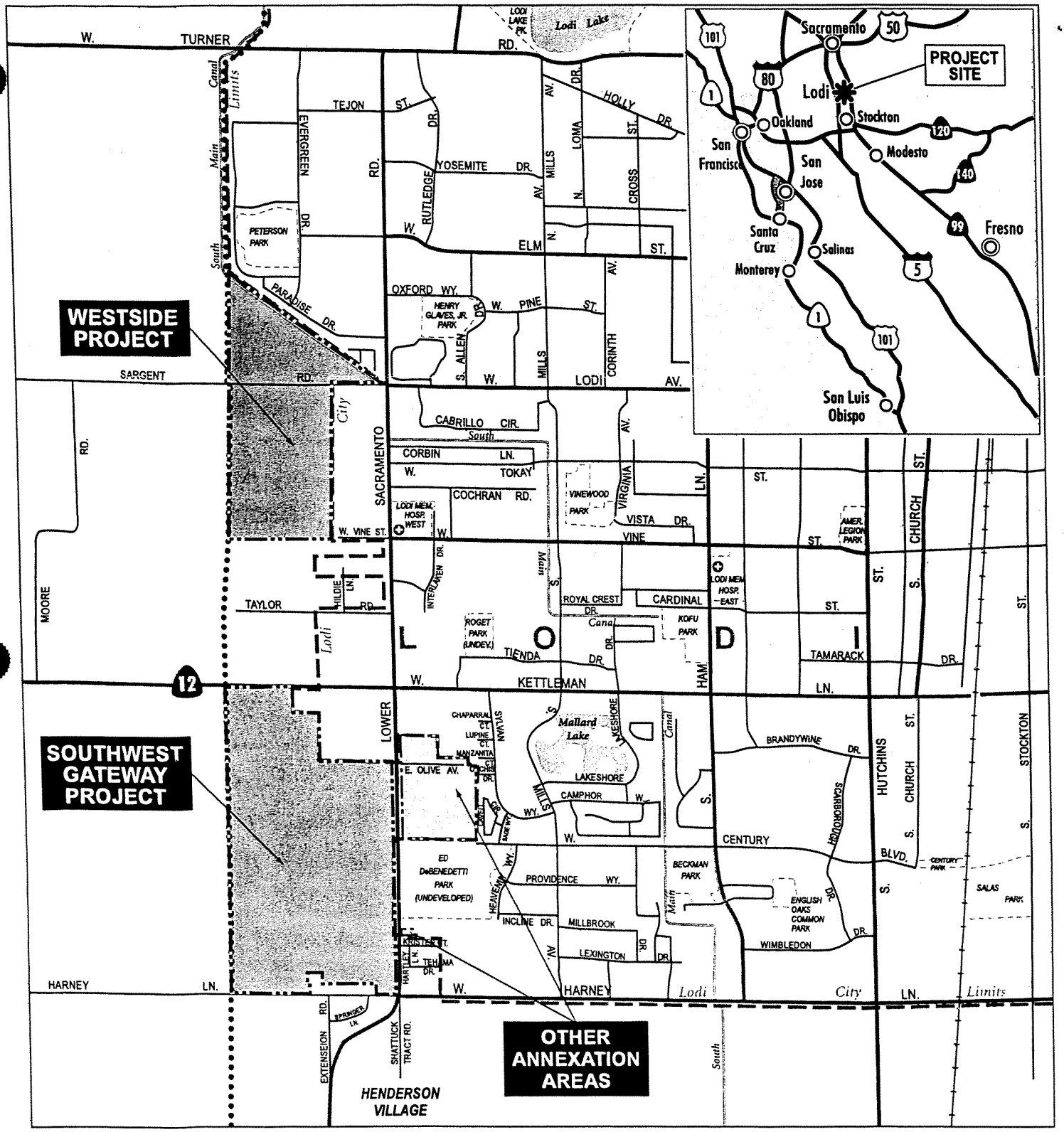

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FIGURE 1

Lodi Annexation EIR
Project Location
and Regional Vicinity

LEGEND

- WESTSIDE & SOUTHWEST GATEWAY PROJECT AREAS
- OTHER ANNEXATION AREAS
- CITY LIMITS
- SPHERE OF INFLUENCE

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SOURCE: CSAA, 2005; LSA ASSOCIATES, INC., 2005

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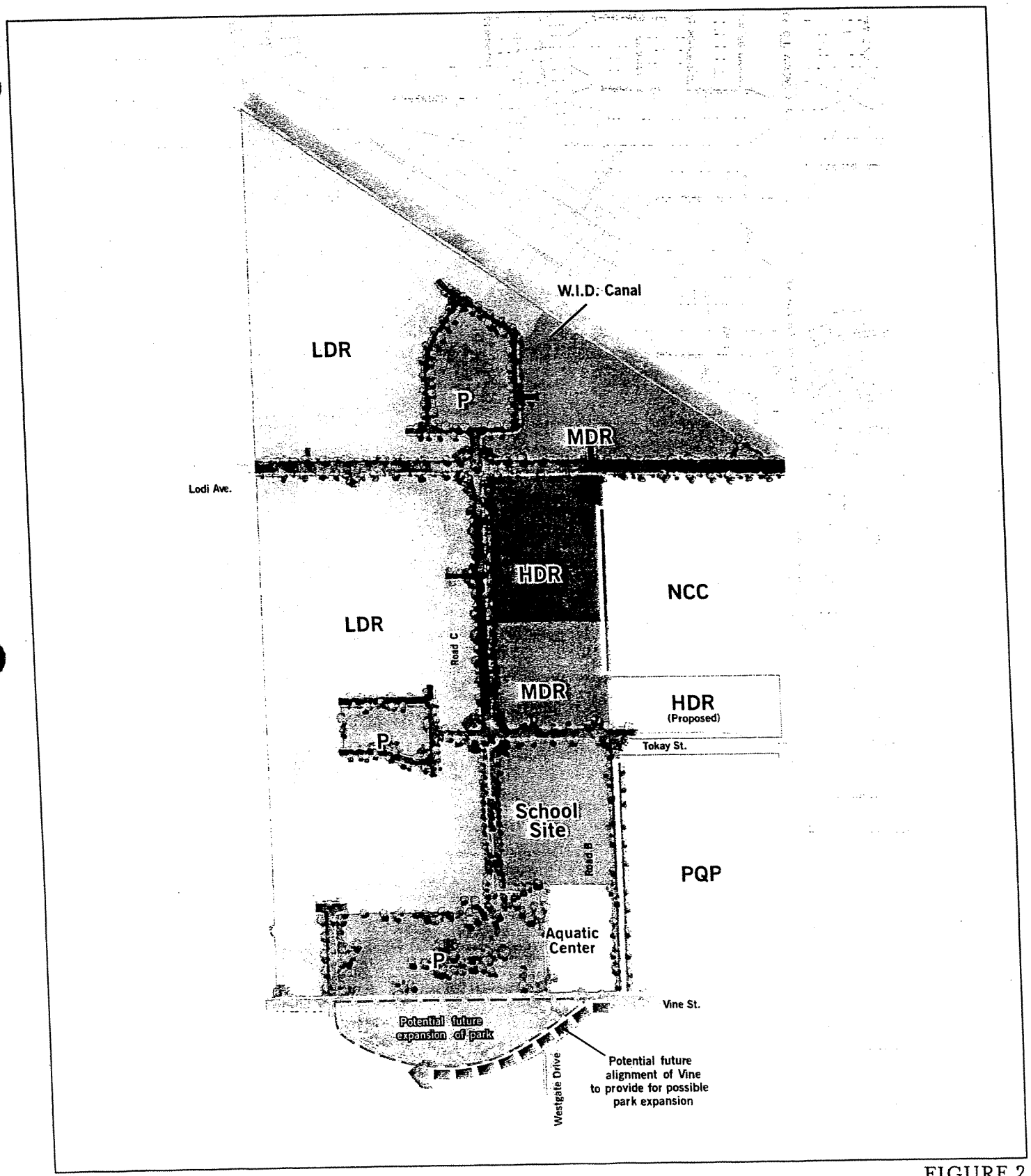

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FIGURE 2

Lodi Annexation EIR
Illustrative Land Use Plan
- Westside

SOURCE: IBA, 2005.

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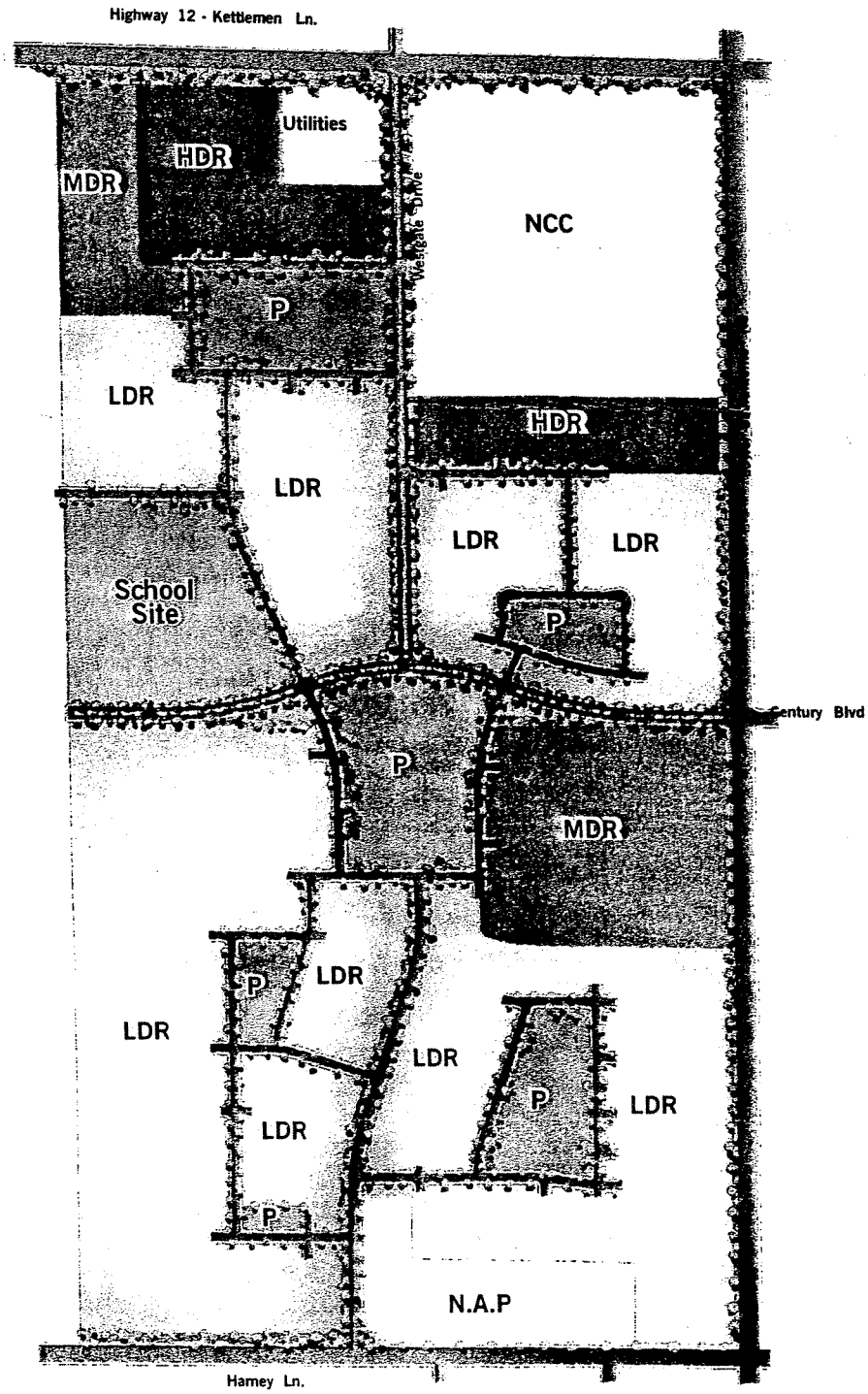

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FIGURE 3

Lodi Annexation EIR
Illustrative Land Use Plan
- Gateway

SOURCE: IBA, 2005.

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STATE OF CALIFORNIA, RESOURCES AGENCY ARNOLD SCHWARZENEGGER, GOVERNOR

DEPARTMENT OF CONSERVATION

DIVISION OF LAND RESOURCE PROTECTION

801 K STREET • MS 18-01 • SACRAMENTO, CALIFORNIA 95814

PHONE 916 / 324-0850 • FAX 916 / 327-3430 • TDD 916 / 324-2555 • WEB SITE conservation.ca.gov

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NOV 0 1 2005

COMMUNITY DEVELOPMENT DEPT
CITY OF LODI

October 28, 2005

Ms. Lynette Dias
City of Lodi
Community Development Department
P.O. Box 3006
Lodi, CA 95241

Subject: Westside Project, Southwest Gateway Project and Other Areas to be Annexed Notice of Preparation (NOP) for a Draft Environmental Impact Report (DEIR) - SCH# 2005092096, San Joaquin County

Dear Ms. Dias:

The Department of Conservation's (Department) Division of Land Resource Protection (Division) has reviewed the NOP for the referenced project. The Division monitors farmland conversion on a statewide basis and administers the California Land Conservation (Williamson) Act and other agricultural land conservation programs. We offer the following comments and recommendations with respect to the project's impacts on agricultural land and resources.

Project Description

The Westside Project would develop 151 acres with residential units, a school site, aquatic center and parks. The Southwest Gateway Project would develop 257 acres with residential units, a school site and parks. An additional 47 acres would be annexed to the City of Lodi (City) and pre-zoned for residential development.

The Westside Project is located north and south of Sargent Road and west of Lower Sacramento Road. The Southwest Gateway Project is located between Harney Lane and Kettlemen Lane and west of Lower Sacramento Road. The additional acres to be annexed are located adjacent to the Southwest Gateway Project area east of Lower Sacramento Road.

The Department's Williamson Act Map for San Joaquin County (County) shows contracted land in both project areas.

Agricultural Setting of the Project

The DEIR should describe the project setting in terms of the actual and potential agricultural productivity of the land. The Division's Important Farmland Map (IFM) for the County should be utilized to identify agricultural land within the project site and in the surrounding area that may be impacted. Acreages for each land use designation should be identified for both areas. Likewise, the County's Williamson Act Map should be utilized to identify potentially impacted contract, Farmland Security Zone (FSZ) and agricultural preserve land by acreage and whether it is prime or nonprime agricultural land according to definition in Government Code §51201(c). Maps of the Important Farmland and Williamson Act land should be included in the DEIR.

In addition, we recommend including the following items of information to characterize the agricultural land resource setting of the project.

- Current and past agricultural use of the project area. Include data on the types of crops grown, crop yields and farm gate sales values.
- To help describe the full agricultural resource value of the soils of the site, we recommend the use of economic multipliers to assess the total contribution of the site's potential or actual agricultural production to the local, regional and state economies. State and Federal agencies such as the UC Cooperative Extension Service and USDA are sources of economic multipliers.

Project Impacts on Agricultural Land

The Department recommends that the following be included in the DEIR in the analysis of project impacts.

- Type, amount, and location of farmland lost to project implementation. The conversion of Prime Farmland, Unique Farmland or Farmland of Statewide Importance is considered a potentially significant adverse impact.
- A discussion of conflicts with Williamson Act contracts, including termination in order to accommodate the project. The DEIR should also discuss the impacts that conflicts or termination would have on nearby properties under contract; i.e., growth-inducing impacts from the perspective that the removal of contract protection removes a barrier to development and results in an incentive to shift to a more intensive land use such as urban development. The termination of a Williamson Act contract is considered a potentially significant adverse impact.
- Indirect impacts on current and future agricultural operations; e.g., land-use conflicts, increases in land values and taxes, vandalism, population, traffic, water availability, etc.
- Growth-inducing impacts, including whether leapfrog development is involved.
- Incremental project impacts leading to cumulatively considerable impacts on agricultural land. These impacts would include impacts from the proposed project as

well as impacts from past, current and probable future projects. The Division's farmland conversion tables may provide useful historical data.

- Impacts on agricultural resources may also be quantified and qualified by use of established thresholds of significance (CEQA Guidelines §15064.7). The Division has developed a California version of the USDA Land Evaluation and Site Assessment (LESA) Model, a semi-quantitative rating system for establishing the environmental significance of project-specific impacts on farmland. The model may also be used to rate the relative value of alternative project sites. The LESA Model is recommended by CEQA and is available from the Division at the contact listed below.

Williamson Act Lands

The Department recommends that the following information be included in the DEIR regarding Williamson Act land impacted by the project.

As a general rule, land can be withdrawn from Williamson Act contract only through the nine-year nonrenewal process. Immediate termination via cancellation is reserved for "extraordinary", unforeseen situations (See Sierra Club v. City of Hayward (1981) 28 Cal.3d 840, 852-855)). Furthermore, it has been held that "cancellation is inconsistent with the purposes of the (Williamson) act if the objectives to be served by cancellation should have been predicted and served by nonrenewal at an earlier time, or if such objectives can be served by nonrenewal now" (Sierra Club v. City of Hayward).

- If cancellation is proposed, notification must be submitted to the Department when the County or City accepts the application as complete (Government Code §51284.1). The board or council must consider the Department's comments prior to approving a tentative cancellation. Required findings must be made by the board or council in order to approve tentative cancellation. Cancellation involving FSZ contracts include additional requirements. We recommend that the DEIR include discussion of how cancellations involved in this project would meet required findings. However, notification must be submitted separately from the CEQA process and CEQA documentation. (The notice should be mailed to Bridgett Luther Thompson, Director, Department of Conservation, c/o Division of Land Resource Protection, 801 K Street MS 18-01, Sacramento, CA 95814-3528.)
- Pursuant to Government Code §51243, if a city annexes land under Williamson Act contract, the city must succeed to all rights, duties and powers of the county under the contract unless conditions in §51243.5 apply to give the city the option to not succeed to the contract. Although a city may have protested a contract and although LAFCO may have upheld the protest, conditions in §51243.5 may not have been met to give the city the option to not succeed to the contract. A LAFCO must notify the Department within 10 days of a city's proposal to annex land under contract (Government Code §56753.5). A LAFCO must not approve a change to a sphere of influence or annexation of contracted land to a city unless specified

conditions apply (Government Code §§51296.3, 56426, 56426.5, 56749 and 56856.5).

- Termination of a Williamson Act/FSZ contract by acquisition can only be accomplished by a public agency, having the power of eminent domain, for a public improvement. The Department must be notified in advance of any proposed public acquisition (Government Code §51290 - 51292), and specific findings must be made. The property must be acquired in accordance with eminent domain law by eminent domain or in lieu of eminent domain in order to void the contract (§51295). The public agency must consider the Department's comments prior to taking action on the acquisition. School districts are precluded from acquiring land under FSZ contract. We recommend discussion in the DEIR of whether such action is envisioned by this project and how the acquisition will meet the required findings. However, notification must be submitted separately from the CEQA process and CEQA documentation to the address noted above.
- If any part of the site is to continue under contract, or remain within an agricultural preserve, after project completion, the DEIR should discuss the proposed uses for those lands. Uses of contracted and preserve land must meet compatibility standards identified in Government Code §51238 - 51238.3, 51296.7. Otherwise, contract termination (see above) must occur prior to the initiation of the land use, or the preserve must be disestablished.
- An agricultural preserve is a zone authorized by the Williamson Act, and established by the local government, to designate land qualified to be placed under contract. Preserves are also intended to create a setting for contract-protected lands that is conducive to continuing agricultural use. Therefore, the uses of agricultural preserve land must be restricted by zoning or other means so as not to be incompatible with the agricultural use of contracted land within the preserve (Government Code §51230). The DEIR should also discuss any proposed general plan designation or zoning within agricultural preserves affected by the project.

Mitigation Measures

The Department encourages the use of agricultural conservation easements on land of at least equal quality and size as partial compensation for the direct loss of agricultural land. If a Williamson Act contract is terminated, or if growth inducing or cumulative agricultural impacts are involved, we recommend that this ratio be increased. We highlight this measure because of its acceptance and use by lead agencies as mitigation under CEQA. It follows a rationale similar to that of wildlife habitat mitigation. The loss of agricultural land represents a permanent reduction in the State's agricultural land resources. Agricultural conservation easements will protect a portion of those remaining resources and lessen project impacts in accordance with CEQA Guideline §15370.

Mitigation using agricultural conservation easements can be implemented by at least two alternative approaches: the outright purchase of easements or the donation of

mitigation fees to a local, regional or statewide organization or agency whose purpose includes the acquisition and stewardship of agricultural conservation easements. The conversion of agricultural land should be deemed an impact of at least regional significance, and the search for replacement lands conducted regionally or statewide, and not limited strictly to lands within the project's surrounding area.

Other forms of mitigation may be appropriate for this project, including the following:

- Protecting farmland in the project area or elsewhere in the County through the use of less than permanent long-term restrictions on use such as 20-year Farmland Security Zone contracts (Government Code §51296 et seq.) or 10-year Williamson Act contracts (Government Code §51200 et seq.).
- Directing a mitigation fee to invest in supporting the commercial viability of the remaining agricultural land in the project area, County or region through a mitigation bank that invests in agricultural infrastructure, water supplies, marketing, etc.

Although the direct conversion of agricultural land and other agricultural impacts are often deemed to be unavoidable by an agency's CEQA analysis, mitigation measures must nevertheless be considered. The adoption of a Statement of Overriding Consideration does not absolve the agency of the requirement to implement feasible mitigation that lessens a project's impacts. A principal purpose of an EIR is to present a discussion of mitigation measures in order to fully inform decision-makers and the public about ways to lessen a project's impacts. In some cases, the argument is made that mitigation cannot reduce impacts to below the level of significance because agricultural land will still be converted by the project, and, therefore, mitigation is not required. However, reduction to a level below significance is not a criterion for mitigation. Rather, the criterion is feasible mitigation that lessens a project's impacts. Pursuant to CEQA Guideline 15370, mitigation includes measures that "avoid, minimize, rectify, reduce or eliminate, or compensate" for the impact. For example, mitigation includes *"Minimizing impacts by limiting the degree or magnitude of the action and its implementation (§15370(b))"* or *"Compensating for the impact by replacing or providing substitute resources or environments (§15370(e))."*

All measures ostensibly feasible should be included in the DEIR. Each measure should be discussed, as well as the reasoning for selection or rejection. A measure brought to the attention of the Lead Agency should not be left out unless it is infeasible on its face.

Finally, when presenting mitigation measures in the DEIR, it is important to note that mitigation should be specific, measurable actions that allow monitoring to ensure their implementation and evaluation of success. A mitigation consisting only of a statement of intention or an unspecified future action may not be adequate pursuant to CEQA.

Information about agricultural conservation easements, the Williamson Act and provisions noted above is available on the Department's website or by contacting the Division at the address and phone number listed below. The Department's website address is:

http://www.conservation.ca.gov/dlrp/index.htm

Thank you for the opportunity to comment on this NOP. The Department looks forward to receiving your response, including a copy of the DEIR. If you have questions on our comments or require technical assistance or information on agricultural land conservation, please contact Bob Blanford at 801 K Street, MS 18-01, Sacramento, California 95814; or, phone (916) 327-2145.

Sincerely,

Dennis J. O'Bryant
Acting Assistant Director

cc: State Clearinghouse

San Joaquin County Resource Conservation District
3422 W. Hammer Lane, Suite A
Stockton, CA 95219

California Regional Water Quality Control Board

Central Valley Region

Robert Schneider, Chair

C. Lloyd, Ph.D.
Agency Secretary

Arnold Schwarzenegger
Governor

Sacramento Main Office
11020 Sun Center Drive #200, Rancho Cordova, California 95670-6114
Phone (916) 464-3291 • FAX (916) 464-4645
http://www.waterboards.ca.gov/centralvalley

RECEIVED
OCT 14 2005
COMMUNITY DEVELOPMENT DEPT
CITY OF LODI

6 October 2005

Lynette Dias
City of Lodi
Community Development Department
221 West Pine Street
Lodi, CA 95241

PROPOSED PROJECT REVIEW, CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA), NOTICE OF PREPARATION FOR WESTSIDE, SOUTHWEST GATEWAY, AND OTHER AREAS TO BE ANNEXED, STATE CLEARINGHOUSE #2005092096, LODI, SAN JOAQUIN COUNTY

As a Responsible Agency, as defined by CEQA, we have reviewed the Notice of Preparation for Westside, Southwest Gateway, and Other Areas to be Annexed. Based on our review, we have the following comments regarding the proposed project.

Construction Storm Water

A NPDES General Permit for Storm Water Discharges Associated with Construction Activities, NPDES No. CAS000002, Order No. 99-08-DWQ is required when a site involves clearing, grading, disturbances to the ground, such as stockpiling, or excavation that results in soil disturbances of one acre or more of total land area. Construction activity that involves soil disturbances on construction sites of less than one acres and is part of a larger common plan of development or sale, also requires permit coverage. Coverage under the General Permit must be obtained prior to construction. More information may be found at http://www.swrcb.ca.gov/stormwtr/construction.html

Post-Construction Storm Water Management

Manage storm water to retain the natural flow regime and water quality, including not altering baseline flows in receiving waters, not allowing untreated discharges to occur into existing aquatic resources, not using aquatic resources for detention or transport of flows above current hydrology, duration, and frequency. All storm water flows generated on-site during and after construction and entering surface waters should be pre-treated to reduce oil, sediment, and other contaminants. The local municipality where the proposed project is located may now require post construction storm water Best Management Practices (BMPs) pursuant to the Phase II, SWRCB, Water Quality Order No. 2003 – 0005 – DWQ, NPDES General Permit No. CAS000004, WDRS for Storm Water Discharges from Small Municipal Separate Storm Sewers Systems (MS4). The local municipality may require long-term post-construction BMPs to be incorporated into development and significant redevelopment projects to protect water quality and control runoff flow.

Wetlands and/or stream course alteration

Section 401 of the federal Clean Water Act requires any project that impacts waters of the United States (such as streams and wetlands) to file a 401 Water Quality Certification application with this office. The project proponent must certify the project will not violate state water quality standards. Projects include, but are not limited to, stream crossings, modification of stream banks or stream courses, and the filling or modification of wetlands. If a U.S. Army Corp of Engineers (ACOE) permit is required for the project, then Water Quality Certification must be obtained prior to initiation of project activities. The proponent must follow the ACOE 404(b)(1) Guidance to assure approval of their 401 Water Quality Certification application. The guidelines are as follows:

1. **Avoidance** (Is the project the least environmentally damaging *practicable* alternative?)
2. **Minimization** (Does the project minimize any adverse effects to the impacted wetlands?)
3. **Mitigation** (Does the project mitigate to assure a no net loss of functional values?)

If, after avoidance and minimization guidelines are considered and wetland impacts are still anticipated:

- determine functional losses and gains (both permanent and temporal; both direct and indirect)
- conduct adequate baselines of wetland functions including vegetation, wildlife, hydrology, soils, and water quality
- attempt to create/restore the same wetland type that is impacted, in the same watershed
- work with a regional context to maximize benefits for native fish, wildlife, vegetation, as well as for water quality, and hydrology
- use native species and materials whenever possible
- document all efforts made to avoid the minimize adverse wetland impacts
- be prepared to develop performance criteria and to track those for between 5 to 20 years
- be prepared to show project success based on achieving wetland functions
- if the project fails, be prepared to repeat the same process (via financial assurance), with additional acreage added for temporal losses
- specify how the mitigation project will be maintained in perpetuity and who will be responsible for the maintenance

For more information regarding Water Quality Certification may be found at http://www.waterboards.ca.gov/centralvalley/available_documents/wq_cert/application.pdf

Dewatering Permit

The proponent may be required to file a Dewatering Permit covered under Waste Discharge Requirements General Order for Dewatering and Other Low Threat Discharges to Surface Waters Permit, Order No. 5-00-175 (NPDES CAG995001) provided they do not contain significant quantities of pollutants and are either (1) four months or less in duration, or (2) the average dry weather discharge does not exceed 0.25 mgd:

a. Well development water
b. Construction dewatering
c. Pump/well testing
d. Pipeline/tank pressure testing
e. Pipeline/tank flushing or dewatering
f. Condensate discharges
g. Water Supply system discharges
h. Miscellaneous dewatering/low threat discharges

Industrial

A NPDES General Permit for Storm Water Discharges Associated with Industrial Activities, NPDES No. CAS000001, Order No. 97-03-DWQ regulates 10 broad categories of industrial activities. The General Industrial Permit requires the implementation of management measures that will achieve the performance standard of best available technology economically achievable (BAT) and best conventional pollutant control technology (BCT). The General Industrial Permit also requires the development of a Storm Water Pollution Prevention Plan (SWPPP) and a monitoring plan. The General Industrial Permit requires that an annual report be submitted each July 1. More information may be found at http://www.swrcb.ca.gov/stormwtr/industrial.html

For more information, please visit the Regional Boards website at http://www.waterboards.ca.gov/centralvalley/ or contact me at 916.464.4642 or by e-mail at stevenb@waterboards.ca.gov.

BRETT STEVENS
Storm Water Unit
916.464.4642

cc: State Clearinghouse, Sacramento

STATE OF CALIFORNIA

ARNOLD SCHWARZENEGGER, *Governor*

PUBLIC UTILITIES COMMISSION
505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298

RECEIVED
OCT 21 2005
COMMUNITY DEVELOPMENT DEPT
CITY OF LODI

October 18, 2005

Lynette Dias
City of Lodi
221 West Pine Street
Lodi, CA 95241

Dear Ms. Dias:

Re: SCH# 2005092096; Westside Project, Southwest Gateway Project, & Other Areas to be Annexed

As the state agency responsible for rail safety within California, we recommend that any development projects planned adjacent to or near the rail corridor in the County be planned with the safety of the rail corridor in mind. New developments may increase traffic volumes not only on streets and at intersections, but also at at-grade highway-rail crossings. This includes considering pedestrian circulation patterns/destinations with respect to railroad right-of-way.

Safety factors to consider include, but are not limited to, the planning for grade separations for major thoroughfares, improvements to existing at-grade highway-rail crossings due to increase in traffic volumes and appropriate fencing to limit the access of trespassers onto the railroad right-of-way.

The above-mentioned safety improvements should be considered when approval is sought for the new development. Working with Commission staff early in the conceptual design phase will help improve the safety to motorists and pedestrians in the County.

If you have any questions in this matter, please call me at (415) 703-2795.

Very truly yours,

Kevin Boles
Utilities Engineer
Rail Crossings Engineering Section
Consumer Protection and Safety Division

cc: Pat Kerr, UP

October 4, 2005

10-SJ-12-PM 15.1
AX-04-01, GPA-04-01, Rezone Z-04-01, GMA-05-001
Southwest Gateway Development Project

Lynette Dias
2215 Fifth Street
Berkley, CA 94710

Dear Ms. Dias:

The California Department of Transportation (Department) appreciates the opportunity to have reviewed the Annexation, General Plan Amendment, Rezone and General Plan Map Amendment for the proposed 1,023 single family residential lots, 340 multi-family units, 14.4 acre school site, and 15.2 acres of parks to be located at the southwest corner of the State Route 12 (SR12)/South Lower Sacramento Road intersection. The Department has the following comments:

- An Encroachment Permit will be required for work (if any) done within the Department's right of way. This work is subject to the California Environmental Quality Act. Therefore, additional biological, archaeological, or other environmental studies may be required as part of the encroachment permits application. A qualified professional must conduct any such studies undertaken to satisfy the Department's environmental review responsibilities. Ground disturbing activities to the site prior to completion and/or approval of required environmental documents may affect the Department's ability to issue a permit for the project. Furthermore, if engineering plans or drawings will be part of your permit application, they should be prepared in standard units.

- All roadway features (for example signs, pavement delineation, roadway surface et cetera) within Department right of way must be protected or maintained in a temporary condition and restored.

- Improvement plans for construction within the State right of way must include: typical cross sections, adequate structural section, traffic handling plans and signing and striping plans stamped by a professional engineer.

- A wheelchair ramp should be provided across curbs that are constructed and/or replaced at pedestrian crosswalks.

- A traffic impact study (TIS) is necessary to determine this proposed project's near-term and long-term impacts to State facilities – both existing and proposed – and to propose appropriate mitigation measures. The study should be prepared in accordance with the *Caltrans Guide for the Preparation of Traffic Impact Studies*, dated December 2002 (Guide). The Guide is available online at the following web address: http://www.dot.ca.gov/hq/tpp/planning_tools/tools.htm. Minimum contents of the TIS are listed in Appendix "A" of the TIS guide. All State owned signalized intersections affected by this project should be analyzed using the intersecting lane vehicle (ILV) procedure from the Department's Highway Design Manual, Topic 406, page 400-21.

- The Department requires level of service (LOS) "C" or better at State owned facilities, including intersections (see Appendix "C-3" of the TIS guide). If an intersection is currently below LOS "C," any increase in delay from project-generated traffic must be analyzed and mitigated. The LOS for operating State highway facilities is based upon measures of effectiveness (MOE) (see Appendix "C-2" of the Guide). If an existing State highway facility is operating at less than this target LOS, the existing MOE should be maintained.

- The Department recommends that the Lead Agency encourage the developer to submit a scope of work for conducting the TIS prior to circulating the local development application for comment in order to expedite the Department's review. This will insure that the TIS submitted follows the Department's guidelines as stated in the *Caltrans Guide for the Preparation of Traffic Impact Studies*, dated December 2002 (TIS guide). The TIS guide is available online at the following web address: http://www.dot.ca.gov/hq/tpp/planning_tools/tools.htm.

- This proposed development will impact SR-12. When combined with the cumulative impacts of other existing and proposed development in the City, the resulting traffic will contribute to the significant congestion forecasted to the SR-12 mainline and at the intersection of SR-12/South Lower Sacramento Road. Therefore, the Department recommends the collection of impacts fees on a "Fair Share" basis for future improvement to these facilities.

- It must be determined if grading would divert drainage from this proposed project and result in increased runoff to existing State facilities. This will not be allowed.

- The Department will not be held responsible for any noise impacts to this development, including from the configuration of the Ultimate Transportation Concept (UTC) for SR-12. A noise study should be completed to analyze federal requirements and be based on 20-year traffic projections and the UTC of the State facility. If there is a noise impact, the developer has the responsibility to provide the mitigation.

- In lieu of reliance on the automobile for every trip, the Department supports the concept of linking the interior project circulation systems with the local municipal system to create pedestrian-, bicycle-, and transit-friendly environments that allow residents to choose alternative modes of transportation.

If you have any questions or would like to discuss our comments in more detail, please contact Dan Brewer at (209) 948-7142 (e-mail: dan.brewer@dot.ca.gov) or me at (209) 941-1921.

Sincerely,

for

TOM DUMAS, Chief
Office of Intermodal Planning

LODS31 T002
P1

FILE

September 28, 2005

(209) 333-6842 Fax
(209) 333-6711

To: City of Lodi Community Development Department/Planning Division

Attn: Lynette Dias or Charity Wagner

From: San Joaquin County Department of Public Works

Subject: Response to tentative map or proposal of **Westside Development Project and Southwest Gateway Development Project on the west side of Lower Sacramento Road between Harney Lane and Lodi Avenue (AX-04-01&02, GPA-04-01&02, RezoneZ-04-01&03, GMA-05-001&002)**

1. We have reviewed the tentative map or proposal and our comments/questions are as follows:

- The County will need to review the Traffic Impact Studies for both projects. Studies should include assessment of impacts to County roadway facilities including, but not limited to, Lower Sacramento Road, Sargent Road (which has the potential to become a "short-cut" to westbound traffic), Davis Road and Harney Lane.
- Annexation process still required and shall include entire right-of-way width of Harney Lane along the proposed developments' frontage.
- What is the City's area-wide circulation plan for both developments, especially for the stubbed streets along the western boundary and how will it impact the County?
- What effect does the Southwest Gateway project have on the existing school on Harney Lane, including pedestrian and bus traffic and accesses?
- How will Southwest Gateway project impact and mitigate traffic and pedestrians at the intersection of Harney Lane and Lower Sacramento Road.

Contact person: Dwayne B. Sabiniano Phone: (209) 468-3024

Signature: [signature]

LODS31T002 P1

FILE

State of California—Health and Human Services Agency

Department of Health Services

California Department of Health Services

SANDRA SHEWRY
Director

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SEP 22 2005

COMMUNITY DEVELOPMENT DEPT.
CITY OF LODI

ARNOLD SCHWARZENEGGER
Governor

September 21, 2005

Lynette Dias
Community Development Department
City of Lodi
221 West Pine Street
P.O. Box 3006
Lodi, CA 95241

RESPONSE TO THE NOTICE OF PREPARATION (NOP) OF A DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE WESTSIDE PROJECT, SOUTHWEST GATEWAY PROJECT, AND OTHER AREAS TO BE ANNEXED

This letter is in response to the Notice of Preparation (NOP) of a draft Environmental Impact Report (EIR) for the Westside Project, Southwest Gateway Project, and Other Areas to be Annexed. The NOP was received by the Department from City of Lodi (City) on September 19, 2005. After reviewing the notice, the Department has the following comments.

The Department wants to make sure that the issue of water quality and quantity produced by the City of Lodi is addressed in the Environmental Impact Report. The EIR should take into consideration that the development of the area should not compromise the quality and quantity of the water produced by the wells that exist in the area. The EIR should also address the issue that the water production is adequate to meet the long term demands of the developed area. Since the City presently relies on groundwater, the City should study its ground water supply to make sure that ground water supply will sustain all this growth without significantly diminishing the quantity of water stored in the aquifer.

Based on the requirements outlined in California Water Code Sections 10910 through 10915, the City should prepare an assessment to assure that there will be a long term adequate supply of water to support this significant increment of development. Typically these issues listed in California Water Code Sections 10910 through 10915 would be addressed in a water supply master plan. Therefore, the City shall prepare a water supply master plan to address all the issues listed in this letter and all the items identified in the California Water Code

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Southern California Drinking Water Field Operations Branch
31 East Channel Street, Room 270, Stockton, CA 95202
(209) 948-7696; (209) 948-7451 fax
Internet Address: http://www.dhs.ca.gov/ps/ddwem/technical/dwp/dwpindex.htm

Sections 10910 through 10915 to support the City's conclusions in the EIR with respect to the adequacy and sustainability of its water supply.

If you have any questions or comments regarding this letter, please contact me at (209) 948-3816 or Bhupinder Sahota at (209) 948-3881.

Joseph O. Spano

Joseph O. Spano, P.E.
District Engineer
Southern California Branch
Drinking Water Field Operations
Stockton District

A:\3910004\Response to NOP 0905

STATE OF CALIFORNIA

Governor's Office of Planning and Research

State Clearinghouse and Planning Unit

FILE

Arnold Schwarzenegger
Governor

Sean Walsh
Director

RECEIVED

SEP 22 2005

COMMUNITY DEVELOPMENT DEPT
CITY OF LODI

Notice of Preparation

September 19, 2005

To: Reviewing Agencies

Re: Westside Project, Southwest Gateway Project, and Other Areas to be Annexed
SCH# 2005092096

Attached for your review and comment is the Notice of Preparation (NOP) for the Westside Project, Southwest Gateway Project, and Other Areas to be Annexed draft Environmental Impact Report (EIR).

Responsible agencies must transmit their comments on the scope and content of the NOP, focusing on specific information related to their own statutory responsibility, within 30 days of receipt of the NOP from the Lead Agency. This is a courtesy notice provided by the State Clearinghouse with a reminder for you to comment in a timely manner. We encourage other agencies to also respond to this notice and express their concerns early in the environmental review process.

Please direct your comments to:

Lynette Dias
City of Lodi
Community Development Department
221 West Pine Street
Lodi, CA 95241

with a copy to the State Clearinghouse in the Office of Planning and Research. Please refer to the SCH number noted above in all correspondence concerning this project.

If you have any questions about the environmental document review process, please call the State Clearinghouse at (916) 445-0613.

Sincerely,

for: Scott Morgan
Associate Planner, State Clearinghouse

Attachments
cc: Lead Agency

1400 TENTH STREET P.O. BOX 3044 SACRAMENTO, CALIFORNIA 95812-3044
TEL (916) 445-0613 FAX (916) 323-3018 www.opr.ca.gov

Document Details Report
State Clearinghouse Data Base

SCH# 2005092096
Project Title Westside Project, Southwest Gateway Project, and Other Areas to be Annexed
Lead Agency Lodi, City of

Type NOP Notice of Preparation

Description Westside Project: This project would develop a 151-acre site with 452 low-density dwelling units, 154 medium-density dwelling units, and 167 high-density dwelling units. This project would include a 10-acre school site, a 4.7 acre site for the City-planned aquatic center, and approximately 18 acres of parks and park basins.
Southwest Gateway Project: This project would develop a 257-acre site with 941 low-density dwelling units, and 340 high-density dwelling units. This project would include a 15-acre school site, and approximately 38 acres of parks and park basins.
Other Areas to be Annexed: The Draft EIR will also include an analysis of of the annexation of 12 additional parcels, a total of 47 acres, adjacent to the Southwest Gateway project area. No specific development plans are proposed for these parcels at this time. These parcels are proposed for annexation to avoid the creation of a county island. As part of the annexation these parcels will be pre-zoned for residential development.

Lead Agency Contact

Name Lynette Dias
Agency City of Lodi
Phone 510-540-7331 **Fax**
email Lynette.Dias@lsa-assoc.com
Address Community Development Department
221 West Pine Street
City Lodi **State** CA **Zip** 95241

Project Location

County San Joaquin
City Lodi
Region
Cross Streets Lower Sacramento Road,
Parcel No.
Township **Range** **Section** **Base**

Proximity to:

Highways Highway 12
Airports
Railways
Waterways Woodbridge Irrigation District Canal
Schools
Land Use

Project Issues Landuse; Traffic/Circulation; Air Quality; Noise; Archaeologic-Historic; Other Issues; Geologic/Seismic; Soil Erosion/Compaction/Grading; Water Quality; Biological Resources; Toxic/Hazardous; Public Services; Aesthetic/Visual

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Reviewing Agencies Resources Agency; Department of Conservation; Department of Parks and Recreation; Department of Water Resources; Department of Fish and Game, Region 2; Department of Health Services; Office of Emergency Services; Native American Heritage Commission; California Highway Patrol; Department of Housing and Community Development; Caltrans, District 10; Department of Toxic Substances Control; Regional Water Quality Control Bd., Region 5 (Sacramento)

Date Received 09/19/2005 **Start of Review** 09/19/2005 **End of Review** 10/18/2005

Note: Blanks in data fields result from insufficient information provided by lead agency.

NOP Distribution List

SLS

County: San Joaquin

SCH# 2005[illegible]2096

Resources Agency

- ■ **Resources Agency**
  Nadell Gayou
- ☐ **Dept. of Boating & Waterways**
  David Johnson
- ☐ **California Coastal Commission**
  Elizabeth A. Fuchs
- ☐ **Colorado River Board**
  Gerald R. Zimmerman
- ■ **Dept. of Conservation**
  Roseanne Taylor
- ☐ **California Energy Commission**
  Roger Johnson
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  Allen Robertson
- ☐ **Office of Historic Preservation**
  Wayne Donaldson
- ■ **Dept of Parks & Recreation**
  Environmental Stewardship Section
- ☐ **Reclamation Board**
  DeeDee Jones
- ☐ **S.F. Bay Conservation & Dev't. Comm.**
  Steve McAdam
- ■ **Dept. of Water Resources**
  Resources Agency
  Nadell Gayou
- ☐ _____
  Conservancy

Fish and Game

- ☐ **Depart. of Fish & Game**
  Scott Flint
  Environmental Services Division
- ☐ **Fish & Game Region 1**
  Donald Koch
- ■ **Fish & Game Region 2**
  Banky Curtis
- ☐ **Fish & Game Region 3**
  Robert Floerke
- ☐ **Fish & Game Region 4**
  Mike Mulligan
- ☐ **Fish & Game Region 5**
  Don Chadwick
  Habitat Conservation Program
- ☐ **Fish & Game Region 6**
  Gabrina Gatchel
  Habitat Conservation Program
- ☐ **Fish & Game Region 6 I/M**
  Tammy Allen
  Inyo/Mono, Habitat Conservation Program
- ☐ **Dept. of Fish & Game M**
  George Isaac
  Marine Region

Other Departments

- ☐ **Food & Agriculture**
  Steve Shaffer
  Dept. of Food and Agriculture
- ☐ **Depart. of General Services**
  Public School Construction
- ☐ **Dept. of General Services**
  Robert Sleppy
  Environmental Services Section
- ■ **Dept. of Health Services**
  Veronica Rameriz
  Dept. of Health/Drinking Water

Independent Commissions,Boards

- ☐ **Delta Protection Commission**
  Debby Eddy
- ■ **Office of Emergency Services**
  Dennis Castrillo
- ☐ **Governor's Office of Planning & Research**
  State Clearinghouse
- ■ **Native American Heritage Comm.**
  Debbie Treadway
- ☐ **Public Utilities Commission**
  Ken Lewis
- ☐ **State Lands Commission**
  Jean Sarino
- ☐ **Tahoe Regional Planning Agency (TRPA)**
  Cherry Jacques

Business, Trans & Housing

- ☐ **Caltrans - Division of Aeronautics**
  Sandy Hesnard
- ☐ **Caltrans - Planning**
  Terri Pencovic
- ■ **California Highway Patrol**
  John Olejnik
  Office of Special Projects
- ■ **Housing & Community Development**
  Lisa Nichols
  Housing Policy Division

Dept. of Transportation

- ☐ **Caltrans, District 1**
  Rex Jackman
- ☐ **Caltrans, District 2**
  Marcelino Gonzalez
- ☐ **Caltrans, District 3**
  Katherine Eastham
- ☐ **Caltrans, District 4**
  Tim Sable
- ☐ **Caltrans, District 5**
  David Murray
- ☐ **Caltrans, District 6**
  Marc Birnbaum
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  Mario Orso
- ☐ **Caltrans, District 12**
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  Division of Financial Assistance
- ☐ **State Water Resources Control Board**
  Student Intern, 401 Water Quality Certification Unit
  Division of Water Quality
- ☐ **State Water Resouces Control Board**
  Steven Herrera
  Division of Water Rights
- ■ **Dept. of Toxic Substances Control**
  CEQA Tracking Center
- ☐ **Department of Pesticide Regulation**

Regional Water Quality Control Board (RWQCB)

- ☐ **RWQCB 1**
  Cathleen Hudson
  North Coast Region (1)
- ☐ **RWQCB 2**
  Environmental Document Coordinator
  San Francisco Bay Region (2)
- ☐ **RWQCB 3**
  Central Coast Region (3)
- ☐ **RWQCB 4**
  Jonathan Bishop
  Los Angeles Region (4)
- ■ **RWQCB 5S**
  Central Valley Region (5)
  - ☐ **RWQCB 5F**
    Central Valley Region (5)
    Fresno Branch Office
  - ☐ **RWQCB 5R**
    Central Valley Region (5)
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- ☐ **RWQCB 6**
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- ☐ **RWQCB 8**
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- ☐ **RWQCB 9**
  San Diego Region (9)

☐ **Other** _____

Last Updated on 08/10/05