

DRAFT  
ENVIRONMENTAL IMPACT REPORT

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# COLLEGE SQUARE PLANNED UNIT DEVELOPMENT

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SCH# 2002122088

Volume 1 of 2  
EIR Text

Prepared for:

City of Sacramento  
Planning and Building Department

Prepared by:

**EDAW**

In association with  
Fehr & Peers Associates  
Earthtech Ltd.

September 9, 2003

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Prepared for:

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September 9, 2003

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*1 INTRODUCTION*

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# 1 INTRODUCTION

## 1.1 PROPOSED PROJECT REQUIRING ENVIRONMENTAL ANALYSIS

The project site is located in the South Sacramento Community Plan area of the City of Sacramento. The project site consists of approximately 63 acres of vacant land that is generally bounded by Cosumnes River Boulevard to the north, Cotton Lane to the south, State Route (SR) 99 to the east, and Bruceville Road to the west. Notable surrounding land uses include Strawberry Creek, the future Strawberry Creek Centre (Target), and Methodist Hospital to the north, SR 99/Cosumnes River Boulevard interchange to the northeast, Lowe's commercial center to the east across SR 99, and Cosumnes River College to the west.

The project applicant (Citadel Equities Group LLC) is seeking to develop a mixed-use residential, commercial, and office project at the project site to be named College Square (proposed project). Adoption of a Planned Unit Development (PUD), including PUD guidelines, is being sought as part of the entitlement package for the project to provide for organized development of the multiple parcels that make up the project site. The PUD Guidelines (included as Appendix A of this EIR) will control how development will occur at the project site and the nature of this development. The Guidelines incorporate a Schematic Plan and supplement existing City ordinances applicable to the project.

The project would include 724 residential units, 270,256 square feet of commercial/retail/office uses, 2,094 parking spaces, common area, a City pond, and streets. The project would include two primary components as described below:

1. **Commercial:** The commercial component would be comprised of 270,256 square feet of commercial uses on approximately 28 gross acres. This commercial space would include approximately 238,257 square feet of neighborhood and community commercial uses (e.g., supermarket, small lot retail, restaurants, bank, coffee house, pharmacy, gas station, car wash), 20,000 square feet of office, 12,000 square feet of child care, and 1,384 parking spaces. Commercial buildings (some attached) would be constructed. These buildings would range up to 45 feet in height, with the exception of residential care facilities, which are permitted to be five stories tall.
2. **Residential:** The residential component would be comprised of 724 senior and multifamily residential units located on approximately 26 gross acres. This would include 132 senior independent units, 120 senior assisted-living units, 472 conventional multifamily units, and 710 parking spaces. Approximately 26 apartment buildings and ancillary buildings would be constructed. These buildings would range from one to three stories.

The project would also include extension of West Stockton Boulevard through the project site to Bruceville Road, and widening of Bruceville Road along the project site's western frontage.

The land use entitlements being requested from the City of Sacramento for the proposed project include the following:

- ▶ General Plan Amendment from Medium Density Residential (16–29 du/ac) to Community/Neighborhood Commercial and Office, Medium Density Residential (16–29 du/ac), and High Density Residential (30+ du/ac).
- ▶ Community Plan Amendment from Special Planning District to Residential (11–29 du/ac), Residential (29+ du/ac), and General Commercial.
- ▶ Rezoning from Highway Commercial Review (HC-R), Limited Commercial (C-1), Office Building (OB), and Multi-Family Review (R-2B-R) to General Commercial Planned Unit Development (C2-PUD)
- ▶ Adoption of the College Square PUD Guidelines
- ▶ Adoption of the College Square Schematic Plan (Exhibit 3)
- ▶ Approval of the Tentative Parcel Map
- ▶ Abandonment of excess City right-of-way adjacent to Cosumnes River Boulevard/Bruceville Road

See Chapter 3 of this EIR for a full description of the proposed project (with exhibits).

## **1.2 EIR TYPE, USE, AND PROCESS**

This environmental impact report (EIR) evaluates the potential environmental impacts associated with the proposed College Square Planned Unit Development (PUD) project. This EIR is a Program EIR as defined by §15168 of the State CEQA Guidelines. A Program EIR assesses the impacts of a series of actions that can be characterized as one large project and are related geographically, as logical parts of a chain of actions, or in connection with the issuance of rules, regulations, plans, or other criteria to govern future actions. A programmatic approach to evaluation of the proposed project is appropriate and consistent with this guidance.

The College Square PUD Guidelines and Schematic Plan would serve as the blueprint for future development of the site by defining the types of permitted land uses, the maximum amount of development (building square footage) permitted, the conceptual design, and the development envelopes (extent of buildings) that could occur at the project site. Adoption of the PUD would ensure that site remains geographically related even after individual parcels are created through subdivision for purposes of sale. These parcels would be developed as component parts of a single project, the College Square PUD. Adoption of the PUD is one step in a chain of actions necessary for development of this site. Following adoption of the PUD and approval of the subdivision map by the City, subsequent requests for development of individual parcels would be reviewed by the City to ensure consistency with the PUD Guidelines and Schematic Plan. This would be accomplished through City review of special permits for each component of the project at the time the individual components are proposed.

No special permits are presently requested as a part of this project and therefore, no development of any component of the project would occur at the time the City adopts the PUD. No special permits are evaluated as a part of this EIR. In the future, when the City receives applications for special permits for

development within the PUD, the City will conduct initial environmental review (i.e., prepare an Initial Study) to determine whether the development proposed will have the potential to either: (1) exacerbate the significant environmental effects identified for the PUD in this EIR; or (2) result in new significant effects not identified in this EIR. If the Initial Study determines that either of these could potentially occur, further CEQA review (i.e., preparation of a Mitigated Negative Declaration or an EIR) will be undertaken. If the Initial Study determines that neither of these would occur, development for which the special permit is submitted would be permitted to commence subject to approval of the special permit and any other required permits.

Although this EIR is a Program EIR, a concerted effort has been made in the EIR to provide a project-level analysis of the effects of construction and operation wherever they can reasonably be anticipated. It was possible to provide a more complete and detailed analysis for the proposed commercial component of the project for which a schematic site plan and other plans (i.e., circulation plan, drainage plan, utilities plan, landscape plan, etc.) have already been prepared and could be evaluated. Hence, it is anticipated that further CEQA review will be limited for those special permits that are consistent with the schematic plan and PUD Guidelines.

Initially, this EIR will be published as a Draft EIR (DEIR) and will be subject to review and comment by the public and by responsible and other interested jurisdictions, agencies, and organizations during a 45-day public review period. Written responses to the comments received on the DEIR will be prepared. The responses may specify changes to the DEIR or to the proposed project, or may explain why the comment does not raise substantive environmental issues that would require such changes. The responses to comments and any changes to the Draft EIR and/or project description therein will, along with the DEIR, become the Final EIR (FEIR). The FEIR will be presented to the Sacramento City Council for certification as to its adequacy under CEQA.

After the FEIR is certified, the City will consider whether to approve the project. If the City approves the project, findings will be prepared addressing each of the significant impacts identified in the EIR. Each finding will determine (1) adoption of the identified mitigation measure(s) will reduce the significant impact to less-than-significant levels; (2) adoption of the identified mitigation measure(s) will reduce the significant impact, but not to less-than-significant levels; or (3) that mitigation is not available to reduce the significant impact to less-than-significant levels. For the latter two findings, the City will disclose the reasons for deciding to approve the proposed project in light of its significant impacts in a Statement of Overriding Considerations.

### **1.3 CONTENT OF THE EIR**

This EIR has been prepared in accordance with the California Environmental Quality Act of 1970 (CEQA), as amended (Public Resources Code, §21000 et seq.) and the State CEQA Guidelines (California Code of Regulations, §15000 et seq.). This report also complies with the rules, regulations, and procedures for implementation of CEQA adopted by the City of Sacramento.

The State CEQA Guidelines require that each EIR contain areas of description and analysis. The following list identifies the required elements of an EIR and the corresponding chapters where each element is located in this document:

Required Description and Analysis	EIR Chapter
Summary (§15123)	2
Description of the project (§15124)	3
Alternatives to the proposed project (§15126.6)	4 and 7
Description of environmental setting (§15125)	5 and 6
Environmental impacts (§15126 and §15143)	6
Cumulative impacts (§15355)	6
Growth inducing impacts (§15126.2(d))	8
Significant unavoidable adverse impacts (§15126.2(b))	9

#### 1.4 SCOPE OF THE EIR

Pursuant to §15063 of the State CEQA Guidelines, the scope of the analysis in this EIR was focused based on the Initial Study (IS) prepared for the proposed project (Appendix B of this EIR) and public comments received on the Notice of Preparation (NOP) and at the CEQA public scoping meeting (Appendix C of this EIR). This EIR addresses those environmental issues for which the Initial Study indicates the proposed project could have potentially significant environmental effects, and those issues known to be of community concern as expressed during the scoping process. These environmental issues are identified below:

- ▶ Land Use
- ▶ Traffic and Circulation
- ▶ Air Quality
- ▶ Noise
- ▶ Drainage/Surface Water Quality
- ▶ Population/Housing
- ▶ Light/Glare
- ▶ Public Services/Utilities (Schools, Water, Solid Waste)
- ▶ Biological Resources
- ▶ Cultural Resources
- ▶ Hazardous Materials

Pursuant to §15128 and §15143 of the State CEQA Guidelines, those environmental issues for which the Initial Study indicates the proposed project would result in less-than-significant environmental effects need not be evaluated further in the EIR. Consistent with §15128 of the State CEQA Guidelines, these environmental issues are listed below. See the Initial Study (Appendix B of this EIR) for an explanation as to why the proposed project would result in less-than-significant environmental effects involving these issues.

- ▶ agricultural resources
- ▶ geology and soils
- ▶ public services/utilities (police, fire, parks, wastewater)
- ▶ mineral resources
- ▶ recreation

#### 1.5 LEAD AND RESPONSIBLE AGENCIES

The City of Sacramento (City) is the CEQA lead agency for the proposed project. In conformance with §15050 and §15367 of the State CEQA Guidelines, the “lead agency” is defined as the “public agency

which has the principal responsibility for carrying out or disapproving a project.” The lead agency contacts are identified below:

L.E. Buford, Principal Planner  
Planning and Building Department  
1231 I Street, Suite 300  
Sacramento, CA 95814  
(916) 264-5935

Thomas Pace, Planning Project Manager  
Planning and Building Department  
1231 I Street, Suite 300  
Sacramento, CA 95814  
(916) 264-6848

In addition to the lead agency, other governmental agencies might be involved in approving elements of the proposed project. These “responsible agencies” could include, but may not necessarily be limited to, the following:

- ▶ California Department of Fish and Game (CDFG)
- ▶ California Department of Transportation (Caltrans)
- ▶ California Public Utilities Commission (CPUC)
- ▶ California Regional Water Quality Control Board (RWQCB)
- ▶ Sacramento Metropolitan Air Quality Management District (SMAQMD)
- ▶ Sacramento Regional County Sanitation District (SRCSD)
- ▶ Sacramento Regional Transit District (RT)
- ▶ State Historic Preservation Officer (SHPO)
- ▶ U.S. Army Corps of Engineers (USACE)
- ▶ U.S. Fish and Wildlife Service (USFWS)

## **1.6 PROJECT SPONSOR**

Citadel Development is the project sponsor for the College Square PUD. The contact information for the project sponsor is provided below:

Bradley Cutler  
Citadel Equities Group LLC  
1512 Eureka Road, Suite 130  
Roseville, CA 95661  
(916) 791-6466

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**2**    ***SUMMARY***

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## 2 SUMMARY

### 2.1 INTRODUCTION

This chapter contains summary descriptions of the EIR process, proposed College Square Planned PUD (proposed project), alternatives, and controversial issues. The proposed project and alternatives are described further in Chapters 3 and 4 of this EIR, respectively.

Table 2-1, provided at the end of this chapter, compiles the environmental effects identified for the proposed project and the alternatives in the technical issue sections of this EIR. The table contains a summary of each environmental impact identified in this EIR, the significance of each impact before mitigation, the proposed mitigation measures, and the significance of each impact after implementation of the recommended mitigation measures.

### 2.2 SUMMARY OF THE EIR PROCESS

This EIR analyzes the potential environmental effects that would be anticipated from implementation of the proposed project. This EIR is a Program EIR as defined by §15168 of the State CEQA Guidelines. A Program EIR assesses the impacts of a series of actions that can be characterized as one large project and are related geographically, as logical parts of a chain of actions, or in connection with the issuance of rules, regulations, plans, or other criteria to govern future actions. A programmatic approach to evaluation of the proposed project is appropriate and consistent with this guidance.

The College Square PUD Guidelines and Schematic Plan would serve as the blueprint for future development of the site by defining the types of permitted land uses, the maximum amount of development (building square footage) permitted, the conceptual design, and the development envelopes (extent of buildings) that could occur at the project site. Adoption of the PUD would ensure that site remains geographically related even after individual parcels are created through subdivision for purposes of sale. These parcels would be developed as component parts of a single project, the College Square PUD. Adoption of the PUD is one step in a chain of actions necessary for development of this site. Following adoption of the PUD and approval of the subdivision map by the City, subsequent requests for development of individual parcels would be reviewed by the City to ensure consistency with the PUD Guidelines and Schematic Plan. This would be accomplished through City review of special permits for each component of the project at the time the individual components are proposed.

No special permits are presently requested as a part of this project and therefore, no development of any component of the project would occur at the time the City adopts the PUD. No special permits are evaluated as a part of this EIR. In the future, when the City receives applications for special permits for development within the PUD, the City will conduct initial environmental review (i.e., prepare an Initial Study) to determine whether the development proposed will have the potential to either: (1) exacerbate the significant environmental effects identified for the PUD in this EIR; or (2) result in new significant effects not identified in this EIR. If the Initial Study determines that either of these could potentially occur, further CEQA review (i.e., preparation of a Mitigated Negative Declaration or an EIR) will be undertaken. If the Initial Study determines that neither of these would occur, development for which the

special permit is submitted would be permitted to commence subject to approval of the special permit and any other required permits.

Although this EIR is a Program EIR, a concerted effort has been made in the EIR to provide a project-level analysis of the effects of construction and operation wherever they can reasonably be anticipated. It was possible to provide a more complete and detailed analysis for the proposed commercial component of the project for which a schematic site plan and other plans (i.e., circulation plan, drainage plan, utilities plan, landscape plan, etc.) have already been prepared and could be evaluated. Hence, it is anticipated that further CEQA review will be limited for those special permits that are consistent with the schematic plan and PUD Guidelines.

Initially, this EIR will be published as a Draft EIR (DEIR) and will be subject to review and comment by the public and by responsible and other interested jurisdictions, agencies, and organizations during a 45-day public review period. Written responses to the comments received on the DEIR will be prepared. The responses may specify changes to the DEIR or to the proposed project, or may explain why the comment does not raise substantive environmental issues that would require such changes. The responses to comments and any changes to the Draft EIR and/or project description therein will, along with the DEIR, become the Final EIR (FEIR). The FEIR will be presented to the Sacramento City Council for certification as to its adequacy under CEQA.

After the FEIR is certified, the City will consider whether to approve the project. If the City approves the project, findings will be prepared addressing each of the significant impacts identified in the EIR. Each finding will determine (1) adoption of the identified mitigation measure(s) will reduce the significant impact to less-than-significant levels; (2) adoption of the identified mitigation measure(s) will reduce the significant impact, but not to less-than-significant levels; or (3) that mitigation is not available to reduce the significant impact to less-than-significant levels. For the latter two findings, the City will disclose the reasons for deciding to approve the proposed project in light of its significant impacts in a Statement of Overriding Considerations.

### **2.3 SUMMARY OF PROJECT DESCRIPTION**

The project site is located in the South Sacramento Community Plan area of the City of Sacramento. The project site consists of approximately 63 acres of vacant land that is generally bounded by Cosumnes River Boulevard to the north, Cotton Lane to the south, State Route (SR) 99 to the east, and Bruceville Road to the west. Notable surrounding land uses include Strawberry Creek, the future Strawberry Creek Centre (Target component currently under construction), and Methodist Hospital to the north, SR 99/Cosumnes River Boulevard interchange to the northeast, Lowe's commercial center to the east across SR 99, and Cosumnes River College to the west.

The project applicant (Citadel Equities Group LLC) is seeking to develop a mixed-use residential, commercial, and office project at the project site to be named College Square (proposed project). Adoption of a Planned Unit Development (PUD), including PUD guidelines, is being sought as part of the entitlement package for the project to provide for organized development of the multiple parcels that make up the project site. The PUD Guidelines (included as Appendix A of this EIR) will control how development will occur at the project site and the nature of this development. The Guidelines incorporate a Schematic Plan and supplement existing City ordinances applicable to the project.



The project will include 724 residential units, 270,256 square feet of commercial/retail/office uses, 2,094 parking spaces, common area, a City pond, and streets. The project will include two primary components as described below:

1. Commercial: The commercial component will be comprised of 270,256 square feet of commercial uses on approximately 28 gross acres. This commercial space will include approximately 238,257 square feet of neighborhood and community commercial uses (e.g., supermarket, small lot retail, restaurants, bank, coffee house, pharmacy, gas station, car wash), 20,000 square feet of office, 12,000 square feet of child care, and 1,384 parking spaces. Commercial buildings (some attached) will be constructed. These buildings will range up to 45 feet in height, with the exception of residential care facilities, which are permitted to be five stories tall.
2. Residential: The residential component will be comprised of 724 senior and multifamily residential units located on approximately 26 gross acres. This will include 132 senior independent units, 120 senior assisted-living units, 472 conventional multifamily units, and 710 parking spaces. Approximately 26 apartment buildings and ancillary buildings will be constructed. These buildings will range from one to three stories.

The project will also include extension of West Stockton Boulevard through the project site to Bruceville Road, and widening of Bruceville Road along the project site's western frontage.

The land use entitlements being requested from the City of Sacramento for the proposed project include the following:

- ▶ General Plan Amendment from Medium Density Residential (16–29 du/ac) to Community/Neighborhood Commercial and Office, Medium Density Residential (16–29 du/ac), and High Density Residential (30+ du/ac).
- ▶ Community Plan Amendment from Special Planning District to Residential (11–29 du/ac), Residential (29+ du/ac), and General Commercial.
- ▶ Rezoning from Highway Commercial Review (HC-R), Limited Commercial (C-1), Office Building (OB), and Multi-Family Review (R-2B-R) to General Commercial Planned Unit Development (C2-PUD)
- ▶ Adoption of the College Square PUD Guidelines
- ▶ Adoption of the College Square Schematic Plan
- ▶ Approval of the Tentative Parcel Map
- ▶ Abandonment of excess City right-of-way adjacent to Cosumnes River Boulevard/Bruceville Road

## **2.4 SUMMARY OF PROJECT ALTERNATIVES**

The following describes the three alternatives to the proposed College Square PUD that are evaluated in this EIR:

### **ALTERNATIVE AA: NO PROJECT (NO DEVELOPMENT) ALTERNATIVE**

Three alternatives to the proposed project are evaluated in this EIR:

- ▶ No Project (No Development) Alternative (AA)
- ▶ General Plan Buildout Alternative (AB)
- ▶ Park-and-Ride Alternative (AC)

A summary description of each of these alternatives is provided below.

### **NO PROJECT (NO DEVELOPMENT) ALTERNATIVE (AA)**

The No Project (No Development) Alternative (AA) is required by CEQA. Under this alternative, conditions at the 63-acre project site would remain as they currently exist (i.e., disturbed annual grassland habitat, several scattered trees, an existing roadway [Kastanis Way] that dead ends on the project site, and no structures). This alternative is considered as required by CEQA.

### **GENERAL PLAN BUILDOUT ALTERNATIVE (AB)**

Under the General Plan Buildout Alternative (AB), the project site would be developed with the existing General Plan land use designation for the project site (i.e., Medium-Density Residential (16-29 du/ac)), resulting in approximately 1,114 multifamily residential dwelling units (i.e., apartments, condominiums), but no senior housing or commercial uses. Unlike the proposed project, this alternative would not require any General Plan Amendment, Community Plan Amendment, or Rezone to permit the proposed land uses.

This alternative is considered in this EIR to provide a comparison of buildout of the project site under the adopted land use plan contrasted with buildout of the proposed project. This alternative is also considered because it could reduce or avoid one or more significant adverse environmental effects of the proposed project (i.e., it could result in less land use, population/housing, light/glare, and stationary source noise impacts than the proposed project).

### **PARK-AND-RIDE ALTERNATIVE (AC)**

The Park-and-Ride Alternative (AC) would be designed similarly to the proposed project, except that approximately 9 acres in the southwest corner of the project site (i.e., the “southwest parcel”) would be dedicated to the Sacramento Regional Transit District (RT) for a future light rail line right-of-way (ROW), park-and-ride lot and bus transfer station, all associated with the planned South Sacramento Corridor Phase 2 Project. Because it is unknown exactly when or where RT will develop the light rail station in the vicinity and hence the park-and-ride lot, this EIR evaluates the potential impacts of developing and operating the park-and-ride lot at the project site (for example, traffic, noise, and

light/glare associated with the park-and-ride lot is evaluated in this EIR). However, development of the park-and-ride lot would not be undertaken by a private applicant but would be completed by RT as a part of its Phase 2 Corridor project, which represents a separate project under CEQA.

The acreage to be dedicated to RT under this alternative would take the place of 264 multifamily residential units planned for this portion of the project site under the proposed project, resulting in a total of 460 residential units under this alternative (208 multifamily units, 252 senior housing units).

This alternative is considered to reflect the potential for RT to locate a future light rail station within the project site's southwest parcel.

## **2.5 ENVIRONMENTALLY SUPERIOR ALTERNATIVE**

Based on the analysis in Chapter 7 of this EIR, the No Project (No Development) Alternative would have the least environmental impacts followed by the General Plan Buildout Alternative, the proposed project, and finally the Park-and-Ride Alternative which would have the greatest impacts. The No Project (No Development) Alternative would be the environmentally superior alternative. However, the State CEQA Guidelines (§15126.6[e][2]) requires that if the No Project Alternative is identified as the environmentally superior alternative, an environmentally superior alternative should be identified from among the remaining alternatives. Consistent with this requirement, the General Plan Buildout Alternative is identified as the environmentally superior alternative.

The General Plan Buildout Alternative would implement the General Plan Land Use Map and would achieve several of the City's objectives for the proposed project, including providing housing opportunities for residents of the City, providing senior and low-income housing, and providing higher density land uses adjacent to planned mass transit facilities which would encourage mass transit usage. The project applicant's objective for the proposed project of providing utility line extensions to multifamily-zoned parcels to the south would also be achieved with this alternative. However, the applicant's other stated objectives may not be achieved, including providing an urban infill project focused on neighborhood and community retail services, supporting the City's jobs/housing balance goals, and providing a major employment center adjacent to light rail.

In addition to not being as effective as the proposed project in meeting the City's and applicant's objectives for the project, it is also noted that, although the General Plan Buildout Alternative would result in less of an impact of traffic and air quality than the proposed project, it would not be as effective in reducing region wide traffic congestion, air quality emissions, and urban sprawl as the proposed project. This is because the proposed project would represent transit-oriented development (TOD) in that it would provide for higher density urban uses adjacent to future planned light rail facilities, which would encourage mass transit use, and would provide for a complementary set of onsite land uses (i.e., residential, commercial, office, child care), which would reduce the need for offsite shopping and service trips. Although the General Plan Buildout Alternative would increase density adjacent to the future planned South Sacramento Corridor Phase 2 Project light rail line, this alternative would not develop the higher density residential development that would occur under the proposed project and would not provide for a complementary set of onsite land uses. In the long run, the proposed project would contribute to a reduction in the cumulative traffic, air emissions, and urban sprawl that would otherwise

be generated in the City with the more traditional mono lower density development that would occur under the General Plan Buildout Alternative.

## **2.6 SUMMARY OF CONTROVERSIAL ISSUES**

There have been no known areas of substantial controversy surrounding the proposed project. Members of the public have raised concerns with regards to the compatibility of the proposed project with existing adjacent residential land uses. Members of the public have also questioned the appropriateness of a mixed-use residential project in an area that they contend already experiences traffic congestion problems during the morning and afternoon rush hours (at the Bruceville Road/Cosumnes River Boulevard intersection and Cosumnes River Boulevard/SR 99 interchange). Each of these issues is addressed in the EIR.

## **2.7 SUMMARY TABLE**

Information in Table 2-1, Summary of Environmental Impacts and Mitigation Measures, has been organized to correspond with the environmental issues discussed in Chapter 6. The summary table is arranged in four columns:

- 1) Environmental impacts;
- 2) Level of significance without mitigation;
- 3) Recommended mitigation measures; and
- 4) Level of significance after implementation of the mitigation measures

A series of mitigation measures are noted when more than one mitigation measure may be required to reduce the impact to a less-than-significant level.

The following initials are used in the Summary Table and in the balance of this EIR to identify the proposed project and alternatives:

- PP Proposed Project
- AA No Project (No Development) Alternative
- AB General Plan Buildout Alternative
- AC Park-and-Ride Alternative

**Table 2-1  
Summary of Impacts and Mitigation**

<b>Impact #</b>	<b>Impact</b>	<b>Significance Before Mitigation</b>	<b>Mitigation Measures</b>	<b>Significance After Mitigation</b>
<b>TRAFFIC</b>				
<b>6.2-1 Bruceville Road/Cosumnes River Boulevard – Base Year</b>				
PP, AC	The addition of the proposed project and Park-and-Ride Alternative would add more than 5 seconds of delay to a.m. and p.m. (LOS D) operations, resulting in a significant impact.	S	Improve the northbound approach of Bruceville Road/Cosumnes River Boulevard intersection to provide an exclusive left-turn lane, two through lanes and an exclusive right turn lane.	LTS
AB	The Bruceville Road/Cosumnes River Boulevard intersection would operate at LOS D during the a.m. and p.m. peak hours under base year conditions. Because the General Plan Buildout alternative would add traffic to this intersection, peak hour operations may degrade beyond the City's 5 second threshold, resulting in a significant impact.	S	Provide an exclusive right-turn lane on the northbound approach to the Bruceville Road/Cosumnes River Boulevard intersection.	LTS
AA	This alternative would not change the number of vehicle trips within the project vicinity, resulting in no impact.	NI	No mitigation is required.	NI
<b>6.2-2 Bruceville Road/Cosumnes River College Driveway – Base Year</b>				
PP, AC	The addition of the proposed project and Park-and-Ride Alternative would degrade intersection operations from LOS A to LOS F during the p.m. peak hour, resulting in a significant impact.	S	Install a traffic signal at the intersection of Bruceville Road/Cosumnes River College Driveway and improve the southbound approach to provide a single through lane and exclusive right-turn lane.	LTS
AB	Although the General Plan Buildout alternative would generate fewer p.m. peak hour trips than the proposed project and Park-and-Ride Alternative, the additional traffic may worsen operations beyond the City's LOS C threshold, resulting in a significant impact.	S	Install a traffic signal at the intersection of Bruceville Road/Cosumnes River College Driveway and improve the southbound approach to provide a single through lane and exclusive right-turn lane.	LTS
AA	This alternative would not change the number of vehicle trips within the project vicinity, resulting in no impact.	NI	No mitigation is required.	NI
<b>6.2-3 Bruceville Road/Timberlake Way/Alpine Frost Drive – Year 2025</b>				
PP	The addition of the proposed project would degrade operations from LOS C to LOS D during the p.m. peak hour, resulting in a significant impact.	S	Provide an exclusive right-turn lane on the northbound approach to the Bruceville Road/Timberlake Way/Alpine Frost Drive intersection if not built by others.	LTS
AB	The General Plan Buildout alternative would generate approximately 35% of the p.m. peak hour trips of the	LTS	No mitigation is required.	LTS

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**Table 2-1 (Continued)  
Summary of Impacts and Mitigation**

<b>Impact #</b>	<b>Impact</b>	<b>Significance Before Mitigation</b>	<b>Mitigation Measures</b>	<b>Significance After Mitigation</b>
	proposed project. Because the amount of traffic generated by the proposed project would increase the delay from 30.8 to 37.5 seconds during the p.m. peak hour, the General Plan Buildout alternative is not expected to exceed the 35.0 second threshold for LOS C operations during the p.m. peak hour, resulting in a less-than-significant impact.			
AC	This alternative would generate additional traffic in the study area. However, the intersection would continue to operate at LOS C during the a.m. and p.m. peak hours with implementation of the Park-and-Ride Alternative, resulting in a less-than-significant impact.	LTS	No mitigation is required.	LTS
AA	This alternative would not change the number of vehicle trips within the project vicinity, resulting in no impact.	NI	No mitigation is required.	NI
<b>6.2-4 Bruceville Road/Cosumnes River Boulevard – Year 2025</b>				
PP, AC	The addition of the proposed project and Park-and-Ride Alternative would add more than 5 seconds of delay to a.m. and p.m. (LOS F) operations, resulting in a significant impact.	S	Provide a third left-turn lane on the westbound approach to the Bruceville Road/Cosumnes River Boulevard intersection.	LTS
AB	The Bruceville Road/Cosumnes River Boulevard intersection would operate at LOS F during the a.m. and p.m. peak hours under Year 2025 conditions. Because the General Plan Buildout alternative would add traffic to this intersection, peak hour operations may degrade beyond the City's 5 second threshold, resulting in a significant impact.	S	Provide a third left-turn lane on the westbound approach to the Bruceville Road/Cosumnes River Boulevard intersection.	LTS
AA	This alternative would not change the number of vehicle trips within the project vicinity, resulting in no impact.	NI	No mitigation is required.	NI
<b>6.2-5 SR 99 Southbound Off-Ramp/Cosumnes River Boulevard – Year 2025</b>				
PP, AC	The addition of the proposed project and Park-and-Ride Alternative would add more than 5 seconds of delay to a.m. (LOS D) and p.m. (LOS E) operations, resulting in a significant impact.	S	Provide an additional right-turn lane on the SR 99 southbound off-ramp to Cosumnes River Boulevard.  To implement this mitigation measure, Caltrans approval is required and additional right-of-way to construct a bridge	SU

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**Table 2-1 (Continued)  
Summary of Impacts and Mitigation**

<b>Impact #</b>	<b>Impact</b>	<b>Significance Before Mitigation</b>	<b>Mitigation Measures</b>	<b>Significance After Mitigation</b>
			may be needed. Because the applicant has no control over right-of-way, this measure is infeasible.	
AB	The SR 99 Southbound Off-Ramp/Cosumnes River Boulevard intersection would operate unacceptably at LOS D during the a.m. peak hour and LOS E during the p.m. peak hour under Year 2025 conditions. Because the General Plan Buildout alternative would add traffic to this intersection, peak hour operations may degrade beyond the City's 5 second threshold, resulting in a significant impact.	S	Provide an additional right-turn lane on the SR 99 southbound off-ramp to Cosumnes River Boulevard.  To implement this mitigation measure, Caltrans approval is required and additional right-of-way to construct a bridge may be needed. Because the applicant has no control over right-of-way, this measure is infeasible.	SU
AA	This alternative would not change the number of vehicle trips within the project vicinity, resulting in no impact.	NI	No mitigation is required.	NI
<b>6.2-6 Driveway 7</b>				
PP, AC	The addition of the proposed project and Park-and-Ride Alternative would result in a maximum queue of 100 feet, which would exceed the provided storage of 50 feet, resulting in a significant impact.	S	In addition to relocating Driveway 7, as discussed in Section 6.2, reconfigure the drive aisle to provide 100-foot minimum of storage between West Stockton Boulevard and the internal circulation aisle.	LTS
<b>6.2-7 North-South Road/West Stockton Boulevard Storage Requirements</b>				
PP	The addition of the proposed project would result in a 95th percentile queue of 360 feet for the eastbound left-turn movement during the p.m. peak hour, which would exceed the provided storage of 100 feet. In addition, the 95th percentile queue for the northbound left-turn movement (250 feet) during the p.m. peak hour would extend past the driveways on the west side of the North-South Road, which would restrict vehicles from exiting, resulting in a significant impact.	S	Extend the eastbound left-turn pocket to provide 250 feet of storage and provide an additional 150-foot left-turn ingress lane at the driveway immediately west of the North-South Road (Driveway 4).  Provide a left-turn lane, a through lane, and an exclusive right-turn lane on the southbound approach.  Relocate the two driveways on the west side of the North-South Road 50 feet to the south, OR replace the driveways with one driveway opposite to the Child Care facility driveway.	LTS
AC	The addition of the Park-and-Ride Alternative would result in LOS D operations during the p.m. peak hour at the North-South Road/West Stockton Boulevard intersection. In	S	Provide two-left turn lanes on the northbound approach to the North-South Road/West Stockton Boulevard intersection.	LTS

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**Table 2-1 (Continued)  
Summary of Impacts and Mitigation**

Impact #	Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
	<p>addition, the eastbound left-turn movement would have a 95th percentile queue of 475 feet during the p.m. peak hour, which would exceed the provided storage of 100 feet, and the northbound left-turn movement queue (535 feet) would extend past the driveway aisles on the west side of the North-South Road, which would restrict vehicles from exiting, resulting in a significant impact.</p>		<p>Provide a left-turn lane, a through lane, and an exclusive right-turn lane on the southbound approach.</p> <p>Extend the eastbound left-turn pocket to provide 250 feet of storage and provide an additional 150-foot left-turn ingress lane at the driveway immediately west of the North-South Road (Driveway 4).</p> <p>Relocate the two driveways on the west side of the North-South Road 50 feet to the south, OR replace the driveways with one driveway opposite to the Child Care facility driveway.</p>	
<b>6.2-8 Bicycle Facilities</b>				
PP, AC	<p>The proposed project and Park-and-Ride Alternative would not affect the existing bicycle facilities within the project vicinity. In addition, the proposed project and project alternatives would not interfere with the planned bikeways shown in the Sacramento City/County 2010 Bikeway Master Plan. Implementation of the proposed project or project alternatives would have no impact.</p>	NI	No mitigation is required.	NI
<b>6.2-9 Pedestrian Facilities</b>				
PP, AC	<p>The proposed project and Park-and-Ride Alternative would not affect the pedestrian circulation within the project vicinity. The traffic signal at Bruceville Road/West Stockton Boulevard would provide a protected crossing for pedestrians to access the future light rail transit station on the west side of Bruceville Road. Implementation of the proposed project or project alternatives would have no impact.</p>	NI	No mitigation is required.	NI
<b>6.2-10 Transit</b>				
PP, AC	<p>The implementation of the proposed project and Park-and-Ride Alternative would not disrupt or interfere with existing</p>	NI	No mitigation is required.	NI

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**Table 2-1 (Continued)  
Summary of Impacts and Mitigation**

Impact #	Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
	<p>or planned transit facilities or services in the study area. The proposed project would generate approximately 55 a.m. peak hour and 80 p.m. peak hour transit trips, the Park-and-Ride Alternative would generate about 35 a.m. peak hour and 55 p.m. peak hour transit trips, and the General Plan Buildout alternative would generate about 77 a.m. and 95 p.m. peak hour transit trips. In addition, the Park-and-Ride Alternative would provide a park-and-ride lot to serve the future light rail station. Because the transit trips would be distributed among the existing transit services (i.e., three bus routes serving the Cosumnes River College Transit Center) and the future light rail transit line, the additional ridership generated by the project is not expected to exceed the available or planned system capacity.</p> <p>In addition, the proposed project and Park-and-Ride Alternative are consistent with the relevant goals in the Sacramento Regional Transit District Transit Master Plan.</p> <p>Implementation of the proposed project or project alternatives would have no impact.</p>			

**AIR QUALITY**

**6.3-1 Short-Term Construction Emissions of ROG, NO<sub>x</sub>, and PM<sub>10</sub>**

PP, AB, AC	<p>With respect to the proposed project, construction of 724 residential units and 270,256 square feet of commercial and office space would temporarily generate emissions of ROG, NO<sub>x</sub>, and PM<sub>10</sub> due to site grading and excavation, paving, application of architectural coatings, motor vehicle exhaust associated with construction equipment and employee commute trips, material transport (especially on unpaved surfaces), and other construction operations. Construction of Alternatives AB and AC would involve disturbance of a similar amount of acreage, and would involve similar</p>	S	<p>In accordance with the recommendations of the SMAQMD, the applicant shall implement the following mitigation measures to reduce temporary construction emissions. In addition to the mitigation measures identified below, construction of the proposed project is required to comply with all applicable SMAQMD rules and regulations, specifically Rule 403 regarding fugitive dust, Rule 442 regarding architectural coatings, and Rule 453 regarding asphalt paving. The applicant shall also submit to the SMAQMD a Construction Emission/Dust Control Plan and</p>	SU
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**Table 2-1 (Continued)  
Summary of Impacts and Mitigation**

Impact #	Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
	<p>amounts of construction activities. Hence, these alternatives would generate similar amounts of ROG, NO<sub>x</sub>, and PM<sub>10</sub> during construction.</p> <p>The site preparation phase for the proposed project would result in unmitigated daily emissions of approximately 8.66 pounds per day (lbs/day) of ROG, 59.11 lbs/day of NO<sub>x</sub>, and 125.41 lbs/day of PM<sub>10</sub>. The actual construction of the proposed project would result in unmitigated daily emissions of approximately 203.60 lbs/day of ROG, 508.01 lbs/day of NO<sub>x</sub>, and 31.92 lbs/day of PM<sub>10</sub>. The construction of Alternatives AB and AC would result in similar levels of emissions.</p> <p>Daily unmitigated emissions of NO<sub>x</sub> would exceed the SMAQMD's significance threshold of 85 lbs/day. In addition, because the Sacramento County portion of the SVAB is currently designated as non-attainment for the state and national ambient ozone and PM<sub>10</sub> standards, construction emissions of ozone precursors (ROG and NO<sub>x</sub>) and PM<sub>10</sub> would potentially contribute to a violation in the NAAQS and CAAQS. As a result, project construction-generated emissions, as well as those associated with Alternatives AB and AC, would be considered to have a significant, short-term air quality impact. The extent of this impact would be similar between the proposed project and each of the development alternatives.</p>		<p>receive approval prior to groundbreaking.</p> <p>To reduce NO<sub>x</sub> and visible emissions from heavy-duty diesel equipment the following measures are recommended by the SMAQMD:</p> <ul style="list-style-type: none"> <li>▶ The project shall provide a plan for approval by the City of Sacramento and SMAQMD demonstrating that the heavy-duty (&gt;50 horsepower) off-road vehicles to be used in the construction project, including owned, leased, and subcontractor vehicles, would achieve a project wide fleet-average 20% NO<sub>x</sub> reduction and 45% particulate reduction compared to the most recent California ARB fleet average at the time of construction; and the project representative shall submit a comprehensive inventory of all off-road construction equipment, equal to or greater than 50 horsepower, that would be used an aggregate of 40 or more hours during any portion of the construction project. The inventory shall be updated and submitted monthly throughout the duration of the project, except that an inventory shall not be required for any 30-day period in which no construction operations occur. At least 48 hours prior to the use of subject heavy-duty off-road equipment, the project representative shall provide the City of Sacramento and SMAQMD with the anticipated construction timeline including start date, and name and phone number of the project manager and onsite foreman. Acceptable options for reducing emissions include the use of late model engines, low-emission diesel products, alternative fuels, particulate matter traps, engine retrofit technology, after-treatment products, and/or other options as they become available.</li> </ul>	

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**Table 2-1 (Continued)  
Summary of Impacts and Mitigation**

Impact #	Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
			<ul style="list-style-type: none"> <li>▶ The project shall ensure that emissions from off-road diesel powered equipment used on the project site do not exceed 40% opacity for more than three minutes in any one hour. Any equipment found to exceed 40% opacity (or Ringlemann 2.0) shall be repaired immediately, and the City of Sacramento and SMAQMD shall be notified within 48 hours of identification of non-compliant equipment. A visual survey of all in-operation equipment shall be made at least weekly, and a monthly summary of visual survey results shall be submitted throughout the duration of the project, except that the monthly summary shall not be required for any 30-day period in which no construction operations occur. The monthly summary shall include the quantity and type of vehicles surveyed as well as the dates of each survey. The City of Sacramento and SMAQMD and/or other officials may conduct periodic site inspections to determine compliance. The above recommendations shall not supercede other SMAQMD or state rules and regulations.</li> <li>▶ The primary contractor shall be responsible to ensure that all heavy-duty equipment is properly tuned and maintained, in accordance with manufacturers' specifications.</li> </ul> <p>To reduce fugitive dust emissions, in compliance with Rule 403, the following mitigation measures are recommended by the SMAQMD:</p> <ul style="list-style-type: none"> <li>▶ All disturbed areas, including storage piles that are not being actively used for construction purposes shall be</li> </ul>	

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**Table 2-1 (Continued)  
Summary of Impacts and Mitigation**

Impact #	Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
			<p>effectively stabilized of dust emissions using water, a chemical stabilizer or suppressant, or vegetative ground cover.</p> <ul style="list-style-type: none"> <li>▶ All onsite unpaved roads and offsite unpaved access roads shall be effectively stabilized of dust emissions using water or a chemical stabilizer or suppressant.</li> <li>▶ When materials are transported offsite, all material shall be covered, effectively wetted to limit visible dust emissions, or maintained with at least 6 inches of freeboard space from the top of the container.</li> <li>▶ All operations shall limit or expeditiously remove the accumulation of project-generated mud or dirt from adjacent public streets at least once every 24 hours when operations are occurring.</li> <li>▶ Following the addition of materials to, or the removal of materials from, the surfaces of outdoor storage piles, the storage piles shall be effectively stabilized of fugitive dust emissions using sufficient water or a chemical stabilizer/suppressant.</li> <li>▶ Onsite vehicle speeds on unpaved roads shall be limited to 15 mph.</li> <li>▶ Wheel washers shall be installed for all trucks and equipment exiting from unpaved areas or wheels shall be washed manually to remove accumulated dirt prior to leaving the site.</li> <li>▶ Sandbags or other erosion control measures shall be</li> </ul>	

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**Table 2-1 (Continued)  
Summary of Impacts and Mitigation**

Impact #	Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
			<p>installed to prevent silt runoff to public roadways from adjacent project areas with a slope greater than 1%.</p> <ul style="list-style-type: none"> <li>▶ Excavation and grading activities shall be suspended when winds exceed 20 mph.</li> <li>▶ The extent of areas simultaneously subject to excavation and grading shall be limited, wherever possible, to the minimum area feasible.</li> </ul> <p>Implementation of the above recommended mitigation measures would result in a 20% reduction in NO<sub>x</sub> emissions and a 45% reduction visible emissions from heavy-duty diesel equipment. In addition, compliance with Rule 403 would result in a 75% reduction in fugitive dust emissions. However, daily construction emissions associated with the proposed project and each of the development alternatives would still exceed the SMAQMD's significance threshold of 85 lbs/day for NO<sub>x</sub> and thus would potentially contribute to a violation in the NAAQS and CAAQS.</p>	
AA	No new development or associated construction emissions would occur on the project site under the No Project (No Development) Alternative. No impact would occur.	NI	No mitigation is required.	NI
<b>6.3-2 Long-Term Regional (Operational) Emissions of ROG, NO<sub>x</sub>, and PM<sub>10</sub></b>				
PP	<p>The operation of the proposed project would result in unmitigated long-term regional emissions of approximately 197.88 lbs/day of ROG, 165.61 lbs/day of NO<sub>x</sub>, and 82.42 lbs/day of PM<sub>10</sub>.</p> <p>Implementation of the proposed project would require General Plan Amendments and Rezoning to permit the proposed land uses. According to the transportation</p>	S	<p>In accordance with the recommendations of the SMAQMD, the applicant shall implement the following mitigation measures to reduce long-term regional area- and mobile-source emissions of ROG, NO<sub>x</sub>, and PM<sub>10</sub>.</p> <ul style="list-style-type: none"> <li>▶ Orient buildings north/south</li> <li>▶ All electric landscape maintenance equipment</li> </ul>	SU

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**Table 2-1 (Continued)  
Summary of Impacts and Mitigation**

Impact #	Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
	<p>analysis, the operation of the proposed project would result in more vehicle trips and VMT than if the project site was developed under the current designation. Thus, an increase in VMT, which would lead to an increase in mobile source emissions, may conflict with the SMAQMD's air quality planning efforts. Consequently, an increase in VMT beyond projections in local plans could potentially result in a significant adverse incremental effect on the region's ability to attain and/or maintain state and national ambient air quality standards.</p> <p>Daily unmitigated emissions of ROG and NO<sub>x</sub> would exceed the SMAQMD's significance threshold of 65 lbs/day. Thus, because the Sacramento County portion of the SVAB is currently designated as non-attainment for the state and national ambient ozone and PM<sub>10</sub> standards, regional emissions of ozone precursors (ROG and NO<sub>x</sub>) and PM<sub>10</sub> would potentially contribute to a violation in the NAAQS and CAAQS. In addition, implementation of the proposed project may conflict with applicable air quality plans. A significant impact would occur.</p>		<ul style="list-style-type: none"> <li>▶ Central water heaters</li> <li>▶ Increase insulation beyond Title 24</li> <li>▶ Provide street artwork and furniture</li> <li>▶ Provide transit shelters, benches, etc.</li> <li>▶ Provide route signs and displays</li> <li>▶ Provide pedestrian signalization and signage</li> <li>▶ Provide articulated storefronts (display windows for visual interest)</li> <li>▶ Do not place long uninterrupted walls along pedestrian access routes</li> <li>▶ Provide secure bike parking</li> <li>▶ Provide employee lockers and showers</li> <li>▶ Provide compressed work schedule (e.g. 9/80)</li> </ul> <p>Implementation of the above recommended mitigation measures would reduce long-term regional emissions. However, daily mitigated emissions of ROG and NO<sub>x</sub> would still exceed the SMAQMD's significance threshold of 65 lbs/day and thus would potentially contribute to a violation in the NAAQS and CAAQS under the proposed project and the development alternatives.</p>	

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**Table 2-1 (Continued)  
Summary of Impacts and Mitigation**

Impact #	Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
AB	<p>Implementation of Alternative AB would result in fewer trips than the proposed project. Thus, in comparison to the proposed project, the operation of Alternative AB would result in slightly fewer emissions; however, daily unmitigated emissions of ROG and NO<sub>x</sub> would still exceed the SMAQMD's significance threshold of 65 lbs/day. In addition, because the Sacramento County portion of the SVAB is currently designated as non-attainment for the state and national ambient ozone and PM<sub>10</sub> standards, construction emissions of ozone precursors (ROG and NO<sub>x</sub>) and PM<sub>10</sub> would potentially contribute to a violation in the NAAQS and CAAQS. A significant impact would occur. The extent of this impact would be less than under the proposed project as less traffic would be generated under this alternative.</p>	S	<p>Implement Mitigation Measure 6.3-2.</p> <p>Implementation of this mitigation measure would reduce long-term regional emissions. However, daily mitigated emissions of ROG and NO<sub>x</sub> would still exceed the SMAQMD's significance thresholds and thus would potentially contribute to a violation in the NAAQS and CAAQS.</p>	SU
AC	<p>Implementation of Alternative AC would result in slightly more trips than the proposed project. The long-term operation of Alternative AC would result in the generation of regional-, area-, and mobile-source emissions of ROG, NO<sub>x</sub>, and PM<sub>10</sub>. The operation of this alternative would result in unmitigated long-term regional emissions of approximately 190.86 lbs/day of ROG, 167.73 lbs/day of NO<sub>x</sub>, and 82.35 lbs/day of PM<sub>10</sub>. The long-term regional emissions would be primarily associated with mobile sources rather than area sources, which consist of natural gas and landscape maintenance emissions.</p> <p>As with the proposed project, implementation of this alternative would require General Plan Amendments and Rezoning to permit the proposed land uses. The operation of Alternative AC would result in more vehicle trips and VMT than if the project site was developed under the current designation. Thus, an increase in VMT, which would lead to</p>	S	<p>Implement Mitigation Measure 6.3-2.</p> <p>Implementation of this mitigation measure would reduce long-term regional emissions. However, daily mitigated emissions of ROG and NO<sub>x</sub> would still exceed the SMAQMD's significance thresholds and thus would potentially contribute to a violation in the NAAQS and CAAQS.</p>	SU

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**Table 2-1 (Continued)  
Summary of Impacts and Mitigation**

Impact #	Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
	<p>an increase in mobile source emissions, may conflict with the SMAQMD's air quality planning efforts. Consequently, an increase in VMT beyond projections in local plans could potentially result in a significant adverse incremental effect on the region's ability to attain and/or maintain state and national ambient air quality standards</p> <p>Daily unmitigated emissions of ROG and NO<sub>x</sub> would exceed the SMAQMD's significance threshold of 65 lbs/day. In addition, because the Sacramento County portion of the SVAB is currently designated as non-attainment for the state and national ambient ozone and PM<sub>10</sub> standards, regional emissions of ozone precursors (ROG and NO<sub>x</sub>) and PM<sub>10</sub> would potentially contribute to a violation in the NAAQS and CAAQS. In addition, implementation of the proposed project may conflict with applicable air quality plans. A significant impact would occur. The extent of this impact would be slightly greater than under the proposed project as slightly more traffic would be generated under this alternative.</p>			
AA	No new development would occur at the project site under the No Project (No Development) Alternative. No impact would occur.	NI	No mitigation is required.	NI
<b>6.3-3 Local Mobile Source Carbon Monoxide Concentration Emissions</b>				
PP	Implementation of the proposed project would result in maximum 1-hour and 8-hour CO concentrations of 60.4 ppm and 36.2 ppm at the Bruceville Road/Cosumnes River Boulevard intersection. This would exceed the state 1-hour or 8-hour CO ambient air quality standards of 20 parts per million (ppm) or 9 ppm, respectively. A significant impact would occur.	S	Implementation of the recommended mitigation measures identified in the traffic section of this EIR (Section 6.2) would reduce local mobile source emissions. However, local mobile source CO would still be anticipated to result in or contribute to CO concentrations that exceed the state 1-hour or 8-hour CO ambient air quality standards of 20 parts per million (ppm) or 9 ppm, respectively.	SU
AB	Implementation of Alternative AB would result in fewer trips than the proposed project. Thus, in comparison to the	S	Implementation of the recommended mitigation measures identified in the traffic section of this EIR (Section 6.2)	SU

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**Table 2-1 (Continued)  
Summary of Impacts and Mitigation**

Impact #	Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
	proposed project, the operation of Alternative AB would result in slightly fewer mobile source emissions; however, local mobile source CO emissions under Alternative AB would still be anticipated to exceed the state 1-hour or 8-hour CO ambient air quality standards of 20 parts per million (ppm) or 9 ppm, respectively. A significant impact would occur. The extent of this impact would be less than the proposed project as less traffic and hence less local mobile source CO would be generated.		would reduce local mobile source emissions. However, local mobile source CO would be anticipated to result in or contribute to CO concentrations that exceed the state 1-hour or 8-hour CO ambient air quality standards of 20 parts per million (ppm) or 9 ppm, respectively. The extent of this impact would be lower under Alternative AB than under the proposed project.	
AC	Implementation of Alternative AC would result in maximum 1-hour and 8-hour CO concentrations of 58.1 ppm and 34.8 ppm at the Bruceville Road/Cosumnes River Boulevard intersection. This would exceed the state 1-hour or 8-hour CO ambient air quality standards of 20 parts per million (ppm) or 9 ppm, respectively. A significant impact would occur. The extent of this impact would be less than under the proposed project because, although slightly more traffic would be generated under this alternative, the peaking characteristics of this traffic would be such that a lower level of peak traffic would occur at the evaluated intersection and hence less local mobile source CO would be generated than under the proposed project.	S	Implementation of the recommended mitigation measures identified in the traffic section of this EIR (Section 6.2) would reduce local mobile source emissions. However, local mobile source CO would be anticipated to result in or contribute to CO concentrations that exceed the state 1-hour or 8-hour CO ambient air quality standards of 20 parts per million (ppm) or 9 ppm, respectively. The extent of this impact would be slightly higher under Alternative AC than under the proposed project.	SU
AA	No new development would occur at the project site under the No Project (No Development) Alternative. No impact would occur.	NI	No mitigation is required.	NI
<b>6.3-4 Odorous Emissions</b>				
PP, AC	No major sources of odors have been identified off-site in the project area that would affect occupants of the proposed onsite land uses. The proposed project and Alternative AC could include land uses that may result in odorous emissions (e.g., restaurant, fast-food, gas station, coffee house). These odorous emissions could affect existing sensitive off-site land uses (senior housing northwest of the project site and	LTS	No mitigation is required.	LTS

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**Table 2-1 (Continued)  
Summary of Impacts and Mitigation**

Impact #	Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
	residences south of the project site). The senior housing north of the project site is over 1,000 feet away, and residential housing to the south is no closer than 500 feet. Given the distance from the site, this impact is considered less than significant. The extent of this impact would be similar between the proposed project and Alternative AC as each would result in the development of similar odor-generating land uses.			
AB	Development of the project site under Alternative AB would not include any major odor emission sources and no major sources of odors have been identified in the area. No impact would occur.	NI	No mitigation is required.	NI
AA	No new development would occur at the project site under the No Project (No Development) Alternative. No impact would occur.	NI	No mitigation is required.	NI
<b>6.3-5 Stationary Source Toxic Air Emissions</b>				
PP, AC	<p>The proposed project and Alternative AC would each result in the development of onsite land uses (i.e., gas station, car wash, restaurants) that could generate toxic air contaminants (TACs). These TACs could potentially affect both existing off-site sensitive land uses (i.e., senior housing to the northwest, residences to the south) and proposed onsite sensitive land uses (i.e., senior housing, multi-family housing, child care).</p> <p>Under SMAQMD Rules 201 (General Permit Requirements) and 207 (Title V-Federal Operating Permit Program), all sources that possess the potential to emit TACs are required to obtain permits from the SMAQMD. Permits may be granted to these operations if they are constructed and operated in accordance with applicable regulations, including Rule 202 (New Source Review) and Rule 904 (Air Toxics Control Measures). Given that compliance with</p>	LTS	No mitigation is required.	LTS

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**Table 2-1 (Continued)  
Summary of Impacts and Mitigation**

<b>Impact #</b>	<b>Impact</b>	<b>Significance Before Mitigation</b>	<b>Mitigation Measures</b>	<b>Significance After Mitigation</b>
	applicable standards are required for the construction and operation of land uses that may result in the emissions of TACs, the TAC emissions from the routine use of TACs in operations, both on- and off-site, are expected to be within established standards. A less-than-significant impact would result.			
AB	Under Alternative AB, no land uses would be developed onsite that would have the potential to emit TACs, and thus the proposed project would not generate TAC impacts on existing off-site or proposed onsite sensitive land uses. This alternative would include the development of onsite sensitive land uses (i.e., residential) which could potentially be affected by offsite TACs generation. However, given that compliance with applicable standards are required for the construction and operation of land uses that may result in the emissions of TACs, the TAC emissions from the routine use of TACs in operations offsite are expected to be within established standards. A less-than-significant impact would result. The extent of this impact would be lower than under the proposed project because, while this alternative and the proposed project would both result in less-than-significant impacts, the proposed project would result in the development of TACs generating land uses that would not be developed under this alternative.	LTS	No mitigation is required.	LTS
AA	No new development would occur at the project site under the No Project (No Development) Alternative. No impact would occur.	NI	No mitigation is required.	NI
<b>6.3-6 Mobile Source Toxic Air Emissions</b>				
PP, AC	Under the proposed project and Alternative AC, commercial land uses would be developed that would require large-sized delivery and shipping trucks that typically use diesel fuel. The diesel PM emissions generated by these trucks, including idling trucks and refrigerated units, would be	LTS	No mitigation is required.	LTS

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**Table 2-1 (Continued)  
Summary of Impacts and Mitigation**

Impact #	Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
	produced primarily at single locations on a regular basis. Diesel PM emissions could be blown to nearby existing offsite and proposed onsite sensitive receptors, including existing adjacent senior housing and residential units, and proposed onsite senior housing, residential uses, and child care uses, but such uses would be located at least 500 feet from the source. This impact is considered less than significant. The extent of this impact would be similar between the proposed project and Alternative AC as both would include the development of commercial uses that would require deliveries by heavy-duty diesel trucks and the same distance to any sensitive receptors.			
AB	No development that would require the use of heavy-duty diesel trucks is proposed. No impact would occur.	NI	No mitigation is required.	NI
AA	No new development would occur at the project site under the No Project (No Development) Alternative. No impact would occur.	NI	No mitigation is required.	NI
<b>6.3-7 Cumulative Air Quality Impacts</b>				
PP, AB, AC	<p>Implementing the proposed project and the development alternatives (Alternatives AB and AC) would result in significant air quality impacts before mitigation associated with short-term construction emissions, long-term regional emissions, and local mobile source carbon monoxide concentration emissions. These would be reduced but would remain significant after mitigation.</p> <p>Because SMAQMD significance thresholds for construction emissions are low enough that development projects such as the College Square PUD would exceed them, because both the related projects and cumulative growth would include projects of similar size, and because feasible mitigation could reduce but not avoid exceedance of these significance thresholds, the proposed project, related projects, and other</p>	S	The related projects should implement Mitigation Measures 6.3-1, 6.3-2, and 6.3-3. These mitigation measures would reduce cumulative air quality impacts, but not to less-than-significant levels.	SU

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**Table 2-1 (Continued)  
Summary of Impacts and Mitigation**

Impact #	Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
	<p>cumulative growth would result in a significant and unavoidable cumulative impact in terms of short-term construction emissions. The extent of this impact would be similar for the proposed project and each of the development alternatives because all three would disturb the same amount of land during construction and involve similar levels of construction activity.</p> <p>Because SMAQMD significance thresholds for regional emissions are low enough that development projects such as the College Square PUD would exceed them and because it is anticipated that certain future development projects in the region would generate greater VMT than planned for by SMAQMD in its air quality attainment plan, the proposed project and cumulative growth would result in a significant and unavoidable cumulative impact in terms of long-term regional emissions. The extent of this impact would be less under the General Plan Buildout Alternative than under the proposed project because less traffic would be generated under Alternative AB. Similarly, the extent of this impact would be greater under Alternative AC because more traffic would be generated under this alternative.</p> <p>The South Sacramento Corridor Phase 2 Project, Strawberry Creek Centre, and Bruceville Road widening are related projects proposed in the vicinity of the project site. Strawberry Creek Centre would be expected to generate significant mobile source carbon monoxide concentration emissions given that it would include the same type and scale of commercial uses as the proposed project. The other two related projects would be expected to generate significant mobile source carbon monoxide concentrations given the increase in traffic to be generated by these projects in the local area. As for the proposed project, mitigation is</p>			

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**Table 2-1 (Continued)  
Summary of Impacts and Mitigation**

Impact #	Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
	<p>available to reduce these emissions, but not to less-than-significant levels. Hence, a significant and unavoidable cumulative impact would occur in the local area in terms of mobile source carbon monoxide concentration emissions. The extent of this impact would be less under Alternative AB than under the proposed project because less traffic would be generated under this alternative. The extent of this impact would be greater under Alternative AC than under the proposed project because more traffic would be generated.</p> <p>Although the proposed project would increase local and regional cumulative air emissions, the TOD nature of the development would reduce overall regionwide urban sprawl and regionwide traffic congestion and air emissions because it would (1) focus development in an already urbanized area of the City; (2) provide much-needed housing close to the downtown job-center, thus reducing the need for urban development in outlying areas; and (3) result in a greater proportion of future City residents using mass transit for home-to-work trips instead of motor vehicles. It would also contribute to a myriad of City and RT policies for the provision of TOD development and the reduction of traffic congestion and urban sprawl. In the long run, the proposed project would contribute to a reduction in the cumulative air emissions that would otherwise be generated in the City with more traditional mono and low-density development.</p>			
AA	<p>No new development would occur at the project site under the No Project (No Development) Alternative; therefore, there would be no contribution to the anticipated increase in areawide air emissions associated with cumulative growth. No impact would occur.</p>	NI	No mitigation is required.	NI

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**Table 2-1 (Continued)  
Summary of Impacts and Mitigation**

Impact #	Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<b>NOISE</b>				
<b>6.4-1 Short-Term Construction Noise</b>				
PP, AB, AC	The simultaneous operation of onsite construction equipment could potentially result in combined intermittent noise levels of approximately 93 dBA at 50 feet from the project site. Based on these equipment noise levels and assuming a noise attenuation rate of 6 dBA per doubling of distance from the source to receptor, exterior noise levels at the sensitive receptors located within approximately 2,300 feet of the project site could potentially exceed 60 dBA without feasible noise control. Construction operations that occur between the hours of 7 a.m. and 6 p.m. Monday through Saturday and 9 a.m. and 6 p.m. on Sunday are exempt from the applicable standards. However, if construction operations were to occur during the noise-sensitive hours of 6 p.m. to 7 a.m. Monday through Saturday or 6 p.m. to 9 a.m. on Sunday, the applicable noise standards could potentially be exceeded at nearby noise-sensitive receptors (i.e., senior housing northwest of the project site, single-family residential units south of the project site). In addition, construction operations occurring during the evening and nighttime hours could result in annoyance and/or sleep disruption to occupants of the nearby residential dwellings. A significant impact could occur. The extent of this impact would be similar between the proposed project and the development alternatives (Alternatives AB and AC) as all would disturb a similar amount of area and include construction activities over a similar period of time.	S	To the extent feasible, construction equipment shall be properly maintained and equipped with noise control, such as mufflers and shrouds, in accordance with manufacturers' specifications.  Construction operations involved with the proposed project shall be limited to the hours between 7 a.m. and 6 p.m. Monday through Saturday and 9 a.m. and 6 p.m. on Sunday. During such hours, these activities are exempt from the noise levels identified in the applicable standards.	LTS
AA	No new development and hence no construction activities would occur at the project site under the No Project (No Development) Alternative. No impact would occur.	NI	No mitigation is required.	NI

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**Table 2-1 (Continued)  
Summary of Impacts and Mitigation**

Impact #	Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<b>6.4-2 Long-Term Area and Stationary Source Noise</b>				
PP, AC	<p><b>Residential Land Uses</b></p> <p>According to the City of Sacramento Noise Ordinance, noise sources associated with the maintenance of residential area property, provided such activities do not occur during the noise-sensitive hours of the day, are exempt from the standards. Activities associated with these land uses would result in only minor increases in ambient noise levels primarily during the day and evening hours and less frequently at night as perceived at the closest residential receptors. Noise levels generated by stationary sources, primarily industrial residential air conditioning units which are shielded, typically average less than 60 dBA at 3 feet from the source. Consequently, stationary source noise levels associated with the occupation and landscape maintenance of the residential component of the project are not expected to exceed the City's maximum allowable exterior noise level of 60 dBA at adjacent existing or proposed noise-sensitive land uses. A less-than-significant impact would occur. The extent of this impact would be similar between the proposed project and Alternative AC because the residential development associated with each would be the same.</p> <p><b>Nonresidential Land Uses</b></p> <p>It is not anticipated that noise from mechanical building equipment associated with the proposed non-residential uses would adversely affect sensitive noise receptors after both standard shielding of these noise source and noise attenuation provided by the distance to sensitive receptors are taken into account.</p>	S	<p>Loading activities (loading, unloading, truck movement and idling) at the proposed drug store shall occur on the southeast rather than the northwest side of the drug store building. Alternatively, the loading area for the proposed drug store shall be enclosed by a noise wall designed in conjunction with a noise consultant, and/or some other solution shall be identified by a noise consultant, to avoid significant loading activity noise impacts on the senior housing north of Cosumnes River Boulevard.</p> <p>Landscape maintenance (use of leaf blowers and lawn mowers) within the portion of the proposed commercial uses located north of the northernmost Bruceville driveway shall be limited to the use of electric- rather than fuel-powered equipment.</p> <p>At the time of submittal of the special permits for each of the individual project components, when the exact project design would be known, a detailed analysis of noise reduction requirements must be made by an acoustical engineer. Required noise reduction features included in the project design that would most effectively comply with the City of Sacramento and the State of California maximum acceptable interior and exterior noise levels for new development and the City's noise ordinance standards with respect to existing noise-sensitive receptors. Such noise reduction requirements may include, but are not necessarily limited to wall construction with resilient channels, staggered studs or double-stud walls, use of dual-glazed windows with laminated glass, limitation of the number and size of windows along walls located close to major noise sources, grouting or caulking to ensure exterior</p>	LTS

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**Table 2-1 (Continued)  
Summary of Impacts and Mitigation**

Impact #	Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
	<p>For loading area noise generated in the southern portion of the project, the development of the residential component of the project between these noise sources and the southern residences would effectively buffer the southern residences from project loading area noise.</p> <p>For loading area noise generated in the northern portion of the project, the loading area for the mini-anchor commercial uses and grocery store would be located approximately 240 and 420 feet from the senior housing, respectively, and would result in noise levels of approximately 76 dBA and 72 dBA at the senior housing, respectively. The drug store proposed at the corner of Cosumnes River Boulevard and Bruceville Road would not have a dedicated loading area, and thus it is anticipated that loading could occur from either the northwest and southeast sides of the building. If loading activities were to take place on the northwest side of the building, they would occur within approximately 210 feet of the senior housing and result in loading noise at the senior housing of approximately 78 dBA. If loading activities were to take place on the southeast side of the building, the building would effectively buffer loading area noise at this location from the senior housing. As indicated, loading area noise from the commercial uses proposed within the northwest portion of the project site could exceed both the daytime and nighttime outdoor stationary source noise thresholds for stationary noise sources of 55 dBA daytime and 50 dBA nighttime at the senior housing. This would represent a significant impact. The extent of this impact would be similar between the proposed project and Alternative AC as each would include development of the drug store.</p>		<p>construction joist are air-tight, and the construction of soundwalls or berms.</p>	

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**Table 2-1 (Continued)  
Summary of Impacts and Mitigation**

Impact #	Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
	The use of onsite landscape maintenance equipment within the non-residential component of the project, such as leaf blowers and gasoline-powered lawn mowers, could result in intermittent area noise levels that range from approximately 80 to 120 dBA at 3 feet, respectively. Assuming an average equipment noise level of 100 dBA and a noise attenuation rate of 6 dBA per doubling of distance from the source, landscape maintenance equipment could result in exterior noise levels of approximately 75 dBA at 50 feet. This would result in exterior noise levels of up to 67 dBA at the existing senior housing located 140 feet northwest of the project site which would exceed the City's applicable area source exterior noise standards of 55 dBA daytime and 50 dBA nighttime at the senior housing. This would represent a significant impact. The extent of this impact would be the similar between the proposed project and Alternative AC.			
AB	The General Plan Buildout Alternative would (1) result in the same less-than-significant activity stationary source noise (i.e., noise from activity areas, mechanical equipment and landscape maintenance) as the residential component of the proposed project; and (2) avoid the significant loading area and landscape maintenance noise anticipated from the commercial component of the proposed project. A less-than-significant impact would occur.	LTS	No mitigation is required.	LTS
AA	No new development would occur at the project site under the No Project (No Development) Alternative. No impact would occur.	NI	No mitigation is required.	NI
<b>6.4-3 Long-Term Mobile Source Noise</b>				
PP	Project generated traffic would not result in a noticeable (i.e., 3 dBA or greater) increase in traffic noise along SR 99, Cosumnes River Boulevard, or Bruceville Road, but would result in a noticeable increase in traffic noise along (1) West Stockton Boulevard between the project site and Shasta	S	Onsite truck traffic and associated loading area operations shall be limited to the less noise-sensitive daytime hours of 6:00 a.m. to 8:00 p.m. Monday through Friday or 7:00 a.m. to 8:00 p.m. on Saturday and Sunday.	SU

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**Table 2-1 (Continued)  
Summary of Impacts and Mitigation**

Impact #	Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
	<p>Avenue; and (2) West Stockton Boulevard between Shasta Avenue and Jacinto Road. In addition, truck traffic from delivery to and from the nonresidential land uses on the local roadways (West Stockton Boulevard) could result in noise levels that exceed the applicable threshold due to tire/pavement contact, brake application, engine and exhaust noise. These increases in traffic noise along segments of West Stockton Boulevard would adversely impact the existing residences along West Stockton Boulevard from the southern boundary of the project site to Jacinto Road, and the proposed residential units along Stockton Boulevard and adjacent to the commercial, office and child care uses proposed along the south side of West Stockton Boulevard. A significant impact would occur.</p>		<p>At the time of submittal of the special permits for each of the individual project components, when the exact project design would be known, a detailed analysis of noise reduction requirements must be made by an acoustical engineer. Required noise reduction features included in the project design that would most effectively comply with the City of Sacramento and the State of California maximum acceptable interior and exterior noise levels for new development and the City's noise ordinance standards with respect to existing noise-sensitive receptors. Such noise reduction requirements may include, but are not necessarily limited to wall construction with resilient channels, staggered studs or double-stud walls, use of dual-glazed windows with laminated glass, limitation of the number and size of windows along walls located close to major noise sources, grouting or caulking to ensure exterior construction joist are air-tight, and the construction of soundwalls or berms.</p> <p>Because the project applicant does not have control of offsite parcels, the development of a noise wall along the west side of West Stockton Boulevard from the southern boundary of the project site to Jacinto Road, which would be required to avoid significant project traffic noise impacts on the existing residences along this segment of West Stockton Boulevard, is not possible.</p>	
AB	<p>Implementation of the AB Alternative would not result in commercial truck traffic and would result in fewer auto trips than the proposed project. Thus, in comparison to the proposed project, the operation of the AB Alternative would result in no commercial traffic noise and slightly less auto traffic noise; however, auto traffic noise levels due to the implementation of Alternative AB would still be expected to</p>	S	<p>At the time of submittal of the special permits for each of the individual project components, when the exact project design would be known, a detailed analysis of noise reduction requirements must be made by an acoustical engineer. Required noise reduction features included in the project design that would most effectively comply with the City of Sacramento and the State of California maximum</p>	SU

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**Table 2-1 (Continued)  
Summary of Impacts and Mitigation**

Impact #	Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
	<p>result in a noticeable increase in ambient noise levels (i.e., 3 dBA or greater) along Stockton Boulevard between the southern portion of the project site and Jacinto Road. This would adversely impact the existing residences along West Stockton Boulevard and would represent a significant impact. The extent of this impact would be less than under the proposed project because less traffic and hence traffic noise would be generated offsite, and because no truck traffic would occur onsite.</p>		<p>acceptable interior and exterior noise levels for new development and the City’s noise ordinance standards with respect to existing noise-sensitive receptors. Such noise reduction requirements may include, but are not necessarily limited to wall construction with resilient channels, staggered studs or double-stud walls, use of dual-glazed windows with laminated glass, limitation of the number and size of windows along walls located close to major noise sources, grouting or caulking to ensure exterior construction joint are air-tight, and the construction of soundwalls or berms.</p> <p>Because the project applicant does not have control of offsite parcels, the development of a noise wall along the west side of West Stockton Boulevard from the southern boundary of the project site to Jacinto Road, which would be required to avoid significant project traffic noise impacts on the existing residences along this segment of West Stockton Boulevard, is not possible.</p>	
AC	<p>Traffic generated under the Park-and-Ride Alternative would not result in a noticeable (i.e., 3 dBA or greater) increase in traffic noise along SR 99, Cosumnes River Boulevard, or Bruceville Road, but would result in a noticeable increase in traffic noise along (1) West Stockton Boulevard between the project site and Shasta Avenue; and (2) West Stockton Boulevard between Shasta Avenue and Jacinto Road. In addition, truck traffic from delivery to and from the nonresidential land uses on the local roadways (West Stockton Boulevard) as well as car traffic associated with the park-and-ride lot, would be expected to result in noise levels that exceed the applicable threshold due to tire/pavement contact, brake application, engine and exhaust noise, and car alarms. These increases in traffic noise along segments of</p>	S	<p>Onsite truck traffic and associated loading area operations shall be limited to the less noise-sensitive daytime hours of 6:00 a.m. to 8:00 p.m. Monday through Friday or 7:00 a.m. to 8:00 p.m. on Saturday and Sunday.</p> <p>At the time of submittal of the special permits for each of the individual project components, when the exact project design would be known, a detailed analysis of noise reduction requirements must be made by an acoustical engineer. Required noise reduction features included in the project design that would most effectively comply with the City of Sacramento and the State of California maximum acceptable interior and exterior noise levels for new development and the City’s noise ordinance standards with</p>	SU

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**Table 2-1 (Continued)  
Summary of Impacts and Mitigation**

Impact #	Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
	<p>West Stockton Boulevard would adversely impact the existing residences along West Stockton Boulevard from the southern boundary of the project site to Jacinto Road, and the proposed residential units along Stockton Boulevard and adjacent to the proposed commercial, office, child care, and park-and-ride lot uses. In addition, car traffic in the proposed park-and-ride lot would be expected to result in noise levels that exceed the applicable threshold at existing residences along Cotton Lane and Shasta Road due mainly to the potential for car alarms going off within the large 500 car lot. A significant impact would occur. The extent of this impact would be greater than under the proposed project given the slightly higher traffic volumes on West Stockton Boulevard under this alternative as well as the development of the park-and-ride lot.</p>		<p>respect to existing noise-sensitive receptors. Such noise reduction requirements may include, but are not necessarily limited to wall construction with resilient channels, staggered studs or double-stud walls, use of dual-glazed windows with laminated glass, limitation of the number and size of windows along walls located close to major noise sources, grouting or caulking to ensure exterior construction joint are air-tight, and the construction of soundwalls or berms.</p> <p>Because the project applicant does not have control of offsite parcels, the development of a noise wall along the west side of West Stockton Boulevard from the southern boundary of the project site to Jacinto Road, which would be required to avoid significant project traffic noise impacts on the existing residences along this segment of West Stockton Boulevard, is not possible.</p>	
AA	<p>No new development would occur at the project site under the No Project (No Development) Alternative. No impact would occur.</p>	NI	No mitigation is required.	NI
<b>6.4-4 Compatibility of the Proposed Land Uses with Projected Onsite Noise Levels</b>				
PP	<p>Predicted noise levels at the project site boundaries would reach approximately 83 dBA along SR 99, 76 dBA along Cosumnes River Boulevard, and 75 dBA under Base Year + Proposed Project conditions.</p> <p>Proposed onsite noise-sensitive receptors would include the child care center, multifamily residential, and senior housing. The nearest of these proposed uses to Cosumnes River Boulevard would be the Child Care Center which would be located 240 feet from, and within the 65 CNEL noise contour of, Cosumnes River Boulevard. The</p>	S	<p>At the time of submission of the special permits for each of the individual project components, when the exact project design would be known, a detailed analysis of noise reduction requirements must be made by an acoustical engineer. Required noise reduction features included in the project design that would most effectively comply with the City of Sacramento and the State of California maximum acceptable interior and exterior noise levels for new development. Such noise reduction requirements measures could include, but are not necessarily limited to wall construction with resilient channels, staggered studs or</p>	SU

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**Table 2-1 (Continued)  
Summary of Impacts and Mitigation**

Impact #	Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
	<p>maximum exterior noise level for new school land uses noise levels for schools, which is conservatively used here as the standard for child care facilities, is 60 dB. Based on the above, noise from Cosumnes River Boulevard could potentially exceed the City's acceptable noise exposure standards. However, the proposed commercial uses along Cosumnes River Boulevard and on the north side of West Stockton Boulevard would effectively buffer the child care center from traffic noise from Cosumnes River Boulevard. A less-than-significant impact would occur.</p> <p>The nearest proposed onsite sensitive noise receptors to SR 99 would be the proposed senior housing to be located in the southeast corner of the project site. This housing would be located within approximately 60 feet, and well within the 70 dBA noise contour of SR 99 (which would extend approximately 500 feet into the eastern portion of the project site. The maximum interior and exterior noise levels for new multifamily land uses are 45 dB and 60 dB in common outdoor use areas. Based on the above, noise from SR 99 would exceed the City's acceptable noise exposure standards. This would represent a significant impact.</p> <p>The nearest proposed onsite sensitive noise receptors to Bruceville Road would be the proposed multifamily housing to be located in the southwest portion of the project site. This housing would be located within approximately 20 feet, and within the well within the 70 dBA noise contour of Bruceville Road (which would extend approximately 102 feet into the western portion of the project site. The maximum acceptable interior and exterior noise levels for new multifamily land uses are 45 dB and 60 dB in common outdoor use areas. Based on the above, noise from Bruceville Road would exceed the City's normally</p>		<p>double-stud walls, use of dual-glazed windows with laminated glass, limitation of the number and size of windows along wall located close to major noise sources, grouting or caulking to ensure exterior construction joint are air-tight, and the construction of soundwalls or berms.</p> <p>Even with implementation of the above mitigation, exterior noise levels at the proposed on-site senior housing and multifamily residential uses, especially along SR 99, would still likely exceed City noise compatibility standards, especially at the upper stories.</p>	

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**Table 2-1 (Continued)  
Summary of Impacts and Mitigation**

Impact #	Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
	acceptable noise exposure standard. This would represent a significant impact.			
AB	<p>Because this alternative would result in residential development along SR 99 and Bruceville Road as would the proposed project, it would result in significant noise compatibility impacts to these proposed onsite residential uses like the proposed project. However, the extent of these impacts would be greater because residential development under this alternative would extend the full length of the project site's frontages with SR 99 and Bruceville Road, thus adversely impacting a greater number of proposed onsite residential units.</p> <p>While the proposed project would not develop noise-sensitive land uses along Cosumnes River Boulevard, the General Plan Buildout Alternative would include the development of multifamily residential uses along the project sites Cosumnes River Boulevard frontage. This housing would be located within approximately 25 feet, and well within the 70-dBA noise contour, of Cosumnes River Boulevard (which would extend approximately 150 feet into the northern portion of the project site). Based on the above, noise from Cosumnes River Boulevard would exceed the City's maximum acceptable noise exposure standards. This would represent a significant impact.</p>	S	<p>At the time of submission of the special permits for each of the individual project components, when the exact project design would be known, a detailed analysis of noise reduction requirements must be made by an acoustical engineer. Required noise reduction features included in the project design that would most effectively comply with the City of Sacramento and the State of California maximum acceptable interior and exterior noise levels for new development. Such noise reduction requirements measures could include, but are not necessarily limited to wall construction with resilient channels, staggered studs or double-stud walls, use of dual-glazed windows with laminated glass, limitation of the number and size of windows along wall located close to major noise sources, grouting or caulking to ensure exterior construction joint are air-tight, and the construction of soundwalls or berms.</p> <p>Even with implementation of the above mitigation, interior and exterior noise levels at the proposed on-site senior housing and multifamily residential uses, especially along SR 99, would still likely exceed City noise compatibility standards, especially at the upper stories.</p>	SU
AC	<p>Because this alternative would result in residential development along Cosumnes River Boulevard and SR 99 similar to the proposed project, it would result in the same less-than-significant and significant noise compatibility impacts, respectively.</p> <p>Under this alternative, residential development would not occur along the Bruceville Road frontage as would occur</p>	S	<p>At the time of submission of the special permits for each of the individual project components, when the exact project design would be known, a detailed analysis of noise reduction requirements must be made by an acoustical engineer. Required noise reduction features included in the project design that would most effectively comply with the City of Sacramento and the State of California maximum acceptable interior and exterior noise levels for new</p>	SU

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**Table 2-1 (Continued)  
Summary of Impacts and Mitigation**

Impact #	Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
	under the proposed project, but rather would be set back from Bruceville Road approximately 420 feet. Hence, the nearest proposed onsite sensitive use to Bruceville Road under this alternative would fall within the 60 dBA noise contour of Bruceville Road. Because residential development within the 60 dBA noise contour is acceptable under City guidelines, a less-than-significant impact would occur.		development. Such noise reduction requirements measures could include, but are not necessarily limited to wall construction with resilient channels, staggered studs or double-stud walls, use of dual-glazed windows with laminated glass, limitation of the number and size of windows along wall located close to major noise sources, grouting or caulking to ensure exterior construction joint are air-tight, and the construction of soundwalls or berms.  Even with implementation of the above mitigation, interior and exterior noise levels at the proposed on-site senior housing and multifamily residential uses, especially along SR 99, would still likely exceed City noise compatibility standards, especially at the upper stories.	
AA	No new development would occur at the project site under the No Project (No Development) Alternative. No impact would occur.	NI	No mitigation is required.	NI
<b>6.4-5 Noise Impacts (Cumulative)</b>				
PP, AB, AC	The anticipated cumulative increases in short-term construction noise and long-term area and stationary sources noise is more problematic in that feasible mitigation is usually available to mitigate this type of noise given the low rise and nonindustrial nature of the type of cumulative development that would occur in the area. Without appropriate mitigation, cumulative development in the area could potentially result in significant short-term construction noise and long-term area and stationary sources noise. However, it is anticipated that adequate mitigation would be provided during the CEQA review of these cumulative projects to result in an overall less-than-significant cumulative impact.  Because of the proximity of the local area to major long-	S	Cumulative development should implement Mitigation Measures 6.4-1 through 6.4-4 to the extent that these measures are applicable.  Implementation of the above mitigation would reduce cumulative construction and long-term area/stationary source noise to less-than-significant levels. This mitigation would also reduce long-term mobile source noise and noise compatibility issues, but not to less-than-significant levels.	SU

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**Table 2-1 (Continued)  
Summary of Impacts and Mitigation**

Impact #	Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
	term mobile noise sources (i.e., SR 99, Cosumnes River Boulevard, Bruceville Road), and because cumulative development would result in an increase in traffic volumes and associated traffic noise from these sources, it is anticipated the cumulative long-term mobile source noise and noise compatibility impacts on existing and proposed future noise-sensitive land uses in the area would represent a significant and unavoidable cumulative impact. The proposed project and the development alternatives (Alternatives AB and AC) would contribute to this impact. The extent of this impact would be similar between the proposed project and each of the development alternatives because, although the traffic volumes generated by each would vary, the differences in traffic volumes would not result in an audible (i.e., 3 dBA or more) difference in mobile-source noise.			
AA	No new development would occur at the project site under the No Project (No Development) Alternative, and therefore there would be no contribution to the anticipated increase in area-wide noise levels. No impact would occur.	NI	No mitigation is required.	NI
<b>DRAINAGE</b>				
<b>6.5-1 Flooding</b>				
PP, AA, AB, AC	The project site is not located within a 100-year floodplain, and thus would not expose persons or structures to 100-year flood hazards. No impact would occur.	NI	No mitigation is required.	NI
<b>6.5-2 Drainage</b>				
PP, AB, AC	The proposed project and development alternatives would divert project flows to a proposed new storm drain along Bruceville Road and discharge project stormwater runoff to Union House Creek via a proposed new outfall to be located approximately 400 feet west of the Cosumnes River Boulevard/Bruceville Road intersection (Exhibit 3-5). The proposed on- and off-site storm drain system has been	S	The project applicant shall size the proposed Bruceville Road trunk storm drain, West Stockton Boulevard storm drain, and the outfall to Union House Creek assuming no onsite detention within the parcels upstream of the project site within Watershed #1 (i.e., implement the larger pipes as called for under the Alternative 2 storm drain system).	LTS

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**Table 2-1 (Continued)  
Summary of Impacts and Mitigation**

Impact #	Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
	<p>designed in accordance with the Sacramento City Storm Drainage Design Standards. It would be designed and sized to accommodate flows from both the project site and the 54 acres of the neighboring watershed south of the site.</p> <p>The impact of the 117 acre Watershed #1, which includes the proposed project, was analyzed in the College Square Drainage Report (Appendix E-2 of the EIR) and found to decrease the water surface elevations in Union House Creek. The proposed storm drain system would safely convey stormwater runoff through and off the project site without onsite or downstream flooding, and a less-than- significant impact would occur. The extent of this impact would be slightly less under the General Plan Buildout Alternative because slightly less post-construction runoff would be generated, and slightly greater under the Park-and-Ride Alternative because slightly more post-construction runoff would be generated.</p> <p>Prior to development of the site, the project applicant would be required to submit final drainage plans to the City’s Public Works Department for review and approval. Through this review and approval, the adequacy of the proposed storm drains to accommodate the required runoff volumes would be assured.</p> <p>The project applicant has proposed two alternatives for the proposed storm drain system. Alternative 1 would size the proposed storm drain facilities assuming detention within the 54-acre up-stream, off-site portion of watershed #1 (i.e., be designed with less capacity). Alternative 2 would size the proposed storm drain facilities assuming no upstream detention (i.e, be designed with greater capacity). Implementing Alternative 1 without the upstream detention</p>			

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**Table 2-1 (Continued)  
Summary of Impacts and Mitigation**

Impact #	Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
	could result in on-site or downstream flooding which would represent a significant impact.			
AA	The No Project (No Development) Alternative would not alter existing drainage conditions at the project site. No development would occur on the project site that would alter existing drainage patterns or the quantity of stormwater runoff generated on the project site. No impact would occur.	NI	No mitigation is required.	NI
<b>6.5-3 Runoff Water Quality</b>				
PP, AB, AC	<p>The water quality plan for the proposed project (and the development alternatives) includes proposals for a comprehensive set of construction and operational Best Management Practices (BMPs) to help reduce the amount of urban pollutants in stormwater runoff from the project site during construction and operation. Proposed construction BMP include straw wattle around the perimeter of construction areas, slope projection, and temporary sediment basins, and other BMPs to reduce first flush siltation and pollutants in runoff from the project site. The proposed operational BMP include on-site water quality pre-treatment grassy swales, oil/grit separators, and other devices recommended by the City of Sacramento Guidance Manual for Onsite Stormwater Quality Control Measures to reduce oils, grease, and other urban pollutants in runoff from the site.</p> <p>The proposed project and the development alternatives would convert the project site from an existing vacant (disturbed grassland) condition to an urban condition. This would increase both the volume of runoff generated on the project site and the amount of urban pollutants in this runoff (due to the deposition on the ground of fuels, oils, pesticides, and other contaminants typical of urban development and motor vehicle use). The proposed BMPs, and/or other</p>	LTS	No mitigation is required.	LTS

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**Table 2-1 (Continued)  
Summary of Impacts and Mitigation**

Impact #	Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
	BMPs which may be required by the Regional Water Quality Control Board (RWQCB) as part of the permitting for the proposed project, would decrease the pollutant load from the project to a less-than-significant impact. The extent of this impact would be slightly less for the General Plan Buildout Alternative and slightly greater for the Park-and-Ride Alternative.			
AA	The No Project (No Development) Alternative would not include construction or operational activities at the project site that would create pollutants in stormwater runoff from the project site. No impact would occur.	NI	No mitigation is required.	NI
<b>6.5-4 Cumulative Flooding, Drainage, and Runoff Water Quality</b>				
PP, AA AB, AC	<p>The proposed project, development alternatives, and the related projects (i.e., South Sacramento Corridor Phase 2 Project, Strawberry Creek Center, Bruceville Road Widening) would all be developed outside of the 100-year floodplain and would not be subject to flooding from 100-year flows. However, some cumulative development within relatively close proximity to the SSCP area is currently located within the 100-year floodplain and could thus potentially be subject to flooding during 100-year storm events. The proposed project would not be part of the development potentially subject to such flooding. Hence, a less-than-significant cumulative flood impact would occur.</p> <p>Cumulative development within Watershed #1 would increase the amount of impervious surface coverage and increase runoff and the need for storm drain improvements. If the cumulative development projects within Watershed #1 were not to develop storm drain facilities planned for the area or if the proposed cumulative development were to result in a greater amount of impervious surfaces than assumed for Watershed #1 in the San Jacinto Master</p>	LTS	No mitigation is required.	LTS

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**Table 2-1 (Continued)  
Summary of Impacts and Mitigation**

Impact #	Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
	<p>Drainage Plan, cumulative drainage impacts could occur. With mitigation, the proposed project would not contribute to any such potential cumulative drainage impacts. Hence, a less-than-significant cumulative drainage impact would occur.</p> <p>It is assumed that cumulative development within the SSCP would occur consistent with all runoff surface water quality requirements (as compliance with these requirements is a pre-requisite for development). However, it is not certain that all cumulative projects would maximize the use of BMPs to reduce urban pollutants in runoff to the maximum extent feasible. If the cumulative development were to not implement all BMPs feasible to reduce urban pollutants in stormwater runoff, the water quality of area waterways could be significantly degraded over time. Because the proposed project and development alternatives would maximize the use of BMPs to reduce urban pollutants in water quality to the maximum extent feasible, and because the No Project Alternative would change conditions on the project site, they would not contribute to any cumulative water quality impacts. Hence, a less-than-significant impact would occur.</p>			

**POPULATION AND HOUSING**

**6.6-1 Consistency with Relevant Plans (Operation)**

PP	<p>The proposed project would support the City of Sacramento General Plan's goals and policies regarding (1) provision of affordable housing for all income groups; (2) provision of a range of housing types; (3) development of housing in an efficient manner; (4) promotion of infill housing; (5) meeting the City's required fair share of the region's housing needs; and (6) provision of housing in mixed-use developments, including TOD, to reduce traffic. The proposed project would also support the South Sacramento</p>	BI	No mitigation is required.	BI
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**Table 2-1 (Continued)  
Summary of Impacts and Mitigation**

Impact #	Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
	Community Plan (SSCP) goals and policies regarding affordable and senior housing, infill development, and planned unit development. The above would represent a beneficial impact. No conflicts with relevant jobs and housing plans would occur.			
AB	The General Plan Buildout Alternative would be more effective than the proposed project in achieving the City’s affordable housing objectives because it would develop more housing units and thus a greater number of affordable housing units. Like the proposed project, this alternative would be consistent with the City’s call for infill development, the efficient use of existing urban services, and would be developed under a PUD as required by the City’s “R Review” zoning to ensure high-quality development. Unlike the proposed project, this alternative would not include transit oriented development (TOD) to reduce traffic. Overall, this alternative would be more effective than the proposed project in meeting the affordable housing objectives of the City and the City’s fair share of the region’s housing needs, and less effective meeting the City’s objectives for provision of housing in mixed-use developments, including TOD, to reduce traffic. A beneficial impact would occur.	BI	No mitigation is required.	BI
AC	Under the Park-and-Ride Alternative, fewer residential units, including low-income units, would be developed than under the proposed project, while the same number of senior units would be developed. Like the proposed project, this alternative would be consistent with goals and policies encouraging the development of infill sites, making efficient use of existing urban services, developing as a planned unit development, and developing as a mixed-use development that would offer employment opportunities to project residents and potentially reduce work-related travel time.	BI	No mitigation is required.	BI

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**Table 2-1 (Continued)  
Summary of Impacts and Mitigation**

Impact #	Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
	Overall, this alternative would be more effective than the proposed project in meeting the City’s housing objectives as they relate to mixed-use development and TOD, and less effective in meeting the City’s housing objectives as they relate to affordable housing and meeting regional housing needs. A beneficial impact would occur.			
AA	No development would occur under the No Project (No Development) Alternative. Therefore, the project site would remain undeveloped, and no conflicts with relevant plans would occur.	NI	No mitigation is required.	NI
<b>6.6-2 Induce Population Growth (Operation)</b>				
PP, AB, AC	<p>The proposed project would result in an onsite resident population of approximately 1,210 persons. This would represent 0.3% and 1.7% of the existing (2003) City and SSCP populations, respectively, and 0.2% and 1.6% of the 2010 City and SSCP populations, respectively. The proposed project would not directly induce substantial population growth that has not already planned for in the General Plan. The General Plan Buildout Alternative (AB) would generate a 35% greater onsite resident population than the proposed project, whereas the Park-and-Ride Alternative (AC) would generate a 37% smaller onsite resident population than the proposed project. The proposed project and these alternatives would result in a less than significant direct population growth inducement impact.</p> <p>The proposed project and Alternatives AB and AC would also not induce substantial population growth indirectly because they would represent infill development and would not extend roads or utility infrastructure to new areas. While both the proposed project and the Park-and-Ride Alternative would generate approximately 890 new jobs that has not been planned for in the General Plan, these jobs would be</p>	LTS	No mitigation is required.	LTS

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**Table 2-1 (Continued)  
Summary of Impacts and Mitigation**

<b>Impact #</b>	<b>Impact</b>	<b>Significance Before Mitigation</b>	<b>Mitigation Measures</b>	<b>Significance After Mitigation</b>
	primarily lower paying service commercial jobs that would be filled by existing area residents; they would not attract new employees from outside the region or require substantial new housing. This impact would be less than significant. The extent of this impact would be similar between the proposed project and Alternatives AB and AC.			
AA	No development would occur under the No Project (No Development) Alternative. No impact would occur.	NI		NI
<b>6.6-3 Displace Existing Housing (Operation)</b>				
PP, AA, AB, AC	The project site is currently vacant. Because no housing is located on the site, no housing would be displaced under the proposed project or any of the alternatives. No impact would occur.	NI	No mitigation is required.	NI
<b>6.6-4 Displace Existing Population (Operation)</b>				
PP, AA, AB, AC	Because no housing or businesses exist at the project site, no population would be displaced with implementation of the proposed project or any of the alternatives. No impact would occur.	NI	No mitigation is required.	NI
<b>6.6-5 Affect Jobs/Housing Balance (Operation)</b>				
PP, AB, AC	The City's 2001 jobs/housing ratio was 1.68 (i.e., jobs rich), whereas the SSCP's jobs/housing ratio was 0.97 (slightly housing rich). This is expected to change over time, to 1.73 and 1.05, respectively.  The jobs/housing ratio would be 1.22 for the proposed project, 0.0 for Alternative AB, and 1.9 for Alternative AC. The proposed project would have (1) a negative effect on jobs/housing balance in the City because it would contribute to the existing and projected future jobs-rich condition in the City, (2) a positive effect on jobs/housing balance in the SSCP in the near term because it would represent a jobs-rich project in a currently slightly housing-rich area, and (3) a	LTS	No mitigation is required.	LTS

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**Table 2-1 (Continued)  
Summary of Impacts and Mitigation**

Impact #	Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
	<p>negative effect on jobs/housing balance in the SSCP area in the future because it would contribute to future projected jobs-rich conditions in the SSCP area. Overall, the proposed project and Park-and-Ride Alternative would result in negative jobs/housing impacts because they would provide more jobs than housing in areas that are or will be jobs rich, while the General Plan Buildout Alternative would have an overall positive jobs/housing impact because it would provide housing in areas that are or will be jobs rich.</p> <p>Because the project site would have access to future adjacent light rail, any jobs/housing imbalance that would occur would be mitigated because onsite residents would potentially be able to travel to their places of employment by using light rail rather than by making offsite motor vehicle trips. This would also be potentially true of onsite employees who could travel to their jobs using light rail. A less than significant impact would occur.</p>			
AA	No development would occur under the No Project (No Development) Alternative. Hence, implementing this alternative would result in neither a positive nor a negative effect in terms of jobs/housing balance.	NI	No mitigation is required.	NI
<b>6.6-6 Induce Population Growth (Cumulative)</b>				
PP, AB, AC	As indicated under Impact 6.6-2, the proposed project and Alternatives AB and AC would result in less than significant population growth inducement impacts. If the cumulative development were to occur consist with the General Plan and SSCP, it would not result in substantial direct growth inducement because this development and associated population have already been planned for in the City's General Plan. Because some of this cumulative development would occur at eastern and western peripheries of the SSCP area, where large plots of open space still	LTS	No mitigation is required.	LTS

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**Table 2-1 (Continued)  
Summary of Impacts and Mitigation**

Impact #	Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
	remain, the extension of roads and utilities to these areas could represent an indirect growth inducement impact by opening up these areas to development. However, even these open space areas have been planned for growth. Hence, cumulative development would not induce substantial population growth either directly or indirectly. A less-than-significant cumulative impact would occur.			
AA	No development would occur under the No Project (No Development) Alternative, so this alternative could not contribute to a cumulative impact. No impact would occur.	NI	No mitigation is required	NI
<b>6.6-7 Displace Existing Housing and Population (Cumulative)</b>				
PP, AA, AB, AC	No existing housing or population would be displaced with implementation of the proposed project or any of the alternatives; therefore, neither the project nor any of the alternatives could contribute to a cumulative impact. No impact would occur.	NI	No mitigation is required.	NI
<b>6.6-8 Affect Jobs/Housing Balance (Cumulative)</b>				
PP, AB, AC	Given the City of Sacramento's current and anticipated future role as an employment center in the region, it is anticipated that the City would continue to be jobs rich. Hence, it is likely that cumulative growth in the City would continue to be jobs rich as well, continuing this trend. The proposed project and the Park-and-Ride Alternative would contribute to these jobs-rich conditions and thus would contribute to cumulative jobs/housing imbalance. Because the General Plan Buildout Alternative would be housing rich, it would not contribute to this cumulative jobs/housing imbalance. However, given that this growth has already been planned for in the General Plan, the relatively small size of the project and alternatives when compared to the City or SSCP area as a whole, and the future presence of light rail adjacent to the project site, the project and alternatives would not contribute substantially to	LTS	No mitigation is required	LTS

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**Table 2-1 (Continued)  
Summary of Impacts and Mitigation**

<b>Impact #</b>	<b>Impact</b>	<b>Significance Before Mitigation</b>	<b>Mitigation Measures</b>	<b>Significance After Mitigation</b>
	jobs/housing imbalance. A less than significant impact would occur.			
AA	No development would occur under the No Project (No Development) Alternative, so this alternative could not contribute to a cumulative jobs/housing balance impact.	NI	No mitigation is required.	NI
<b>LIGHT AND GLARE</b>				
<b>6.7-1 Light and Glare Impacts during Construction</b>				
PP, AB, AC	<p>City ordinances restrict construction activities to daytime hours. Hence, construction activities under the proposed project and Alternatives AB and AC would not occur at the project site during nighttime hours, and no substantial lighting would be generated associated with construction activities. However, if construction site security lighting were to be located close to the existing residences or along SR 99, it could result in a significant impact.</p> <p>Construction activities associated with the proposed project and the development alternatives would not create a new source of substantial glare because these activities would not include the handling of large expanses of glass or other reflective materials (because no high-rise buildings are proposed), and would not include the parking of large numbers of motor vehicles at a single location. A less-than-significant impact would occur.</p>	S	To the degree possible, the project applicant and construction contractors shall locate lit construction sites and construction storage areas away from existing adjacent residential uses and the SR 99 frontage. All construction security lighting shall be shielded, focused downward, and focused away from residential areas and public streets.	LTS
AA	No construction activities would occur at the project site under the No Project (No Development) Alternative. No impact would occur.	NI	No mitigation is required.	NI
<b>6.7-2 Light Impacts on Existing Sensitive Land Uses (Operation)</b>				
PP	Operation of the proposed project would introduce light to a previously undeveloped site, possibly affecting the existing senior housing to the north, residences to the northwest, south and southwest, and motorists on SR 99 and the SR	S	The project applicant shall ensure that the landscaping concepts shown in the landscape plan are extended to the residential component of the project and that the southern boundary of the project receives the same landscape	LTS

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**Table 2-1 (Continued)  
Summary of Impacts and Mitigation**

Impact #	Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
	<p>99/Cosumnes River Boulevard/Calvine Road overpass.</p> <p>The project's PUD guidelines require that exterior lighting be compatible with surrounding land uses, parking lot light standards be limited to 20 feet in height, roof-top lighting, searchlights, illuminating advertisements, and illuminated balloons be prohibited, and that security lighting be limited to that which is non-intrusive to neighboring property owners and motorists. The proposed landscape plan (Exhibit 3-7) shows that the western, northern, and eastern borders of the site would be planted with an almost continuous line of large-canopy trees, with the exception of the southern portion of the proposed project (the project's residential component) for which the proposed landscape plan does not identify landscaping. This lack of information about proposed landscaping is partially offset by the landscaping requirements of the PUD guidelines which are applicable to the whole of the project site.</p> <p>The proposed PUD Guidelines requirements and landscape plan, the proposed site plan which would internalize much of the project lighting, and the presence of existing intervening light sources, would combine to result in less than significant impacts on existing adjacent land uses to the north, west and east. However, the lack of proposed vegetative or other visual screening along the southern boundary of the project site could result in a potentially significant light impact to the existing residences to the south.</p>		<p>treatment as shown in the landscape plan along the eastern, northern, and western boundaries of the project site. The project applicant also shall ensure that all project lighting is shielded, focused downward, and focused away from residential areas and public streets. Finally, the project lighting shall comply with all other applicable requirements of the City's Zoning Ordinance and other light regulations.</p>	
AB	<p>Under the General Plan Buildout Alternative, the project site would be developed with two-story apartments and condominiums. Lighting under this alternative would be of a lower intensity than under the proposed project given the</p>	S	Implement Mitigation Measure 6.7-2.	LTS

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**Table 2-1 (Continued)  
Summary of Impacts and Mitigation**

Impact #	Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
	<p>lack of commercial use lighting under this alternative. This alternative would result in lighting that is more compatible with the surrounding land uses than the proposed project. Still, without visual screening along the southern boundary of the project site, this alternative could result in a potentially significant light impact to the existing adjacent residential uses to the south.</p>			
AC	<p>Under this alternative, the project site would be developed as proposed under the College Square project, except that a park-and-ride lot would be developed on the southwest parcel instead of apartment development. Because the difference between the proposed project and this alternative would only be in the southwestern portion of the site, and because this alternative would adhere to the College Square PUD Guidelines for landscaping/screening and the College Square Landscape Plan, this alternative would result in the same less than significant impacts to existing adjacent uses to the north, east and west as the proposed project.</p> <p>The College Square Landscape Plan does not identify planned landscaping for the southern portion of the project site. Because this alternative would include development of a lit, nine acre, 500 space park-and-ride lot on the southwest parcel in addition to apartment further to the east, this alternative would result in significant light impacts to existing adjacent residential uses to the south and southwest. Given the large lit parking lot under this alternative, the extent of this light impact would be greater than under the proposed project which would not include the lot.</p>	S	<p>The project applicant shall ensure that all project lighting is shielded, focused downward, and focused away from residential areas and public streets. The project lighting also shall comply with all other applicable requirements of the City's Zoning Ordinance and other light regulations. In addition, the applicant may introduce a visual barrier between the lot and views from Bruceville Road and from the residences south of the project site. The form of that barrier could be determined based on the results of noise reduction analyses conducted for the project. As described in Section 6.4, Noise, to determine the most effective means to comply with City of Sacramento and California noise requirements, a detailed analysis of noise reduction requirements would be made when special permits are submitted for each project component. If a sound wall is selected as the preferred approach to reduce noise levels associated with the park-and-ride lot, landscape treatments would be provided along the outer edge of the wall to soften the appearance of the wall. If a sound wall is not constructed along that portion of the project site, the applicant shall landscape the southern border of the site with the same landscape treatments as shown in the landscape plan along the eastern, northern, and western boundaries of the site.</p>	LTS
AA	<p>No development would occur under the No Project (No Development) Alternative. Therefore, the project site would</p>	NI	<p>No mitigation is required.</p>	NI

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**Table 2-1 (Continued)  
Summary of Impacts and Mitigation**

Impact #	Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
	remain undeveloped, and no conflicts with relevant plans would occur.			
<b>6.7-3 Glare Impacts on Existing Sensitive Land Uses (Operation)</b>				
PP, AB	Implementation of the proposed project and the development alternatives (Alternatives AB and AC) could increase daytime glare in the area associated with outdoor building facades and car windshields. However, the College Square PUD Guidelines require that site design and construction materials be selected to minimize glare, the proposed landscape plan calls for vegetative screening and parking lot trees, the project would not include mid or high rise glass clad buildings or large unscreened parking lots which are typical sources of glare, and parking lots would be internalized and blocked from most adjacent views by proposed buildings. For all these reasons the proposed project would result in a less-than-significant impact glare impact. The extent of this impact would be less under the General Plan Buildout Alternative (Alternative AB) because, while this alternative would not implement the landscape plan proposed under the proposed project, it would still be subject to the City’s landscaping and shading requirements, and at the same time would develop low-rise apartments instead of commercial uses and large parking lots.	LTS	No mitigation is required.	LTS
AC	Under the Park-and-Ride Alternative, the same land uses would be developed in the northern and eastern portions of the project site. For the same reasons discussed under Impact 6.7-3 for the proposed project, this alternative would result in less-than-significant glare impacts to adjacent land uses to the north, east and west. However, this alternative would include a 9-acre park-and-ride lot on the southwest parcel. This parking lot would be at the periphery of the project site as opposed to the large parking lots under the proposed project that would be mostly internal to the project	S	Implement Mitigation Measure 6.7-2.	LTS

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**Table 2-1 (Continued)  
Summary of Impacts and Mitigation**

Impact #	Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
	site. The City has shading requirements for parking lots that requires a relatively high density of tree plantings within parking lots. This tree planting requirement would avoid any potential for substantial glare impacts from this parking lot on the SR 99/Calvine Road/Cosumnes River Boulevard overpass. However, the proposed landscape plan does not extend to the southwest parcel. Hence, this alternative would result in the development of a 500-space unscreened parking lot within relatively close proximity of existing residential uses which could result in a potentially significant glare impact.			
AA	No development would occur at the project site under the No Project (No Development) Alternative. No impact would occur.	NI	No mitigation is required.	NI
<b>6.7-4 Light and Glare Impacts on Sensitive Land Uses (Cumulative)</b>				
PP, AB, AC	With development of the proposed project and the projects adjacent to the project site (e.g., Strawberry Creek Centre, RT Phase 2 Light Rail Corridor Project, widening of Bruceville Road and Cosumnes River Boulevard, signalized intersection at the college entrance off Bruceville Road), the area would be transformed from an unlit or dimly lit rural environment to a lit urbanized environment that also generates daytime glare. However, the project site and the sites of the projects identified above are surrounded on all sides by urban development. Because existing light-sensitive land uses in the area are already subjected to some urban light and glare, each new project to be developed in the area would be subject to City lighting standards, landscaping standards, and other buffering requirements, and with implementation of the light mitigation identified for the proposed project, the cumulative light and glare impacts in the area would be less than significant. This impact would be slightly less under the General Plan Buildout Alternative	LTS	No mitigation is required.	LTS

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**Table 2-1 (Continued)  
Summary of Impacts and Mitigation**

<b>Impact #</b>	<b>Impact</b>	<b>Significance Before Mitigation</b>	<b>Mitigation Measures</b>	<b>Significance After Mitigation</b>
	and slightly greater under the Park-and-Ride Alternative.			
AA	No development would occur at the project site under the No Project (No Development) Alternative. No increase in light and glare impacts would occur under this alternative because this alternative would not contribute to any significant cumulative impact that may result associated with cumulative development. No impact would occur.	NI	No mitigation is required.	NI
<b>PUBLIC SERVICES AND UTILITIES</b>				
<b>6.8-1 School Facilities/Services (Construction)</b>				
PP, AB, AC	At most, several dozen construction workers would be working on the project site at any one time during project construction. However, it is not anticipated that construction workers' families would place a demand on the school district because the construction industry differs from most other industry sectors in that there is no regular place of work (i.e., construction workers commute to a job site that may change many times during the course of the year; and construction workers do not generally change their place of residence each time they change job sites. Therefore, project construction workers would not generate a substantial increase in school enrollment in the area. A less-than-significant impact would occur.	LTS	No mitigation is required.	LTS
AA	Conditions at the proposed project site would remain as they currently exist. No demand for school facilities would result. Therefore, no impact would occur.	NI	No mitigation is required.	NI
<b>6.8-2 School Facilities/Services (Operation)</b>				
PP, AB, AC	The proposed project would generate an estimated 254 school students during operation (144 K-6, 35 junior high, and 75 high school). The General Plan Buildout Alternative would generate approximately twice as many students and the Park-and-Ride Alternative about half as many.	LTS	No mitigation is required.	LTS

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**Table 2-1 (Continued)  
Summary of Impacts and Mitigation**

Impact #	Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
	Two of the three schools that would serve the proposed project and alternatives currently has unused capacity. Irene B West Elementary and Harriet G. Eddy Middle School, have 3 and 267 empty seats, respectively. Laguna Creek High School is currently 126 students over capacity, and therefore, has no empty seats. Five additional schools have been funded within the EGUSD to supplement existing school capacity, and 28 new schools are being planned within the EGUSD to accommodate additional population growth in the EGUSD. The project applicant would be required to pay the state-mandated school impact fees required to mitigate impacts on schools from proposed development. The state considers payment of these fees as full and complete mitigation for impacts to schools (California Government Code §65995 and §65996). For all these reasons, the proposed project, General Plan Buildout Alternative, and Park-and-Ride Alternative would each result in a less-than-significant impact. The degree of this impact would be higher under the General Plan Buildout Alternative and less under the Park-and-Ride Alternative, relative to the proposed project.			
AA	Conditions at the proposed project site would remain as they currently exist. No demand for school facilities would result. Therefore, no impact would occur.	NI	No mitigation is required.	NI
<b>6.8-3 School Facilities/Services (Cumulative)</b>				
PP, AB, AC	The proposed project in concert with past, present, and reasonably foreseeable future cumulative growth within the EGUSD service area, would create an increased demand for school services and facilities from the EGUSD. The EGUSD is making efforts to accommodate this demand through its current construction and planning program for new schools (see Impact 6.8-2). As required by existing regulations, the cumulative development in the EGUSD	LTS	No mitigation is required.	LTS

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**Table 2-1 (Continued)  
Summary of Impacts and Mitigation**

Impact #	Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
	service area is subject to state-mandated school impact fees to mitigate impacts on schools associated with development which the state considers full and complete mitigation (California Government Code §65995 and §65996). Therefore, a less-than-significant cumulative impact would occur.			
AA	Conditions at the proposed project site would remain as they currently exist. No demand for school facilities would result. No impact would occur.	NI	No mitigation is required.	NI
<b>6.8-4 Water Facilities/Services (Construction)</b>				
PP, AB, AC	<p>Project construction activities could potentially interrupt water service to existing land uses if such construction activities were to damage existing water lines or create the need to re-route existing water lines. However, the City requires that all proposed grading, excavation, construction, and utility plans be reviewed and approved before construction. No impact would occur.</p> <p>Project construction activities would create a temporary short-term demand for water from the City for dust suppression and construction-vehicle wash-down. Because this water use would be temporary, short-term, and represent a very small proportion of the total potable water use in the City, a less-than-significant impact would occur. The degree of this impact would be similar between the proposed project and the two development alternatives as roughly the same amount of grading would occur under each.</p>	LTS	No mitigation is required.	LTS
AA	Conditions at the proposed project site would remain as they currently exist. No potential for interruption of water service or demand for water would result. Therefore, no impact would occur.	NI	No mitigation is required.	NI

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**Table 2-1 (Continued)  
Summary of Impacts and Mitigation**

Impact #	Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<b>6.8-5 Water Facilities/Services (Operation)</b>				
PP, AB, AC	<p>The proposed project would consume an estimated 240,962 gpd or 270 AFY) of potable water. This would represent a 100% increase in water currently consumed at the project site, 0.19% of the City’s current potable water consumption, and 0.15% of the City’s projected 2020 potable water consumption. The SB 610 WSA prepared for project (included as Appendix H of this EIR) evaluates the adequacy of existing and future water supplies to meet project water demand in conjunction with existing and future development in the City over the next 20 years. As indicated, the existing City water supply is 148,000 AFY, normal year future City water supply would range from 205,500 AFY in 2005 to 249,000 AFY in 2020, and future City water demand (i.e., proposed project plus existing/future city development) would range from 150,278 AFY in 2005 to 175,899 AFY in 2020. As further indicated, while the project would consume approximately 80 AFY more water than projected for the site in the City’s Urban Water Management Plan (UWMP), the City is projected to have a normal year surplus supply of over 73,000 acre-feet per year in 2020 regardless of whether or not the proposed project is developed. This is also true during single dry and multiple dry years where the City would have a surplus supply of approximately 63,000 acre-feet per year in 2020. Therefore, adequate water is available to serve the proposed project and a less-than-significant impact would occur with respect to water supply.</p> <p>Water for the project would be provided by the City’s municipal water system by connecting to existing water lines in the vicinity. A booster pump would be constructed on each parcel to increase the available water pressure for their domestic needs. A separate fire protection water system</p>	LTS	No mitigation is required.	LTS

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**Table 2-1 (Continued)  
Summary of Impacts and Mitigation**

Impact #	Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
	<p>would be constructed onsite which would include a booster pump system to provide the required fire flow and pressures. Based on the proposed utility plans (included in Chapter 3, Section 6.8, and Appendix A (PUD Guidelines) of this EIR), it would appear that adequate plans are being proposed to convey water to the proposed project. This would be determined conclusively during the design phases of the project and associated City Department of Public Works review of the design plans and final map. With City review, adequate water conveyance infrastructure would be provided to serve the proposed project would a less than significant impact would occur with respect to the adequacy of water conveyance infrastructure.</p>			
AA	<p>Conditions at the proposed project site would remain as they currently exist. No new demand for water supply would result. Therefore, no impact would occur.</p>	NI	No mitigation is required.	NI
<b>6.8-6 Water Facilities/Services (Cumulative)</b>				
PP, AB, AC	<p>See Impact 6.8-8, which also covers cumulative water supply and demand. As indicated, existing and future water supplies would be adequate to serve the proposed project in combination with cumulative growth in the City. A less-than-significant impact would occur.</p> <p>As indicated under Impact 6.8-8, adequate water conveyance infrastructure would be provided to serve the proposed project. City Department of Public Works review and approval of water utility plans associated with proposed cumulative projects in the area would assure that adequate water conveyance infrastructure is provided to serve cumulative development. The proposed project in combination with cumulative development in the South Sacramento Community Plan (SSCP) area could eventually require that water trunk lines and pump stations serving the</p>	LTS	No mitigation is required.	LTS

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Summary of Impacts and Mitigation**

<b>Impact #</b>	<b>Impact</b>	<b>Significance Before Mitigation</b>	<b>Mitigation Measures</b>	<b>Significance After Mitigation</b>
	Community Plan area be enlarged or upgraded. Such regional improvements are carried out by the City on an ongoing basis as part of the City's Capital Improvements Program, and it is thus anticipated that adequate water conveyance infrastructure would continue to be available within the SSCP area in the future. Based on the above, no impact would occur with respect to the adequacy of cumulative water conveyance infrastructure.			
AA	Conditions at the project site would remain as they currently exist. No demand for or interruption of water service would result. No impact would occur.	NI	No mitigation is required.	NI
<b>6.8-7 Solid Waste Facilities/Services (Construction)</b>				
PP, AB, AC	Construction waste would be generated associated with clearing of the project site and construction of onsite structures, utilities, and roadways. This construction debris would represent a tiny fraction of the amount of solid waste received by the Keifer, Forward, and/or Lockwood landfills in a single day, and would be both short-term and temporary. It would not create a measurable effect on the capacity of the landfill. A less-than-significant impact would occur.	LTS	No mitigation is required.	LTS
AA	Conditions at the project site would remain as they currently exist. No generation of solid waste would result. No impact would occur.	NI	No mitigation is required.	NI
<b>6.8-8 Solid Waste Facilities/Services (Operation)</b>				
PP, AB, AC	The proposed project would generate an estimated 8,495 pounds per day of solid waste during operation while the General Plan Buildout Alternative would generate slightly more than this each day and the Park-and-Ride Alternative approximately 25% less. This waste would represent a tiny fraction of the amount of solid waste received by the Keifer, Forward, and/or Lockwood landfills in a single day, and would not create a measurable effect on the capacity of the landfill. The proposed project would also comply with all	LTS	No mitigation is required.	LTS

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**Table 2-1 (Continued)  
Summary of Impacts and Mitigation**

<b>Impact #</b>	<b>Impact</b>	<b>Significance Before Mitigation</b>	<b>Mitigation Measures</b>	<b>Significance After Mitigation</b>
	federal, state, and local statutes and regulations related to solid waste reduction/recycling. A less-than-significant impact would occur. The extent of this impact would be slightly greater under the General Plan Buildout Alternative and slightly less under the Park-and-Ride Alternative.			
AA	Conditions at the proposed project site would remain as they currently exist. No generation of solid waste would result. Therefore, no impact would occur.	NI	No mitigation is required.	NI
<b>6.8-9 Solid Waste Facilities/Services (Cumulative)</b>				
PP, AB, AC	The proposed project in conjunction with cumulative development in the South Sacramento area would generate solid waste during construction and operation. Because solid waste haulers use a variety of landfill facilities, and the landfills that serve the South Sacramento area have remaining capacities through the foreseeable future (based on existing growth projections) capacity exists within the landfill system to accommodate project plus cumulative development. A less-than-significant impact would occur.	LTS	No mitigation is required.	LTS
AA	Conditions at the proposed project site would remain as they currently exist. No generation of solid waste would result. Therefore, no impact would occur.	NI	No mitigation is required.	NI
<b>BIOLOGICAL RESOURCES</b>				
<b>6.9-1 Loss of Burrowing Owl</b>				
PP, AB, AC	Burrowing owls could occupy the grasslands in the project site prior to the start of construction. No burrowing owls were observed onsite during reconnaissance-level surveys, but suitable habitat is present. However, burrowing owls have been observed as recently as 2002 in the playing field at Cosumnes River College. If burrowing owls are present in construction areas, occupied burrows could be destroyed under the proposed project and the development alternatives. This would represent a significant impact. The extent of this	S	The project applicant shall undertake the following:  1. Prior to construction activity, focused pre-construction surveys would be conducted by a qualified biologist for burrowing owls where suitable habitat is present within 250 feet of the proposed construction areas. Surveys would be conducted no less than 14 days and no more than 30 days prior to commencement of construction activities and surveys would be conducted in	LTS

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**Table 2-1 (Continued)  
Summary of Impacts and Mitigation**

Impact #	Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
	<p>impact would be similar between the proposed project and each of the development alternatives as generally the same amount of land would be disturbed under each.</p>		<p>accordance with CDFG protocol.</p> <ol style="list-style-type: none"> <li>2. If no occupied burrows are found on the project site, a letter report documenting survey methods and findings prepare by the qualified biologist would be submitted to CDFG for review and approval, and no further mitigation would be necessary.</li> <li>3. If occupied burrows are found, impacts to them would be avoided by providing a construction buffer of 165 feet during the non-breeding season (September 1 through January 31) or 250 feet during the breeding season (February 1 through August 31). If construction occurs during the breeding season, the applicant would ensure that a minimum of 6.5 acres of contiguous foraging habitat is available surrounding the occupied burrowing owl nest burrow.</li> <li>4. If adverse affects to occupied burrows (direct removal or construction within the buffer zone as defined in #3 above) are unavoidable, onsite passive relocation techniques approved by CDFG would be used to encourage owls to move to alternative burrows outside of the impact area. However, no occupied burrows would be disturbed during the nesting season unless a qualified biologist verifies through non-invasive methods that juveniles from the occupied burrows are foraging independently and are capable of independent survival. Mitigation for foraging habitat for relocated pairs would follow guidelines provided in the California Burrowing Owl Consortium Guidelines (1993) which range from 6.5 to 19.5 acres per pair.</li> </ol>	

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Summary of Impacts and Mitigation**

Impact #	Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
AA	No development would occur as a result of this alternative, so no burrowing owls would be affected. No impact would occur.	NI	No mitigation is required.	NI
<b>6.9-2 Removal of Swainson's Hawk Foraging and Nesting Habitat</b>				
PP, AB, AC	Approximately 63 acres of grassland and seasonal wetland habitat that provide foraging habitat for Swainson's hawk would be removed as a result of the implementation of the proposed project or development alternatives. In addition, several trees which provide marginal Swainson's hawk nesting habitat would be removed under the proposed project and each of the development alternatives. While abundant foraging and nesting habitat still occur in the surrounding areas, habitat for this species is being removed at a rapid rate. A significant impact would occur. The extent of this impact would be similar between the proposed project and each of the development alternatives as generally the same amount of land would be disturbed under each.	S	<p>In order to reduce the impacts of the loss of foraging and nesting habitat for Swainson's hawk, the following mitigation measures shall be implemented by the project applicant.</p> <p>For foraging impact: The following mitigation ratios were taken from the CDFG Staff Report Regarding Mitigation for Impacts to Swainson's Hawks (<i>Buteo swainsoni</i>) in the Central Valley of California, November 1994.</p> <ul style="list-style-type: none"> <li>▶ Preserve similar habitat within a 10-mile radius of the project site to be protected through fee title or conservation easement acceptable to CDFG through the payment of fees to a Swainson's hawk foraging habitat mitigation bank. Preservation ratios are as follows: <ul style="list-style-type: none"> <li>- 0.5 acres preserved for every acre lost if project site is located between 5 and 10 miles from a nest.</li> <li>- 0.75 acres preserved for every acre lost if project site is located between 1 and 5 miles from a nest.</li> <li>- acres preserved for every acre lost if project site is located within 1 mile of a nest.</li> </ul> </li> </ul> <p>For nesting impact:</p> <ul style="list-style-type: none"> <li>▶ pre-construction surveys shall be conducted by a qualified biologist to identify active nests within ½ mile of the project site. The surveys shall be</li> </ul>	LTS

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**Table 2-1 (Continued)  
Summary of Impacts and Mitigation**

Impact #	Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
			<p>conducted no less than 14 days and no more than 30 days prior to the beginning of construction of each phase of the proposed project. To the extent feasible, guidelines provided in the Recommended Timing and Methodology for Swainson’s Hawk Nesting Surveys in the Central Valley shall be followed.</p> <ul style="list-style-type: none"> <li>▶ If nests are not found, no further mitigation would be required.</li> <li>▶ If active nests are found, construction should not occur within 0.5 mile of the active nest during the breeding season (March 1 – September 15).</li> <li>▶ If construction must occur during these months, the nests would be protected by establishing appropriate buffers around each nest. CDFG guidelines recommend implementation of 0.25- or 0.5-mile buffers, but the size of the buffer may be adjusted if a qualified biologist and CDFG determine it would not be likely to adversely affect the nest. No project activity shall commence within the buffer area until a qualified biologist confirms that the nest is no longer active. Monitoring of the nest by a qualified biologist may be required if the activity could adversely affect the nesting Swainson’s hawk.</li> </ul>	
AA	No development would occur as a result of this alternative, so no Swainson’s hawk nests or foraging habitat would be affected. Hence, no impact would occur.	NI	No mitigation is required.	NI
<b>6.9-3 Loss of Jurisdictional Waters of the United States</b>				
PP, AB, AC	The proposed project and development alternatives would remove 4.9 acres of wetlands, including 2.5 acres of vernal pools and 2.4 acres of seasonal marsh/wetland, and would	S	To mitigate direct and indirect impacts on wetlands, a minimum of 11.35 acres of wetlands shall be created and 16.28 acres of wetland shall be preserved by the project	LTS

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**Table 2-1 (Continued)  
Summary of Impacts and Mitigation**

Impact #	Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
	<p>have indirect effects on 1.85 acres of constructed wetland and 0.29 acre of seasonal marsh that occur just offsite. The indirect effects would be associated with diversion of natural surface flow into the offsite wetlands which are known to contain federally listed invertebrates. Also, Union House Creek would likely be considered a jurisdictional waters of the United States, and the construction of the proposed stormwater outfall structure within this creek would require a Section 404 permit from USACE. The above would represent a significant impact. The extent of this impact would be similar between the proposed project and each of the development alternatives as generally the same amount of land would be disturbed under each.</p>		<p>applicant and the City shall verify compliance consistent with Table 6.9-2. This mitigation is in accordance with the ratios set forth in the Biological Opinion issued February 7, 2002. In addition to these ratios, all the Terms and Conditions and the Conservation Recommendations set forth in the Biological Opinion shall be implemented.</p> <p>An individual permit for discharge activities into jurisdictional waters of the United States, including wetlands, is required from the USACE under Section 404 of the Clean Water Act to fill onsite wetlands. In addition, Regional Water Quality Control Board Certification is required, pursuant to Section 401 of the Clean Water Act.</p> <p>For the proposed stormwater outfall to Union House Creek: (1) a wetland delineation is required to determine the presence of Jurisdictional Waters of the United States; (2) a Section 404 permit shall be obtained from USACE for the discharge or dredge or fill material into jurisdictional waters of the United States; (3) RWQCB Certification is required, pursuant to Section 401 of the Clean Water Act; and (4) a Streambed Alteration Agreement is required by CDFG for impacts to the bed or bank of the creek.</p>	
AA	<p>No development would occur as a result of this alternative, so no waters of the United States would be removed or indirectly affected. Hence, no impact would occur.</p>	NI	No mitigation is required.	NI
<b>6.9-4 Loss of Habitat for Vernal Pool Invertebrates</b>				
PP, AB, AC	<p>The Biological Opinion dated February 7, 2002, considers all wetlands including vernal pool, seasonal wetland and seasonal marsh, habitat for the federally listed vernal pool fairy and vernal pool tadpole shrimp. The Biological Opinion was issued for the project site, excluding the southwest parcel; however, these species are assumed to be</p>	S	Implement Mitigation Measure 6.9-3.	LTS

NI=No Impact

LTS=Less than significant

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SU=Significant Unavoidable

BI=Beneficial Impact

**Table 2-1 (Continued)  
Summary of Impacts and Mitigation**

Impact #	Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
	present in the wetlands in the southwest parcel as well due to the presence of these species in the watershed. These wetland areas also provide potential habitat for California linderiella and Midvalley fairy shrimp, both federal species of special concern. As a result of this project or the development alternatives, a total of 4.9 acres of habitat for special-status invertebrates would be removed/filled and 2.14 acres of wetlands (offsite) would be indirectly impacted. The onsite habitat would become unsuitable for invertebrates as a result of the proposed action and the offsite habitat would become less suitable. This loss of this habitat would be considered a significant impact. The extent of this impact would be similar between the proposed project and each of the development alternatives as generally the same amount of land would be disturbed under each.			
AA	No development would occur as a result of this alternative, so no habitat for vernal pool invertebrates would be removed or indirectly affected. Hence, no impact would occur.	NI	No mitigation is required.	NI
<b>6.9-5 Loss of Giant Garter Snake</b>				
PP, AB, AC	Giant garter snake is not expected to occur on the project site because the habitat is low quality and separated from good quality habitat (i.e., portions of Strawberry Creek) by major roadways. The project site currently drains north and west. Some of the runoff pools along Cosumnes River Boulevard while other runoff enters a drainage ditch along Bruceville Road that feeds a storm drain system which eventually drains into Jacinto Creek. The project and development alternatives would drain northwest to Union House Creek via a new storm drain line and outfall. Union House Creek is concrete-lined and not considered habitat for giant garter snake. As a result, giant garter snakes are not expected to be adversely affected by implementation of the proposed project or the development alternatives. This impact would	LTS	No mitigation is required.	LTS

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**Table 2-1 (Continued)  
Summary of Impacts and Mitigation**

<b>Impact #</b>	<b>Impact</b>	<b>Significance Before Mitigation</b>	<b>Mitigation Measures</b>	<b>Significance After Mitigation</b>
	be less-than-significant. The extent of this impact would be similar between the proposed project and each of the development alternatives as generally the same amount of land would be disturbed under each.			
AA	No development would occur as a result of this alternative, so no giant garter snakes would be affected. Hence, no impact would occur.	NI	No mitigation is required.	NI
<b>6.9-6 Loss of Rare Plants</b>				
PP, AB, AC	Rare plant surveys were conducted by ECORP biologists during April and June 2000 on the constructed wetland (offsite) and the project site, excluding the southwest parcel. No rare plants were found during these surveys. Rare plant surveys for the southwest parcel were conducted in April and June 2003. The surveys did not identify any rare plants onsite. No impact would occur.	NI	No mitigation is required.	NI
AA	No development would occur as a result of this alternative, so no rare plants would be affected. Hence, no impact would occur.	NI	No mitigation is required.	NI
<b>6.9-7 Disturbance of Raptor Nests</b>				
PP, AB, AC	A few trees are scattered throughout the project site. These trees are mainly non-native, landscape trees along with a few walnut trees. These trees could be used by red-tailed hawk, white-tailed kite, and other raptors. Also, grasslands with tall, dense weeds could be used for nesting by northern harrier. During the 2003 reconnaissance survey, a white-tailed kite was observed in a small tree (approximately 10 feet tall) on the east side of Bruceville Road, directly adjacent to the project site. Grassland and approximately 10 trees that could provide raptor nest habitat would be removed with the implementation of the proposed project and development alternatives. Disturbance to nesting raptors would be considered a significant impact. The extent of this impact would be similar between the proposed project	S	The following measures shall be implemented by the project applicant to reduce potential impacts to active raptor nests to a less-than-significant level:  A. To the extent feasible, all grading and tree removal shall occur outside the raptor nesting season (September to January). If grading or tree removal is avoided during the raptor nesting season, no further mitigation shall be necessary. This measure applies to any heavy equipment activities that would occur within 500 feet of trees in or adjacent to the project site.  B. If grading or tree removal is proposed to take place during the raptor nesting season, a focused survey for	LTS

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**Table 2-1 (Continued)  
Summary of Impacts and Mitigation**

Impact #	Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
	and each of the development alternatives as generally the same amount of land would be disturbed under each.		<p>raptor nests shall be conducted by a qualified biologist during the nesting season to identify active nests on the project site. The survey would be conducted no more than 30 days prior to the beginning of grading or tree removal. The results of the survey would be summarized in a written report to be submitted to CDFG and the City of Sacramento Planning Department prior to the beginning of grading.</p> <p>C. If active nests are found, no remediation or other construction activity shall take place within 500 feet of the nest until the young have fledged (as determined by a qualified biologist). If no active nests are found during the focused survey, no further mitigation would be required.</p>	
AA	No development would occur as a result of this alternative, so no raptor nests would be removed or disturbed. No impact would occur.	NI	No mitigation is required.	NI
<b>6.9-8 Loss of Heritage Trees</b>				
PP, AB, AC	There are approximately 15 trees scattered throughout the project site. These trees are mainly non-native, landscape trees along with a few walnut trees. If these trees meet the criteria for heritage trees as set forth in the City of Sacramento Heritage Tree Ordinance, their removal would represent a significant impact. The extent of this impact would be similar between the proposed project and each of the development alternatives (Alternatives AB and AC) since the same amount of land would be disturbed under each.	S	<p>A tree survey shall be conducted on the project site to determine if heritage trees are present as defined by the City of Sacramento Heritage Tree Ordinance.</p> <ul style="list-style-type: none"> <li>▶ If no heritage trees are present onsite, no further mitigation is required.</li> <li>▶ If heritage trees are present onsite, preserve the trees by installing temporary fencing 5 feet beyond the drip line of protected trees to minimize disturbance to the trees and their root zones in accordance with the Sacramento City Code, Chapter 12.64 Heritage Trees. Fences shall be maintained until all project activities</li> </ul>	LTS

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**Table 2-1 (Continued)  
Summary of Impacts and Mitigation**

<b>Impact #</b>	<b>Impact</b>	<b>Significance Before Mitigation</b>	<b>Mitigation Measures</b>	<b>Significance After Mitigation</b>
			are complete. No grading, trenching, or movement of heavy equipment shall occur within fenced areas.  ▶ If removal of the heritage trees or construction within 5 feet of the drip line cannot be avoided, a permit under Chapter 12.64.050 of the Heritage Tree Ordinance shall be obtained. All requirements of the permit shall be implemented.	
AA	No development would occur as a result of this alternative, so no heritage trees would be removed or disturbed. No impact would occur.	NI	No mitigation is required.	NI
<b>6.9-9 Biological Impacts of Off-Site Storm Drainage and Outfall</b>				
PP, AB, AC	The proposed project and each of the development alternatives (AB and AC) would include the development of an off-site storm drain and outfall to Union House Creek. The proposed storm drain alignment would cross Bruceville Road and Cosumnes River Boulevard to a discharge point located several hundred feet west of the Bruceville Road/Cosumnes River Boulevard intersection. The majority of the pipeline alignment contains roadway and road shoulder. The portion of the alignment closest to the creek contains weeds and non-native vegetative. The creek at the proposed outfall location is a concrete channel and does not contain riparian vegetation. A less than significant impact would occur. The extent of this impact would be similar between the proposed project and each of the development alternatives.	LTS	No mitigation is required.	LTS
AA	No off-site storm drain and outfall would be developed under the No Project (No Development) Alternative. No impact would occur.	NI	No mitigation is required.	NI
<b>6.9-10 Cumulative Impacts on Biological Resources</b>				
PP, AB, AC	The proposed project would result in significant biological resources impacts before mitigation associated with loss of	S	Cumulative development should implement Mitigation Measures 6.9-1, 6.9-2, 6.9-3, 6.9-7 and 6.9-8, and should	SU

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**Table 2-1 (Continued)  
Summary of Impacts and Mitigation**

Impact #	Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
	<p>burrowing owl, removal of Swainson’s hawk nesting and foraging habitat, loss of jurisdictional Waters of the U.S., loss of habitat for vernal pool invertebrates, disturbance of raptor nests, and loss of heritage trees. These impacts would be reduced to less-than-significant levels with implementation of the mitigation recommended in this section.</p> <p>Given the presence of the above listed biological resources in the vicinity of the project site, the South Sacramento Community Plan (SSCP) area, and the greater City of Sacramento, it is anticipated that cumulative development within these areas would significantly impact the above listed biological resources before mitigation, but that on a project-by-project basis, some or all of these impacts could be avoided. Still, cumulative development within the vicinity of the project site, the SSCP area, and the greater City of Sacramento would result in a large net reduction in listed species, sensitive species, the habitats of listed species and sensitive species, wetlands, waters of the United States and the State, and heritage trees. A significant unavoidable cumulative impact could occur. Although on a project basis, the proposed project and the development alternatives (Alternatives AB and AC) would not result in any significant impacts to biological resources after mitigation, they would contribute to this cumulative impact.</p>		<p>conduct rare plant surveys and implement required mitigation (similar to the proposed project and the development alternatives).</p>	
AA	<p>No new development would occur at the project site under the No Project (No Development) Alternative, and therefore there would be no impact in terms of contribution to cumulative biological resources impacts.</p>	NI	No mitigation is required.	NI

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**Table 2-1 (Continued)  
Summary of Impacts and Mitigation**

Impact #	Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<b>CULTURAL RESOURCES</b>				
<b>6.10-1 Known Archaeological Resources</b>				
PP, AA, AB, AC	No known prehistoric archaeological sites have been identified within or adjacent to the project site. Three historic archaeological sites (CS 1, CS 2, CS 4), remains of residential and ranching outbuildings and irrigation systems, were identified on the project site and evaluated. These were found to be ineligible for listing in the CRHR; therefore, no further research or mitigation is required. No impact would occur. The degree of the impact would be similar between the proposed project and each of the alternatives because none of these would affect known significant cultural resources.	NI	No mitigation is required.	NI
<b>6.10-2 Undiscovered Archaeological Resources</b>				
PP, AB, AC	There exists the possibility for the presence of undiscovered archaeological resources on the project site. Development would require grading and excavation that could disturb or damage any as-yet-undiscovered cultural resource that may be present at the project site. A significant impact could occur. The degree of the impact would likely be similar between the proposed project and the development alternative because a similar area would be disturbed under each.	S	<p>Future development on the project site shall comply with the following measures:</p> <ul style="list-style-type: none"> <li>▶ If subsurface prehistoric or historical archaeological remains are identified during construction, work in the affected areas shall immediately stop until the find can be evaluated by a qualified archaeologist. If the find is determined to be of significance, mitigation shall consist of avoidance, and/or mitigation through data recovery.</li> </ul> <p>In accordance with §7050.5 of the Health and Safety Code and §5097.94 and §5097.98 of the Public Resources Code, if human remains are discovered at the project site during excavation, work shall immediately stop at the construction site, the county coroner shall be contacted, and the Native American Heritage Commission shall be contacted. If the remains are determined to be Native American in origin,</p>	LTS

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**Table 2-1 (Continued)  
Summary of Impacts and Mitigation**

<b>Impact #</b>	<b>Impact</b>	<b>Significance Before Mitigation</b>	<b>Mitigation Measures</b>	<b>Significance After Mitigation</b>
			they shall be left intact, and the most likely descendants shall be notified.	
AA	No change to existing conditions in the project area would occur under the No Project (No Development) Alternative. Because no additional grading or excavation would occur, any buried archaeological resources that may be present at the project site would remain undisturbed. Therefore, no impact would occur.	NI	No mitigation is required.	NI
<b>6.10-3 Cumulative Loss of Cultural Resources</b>				
PP, AB, AC	As urban development increases throughout the City of Sacramento and the region, cultural resources could be unearthed and damaged or destroyed. A significant cumulative impact would occur.	S	Implement Mitigation Measure 6.10-2.	LTS
AA	No new development would occur on the project area under the No Project (No Development) Alternative. Therefore, no potential would exist for cultural resources in the project area to be affected under this alternative; thus, no impact would occur.	NI	No mitigation is required.	NI
<b>HAZARDOUS MATERIALS</b>				
<b>6.11-1 Hazardous Materials – Soil Contamination</b>				
PP, AB, AC	The Phase I Environmental Site Assessment (ESA) conducted for the project indicates that there is no documented known or suspected soil contamination at the project site. However, there is the potential that as of yet undiscovered soil contamination may exist at the site which could be unearthed during construction-related earth-moving activities and potentially expose persons to contamination. Any exposure of people to contaminated soil during construction is considered a significant impact. The degree of this impact would likely be similar between the proposed project and each of the development alternatives as earth-moving operations would occur at the project site under	S	If discolored soil, storage tanks or other evidence of potential soil contamination is unearthed during construction-related earth work, or if noxious odors are encountered during said earth work, construction activities shall immediately cease at the construction site. A qualified environmental consultant shall collect and analyze soil samples from the construction site. If contaminants are identified in the samples, the applicant shall coordinate with the Sacramento County EMD for direction on appropriate remediation measures and procedures prior to the commencement of construction activities.	LTS

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**Table 2-1 (Continued)  
Summary of Impacts and Mitigation**

<b>Impact #</b>	<b>Impact</b>	<b>Significance Before Mitigation</b>	<b>Mitigation Measures</b>	<b>Significance After Mitigation</b>
	each.			
AA	There would be no impact related to contaminated soil associated with this alternative since there would be no construction in the proposed project area. Any soil contamination which may exist at the site would not be disturbed. No impact would occur.	NI	No mitigation is required.	NI
<b>6.11-2 Hazardous Materials – Asbestos-Containing Materials</b>				
PP, AB, AC	The project site does not contain any existing structures, and thus the proposed project and development alternatives would not include the demolition and/or renovation of structures which may contain asbestos. No impact would occur.	NI	No mitigation is required.	NI
AA	There would be no impact related to asbestos-containing materials associated with this alternative because there would be no construction activities on the project site and no existing structures are located on the project site that may contain asbestos. No impact would occur.	NI	No mitigation is required.	NI
<b>6.11-3 Hazardous Materials – Groundwater Contamination</b>				
PP, AB, AC	The groundwater aquifer in the area of the project is located approximately 95 feet below the existing surface elevation so that contact with the aquifer during construction is unlikely. No especially deep excavations or deep pilings would be required for foundation supports. The results of the Phase I ESA indicate that there are no documented known or suspected cases of contaminated groundwater in the project area. Construction workers would not be exposed to contaminants in groundwater. A less-than-significant impact. The degree of this impact would likely be similar between the proposed project and each of the development alternatives as the area of disturbance would be similar under each.	LTS	No mitigation is required.	LTS

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**Table 2-1 (Continued)  
Summary of Impacts and Mitigation**

<b>Impact #</b>	<b>Impact</b>	<b>Significance Before Mitigation</b>	<b>Mitigation Measures</b>	<b>Significance After Mitigation</b>
AA	There would be no impact related to contaminated groundwater associated with this alternative because there would be no construction activities in the proposed project area. No impact would occur.	NI	No mitigation is required.	NI
<b>6.11-4 Hazardous Materials – Cumulative Impacts</b>				
PP, AB, AC	Cumulative development in conjunction with the proposed project could increase the potential exposure hazard to unknown preexisting contaminants. If Phase I ESAs are not prepared for this cumulative development, and if any mitigation measures identified in these ESAs that are required to avoid potential exposure hazards to any preexisting hazardous contamination are not implemented, a potentially significant impact could occur. Because the proposed project would be required to comply with applicable regulations, and because site-specific mitigation measures have been identified to avoid exposure to any unknown preexisting contaminants that may be present at the project site, the proposed project would not contribute to any such significant cumulative impact.	S	The applicants of the cumulative projects shall have prepared Phase I Environmental Site Assessments (ESAs) for their projects and shall implement any mitigation measures recommended in those ESAs to avoid potential exposure hazards to any preexisting hazardous materials contamination on the cumulative development sites.	LTS
AA	No new development would occur within the proposed project area. Therefore, no increase in the potential exposure to hazardous materials would occur under this alternative, and thus no impact would result associated with cumulative development.	NI	No mitigation is required.	NI

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**3      *PROJECT DESCRIPTION***

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## **3 PROJECT DESCRIPTION**

### **3.1 INTRODUCTION**

The project applicant (Citadel Equities Group) is seeking adoption of a Planned Unit Development (PUD) as part of the entitlement package for the College Square project (proposed project). The College Square PUD Guidelines (included as Appendix A of this EIR) incorporate a Schematic Plan and guidelines that supplement existing City ordinances applicable to development of the project site. The PUD guidelines would be adopted by the City and used by the City in the future to evaluate individual components of the project for consistency with the PUD guidelines. This would be accomplished through City review of special permits for each component of the project at the time these individual components are proposed. No special permits are included as a part of the entitlement package being sought at this time, and thus are not evaluated in this EIR. See the PUD guidelines and Required Discretionary Actions subsections of this chapter of the EIR for additional explanation of the entitlement process.

The College Square PUD Guidelines and Schematic Plan would serve as the blueprint for future development of the site by defining the types of permitted land uses, the maximum amount of development (building square footage) permitted, the conceptual design, and the development envelopes (extent of buildings) that could occur at the project site. Adoption of the PUD would ensure that site remains geographically related even after individual parcels are created through subdivision for purposes of sale. These parcels would be developed as component parts of a single project, the College Square PUD. Adoption of the PUD is one step in a chain of actions necessary for development of this site. Following adoption of the PUD and approval of the subdivision map by the City, subsequent requests for development of individual parcels would be reviewed by the City to ensure consistency with the PUD Guidelines and Schematic Plan. This would be accomplished through City review of special permits for each component of the project at the time the individual components are proposed.

No special permits are presently requested as a part of this project and therefore, no development of any component of the project would occur at the time the City adopts the PUD. No special permits are evaluated as a part of this EIR. In the future, when the City receives applications for special permits for development within the PUD, the City would conduct initial environmental review to determine whether the development proposed would have the potential to either: (1) exacerbate the significant environmental effects identified for the PUD in this EIR; or (2) result in new significant effects not identified in this EIR. If the review determines that either of these could potentially occur, further CEQA review would be undertaken. If the review determines that neither of these would occur, development for which the special permit is submitted would be permitted to commence subject to approval of the special permit and any other required permits.

This chapter of the EIR includes subsections on existing setting, project characteristics, project schedule, required discretionary actions, and related projects. The project characteristics section includes subsections on the proposed development plan, PUD Guidelines, circulation/parking plan, drainage plan, utilities plan, landscape plan, lighting plan, wall requirements, and grading plan.

### **3.2 PROJECT LOCATION**

The project site is located within the southern part of the City of Sacramento (within the South Sacramento Community Plan area) as shown in Exhibits 3-1 and 3-2. The site consists of approximately 63 gross acres at the southeast corner of Cosumnes River Boulevard and Bruceville Road. The site contains six parcels (Assessor's Parcels 117-0182-001, -019, -020, -021, -024, and -028).

### **3.3 EXISTING SETTING**

The project site is currently vacant land once used for agriculture. The topography is relatively flat, sloping very gently to the north and west with an average site elevation of approximately 25 feet above mean sea level. The site supports disturbed annual grassland habitat with several scattered trees, and is devoid of structures. The central portion of the site contains several mounds of dirt and refuse indicative of dumping.

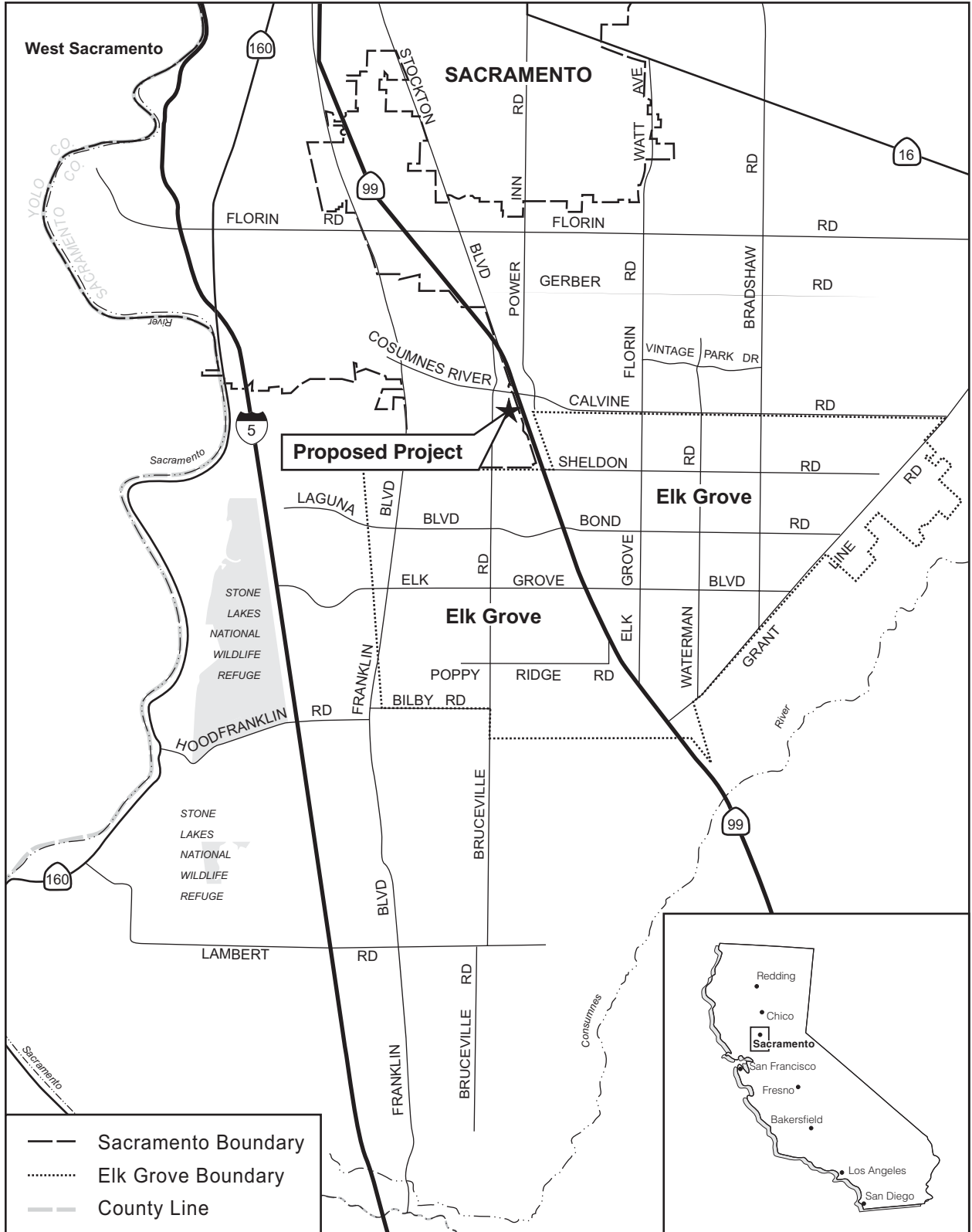
Local vehicular access is provided by Cosumnes River Boulevard (six lanes) and Bruceville Road (two lanes), located along the northern and western boundaries of the site, respectively; West Stockton Boulevard (two lanes), located along the southwestern boundary of the site; and Kastanis Way (one lane), which dead-ends on the project site from Bruceville Road. The State Route (SR) 99/Calvine Road/Cosumnes River Boulevard interchange provides regional access.

The site is surrounded by: Cosumnes River Boulevard, Strawberry Creek, vacant land and a senior citizen apartment complex to the north; vacant land and large-lot single-family residential to the south; SR 99 to the east; and Bruceville Road and Cosumnes River College to the west. The vacant land across Cosumnes River Boulevard directly north of the project site is the subject of an approved but not yet developed commercial project (Strawberry Creek Centre). Further to the north, northwest and southwest are a residential subdivision, Methodist Hospital, and an apartment complex, respectively. A shallow topographically depressed area lies immediately northwest and adjacent to the project site that supports a vernal pool vegetative and animal community (see Section 6.9, Biological Resources, for further discussion).

The project site is subject to the City of Sacramento General Plan, South Sacramento Community Plan (SSCP), and City of Sacramento Zoning Ordinance. The General Plan land use designation of the site is Medium-Density Residential (16–29 du/ac), while the SSCP designation is Special Planning District.<sup>1</sup>

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<sup>1</sup> Special Planning Districts allow the City Planning Commission and City Council to initiate proceedings to regulate properties under multiple ownership, designated in redevelopment, community, or general plans, that are in need of general physical and economic improvement, or have special environmental features that land use, zoning and other regulations cannot adequately address. For such areas to achieve their fullest potential, it may be desirable to provide for a range of uses that would not otherwise be permitted with standard zoning designations, and/or to encourage coordinated development of multiple properties.

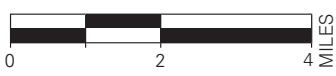


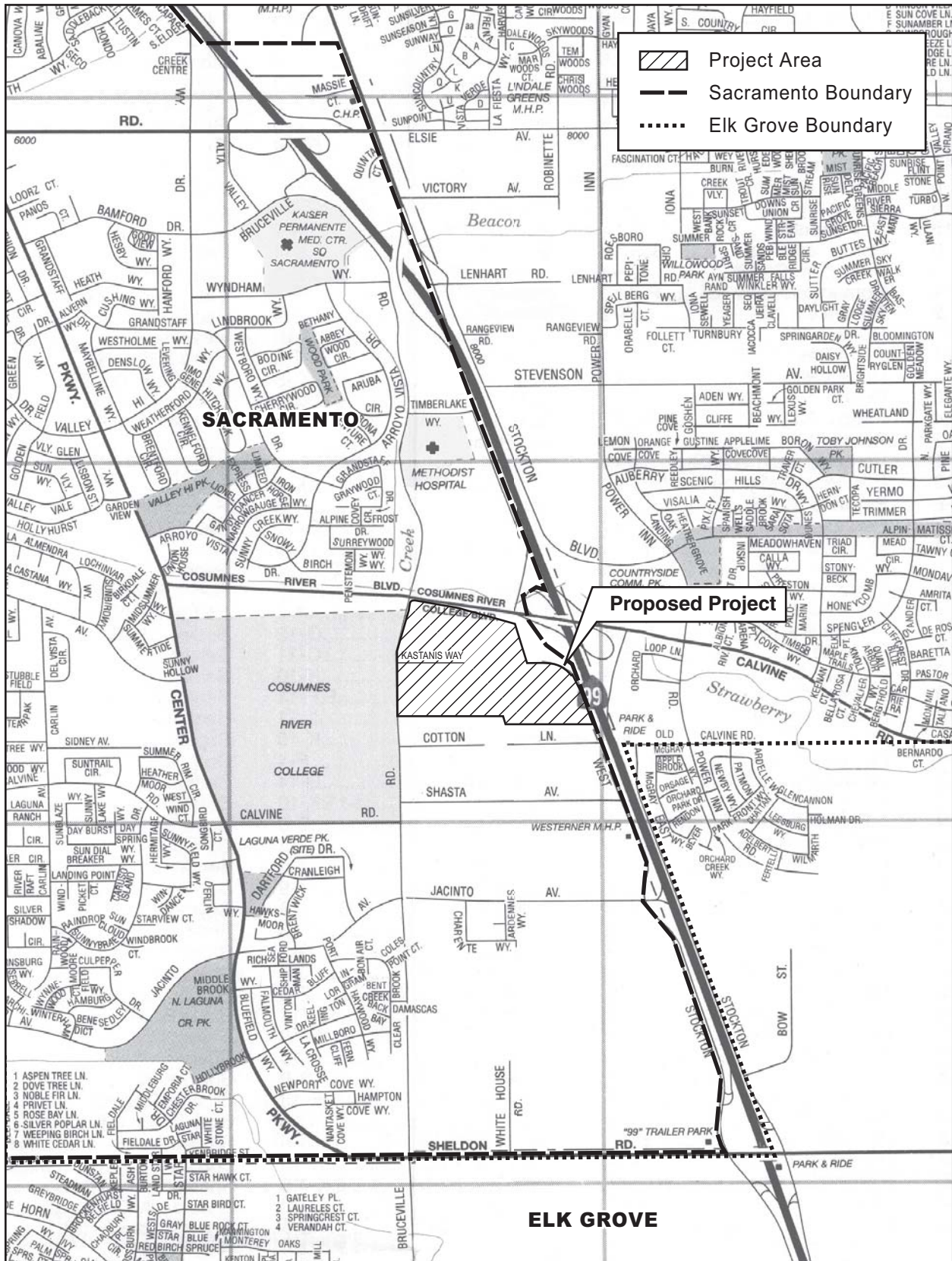
Source: California, Thomas Brothers Guide 2001

## Regional Setting

EXHIBIT 3-1

College Square PUD  
1T157.01 3/03

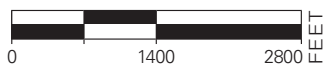




Source: California State Automobile Association, Greater Sacramento Southern Area 1997

### Local Setting

College Square PUD  
1T157.01 3/03



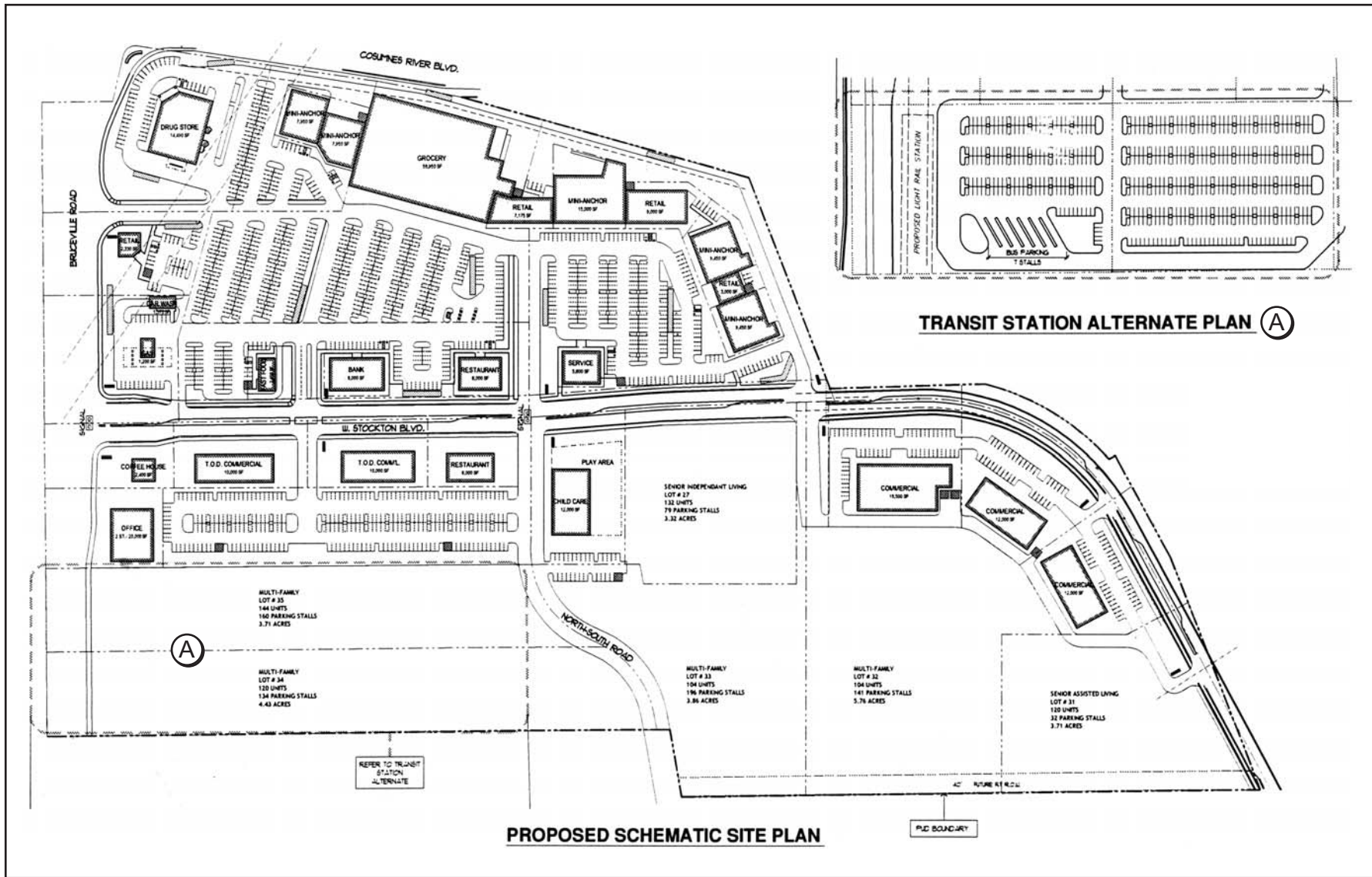


The adjacent vacant properties to the north, south and east are currently designated by the General Plan land use map as Community/Neighborhood Commercial & Offices, Low Density Residential, and Schools/ Transit, respectively. The adjacent vacant property to the northeast, between the project site and SR 99, is designated as Medium Density Residential, but is a wetland mitigation area associated with the SR 99/Calvine Road/Cosumnes River Boulevard interchange and thus not subject to future development.

### **3.4 REQUIRED DISCRETIONARY ACTIONS**

The land use entitlements requested of the lead agency (City of Sacramento) for the College Square PUD (proposed project) are as follows:

- ▶ General Plan Amendment from Medium Density Residential (16–29 du/ac) (approximately 63 acres) to Community/Neighborhood Commercial and Office (approximately 38 acres), Medium Density Residential (16–29 du/ac) (approximately 13 acres), and High Density Residential (30+ du/ac) (approximately 13 acres) (the City Council (CC) is the approving body for this entitlement).
- ▶ Community Plan Amendment from Special Planning District (approximately 63 acres) to Residential (11–29 du/ac) (approximately 13 acres), Residential (29+ du/ac) (approximately 13 acres), and General Commercial (approximately 38 acres) (the CC is the approving body for this entitlement).
- ▶ Rezoning from HC-R (approximately 7 acres), C-1 (approximately 2 acres), OB, and R-2B-R (approximately 53 acres) to C2-PUD (approximately 63 acres).
- ▶ Adoption of the College Square PUD Guidelines (the CC is the approving body for this entitlement).
- ▶ Adoption of the College Square Schematic Plan (Exhibit 3-3) (the CC is the approving body for this entitlement).
- ▶ Approval of the Tentative Parcel Map (the Planning Commission (PC) is the approving body for this entitlement).
- ▶ Abandonment of excess City right-of-way adjacent to Cosumnes River Boulevard/Bruceville Road (the CC is the approving body for this entitlement).

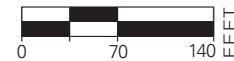


Source: Borges 10/31/02

## PUD Schematic Site Plan

College Square PUD  
1T157.01 10/02

EXHIBIT 3-3



**EDAW**

- ▶ EIR Certification (the PC and CC are the approving bodies for this entitlement).

Possible approvals and/or permits required from responsible and trustee agencies include:

- ▶ Potential Endangered Species Act consultation and incidental take permit (not anticipated as required at this time) from the U.S. Fish and Wildlife Service (USFWS).
- ▶ Potential State Endangered Species Act take permit (not anticipated as required at this time) from the California Department of Fish & Game (CDFG).
- ▶ Section 404 of Clean Water Act – discharge or fill of Waters of the U.S. from the U.S. Army Corps of Engineers (USACE).
- ▶ Authorization from USACE to use Nationwide permits and/or individual permits for dewatering and discharge to Waters of the U.S.
- ▶ Section 401 of the Clean Water Act – certification of 404 permits from the Regional Water Quality Control Board (RWQCB).

### **3.5 PROJECT OBJECTIVES**

The College Square PUD (proposed project) is designed to provide an urban infill development focused on achieving the following City and applicant objectives:

#### City Objectives

1. Provide housing opportunities for residents of the City of Sacramento, especially seniors and lower-income residents;
2. Provide transit-oriented development (TOD) adjacent to light rail facilities currently being planned in the area by the Sacramento Regional Transit District (RT) as part of the South Sacramento Corridor Phase 2 Project; and
3. Provide services catering to students and faculty at Cosumnes River College, and provide a mix of onsite residential, commercial and office uses that complement one another, in order to reduce the traffic and air emissions that would be generated by development of the project site under more traditional residential development.

#### Applicant Objectives

1. Provide an urban infill project focused on needed neighborhood and community retail services, to support the City's jobs-housing balance goals and to address air quality objectives by incorporating Light Rail into its overall circulation system. The design complements future employees on the project site, students at Cosumnes River College, local residents and future high-density residential uses.

2. Provide neighborhood- and community-serving retail for the South Sacramento community that is in close proximity to existing and future residents, Cosumnes River College, area hospitals, and the traveling public. The project located adjacent to major arterials and State Route (SR) 99 would have enhanced visibility and appeal that would assure the project’s long-term success.
3. Provide a major employment center immediately adjacent to Cosumnes River College, SR 99, zoned high-density residential uses, light rail and the nearby senior housing developments.
4. Provide a retail center of significant size to serve South Sacramento residents and the surrounding community.
5. Provide a more cost effective location for the future park and ride lot. The conceptual park and ride lot would be located near both the main activity center of Cosumnes River College, future high density residential uses and future retail uses.
6. Provide an opportunity for a multi-use transit center, for Light Rail, bus connections and pedestrian and bicycle usage.
7. Provide utility line extensions into an area that is presently unserved. The utility extensions would particularly benefit zoned multi-family parcels to the south of the project, which cannot be developed without the needed utility connections at Bruceville Road and Cosumnes River Boulevard.

### 3.6 PROJECT CHARACTERISTICS

#### 3.6.1 DEVELOPMENT PLAN

The College Square project is an approximately 63-gross-acre mixed-use residential, commercial and office project. The project would include 724 multifamily residential units, 270,256 square feet of commercial/retail/ office uses, 2,094 parking spaces, common area, and streets (Exhibit 3-3, Tables 3-1 and 3-2).

<b>Table 3-1 Development Table (Summary)</b>			
<b>Land Use</b>	<b>Net Acres</b>	<b>Gross Acres</b>	<b>Units/Sq. Ft.</b>
Commercial	22	28	270,256 sq ft
Residential	24	26	724 du
Other	7	9	--
<b>Total</b>	<b>53</b>	<b>63</b>	<b>724 du 270,256 sq ft</b>

The project would include the following primary components:

1. Commercial: The commercial component would comprise 270,256 square feet of commercial uses on approximately 28 gross acres. This commercial space would include approximately 238,257 square feet of neighborhood and community commercial uses (i.e., grocery store, drug

**Table 3-2  
Development Table (Full)**

<b>Parcel No.</b>	<b>Land Use</b>	<b>Units/ Sq. Ft.</b>	<b>Parking Required</b>	<b>Parking Provided</b>	<b>Net Acres</b>	<b>Gross Acres</b>
1	Drug Store	14,040 sq ft	56	73	2.23	2.95
2	Mini-Anchor	7,950 sq ft	32	40	0.23	0.23
3	Mini-Anchor	7,950 sq ft	32	32	0.26	0.26
4	Grocery	58,950 sq ft	236	341	5.59	5.59
5	In-Line Retail	7,010 sq ft	28	28	0.20	0.20
6	Mini-Anchor	15,000 sq ft	60	60	0.53	0.53
7	In-Line Retail	9,000 sq ft	36	45	0.35	0.35
8	Mini-Anchor	9,450 sq ft	38	50	0.38	0.38
9	In-Line Retail	3,000 sq ft	12	15	0.14	0.14
10	Mini-Anchor	9,450 sq ft	38	44	0.32	0.32
11	Service	5,600 sq ft	22	29	0.18	0.18
12	Restaurant	6,000 sq ft	60	60	0.24	0.24
13	Bank	8,000 sq ft	32	33	0.28	0.28
14	Fast Food	2,450 sq ft	25	63	0.23	0.23
15	Gas Station/Car Wash	1,200 sq ft	5	9	0.86	1.74
16	Retail	2,330 sq ft	9	20	0.84	1.32
20	Office Bldg.	20,000 sq ft	0	0	0.55	0.94
21	Coffee House	2,376 sq ft	24	31	0.32	0.84
22	TOD Commercial	10,000 sq ft	40	82	0.59	0.89
23	TOD Commercial	10,000 sq ft	40	80	0.55	0.81
25	Restaurant	6,000 sq ft	60	60	2.81	3.01
26	Child Care	12,000 sq ft	30	19	1.05	1.42
28	Commercial	18,500 sq ft	74	74	1.45	1.89
29	Commercial	12,000 sq ft	24	48	1.25	1.99
30	Commercial	12,000 sq ft	24	48	1.05	1.53
<b>Subtotal (All Commercial)</b>		<b>270,256 sq ft</b>	<b>999</b>	<b>1,384</b>	<b>22.48</b>	<b>28.26</b>
27	Senior Independ. Living	132 du	99	79	2.67	3.05
31	Senior Assisted Living	120 du	60	32	3.32	3.70
32	Multifamily Apts.	108 du	170	141	5.76	5.81
33	Multifamily Apts.	124 du	195	196	3.86	4.17
34	Multifamily Apts.	138 du	217	134	4.43	4.97
35	Multifamily Apts.	102 du	160	160	3.71	4.26
<b>Subtotal (All Residential)</b>		<b>724 du</b>	<b>841</b>	<b>710</b>	<b>23.75</b>	<b>25.96</b>
17	Cosumnes River Blvd.	--	--	--	1.02	1.02
18	W. Stockton Blvd.	--	--	--	1.89	2.67
19	City Pond	--	--	--	4.08	4.74
24	Common Area – TOD	--	--	--	0.42	0.62
<b>Subtotal (other areas)</b>		<b>--</b>	<b>--</b>	<b>--</b>	<b>7.41</b>	<b>9.05</b>
<b>Total</b>		<b>724 du 270,256 sq ft</b>	<b>1,840</b>	<b>2,094</b>	<b>53.64</b>	<b>63.27</b>

Source: Borges October 31, 2002. Revised EDAW 2003.

store, restaurant, bank, coffee house, fast food restaurant, small lot retail and service, gas station/car wash), 20,000 square feet of office, 12,000 square feet of child care, and 1,384 parking spaces. Commercial buildings (some attached) would be constructed. These buildings would range in site from 2,330 square feet to 58,950 square feet, and could be up to 45 feet in height, with the exception of residential care facilities, which are permitted to be five stories tall. The commercial component would generate approximately 890<sup>2</sup> onsite employees. As indicated in Section IV, Item E of the PUD Guidelines, the commercial, office, and daycare uses would be permitted to operate 24 hours a day, except as otherwise limited by the Planning Commission or City Council through the special permit process.

2. Residential: The residential component would be comprised of 724 senior and multifamily residential units located on approximately 26 gross acres. This would include 132 senior independent units, 120 senior assisted-living units, 472 conventional multifamily units, and 710 parking spaces. Approximately 26 apartment buildings and ancillary buildings would be constructed. These buildings would range from one to two stories.

The residential component would generate approximately 1,210<sup>3</sup> onsite residents. As indicated in Section IV, Item E of the PUD Guidelines, the senior care component of the proposed housing would be permitted to operate 24 hours a day, except as otherwise limited by the Planning Commission or City Council through the special permit process. Consistent with the City's Inclusionary Housing Program, 5% of the project housing units would be affordable to low-income households and 10% would be affordable to very low-income households.

3. Other Areas: The project would include other areas totaling approximately 9 acres. These would include TOD common area and major streets (i.e., extension of West Stockton Boulevard through the project site to Bruceville Road, and an increase in the width of Bruceville Road along the project site's western frontage).
4. Offsite Improvements: The project would include the following offsite improvements:
  - (a) Relocation of an existing segment of West Stockton Boulevard to outside of the existing SR 99/Calvine Road/Cosumnes River Boulevard wetland mitigation area located directly northeast of the project site. The existing roadway would be demolished, and a new roadway constructed. All project and street drainage would be piped away from the wetland parcel.
  - (b) Improvement of the Bruceville Road frontage (i.e., sidewalks, storm drains) within the existing street right-of way adjacent to the project site as part of a planned City/County widening project of Bruceville Road. The Bruceville City/County widening project is described further under the Related Projects section at the end of this chapter.

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<sup>2</sup> Based on an employee generation rate of 3.3 employees per 1,000 square feet of C-2 general commercial development from Section 17.184.050 of the City of Sacramento Zoning Ordinance.

<sup>3</sup> Assumes 1.67 persons per multifamily dwelling unit consistent with R Street Corridor DEIR, page 6.2-6 (City of Sacramento 1995).

- (c) Improvement of the Cosumnes River Boulevard frontage (i.e., sidewalk, bus turnout) adjacent to the project site (within the existing street right-of-way).
- (d) Construction of a traffic signal at the intersection of Bruceville Road and West Stockton Boulevard.
- (e) Construction of a water line in the existing West Stockton Boulevard from the southern boundary of the project site to Shasta Avenue (within the existing right-of-way).
- (f) Construction of a storm drain and outfall from the project to Union House Creek, approximately 200 feet west of Bruceville Road.

### **3.6.2 PUD GUIDELINES**

As indicated previously, the project site is designated by the SSCP as a Special Planning District. This District allows the City to initiate proceedings to regulate properties so as to achieve their fullest potential, including providing for a range of uses that would not otherwise be permitted with standard zoning and encouraging coordinated development of multiple properties. Within Special Planning Districts, larger development projects in the City are often processed under a Planned Unit Development (PUD). According to the City's Zoning Ordinance, a PUD is a residential and/or commercial development guided by a total design plan in which one or more of the zoning or subdivision regulations, other than use regulations, may be waived or varied to allow flexibility and creativity in site and building design and location, in accordance with general guidelines.

In response to the SSCP Special Planning District designation of the project site, the project applicant (Citadel Development) is seeking adoption of a PUD as part of the entitlement package for the project. The College Square PUD Guidelines and Schematic Plan would serve as the blueprint for future development of the site by defining the types of permitted land uses, the maximum amount of development (building square footage) permitted, the conceptual design, and the development envelopes (extent of buildings) that could occur at the project site. Adoption of the PUD would ensure that site remains geographically related even after individual parcels are created through subdivision for purposes of sale. These parcels would be developed as component parts of a single project, the College Square PUD. Adoption of the PUD is one step in a chain of actions necessary for development of this site. Following adoption of the PUD and approval of the subdivision map by the City, subsequent requests for development of individual parcels would be reviewed by the City to ensure consistency with the PUD Guidelines and Schematic Plan. This would be accomplished through City review of special permits for each component of the project at the time the individual components are proposed.

The College Square PUD Guidelines (1) set forth procedures for approval of individual components of the proposed project; (2) specify permitted uses, development standards, building standards, and sign standards that individual components of the project must adhere to; and (3) identify environmental standards that individual components of the project must comply with. The Guidelines include sections on: preliminary review, special permits, project applications, compliance with the Schematic Plan, building/occupancy standards, wall requirements, hours of operation, permitted uses, landscaping, plant list, setbacks, circulation, parking standards, exterior lighting, architectural design, building height, exterior building materials/colors, roof projections/design, energy conservation, temporary structures,

loading areas, outside storage, trash enclosures/recycling facilities, utilities, and sign construction standards. The Guidelines also establish an Architectural Review Committee to ensure that the plans for individual components of the project are consistent with the PUD Guidelines.

A summary of the procedures for approval of individual components of the PUD as set forth in the PUD Guidelines is provided below.

### **SPECIAL PERMITS REQUIRED**

Development of certain uses within the PUD shall be subject to special permit approval by the City Planning Commission. These uses are specifically listed in Table 1 of the PUD Guidelines. Special permit development plans shall be in conformance with the Schematic Plan and PUD Guidelines.

### **PRELIMINARY REVIEW**

A preliminary review by the City's Planning Director of special permit applications may be required when the City determines that such a review is essential to a thorough evaluation of the application, especially when the special permits may be proposing amendments to the Schematic Plan and/or PUD guidelines.

### **PROJECT APPLICATION**

Information to be submitted by the applicant as part of special permit applications for individual components of the proposed project shall include the project application, site plan(s), landscape plan, elevations, and miscellaneous documentation (i.e., written approval of the plans by the College Square Architectural Review Committee, written documentation of consultation with Regional Transit, Transportation Systems Management Plan, lighting plan, and signage plan).

### **AMENDMENTS TO THE SCHEMATIC PLAN AND/OR PUD GUIDELINES**

Preliminary plans shall be submitted to the City's Planning Director for preliminary review prior to submission of an application to amend the Schematic Plan and/or PUD Guidelines.

Amendments to the PUD Schematic Plan and/or PUD Guidelines shall be approved by the City Council or, in limited circumstances by the Planning Commission. The Schematic Plan is conceptual in nature, and adjustments that do not materially affect the nature or character of the PUD, such as building orientation, placement of buildings and entrances, landscaping, parking configuration, and relocation of land uses may be made during the special permit process without the need to amend the Schematic Plan.

The PUD Schematic Plan (Exhibit 3-3) designates building limit lines. The size, number, and configuration of buildings within these lines may be modified during the special permit process. Any such modification would require City review and CEQA evaluation as part of the special permit approval process. However, the overall building area for the PUD cannot exceed that which is approved as part of the PUD (Exhibit 3-3, Tables 3-1 and 3-2) and evaluated in this EIR.



### **3.6.3 CIRCULATION/PARKING PLAN**

As indicated in Exhibit 3-4, the proposed project would include a fully developed vehicular circulation system, pedestrian circulation system, and parking plan to be designed and constructed to the satisfaction of the City Engineer and to be consistent with Americans with Disabilities Act requirements. These proposed circulation systems and parking plan are described below. See Section 6.2 of this EIR and Section V.D of the College Square PUD Guidelines (Appendix A of this EIR) for additional descriptions.

#### **VEHICULAR CIRCULATION SYSTEM**

Access to the project site would be via a single driveway, additional driveways off Bruceville Road, and the extension of West Stockton Boulevard through the project site to Bruceville Road. The Cosumnes River Boulevard/Bruceville Road intersection would be improved through the provision of a second right turn lane. The proposed Bruceville Road/West Stockton Boulevard intersection would be signal controlled, while the proposed Bruceville Road/project road intersection further to the north would be right-turn only.

Within the project site, the proposed four-lane divided West Stockton Boulevard extension would serve as the primary access to and collector in the project site. (Collectors are roadways that provide citywide or large district connectivity and circulation.) It would separate the proposed commercial development on the northern portion of the project site from the proposed TOD commercial and residential development on the southern portion of the site. A new North-South Road would be constructed from the proposed commercial development to the southern boundary of the project site where it would be stubbed for potential future connection to roadways to the south. The West Stockton Boulevard/North-South Road intersection would be signal controlled.

The internal vehicular circulation for the commercial component north of West Stockton Boulevard would consist of a peripheral drive aisle aligned adjacent to and in front of the grocery store, retail shops, and anchor shops which would provide access to customers to a common parking area. A service drive aisle for delivery trucks serving major tenants would be located toward the rear of these uses, along the northern and eastern boundaries of the project site. Small tenants and buildings are not required to have separate loading facilities and may be served from the front of the building. The service aisle would have access to West Stockton Boulevard near the northwest corner of Parcel 28 and the entry drive accessing Bruceville Road. The service drive would be separated from the customer circulation system and thus is designed to avoid conflicts with customer vehicles.

The internal vehicular circulation for the TOD commercial component south of West Stockton Boulevard would consist of two driveways off West Stockton Boulevard that provide direct access into the common parking lot for these uses. These small commercial uses would take delivery from the front of the buildings.

The internal vehicular circulation for the residential components of the proposed project would be determined when the special permit is submitted for this component of the project.

See Section 6.2, Traffic and Circulation, for recommended revisions to the proposed site plan and circulation system required to provide for safe and efficient vehicular and pedestrian circulation.

## **PEDESTRIAN CIRCULATION SYSTEM**

According to the project site plan, sidewalks would be constructed along the extension of West Stockton Boulevard and on east side of Bruceville Road along the frontage of the project site. Crosswalks are proposed along West Stockton Boulevard at each project driveway for pedestrians traveling east-west. For pedestrians traveling north-south across West Stockton Boulevard, crosswalks would be provided at the two signalized intersections and at the driveways located immediately east and west of the North-South Road (Driveways 4 and 6). Additional walkways would be provided between the retail, office, and residential uses.

The traffic signal at Bruceville Road/West Stockton Boulevard would provide a protected crossing for pedestrians traveling between the project site, Cosumnes River College, and the future light rail station. The sidewalk on the west side of Bruceville Road between the project site and the Cosumnes River College main driveway would serve pedestrians traveling to these uses.

Bike lanes are not provided on the West Stockton Boulevard extension. Based on the width of the roadway (about 24 feet per direction), bike lanes cannot be accommodated within the proposed right-of-way.

See Section 6.2, Traffic and Circulation, for recommended revisions to the proposed pedestrian circulation system required to provide for safe and efficient pedestrian and bicycle circulation.

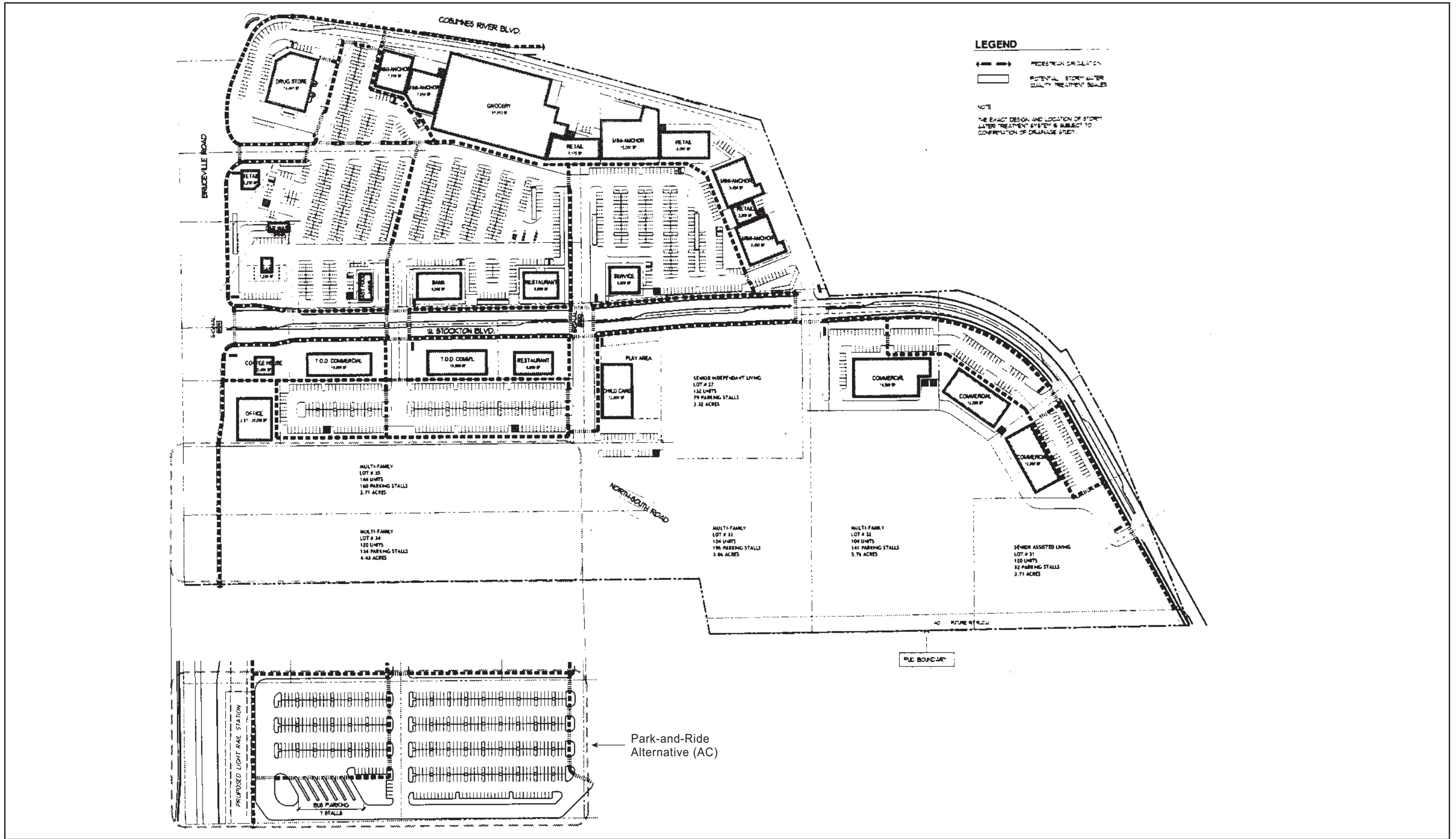
## **PARKING PLAN**

As indicated in Table 3-2, 1,840 parking spaces are required for the project in compliance with City parking standards, while 2,094 parking spaces are proposed. As indicated in Section V.E of the PUD Guidelines, reciprocal parking would allow compliance with City parking standards based on the entire PUD requirement rather than on a parcel by parcel basis, and carpool, vanpool, and bicycle parking would be located near building entrances.

### **3.6.4 DRAINAGE PLAN**

The project site is not located within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary Map, Flood Insurance Rate Map, or other flood hazard delineation map (FEMA Q# Flood Data, 1996). Hence, no flood control improvements are required or planned.

The 63-acre project site is located within the northernmost portion of a 117.5-acre watershed bounded by Cosumnes River Boulevard, Bruceville Road, SR 99, and Shasta Avenue/Cotton Lane. This watershed is included in the Jacinto Creek Drainage Master Plan area as Watershed #1 which, according to the Jacinto Creek Master Drainage Plan, is planned to drain north to Strawberry Creek, then to Union House Creek (located on the north side of Cosumnes River Boulevard, just east of Bruceville Road). Existing site drainage is to the north and west. Runoff that drains to the north drains to an existing 18-inch storm drain that discharges to Strawberry Creek, located along the north side of Cosumnes River Boulevard. Runoff that drains to the west drains to an existing inadequate ditch system along Bruceville Road.

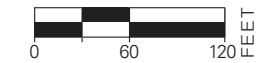


Source: Doucet & Associates, Inc 10/31/02

### Circulation Plan

College Square PUD  
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EXHIBIT 3-4



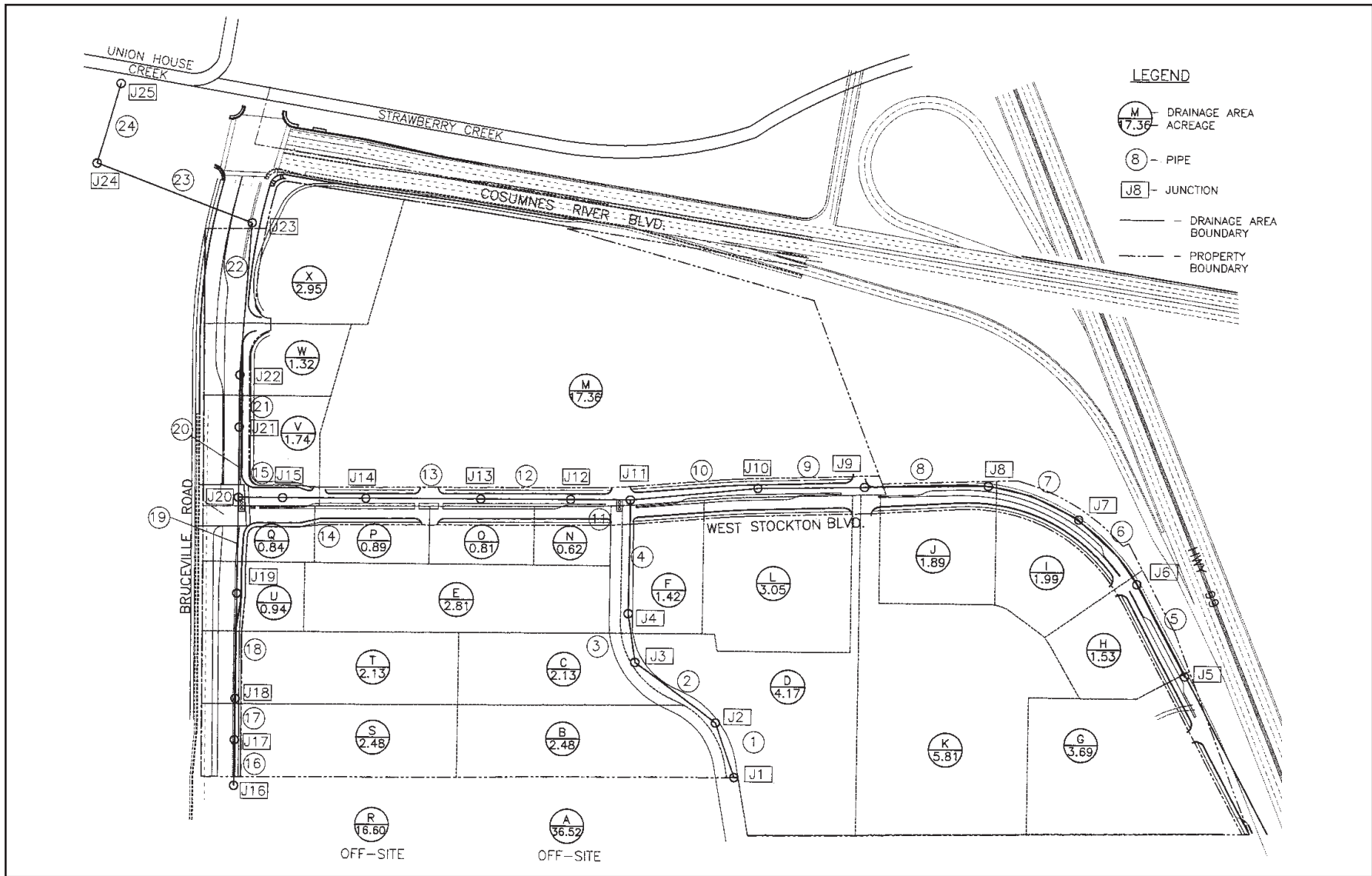
EDAW

To accommodate run-off flows to offsite areas, two drainage alternatives are being proposed. The drainage outfall for the watershed is planned at Union House Creek, approximately 400 feet downstream from the Cosumnes River Boulevard/Bruceville Road intersection. Exhibit 3-5 shows the proposed storm drain layout. Under both alternatives, one offsite drainage improvement would be required (a 66-inch storm drain and associated outfall from the northwest corner of the project site to Union House Creek).

1. Alternative 1 is a gravity trunk drain system that would accommodate developed flow rates for the College Square project site and existing flow rates for the offsite area tributary to the system. This alternative makes the assumption that the 54-acre offsite tributary area south of the project site, which is outside of the project applicant's control, would eventually incorporate detention ponds once those properties are developed. Those detention ponds would release flows at a rate equal to or less than the existing conditions.
2. Alternative 2 is also a gravity trunk drain system that would accommodate developed flow rates for the entire watershed without detention.

The proposed storm drain system has been analyzed in accordance with the Sacramento City Storm Drainage Design Standards. The main difference between the two alternatives is the size of the pipes. Typically, the pipes for Alternative 2 are one pipe size larger than Alternative 1 to accommodate the lack of detention in the 54 acres of the watershed south of the project site (Exhibit 3-5 shows the proposed layout of the storm drain system, the pipe sizes for the two alternatives can be obtained from Appendix C for Alternative 1 and Appendix D for Alternative 2 of the College Square Preliminary Drainage Report). Under both alternatives, the onsite storm drain system and offsite storm drain and outfall would be sized to safely convey stormwater through and off the project site. The proposed trunk storm drain along Bruceville Road, the storm drain from the northwest corner of the project site to Union House Creek, and the associated outfall would be sized to accommodate flows from both the project site and the 54 acres of the watershed south of the site. Alternative 2 would be developed, unless the City decides to require detention within the 54 acres of the watershed south of the project site, in which case Alternative 1 would be developed.

Prior to construction, the project applicant would file a Notice of Intent to Comply with the NPDES General Permit for Construction Related Activities with the Regional Water Quality Control Board (RWQCB). In compliance with the permit, the project applicant would prepare a Storm Water Pollution Prevention Plan (SWPPP) for all stages of construction, and the project site would be monitored by qualified erosion control inspectors for compliance with the above. Best Management Practices (BMPs) would be incorporated into the project's SWPPP to reduce first flush pollutants in runoff from the project site. During construction, storm water runoff from the project site would be diverted into onsite water quality pre-treatment systems before entering the proposed storm drain system. The following specific pre-treatment systems are proposed: grassy swales and other structural BMPs as required by the City of Sacramento Guidance Manual for On-Site Stormwater Quality Control Measures (January 2000). Grassy swales would be constructed between the back of the curb and the sidewalk, along West Stockton Boulevard, to treat the roadway runoff. Additional grassy swales would be incorporated within the project development areas to treat runoff from the parking lots. Stormwater runoff from the proposed parking areas would be routed to these water quality facilities before being discharged to Union House Creek, as required by the Jacinto Creek Drainage Master Plan. Roof drainage would be hard piped to the storm drain system because it does not require treatment.



Source: Doucet & Associates, Inc 12/05/02

## Drainage Plan

College Square PUD  
1T157.01 10/02

EXHIBIT 3-5



EDAW

See Section 6.5 of this EIR for further discussion and analysis of the proposed drainage plan, including identification of the types of BMPs and water quality pre-treatment systems to be implemented.

### **3.6.5 UTILITIES PLAN**

As indicated in Exhibit 3-6, fully developed utility systems are proposed to serve the project. Water service for the proposed project would be provided by the City of Sacramento by connection to an existing 24-inch water main located on the west side of Bruceville Road. A new 12-inch water line would be installed from the existing 24-inch line near Cosumnes River Boulevard across Bruceville Road and then down the east side of Bruceville to the southern limit of the project site. A 12-inch water line would also be constructed along the north side of West Stockton Boulevard to the eastern boundary of the project site, and a third 12-inch water line would be constructed on the south side of West Stockton Boulevard from Bruceville Road to the eastern and southern boundary of the project site, and then offsite southward to Shasta Avenue. Water lines would be extended from these lines to each individual onsite parcel. A booster pump is required for each onsite parcel to increase the available water pressure for domestic needs. A separate fire protection system would be constructed onsite which would also include a booster pump system to provide the required fire flow and pressures.

Sanitary sewer service for the proposed project would be provided by the Sacramento Regional County Sanitation District (SRCSD) by connection to an existing 18-inch sewer stub located in Bruceville Road which was previously designed and constructed to serve the area.

Dry utilities (i.e., electricity, natural gas, telephone, cable television) would be extended from both Bruceville Road and West Stockton Boulevard to the project site.

### **3.6.6 LANDSCAPE PLAN**

The landscape plan for the project provides for a range of large canopy trees, medium shade trees, evergreen screen trees, major accent trees, shrubs, and ground cover/vines/turf to create a unique and desirable environment for the intended uses, provide shade for pedestrians, and screen the project from adjacent uses.

As indicated in Exhibit 3-7, several hundred broad-leaf deciduous trees ranging in size from 15-gallon to 36-inch boxes would be planted at the periphery and within the project, along with shrubs ranging in size from 5 to 15 gallons and ground cover/vines/turf from 1 to 5 gallons. The deciduous trees would change with the seasons, thus offering year-round interest.

Section V.B of the College Square PUD Guidelines sets forth the landscaping regulations for the project and includes a plant list from which landscaping for the project would be selected. The proposed landscaping shall comply with applicable City of Sacramento ordinances for minimum landscape coverage (10% of net acreage) and drought tolerance, shall be composed of natural and decorative trees, ground cover and shrubs with automatic irrigation systems, and shall be limited to those varieties of trees, shrubs and groundcover identified in the plant list. Side and rear elevations of any project building and service areas (e.g., loading, trash, storage) visible from surrounding roadways would be landscaped. Columnar accent trees would delineate the drive isles, and would add visual interest as well as reinforce the linear movement of the isles. The pedestrian plazas, entries, and pathways would be recognizable

through the use of flowering accent trees, and would make the spaces more intimate and pedestrian friendly. Parking areas shall be landscaped to comply with City Zoning Ordinance Section 6.D.19 which requires that trees be planted and maintained throughout the surface parking lots to ensure that, within 15 years after development of the parking lot, at least 50% of the parking area is shaded. The 50% shading requirement may be relaxed to accommodate plantings under the high-tension lines. All areas not utilized for circulation, parking and services would be landscaped. Undeveloped areas proposed for future construction would be maintained in a reasonably weed free condition but may not be fully landscaped.

A landscape maintenance program would be established to ensure that landscaping is maintained. After development, landscaping shall become the responsibility of the individual property owners: each would be subject to the landscape and other requirements in the PUD Guidelines.

See the PUD Guidelines for additional landscape standards. Special Permit applications would include submittal of preliminary landscape and shading plans which comply with the PUD Guidelines. See Section 6.7, Light/Glare, for additional discussion.

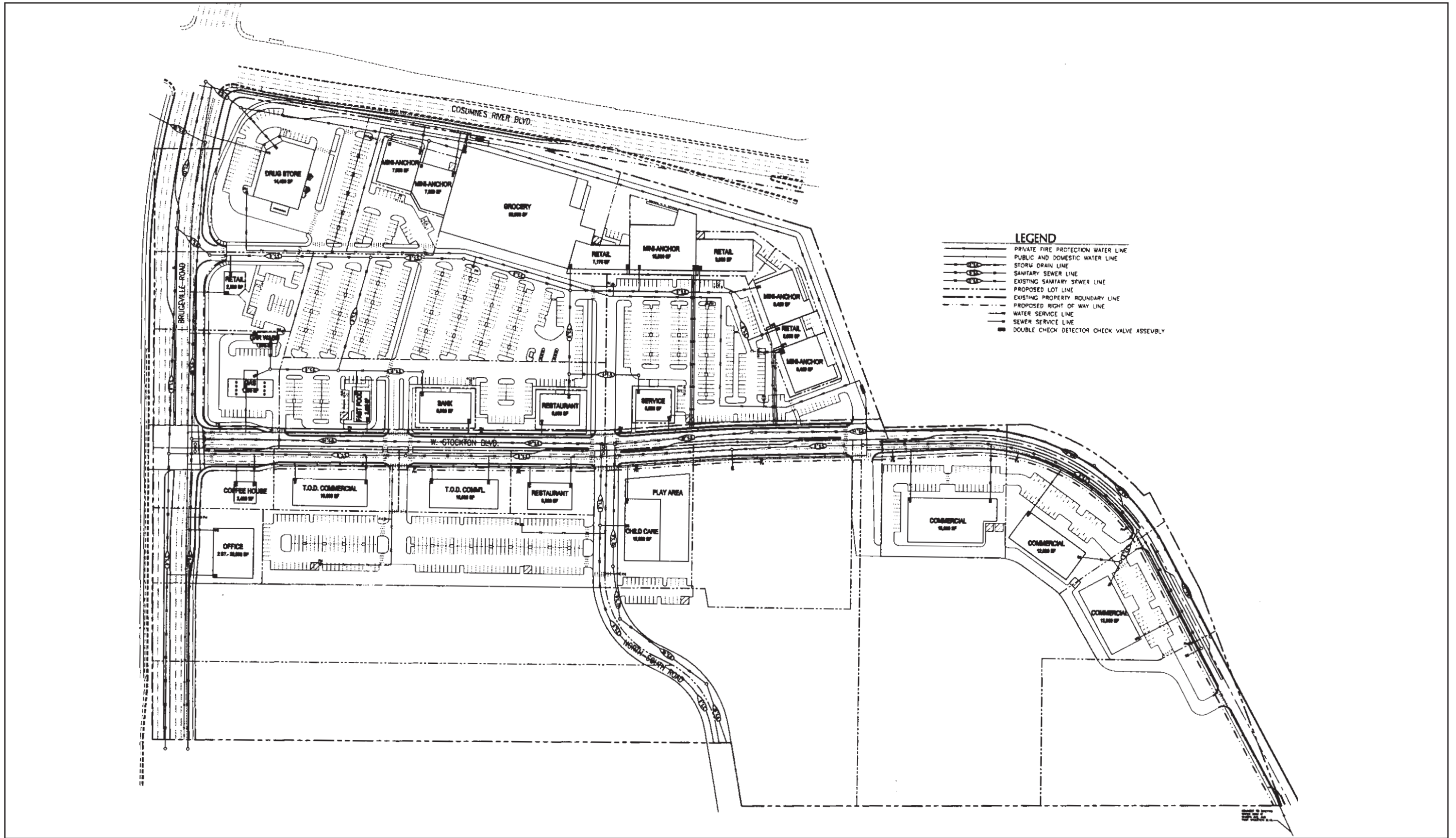
The landscaping for the residential components of the proposed project would be determined at the special permit stages of the project.

### **3.6.7 LIGHTING PLAN**

As indicated in Section V.F of the College Square PUD Guidelines, exterior lighting for the project would be designed in a coordinated manner that enhances the quality image of the project, provides safety and security for all project uses, and is compatible with surrounding development. Sodium vapor lighting would be discouraged. Parking lot lighting would be of a metal halide light source on light poles not to exceed 20 feet in height. All exterior lighting would be shielded to prevent offsite glare. Lighting design shall not produce hazardous glare to motorists, building occupants, residents of adjacent areas, or the general public. High-intensity security lighting (i.e., “Walpack” fixtures) would be permitted only in screened areas. No security light fixtures would be mounted above wall fascias or on the roof of proposed buildings. No roof-top lighting (e.g., searchlights, illuminated advertisements, balloons) shall be permitted except in the case of security lights, and only if deemed necessary and installed so as not to be intrusive to adjacent properties. As indicated in Section VII of the PUD Guidelines, illuminated signage would also be permitted under the project. See Section 6.7, Light/Glare, for additional discussion.

### **3.6.8 WALL REQUIREMENTS**

As described in Section IV.D of the College Square PUD Guidelines, open fencing with pedestrian gate access at regular intervals shall be encouraged along property lines where residential uses abut nonresidential uses. No fencing or dividing structures of any kind shall be required in areas designated for transit-mixed-use development. Solid (e.g., masonry) walls shall be discouraged between residential and nonresidential uses in the plan areas to best facilitate the open area master plan.

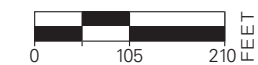


Source: Doucet & Associates, Inc 10/31/02

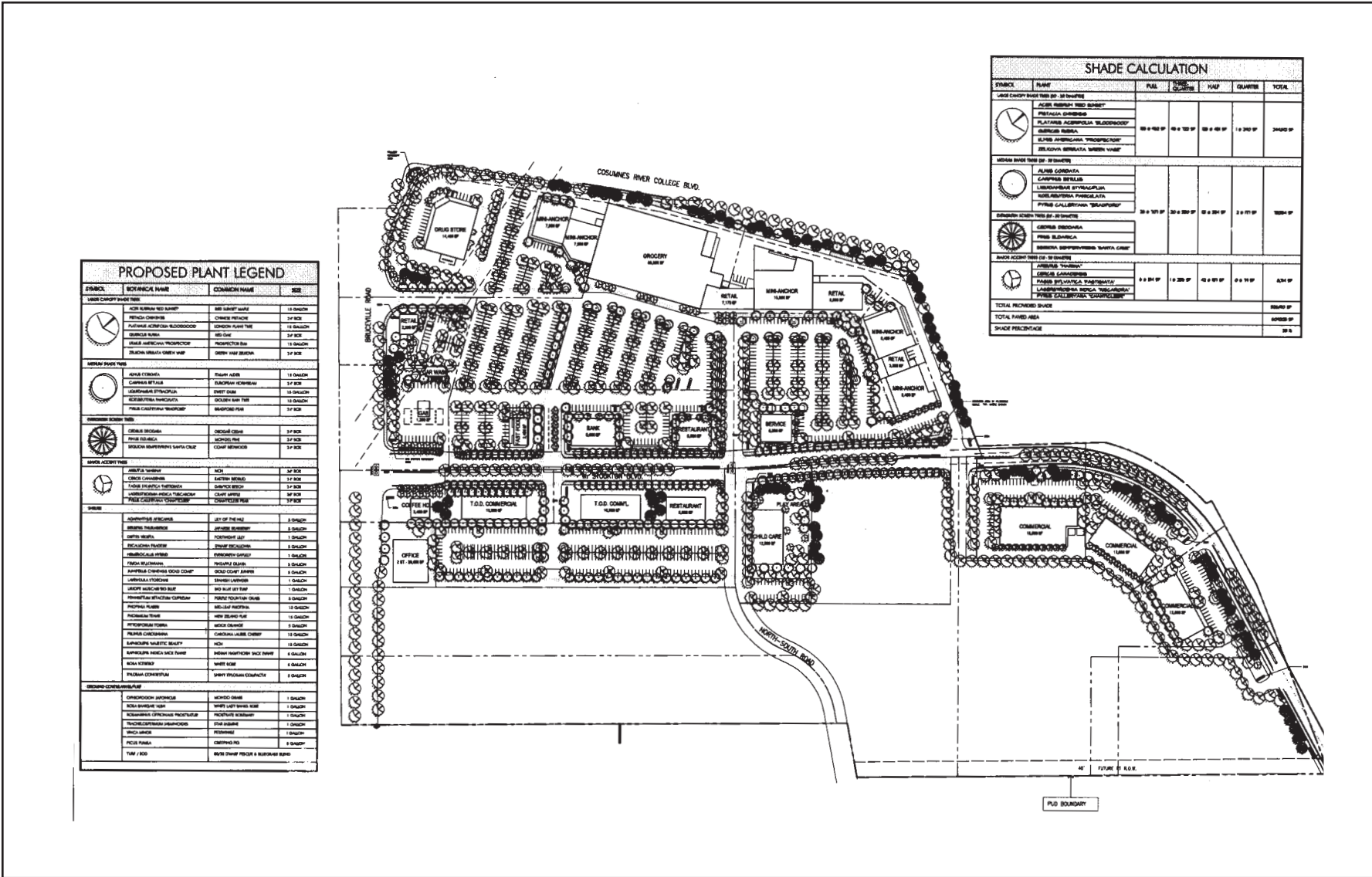
Utilities Plan

College Square PUD  
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EXHIBIT 3-6







**PROPOSED PLANT LEGEND**

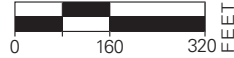
SYMBOL	SCIENTIFIC NAME	COMMON NAME	SIZE
<b>WOOD-CANOPY TREE</b>			
[Symbol]	ACEB QUINUM RED BARKED	RED BARKED	10' DIA @ 10' H
	FICUS CHENSIS	CHINA FIG	10' DIA @ 10' H
	PLATANUS ACERIFOLIA BLOODWOOD	BLOODWOOD	10' DIA @ 10' H
	QUERUS SPAEA	WHITE OAK	10' DIA @ 10' H
[Symbol]	QUERUS ALBA	WHITE OAK	10' DIA @ 10' H
	QUERUS LAEVOGAMA	DOWNY OAK	10' DIA @ 10' H
<b>SMALL POKEE TREE</b>			
[Symbol]	QUERUS ALBA	WHITE OAK	10' DIA @ 10' H
	QUERUS ALBA	WHITE OAK	10' DIA @ 10' H
<b>SHRUB</b>			
[Symbol]	CORONILLA BIFIDA	SHRUB	10' DIA @ 10' H
	LINDERA STRYCNIFOLIA	SHRUB	10' DIA @ 10' H
	OSYRIS ALBIFLORA	SHRUB	10' DIA @ 10' H
	PERSEA NANA	SHRUB	10' DIA @ 10' H
<b>SMALL TREE</b>			
[Symbol]	QUERUS ALBA	WHITE OAK	10' DIA @ 10' H
	QUERUS ALBA	WHITE OAK	10' DIA @ 10' H
<b>SHRUB ACCELYT</b>			
[Symbol]	CORONILLA BIFIDA	SHRUB	10' DIA @ 10' H
	LINDERA STRYCNIFOLIA	SHRUB	10' DIA @ 10' H
<b>SMALL TREE</b>			
[Symbol]	ADONIS VIRGATA	SMALL TREE	8' DIA @ 8' H
	ALNUS INCANA	SMALL TREE	8' DIA @ 8' H
	CORYLUS CORNUTA	SMALL TREE	8' DIA @ 8' H
	FRAXINUS VIRGINIANA	SMALL TREE	8' DIA @ 8' H
	QUERUS ALBA	SMALL TREE	8' DIA @ 8' H
	QUERUS ALBA	SMALL TREE	8' DIA @ 8' H
	QUERUS ALBA	SMALL TREE	8' DIA @ 8' H
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	QUERUS ALBA	SMALL TREE	8' DIA @ 8' H
	<b>SHRUB</b>		
[Symbol]	ADONIS VIRGATA	SMALL TREE	8' DIA @ 8' H
	ALNUS INCANA	SMALL TREE	8' DIA @ 8' H
	CORYLUS CORNUTA	SMALL TREE	8' DIA @ 8' H
	FRAXINUS VIRGINIANA	SMALL TREE	8' DIA @ 8' H
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	QUERUS ALBA	SMALL TREE	8' DIA @ 8' H
<b>SMALL SHRUB</b>			
[Symbol]	ADONIS VIRGATA	SMALL TREE	8' DIA @ 8' H
	ALNUS INCANA	SMALL TREE	8' DIA @ 8' H
	CORYLUS CORNUTA	SMALL TREE	8' DIA @ 8' H
	FRAXINUS VIRGINIANA	SMALL TREE	8' DIA @ 8' H
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	QUERUS ALBA	SMALL TREE	8' DIA @ 8' H
	QUERUS ALBA	SMALL TREE	8' DIA @ 8' H

**SHADE CALCULATION**

SYMBOL	PLANT	PLANT SIZE	PLANT TYPE	PLANT COUNT	PLANT TYPE	PLANT COUNT	TOTAL
<b>WOOD CANOPY TREE OF 10' DIAMETER</b>							
[Symbol]	ALNUS INCANA	10' DIA @ 10' H	WOOD CANOPY TREE	2	QUANT	2	200 SF
[Symbol]	QUERUS ALBA	10' DIA @ 10' H	WOOD CANOPY TREE	1	QUANT	1	100 SF
<b>SMALL POKEE TREE OF 8' DIAMETER</b>							
[Symbol]	QUERUS ALBA	8' DIA @ 8' H	SMALL POKEE TREE	2	QUANT	2	128 SF
[Symbol]	QUERUS ALBA	8' DIA @ 8' H	SMALL POKEE TREE	1	QUANT	1	64 SF
<b>SMALL TREE OF 8' DIAMETER</b>							
[Symbol]	QUERUS ALBA	8' DIA @ 8' H	SMALL TREE	2	QUANT	2	128 SF
[Symbol]	QUERUS ALBA	8' DIA @ 8' H	SMALL TREE	1	QUANT	1	64 SF
<b>SMALL SHRUB OF 6' DIAMETER</b>							
[Symbol]	QUERUS ALBA	6' DIA @ 6' H	SMALL SHRUB	2	QUANT	2	72 SF
[Symbol]	QUERUS ALBA	6' DIA @ 6' H	SMALL SHRUB	1	QUANT	1	36 SF
<b>TOTAL PROVIDED SHADE</b>							
							<b>504 SF</b>
<b>TOTAL PAVED AREA</b>							<b>6000 SF</b>
<b>SHADE PERCENTAGE</b>							<b>8.4%</b>

Source: Doucet & Associates, Inc 10/31/02

Landscape Plan



### **3.6.9 GRADING PLAN**

Rubble dumped on the project site would be hauled away. The existing roadway section in West Stockton Boulevard would be excavated as necessary to construct the roadway section to the final grades. The construction of the proposed roadways, buildings, parking lots and landscaped areas would result in approximately 5,000 cubic yards of cut and approximately 85,000 cubic yards of fill.

### **3.6.10 PHASING PLAN**

It is anticipated that the first special permits for development would be approved and construction of those components of the project would begin in 2004. The PUD is expected to be fully developed by 2010. This development period may be shorter or longer, depending on market conditions.

The phasing plan for the project anticipates project development in nine phases as shown in Exhibit 3-8. As part of the first special permit for the proposed project, the backbone infrastructure would be constructed including roads, public walks, sewer system, drainage system, utilities, lighting, and traffic signals. Then the utilities, pedestrian, lighting, and landscaping specific to each parcel and its associated buildings would be constructed. The following sequence of building construction is anticipated:

Phase #1: Neighborhood Retail Center

Shops A, Drug Store, Mini Anchor A and B, Grocery Store  
Parcels 1-5, portion of 11, 17

Phase #2: Pad Buildings South of Phase #1

Restaurant, Bank, Fast Food, Gas Station, Retail  
Parcels 12-16, 18

Phase #3: Neighborhood Retail Center/Shops East of Phase #2

Mini Anchor C, Shops B, Mini Anchor D, Shops C, Mini Anchor E, Serving Building  
Parcels 6-11, 19

Phase #4: Community Commercial

Community Commercial Buildings A, B and C  
Parcels 28-30

Phase #5: TOD Commercial

Office, Coffee House, Two Commercial Buildings, Restaurant  
Parcels 20-25

Phase #6: Child Care Center

Parcel 26

Phase #7: Senior Independent Living and Senior Assisted Living Residential

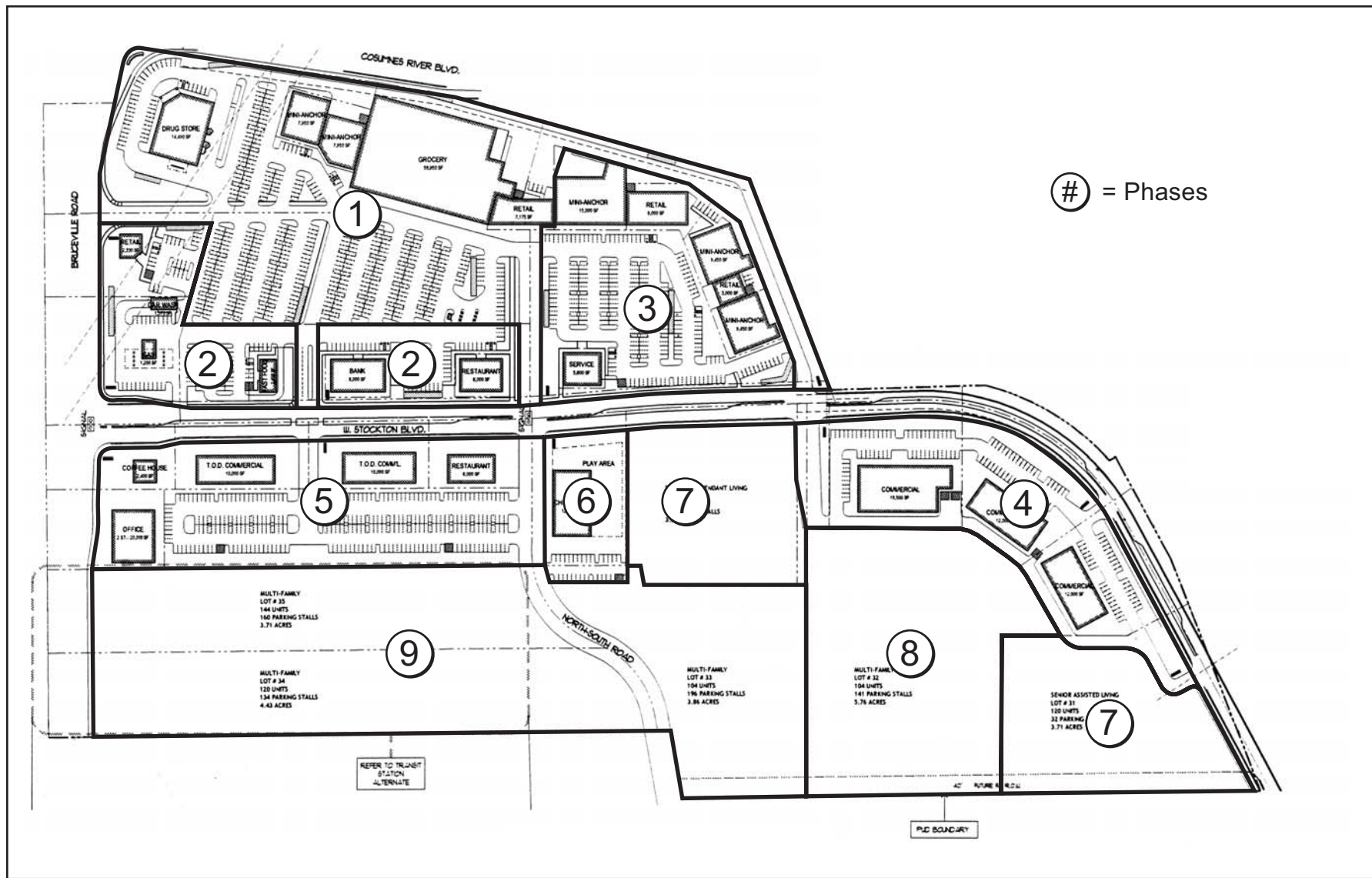
Parcels 27, 31

Phase #8: Multi-Family Residential

Parcel 32

Phase #9: Multi-Family Residential

Parcels 34, 35

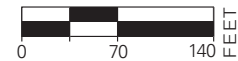


Source: Citadel Equities Group LLC, 03/21/03

## Phasing Plan

College Square PUD  
1T157.01 05/03

EXHIBIT 3-8



### **3.7 RELATED PROJECTS**

Several projects may have an effect on the proposed project or be affected by the project, as listed below.

#### **3.7.1 SOUTH SACRAMENTO CORRIDOR PHASE 2 PROJECT**

The City of Sacramento's General Plan identifies, as a potential future track alignment for a south Sacramento light rail line, a future track segment located along the south side of Cosumnes River Boulevard between Bruceville Road and SR 99 in the northern portion of the project site. Further consideration of this alignment by the Sacramento Regional Transit District (RT) has been abandoned in favor of routing the tracks south down Bruceville Road, and turning east (south of the College Square project site), before crossing SR 99 (RT 2002). As part of its South Sacramento Corridor Phase 2 Project study, RT would determine whether to route this Bruceville Road track alignment on the west side, the east side, or down the center median of Bruceville Road.

For purposes of cumulative "future year" analyses, the College Square EIR assumes only the west-side alignment of light rail transit along Bruceville Road. The applicant would dedicate a 40-foot by 1,200-foot right-of-way across the southern boundary to RT. Discussions with RT and the City's participation in RT's planning process suggest that this is the more likely rail alignment of the three possible choices.

#### **3.7.2 STRAWBERRY CREEK CENTRE**

Strawberry Creek Centre is a refinement of a previously approved PUD (P90-055, Methodist Retail Center, 1992). The project consists of 217,100 square feet of destination and community-serving retail on approximately 22 gross acres of vacant land located at the northeast corner of Cosumnes River Boulevard and Bruceville Road (north of the project site). The project includes a mix of commercial/retail space, kiosk space, entertainment space, and office/retail space, including a 138,000-square-foot Target retail for which a special permit was approved as part of the project. The Target was proposed to be 35 feet above grade, have 640 parking spaces, have approximately 150-200 employees (40-50 employees per shift), and have an estimated 1,200 customers on the site during peak periods. Vehicular access would be via driveways off Cosumnes River Boulevard, Bruceville Road, and Timberlake Way. The Strawberry Creek Centre project was approved by the City on November 12, 2002 and is currently under construction.

It is noted that planned development at the Strawberry Creek Centre site as undergone multiple development proposals over many years, and it is thus not certain that a Target would be developed at the site. Hence, for purposes of this EIR, the name "Target" is followed by "or similar project" in this EIR for the remainder of this EIR.

#### **3.7.3 BRUCEVILLE ROAD WIDENING**

Bruceville Road is proposed to be widened from Cosumnes River Boulevard to Sheldon (approximately 1 mile). The project would involve widening the road from two to six lanes separated by a landscape median with three turn lanes at Cosumnes River Boulevard.

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**4    *ALTERNATIVES TO THE PROJECT***

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## 4 ALTERNATIVES TO THE PROJECT

### 4.1 INTRODUCTION

The purpose of this chapter is to identify and describe the alternatives to the proposed project. The evaluation of the environmental impacts of the alternatives is provided in Chapter 6 of this EIR along with the evaluation of the proposed project. The comparative merits of the alternatives as compared to those of the proposed project, as well as the environmentally superior alternative, are identified in Chapter 7 of this EIR.

Project alternatives are intended to be developed to reduce or eliminate the potentially significant adverse environmental effects of a proposed project while attempting to meet the project objectives. An EIR is required to contain a discussion of a reasonable range of alternatives to the proposed project, or to the location of the proposed project, that could feasibly attain the basic objectives of the project (State CEQA Guidelines, §15126[a]). The comparative merits of the alternatives should also be presented. CEQA provides the following guidelines for considering alternatives to the proposed project.

- ▶ The “no project” alternative shall be evaluated along with the impacts of this alternative. If the environmentally superior alternative is the “no project” alternative, the EIR shall also identify an environmentally superior alternative from among the other alternatives (State CEQA Guidelines, §15126[e]).
- ▶ The discussion of alternatives shall focus on alternatives capable of eliminating significant adverse effects or reducing them to a level of insignificance, even if these alternatives would partially impede the attainment of the proposed objectives, or would be more costly (State CEQA Guidelines, §15126[b]).
- ▶ If an alternative would cause one or more significant effects in addition to those that would be caused by the proposed project, the significant effects of the alternatives shall be discussed, but in less detail than the significant effects of the proposed project (State CEQA Guidelines, §15126[d]).
- ▶ The range of alternatives required in an EIR is governed by the “rule of reason” that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice. The key issue is whether the selection and discussion of alternatives fosters informed decision-making and informed public participation. An EIR need not consider an alternative whose effect cannot be reasonably ascertained and whose implementation is remote and speculative (State CEQA Guidelines, §15126[f]).

### 4.2 ALTERNATIVES CONSIDERED IN THIS EIR

Three alternatives to the proposed project are evaluated in this EIR:

- ▶ No Project (No Development) Alternative (AA)
- ▶ General Plan Buildout Alternative (AB)
- ▶ Park-and-Ride Alternative (AC)

Each of these alternatives is described below. Table 4-1 identifies the development that would occur at the project site for each of these alternatives.

<b>Table 4-1 Development Table – Alternatives</b>				
<b>Land Use</b>	<b>No Project (AA)</b>	<b>G.P. Buildout (AB)</b>	<b>Park-and-Ride (AC)</b>	<b>Proposed Project</b>
Residential	--	1,114 du	460 du	724 du
Commercial/Office	--	--	270,256 sq ft	270,256 sq ft

For purposes of analysis in this EIR, it is assumed that the area of disturbance under the proposed project and each of the alternatives, with the exception of the No Project (No Development) Alternative, would be the same (i.e., approximately 63 acres). The total amount of impervious surfaces is approximately 5% for the No Project (No Development) Alternative, 75% for the General Plan Buildout Alternative, 82% for the proposed project, and 89% for the Park-and-Ride Alternative.

**NO PROJECT (NO DEVELOPMENT) ALTERNATIVE (AA)**

The No Project (No Development) Alternative (AA) is required by CEQA. Under this alternative, conditions at the approximately 63-acre project site would remain as they currently exist (i.e., disturbed annual grassland habitat, several scattered trees, an existing roadway [Kastanis Way] that dead ends on the project site, and no structures). Table 4-1 compares this alternative to the amount of development that would occur at the project site for the other alternatives and the proposed project.

Residential and commercial development as planned for by the City of Sacramento (City) General Plan would not be developed on the project site with this alternative. The City’s objectives for the proposed project would also not be achieved, such as providing housing opportunities for residents of the City, providing senior and low-income housing, providing higher density transit-oriented development (TOD) adjacent to planned light rail facilities that encourages transit usage, providing services catering to students and faculty of Cosumnes River College, and reducing traffic that would otherwise occur at the project site under traditional residential/commercial development. The storm drain system planned for the site in the Jacinto Creek Planning Area Drainage Master Plan also would not be developed (April 15, 1996).

Similarly, the project applicant’s objectives for the proposed project would not be achieved, including providing an urban infill project focused on needed neighborhood and community retail services, supporting the City’s jobs/housing balance goals, providing utility line extensions to multi-family zoned parcels to the south, and so on.

**GENERAL PLAN BUILDOUT ALTERNATIVE (AB)**

Under the General Plan Buildout Alternative (AB), the project site would be developed with the existing General Plan land use designation for the project site (i.e., Medium-Density Residential (16-29 du/ac)),

resulting in approximately 1,114<sup>1</sup> multifamily residential dwelling units (i.e., apartments, condominiums), but no senior housing or commercial uses. Unlike the proposed project, this alternative would not require any General Plan Amendment, Community Plan Amendment, or Rezone to permit the proposed land uses. Table 4-1 identifies the amount of development at the project site for this alternative compared to that of the other alternatives and the proposed project.

This alternative is considered in this EIR to provide a comparison of buildout of the project site under the adopted land use plan contrasted with buildout of the proposed project. This alternative is also considered because it could reduce or avoid one or more significant adverse environmental effects of the proposed project (i.e., it could result in less land use, population/housing, light/glare, and stationary source noise impacts than the proposed project).

This alternative implements the General Plan Land Use Map and would develop the storm drain system planned for the site in the Jacinto Creek Planning Area Drainage Master Plan (April 15, 1996). This alternative would also achieve several of the City's objectives for the proposed project, including providing housing opportunities for residents of the City, providing senior and low-income housing, and providing higher density land uses adjacent to planned mass transit facilities which would encourage mass transit usage.

The project applicant's objective for the proposed project of providing utility line extensions to multifamily-zoned parcels to the south would be achieved with this alternative. However, the applicant's other stated objectives would not be achieved, including providing an urban infill project focused on neighborhood and community retail services, and supporting the City's jobs/housing balance goals.

### **PARK-AND-RIDE ALTERNATIVE (AC)**

The Park-and-Ride Alternative (AC) would be designed similarly to the proposed project, except that approximately 9 acres in the southwest corner of the project site (i.e., the "southwest parcel") would be dedicated to the Sacramento Regional Transit District (RT) for a future light rail line right-of-way (ROW), park-and-ride lot and bus transfer station, all associated with the planned South Sacramento Corridor Phase 2 Project. Because it is unknown exactly when or where RT will develop the light rail station in the vicinity and hence the park-and-ride lot, this EIR evaluates the potential impacts of developing and operating the park-and-ride lot at the project site (for example, traffic, noise, and light/glare associated with the park-and-ride lot is evaluated in this EIR). However, development of the park-and-ride lot would not be undertaken by a private applicant but would be completed by RT as a part of its Phase 2 Corridor project, which represents a separate project under CEQA.

The acreage to be dedicated to RT under this alternative would take the place of 264 multifamily residential units planned for this portion of the project site under the proposed project, resulting in a total of 460 residential units under this alternative (208 multifamily units, 252 senior housing units).

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<sup>1</sup> The 1,114 residential unit figure was derived by multiplying 22 du/ac by 42.91 net acres. The 22 du/ac density figure is used because it represents the midpoint between the 16 and 29 du/ac permitted at the project site under the existing Medium Density Residential General Plan land use designation of the site. The 42.91 net acres was derived by taking 80% of the project site's acreage of 53.64 acres available for buildout after deducting acreage for roads, but not for a water quality pond, or park land. This unit figure represents a realistic estimate of the development that would occur at the project site under the existing General Plan.



As for the proposed project, a General Plan Amendment, Community Plan Amendment, and Rezone would be required to permit the development of uses other than residential uses at the project site. Table 4-1 identifies the amount of development at the project site for this alternative compared to that of the other alternatives and the proposed project. Exhibit 3-3 identifies a possible configuration of development on the southwest parcel for this alternative (this is provided for schematic and evaluative purposes only – RT would determine the final configuration of this parcel under this alternative).

This alternative would accommodate the potential need by RT for a light rail ROW, park-and-ride lot, and bus transfer station in the vicinity of the project site and Cosumnes River College. This alternative would more likely be implemented if RT were to select a light rail alignment along the east side of Bruceville Road, rather than the west side of Bruceville Road or the Bruceville Road median as assumed under the proposed project. The applicant has reserved the 9.23-acre southwest parcel for RT.

This alternative would achieve all of the City’s objectives for the proposed project, albeit to a lesser degree than the proposed project. The reduced number of residential units and reduced density under this alternative would provide less senior and low-income housing, and less transit ridership<sup>2</sup>, than under the proposed project. At the same time, this alternative would meet the potential need of RT for a site for a park-and-ride lot and bus transfer station in the vicinity that would not be provided under the other alternatives (including the proposed project). As for the proposed project, the storm drain system planned for the site under the Jacinto Creek Planning Area Drainage Master Plan (April 15, 1996) would be developed.

All of the applicant’s objectives for the proposed project would be achieved with this alternative, including providing an urban infill project focused on needed neighborhood and community retail services, supporting the City’s jobs-housing balance goals, providing utility line extensions to multifamily zoned parcels to the south, etc. In fact, this alternative would be more effective than the proposed project in achieving certain of the applicant’s objectives, including providing a location for a future light rail station, providing a more cost effective light rail alignment for RT (through the dedication of land for a portion of the track ROW, station, and park-and-ride lot), and providing an opportunity for a multi-use transit center for light rail, bus, pedestrian, and bicycle connections.

#### **4.3 ALTERNATIVES CONSIDERED AND REJECTED**

CEQA requires that the lead agency identify any alternatives that were considered but rejected as infeasible during the scoping process, and briefly explain the reasons underlying this determination (State CEQA Guidelines, §15126[c]). Among the factors that may be used to eliminate alternatives from detailed consideration in an EIR are failure to meet most of the basic project objectives, infeasibility, or inability to avoid significant environmental impacts.

The No Project, General Plan Buildout, and Park-and-Ride Alternatives are evaluated in this EIR. This represents a reasonable range of project alternatives.

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<sup>2</sup> As shown in Tables 6.2-10 and 6.2-11, total transit trips would decrease from 802 under the proposed project to 536 under the Park-and-Ride Alternative.

An offsite alternative is sometimes considered in EIRs to provide an evaluation of a greater range of possible alternatives to a proposed project. In this case, consideration of this alternative is inappropriate for several reasons. The project site is designated by the General Plan for urban uses, is zoned by the City's Zoning Ordinance as a Special Planning District (which calls for development of a range of uses and coordinated development such as would be provided by the proposed project), and has already undergone utility and drainage planning. Not developing the site would be inconsistent with these existing City plans/policies and, as an infill parcel, would be inconsistent with the logical progression of development in the area. Third, the project site is located along a planned RT light rail line and station, and developing the proposed project at a different location would not further local and regional transit goals and objectives. Fourth, there is no evidence to suggest that the project site is more sensitive in terms of natural resources and adjacent land uses than other large vacant parcels in the area, and developing the project at a different location would not be expected to reduce any of the significant environmental effects of the proposed project.

Two reduced density alternatives are considered in this EIR in an effort to reduce the potential environmental effects of the proposed project. The General Plan Buildout Alternative does not include a commercial component and would result in substantially less trip generation than the proposed project (see Section 6.2, Traffic, for further discussion), although more residential units are proposed. The Park-and-Ride Alternative provides for the same amount of commercial space as the proposed project but reduces the number of residential units. In this case, consideration of further reduced density alternatives is unnecessary because such an alternative would be less effective than the proposed project in achieving (1) the housing objectives of the City by developing less housing, including less senior and low-income housing; and (2) the transit objectives of the City and RT by developing lower density uses adjacent to planned light rail facilities (thus reducing the potential for use of mass transit and increasing the potential for future vehicular traffic).

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**5      *LAND USE AND CONSISTENCY WITH ADOPTED  
PLANS AND POLICIES***

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## **5 LAND USE AND CONSISTENCY WITH ADOPTED PLANS AND POLICIES**

### **5.1 INTRODUCTION**

This chapter describes existing land uses in the project area and presents information on the current land use policies and designations applicable to the College Square PUD (proposed project). It also presents an assessment of the project's consistency with adopted plans, including the City of Sacramento General Plan Update (SGPU) and the South Sacramento Community Plan (SSCP), and its compatibility with the adjacent land uses.

This chapter examines planning consistency and whether implementation of the project would result in conflicts between land uses or displacement of land uses. Hence, this chapter complies with §15125(d) the California Environmental Quality Act Guidelines (State CEQA Guidelines), which suggests that environmental impact reports (EIRs) discuss planning inconsistencies as part of the environmental setting. To the extent practical, this chapter also follows the standard City of Sacramento EIR format, presented in Chapter 6, Environmental Analysis. For each identified impact, the discussion describes the extent of the impact under the proposed project and alternatives. Because these consistency and compatibility impacts are not physical impacts on the environment, mitigation measures are not identified in this chapter, as allowed under CEQA. For the discussion of the physical environmental impacts that would result under the proposed project and alternatives, see Chapter 6, Environmental Analysis.

### **5.2 EXISTING SETTING**

#### **5.2.1 REGIONAL SETTING**

As indicated in Exhibit 3-1, the project site is located in the southern portion of the City of Sacramento, California. The City of Sacramento is divided into 11 geographic areas, known as community plan areas. The SSCP area, the area in which the College Square project is located, is divided into two sections by an unincorporated portion of Sacramento County. In general, the SSCP area is bounded by Fruitridge Road on the north, Elk Grove-Florin Road (South Watt Avenue) on the east, Sheldon Road on the south, and Union Pacific Railroad tracks on the west.

The SSCP area includes a mix of housing types, including single-family and multifamily developments and independent and assisted senior housing developments. Large commercial shopping developments, including Florin Mall and Southgate Center, are located in the northern portion of the area. In addition, the community is served by two hospitals, several medical facilities, and Cosumnes River College.

The SSCP area contains the largest current and projected population of any community plan area in the City of Sacramento. The population in this area is expected to grow by 22%, from 67,313 residents in 1998 to 85,987 residents in 2022. A variety of housing and employment opportunities exist in the area.

The southernmost portion of the SSCP area includes the Jacinto Creek Planning Area (JCPA). Most of the JCPA was annexed into the City from Sacramento County in 1992. The City's General Plan and the SSCP were amended to include the JCPA in 1995. The JCPA area extends from Cotton Lane in the north

to Sheldon Road in the south and from Bruceville Road in the west to State Route (SR) 99 in the east. The College Square project site is located immediately north of but outside the JCPA.

The portion of the SSCP area in which the project site is located was annexed to the City in 1987 as part of the Danekas Annexation. The Danekas Annexation covered the area extending from just north of Cosumnes River Boulevard in the north to Cotton Lane in the south, and from Bruceville Road in the west to SR 99 in the east. The Danekas Annexation area is located directly north of the JCPA area.

## **5.2.2 LOCAL SETTING**

As indicated in Exhibit 5-1, the approximately 63-acre project site is located at the southeastern corner of the intersection of Bruceville Road and Cosumnes River Boulevard. The site is generally bounded on the north by Cosumnes River Boulevard, on the east by SR 99, on the south by Cotton Lane, and on the west by Bruceville Road (Exhibit 3-2).

The land uses surrounding the project site include a senior citizen apartment complex northwest of the site, across the intersection of Bruceville Road and Cosumnes River Boulevard; vacant land (the future site of Strawberry Creek Centre, an approved commercial project) directly north of the site, across Cosumnes River Boulevard; SR 99 and a wetland mitigation bank parcel on the east; vacant land and residential development on the south, including small ranchettes along Cotton Lane; and Cosumnes River College on the west side of Bruceville Road. Further north, northwest, and southwest of the project site are a residential subdivision, Methodist Hospital, and an apartment complex, respectively.

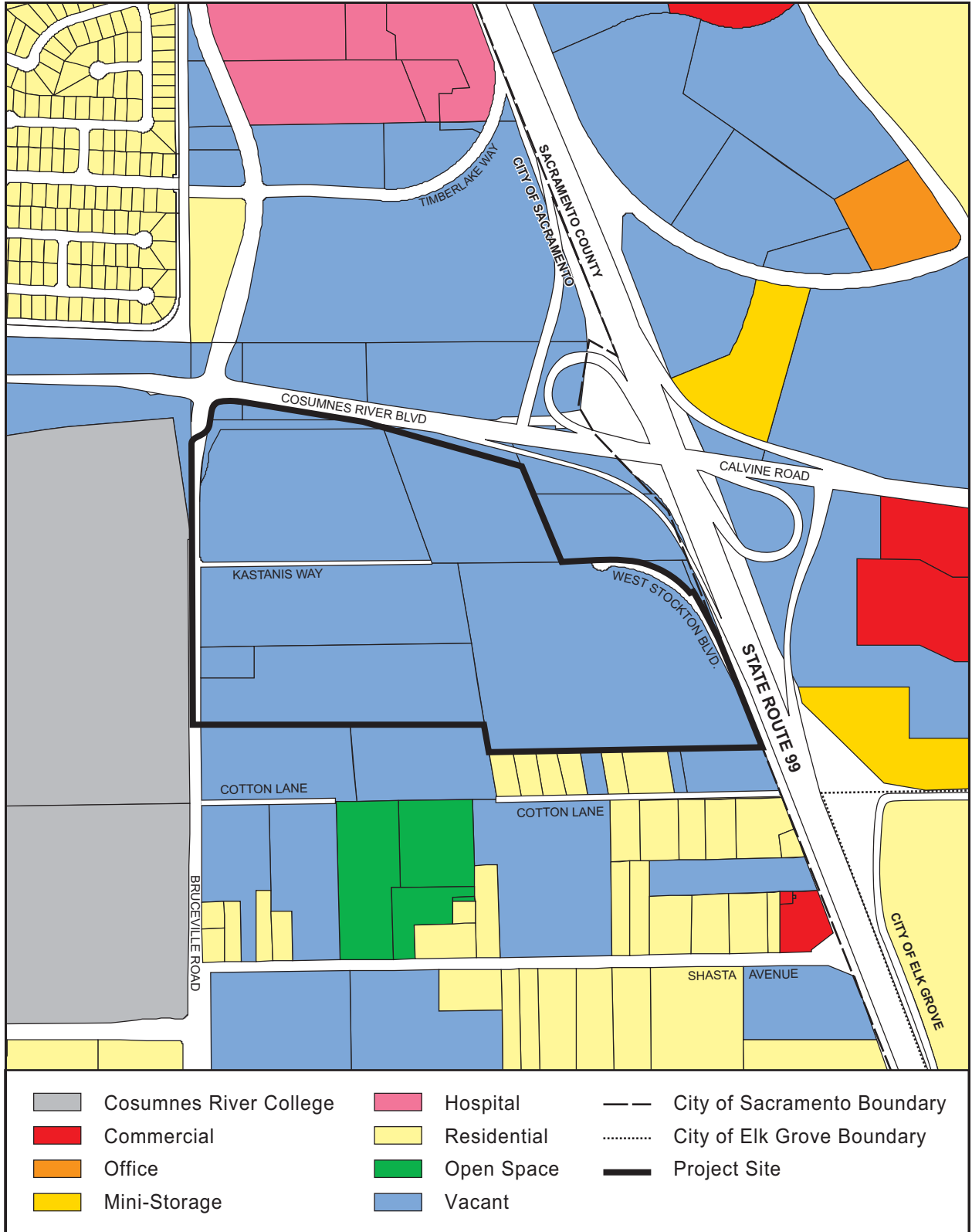
## **5.3 ADOPTED PLANS**

### **5.3.1 CITY OF SACRAMENTO GENERAL PLAN**

The City of Sacramento General Plan Update (SGPU) is a 20-year policy guide for the physical, economic, and environmental growth and renewal of the City. It comprises goals, policies, programs, and actions based on an assessment of current and future needs and available resources. The SGPU is oriented toward physical development of land uses, a circulation network, and supporting facilities and services. For this reason, the document is the City's principal tool for evaluating public and private projects and municipal service improvements. Land use designations in the SGPU define the types, densities, and functions of permitted land uses in each land use designation. The SGPU was adopted on January 19, 1988, concluding a 3-year planning effort. The update replaced the 1974 general plan.

The SGPU Land Use Map (2002) designates the entire approximately 63-acre College Square project site as Medium-Density Residential (16-29 dwelling units per net acre [du/na]) (Exhibit 5-2). As described in the SGPU, development permitted under the Medium-Density Residential designation includes condominiums, garden apartments, and low-density apartment uses. Some commercial or office use may be located in multifamily districts because an overlap of land uses is expected in higher density residential districts located along major streets.

The SGPU Land Use Map identifies, as a potential future conceptual track alignment for a south Sacramento light rail line, a track segment along the south side of Cosumnes River Boulevard between Bruceville Road and SR 99 (on the northernmost portion of the project site). Further consideration of this

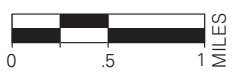


Source: EDAW 2003

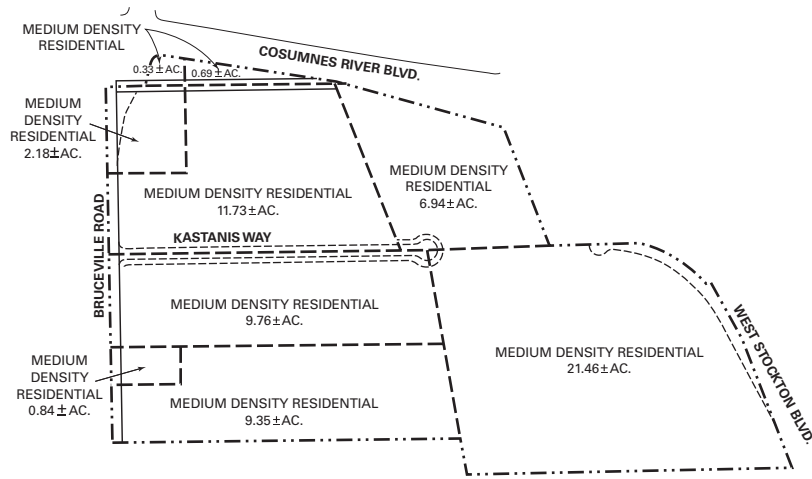
### Existing Land Uses in the Project Vicinity

EXHIBIT 5-1

College Square PUD  
1T157.01 5/03



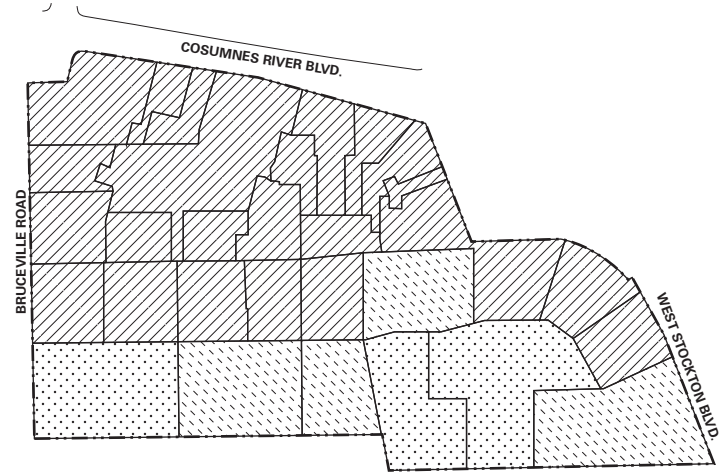
### Existing General Plan Land Use Designations



**LEGEND**

Medium Density Residential (63.27 Gross Acres)

### Proposed General Plan Land Use Designations



**LEGEND**

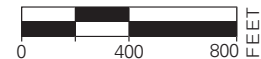
-  Community/Neighborhood Commercial and Office (37.62 Gross Acres)
-  Medium Density Residential (12.59 Gross Acres)
-  High Density Residential (13.06 Gross Acres)

Source: Doucet & Associates 2002

## City of Sacramento General Plan Land Use Designations

EXHIBIT 5-2

College Square PUD  
G 1T157.01 05/03



alignment by the Sacramento Regional Transit District (RT) has been abandoned in favor of routing the tracks south down Bruceville Road, then eastward inside the southern boundary of College Square and then across SR 99 (Robinson, pers. comm., 2002). As part of its South Sacramento Corridor Phase 2 Project study, RT will determine whether to route this Bruceville Road track alignment on the west side, on the east side (on the project site), or down the center median of Bruceville Road.

### **5.3.2 SOUTH SACRAMENTO COMMUNITY PLAN**

The SSCP is a long-range planning document that serves as a policy guide for planners, public officials, and landowners to assist them in their determinations relating to development in the community. Like the SGPU, it identifies goals and policies to assist in this endeavor. The SSCP is consistent with and implements the SGPU while providing more specific guidance for the south Sacramento area than is provided in the SGPU.

The SSCP was adopted in 1986. The product of 2 years of collaboration between the City Planning Department and a citizens advisory committee, the SSCP revised and consolidated the five previous community plans for south Sacramento: the Fruitridge (1965), Colonial (1965), Southgate (1965), Lindale-Florin (1965), and Valley Hi (1968) plans.

The project site is located in the SSCP area. The entire approximately 63-acre project site is designated Special Planning District (Exhibit 5-3) on the SSCP Land Use Map (1999). Special Planning Districts are intended to allow the City Planning Commission and City Council to initiate proceedings (such as approval of a Planned Unit Development) to regulate properties under multiple ownership, designated in redevelopment, community, or general plans, that are in need of general physical and economic improvement or that have special environmental features that land use, zoning, and other regulations cannot adequately address. For such areas to achieve their fullest potential, the SSCP indicates that it may be desirable to provide for a range of uses that would not otherwise be permitted with standard zoning designations and/or to encourage coordinated development of multiple properties.

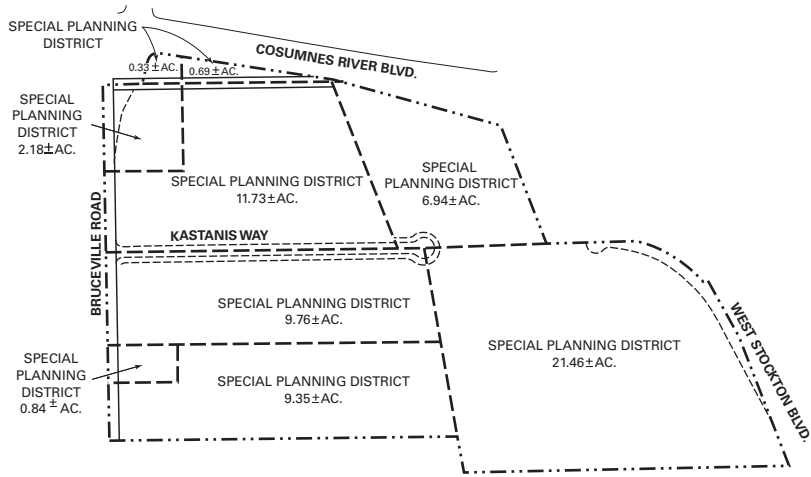
### **5.3.3 SACRAMENTO ZONING ORDINANCE**

The Sacramento Zoning Ordinance regulates the use, location, height, and size of buildings or structures, yards, courts, and open spaces; the amount of building coverage permitted in each zone; and population density. The Zoning Ordinance divides the City of Sacramento into zones of such shape, size, and number best suited to carry out the ordinance's regulations; provide for the enforcement of the regulations; and ensure the provision of adequate open space for aesthetic and environmental amenities.

The project site is zoned OB (Office Building) (approximately 1 acre), C-1 (Limited Commercial) (approximately 2 acres), HC-R (Highway Commercial Review) (approximately 7 acres), and R-2B-R (Multi-Family Review) (approximately 41 acres) (Exhibit 5-4). The Office Building zone is intended for business office centers and institutional or professional buildings. The Limited Commercial zone provides for office and retail stores and service establishments that are compatible with residential developments. The Highway Commercial Review zone typically is located along federal and state freeways, and permitted uses are establishments offering accommodations or services to motorists. The



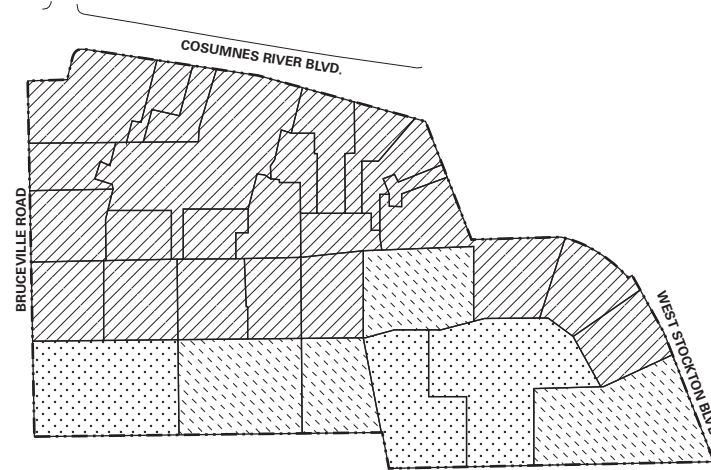
### Existing Community Plan Land Use Designations






**LEGEND**

Special Planning District (63.27 Gross Acres)

### Proposed Community Plan Land Use Designations



**LEGEND**

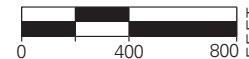
-  General Commercial (37.62 Gross Acres)
-  11-29 Units/Acre Residential (12.59 Gross Acres)
-  29+ Units/Acre Residential (13.06 Gross Acres)

Source: Doucet & Associates 2002

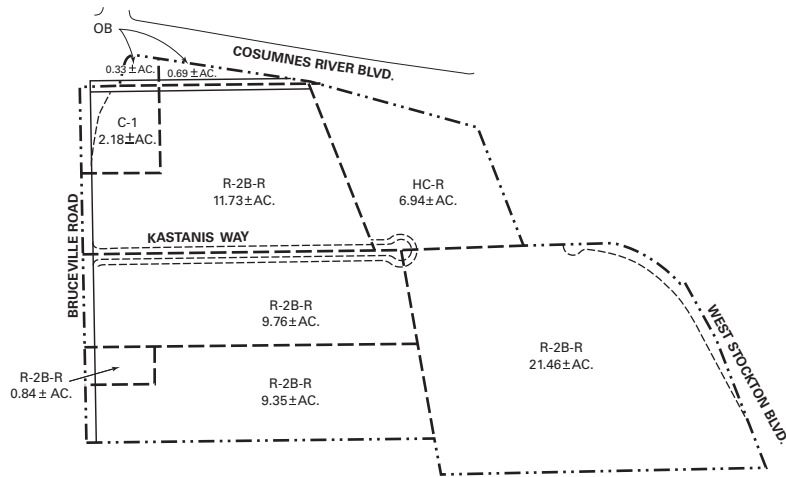
## South Sacramento Community Plan Land Use Designations

EXHIBIT 5-3

College Square PUD  
G 1T157.01 05/03



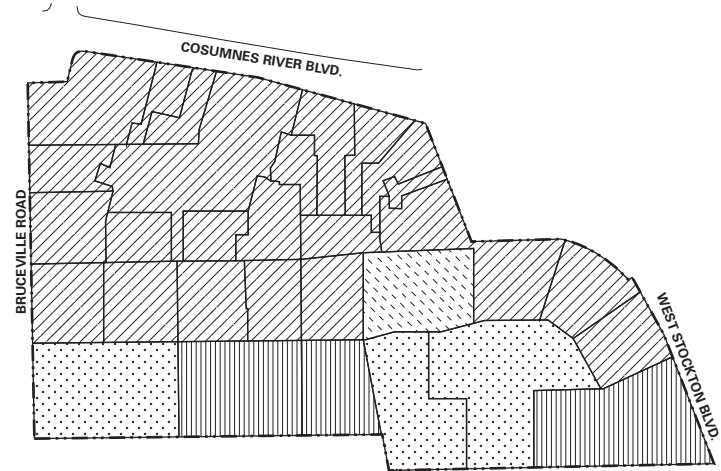
### Existing Zoning Designations



**LEGEND**

- OB (1.02 Gross Acres)
- C-1 (2.18 Gross Acres)
- HC-R (6.94 Gross Acres)
- R-2B-R (53.13 Gross Acres)

### Proposed Zoning Designations



**LEGEND**

- C-2-PUD (37.62 Gross Acres)
- R-3-PUD (12.59 Gross Acres)
- R3A-PUD (10.21 Gross Acres)
- R-4-PUD (2.85 Gross Acres)

Source: Doucet & Associates 2002

Multi-Family Review zone permits apartments or condominiums with a minimum land use per unit of 200 square feet and a maximum density of 21 units per acre.

#### **5.3.4 TRANSIT MASTER PLAN**

The RT Transit Master Plan, adopted in 1993, outlines the systematic expansion of bus and light rail services to address regional mobility and environmental needs in the City of Sacramento and adjacent communities. The Transit and Land Use Coordination Element of the plan presents principles and policies that strengthen the link between land use and transit through coordinating land use patterns and transit service to improve transit efficiency and use. Improvement to the transit system may be accomplished through service design and operations, travel cost, user preference and land use patterns. Each of these items is discussed briefly below:

- ▶ Service design and operations - More frequent, accessible, convenient service will yield more riders and optimize the effectiveness and overall capacity of the region's transportation system.
- ▶ Travel costs - Modifying travel costs to increase transit system use may include increasing the cost of travel for other transit modes, such as increasing parking charges and reducing parking supply.
- ▶ User preference - Influencing user preferences for mobility choices is an indirect and complex method to shift user perceptions, attitudes, and understanding of the transit system and mobility options.
- ▶ Land use patterns - Strengthening the link between land use patterns and the transit system improves transit system use. Land use patterns are a critical determinant of travel demand.

The Transit Master Plan identifies a strategy to expand the service area of RT over 20 years, including extending a light rail line through southern Sacramento (to Elk Grove) as part of its 10-year development plan. No specific southern route is identified. The plan states that an alternatives analysis will be conducted before the route is selected.

RT is completing conceptual engineering and is preparing an EIR/EIS for the South Sacramento Corridor Phase 2 Project. Currently, RT's light rail system is being extended into south Sacramento as part of RT's South Sacramento Corridor Phase 1 Project, a 6.3-mile extension to Meadowview Road scheduled to open in April 2005. The South Sacramento Corridor Phase 2 Project is the proposed extension of the light rail system an additional 5 miles southeastward, from Meadowview Road to the intersection of Calvine/Auberry, which is located approximately 1 mile east and slightly south of the project site. The Phase 1 and 2 projects have been conceptually planned in RT's Transit Master Plan; the corridor projects are the project-level planning and implantation tools for this conceptual planning.

#### **5.3.5 Jacinto Creek Planning Area**

The project site is located north and just outside the Jacinto Creek Planning Area (JCPA) and is not subject to the requirements of the JCPA (Regan-Vienop 2003). However, the JCPA does identify transportation facilities in the vicinity of the College Square project site that will be required at buildout of the JCPA. The relevant transportation facilities are listed below from the October 30, 1996 JCPA Infrastructure and Utilities Plan:

- ▶ Bruceville Road – Six lanes with landscaped median, curb, gutter, sidewalk, bike lanes, and landscape corridor (62 foot half section).
- ▶ West Stockton Boulevard – 54' Collector with left turn pockets and no parking.
- ▶ Traffic signals at Bruceville/Calvine and Bruceville/Cosumnes College East Entrance.

The JCPA Infrastructure and Utilities Plan indicates that development of Bruceville to six lanes is required to provide regional service, but that construction of two lanes in each direction is adequate as an interim condition to serve the fully developed JCPA. The Plan also requires that all developments along Bruceville Road be required to provide street and landscape improvements, either by constructing them or contributing their estimated costs, as determined by the City.

#### **5.4 REQUIRED LAND USE ENTITLEMENTS**

The following land use entitlements would be required from the City of Sacramento, and are being sought by the project applicant, for the College Square PUD:

- ▶ General Plan Amendment (GPA) from Medium Density Residential (16–29 du/ac) to Community/Neighborhood Commercial and Office, Medium Density Residential (16–29 du/ac), and High Density Residential (30+ du/ac);
- ▶ Community Plan Amendment from Special Planning District to Residential (11–29 du/ac), Residential (29+ du/ac), and General Commercial;
- ▶ rezoning from HC-R, C-1, OB, and R-2B-R to C2-PUD;
- ▶ adoption of the College Square PUD Guidelines;
- ▶ adoption of the College Square Schematic Plan (Exhibit 3-3);
- ▶ approval of the Tentative Parcel Map; and
- ▶ abandonment of excess City right-of-way adjacent to Cosumnes River Boulevard/Bruceville Road.

In addition to the above entitlements, and consistent with the Special Planning District designation of the project site by the SSCP (which requires that development of the site occur under a PUD), approval by the City of special permits would be required for development of individual components of the project. Special permits are not being sought at this time. At the time applications for special permits are received by the City, the City would review the special permits for their consistency with the PUD and would conduct initial environmental review (i.e., prepare an initial study) to determine whether the development proposed under the special permits would have the potential to result in additional significant impacts not identified in this EIR.

## **5.5 CONSISTENCY WITH ADOPTED PLANS AND COMPATIBILITY WITH ADJACENT LAND USES**

### **5.5.1 METHOD OF ANALYSIS**

The following analysis addresses five issues: (1) project consistency with the SGPU, (2) project consistency with the SSCP; (3) project consistency with the City of Sacramento Zoning Ordinance; (4) project consistency with the RT Transit Master Plan, and (5) project compatibility with existing adjacent land uses. For these first four issues, this section differs from the environmental issues evaluated in Chapter 6 of this EIR in that project consistency with applicable plans are addressed as opposed to environmental impacts and mitigation measures. This discussion complies with §15125(c) of the State CEQA Guidelines which suggests that EIRs should discuss planning inconsistencies as part of the environmental setting. For the fifth issue (project compatibility with adjacent land uses), this section examines whether the proposed uses are similar to the existing uses adjacent to the project site in type and intensity. Any environmental impacts resulting from placing the proposed land uses adjacent to the existing land uses are evaluated in Chapter 6 (e.g., traffic, noise, light/glare).

The analysis examines the proposed project (PP), the No Project (No Development) Alternative (AA), the General Plan Buildout Alternative (AB), and Park-and-Ride Alternative (AC). See Chapter 4 for descriptions of the project alternatives.

### **5.5.2 ANALYSIS**

#### **Impact 5-1: Consistency with the SGPU**

PP            The existing land use designation for the project site under the SGPU is Medium Density Residential. This designation would permit 1,114 multifamily dwelling units (i.e., apartments, condominiums), or some combination of multifamily dwelling units and a smaller amount of neighborhood-serving commercial uses, at the project site. Under the proposed project, the project site would be developed with medium- and high-density urban uses adjacent to a future planned light rail station, and a mix of onsite uses would be developed that would be complementary to one another and that would reduce the need for offsite shopping trips by the proposed onsite residences. In these respects, the proposed project would be consistent with SGPU policies aimed at encouraging mass transit usage and reducing traffic congestion. Under the project, a GPA is proposed that would redesignate the project site as follows: Community/Neighborhood Commercial and Office (approximately 38 acres), Medium Density Residential (16–29 du/ac) (approximately 13 acres), and High Density Residential (30+ du/ac) (approximately 13 acres) (Exhibit 5-2). This GPA would permit a higher density of residential development on portions of the project site than is currently permitted under the SGPU. This GPA also would permit community commercial development on a portion of the project site that is not currently permitted. The proposed development would be inconsistent with the SGPU Land Use Map. The GPA would correct this inconsistency.

SGPU goals and policies relevant to the proposed project are included in the Residential Land Use, Housing, Commerce and Industry Land Use, Circulation, Public Facilities and

Services, and Health and Safety Elements of the SGPU. Table 5-1 identifies these SGPU goals and policies and indicates whether the project is consistent with them. As indicated in Table 5-1, the proposed project would be consistent with the relevant residential, housing, commercial, and public facilities/services policies of the SGPU.

<b>Table 5-1 SGPU Goals and Policies—Assessment of Project Consistency</b>	
<b>Plan Element Goal or Policy Statement</b>	<b>Project Consistency Assessment</b>
<b>Residential Land Use Goal:</b> Provide affordable housing opportunities for all income household categories throughout the City.	<u>Consistent:</u> The proposed project would meet the demands of the City’s Inclusionary Housing Program, which requires that 5% and 10% of the multifamily units at the site be affordable to and occupied by low-income and very low income households, respectively. The project would provide senior housing that would help meet the City’s senior housing needs, and it would provide apartments that could potentially be used by Cosumnes River College students.
<b>Residential Land Use Goal:</b> Develop residential land uses in a manner which is efficient and utilizes existing and planned urban resources.	<u>Consistent:</u> The proposed project is a mixed-use development that includes a variety of residential uses alongside office and retail uses. It represents infill development, which is an efficient use of the land and for which urban resources already exist adjacent to the project site (e.g., streets, utility infrastructure). Its location near Cosumnes River College would help to ensure efficient use of the residential and commercial space by students. In addition, the project would be located near a planned extension of RT’s light rail line, which would allow the project to take advantage of planned mass transit. The project also would increase density adjacent to planned mass transit, thus providing for a more efficient land use pattern (i.e., both increase mass transit usage and decrease traffic generation).
<b>Residential Land Use Policy:</b> Identify areas where increased densities, land use changes or mixed uses would help support existing services, transportation facilities, transit, and light rail. Then proceed with necessary General Plan land use changes for property with service capacities adequate to support more intensive residential development.	<u>Consistent:</u> See the first and second responses in this table.
<b>Residential Land Use Policy:</b> Identify areas of potential change where higher density development would be appropriate along major thoroughfares, commercial strips and near light rail stations, and modify plans to accommodate this change.	<u>Consistent:</u> See the preceding response.
<b>Residential Land Use Policy:</b> Promote infill development as a means to meet future housing needs by expanding the benefits for this type of development and actively promote infill development in identified infill areas through outreach programs designed to inform the development community and property owners of this program.	<u>Consistent:</u> The project is an infill project, surrounded on all sides by existing or approved development. The project would provide housing to help meet City housing needs, including low- and very-low income housing, consistent with the requirements of the City’s Inclusionary Housing Program.

**Table 5-1 (Continued)**  
**SGPU Goals and Policies—Assessment of Project Consistency**

<b>Plan Element Goal or Policy Statement</b>	<b>Project Consistency Assessment</b>
<p><b>Residential Land Use Goal:</b> Maintain orderly residential growth in areas where urban services are readily available or can be provided in an efficient cost effective manner.</p>	<p><u>Consistent:</u> Because the project would be surrounded by existing or approved development, the extension of urban services would be accomplished in an efficient and cost-effective manner. Any such extension would be limited to extension in the project site itself. Roadway and utility infrastructure currently exists immediately adjacent to the project site, so no inefficient or costly extension of infrastructure to the project site would be required.</p>
<p><b>Residential Land Use Policy:</b> Use mixed-use housing and employment centers to help meet housing needs and reduce traffic in new development within the City.</p>	<p><u>Consistent:</u> The project is a mixed-use development with residential, office, and retail uses. A portion of the population living in the housing may fill the estimated 890 new jobs associated with the office and retail uses and would not contribute to local work-related traffic. Also, it is anticipated that a portion of the apartments to be developed under the project may be occupied by Cosumnes River College students and that these students would not require transportation to school. The project, which would be located next to a planned extension of the RT light rail line, is a transit-oriented development. Many of the travelers to and from the project site would be expected to use light rail. The above would both reduce housing demand in the area and reduce the amount of additional traffic that would otherwise be generated by the proposed project.</p>
<p><b>Housing Element Goal:</b> Meet new housing needs for all income groups.</p>	<p><u>Consistent:</u> See the first response in this table.</p>
<p><b>Housing Element Goal:</b> Provide affordable housing for all income groups.</p>	<p><u>Consistent:</u> See the first response in this table.</p>
<p><b>Housing Element Goal:</b> Provide a mixture of housing types and styles throughout the city.</p>	<p><u>Consistent:</u> This policy is applicable more to the City of Sacramento than to individual development projects. However, the proposed project would include the development of multifamily housing in a predominantly single-family housing area and thus would contribute to the City’s goal of providing a mixture of housing types and styles throughout the City.</p>
<p><b>Commerce and Industry Land Use Element Goal:</b> Ensure that all areas of the City are adequately served by neighborhood/community shopping districts.</p>	<p><u>Consistent:</u> The proposed project would include a neighborhood/community commercial component that would provide for the local shopping, service, and childcare needs of the proposed onsite residential uses and existing adjacent residential areas.</p>
<p><b>Commerce and Industry Land Use Element Goal:</b> Promote mixed-use development of neighborhood/ community commercial districts through new construction and revitalization.</p>	<p><u>Consistent:</u> The College Square project’s mixed-use development has residential, office, and retail uses.</p>
<p><b>Circulation Element Goal:</b> Provide adequate off-street parking for new development and reduce the impact of on-street parking in established areas.</p>	<p><u>Consistent:</u> As indicated in Table 3-2, the project would include 2,094 off-street parking spaces, which exceeds the 1,840 parking spaces required under existing City code. Hence, adequate new off-street parking would be required to serve the proposed project. There is currently no on-street parking on and adjacent to the project site, and the proposed project would not create a demand for on-street parking.</p>

<b>Table 5-1 (Continued)</b> <b>SGPU Goals and Policies—Assessment of Project Consistency</b>	
<b>Plan Element Goal or Policy Statement</b>	<b>Project Consistency Assessment</b>
<b>Public Facilities and Services Element</b> <b>Goal:</b> Time all new public facilities and services as closely as possible to approved urban expansion.	<u>Consistent:</u> The timing of new public facilities and services at the proposed project site would coincide with the project’s development.
<b>Public Facilities and Services Element</b> <b>Goal:</b> Provide infrastructure for identified infill areas.	<u>Consistent:</u> Necessary infrastructure would be provided for the proposed project as the project is developed. The project site represents an infill project, and existing roadway and utility infrastructure already exists adjacent to the project site to serve it; no extension of roadway and utility infrastructure to the project site would be required.
<b>Public Facilities and Services Element</b> <b>Goal:</b> Achieve economy and efficiency in the provision of services and facilities.	<u>Consistent:</u> The project is infill development. Roadway and utility infrastructure already exists adjacent to the project site that the project would be able to connect to, the City would not be required to expend substantial funds to extend infrastructure to the project site. Furthermore, the project would pay for those infrastructure improvements required to serve it, would pay all applicable utility and service impact fees (such as the state-mandated school impact fee and City in-lieu park fees), and would pay applicable fees that contribute to the ongoing provision of utilities and services to the project after project construction.

AA Under the No Project (No Development) Alternative, the College Square project site would remain in its current state. No new development would occur on the site. No GPA would be required under this alternative, as opposed to the proposed project, for which a GPA changing the SGPU land use designation at the project site would be required. This alternative would not support the goals and policies of the SGPU that encourage mixed-use development, the development of housing to help meet the City’s housing needs, the development of neighborhood/community commercial uses to help meet the needs of local neighborhoods, or the development of affordable housing.

AB Under the General Plan Buildout Alternative, the project site would be developed with 1,114 multifamily dwelling units (i.e., apartments, condominiums), or some combination of multifamily dwelling units and a smaller amount of neighborhood-serving commercial uses, consistent with the existing SGPU Medium Density Residential land use designation of the project site. Consistent with the City’s Inclusionary Housing Program and like the proposed project, 15% of the housing units under this alternative would be affordable. Unlike the proposed project, no GPA would be required under this alternative, thus preserving the residential use of the site planned for in the SGPU. This alternative would support the Housing Element’s goal of increased housing opportunities and the development of affordable housing to a greater degree than the proposed project because more housing units, including more affordable housing units, would be developed at the project site under this alternative. At the same time, this alternative would not support the mixed-use development goals and policies of the Residential Land Use and Commerce and Industry Land Use Elements to the degree that the proposed



project would. Like the proposed project, this alternative would develop higher density land uses adjacent to planned light rail facilities and thus would encourage mass transit usage and potentially reduce regional traffic. It is debatable whether the project would be more or less effective in these respects than the General Plan Buildout Alternative, which could result in an increase or in a significant decrease in residential units.

AC Under the Park-and-Ride Alternative, the project site would be developed as proposed under the project except that slightly more than 9 acres in the southwestern corner of the project site would be dedicated to RT for a future light rail line right-of-way, park-and-ride lot, and bus transfer station. The acreage to be dedicated to RT under this alternative would take the place of 240 multifamily residential units planned for this portion of the site under the proposed project. Like the proposed project, this alternative would (1) result in a combination of residential and commercial uses at the project site, (2) require a GPA, (3) develop affordable housing consistent with the City's Inclusionary Housing Program, and (4) develop higher density land uses adjacent to planned light rail facilities. A park-and-ride lot for the planned South Sacramento Corridor Phase 2 Project light rail station would be developed. However, fewer residential units are provided adjacent to mass transit than for the proposed project. It is arguable whether the proposed project or this alternative would be more transit oriented overall. This alternative would be less effective than the proposed project in achieving the housing goals and objectives of the Residential Land Use Element and Housing Element of the SGPU because fewer residential units would be developed than for the proposed project, including less affordable housing.

### **Impact 5-2: Consistency with the SSCP**

PP The existing land use designation for the project site under the SSCP is Special Planning District. This designation allows the City to initiate proceedings (such as approval of a PUD) to regulate for the coordinated development of multiple parcels. The Special Planning District designation is a temporary, nonrestrictive land use designation used until the City determines the most efficient use of an area. After the City determines its preferred approach for developing the area, more specific land use designation to guide future development are provided. Under the proposed project, the site would be redesignated as Residential (11-29 du/ac) (approximately 13 acres), Residential (29+ du/ac) (approximately 13 acres), and General Commercial (approximately 38 acres) (Exhibit 5-3). The two residential designations would allow apartments and senior housing, respectively, while the General Commercial designation would allow development of commercial uses. The proposed project includes PUD guidelines that provide a coordinated set of development regulations and standards under which development may occur at the project site, implementing the SSCP Special Planning District land use designation of the project site.

SSCP goals and policies relevant to the proposed project are included in the Residential Land Use and Housing, Commercial Land Use, and Public Facilities and Services Elements of the SSCP. Table 5-2 identifies the SSCP goals and policies relevant to the proposed project and states whether the project is consistent with them.

**Table 5-2  
SSCP Goals and Policies—Assessment of Project Consistency**

<b>Plan Element Goal or Policy Statement</b>	<b>Project Consistency Assessment</b>
<p><b>Residential Land Use and Housing Goal or Policy:</b> Accommodate growth projected for South Sacramento in an orderly and efficient manner which enhances the existing attractive features and which provides assets which the community needs.</p>	<p><u>Consistent:</u> The proposed project would accommodate growth projected for the south Sacramento area in an orderly and efficient manner in that it would provide infill development in general consistency with the type of land uses planned for the site in the SSCP, and it would complete the roadway and utilities systems grids in the area. Community/ neighborhood-serving commercial uses would be provided, and the required in-lieu park fees would be contributed, which would serve not only the proposed project, but adjacent residential areas. The proposed landscape plan (Exhibit 3-7) would provide for trees and other vegetative screening around the periphery of the project, and trees and landscaping within the project itself.</p>
<p><b>Residential Land Use and Housing Goal or Policy:</b> Encourage more variation of housing types in South Sacramento, especially to meet the needs of the two ends of the housing and income spectrum.</p>	<p><u>Consistent:</u> The proposed project would provide apartments and senior housing, both of which are in considerable demand in the SSCP area and in the greater City of Sacramento. Single-family residential development is not part of this project but is provided throughout the adjacent area. Consistent with the City’s Inclusionary Housing Program, 15% of the residential component of the proposed project would be affordable housing, with 5% affordable to and occupied by low-income households and 10% affordable to and occupied by very low income households.</p>
<p><b>Commercial Land Use Goals or Policy:</b> Encourage healthy commercial shopping centers both within and outside of the South Sacramento community.</p>	<p><u>Consistent:</u> The retail uses associated with the proposed project would be located alongside residential and office units, across the street from Cosumnes River College, and adjacent to an extension of RT’s light rail system. The variety of retail uses (primarily local neighborhood retail center uses) would be expected to be well supported by project residents, college students and faculty members, and consumers using the light rail line.</p>
<p><b>Commercial Land Use Goals or Policy:</b> Avoid exceeding the current level of commercially zoned land. Maintain the appropriate ratio of shopping center space to population.</p>	<p><u>Consistent:</u> The slight increase on jobs over buildout numbers from the adopted community plan does not unreasonably affect the ratio of shopping center space to population.</p>
<p><b>Commercial Land Use Goals or Policy:</b> Provide for sufficient commercial land in developing areas to serve the shopping needs of future residents.</p>	<p><u>Consistent:</u> See the preceding response.</p>
<p><b>Special Issues (Cosumnes River College Special Study Area) Goal:</b> Encourage land uses that can take advantage of the unique characteristics of this area of South Sacramento.</p>	<p><u>Consistent:</u> The SSCP identifies the area roughly between Cosumnes River College and SR 99 as the Cosumnes River College Special Study Area. The SSCP states that because the area lies between a major freeway and an educational facility, its development should “take advantage of the vocational education curriculum of Cosumnes River College and the proximity to a major freeway, State Route 99.” The project is consistent with this goal because 15% of the housing at the site would qualify as affordable housing, which would provide students with housing opportunities. The proposed project also would provide students and members of the faculty with a restaurant and other neighborhood and service commercial uses. Both the City and</p>

**Table 5-2 (Continued)  
SSCP Goals and Policies—Assessment of Project Consistency**

<b>Plan Element Goal or Policy Statement</b>	<b>Project Consistency Assessment</b>
	<p>the applicant have identified providing services catering to the students and faculty of Cosumnes River College as one of the goals of the project.</p> <p>Finally, and most importantly, the project would take advantage of its proximity to SR99 and the SR99/Cosumnes River Boulevard interchange by developing a portion of the project site with highway commercial and office uses instead of medium density residential. This would put the highest traffic-generating type of uses (commercial and office for which there is a demand in the Study Area) next to the freeway, and would maximize the use of the freeway as opposed to surface streets.</p>

As a mixed-use infill development, the proposed project is consistent with the Residential Land Use and Housing goals and policies of the SSCP encouraging orderly and efficient growth in south Sacramento. The proposed project would provide apartments and senior housing, both of which are in considerable demand in the SSCP area and the greater City of Sacramento and which are encouraged by the SSCP. By setting aside 5% of its residential units for low-income households and 10% for very low income households, it is consistent with the SSCP’s recommendations for the provision of affordable housing. Because the commercial uses at the project site would be located along with residential and office uses on the same site, across the street from a large population associated with Cosumnes River College, and adjacent to a light rail station, and because the local area currently lacks a much-needed shopping center (i.e., no supermarket is currently located within a 1-mile radius of the project site), the project also is consistent with the Commercial Land Use goals and policies of the SSCP encouraging the careful development of commercial areas. The proposed project would be inconsistent with one SSCP commercial land use policy (“avoid exceeding the current level of commercially zoned land”) because the project would rezone a portion of the project site from residential to commercial. This inconsistency would be mitigated by the special study area requirement to provide land uses that take advantage of the proximity to the major freeway.

AA Under the No Project (No Development) Alternative, the College Square project site would remain in its current state. No Community Plan Amendment would be required under this alternative, as it would under the proposed project. Nondevelopment would not represent an inconsistency with the SSCP land use designation of the project site because the site is designated as Special Planning District, and an amendment is required for any development of the site under this designation to provide for a mechanism (such as a PUD) under which the City can determine the nature of development at the project site. Because no new development would occur on the site, this alternative would not support the goals and policies of the SSCP that encourage mixed-use development, the development of affordable housing, and the careful development of commercial areas.

AB Under the General Plan Buildout Alternative, the project site would be developed with 1,114 multifamily dwelling units (i.e., apartments, condominiums) in accordance with the SGPU's Medium-Density Residential land use designation. Although a Community Plan Amendment would be required under this alternative, as it would under the proposed project, this would not represent an inconsistency with the SSCP land use designation for the project site for the reasons stated above. Like the proposed project, this alternative would provide apartments, which are in considerable demand in the SSCP area and the greater City of Sacramento and which are encouraged by the SSCP. By setting aside 5% of its residential units for low-income households and 10% for very low income households, it is consistent with the SSCP's recommendations for the provision of affordable housing. This alternative would be more supportive of the SSCP housing goals and policies than the proposed project because it would provide more apartments and more affordable housing units. This alternative may be less supportive of the SSCP goals and policies encouraging orderly and efficient development because although it would represent infill development, which would make efficient use of existing infrastructure in the area, it would devote the entire project site to residential uses and thus would neither provide for the local shopping needs of the area nor provide for onsite complementary land uses that could potentially reduce offsite shopping trips (i.e., would not provide the trip-reduction benefits anticipated under the proposed project). Unlike the proposed project, this alternative would be consistent with the SSCP commercial land use policy that calls for avoiding exceeding the current level of commercially zoned land because this alternative would not rezone a portion of the property from residential to commercial. This alternative would fail to take advantage of the special study area requirements to provide land uses that take advantage of the proximity to the major freeway.

AC Under the Park-and-Ride Alternative, approximately 9 acres in the southwestern corner of the project site would be dedicated for a future light rail line right-of-way, park-and-ride lot, and bus transfer station. Otherwise, the development would be the same as the proposed project. A Community Plan Amendment would be required under this alternative; however, this would not represent an inconsistency with the SSCP land use designation for the reasons stated above. Like the proposed project, this alternative would provide apartments and affordable housing, which are in considerable demand within the SSCP area and the greater City of Sacramento and encouraged by the SSCP. This alternative would be less supportive of the SSCP housing goals and policies than the proposed project because it would provide fewer apartments and fewer affordable housing units. Like the proposed project, this alternative would provide for the local shopping needs of the area and provide for onsite complementary land uses, both of which would be consistent with the Commercial Land Use goals and policies of the SSCP encouraging the careful development of commercial areas. This alternative is consistent with the SSCP commercial land use policy because there is no impediment to designating land uses that can take advantage of the vocational education curriculum and the proximity to the major freeway.

### **Impact 5-3: Consistency with the Sacramento Zoning Ordinance**

PP The existing zoning designations at the project site are HC-R (Highway Commercial Review) (approximately 7 acres), C-1 (Limited Commercial) (approximately 2 acres), OB (Office Building) (approximately 1 acre), and R-2B-R (Multi-Family Residential) (approximately 53 acres). Under the proposed project, the zoning designation for the site would be C-2-PUD (General Commercial-PUD) (approximately 38 acres), R-3-PUD (Multi-Family Residential-PUD) (approximately 13 acres), R-3A-PUD (Multi-Family Residential-PUD) (approximately 10 acres), and R-4-PUD (Multi-Family Residential-PUD) (approximately 3 acres) (Exhibit 5-4). The C-2 designation allows the sale of commodities or the performance of services, including repair facilities, small wholesale stores or distributors, and limited processing and packaging. The R-3 designation permits more traditional types of apartments, located outside the central city and serving as a buffer along major streets and shopping centers; minimum land area per unit under this designation is 1,500 square feet. The R-3A designation permits multifamily residential development in the central city and in certain adjacent areas. It is designed to provide development regulations that are consistent with goals for various residential areas in the central city. Minimum land area per unit under this designation is 1,200 square feet. The R-4 designation permits multifamily residential development located generally adjacent to R-5 zoning (R-5 zoning borders the central business district and may include institutional, office, and commercial uses in addition to multifamily residential uses); minimum land area per unit under the R-4 designation is 750 square feet. The PUD designation provides the City with a considerable amount of flexibility in developing the area, including requiring from the project applicant a set of PUD guidelines that set forth the development standards under which development would occur.

The existing zoning of the site permits primarily multifamily residential development at 21 dwelling units per acre, with a smaller amount of highway commercial uses and a very small amount of limited commercial and office uses. Under the proposed project, a greater proportion of the project site would be developed with commercial uses, and higher density residential development would occur than is permitted under existing zoning. These would represent inconsistencies with existing zoning. The proposed rezone would change the zoning ordinance to make it consistent with the proposed project.

AA Under the No Project (No Development) Alternative, the College Square project site would remain in its current state. No new development would occur on the site, and no changes to zoning would be required. Therefore, this alternative would be consistent with the zoning ordinance.

AB Under the General Plan Buildout Alternative, the project site would be developed with 1,114 multifamily residential units (apartments and condominiums), consistent with the SGPU Multi-Family Residential land use designation of the project site. The development of multifamily residential uses on those portions of the project site not currently zoned for residential development (i.e., the approximately 1 acre of OB, 2 acres of C-1, and 7 acres of HC-R) would represent inconsistencies with existing zoning. Like

the proposed project, a rezone would be required to change the zoning ordinance to make it consistent with this alternative. The extent of this rezone would be less under this alternative (i.e., it would involve a total of only approximately 9 acres of rezoned land, whereas under the proposed project, the entire project site would be rezoned).

AC Under the Park-and-Ride Alternative, the northern and eastern three-quarters of the project site would be developed with service/neighborhood commercial and multifamily residential uses, respectively, similar to the proposed project. However, the southwestern one-quarter of the project site would be developed with a park-and-ride lot instead of the residential development proposed at this location under the proposed project. Like the proposed project, a greater proportion of the project site would be developed with commercial uses, and higher density residential development would occur than is permitted under existing zoning. These would represent inconsistencies with existing zoning. Like the proposed project, a rezone would be required to change the zoning ordinance to make it consistent with this alternative. The extent of this rezone would be greater under this alternative because the southwestern portion of the project site, which is currently zoned for residential and which would be developed with residential under the proposed project, would need to be rezoned for a totally unlike land use (i.e., park-and-ride lot).

#### **Impact 5-4: Consistency with the RT Transit Master Plan**

PP The Transit Master Plan does not identify particular land use or zoning designations for the area addressed by the plan. It does, however, identify a large area south of downtown, including the project site that would be the subject of an alternatives analysis before the route of the southern light rail extension is identified. RT is undertaking planning and preparing an EIR/EIS for its proposed South Sacramento Corridor Phase 2 Project. This project would extend light rail service south from Meadowview Road to Elk Grove, with the rail tracks and a light rail station being planned in the vicinity of the project site (although the exact track alignment and station location have not yet been determined). The proposed project is consistent with two of the three possible track alignments that have been discussed in the context of the South Sacramento Corridor Phase 2 Project (i.e., track alignments southward down the west side or center median of Bruceville Road from Cosumnes River Boulevard, and then eastward south of the project site). The proposed project is not consistent with another potential track alignment being discussed (i.e., same as above, but with the track alignment southward down the east side of Bruceville Road (on a portion of the project site). The latter potential track alignment is one of the reasons why the Park-and-Ride Alternative is being evaluated in this EIR (which plans for such a track alignment).

The goals, objectives, and guidelines from the Transit Master Plan that are relevant to the proposed project are presented in Table 5-3. The table also states whether the project is consistent with these goals, objectives, and guidelines.

**Table 5-3  
Transit Master Plan Goals, Objectives, and Guidelines—Assessment of Project Consistency**

<b>Plan Element Goal or Policy Statement</b>	<b>Project Consistency Assessment</b>
<b>Overall Goal:</b> Promote transit-oriented land use planning and integrate land use and transportation planning policies to maximize public transit productivity.	<u>Consistent:</u> The proposed project is a transit-oriented development that involves development of higher density commercial, office, and residential uses adjacent to a planned RT light rail station. The combination of uses is expected to encourage use of the transit system.
<b>Site Design and Pedestrian Access Objective:</b> Walking distances must be of a pedestrian scale and design.	<u>Consistent:</u> Pedestrian access and design are addressed in Section V of the College Square PUD Guidelines, in subsection D, Circulation. It states, “Walkways shall be designated to link all buildings within the PUD. These walkways must provide connections to street access, bus stops, parking areas, adjacent structures and abutting properties. Walkways shall be designed with pedestrian health and safety in mind. Walkways shall be landscaped to provide shade in the summer and shall be constructed to visibly and physically delineate the walkway from other roads or vehicular access. Lighting, scaled to the needs of the pedestrian, shall be provided for safety and aesthetics.”
<b>Site Design and Pedestrian Access Guideline 1.1:</b> Development within 1,500 feet from transit corridors or within 2,000 feet from light rail stations is within the pedestrian threshold of transit and must provide or ensure direct access to the transit system.	<u>Consistent:</u> The proposed project likely would be located within 2,000 feet of the future Bruceville light rail station and provides plans to link the project to the station via a pedestrian circulation system. As indicated in Exhibits 3-3, 3-4 and 3-7, the project would include a series of clearly delineated onsite pedestrian linkages that lead from the proposed onsite land commercial and residential uses to pedestrian landscape corridors along Bruceville Road, Cosumnes River Boulevard, and West Stockton Boulevard. These pedestrian landscape corridors would, in turn, lead to the future proposed light rail planned by RT along Bruceville Road to encourage the use of public transit. See Chapter 3 of this EIR for further discussion.
<b>Site Design and Pedestrian Access Objective:</b> Street patterns in new developments should be designed for pedestrian circulation with an emphasis placed on providing maximum access to streets with existing or planned transit routes.	<u>Consistent:</u> See preceding responses.
<b>Site Design and Pedestrian Access Objective:</b> All neighborhoods should be equally accessible to transit services and pedestrians.	<u>Consistent:</u> See preceding responses. In addition, although the proposed project does not specifically propose bus stops, project design plans would be reviewed by the City’s Public Works Department, which would require bus stops consistent with City code requirements.
<b>Site Design and Pedestrian Access Objective:</b> Multifamily residential developments should be accessible from transit stops.	<u>Consistent:</u> See preceding response.
<b>Site Design and Pedestrian Access Objective:</b> Commercial and office developments should be oriented toward public streets and sidewalks rather than toward parking lots.	<u>Not Determined:</u> The designs for the proposed commercial buildings have not been completed, and it cannot be determined at this point whether the ultimate design would be consistent or inconsistent. Project buildings along Cosumnes have, in response to public comments, been re-oriented toward the internal street of

<b>Table 5-3 (Continued)</b> <b>Transit Master Plan Goals, Objectives, and Guidelines—Assessment of Project Consistency</b>	
<b>Plan Element Goal or Policy Statement</b>	<b>Project Consistency Assessment</b>
	West Stockton Boulevard, and some buildings along Bruceville have frontage on Bruceville, while others would have frontage on two streets.
<b>Site Design and Pedestrian Access Objective:</b> Local jurisdictions should encourage infill development in areas served by transit.	<u>Consistent:</u> The proposed project is infill development surrounded by existing or approved development.
<b>Compatible Land Use Objective:</b> Encourage the development of mixed-use projects along transit corridors.	<u>Consistent:</u> The project, which would be located adjacent to a light rail station, is a mixed-use development with commercial, office, and residential uses.
<b>Compatible Land Use Guideline 1.1:</b> Require that land within the pedestrian thresholds of transit corridors and light rail stations have the appropriate land use designations to allow the creation of mixed-use developments	<u>Consistent:</u> The project involves redesignating land uses so that the project site would be a mixed-use development.
<b>Residential Density and Employment Intensity Objective:</b> Encourage development densities and intensities that increase and maximize the potential transit market within pedestrian threshold of transit corridors and light rail stations.	<u>Consistent:</u> The proposed project includes commercial, office, and medium- and high-density residential uses adjacent to a future light rail station that would maximize the use of mass transit. The density of development being proposed is the maximum that is traditional within a low-rise suburban setting such as that within which the project site is located.
<b>Residential Density and Employment Intensity Guideline 1.1:</b> Require that all development within pedestrian thresholds of transit corridors and light rail station at least meet the minimum residential densities and employment intensities appropriate for the regional location.	<u>Consistent:</u> See preceding response.

RT’s Transit Master Plan identifies a set of goals, policies, and objectives for coordinating land use development with transit services by addressing both regional policy and project site-oriented planning issues. Many of the Transit Plan objectives are applicable to buildout conditions under the proposed project. Generally, the master plan goals call for a transit service that contributes to the region’s economic, social, and environmental health; develop service plans and standards that would maximize the effectiveness and efficiency of district operations and bring the system to its full potential; and promote transit-oriented land use planning and integrate land use and transportation planning policies to maximize public transit productivity. These goals are mirrored in the College Square project. The density and intensification of uses proposed under the College Square project would support the planned light rail extension into the project area. Therefore, the proposed project is consistent with the Transit Master Plan. The one exception is the Transit Master Plan’s objective of orienting commercial and office development toward public streets rather than toward parking lots.



AA Under the No Project (No Development) Alternative, the College Square project site would remain in its current state. No new development would occur on the site. This alternative would be consistent with all three of the possible track alignments being considered by RT down Bruceville Road in that it would not interfere with the development of any of these track alignments. Because the project site would remain undeveloped, this alternative would not help to achieve the goals, policies, and objectives of the Transit Master Plan (e.g., it would not bring RT's transit system to its full potential, would not promote transit-oriented land use planning, would not encourage infill development in areas served by mass transit); however, it would not preclude future attainment of these goals.

AB Under the General Plan Buildout Alternative, the project site would be developed with 1,114 multifamily residential units (apartments, condominiums) consistent with the SGPU's Medium-Density Residential land use designation of the project site. Like the proposed project, this alternative is consistent with two of the three possible track alignments that have been discussed in the context of the South Sacramento Corridor Phase 2 Project (i.e., track alignments southward down the west side or center median of Bruceville Road from Cosumnes River Boulevard, and then eastward south of the project site). Like the proposed project, this alternative is not consistent with another potential track alignment being discussed (i.e., same as above, but with the track alignment southward down the east side of Bruceville Road, on a portion of the project site).

This alternative would encourage use of mass transit because it would develop medium-density residential uses adjacent to a future light rail station. It is debatable whether this alternative would be more or less effective in encouraging mass transit usage when compared to the proposed project. Implementing this alternative would result in a greater number of residential units at the project site and thus, potentially, a greater number of transit riders. However, this alternative also would potentially cause more traffic because of the lack of land uses that complement one another at the project site (i.e., would create a need for offsite shopping trips that would not be required under the proposed project). Although this alternative may be less supportive of transit use than the proposed project, it is consistent with the Transit Master Plan.

AC Under the Park-and-Ride Alternative, the southwest quarter of the project site would be dedicated for a future light rail line right-of-way, park-and-ride lot, and bus transfer station, but the development would otherwise be the same as the proposed project. Like the proposed project, this alternative would be consistent with the two of the possible alignments being considered by RT for the South Sacramento Corridor Phase 2 Project (i.e., extension of light rail line down either the west side or center median of Bruceville Road). Unlike the proposed project, this alternative also would be consistent with the track alignment being considered down the east side of Bruceville Road (on a portion of the project site).

Like the proposed project, this alternative would encourage mass transit ridership by developing higher density land uses adjacent to future mass transit facilities. This alternative would go beyond the transit-oriented land use planning of the proposed

project by dedicating the land required by RT for a park-and-ride lot for the future Bruceville Road station.

#### **Impact 5-5: Consistency with the JCPA Infrastructure and Utilities Plan**

- PP, AB, AC     The proposed project and each of the development alternatives (Alternatives AB and AC) would provide the transportation improvements, or contribute their fair share funding toward the transportation improvements, required by the JCPA Infrastructure and Utilities Plan. The proposed project and development alternatives would improve the Bruceville Road frontage with sidewalks and gutters, add an additional right turn lane from Bruceville Road northbound to Cosumnes River Boulevard eastbound, extend West Stockton Boulevard from its current terminus to Bruceville Road as a four lane roadway, and add improved traffic signals at Bruceville/Calvine (to correspond to the intersection improvements). See Section 6.2, Traffic, for further discussion.
- AA                This alternative would not include any development, and would not provide any of the transportation improvements identified in the JCPA Infrastructure and Utilities Plan.

#### **Impact 5-6: Compatibility with Existing Adjacent Land Uses**

- PP                Land adjacent to the project site is primarily vacant or developed with residential uses. As indicated in Exhibit 5-1, vacant land is located across Cosumnes River Boulevard north of the project, adjacent to the project site to the south, and northeast of the project site between SR 99 and the project site (i.e., wetland mitigation bank). A mix of housing types is located north and south of the project. Cosumnes River College is located west of the site, across Bruceville Road.

The proposed project would replace vacant land with a mixed-use commercial and residential development close to adjacent sensitive land uses. To the north, service/neighborhood commercial uses would be developed across the street from an existing senior housing complex; to the south, multifamily residential uses (apartments and senior housing) would be developed adjacent to approximately one-half dozen large-lot single-family residences.

The proposed project would not be expected to result in land use incompatibilities with the existing senior housing to the north for several reasons. First, the proposed project includes a landscape plan (Exhibit 3-7), which calls for trees and other landscape treatment at the project's periphery (including at the Cosumnes River Boulevard/Bruceville Road intersection). This landscaping would act as a buffer between the project and the senior housing. Second, the proposed onsite buildings would be a maximum of 45 feet tall, with the building proposed at the corner of Cosumnes River Boulevard and Bruceville Road, opposite the senior housing, at 14,040 square feet (i.e., drug store). The height and size of this building are comparable to those of the senior housing building. Third, the senior housing is located at the intersection of Cosumnes River Boulevard and Bruceville Road, which is well lit and has a considerable amount of traffic. Hence, the area between the senior housing and the project site is already urban in nature. Fourth, the area is designated for urban development and would soon be

considerably more urban and commercial in nature than it currently is, with development of the approved Strawberry Creek Centre (i.e., Target) just east of the senior housing across Bruceville Road. For these reasons, it is not anticipated that implementing the project would result in land use incompatibilities with the senior housing.

Implementing the proposed project also would not be expected to result in land use incompatibilities with the existing large-lot single-family residences to the south for several reasons. First, multifamily housing (apartments and senior housing) would be developed in the southern portion of the project site, across from the existing adjacent residences to the south. This multifamily housing would buffer the project's commercial components from the existing housing to the south. Second, this multifamily housing would be a maximum of three stories high and generally would be consistent in height and mass with this single-family residential development. Third, although the proposed landscape plan (Exhibit 3-7) does not extend to the residential component of the proposed project, mitigation measures are identified in Section 6.7 of this EIR, Light/Glare, requiring that this landscaping be extended to the southern boundary of the project site and that a masonry wall be constructed that would provide visual screening and noise attenuation between the proposed uses and the existing adjacent residences to the south. For these reasons, it is not anticipated that implementing the project would result in land use incompatibilities with the existing residences to the south.

See applicable sections of this EIR (e.g., Section 6.4, Noise; Section 6.7, Light/Glare) for evaluations of the project's potential physical impacts on existing adjacent land uses. The project is compatible with the City's proposed 20-acre park, which is in the process of acquisition.

- AA Under the No Project (No Development) Alternative, the College Square project site would remain in its current state. No new development would occur on the site. Therefore, no land use incompatibilities would occur. Because the project site would remain vacant under this alternative, the extent of impacts under this alternative would be less than under the proposed project.
- AB Under the General Plan Buildout Alternative, the project site would be developed with 1,114 multifamily residential units (apartments and condominiums) consistent with the SGPU's Medium Density Residential land use designation of the project site. As discussed in the preceding analysis of the proposed project, the development of multifamily residential uses at the project site would not result in land use incompatibilities with the existing residences to the south. For similar reasons, such residential development would not result in land use incompatibilities with the existing senior housing to the north. The potential for land use incompatibility would be less because no commercial development would occur on the project site under this alternative and because onsite development would be restricted to two stories.
- AC Development under the Park-and-Ride Alternative would be the same as under the proposed project, except that the southwestern portion of the project site would be dedicated to RT for a future light rail line right-of-way, park-and-ride lot, and bus transfer

station. As described previously for the proposed project, mixed-use development at the project site would be compatible with the existing land uses in the area. However, development of a park-and-ride lot adjacent to the existing large-lot residences to the south could result in land use compatibility conflicts. Based on the presence of a 40-foot right-of-way that would be dedicated to RT for track purposes on the eastern portion of the site, and the location of the City park immediately south of the tracks, the conflict would appear to be minor. As indicated in Section 6.7, Light/Glare, mitigation has been identified in this EIR in the form of landscaping and walls to protect the residences to the south from the light and glare to be generated by the park-and-ride lot. Similarly, mitigation has been identified in Section 6.4, Noise, to protect the residences from noise associated with the park-and-ride lot.

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**6      *ENVIRONMENTAL ANALYSIS***

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## 6 ENVIRONMENTAL ANALYSIS

### 6.1 INTRODUCTION TO THE ANALYSIS

This chapter of the EIR includes an evaluation of the potential physical impacts of the proposed project and alternatives on the environment in terms of the 10 environmental issues listed below:

- ▶ traffic and circulation
- ▶ air quality
- ▶ noise
- ▶ drainage/surface water quality
- ▶ population/housing
- ▶ light/glare
- ▶ public services/utilities (schools, water, solid waste)
- ▶ biological resources
- ▶ cultural resources
- ▶ hazardous materials

Section 15125(d) of the State CEQA Guidelines requires that an EIR discuss any inconsistencies that could result when the proposed project is compared with adopted land use plans. This consistency discussion is presented in Chapter 5 of this EIR, Land Use and Consistency with Adopted Plans and Policies, and is not treated as a physical environmental effect. The environmental issues listed above are evaluated in Sections 6.2 through 6.11 of this chapter.

Each of the sections in this chapter includes the following subsections: Introduction, Environmental Setting, Regulatory Provisions, Impacts and Mitigation Measures, and Level of Significance after Mitigation. The Introduction subsections introduce the reader to the issues covered in the analysis for each environmental issue and states whether a separate technical report was prepared and included as a technical appendix to the EIR to back up the analysis. The Environmental Setting and Regulatory Provisions subsections describe the existing physical environment and applicable regulations of the environmental issue, respectively. The Impacts and Mitigation Measures subsections identify the method of analysis used to evaluate the impacts of the proposed project and alternatives, the standards of significance used to judge the significance of each impact, the impacts of the proposed project and each alternative, including cumulative impacts, and the mitigation measures required to reduce or avoid the identified significant impacts to less than significant levels. The Level of Significance after Mitigation subsections identify whether any residual significant impacts would remain after implementation of the recommended mitigation.

Each environmental section includes an evaluation of the potential environmental impacts of the proposed project and of the three alternatives to the proposed project, identified in Chapter 4 of this EIR. The analysis of the alternatives examines the extent of the impacts under each alternative compared to that of the proposed project. As permitted under CEQA, the evaluation of the alternatives is provided at a lesser level of detail than that conducted for the proposed project.

The significance of the impacts identified in the following sections is expressed as one of three determinations: (1) ***no impact***, (2) ***less than significant***, and (3) ***significant***. A significant impact is defined, pursuant to CEQA, as a substantial and adverse change to the environment. The significance determinations are presented in bold, italicized text. Where significant impacts are identified, mitigation measures are provided to reduce or avoid the impact. In cases where the impact would not be reduced to

a less-than-significant level by the mitigation, the impact is identified as *significant and unavoidable* under the Level of Significance after Mitigation subsection of each section.

The format convention used in Chapter 6 to present the analysis of the environmental impacts of the proposed project and the alternatives is presented below:

**Impact x.1-1: Name of Impact**

- PP Discussion of impact of College Square PUD (Proposed Project)
- AA Discussion of impact of Alternative AA (No Project/No Development Alternative)
- AB Discussion of impact of Alternative AB (General Plan Buildout Alternative)
- AC Discussion of impact of Alternative AC (Park-and-Ride Alternative)

**Mitigation x.1-1: Name of Impact**

- PP Mitigation measure for impact of College Square PUD (Proposed Project)
- AA Mitigation measure for impact of Alternative AA (No Project/No Development Alternative)
- AB Mitigation measure for impact of Alternative AB (General Plan Buildout Alternative)
- AC Mitigation measure for impact of Alternative AC (Park-and-Ride Alternative)

In circumstances where implementation of the proposed project and one or more of the alternatives may result in similar impacts, the impacts of the proposed project and the alternative(s) are evaluated together. The following format convention is representative of such an instance. It is representative of a case where implementation of the proposed project and Alternative AC would result in similar impacts.

**Impact x.2-1: Name of Impact**

- PP, AC Discussion of impact of College Square PUD (Proposed Project) and Alternative AC
- AA Discussion of impact of Alternative AA (No Project [No Development] Alternative)
- AB Discussion of impact of Alternative AB (General Plan Buildout Alternative)

**Mitigation x.2-1: Name of Impact**

- PP, AC Mitigation measure for impact of College Square PUD (Proposed Project) and Alternative AC
- AA Mitigation measure for impact of Alternative AA (No Project/No Development Alternative)
- AB Mitigation measure for impact of Alternative AB (General Plan Buildout Alternative)

As required by §15130 of the State CEQA Guidelines, this chapter includes a discussion of cumulative impacts. Cumulative impacts are defined as “two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts” (State CEQA Guidelines §15355). “The cumulative impact from several projects is the change in the environment, which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects” (§15355). Section 15130 of the guidelines requires EIRs to consider cumulative impacts “when they are significant.” As permitted under CEQA, this EIR incorporates two basic methods for establishing the cumulative environment in which the project is

considered: the use of a list of past, present, and reasonably anticipated future projects, and the use of adopted growth projections from a general plan or other regional planning document. Past, present, and reasonably anticipated future projects considered include, but are not limited to, the RT South Sacramento Corridor Phase 2 Project, Strawberry Creek Centre, Bruceville Road widening, San Jacinto Creek Master Drainage Plan, and South Sacramento Community Plan (SSCP). Adopted growth projections include, but are not limited to, those from the General Plan, SSCP, and the SACMET travel demand forecasting model. See the individual sections in this chapter for discussion of the specific cumulative projects/growth assumptions considered for each environmental issue.



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## **6.2 TRAFFIC**

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## 6.2 TRAFFIC

### 6.2.1 INTRODUCTION

This section describes the potential impacts to the transportation system near the College Square Planned Unit Development (PUD). The impact analysis examined the roadway, transit, and bicycle/pedestrian components of the overall transportation system under base year and cumulative (Year 2025) conditions with and without the proposed project and project alternatives. The proposed project and Park-and-Ride Alternative were both analyzed quantitatively while the General Plan Buildout alternative was evaluated on a qualitative basis. Significant impacts as defined by CEQA were identified for each component and, as necessary, mitigation measures were identified to offset those impacts.

The proposed project site would be located adjacent to a proposed Regional Transit light rail transit South Line extension project. Regional Transit is currently conducting the planning study and environmental documents for Phase 2 of the South Line extension, which would serve the proposed project. The final environmental documents are anticipated for completion in spring 2003. Design and construction of the light rail transit line will occur between 2003-2006.

This section is organized to include two parts. The first part is the environmental setting, which describes the existing transportation system. The second part describes the impact analysis, including standards of significance used in the evaluation, specific impacts of the project, and proposed mitigation measures. The traffic modeling output summarized in this section is available at the City of Sacramento Public Works Department, 1231 I Street, Room 300, Sacramento, California 95814.

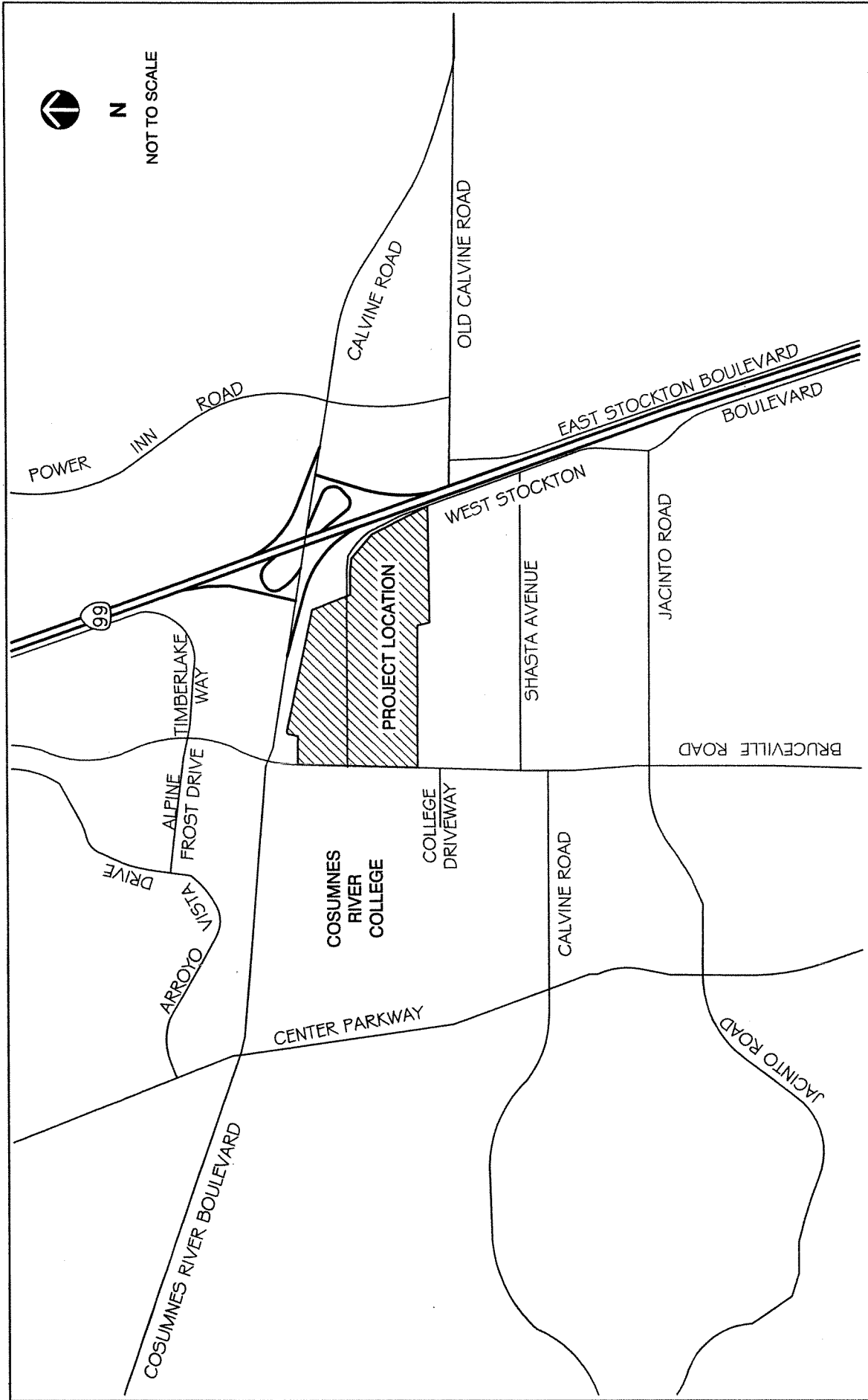
### 6.2.2 ENVIRONMENTAL SETTING

The roadway, transit, bicycle, and pedestrian components of the transportation system are described below. Exhibit 6.2-1 displays the roadways within the study area.

#### Roadway System

The roadway network in the vicinity of the proposed College Square PUD is described below.

- ▶ **State Route 99 (SR 99)** is six lanes (two mixed-flow lanes and one high-occupancy vehicle lane in each direction) within the study area. SR 99 serves as the commute corridor between downtown and the southern area of the City of Sacramento and the City of Elk Grove.
- ▶ **Bruceville Road** is a north-south roadway continuing from Valley Hi Drive just south of Mack Road and extending south beyond Elk Grove Boulevard. Bruceville Road is four lanes north of Timberlake Way and continues south as a two-lane roadway within the project area. According to the Jacinto Creek Community Plan, Bruceville Road will be a six-lane divided roadway. South of Cosumnes River Boulevard, the land adjacent to Bruceville Road is primarily undeveloped except for Cosumnes River College, located on the west side of Bruceville Road, and some pockets of residential uses.



- ▶ ***Cosumnes River Boulevard*** intersects Franklin Boulevard, continues east as a two-lane roadway, and widens to six lanes just west of Bruceville Road. Within the project site it is a six-lane divided throughway with a turn lane and a two-lane on-ramp for SR 99 south. Cosumnes River Boulevard becomes Calvin Road just east of SR 99 and continues into the City of Elk Grove.
- ▶ ***Timberlake Way*** is a two-lane roadway that connects to Bruceville Road at Alpine Frost Drive and curves towards the north to reconnect with Bruceville Road north of Hospital Drive. Timberlake Way provides access to the Methodist Hospital of Sacramento.
- ▶ ***Alpine Frost Drive*** is a two-lane east-west roadway that serves the residential uses west of Bruceville Road.
- ▶ ***Shasta Avenue*** is a two-lane east-west roadway between Bruceville Road and West Stockton Boulevard serving residential uses.
- ▶ ***Calvine Road*** is a two-lane east-west roadway with a two-way center left-turn lane. Calvine Road extends west of Bruceville Road and runs along the southern boundary of Cosumnes River College and serves residential uses to the south.
- ▶ ***Jacinto Road*** is a two-lane east-west roadway continuing west of Bruceville Road toward Center Parkway and east of West Stockton Boulevard. Jacinto Road serves an elementary school west of Bruceville Road and residential uses within the project area.
- ▶ ***West Stockton Boulevard*** is a two-lane roadway that continues from north of Shasta Avenue and runs parallel to SR 99. West Stockton Boulevard provides access to SR 99 at Sheldon Road. West Stockton Boulevard terminates at the eastern end of the project, partially in the City's wetland mitigation parcel with no access to Bruceville Road.

### **Study Intersections**

The study intersections selected by the City of Sacramento are listed below:

1. Bruceville Road/Timberlake Way/Alpine Frost Drive
2. Bruceville Road/Cosumnes River Boulevard
3. Bruceville Road/Cosumnes River College Driveway
4. Bruceville Road/Shasta Avenue
5. Bruceville Road/Calvine Road
6. Bruceville Road/Jacinto Road
7. SR 99 Southbound Ramps/Cosumnes River Boulevard
8. SR 99 Northbound Ramps/Cosumnes River Boulevard
9. Bruceville Road/West Stockton Boulevard (proposed)
10. Right in/right out driveway/West Stockton Boulevard (proposed)

Traffic counts were collected during the a.m. (7:00 – 9:00) and p.m. (4:00 – 6:00) peak hours at eight existing study intersections. Traffic counts at six of the study intersections were collected in spring 2002

for use in the Strawberry Creek Target Store Traffic Study<sup>1</sup>. Fehr & Peers conducted counts at the Bruceville Road/Cosumnes River College Driveway and the Bruceville Road/Shasta Avenue intersections in December 2002. The existing peak hour traffic volumes, lane configurations, and traffic controls at each study intersection are displayed in Exhibit 6.2-2.

Signal timings were collected from the California Department of Transportation (Caltrans) for the intersections on Cosumnes River Boulevard at the SR 99 northbound and southbound off-ramps. The City of Sacramento provided the existing signal timings for the Bruceville Road/Cosumnes River Boulevard intersection.

### Analysis Methodology

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

### Signalized Intersections

The signalized intersections were analyzed using the methodology presented in the *Highway Capacity Manual (2000 HCM)*, Transportation Research Board, 2000. This methodology determines the LOS at signalized intersections by comparing the average control delay per vehicle at the intersection to the thresholds shown in Table 6.2-1.

Level of Service	Average Control Delay (seconds/vehicle)
A	≤ 10.0
B	10.1 – 20.0
C	20.1 – 35.0
D	35.1 – 55.0
E	55.1 – 80.0
F	> 80.0

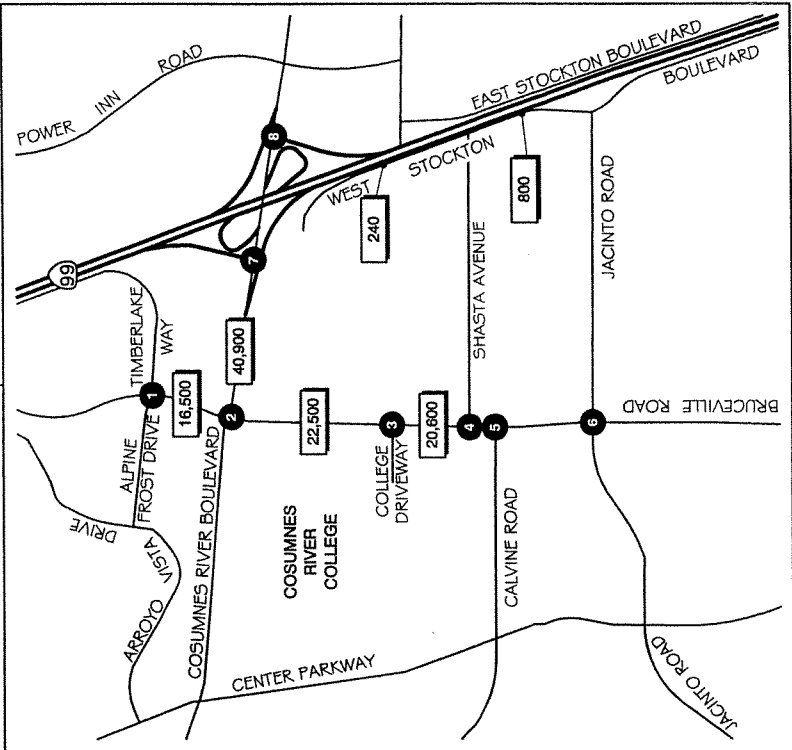
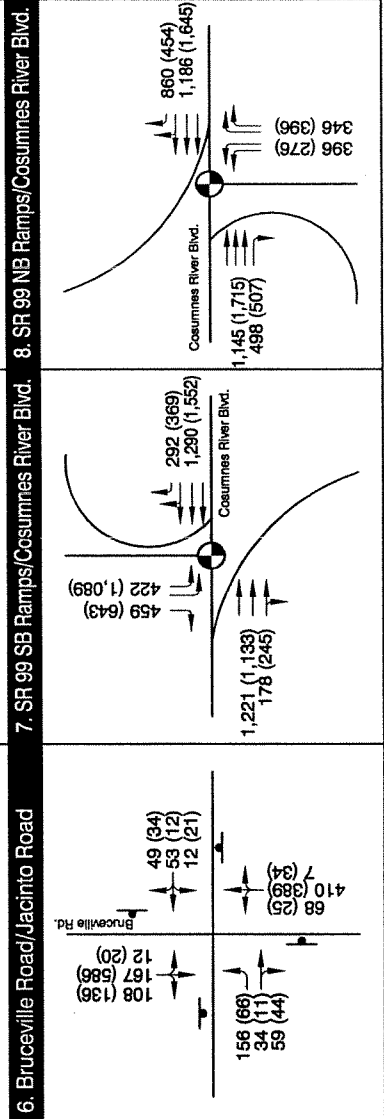
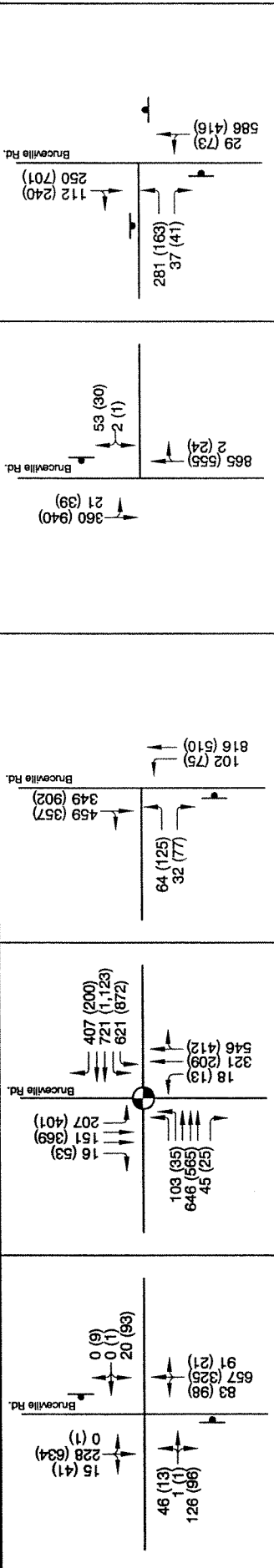
Source: Transportation Research Board 2000

### Unsignalized Intersections

The unsignalized intersections were also analyzed using methods described in the *2000 HCM*. This methodology reports the LOS using the control delay thresholds shown in Table 6.2-2. As described in the *2000 HCM*, the LOS for all-way stop controlled intersections is based on the average control delay for the entire intersection. Conversely, for side-street stop-controlled intersections, the LOS is measured separately for each individual movement. To be consistent with both the *2000 HCM* and the City's

<sup>1</sup> *Traffic Impact Analysis for the Strawberry Creek Target*, July 26, 2002, kdAnderson Transportation Engineers.

1. Bruceville Road/Timberlake Way      2. Bruceville Road/Cosumnes River Blvd.      3. Bruceville Road/College Driveway      4. Bruceville Road/Shasta Avenue      5. Bruceville Road/Calvine Road



**LEGEND**

- Turn Lane
- XX (YY)
- 1
- Study Intersection
- Traffic Signal
- Stop Sign
- Daily Traffic Volume

NOT TO SCALE

significance criteria, which are based on the average control delay for the intersection, both the average control delay and control delay for the worst-case movement are reported.

Level of Service	Average Control Delay (seconds/vehicle)
A	≤ 10.0
B	10.1 – 15.0
C	15.1 – 25.0
D	25.1 – 35.0
E	35.1 – 50.0
F	> 50.0

Source: Transportation Research Board 2000

A signal warrant analysis for each unsignalized study intersection was also conducted based on the peak hour volume warrant (*Traffic Manual*, Caltrans 1996).

### Intersection Operations

The traffic volumes displayed in Exhibit 6.2-2 were used to determine the existing operations at each study intersection. Table 6.2-3 summarizes the traffic operations during the a.m. and p.m. peak hours.

Intersection	Control	Average Delay (seconds per vehicle) - Level of Service	
		AM	PM
Bruceville Road/Timberlake Way	TWSC <sup>1</sup>	4.4 – A (39.7 – E) <sup>2</sup>	13.2 – B (>50.0 – F) <sup>2</sup>
Bruceville Road/Cosumnes River Boulevard	Signal	35.6 – D	54.2 – D
Bruceville Road/College Driveway	TWSC	1.2 – A (11.9 – B) <sup>2</sup>	3.3 – A (28.8 – D) <sup>2</sup>
Bruceville Road/Shasta Avenue	TWSC	1.0 – A (17.6 – C) <sup>2</sup>	0.9 – A (13.2 – B) <sup>2</sup>
Bruceville Road/Calvine Road	AWSC <sup>3</sup>	31.2 – D	>50.0 – F
Bruceville Road/Jacinto Road	AWSC	16.2 – C	44.9 – E
SR 99 SB Ramps/Cosumnes River Boulevard	Signal	10.0 – A	13.7 – B
SR 99 NB Ramp/Cosumnes River Boulevard	Signal	7.2 – A	7.1 – A

Notes:  
<sup>1</sup> Two-way stop controlled intersection.  
<sup>2</sup> Delay and LOS for worst-case movement at two-way stop controlled intersections.  
<sup>3</sup> All-way stop controlled intersection.  
Source: Fehr & Peers Associates 2003

Field observations were also conducted to determine queue lengths at signalized study intersections and to compare the queue lengths to the available storage. Locations that were observed to have extensive vehicle-queues are summarized below.

- ▶ Vehicles using the westbound left-turn lane at Bruceville Road/Cosumnes River Boulevard were observed to queue beyond the storage provided by three to four vehicles during the p.m. peak hour (185 feet of storage provided by the inside turn lane and 325 feet provided by the outside turn lane).
- ▶ Vehicles using the southbound left-turn lane at Bruceville Road/Cosumnes River Boulevard were observed to queue about 375 feet beyond the intersection during the p.m. peak hour (135 feet of storage provided).
- ▶ Vehicles using the right-turn lane of the southbound SR 99 off-ramp were observed to queue about 400 feet from the stop line at the ramp terminal intersection during the p.m. peak hour (1,250 feet of storage provided between the stop line and the SR 99 gore point).

The following unsignalized study intersections currently meet the peak hour volume warrant (*Traffic Manual*, Caltrans 1996) for a traffic signal:

- ▶ Bruceville Road/Cosumnes River College Driveway during the p.m. peak hour.
- ▶ Bruceville Road/Calvine Road during the a.m. and p.m. peak hours.

### **Study Roadways**

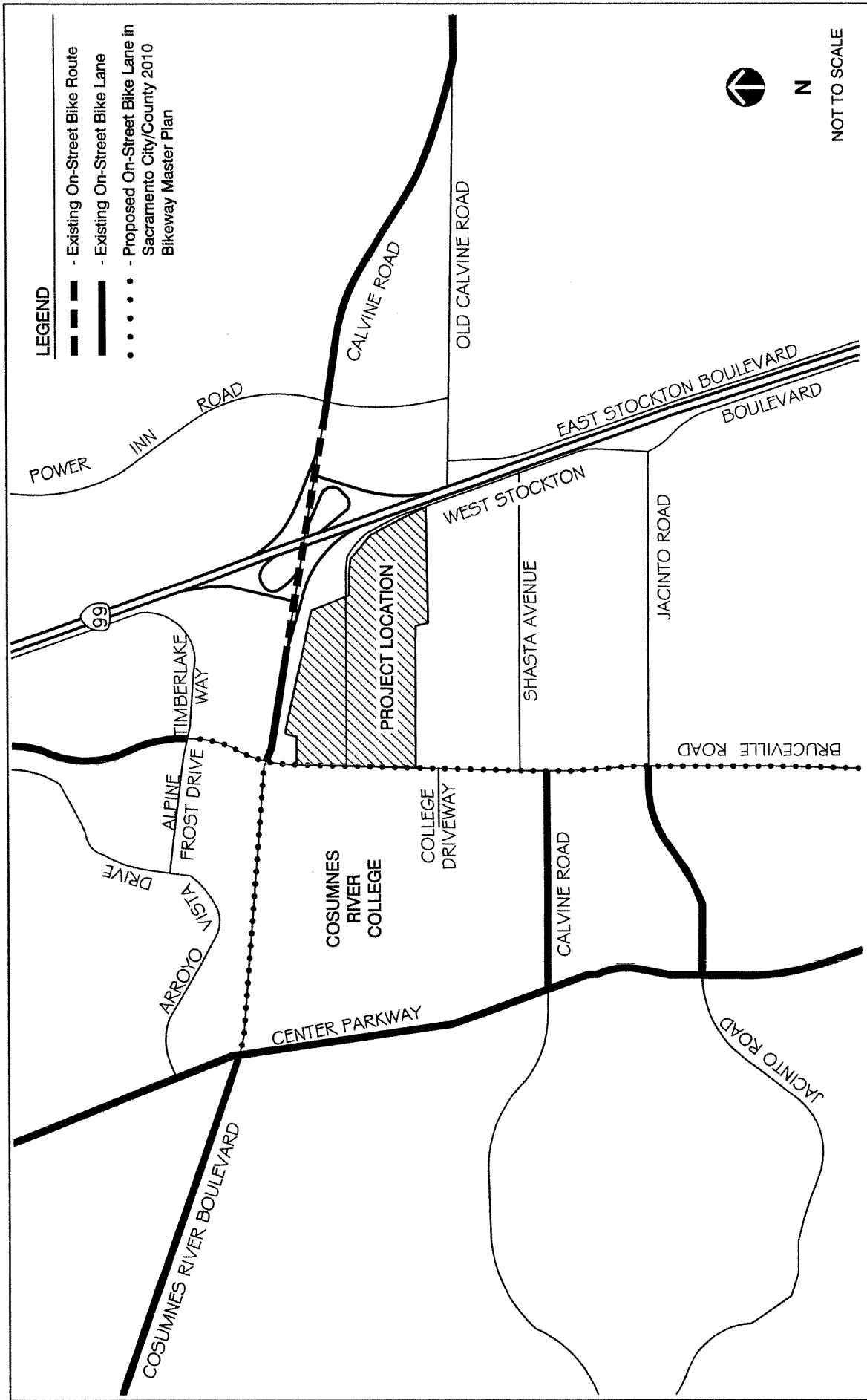
Daily (48-hour) traffic counts were conducted on six roadway segments in December 2002. Exhibit 6.2-2 displays the daily volumes at each study roadway segment. Throughout this report, daily traffic volumes are reported for each scenario as a measure of the magnitude of traffic volume change. In the study area, the basic roadway system has been established and intersection operations are the limiting factor that may result in an impact.

### **Bicycle and Pedestrian Facilities**

Existing and planned bicycle facilities within the study area are displayed in Exhibit 6.2-3. As shown, no off-street bike paths are located within the study area. Class II on-street bike lanes (i.e., signed and striped) are located on Bruceville Road north of Timberlake Way and on Cosumnes River Boulevard west of Center Parkway and east of Bruceville Road. According to the *Sacramento City/County 2010 Bikeway Master Plan* (September 1992), Class II on-street bike lanes are planned along Bruceville Road and the remaining portion of Cosumnes River Boulevard.

Sidewalks are provided on the west side of Bruceville Road along the frontage of Cosumnes River College and on Cosumnes River Boulevard east of Bruceville Road. Timberlake Way, Alpine Frost Drive, Calvine Road, and Jacinto Road also have sidewalks.





## **Transit Service**

The Sacramento Regional Transit District (RT) provides public transit service within the project area as shown in Exhibit 6.2-4. Three routes provide direct fixed route service to the project area. Bus stops are located along Bruceville Road at Jacinto Road, Shasta Avenue, and Timberlake Way. Each of the bus routes discussed below provides service along Bruceville Road and stop at the Cosumnes River College Transit Center.

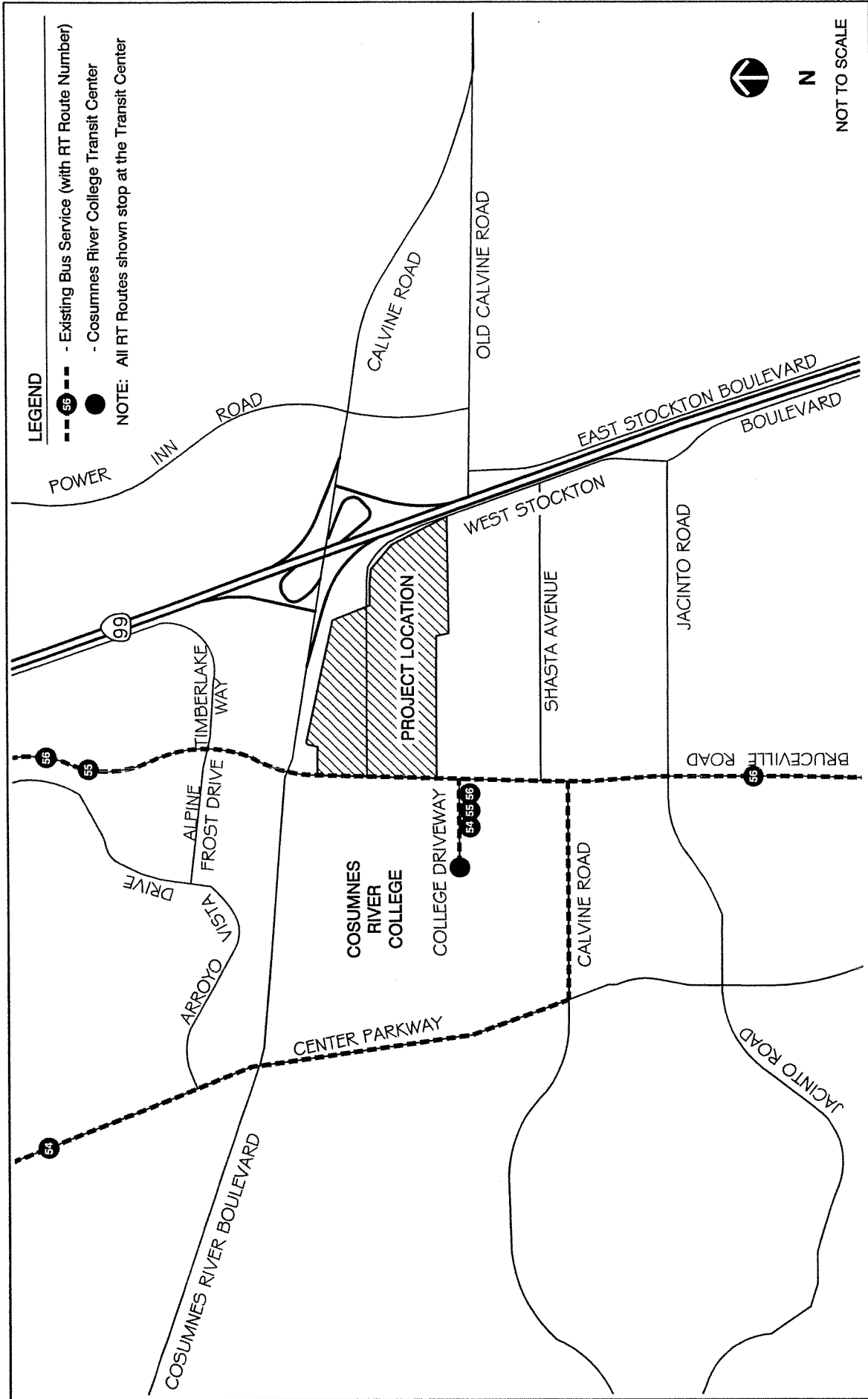
- ▶ **Route 54 (Center Parkway)** operates between the Florin Mall Transit Center and Cosumnes River College Transit Center and travels on Center Parkway, Calvine Road and Bruceville Road within the study area.
- ▶ **Route 55 (Scottsdale)** provides service between the Florin Mall Transit Center and Cosumnes River College Transit Center and travels on Bruceville Road within the study area.
- ▶ **Route 56 (Laguna Express)** operates between Downtown Sacramento and Elk Grove-Florin Road/Elk Grove Boulevard intersection and travels on SR 99 and Bruceville Road within the study area.

The RT South Line extension will provide future light rail transit service to the project area. RT is currently constructing Phase 1 of the South Line extension that will provide service from Downtown Sacramento to Meadowview Road, and is conducting the planning study and preparing the environmental documents for Phase 2 of the South Line extension from Meadowview to Calvine/Auberry. Phase 2 will provide an additional 5 miles of light rail transit service in South Sacramento with stops planned along Cosumnes River Boulevard at Franklin Boulevard and Center Parkway, on Bruceville Road at Cosumnes River College, and east of SR 99 at Calvine/Auberry. The final environmental documents will be completed in spring 2003 and construction will take place between 2003-2006.

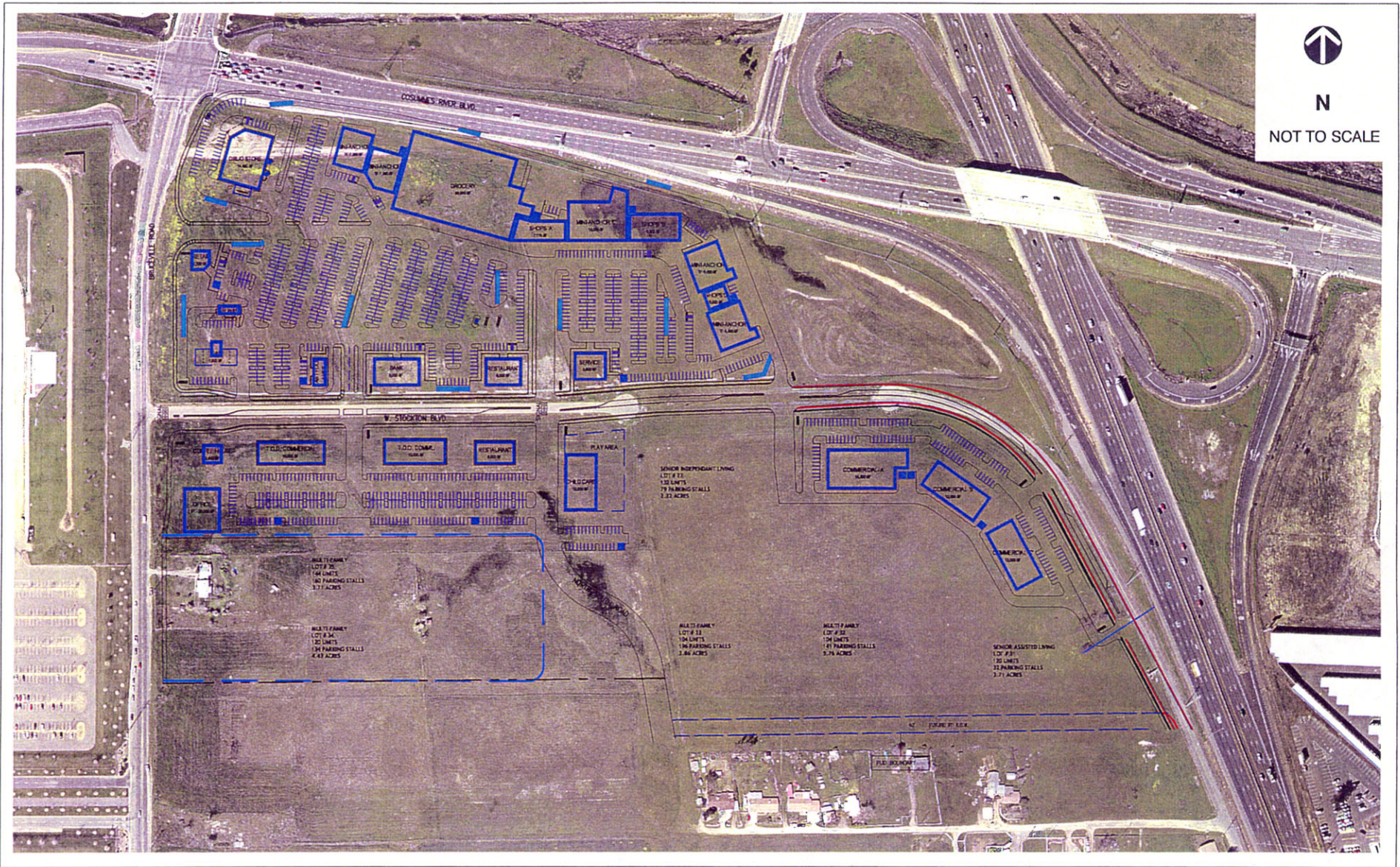
## **Project Land Use and Circulation**

The proposed project is located on the southeast quadrant of the Cosumnes River Boulevard/Bruceville Road intersection and contains approximately 725 residential units (age-restricted housing and typical apartment), 30,000 square feet of offices, and 240,000 square feet of retail uses. The project site plan is displayed in Exhibit 6.2-5. The Park-and-Ride Alternative would replace the apartments located on the southwest portion of the site (264 units) with a 588-space park-and-ride facility.

As shown in the site plan, the proposed project would extend West Stockton Boulevard from its current terminus to Bruceville Road. W. Stockton Boulevard is proposed to be constructed as a four-lane divided roadway between Bruceville Road and the commercial uses at the eastern edge of the site. A traffic signal is proposed at the Bruceville Road/West Stockton Boulevard intersection, which would serve as the main access to/from the project site. This intersection would be located about 850 feet south of the Bruceville Road/Cosumnes River Boulevard intersection. An additional driveway providing right-turns in and out of the project site is proposed approximately 450 feet north of the Bruceville Road/West Stockton Boulevard intersection.



**EXISTING TRANSIT SERVICE**  
**EXHIBIT 6.2-4**



A second traffic signal is proposed at the North-South Road/West Stockton Boulevard intersection. The north-south road would provide access to Shasta Avenue in the future. Six driveways along West Stockton Boulevard are proposed to provide access to the adjacent uses.

The project site's General Plan land use designation is medium density residential (i.e., garden apartments and condominiums) with densities ranging from 16 to 29 units per acre. To develop the General Plan Buildout alternative, the City assumed that 80% of the site would be constructed as medium density residential for a total of 1,114 dwelling units. These units were divided equally between low rise apartments (472 units) and low rise condominiums (472 units) (For calculations see page 4-3).

### **6.2.3 ANALYSIS**

The analysis methodology, transportation impacts, and mitigation measures for the proposed project and project alternatives are described below.

#### **Traffic Volume Forecasts**

Traffic volume forecasts for base year and cumulative (Year 2025) conditions, with and without the project, are discussed below.

#### **Base Year Conditions**

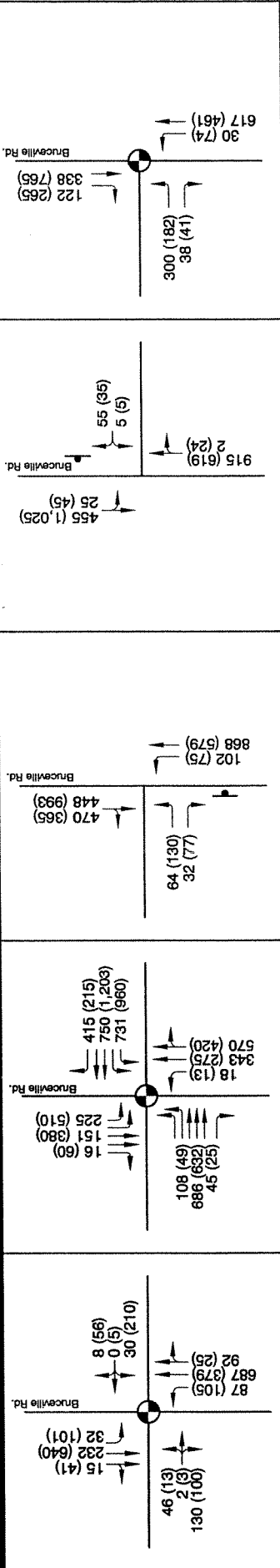
Several projects are planned and approved within the study vicinity that will increase traffic volumes on the roadways adjacent to the proposed project site. Because these projects will likely be constructed before the proposed project, "base year" traffic forecasts were developed to reflect the development of these projects and establish a baseline for analyzing the proposed project.

Base year traffic forecasts were developed by modifying the existing traffic counts to include the traffic generated by the Strawberry Creek Target Store, Arcadian Villages 1 and 2, and Elk Grove Unified School District's 7<sup>th</sup> High School. The following roadway improvements were included, as they will be constructed with the development of the Target Store or are near-term improvements planned by the City:

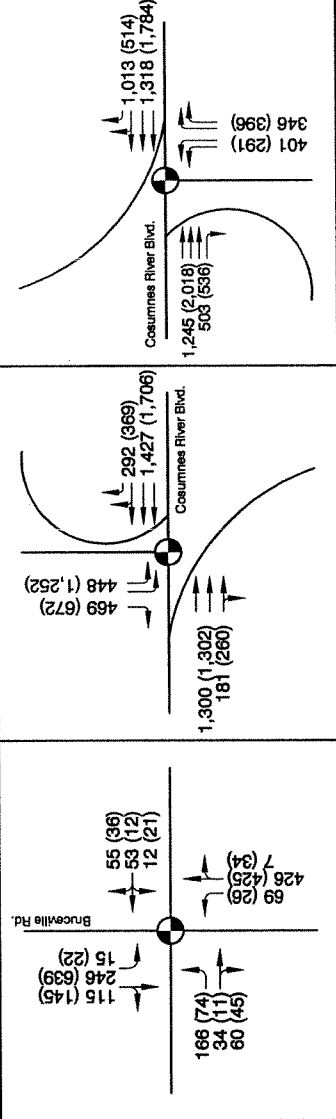
- ▶ Traffic signal at Bruceville Road/Timberlake Way/Alpine Frost Drive.
- ▶ Widening of Bruceville Road to four lanes between Cosumnes River Boulevard and Timberlake Way/Alpine Frost Drive.
- ▶ A second southbound left-turn lane at Bruceville Road/Cosumnes River Boulevard.
- ▶ Traffic signal at Bruceville Road/Calvine Road and Bruceville Road/Jacinto Road.

Exhibit 6.2-6 displays the peak hour traffic volumes for base year conditions and the planned roadway improvements. The Bruceville Road/Cosumnes River College Driveway intersection would meet the peak hour volume warrant for a traffic signal during the p.m. peak hour under base year conditions. Daily roadway volumes are displayed in Exhibit 6.2-6 and summarized in Table 6.2-4.

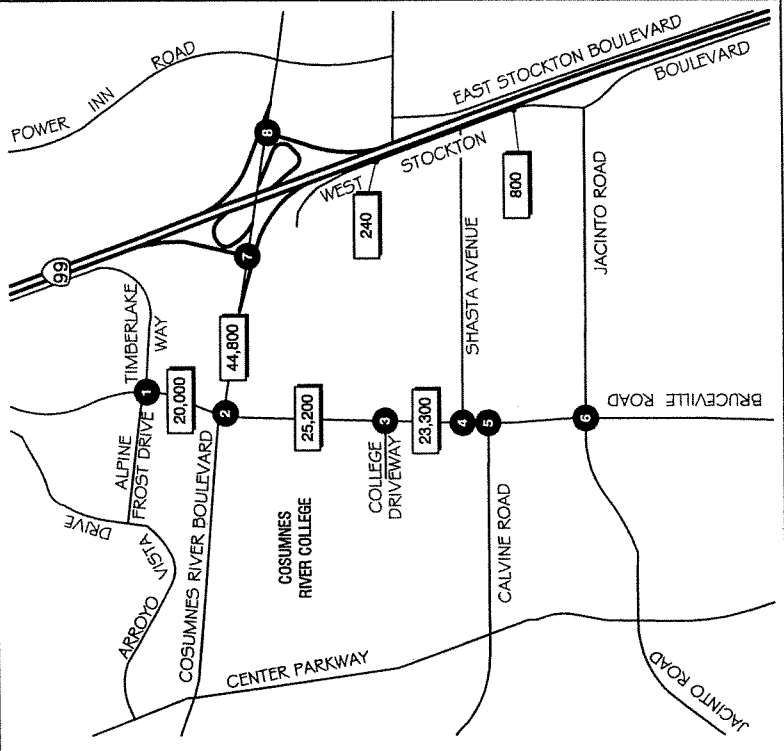
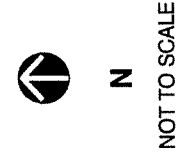
1. Bruceville Road/Timberlake Way      2. Bruceville Road/Cosumnes River Blvd.      3. Bruceville Road/College Driveway      4. Bruceville Road/Shasta Avenue      5. Bruceville Road/Calvine Road



6. Bruceville Road/Jacinto Road      7. SR 99 SB Ramps/Cosumnes River Blvd.      8. SR 99 NB Ramps/Cosumnes River Blvd.



- LEGEND**
- Turn Lane
  - AM (PM) Peak Hour Traffic Volume
  - Study Intersection
  - Traffic Signal
  - Stop Sign
  - Daily Traffic Volume



**TRAFFIC VOLUMES  
AND LANE CONFIGURATIONS -  
BASE YEAR NO PROJECT CONDITIONS**

EXHIBIT 6.2-6

<b>Table 6.2-4 Daily Traffic Volumes – Base Year Conditions</b>	
<b>Roadway Segment</b>	<b>Daily Volume</b>
Cosumnes River Boulevard – Bruceville Road to SR 99	44,800
Bruceville Road – Cosumnes River Boulevard to Timberlake Way	20,000
Bruceville Road – Cosumnes River Boulevard to College Driveway	25,200
Bruceville Road – College Driveway to Shasta Avenue	23,300
West Stockton Boulevard – North of Shasta Avenue	240
West Stockton Boulevard – Shasta Avenue to Jacinto Road	800
Source: Fehr & Peers Associates 2003	

**Cumulative Conditions**

Cumulative (Year 2025) traffic forecasts were generated using the SACMET travel demand forecasting model (V.01). The base year (2000) and cumulative (Year 2025) roadway networks were updated to include the appropriate number of lanes, travel speeds, and loading of traffic analysis zones (TAZ) to the roadway network.

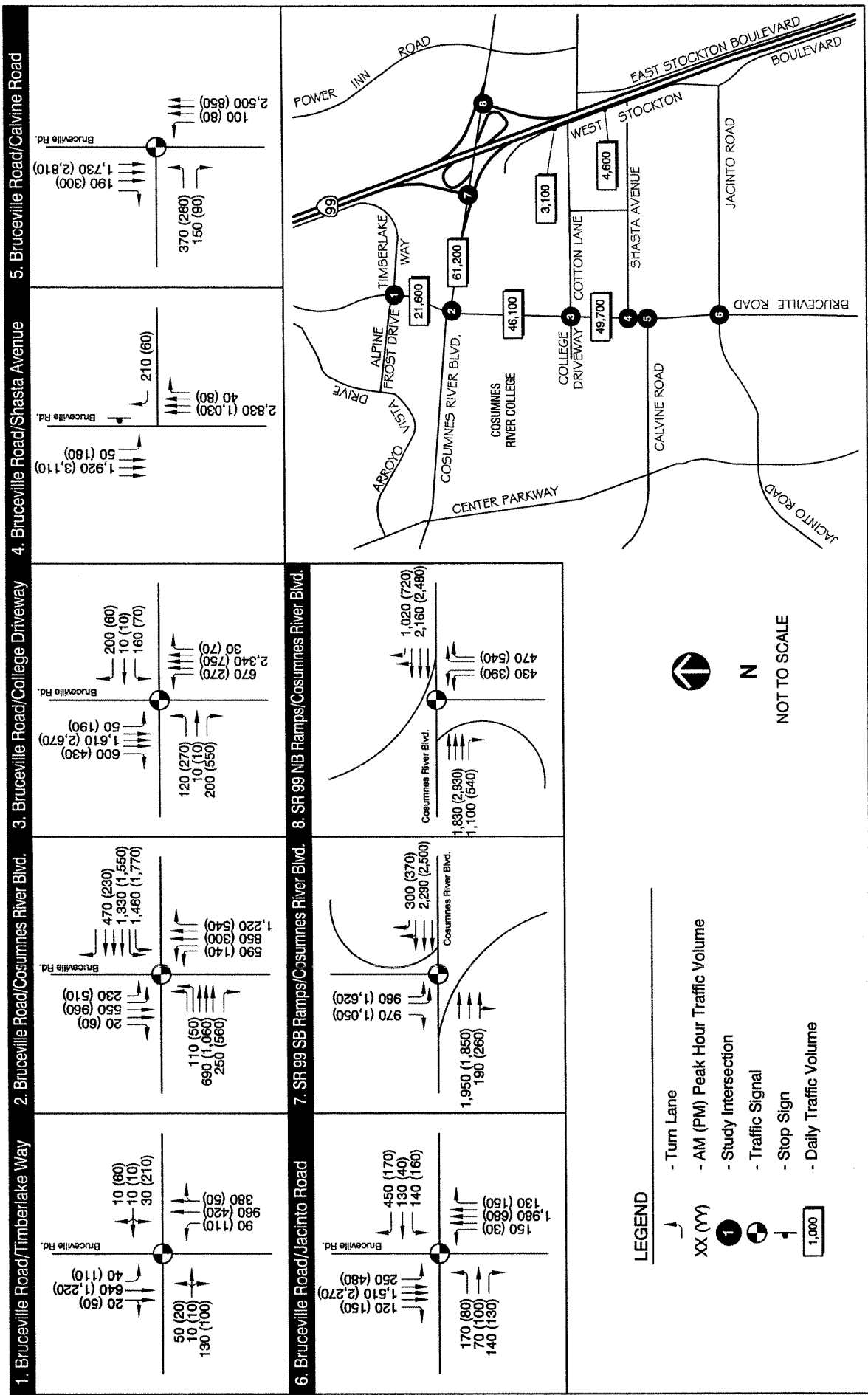
The Year 2025 SACMET model contains the future light rail transit line along Bruceville Road and the transit station at Cosumnes River College. In addition, the following roadway improvements are expected to be in place by Year 2025 and are reflected in the model:

- ▶ Bruceville Road will be widened to six lanes south of Cosumnes River Boulevard
- ▶ Cosumnes River Boulevard will be widened to four lanes west of Bruceville Road
- ▶ Cotton Lane will form the east leg of the Bruceville Road/Cosumnes River College Driveway and this intersection will be signalized
- ▶ Left-turns from Shasta Avenue onto Bruceville Road will not be allowed

The first two improvements are identified in the *Metropolitan Transportation Plan for 2025* (Sacramento Area Council of Governments, May 2002). The third and fourth improvements are based on the Jacinto Creek Planning Area Transportation Plan Map 2 provided by the City of Sacramento.

The land uses assumed in the model for the project site were removed to develop Year 2025 traffic volumes without the project. The peak hour intersection traffic volumes and daily roadway volumes were developed by running both the 2000 and 2025 SACMET models and performing an adjustment procedure (i.e., difference method) to account for inaccuracies in the base year version of the model.

Exhibit 6.2-7 displays the daily and peak hour traffic volumes at the study intersections in Year 2025. Daily roadway volumes are also summarized in Table 6.2-5 for Year 2025 conditions.



**TRAFFIC VOLUMES  
AND LANE CONFIGURATIONS -  
YEAR 2025 NO PROJECT CONDITIONS**

**EXHIBIT 6.2-7**



<b>Table 6.2-5 Daily Traffic Volumes – Year 2025 Conditions</b>	
<b>Roadway Segment</b>	<b>Daily Volume</b>
Cosumnes River Boulevard – Bruceville Road to SR 99	61,200
Bruceville Road – Cosumnes River Boulevard to Timberlake Way	21,600
Bruceville Road – Cosumnes River Boulevard to College Driveway	46,100
Bruceville Road – College Driveway to Shasta Avenue	49,700
West Stockton Boulevard – North of Shasta Avenue	3,100
West Stockton Boulevard – Shasta Avenue to Jacinto Road	4,600
Source: Fehr & Peers Associates 2003	

### **Trip Generation**

The number of trips generated by the proposed project and project alternatives were estimated using industry standards. Under cumulative conditions, the trip generation was adjusted to reflect the future light rail station located adjacent to the project site. The project trip generation for base year and cumulative conditions is discussed below.

### **Base Year Conditions**

Table 6.2-6 summarizes the land uses, trip generation rates, and number of daily and peak hour trips generated by the proposed project and Park-and-Ride Alternative. The sources used to estimate the number of trips generated by each land use is also displayed in Table 6.2-6. As shown, the trip generation for the general retail uses (i.e., grocery store, drug store, transit-oriented development [TOD] commercial, and supporting retail and commercial pads) located primarily on the northern portion of the site was

developed using the Institute of Transportation Engineers (ITE) trip rate equation for a shopping center. The number of trips generated by the specified retail uses was estimated using the trip generation rate for each use as recommended by ITE.

Tables 6.2-7 and 6.2-8 summarize the total number of new trips after accounting for the internalization of project trips (e.g., trips between residential and retail uses) and pass-by trips. Based on information in *Trip Generation Handbook* (ITE, 1998), developments that include a combination of residential, office, and retail uses have between a 17% and 40% internal capture rate of vehicle-trips. Because the proposed project includes a smaller amount of office use (about 10% of total non-residential square footage) than a typical mixed-use development and because the ITE trip generation rate for a shopping center accounts for the internalization between retail trips, a 10% internal capture rate was applied to reflect a conservative approach. The internalization reduction was not applied to the park-and-ride lot included in the Park-and-Ride Alternative because users will be traveling to/from the lot as a primary trip purpose (not ancillary to a shopping trip).

**Table 6.2-6  
Project Land Uses and Trip Generation by Parcel**

Parcel No.	Use	Size	Trip Generation Source	Trip Rate				Number of Trips							
				AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour					
				% IN	% OUT	% IN	% OUT	IN	OUT	IN	OUT	Total	Total		
<b>Proposed Project</b>															
-	Shopping Center	202,395	KSF	ITE 820	61	39	48	52	10,727	148	95	243	480	520	1,000
13	Bank	8,000	KSF	ITE 912	56	44	51	49	2,122	57	44	101	223	215	438
26	Child Care Facility	12,000	KSF	ITE 565	53	47	47	53	951	81	72	153	74	84	158
21	Coffee House	2,376	KSF	-- <sup>4</sup>	49	51	51	49	1,179	80	84	164	26	25	51
14	Fast Food	2,450	KSF	ITE 834	51	49	52	48	1,215	62	60	122	43	39	82
15	Gas Station	8,00	F.P. <sup>2</sup>	ITE 846	51	49	50	50	1,223	43	42	85	53	53	106
12	Restaurant	6,000	KSF	ITE 832	52	48	60	40	782	29	27	56	39	26	65
25	Restaurant	6,000	KSF	ITE 832	52	48	60	40	782	29	27	56	39	26	65
<b>Retail Total</b>									18,981	529	451	980	977	988	1,965
20	Office Building	20,000	KSF	ITE 710	88	12	17	83	350	42	6	48	13	62	75
22	TOD Commercial <sup>6</sup>	5,000	KSF	ITE 710	88	12	17	83	88	10	1	11	3	16	19
23	TOD Commercial	5,000	KSF	ITE 710	88	12	17	83	88	10	1	11	3	16	19
<b>Office Total</b>									526	62	8	70	19	94	113
31	Senior Assisted Living	120	D.U. <sup>3</sup>	ITE 252	61	39	56	44	258	4	3	7	11	9	20
27	Senior Independent Living	132	D.U.	ITE 253	63	37	59	41	459	6	3	9	8	5	13
32	Multi-Family Housing	104	D.U.	ITE 220	16	84	67	33	690	8	45	53	43	21	64
33	Multi-Family Housing	104	D.U.	ITE 220	16	84	67	33	690	8	45	53	43	21	64
34	Multi-Family Housing	120	D.U.	ITE 220	16	84	67	33	796	10	51	61	50	25	75
35	Multi-Family Housing	144	D.U.	ITE 220	16	84	67	33	955	12	62	74	60	29	89
<b>Residential Total</b>									3,848	48	209	257	215	110	325
<b>Trip Generation of Proposed Project</b>									<b>23,355</b>	<b>639</b>	<b>668</b>	<b>1,307</b>	<b>1,211</b>	<b>1,192</b>	<b>2,403</b>
<b>Project Alternative</b>															
Trip Generation of Proposed Project									23,355	639	668	1,307	1,211	1,192	2,403
34&35	Park & Ride	588	Spaces	ITE Journal <sup>7</sup>	85	15	17	83	2,064	340	60	400	62	303	365
34	Multi-Family Housing	-120	D.U.	ITE 220	16	84	67	33	-796	-10	-51	-61	-50	-25	-75
35	Multi-Family Housing	-144	D.U.	ITE 220	16	84	67	33	-955	-12	-62	-74	-60	-29	-89
<b>Net Increase of Trips</b>									<b>313</b>	<b>318</b>	<b>-53</b>	<b>265</b>	<b>-48</b>	<b>249</b>	<b>201</b>
<b>Trip Generation of Project Alternative</b>									<b>23,668</b>	<b>957</b>	<b>615</b>	<b>1,572</b>	<b>1,163</b>	<b>1,441</b>	<b>2,604</b>

Notes:  
 1. KSF - Thousand Square Feet.  
 2. F.P. - Fueling Positions.  
 3. D.U. - Dwelling Units.  
 4. Daily trip rate based on ITE trip rate for Fast Food Restaurant. Peak hour trip rates based on Fehr & Peers Trip Generation Study of Starbucks in Orinda, CA  
 5. Not including square footage of gas station. Trip generation of gas station based on number of fuelling positions.  
 6. TOD Commercial contains a first floor (5 KSF) of commercial uses and a second floor (5 KSF) of office uses.  
 7. Source: Trip Generation Rates for Light Rail Transit Park-and-Ride Lots, ITE Journal, June 1994.

The *Trip Generation Handbook* was also used to estimate the number of pass-by trips generated by the proposed project and Park-and-Ride Alternative. Pass-by trips are made by motorists who are already on the adjacent roadway (i.e., Bruceville Road or Cosumnes River Boulevard) and enter the site on their way to a different “primary destination.” Pass-by trips made by vehicles already traveling on Bruceville Road were assigned to the main project driveway at West Stockton Boulevard or the right-in/out driveway to travel to and from the project site. Although Cosumnes River Boulevard would not provide direct access to/from the project site, vehicles already traveling on Cosumnes River Boulevard are expected to “divert” into the project site. Pass-by or “diverted” trips from Cosumnes River Boulevard were assigned through the Bruceville Road/Cosumnes River Boulevard intersection to access the main project driveway at West Stockton Boulevard.

The proposed retail uses have pass-by rates ranging between approximately 35% for a shopping center to approximately 60% for a gas station. However, certain uses, such as the Child Care facility, will have pass-by rates lower than shopping centers. Based on the retail uses proposed and the existing traffic volumes on Bruceville Road and Cosumnes River Boulevard, a 30% pass-by rate was applied. While the number of pass-by trips may increase as future volumes on Bruceville Road and Cosumnes River Boulevard increase, a 30% pass-by rate was also used under Year 2025 conditions as a conservative approach.

As shown in Tables 6.2-7 and 6.2-8, the proposed project generates approximately 15,890 new daily trips, 910 new a.m. peak hour trips, and 1,630 new p.m. peak hour trips. The Park-and-Ride Alternative generates approximately 16,380 new daily trips, 1,190 new a.m. peak hour trips, and 1,850 new p.m. peak hour trips.

Use	Size	Number of Trips						
		Daily Trips	AM Peak Hour			PM Peak Hour		
			IN	OUT	Total	IN	OUT	Total
Retail Uses <sup>1</sup>	239,221 KSF <sup>2</sup>	18,981	529	451	980	977	988	1,965
	<i>Internal Trips (10%)</i>	-1,898	-53	-45	-98	-98	-99	-197
	<i>Pass-by Trips (30%)<sup>4</sup></i>	-5,125	-143	-122	-265	-264	-267	-531
	<b><i>New Retail Trips</i></b>	<b>11,958</b>	<b>333</b>	<b>284</b>	<b>617</b>	<b>615</b>	<b>622</b>	<b>1,237</b>
Office Uses	30,000 KSF	526	62	8	70	19	94	113
	<i>Internal Trips (10%)</i>	-53	-6	-1	-7	-2	-9	-11
	<b><i>New Office Trips</i></b>	<b>473</b>	<b>56</b>	<b>7</b>	<b>63</b>	<b>17</b>	<b>85</b>	<b>102</b>
Residential Uses	724 D.U. <sup>3</sup>	3,848	48	209	257	215	110	325
	<i>Internal Trips (10%)</i>	-385	-5	-21	-26	-22	-11	-33
	<b><i>New Residential Trips</i></b>	<b>3,463</b>	<b>43</b>	<b>188</b>	<b>231</b>	<b>193</b>	<b>99</b>	<b>292</b>
	<b>Total Trips</b>	<b>23,355</b>	<b>639</b>	<b>668</b>	<b>1,307</b>	<b>1,211</b>	<b>1,192</b>	<b>2,403</b>
	Total Internal Trips (10%)	-2,336	-64	-67	-131	-122	-119	-241
	Total Pass-by Trips (30%)	-5,125	-143	-122	-265	-264	-267	-531
	<b>Total New Trips</b>	<b>15,894</b>	<b>432</b>	<b>479</b>	<b>911</b>	<b>825</b>	<b>806</b>	<b>1,631</b>
Notes:								
<sup>1</sup> Not including square footage of gas station.								
<sup>2</sup> KSF - Thousand Square Feet.								
<sup>3</sup> D.U. - Dwelling Units.								
<sup>4</sup> 30% pass-by rate applied to retail uses after 10% internalization was calculated.								

Use	Size	Number of Trips						
		Daily Trips	AM Peak Hour			PM Peak Hour		
			IN	OUT	Total	IN	OUT	Total
Retail Uses <sup>1</sup>	239,221 KSF <sup>2</sup>	18,981	529	451	980	977	988	1,965
	<i>Internal Trips (10%)</i>	-1,898	-53	-45	-98	-98	-99	-197
	<i>Pass-by Trips (30%)<sup>4</sup></i>	-5,125	-143	-122	-265	-264	-267	-531
	<b><i>New Retail Trips</i></b>	<b>11,958</b>	<b>333</b>	<b>284</b>	<b>617</b>	<b>615</b>	<b>622</b>	<b>1,237</b>
Office Uses	30,000 KSF	526	62	8	70	19	94	113
	<i>Internal Trips (10%)</i>	-53	-6	-1	-7	-2	-9	-11
	<b><i>New Office Trips</i></b>	<b>473</b>	<b>56</b>	<b>7</b>	<b>63</b>	<b>17</b>	<b>85</b>	<b>102</b>
Residential Uses	460 D.U. <sup>3</sup>	2,097	26	96	122	105	56	161
	<i>Internal Trips (10%)</i>	-210	-3	-10	-13	-11	-6	-17
	<b><i>New Residential Trips</i></b>	<b>1,887</b>	<b>23</b>	<b>86</b>	<b>109</b>	<b>94</b>	<b>50</b>	<b>144</b>
Park and Ride	588 Spaces	2,064	340	60	400	62	303	365
	<b><i>New Park-and-Ride Trips</i></b>	<b>2,064</b>	<b>340</b>	<b>60</b>	<b>400</b>	<b>62</b>	<b>303</b>	<b>365</b>
	<b>Total Trips</b>	<b>23,668</b>	<b>957</b>	<b>615</b>	<b>1,572</b>	<b>1,163</b>	<b>1,441</b>	<b>2,604</b>
	Total Internal Trips (10%)	-2,161	-62	-56	-118	-111	-114	-225
	Total Pass-by Trips (30%)	-5,125	-143	-122	-265	-264	-267	-531
	<b>Total New Trips</b>	<b>16,382</b>	<b>752</b>	<b>437</b>	<b>1,189</b>	<b>788</b>	<b>1,060</b>	<b>1,848</b>
Notes:								
<sup>1</sup> Not including square footage of gas station.								
<sup>2</sup> KSF - Thousand Square Feet.								
<sup>3</sup> D.U. - Dwelling Units.								
<sup>4</sup> 30% pass-by rate applied to retail uses after 10% internalization was calculated.								

The trip generation for the General Plan Buildout alternative was developed using the ITE trip rates for low rise apartments and condominiums. As shown in Table 6.2-9, the General Plan Buildout alternative generates approximately 6,935 new daily trips, 505 new a.m. peak hour trips, and 625 new p.m. peak hour trips.

Use	Size	Trip Generation Source	Trip Rate			Number of Trips		
			Daily	AM	PM	Daily	AM	PM
Low Rise Apartments	557 D.U.	ITE 221	6.59	0.47	0.58	3,671	262	323
Low Rise Condominiums	557 D.U.	ITE 230	5.86	0.44	0.54	3,264	245	301
<b>Total Trips</b>						<b>6,935</b>	<b>507</b>	<b>624</b>
Notes: D.U. - Dwelling Units.								

## Year 2025 Conditions

Under cumulative (Year 2025) conditions, the Regional Transit (RT) south line extension is expected to be completed and a light rail station will be located on the west side of Bruceville Road adjacent to the project site. The light rail extension and nearby transit station will reduce the number of vehicle-trips generated by the proposed project and project alternatives under cumulative conditions. Research conducted for transit oriented developments was used to estimate transit ridership for the proposed project and project alternatives.

According to *Ridership Impacts of Transit-Focused Development in California* (Robert Cervero, November 1993), developments located close (i.e., approximately two-thirds of a mile) to light rail stations can have relatively high transit ridership levels. This research evaluated ridership characteristics of employment, commercial-retail, and residential land uses located near stations on the following California rail systems: Sacramento Regional Transit, BART, CalTrain, Santa Clara County Transit, and San Diego Transit.

Cervero's study found that approximately 75% of residents living close (i.e., approximately two-thirds of a mile) to a rail station used a car as their primary travel mode, while approximately 9% of employees working close to a rail station used the train to travel to work. The results showed transit ridership increased when people were traveling to large downtown areas where the freeways were often congested.

Table 6.2-10 summarizes trip mode-split for employees working near transit stations and residents living near transit stations within Sacramento and displays the average mode-splits for all rail systems studied.

<b>Table 6.2-10 Work Trip Mode Choice Comparison <sup>1</sup></b>				
<b>Mode</b>	<b>Percent of Trips by Mode</b>			
	<b>Sacramento Regional Transit</b>		<b>All Systems Studied</b>	
	<b>Station-Area Workers</b>	<b>Station-Area Residents</b>	<b>Station-Area Workers</b>	<b>Station-Area Residents</b>
Drive Alone	67.0%	72.7%	68.0%	73.0%
Shared Ride	18.6%	6.8%	15.2%	5.0%
Public Transit	11.7%	15.2%	12.7%	17.2%
Walk/Bike	2.6%	1.9%	4.0%	4.7%
Notes: <sup>1</sup> Institute of Urban and Regional Development, <i>Ridership Impacts of Transit-Focused Development in California</i> , Robert Cervero, November 1993.				

The information in Table 6.2-10 was used to estimate the transit ridership for the proposed project under Year 2025 conditions. Approximately 12% of station-area workers (i.e., office and retail employees) are anticipated to use transit to travel to/from the project site and approximately 15% of station-area residents are anticipated to use transit to travel to/from the project site. Based on Sacramento Area Council of Governments (SACOG) employment data, employees produce about 7% of vehicle-trips generated by retail uses. Although some patrons of the retail uses will likely use transit, data is not available to

quantify the number of transit trips generated. Therefore, the transit ridership of 11.7% was only applied to the employees of the retail uses.

Tables 6.2-11 and 6.2-12 summarize the Year 2025 trip generation of the proposed project and Park-and-Ride Alternative after accounting for transit ridership. As shown, the proposed project generates approximately 15,140 new daily trips, 860 new a.m. peak hour trips, and 1,560 new p.m. peak hour trips under cumulative conditions, and the Park-and-Ride Alternative generates approximately 15,890 new daily trips, 1,160 new a.m. peak hour trips, and 1,800 new p.m. peak hour trips.

Use	Size	Number of Trips						
		Daily Trips	AM Peak Hour			PM Peak Hour		
			IN	OUT	Total	IN	OUT	Total
Retail Uses <sup>1</sup>	239,221 KSF <sup>2</sup>	18,981	529	451	980	977	988	1,965
<i>Internal Trips (10%)</i>		-1,898	-53	-45	-98	-98	-99	-197
<i>7% of Retail Trips are Employee Trips</i>		1,329	37	32	69	68	69	137
<i>Transit Trips - 11.7% of Retail Employee Trips by Transit</i>		-155	-4	-4	-8	-8	-8	-16
<i>Pass-by Trips (30%) Applied to Retail Uses<sup>4</sup></i>		-5,078	-142	-121	-263	-261	-264	-525
<b><i>New Retail Trips</i></b>		<b>11,850</b>	<b>330</b>	<b>281</b>	<b>611</b>	<b>610</b>	<b>617</b>	<b>1,227</b>
Office Uses	30,000 KSF	526	62	8	70	19	94	113
<i>Internal Trips (10%)</i>		-53	-6	-1	-7	-2	-9	-11
<i>Transit Trips - 11.7% of Office Employee Trips by Transit</i>		-62	-7	-1	-8	-2	-11	-13
<b><i>New Office Trips</i></b>		<b>411</b>	<b>49</b>	<b>6</b>	<b>55</b>	<b>15</b>	<b>74</b>	<b>89</b>
Residential Uses	724 D.U. <sup>3</sup>	3,848	48	209	257	215	110	325
<i>Internal Trips (10%)</i>		-385	-5	-21	-26	-22	-11	-33
<i>Transit Trips - 15.2% of Residential Trips by Transit</i>		-585	-7	-32	-39	-33	-17	-50
<b><i>New Residential Trips</i></b>		<b>2,878</b>	<b>36</b>	<b>156</b>	<b>192</b>	<b>160</b>	<b>82</b>	<b>242</b>
<b>Total Trips</b>		<b>23,355</b>	<b>639</b>	<b>668</b>	<b>1,307</b>	<b>1,211</b>	<b>1,192</b>	<b>2,403</b>
<i>Total Internal Trips (10%)</i>		-2,336	-64	-67	-131	-122	-119	-241
<i>Total Transit Trips</i>		-802	-18	-37	-55	-43	-36	-79
<i>Total Pass-by Trips (30%)</i>		-5,078	-142	-121	-263	-261	-264	-525
<b>Total New Trips</b>		<b>15,139</b>	<b>415</b>	<b>443</b>	<b>858</b>	<b>785</b>	<b>773</b>	<b>1,558</b>
Notes:								
<sup>1</sup> Not including square footage of gas station.								
<sup>2</sup> KSF - Thousand Square Feet.								
<sup>3</sup> D.U. - Dwelling Units.								
<sup>4</sup> 30% pass-by rate applied to retail uses after 10% internalization was calculated.								

Use	Size	Number of Trips							
		Daily Trips	AM Peak Hour			PM Peak Hour			
			IN	OUT	Total	IN	OUT	Total	
Retail Uses <sup>1</sup>	239.221 KSF <sup>2</sup>	18,981	529	451	980	977	988	1,965	
<i>Internal Trips (10%)</i>		-1,898	-53	-45	-98	-98	-99	-197	
<i>7% of Retail Trips are Employee Trips</i>		-1,329	-37	-32	-69	-68	-69	-137	
<i>Transit Trips - 11.7% of Retail Employee Trips by Transit</i>		-155	-4	-4	-8	-8	-8	-16	
<i>Pass-by Trips (30%) Applied to Retail Uses<sup>4</sup></i>		-5,078	-142	-121	-263	-261	-264	-525	
<b><i>New Retail Trips</i></b>		<b>11,850</b>	<b>330</b>	<b>281</b>	<b>611</b>	<b>610</b>	<b>617</b>	<b>1,227</b>	
Office Uses	30.000 KSF	526	62	8	70	19	94	113	
<i>Internal Trips (10%)</i>		-53	-6	-1	-7	-2	-9	-11	
<i>Transit Trips - 11.7% of Office Employee Trips by Transit</i>		-62	-7	-1	-8	-2	-11	-13	
<b><i>New Office Trips</i></b>		<b>411</b>	<b>49</b>	<b>6</b>	<b>55</b>	<b>15</b>	<b>74</b>	<b>89</b>	
Residential Uses	0 D.U. <sup>3</sup>	2,097	26	96	122	105	56	161	
<i>Internal Trips (10%)</i>		-210	-3	-10	-13	-11	-6	-17	
<i>Transit Trips - 15.2% of Residential Trips by Transit</i>		-319	-4	-15	-19	-16	-9	-25	
<b><i>New Residential Trips</i></b>		<b>1,568</b>	<b>19</b>	<b>71</b>	<b>90</b>	<b>78</b>	<b>41</b>	<b>119</b>	
Park and Ride	588 Spaces	2,064	340	60	400	62	303	365	
<b><i>New Park-and-Ride Trips</i></b>		<b>2,064</b>	<b>340</b>	<b>60</b>	<b>400</b>	<b>62</b>	<b>303</b>	<b>365</b>	
<b>Total Trips</b>		<b>23,668</b>	<b>957</b>	<b>615</b>	<b>1,572</b>	<b>1,163</b>	<b>1,441</b>	<b>2,604</b>	
<i>Total Internal Trips (10%)</i>		-2,161	-62	-56	-118	-111	-114	-225	
<i>Total Transit Trips</i>		-536	-15	-20	-35	-26	-28	-54	
<i>Total Pass-by Trips (30%)</i>		-5,078	-142	-121	-263	-261	-264	-525	
<b>Total New Trips</b>		<b>15,893</b>	<b>738</b>	<b>418</b>	<b>1,156</b>	<b>765</b>	<b>1,035</b>	<b>1,800</b>	
Notes:									
<sup>1</sup> Not including square footage of gas station.									
<sup>2</sup> KSF - Thousand Square Feet.									
<sup>3</sup> D.U. - Dwelling Units.									
<sup>4</sup> 30% pass-by rate applied to retail uses after 10% internalization was calculated.									

The trip generation for the General Plan Buildout alternative was also reduced to reflect the light rail transit extension in Year 2025. As summarized above, 15% of station area residents are anticipated to use transit. As shown in Table 6.2-13, the General Plan Buildout alternative generates approximately 5,880 new daily trips, 430 new a.m. peak hour trips, and 530 new p.m. peak hour trips under cumulative conditions.

Use	Size	Trip Generation Source	Trip Rate			Number of Trips		
			Daily	AM	PM	Daily	AM	PM
Low Rise Apartments	557 D.U.	ITE 221	6.59	0.47	0.58	3,671	262	323
Low Rise Condominiums	557 D.U.	ITE 230	5.86	0.44	0.54	3,264	245	301
Total						6,935	507	624
<i>Transit Trips - 15.2% of Residential Trips by Transit</i>						-1,054	-77	-95
<b>Total New Trips</b>						<b>5,881</b>	<b>430</b>	<b>529</b>
Notes: D.U. - Dwelling Units.								

**Trip Generation Comparison**

The number of trips generated by the proposed project and Park-and-Ride Alternative were compared to the number of trips generated by the General Plan Buildout alternative under base year and Year 2025 conditions. Table 6.2-14 summarizes the number of daily and peak hour trips generated by the proposed project and project alternatives. As shown, the Park-and-Ride Alternative generates the highest number of trips under base year and Year 2025 conditions. The General Plan Buildout alternative generates approximately half as many trips as the proposed project during the a.m. peak hour and even fewer daily and p.m. peak hour trips.

<b>Table 6.2-14 Trip Generation for Year 2025 Conditions – Comparison</b>						
<b>Scenario</b>	<b>Base Year Conditions Total New Trips</b>			<b>Year 2025 Conditions Total New Trips</b>		
	<b>Daily</b>	<b>AM</b>	<b>PM</b>	<b>Daily</b>	<b>AM</b>	<b>PM</b>
Proposed Project	15,894	913	1,630	15,139	860	1,557
Park-and-Ride Alternative	16,382	1,191	1,848	15,893	1,159	1,799
General Plan Buildout Alternative	6,935	507	624	5,881	430	529

Notes: Difference in base year and Year 2025 trip generation is due to future light rail transit.

**Trip Distribution**

The following discussion summarizes the analysis approach used for the distribution of project trips under base year and Year 2025 conditions.

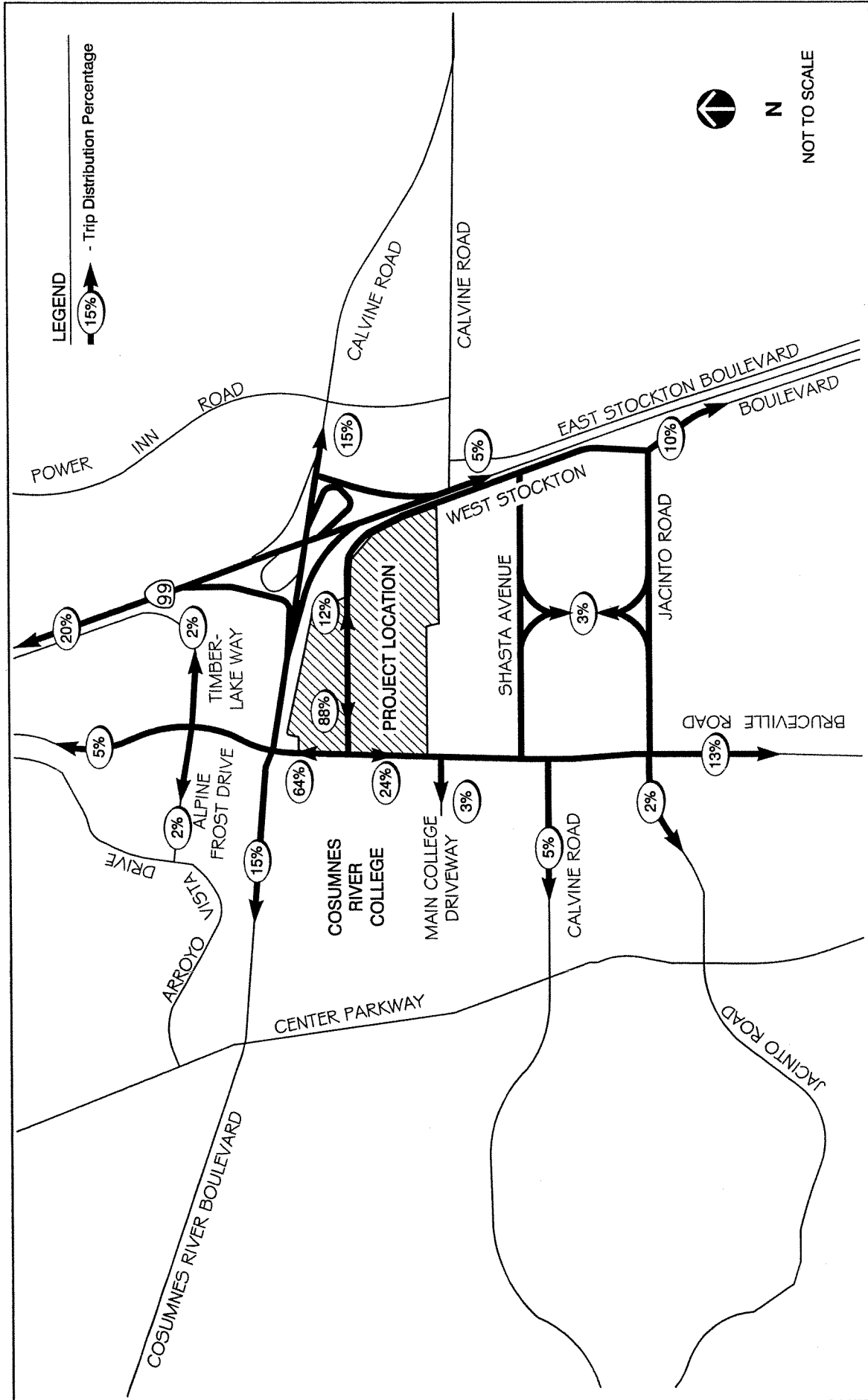
**Base Year Conditions**

The project trips for the proposed project and Park-and-Ride Alternative were manually assigned to the roadway network. The distribution of trips was based on the adjacent land uses, travel patterns, and output from the SACMET (Year 2000) travel demand model. Exhibit 6.2-8 displays the project trip distribution used for the base year analysis.

Using the trip distribution shown in Exhibit 6.2-8, project trips were manually added to base year traffic volumes to develop “base year plus project” and “base year plus Park-and-Ride Alternative” traffic volumes. In addition, traffic volumes were adjusted to reflect the extension of West Stockton Boulevard to Bruceville Road based on output from the SACMET travel demand model. Approximately 30 vehicles during the peak hours and 100 daily vehicles (non-project related) will use the West Stockton Boulevard extension instead of traveling on Bruceville Road.

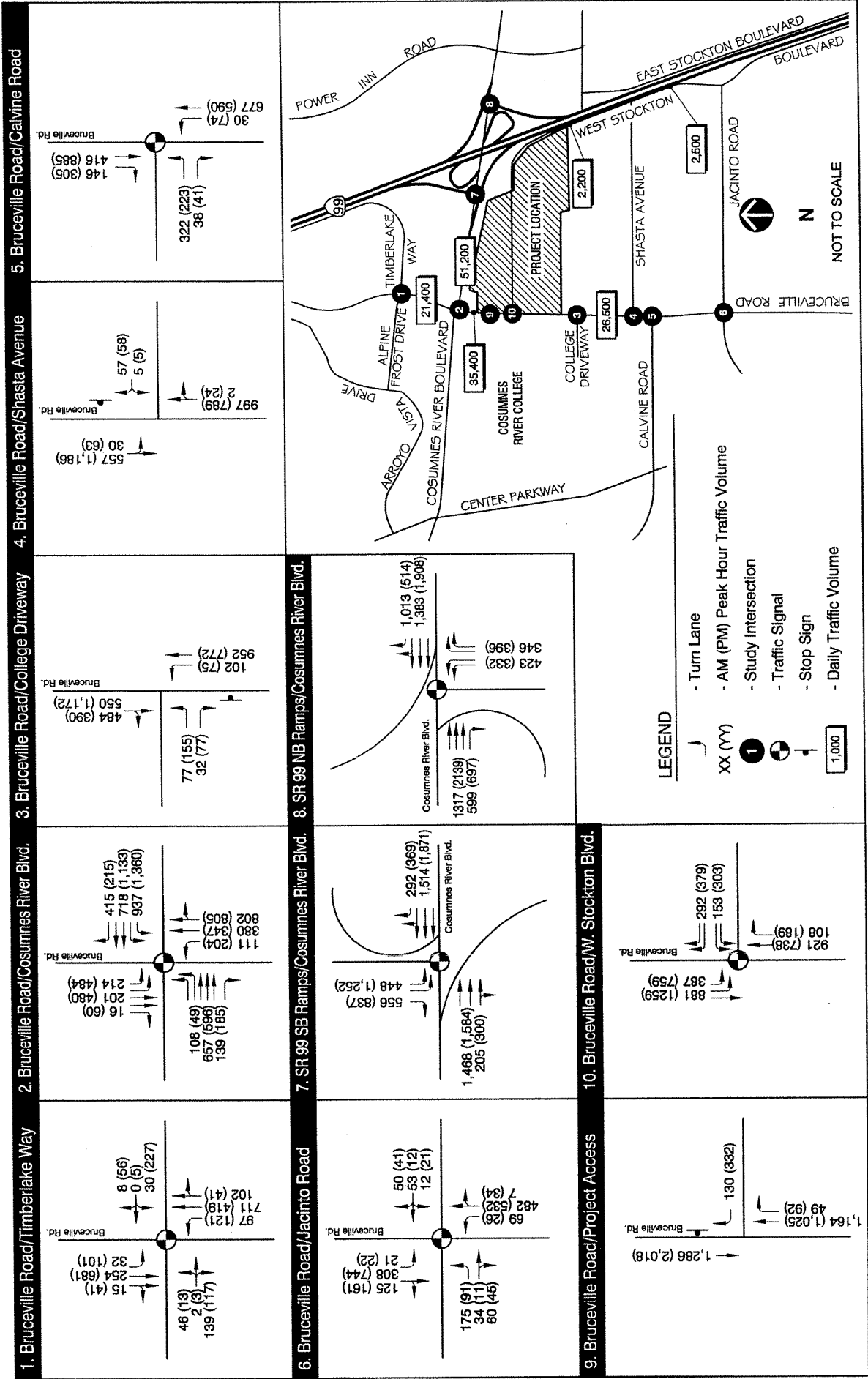
The a.m. and p.m. peak hour traffic volumes with the proposed project and Park-and-Ride Alternative are displayed in Exhibits 6.2-9 and 6.2-10. Table 6.2-15 summarizes the daily traffic volumes under base year conditions.





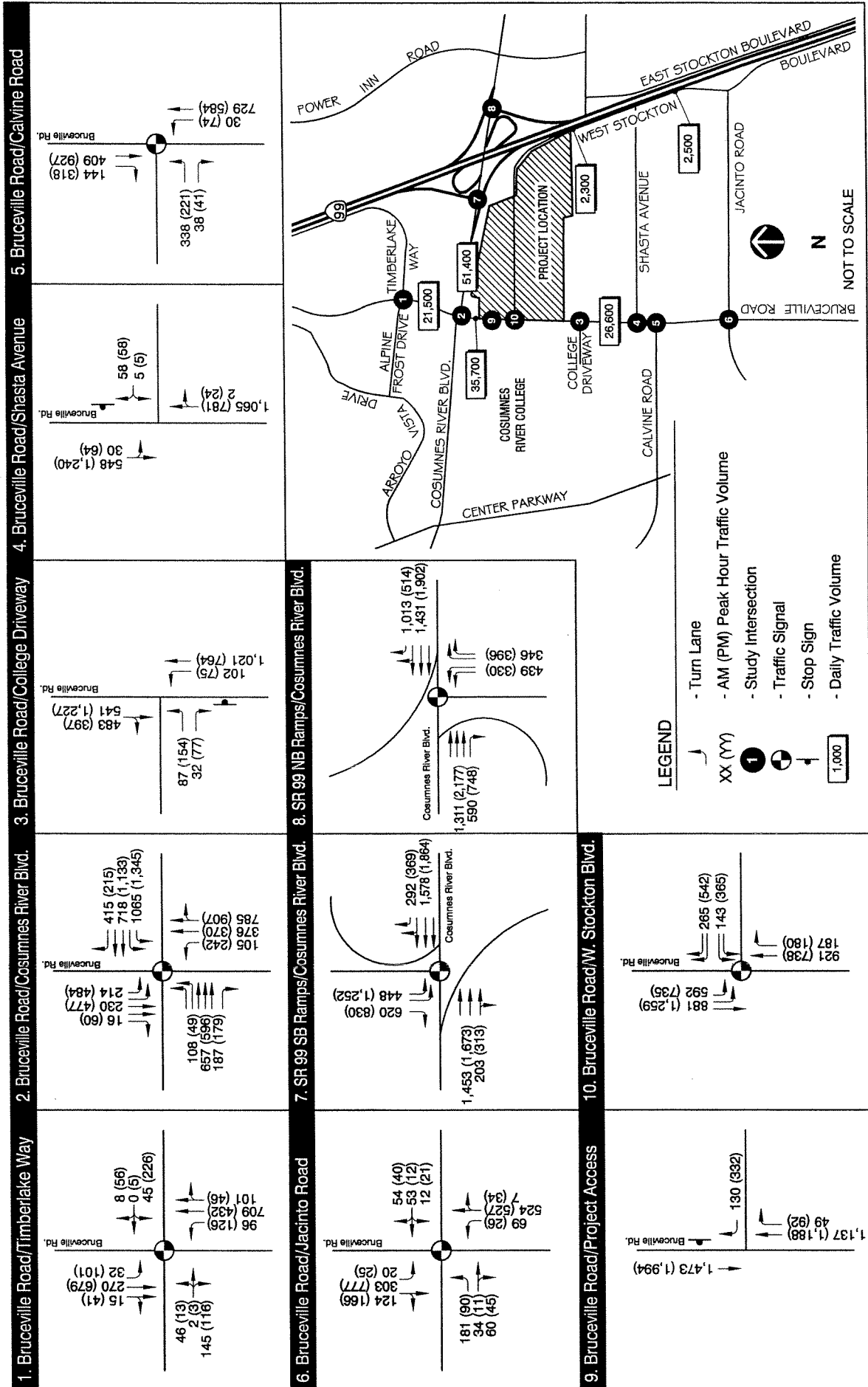
**TRIP DISTRIBUTION -  
 BASE YEAR CONDITIONS**

EXHIBIT 6.2-8



**TRAFFIC VOLUMES  
AND LANE CONFIGURATIONS -  
BASE YEAR PLUS PROPOSED PROJECT CONDITIONS**

**EXHIBIT 6.2-9**



**TRAFFIC VOLUMES  
AND LANE CONFIGURATIONS -  
BASE YEAR WITH PARK & RIDE ALTERNATIVE CONDITIONS**

**EXHIBIT 6.2-10**

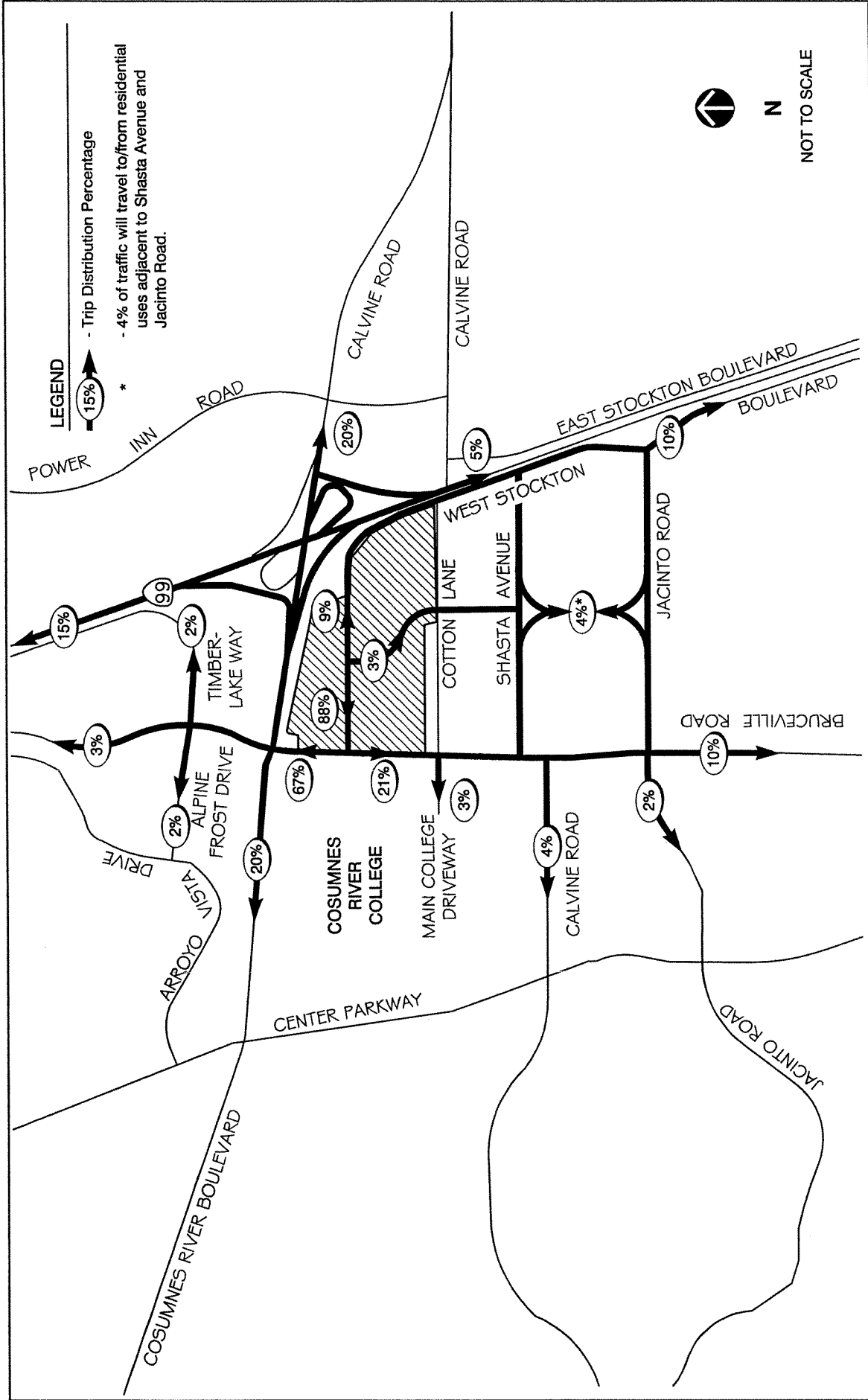
<b>Table 6.2-15</b>			
<b>Daily Traffic Volumes – Base Year with Project Conditions</b>			
<b>Roadway Segment</b>	<b>Daily Traffic Volumes</b>		
	<b>Base Year No Project</b>	<b>Base Year Plus Proposed Project</b>	<b>Base Year Plus Park-and-Ride Alternative</b>
Cosumnes River Boulevard – Bruceville Road to SR 99	44,800	51,200	51,400
Bruceville Road – Cosumnes River Boulevard to Timberlake Way	20,000	21,400	21,500
Bruceville Road – Cosumnes River Boulevard to Project Site	25,200	35,400	35,700
Bruceville Road – Project Site to Shasta Avenue	23,300	26,500	26,600
West Stockton Boulevard – Project Site to Shasta Avenue	240	2,200	2,300
West Stockton Boulevard – Shasta Avenue to Jacinto Road	800	2,500	2,500
Source: Fehr & Peers Associates 2003			

### Year 2025 Conditions

Project trips were also manually assigned under Year 2025 conditions. However, the trip distribution reflects future land uses and travel patterns in the area based on output from the SACMET (Year 2025) travel demand model. Exhibit 6.2-11 displays the project trip distribution used for the Year 2025 analysis.

Using the trip distribution shown in Exhibit 6.2-11, project trips were manually added to Year 2025 traffic volumes to develop “Year 2025 plus project” and “Year 2025 plus Park-and-Ride Alternative” traffic volumes. The traffic volumes were also adjusted to reflect the extension of West Stockton Boulevard to Bruceville Road and the construction of the North-South Road from Cotton Lane to West Stockton Boulevard based on output from the SACMET travel demand model. Approximately 300 vehicles during the peak hours and 1,500 daily vehicles (non-project related) will use these roadways. The resulting a.m. and p.m. peak hour traffic volumes with the proposed project and Park-and-Ride Alternative are displayed in Exhibits 6.2-12 and 6.2-13. Table 6.2-16 summarizes the daily traffic volumes in Year 2025.

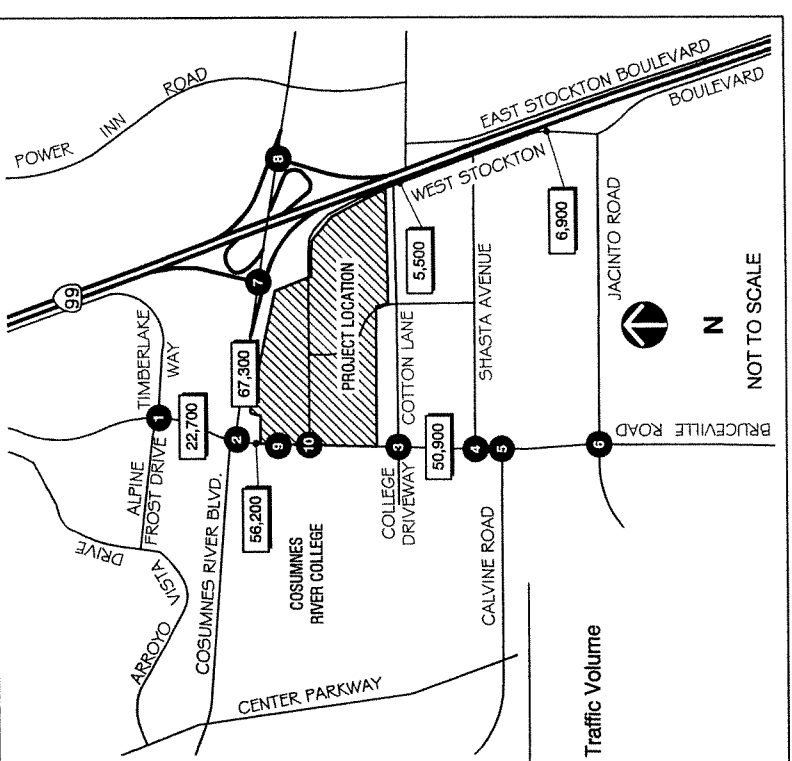
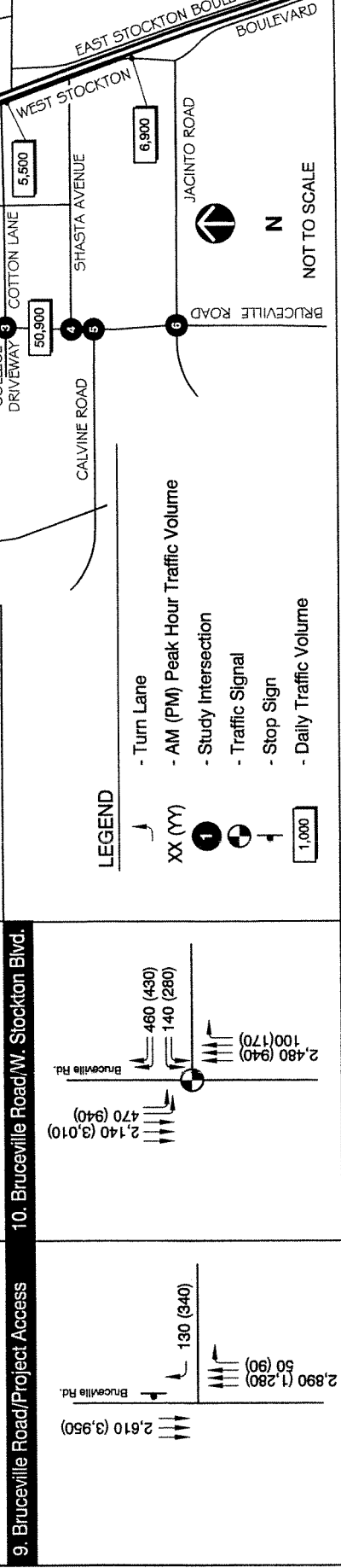
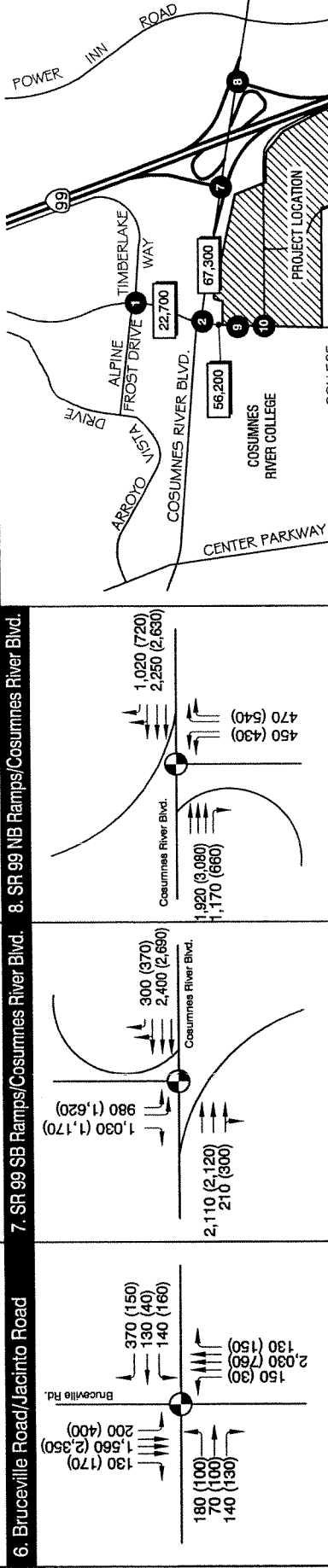
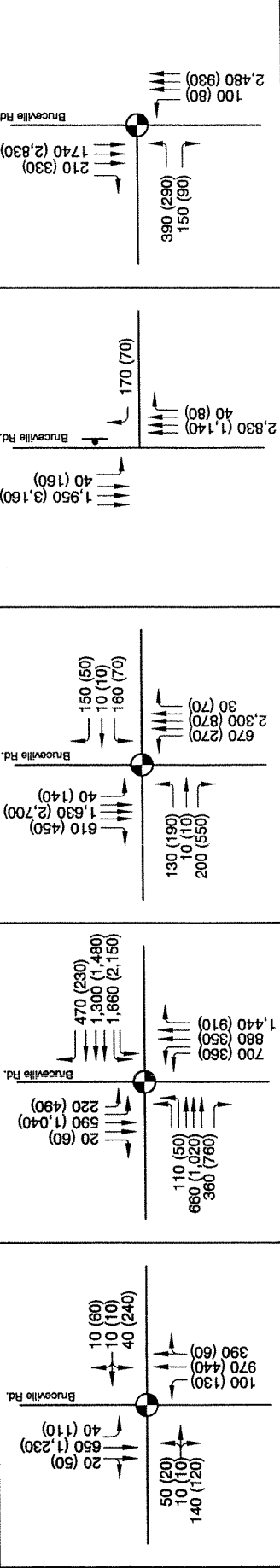
<b>Table 6.2-16</b>			
<b>Daily Traffic Volumes –Year 2025 with Project Conditions</b>			
<b>Roadway Segment</b>	<b>Daily Traffic Volumes</b>		
	<b>Year 2025 No Project</b>	<b>Year 2025 Plus Proposed Project</b>	<b>Year 2025 Plus Park-and-Ride Alternative</b>
Cosumnes River Boulevard – Bruceville Road to SR 99	61,200	67,300	67,600
Bruceville Road – Cosumnes River Boulevard to Timberlake Way	21,600	22,700	22,700
Bruceville Road – Cosumnes River Boulevard to Project Site	46,100	56,200	56,700
Bruceville Road – Project Site to Shasta Avenue	49,700	50,900	51,100
West Stockton Boulevard – Project Site to Shasta Avenue	3,100	5,500	5,600
West Stockton Boulevard – Shasta Avenue to Jacinto Road	4,600	6,900	7,000
Source: Fehr & Peers Associates 2003			



**TRIP DISTRIBUTION -  
CUMULATIVE (YEAR 2025) CONDITIONS**

EXHIBIT 6.2-11

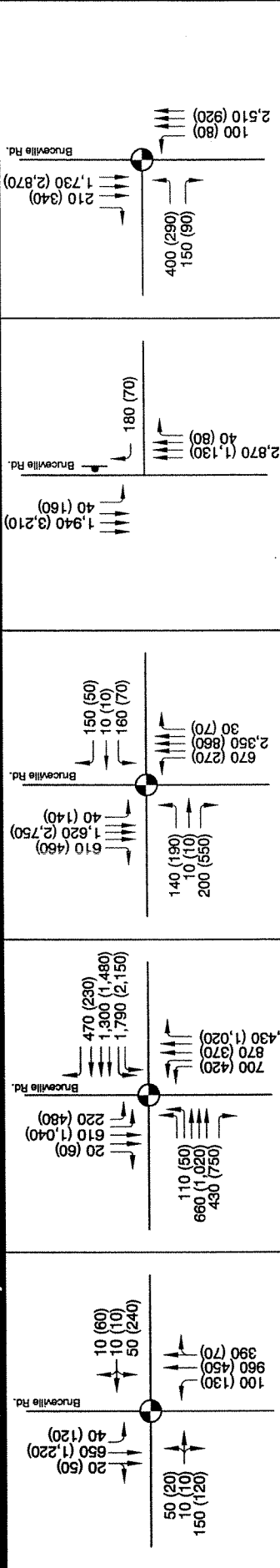
1. Bruceville Road/Timberlake Way  
 2. Bruceville Road/Cosumnes River Blvd.  
 3. Bruceville Road/College Driveway  
 4. Bruceville Road/Shasta Avenue  
 5. Bruceville Road/Calvine Road



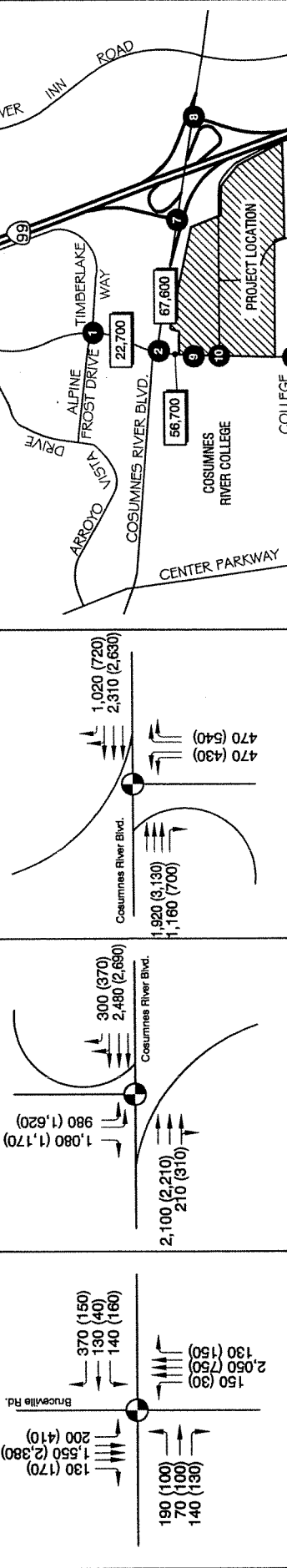
- LEGEND**
- Turn Lane
  - AM (PM) Peak Hour Traffic Volume
  - Study Intersection
  - Traffic Signal
  - Stop Sign
  - Daily Traffic Volume
- XX (YY)    1    1,000

**TRAFFIC VOLUMES  
 AND LANE CONFIGURATIONS -  
 YEAR 2025 PLUS PROPOSED PROJECT CONDITIONS**  
 EXHIBIT 6.2-12

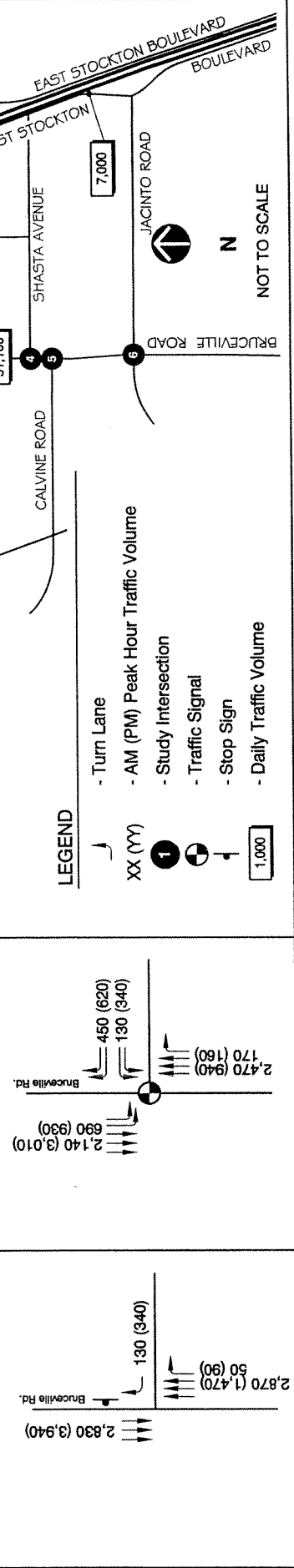
1. Bruceville Road/Timberlake Way  
 2. Bruceville Road/Cosumnes River Blvd.  
 3. Bruceville Road/College Driveway  
 4. Bruceville Road/Shasta Avenue  
 5. Bruceville Road/Gaivine Road



6. Bruceville Road/Jacinto Road  
 7. SR 99 SB Ramps/Cosumnes River Blvd.  
 8. SR 99 NB Ramps/Cosumnes River Blvd.



9. Bruceville Road/Project Access  
 10. Bruceville Road/W. Stockton Blvd.



TRAFFIC VOLUMES  
 AND LANE CONFIGURATIONS -  
 YEAR 2025 PLUS PARK & RIDE ALTERNATIVE CONDITIONS  
 EXHIBIT 6.2-13

## Analysis Results

The analysis methodologies and traffic forecasts discussed above were used to analyze traffic operations with the additional traffic generated by the proposed project and Park-and-Ride Alternative. The LOS results for the study intersections and roadways are summarized below. An analysis of on-site circulation for vehicles, pedestrians and bicyclists, on-site parking, and the location of project driveways are also discussed.

### Intersections

Traffic operations were analyzed during the a.m. and p.m. peak hours using the intersection geometries and traffic volumes from the exhibits discussed above. Tables 6.2-17 and 6.2-18 summarize the peak hour traffic operations under base year and Year 2025 conditions with and without the proposed project and Park-and-Ride Alternative.

<b>Table 6.2-17 Peak Hour Intersection Operations – Base Year Conditions</b>							
<b>Intersection</b>	<b>Average Delay (seconds per vehicle) - Level of Service</b>						
	<b>Control</b>	<b>No Project</b>		<b>Plus Proposed Project</b>		<b>Plus Park-and-Ride Alternative</b>	
		<b>AM</b>	<b>PM</b>	<b>AM</b>	<b>PM</b>	<b>AM</b>	<b>PM</b>
Bruceville Road/Timberlake Way	Signal	15.7 - B	24.7 - C	16.7 - B	27.0 - C	17.5 - B	27.2 - C
Bruceville Road/Cosumnes River Boulevard	Signal	36.1 - D	51.2 - D	50.7 - D	>80.0 - F	61.0 - E	>80.0 - F
Bruceville Road/College Driveway	TWSC <sup>1</sup>	1.2 - A (13.3 - B)	5.3 - A (>50.0 - F)	1.3 - A (15.6 - C)	>50.0 - F (>50.0 - F)	1.3 - A (15.9 - C)	>50.0 - F (>50.0 - F)
Bruceville Road/Shasta Avenue	TWSC <sup>1</sup>	1.1 - A (20.1 - C)	1.3 - A (18.2 - C)	1.3 - A (23.1 - C)	2.4 - A (23.8 - C)	1.4 - A (25.5 - D)	2.6 - A (24.3 - C)
Bruceville Road/Calvine Road	Signal	14.4 - B	15.7 - B	15.1 - B	16.5 - B	15.6 - B	18.5 - B
Bruceville Road/Jacinto Road	Signal	23.2 - C	16.9 - B	24.8 - C	19.9 - B	26.0 - C	20.0 - C
SR 99 SB Ramps/Cosumnes River Boulevard	Signal	10.2 - B	15.4 - B	11.9 - B	26.3 - C	13.5 - B	24.6 - C
SR 99 NB Ramp/Cosumnes River Boulevard	Signal	7.0 - A	7.3 - A	7.1 - A	8.4 - A	7.3 - A	7.6 - A
Bruceville Road/W. Stockton Boulevard	Signal	--	--	19.5 - B	27.6 - C	23.9 - C	30.9 - C
Notes: 1 Two-way stop controlled intersection. Results shown in average delay & LOS (worst-case movement delay and LOS). Shaded boxes indicated significant impacts. Source: Fehr & Peers Associates 2003							



Table 6.2-18 Peak Hour Intersection Operations – Year 2025 Conditions							
Intersection	Average Delay (seconds per vehicle) - Level of Service						
	Control	No Project		Plus Proposed Project		Plus Park-and-Ride Alternative	
		AM	PM	AM	PM	AM	PM
Bruceville Road/Timberlake Way	Signal	18.8 - B	30.8 - C	20.3 - C	37.5 - D	21.6 - C	35.0 - C
Bruceville Road/Cosumnes River Boulevard	Signal	>80.0 - F	>80.0 - F	>80.0 - F	>80.0 - F	>80.0 - F	>80.0 - F
Bruceville Road/College Driveway	Signal	54.5 - D	76.4 - E	54.0 - D	75.0 - E	53.9 - D	77.9 - E
Bruceville Road/Shasta Avenue	TWSC <sup>1</sup>	2.9 - A (>50.0 - F)	0.7 - A (11.1 - B)	1.7 - A (40.5 - E)	0.7 - A (11.6 - B)	2.0 - A (45.8 - E)	0.6 - A (11.5 - B)
Bruceville Road/Calvine Road	Signal	14.2 - B	17.2 - B	14.7 - B	18.5 - B	15.1 - B	19.2 - B
Bruceville Road/Jacinto Road	Signal	50.0 - D	24.4 - C	40.2 - D	24.1 - C	41.5 - D	24.3 - C
SR 99 SB Ramps/Cosumnes River Boulevard	Signal	53.7 - D	79.1 - E	79.2 - E	>80.0 - F	79.6 - E	>80.0 - F
SR 99 NB Ramp/Cosumnes River Boulevard	Signal	9.5 - A	12.6 - B	9.9 - A	14.2 - B	9.9 - A	13.3 - B
Bruceville Road/W. Stockton Boulevard	Signal	--	--	21.0 - C	16.7 - B	25.4 - C	17.5 - B
Notes: <sup>1</sup> Two-way stop controlled intersection. Results shown in average delay & LOS (worst-case movement delay & LOS) Shaded boxes indicated significant impacts. Source: Fehr & Peers Associates 2003							

The Bruceville Road/West Stockton Boulevard intersection was analyzed with the lane configurations below.

- ▶ Dual left-turn lanes on the southbound approach
- ▶ Dual left-turn lanes on the westbound approach
- ▶ Dual right-turn lanes on the westbound approach
- ▶ A right-turn lane on the northbound approach
- ▶ One northbound and southbound through lane on Bruceville Road for base year
- ▶ Three northbound and southbound through lanes on Bruceville Road for Year 2025

The dual turn lanes on westbound West Stockton Boulevard and the northbound right-turn lane on Bruceville Road are proposed with the project and shown on the site plan. Bruceville Road would need to be widened to four lanes to accommodate the dual turn lanes from West Stockton Boulevard to Bruceville Road under base year conditions. Dual left-turn lanes on the southbound Bruceville Road approach are needed to accommodate the anticipated traffic volumes (between 735 and 940 vehicles during the p.m. peak hour) under base year and Year 2025 conditions.

The proposed project may improve operations at some study intersections. This is due to vehicles (non-project related) using the extension of West Stockton Boulevard and the North-South Road to access Bruceville Road instead of traveling through these intersections.

Queue lengths at the northbound and southbound SR 99 off-ramps were also analyzed during the peak hours using the Synchro 5.0 intersection analysis software program. Tables 6.2-19 and 6.2-20 summarize the 95<sup>th</sup> percentile queues under base year and Year 2025 conditions with and without the proposed project and Park-and-Ride Alternative. As shown in the tables, vehicles exiting the SR 99 off-ramps are not expected to queue onto the SR 99 mainline under base year or Year 2025 conditions, with or without the proposed project or Park-and-Ride Alternative.

Off-Ramp	Movement	Storage Provided <sup>1</sup>	Peak Hour	95 <sup>th</sup> Percentile Queue <sup>2</sup>		
				No Project	Proposed Project	Park-and-Ride Alternative
Northbound	Left	1,380 feet +500 feet	AM	85 feet	85 feet	90 feet
			PM	60 feet	70 feet	65 feet
	Right	1,380 feet +500 feet	AM	65 feet	65 feet	65 feet
			PM	80 feet	80 feet	80 feet
Southbound	Left	1,250 feet +500 feet	AM	65 feet	65 feet	65 feet
			PM	210 feet	220 feet	220 feet
	Right <sup>3</sup>	1,250 feet	AM	165 feet	200 feet	290 feet
			PM	400 feet	570 feet	570 feet

Notes:  
<sup>1</sup> Storage measured from stop line to gore point plus additional storage provided by dual turn lanes (i.e., +500 feet indicates that a 2<sup>nd</sup> turn lane with 500 feet of storage is provided).  
<sup>2</sup> 95<sup>th</sup> percentile queue reported in feet per lane.  
<sup>3</sup> PM peak hour queue adjusted to reflect observed queue under existing conditions.  
Source: Fehr & Peers Associates 2003

Off-Ramp	Movement	Storage Provided <sup>1</sup>	Peak Hour	95 <sup>th</sup> Percentile Queue <sup>2</sup>		
				No Project	Proposed Project	Park-and-Ride Alternative
Northbound	Left	1,380 feet +500 feet	AM	85 feet	85 feet	90 feet
			PM	105 feet	115 feet	115 feet
	Right	1,380 feet +500 feet	AM	90 feet	90 feet	95 feet
			PM	155 feet	155 feet	155 feet
Southbound	Left	1,250 feet +500 feet	AM	170 feet	170 feet	170 feet
			PM	485 feet <sup>4</sup>	485 feet <sup>4</sup>	485 feet <sup>4</sup>
	Right <sup>3</sup>	1,250 feet	AM	530 feet <sup>4</sup>	560 feet <sup>4</sup>	600 feet <sup>4</sup>
			PM	845 feet <sup>4</sup>	930 feet <sup>4</sup>	940 feet <sup>4</sup>

Notes:  
<sup>1</sup> Storage measured from stop line to gore point plus additional storage provided by dual turn lanes (i.e., +500 feet indicates that a 2<sup>nd</sup> turn lane with 500 feet of storage is provided).  
<sup>2</sup> 95<sup>th</sup> percentile queue reported in feet per lane.  
<sup>3</sup> PM peak hour queue adjusted to reflect observed queue under existing conditions.  
<sup>4</sup> Vehicle queues may be longer than reported. Queue shown is maximum after two cycles.  
Source: Fehr & Peers Associates 2003

**On-Site Vehicle Circulation**

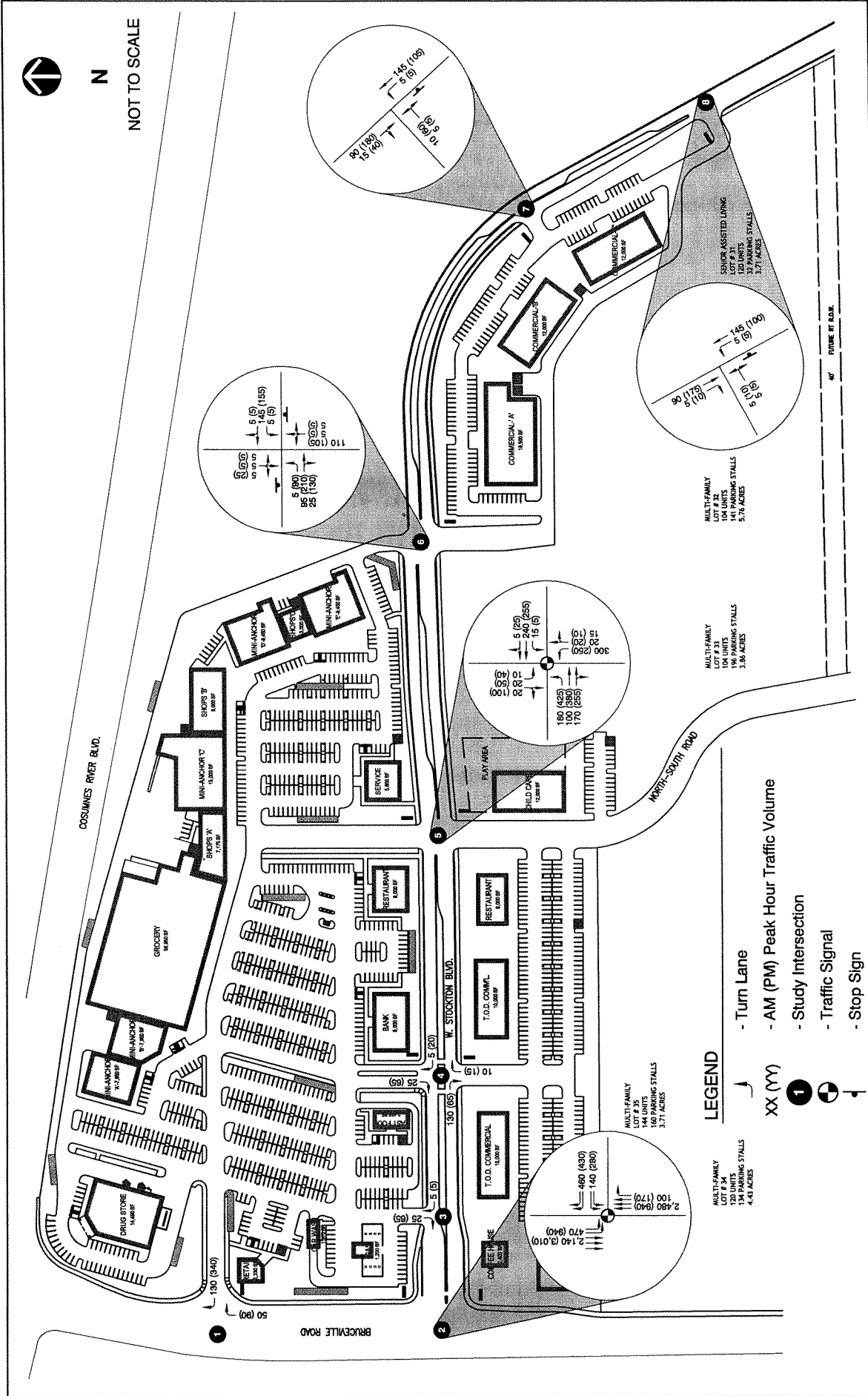
The on-site circulation system was analyzed under Year 2025 conditions. Because the site should be designed to accommodate future traffic volumes, the on-site circulation was analyzed under Year 2025 conditions. Although Year 2025 traffic volumes reflect the reduction of vehicle trips due to the higher number of transit trips, through traffic volumes on West Stockton Boulevard will be higher in Year 2025, which affects the on-site queuing. The recommendations for on-site circulation discussed below will accommodate base year and Year 2025 traffic volumes.

Peak hour turning movements at each driveway were developed based on the adjacent land uses and the distribution of project trips to the surrounding roadway network. Exhibits 6.2-14 and 6.2-15 display the onsite traffic volumes for the proposed project and Park-and-Ride Alternative under Year 2025 conditions. The volumes shown in these exhibits reflect all vehicle-trips (i.e., new trips, pass-by trips, and internal trips). Each driveway is also numerically labeled in these exhibits.

The minimum required throat depth and stacking requirements for the inbound left-turn lanes were computed at each driveway for the proposed project and Park-and-Ride Alternative under Year 2025 conditions. An adequate throat depth is necessary to provide sufficient stacking distance for vehicles exiting the project site to avoid blocking the first on-site circulation aisle, and adequate stacking for left-turn pockets is necessary to ensure that vehicles do not spill back onto West Stockton Boulevard and block through traffic. Table 6.2-21 displays the available storage and minimum required storage at each unsignalized project driveway.

Driveway	Movement	Storage Provided	Storage Required <sup>1</sup>	
			Proposed Project	Park-and-Ride Alternative
1	Right-Out	260 feet	250 feet	250 feet
3	Right-Out	50 feet	25 feet	25 feet
4	Northbound Right-Out	140 feet	25 feet	25 feet
	Southbound Right-Out	130 feet	25 feet	25 feet
6	Northbound Left/Thru/Right-Out	200 feet	100 feet	100 feet
	Southbound Left/Thru/Right-Out	120 feet	75 feet	75 feet
	Eastbound Left-In	100 feet	100 feet	100 feet
	Westbound Left-In	100 feet	25 feet	25 feet
7	Left/Thru/Right-Out	40 feet	100 feet	100 feet
	Left-In	100 feet	25 feet	25 feet
8	Left/Thru/Right-Out	200 feet	50 feet	50 feet
	Left-In	-- <sup>2</sup>	25 feet	25 feet

Notes: Shaded boxes indicate storage required exceeds storage provided.  
<sup>1</sup> Storage required based on maximum queue length during a.m. or p.m. peak hour in Year 2025.  
<sup>2</sup> Turn pocket storage not shown on site plan.  
 Source: Fehr & Peers Associates 2003



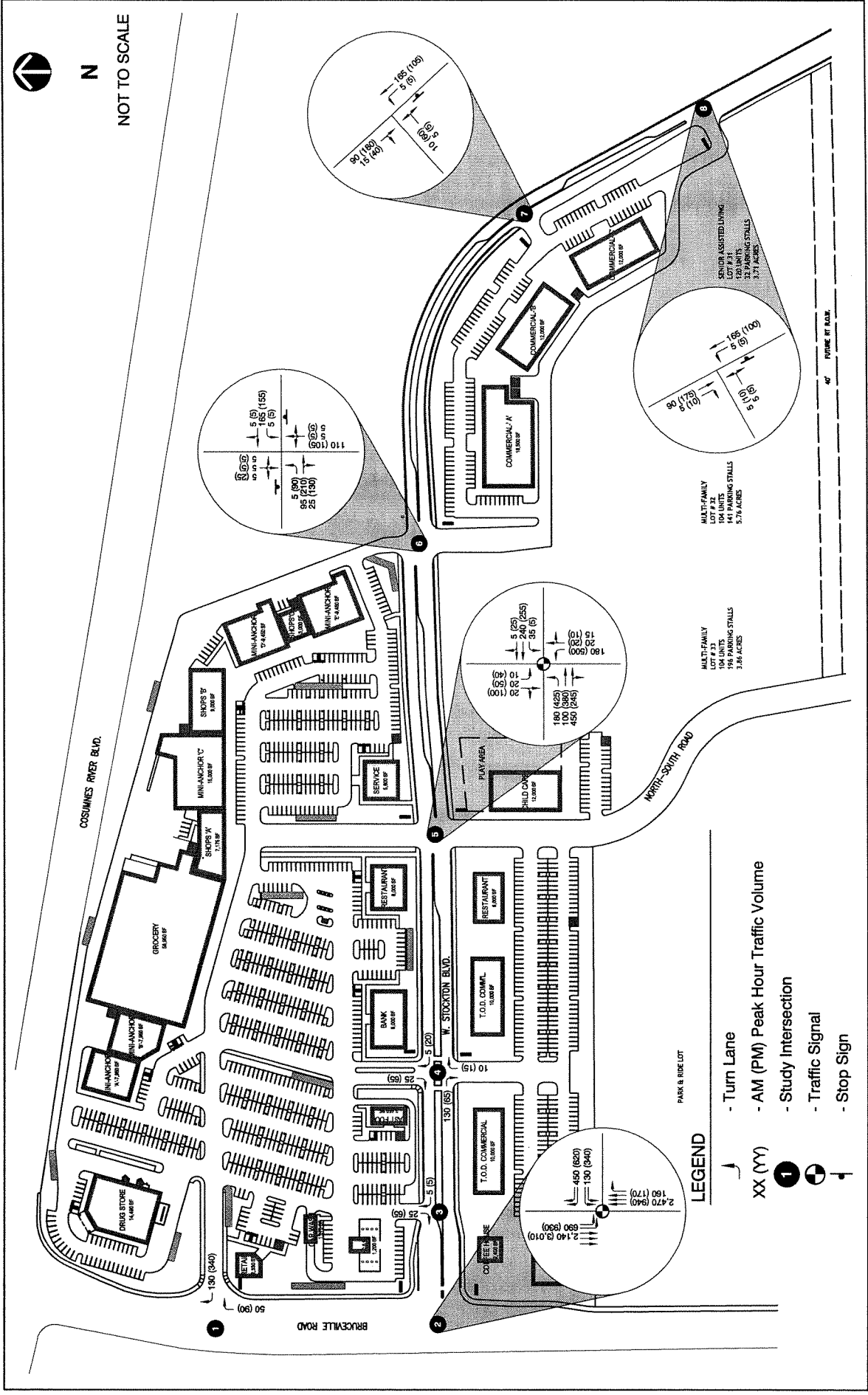
**PROPOSED PROJECT  
PEAK HOUR TRAFFIC VOLUMES  
YEAR 2025 CONDITIONS**

**EXHIBIT 6.2-14**



N

NOT TO SCALE



**LEGEND**

- Turn Lane
- AM (PM) Peak Hour Traffic Volume
- Study Intersection
- Traffic Signal
- Stop Sign

**PARK & RIDE ALTERNATIVE**  
**PEAK HOUR TRAFFIC VOLUMES**  
**YEAR 2025 CONDITIONS**

EXHIBIT 6.2-15

**FEHR & PEERS**  
 TRANSPORTATION CONSULTANTS

May 02, 2003 MJF  
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The turn lane storage requirements were also determined for the two signalized intersections at Bruceville Road/West Stockton Boulevard and North-South Road/West Stockton Boulevard serving the project site. Table 6.2-22 summarizes the 95<sup>th</sup> percentile queue length and intersection operations with the proposed project and Park-and-Ride Alternative.

<b>Table 6.2-22</b>				
<b>95<sup>th</sup> Percentile Queues at Signalized Project Driveways</b>				
<b>Intersection</b>	<b>Approach</b>	<b>Movement (Storage Provided)</b>	<b>95<sup>th</sup> Percentile Queue<sup>1</sup></b>	
			<b>Proposed Project</b>	<b>Park-and-Ride Alternative</b>
Bruceville Road/ W. Stockton Boulevard	Southbound <sup>2</sup>	Left	315 feet	350 feet
	Westbound	Left (125 feet) <sup>3</sup>	115 feet	100 feet
		Right (125 feet) <sup>3</sup>	50 feet	50 feet
North-South Road/ W. Stockton Boulevard	Northbound <sup>2</sup>	Left	250 feet	535 feet
		Thru/Right	25 feet	20 feet
	Southbound <sup>2</sup>	Left	50 feet	60 feet
		Thru/Right	75 feet	100 feet
	Eastbound	Left (100 feet)	360 feet	475 feet
		Thru/Right	105 feet	170 feet
	Westbound	Left (100 feet)	25 feet	35 feet
Thru/Right		100 feet	125 feet	

Notes: Storage provide and 95<sup>th</sup> percentile queue reported in feet per lane.  
1 95<sup>th</sup> percentile queue (feet per lane) based on a.m. or p.m. peak hour (worst-case) in Year 2025.  
2 Turn pocket storage not shown on site plan.  
3 Storage length based on 100-foot turn pocket length and spacing between stop line and adjacent driveway (150 feet) for an average of 125 feet per lane.  
Shaded boxes indicate storage required exceeds storage provided.  
Source: Fehr & Peers Associates 2003

Traffic operations were analyzed at the two signalized driveways and at the right-in/out driveway on Bruceville Road using the same methodology as the study intersection analysis (*Highway Capacity Manual*, Transportation Research Board, 2000). As shown in Table 6.2-18, the Bruceville Road/West Stockton Boulevard intersection would operate at LOS C or better in Year 2025 with the proposed project and Park-and-Ride Alternative. The Bruceville Road/right-in/out driveway would operate at LOS A during both peak hours, and the westbound right-turn movement from the project site onto Bruceville Road would operate at LOS D or better. Because the average delay at the intersection would provide LOS A operations, this intersection would operate acceptably according to City standards. In addition, vehicles making the right-turn movement from the project site onto Bruceville Road are not expected to queue beyond the storage provided as shown in Table 6.2-22.

If Bruceville Road will have only two travel lanes (i.e., 1 northbound and 1 southbound lane) adjacent to the project site in the near-term, implementation of the proposed project or Park-and-Ride Alternative would result in LOS C conditions at the Bruceville/right in/out driveway. However, the right-turn movement from the project site onto Bruceville Road would operate at LOS E during the a.m. peak hour

and LOS F during the p.m. peak hour. Although the LOS for the right-turn movement is not considered a significant project impact (because the standard is applied to the intersection as a whole), the following improvement is recommended to provide LOS C with the proposed project and LOS D with the Park-and-Ride Alternative during the p.m. peak hour:

- ▶ Widen Bruceville Road from two to four lanes between West Stockton Boulevard and Cosumnes River Boulevard with the construction of the proposed project or Park-and-Ride Alternative.

The North-South Road/West Stockton Boulevard intersection would operate as follows under Year 2025 conditions:

- ▶ LOS C during the a.m. and p.m. peak hours with the proposed project.
- ▶ LOS B during the a.m. peak hour and LOS D during the p.m. peak hour with the Park-and-Ride Alternative.

The western portion of West Stockton Boulevard is expected to carry between 22,000 and 24,000 vehicles per day under base year and Year 2025 conditions with the proposed project and Park-and-Ride Alternative. These volumes include project trips and vehicles that will use the extension of West Stockton Boulevard to travel between uses south of the project site and Bruceville Road. The projected daily volumes require West Stockton Boulevard to be constructed as a four lane roadway along the majority of the project site as proposed on the site plan. The City's threshold for LOS C for a four lane low access control arterial is 24,000 vehicles per day. Because West Stockton Boulevard will have a daily volume of up to 24,000 vehicles per day on the most highly traveled segments, a four lane roadway will be able to accommodate the anticipated demand.

West Stockton Boulevard is proposed to transition from a four to two-lane roadway at the eastern end of the project site (i.e., just west of the three commercial pads at driveway 6). The eastern portion of West Stockton Boulevard is expected to carry between 5,100 and 5,900 vehicles per day under base year and Year 2025 conditions with the proposed project and Park-and-Ride Alternative. Therefore, a two-lane roadway on the eastern portion of the site as proposed on the site plan will adequately serve the anticipated daily volumes.

### **Onsite Bicycle & Pedestrian Circulation**

According to the project site plan, sidewalks will be constructed along the extension of West Stockton Boulevard and on east side of Bruceville Road along the frontage of the project site. Crosswalks are proposed along West Stockton Boulevard at each project driveway for pedestrians traveling east-west. For pedestrians traveling north-south across West Stockton Boulevard, crosswalks are proposed at the two signalized intersections and at the driveways located immediately east and west of the North-South Road (Driveways 4 and 6). Additional walkways will be provided between the retail, office, and residential uses.

The traffic signal at Bruceville Road/West Stockton Boulevard will provide a protected crossing for pedestrians traveling between the project site, Cosumnes River College, and the future light rail station.

The sidewalk on the west side of Bruceville Road between the project site and the Cosumnes River College main driveway will serve pedestrians traveling to these uses.

Bike lanes are not provided on the West Stockton Boulevard extension. Based on the width of the roadway (about 24 feet per direction), bike lanes cannot be accommodated within the proposed right-of-way. Recommendations to improve pedestrian and bicycle circulation within the site are discussed below:

- ▶ Sidewalks should be constructed along the North-South Road to provide pedestrian access between the retail uses and the multi-family housing
- ▶ A pedestrian walkway should be provided on the west side of the TOD commercial parcels to provide access to West Stockton Boulevard
- ▶ The uncontrolled crosswalks (i.e., locations without a traffic signal) across West Stockton Boulevard could be unsafe for pedestrians, especially during peak hours when 1,800 to 2,100 vehicles are expected to travel on West Stockton Boulevard; therefore, these crosswalks should be eliminated and pedestrians should be directed to cross West Stockton Boulevard at the signalized intersections

### **Project Driveway Locations & Spacing**

Driveways along West Stockton Boulevard are appropriately located and have adequate spacing except for the driveway located just east of Bruceville Road (Driveway 3). This driveway is located about 150 feet (measured from near curb return to driveway centerline) east of the Bruceville Road/West Stockton Boulevard intersection. Although the westbound 95<sup>th</sup> percentile vehicle queues (as shown in Table 6.2-22) on West Stockton Boulevard are not reported to extend past this driveway during the peak hours, queues may block this driveway occasionally during peak travel times. The following improvement would help to eliminate vehicles blocking the driveway:

- ▶ Driveway 3 - Relocate a minimum of 20 feet to the east and remove the parking adjacent to the east side of the driveway (9 spaces).

This improvement would help to prevent vehicles from blocking the driveway. In addition, removing the proposed parking (9 spaces) from the east side of the driveway will eliminate potential conflicts between vehicles entering the driveway and vehicles backing out of the parking spaces. Additional parking (about 15 spaces) could be provided south of the Drug Store on the northwest quadrant of the site, if needed.

The right-in/out driveway on Bruceville Road is located about 340 feet south of Cosumnes River Boulevard. As discussed above, the Bruceville Road/right-in/out driveway would operate at LOS C or better in Year 2025 with the proposed project and Park-and-Ride Alternative. Although vehicles exiting this driveway must cross the three travel lanes on Bruceville Road (Year 2025) to access the left-turn lane on Bruceville Road and may experience delays waiting for a gap in traffic during the peak hours, this driveway is needed to provide adequate access to and from the project site. The traffic signal at Bruceville Road/West Stockton Boulevard will provide gaps in traffic to allow vehicles to exit.



The Bruceville Road/West Stockton Boulevard intersection (Driveway 2) is located approximately 850 south of the Bruceville Road/Cosumnes River Boulevard intersection. Due to the spacing between these two intersections, intersection operations were reanalyzed with coordinated traffic signals to determine if the LOS would remain acceptable. In addition, the other signalized intersections along Bruceville Road at the Cosumnes River College Driveway, Calvin Road, and Jacinto Road were reanalyzed as part of the coordinated signal system. Coordinating the signals along Bruceville Road would improve vehicle progression through the corridor and traffic operations would remain acceptable (except as shown in Table 6.2-18) at each of the signalized intersections during the peak hours with the proposed project or Park-and-Ride Alternative.

The driveways on the eastern end of the site (Driveways 7 and 8) are located east of the horizontal curve on West Stockton Boulevard. The minimum stopping sight distance required on this segment of West Stockton Boulevard is 430 feet<sup>2</sup> (*Highway Design Manual*, Caltrans, 1995). The “line of sight” for drivers stopped at Driveway 7 to see a vehicle traveling eastbound on West Stockton Boulevard would be partially blocked by vehicles parked in the spaces just west of the driveway. To maintain an appropriate sight distance, the following improvements are recommended:

- ▶ Relocate Driveway 7 to the west, between the Commercial A and Commercial B parcels.

This improvement would place the driveway before the horizontal curve on West Stockton Boulevard and would improve the sight distance for exiting vehicles. A throat depth of approximately 60 feet would be provided compared to the 40-foot throat depth at the proposed location. Driveway 8 is located at the end of the horizontal curve and has adequate sight distance.

#### **6.2.4 IMPACTS AND MITIGATION MEASURES**

The standards of significance used to identify traffic impacts of the proposed project and project alternatives are identified below. Mitigation measures are provided for “plus project” conditions because intersections that operate below the City standards under base year and Year 2025 conditions are not the responsibility of the project. Impacts for the proposed project and project alternatives are identified as follows:

- ▶ PP - Proposed Project
- ▶ AA - No Project (No Development) Alternative
- ▶ AB - General Plan Buildout Alternative
- ▶ AC – Park-and-Ride Alternative

The feasibility of the mitigation is also discussed. Some measures require right-of-way that is not available through implementation of the proposed project. To implement these measures, right-of-way would have to be acquired. The potential cost of right-of-way acquisition makes the mitigation measures infeasible per Section 15364 of CEQA.

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<sup>2</sup> Based on sight distance standards for roadways with a 50 M.P.H. design speed.

## STANDARDS OF SIGNIFICANCE

Impact significance criteria are summarized below for study area intersections, bicycle and pedestrian facilities, and transit facilities.

### Intersections

The City of Sacramento has established a level of service standard for intersections of LOS C. The level of service is based on the average control delay at signalized and unsignalized intersections. As stated in the City's *Traffic Impact Guidelines* (February 1996), a significant traffic impact occurs under the following conditions:

- ▶ The addition of project-generated traffic causes a facility to change from LOS A, B, or C to LOS D, E, or F, or
- ▶ The addition of project-generated traffic increases the average stopped delay by five seconds or more at an intersection already operating worse than LOS C

This standard is consistent with a goal set forth in the City of Sacramento, General Plan Update (1988). Specifically, Section 5-11 – Goal D, states that the City will, “Work towards achieving a Level of Service C on the city’s local and major street system. Due to the constraints associated with existing development in the City, and because of other environmental concerns, this goal cannot always be met.”

### Bicycle Facilities

A significant bikeway impact would occur if:

- ▶ The project hindered or eliminated an existing designated bikeway, or if the project interfered with implementation of a proposed bikeway, or
- ▶ The project was to result in unsafe conditions for bicyclists, including unsafe bicycle/pedestrian or bicycle/motor vehicle conflicts

### Pedestrian Facilities

A significant pedestrian circulation impact would occur if:

- ▶ The project was to result in unsafe conditions for pedestrians, including unsafe increase in pedestrian/bicycle or pedestrian/motor vehicle conflicts

### Transit Facilities

A significant impact to the transit system would occur if:

- ▶ The project-generated ridership, when added to existing or future ridership, exceeds available or planned system capacity. Capacity is defined as the total number of passengers the system of busses and light rail vehicles can carry during the peak hours of operation

### **Impact Classification**

Impacts are classified as follows:

- ▶ No Impact
- ▶ Less Than Significant (mitigation unnecessary)
- ▶ Significant (mitigation necessary)
- ▶ Significant Unavoidable

### **Intersections**

The intersection listed below would be significantly impacted with the additional traffic generated by the proposed project or project alternatives based on the City’s significance criteria. Mitigation measures are proposed to reduce project impacts to less than significant. Tables 6.2-23 and 6.2-24 display the traffic operations with the mitigation measures for base year and Year 2025 conditions. Exhibits 6.2-16 and 6.2-17 display the mitigation measures for improvements that are feasible and would reduce the identified impacts to a less than significant level under base year and Year 2025 conditions with the proposed project and Park-and-Ride Alternative.

#### **Impact 6.2-1: Bruceville Road/Cosumnes River Boulevard – Base Year**

- |        |   |
|--------|---|
| PP, AC | The addition of the proposed project and Park-and-Ride Alternative would add more than 5 seconds of delay to a.m. and p.m. (LOS D) operations, resulting in a <i>significant</i> impact.  |
| AA     | This alternative would not change the number of vehicle trips within the project vicinity, resulting in <i>no impact</i> .  |
| AB     | The Bruceville Road/Cosumnes River Boulevard intersection would operate at LOS D during the a.m. and p.m. peak hours under base year conditions. Because the General Plan Buildout alternative would add traffic to this intersection, peak hour operations may degrade beyond the City’s 5 second threshold, resulting in a <i>significant</i> impact. |

#### **Mitigation 6.2-1: Bruceville Road/Cosumnes River Boulevard – Base Year**

The following measures would be needed to mitigate the Bruceville Road/Cosumnes River Boulevard intersection:

**Table 6.2-23  
Peak Hour Intersection Operations – Base Year Conditions With Mitigation**

Intersection	Average Delay (seconds per vehicle) - Level of Service						
	Control	Base Year Conditions		Base Year Plus Proposed Project With Mitigation		Base Year Plus Park-and-Ride Alternative With Mitigation	
		AM	PM	AM	PM	AM	PM
Bruceville Road/Timberlake Way	Signal	15.7 - B	24.7 - C	16.7 - B	27.0 - C	17.5 - B	27.2 - C
Bruceville Road/Cosumnes River Boulevard	Signal	36.1 - D	51.2 - D	28.0 - C	46.1 - D	29.6 - C	52.0 - D
Bruceville Road/College Driveway	TWSC <sup>1</sup>	1.2 - A (13.3 - B)	5.3 - A (>50.0 - F)	1.3 - A (15.6 - C)	19.7 - B <sup>2</sup>	1.3 - A (15.9 - C)	22.9 - C <sup>2</sup>
Bruceville Road/Shasta Avenue	TWSC <sup>1</sup>	1.1 - A (20.1 - C)	1.3 - A (18.2 - C)	1.3 - A (23.1 - C)	2.4 - A (23.8 - C)	1.4 - A (25.5 - D)	2.6 - A (24.3 - C)
Bruceville Road/Calvine Road	Signal	14.4 - B	15.7 - B	15.1 - B	16.5 - B	15.6 - B	18.5 - B
Bruceville Road/Jacinto Road	Signal	23.2 - C	16.9 - B	24.8 - C	19.9 - B	26.0 - C	20.0 - C
SR 99 SB Ramps/Cosumnes River Boulevard	Signal	10.2 - B	15.4 - B	11.9 - B	26.3 - C	13.5 - B	24.6 - C
SR 99 NB Ramp/Cosumnes River Boulevard	Signal	7.0 - A	7.3 - A	7.1 - A	8.4 - A	7.3 - A	7.6 - A
Bruceville Road/W. Stockton Boulevard	Signal	--	--	19.5 - B	27.6 - C	23.9 - C	30.9 - C

Notes:

<sup>1</sup> Two-way stop controlled intersection. Results shown in average delay & LOS (worst-case movement delay & LOS)

<sup>2</sup> Signalized intersection with implementation of mitigation. Shaded boxes display traffic operations with recommended mitigation.

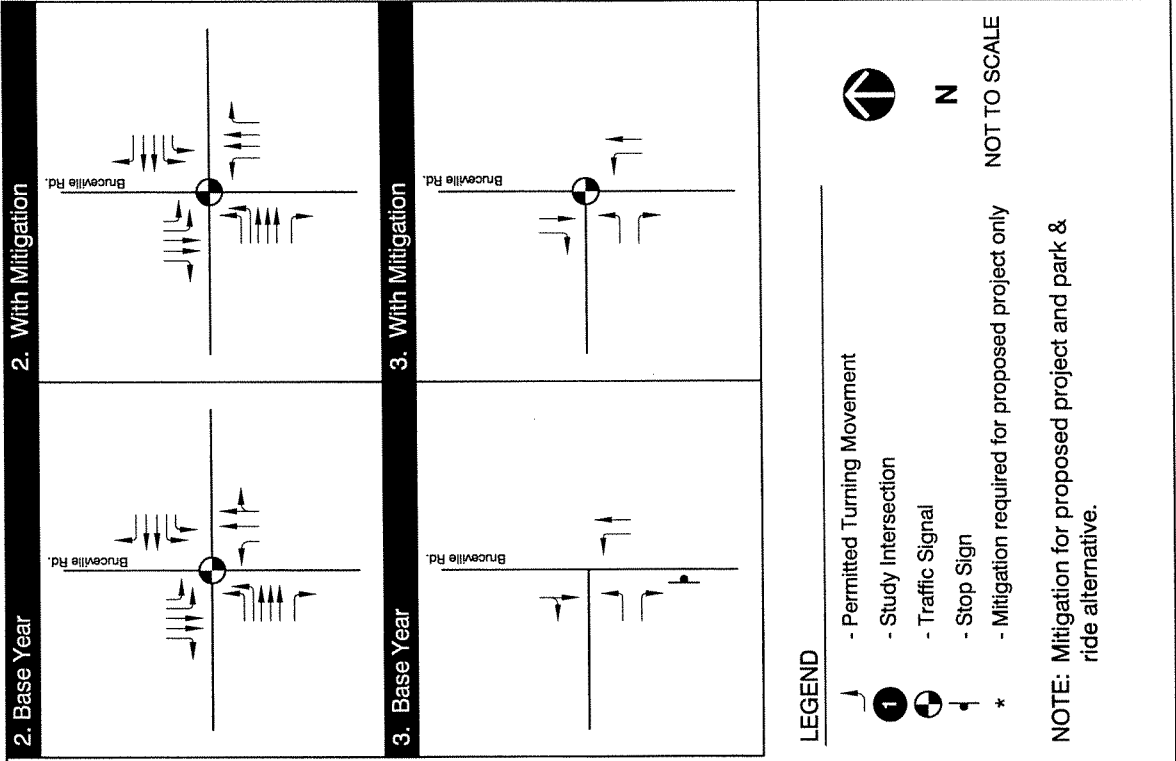
Implementation of mitigation would reduce impact to less than significant.

Source: Fehr & Peers Associates 2003

**Table 6.2-24  
Peak Hour Intersection Operations – Year 2025 Conditions With Mitigation**

Intersection	Average Delay (seconds per vehicle) - Level of Service						
	Control	Year 2025 Conditions		Year 2025 Plus Proposed Project With Mitigation		Year 2025 Plus Park-and-Ride Alternative With Mitigation	
		AM	PM	AM	PM	AM	PM
Bruceville Road/Timberlake Way	Signal	18.8 - B	30.8 - C	20.3 - C	34.8 - C	21.6 - C	35.0 - C
Bruceville Road/Cosumnes River Boulevard	Signal	>80.0 - F	>80.0 - F	>80.0 - F <sup>2</sup>	>80.0 - F <sup>2</sup>	>80.0 - F <sup>2</sup>	>80.0 - F <sup>2</sup>
Bruceville Road/College Driveway	Signal	54.5 - D	76.4 - E	54.0 - D	75.0 - E	53.9 - D	77.9 - E
Bruceville Road/Shasta Avenue	TWSC <sup>1</sup>	2.9 - A (>50.0 - F)	0.7 - A (11.1 - B)	1.7 - A (40.5 - E)	0.7 - A (11.6 - B)	2.0 - A (45.8 - E)	0.6 - A (11.5 - B)
Bruceville Road/Calvine Road	Signal	14.2 - B	17.2 - B	14.7 - B	18.5 - B	15.1 - B	19.2 - B
Bruceville Road/Jacinto Road	Signal	50.0 - D	24.4 - C	40.2 - D	24.1 - C	41.5 - D	24.3 - C
SR 99 SB Ramps/Cosumnes River Boulevard	Signal	53.7 - D	79.1 - E	20.8 - C	57.2 - E	23.5 - C	57.4 - E
SR 99 NB Ramp/Cosumnes River Boulevard	Signal	9.5 - A	12.6 - B	9.9 - A	14.2 - B	9.9 - A	13.3 - B
Bruceville Road/W. Stockton Boulevard	Signal	--	--	21.0 - C	16.7 - B	25.4 - C	17.5 - B

Notes:  
Two-way stop controlled intersection. Results shown in average delay & LOS (worst-case movement delay & LOS). Impact is significant and unavoidable.  
Shaded boxes display traffic operations with recommended mitigation.  
Implementation of mitigation would reduce impact to less than significant.  
Source: Fehr & Peers Associates 2003



2. Base Year

2. With Mitigation

3. Base Year

3. With Mitigation

**LEGEND**

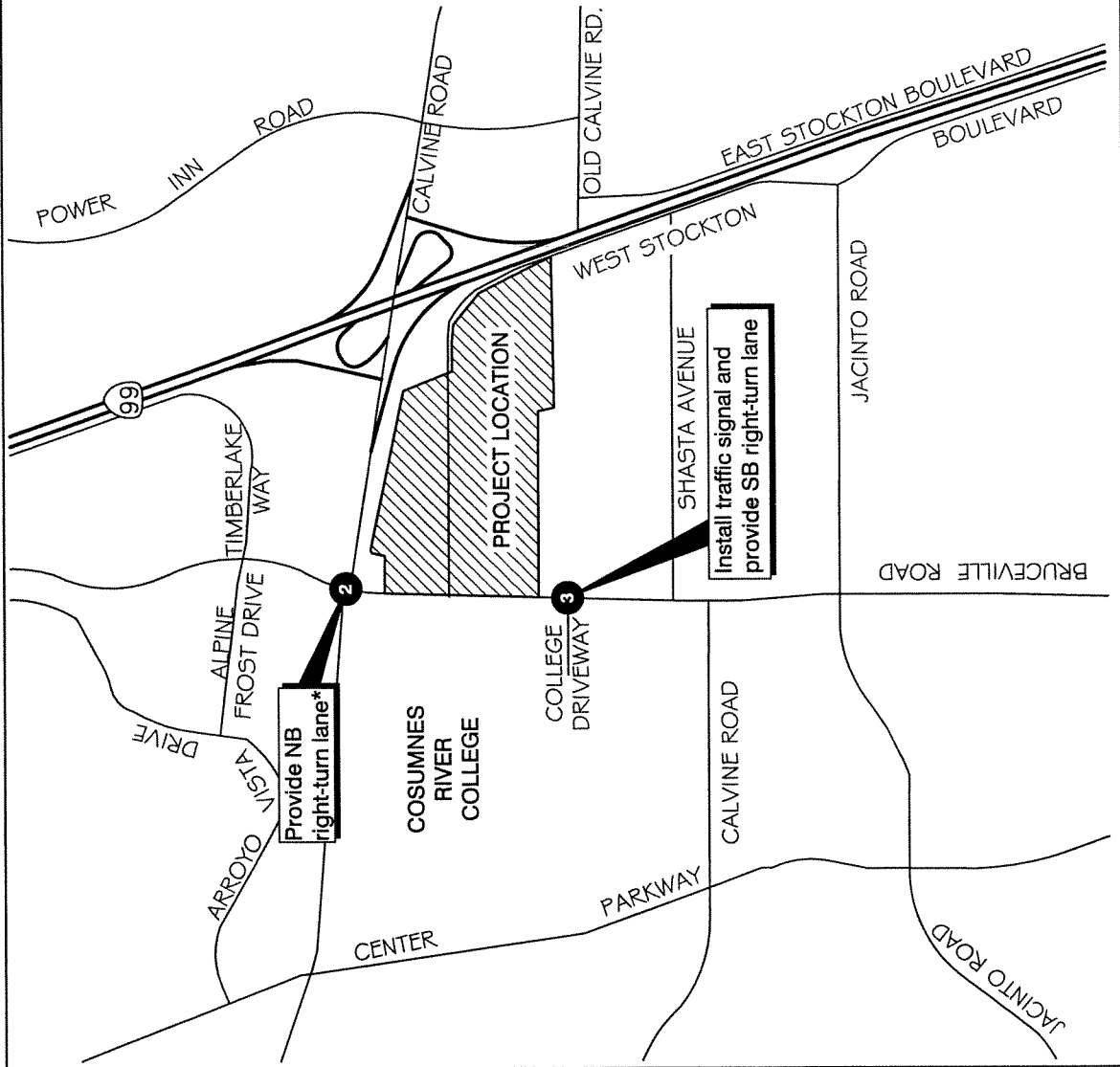
- ↓ - Permitted Turning Movement
- 1 - Study Intersection
- 2 - Traffic Signal
- ↓ - Stop Sign
- \* - Mitigation required for proposed project only



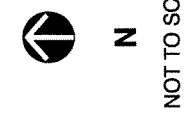
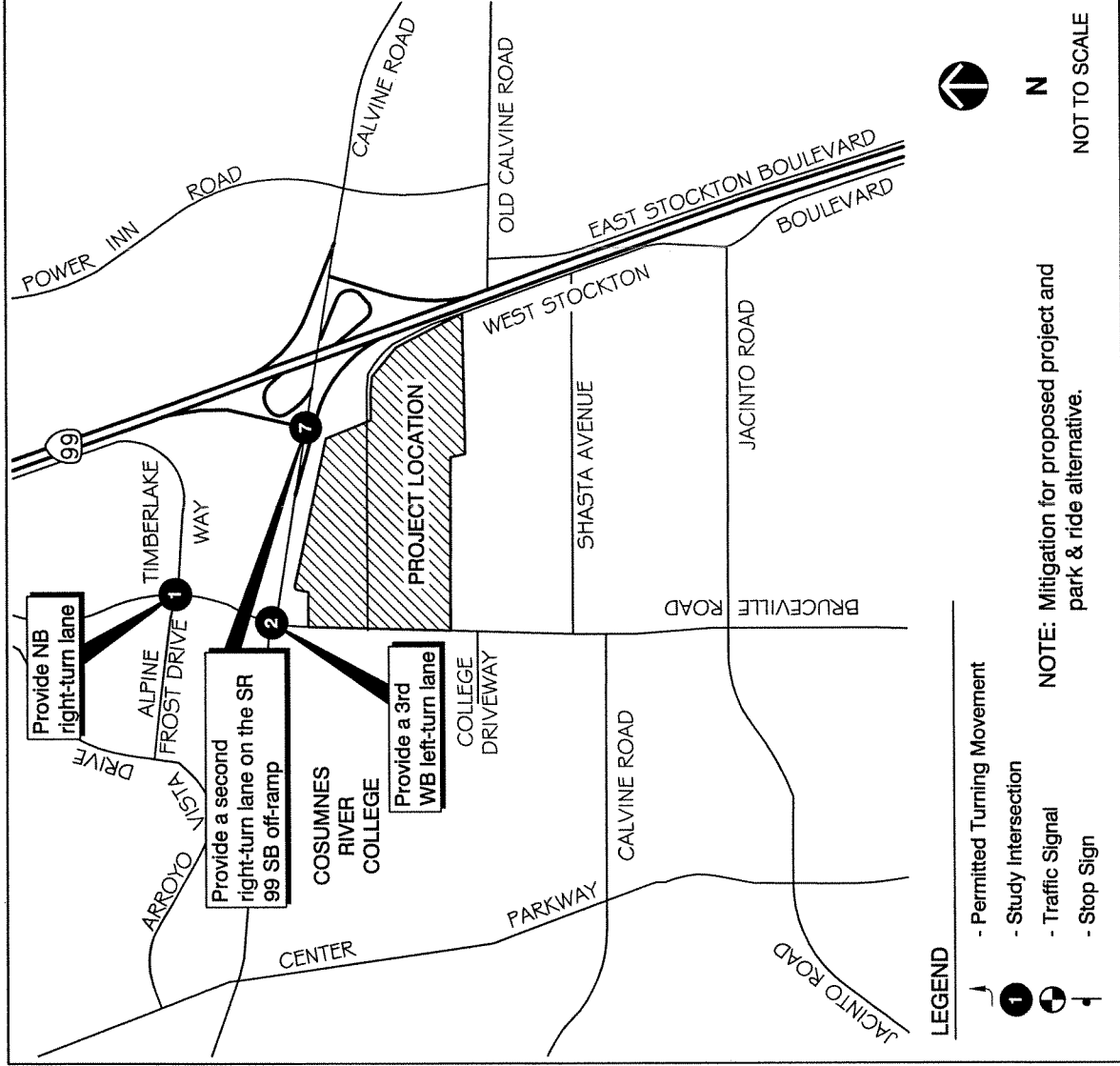
N

NOT TO SCALE

**NOTE:** Mitigation for proposed project and park & ride alternative.

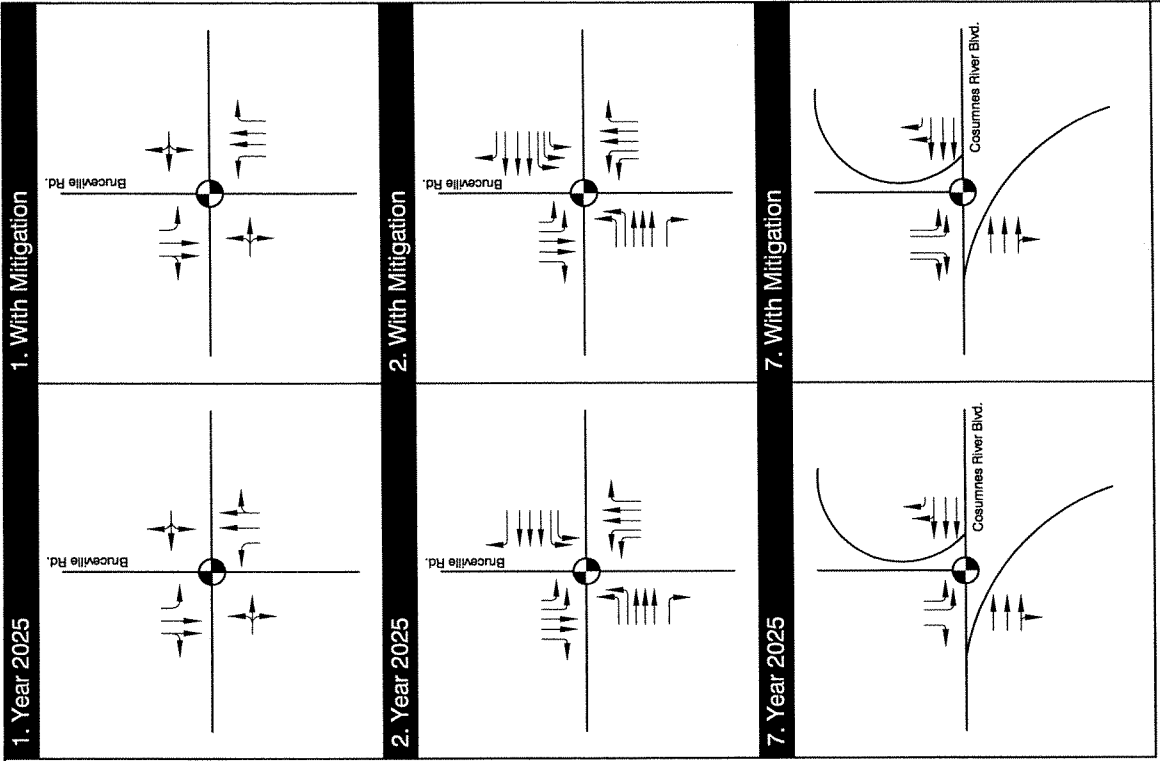


**MITIGATION MEASURES FOR  
BASE YEAR CONDITIONS**



LEGEND  
 - Permitted Turning Movement  
 - Study Intersection  
 - Traffic Signal  
 - Stop Sign

NOTE: Mitigation for proposed project and park & ride alternative.



**MITIGATION MEASURES FOR YEAR 2025 CONDITIONS**  
**EXHIBIT 6.2-17**

PP, AC *Improve the northbound approach of Bruceville Road/Cosumnes River Boulevard intersection to provide an exclusive left-turn lane, two through lanes and an exclusive right turn lane.*

Implementation of this mitigation measure would result in less than a 5 second increase in delay during the a.m. and p.m. peak hours and would reduce the impact to *less than significant*.

AA No mitigation is required.

AB *Provide an exclusive right-turn lane on the northbound approach to the Bruceville Road/Cosumnes River Boulevard intersection.*

Implementation of this mitigation measure would result in less than a 5 second increase in delay during the a.m. and p.m. peak hours for the proposed project and Park-and-Ride Alternative, reducing the impact to less than significant. Because the General Plan Buildout alternative would generate fewer trips than the proposed project and Park-and-Ride Alternative, this measure would also reduce the impact of the General Plan Buildout alternative to *less than significant*.

#### **Impact 6.2-2: Bruceville Road/Cosumnes River College Driveway – Base Year**

PP, AC The addition of the proposed project and Park-and-Ride Alternative would degrade intersection operations from LOS A to LOS F during the p.m. peak hour, resulting in a *significant* impact.

AA This alternative would not change the number of vehicle trips within the project vicinity, resulting in *no impact*.

AB The proposed project and Park-and-Ride Alternative would degrade operations from LOS A to LOS F during the p.m. peak. Although the General Plan Buildout alternative would generate fewer p.m. peak hour trips than the proposed project and Park-and-Ride Alternative, the additional traffic may worsen operations beyond the City's LOS C threshold, resulting in a *significant* impact.

#### **Mitigation 6.2-2: Bruceville Road/Cosumnes River College Driveway – Base Year**

The following measures would be needed to mitigate the Bruceville Road/Cosumnes River College Driveway:

PP, AC *Install a traffic signal at the intersection of Bruceville Road/Cosumnes River College Driveway and improve the southbound approach to provide a single through lane and exclusive right-turn lane.*

Implementation of this mitigation measure would result in LOS B operations with the implementation of the proposed project and LOS C operations during the p.m. peak hour



with the implementation of the Park-and-Ride Alternative and would reduce the impact to a *less-than-significant* level.

AA No mitigation is required.

AB *Install a traffic signal at the intersection of Bruceville Road/Cosumnes River College Driveway and improve the southbound approach to provide a single through lane and exclusive right-turn lane.*

Implementation of this mitigation measure would result in LOS C or better operations with the implementation of the proposed project and Park-and-Ride Alternative during the p.m. peak hour, reducing the impact to less than significant. Because the General Plan Buildout alternative would generate fewer trips than the proposed project and Park-and-Ride Alternative, this measure would also reduce the impact of the General Plan Buildout alternative to *less than significant*.

### **Impact 6.2-3: Bruceville Road/Timberlake Way/Alpine Frost Drive – Year 2025**

PP The addition of the proposed project would degrade operations from LOS C to LOS D during the p.m. peak hour, resulting in a *significant* impact.

AA This alternative would not change the number of vehicle trips within the project vicinity, resulting in *no impact*.

AB The General Plan Buildout alternative would generate approximately 35% of the p.m. peak hour trips of the proposed project. Because the amount of traffic generated by the proposed project would increase the delay from 30.8 to 37.5 seconds during the p.m. peak hour, the General Plan Buildout alternative is not expected to exceed the 35.0 second threshold for LOS C operations during the p.m. peak hour, resulting in a *less-than-significant* impact.

AC This alternative would generate additional traffic in the study area. However, the intersection would continue to operate at LOS C during the a.m. and p.m. peak hours with implementation of the Park-and-Ride Alternative, resulting in a *less-than-significant* impact.

### **Mitigation 6.2-3: Bruceville Road/Timberlake Way/Alpine Frost Drive – Year 2025**

The following measures would be needed to mitigate the Bruceville Road/Timberlake Way/Alpine Frost Drive intersection:

PP *Provide an exclusive right-turn lane on the northbound approach to the Bruceville Road/Timberlake Way/Alpine Frost Drive intersection if not built by others.*

Implementation of this mitigation measure would improve operations to LOS C during the p.m. peak hour and would reduce the impact to *less than significant*.

AA, AB, AC No mitigation is required.

**Impact 6.2-4: Bruceville Road/Cosumnes River Boulevard – Year 2025**

PP, AC The addition of the proposed project and Park-and-Ride Alternative would add more than 5 seconds of delay to a.m. and p.m. (LOS F) operations, resulting in a *significant* impact.

AA This alternative would not change the number of vehicle trips within the project vicinity, resulting in *no impact*.

AB The Bruceville Road/Cosumnes River Boulevard intersection would operate at LOS F during the a.m. and p.m. peak hours under Year 2025 conditions. Because the General Plan Buildout alternative would add traffic to this intersection, peak hour operations may degrade beyond the City’s 5 second threshold, resulting in a *significant* impact.

**Mitigation 6.2-4: Bruceville Road/Cosumnes River Boulevard – Year 2025**

The following measures would be needed to mitigate the Bruceville Road/Cosumnes River Boulevard intersection:

PP, AC *Provide a third left-turn lane on the westbound approach to the Bruceville Road/Cosumnes River Boulevard intersection.*

Implementation of this mitigation measure would result in less than a 5 second increase in delay during the a.m. and p.m. peak hours and would reduce the impact to a *less than significant* level. This improvement would result in three left-turn lanes from Bruceville Road onto Cosumnes River Boulevard.

AA No mitigation is required.

AB *Provide a third left-turn lane on the westbound approach to the Bruceville Road/Cosumnes River Boulevard intersection.*

Implementation of this mitigation measure would result in less than a 5 second increase in delay during the a.m. and p.m. peak hours for the proposed project and Park-and-Ride Alternative, reducing the impact to *less than significant*. Because the General Plan Buildout alternative would generate fewer trips than the proposed project and Park-and-Ride Alternative, this measure would also reduce the impact of the General Plan Buildout alternative to *less than significant*.

**Impact 6.2-5: SR 99 Southbound Off-Ramp/Cosumnes River Boulevard – Year 2025**

- PP, AC      The addition of the proposed project and Park-and-Ride Alternative would add more than 5 seconds of delay to a.m. (LOS D) and p.m. (LOS E) operations, resulting in a *significant* impact.
- AA            This alternative would not change the number of vehicle trips within the project vicinity, resulting in *no impact*.
- AB            The SR 99 Southbound Off-Ramp/Cosumnes River Boulevard intersection would operate unacceptably at LOS D during the a.m. peak hour and LOS E during the p.m. peak hour under Year 2025 conditions. Because the General Plan Buildout alternative would add traffic to this intersection, peak hour operations may degrade beyond the City’s 5 second threshold, resulting in a *significant* impact.

**Mitigation 6.2-5: SR 99 Southbound Off-Ramp/Cosumnes River Boulevard – Year 2025**

The following measures would be needed to mitigate the SR 99 Southbound Off-Ramp/Cosumnes River Boulevard intersection:

- PP, AC      *Provide an additional right-turn lane on the SR 99 southbound off-ramp to Cosumnes River Boulevard.*
- Implementation of this mitigation measure would result in less than a 5 second increase in delay during the a.m. and p.m. peak hours and would reduce the impact to a less than significant level. To implement this mitigation measure, Caltrans approval is required and additional right-of-way to construct a bridge may be needed. Because the applicant has no control over right-of-way, this measure is infeasible. Therefore, this impact is *significant and unavoidable*.
- AA            No mitigation is required.
- AB            *Provide an additional right-turn lane on the SR 99 southbound off-ramp to Cosumnes River Boulevard.*
- Implementation of this mitigation measure would result in less than a 5 second increase in delay during the a.m. and p.m. peak hours for the proposed project and Park-and-Ride Alternative, reducing the impact to less than significant. Because the General Plan Buildout alternative would generate fewer trips than the proposed project and Park-and-Ride Alternative, this measure would also reduce the impact of the General Plan Buildout alternative to less than significant. To implement this mitigation measure, Caltrans approval is required and additional right-of-way to construct a bridge may be needed. Because the applicant has no control over right-of-way, this measure is infeasible. Therefore, this impact is *significant and unavoidable*.

## Onsite Circulation

The analysis of onsite circulation was conducted for 2025 conditions, as they represent the “worst case”. While the on-site design needs may be less in the near-term, it is not practical to phase the onsite improvements. Therefore, the following measures should be implemented with the project or the Park-and-Ride Alternative.

### **Impact 6.2-6: Driveway 7 (refer to Exhibit 6.2-14 for driveway location)**

PP, AC            The addition of the proposed project and Park-and-Ride Alternative would result in a maximum queue of 100 feet, which would exceed the provided storage of 50 feet, resulting in a *significant* impact.

### **Mitigation 6.2-6: Driveway 7 (refer to Exhibit 6.2-14 for driveway location)**

The following measures would be needed to mitigate Driveway 7 in addition to relocating Driveway 7, as discussed previously as a recommendation:

PP, AC            *Reconfigure the drive aisle to provide 100-foot minimum of storage between West Stockton Boulevard and the internal circulation aisle.*

Implementation of this mitigation measure would provide an acceptable storage length for outbound vehicles and would reduce the impact to a *less-than-significant* level.

### **Impact 6.2-7: North-South Road/West Stockton Boulevard Storage Requirements**

PP                The addition of the proposed project would result in a 95<sup>th</sup> percentile queue of 360 feet for the eastbound left-turn movement during the p.m. peak hour, which would exceed the provided storage of 100 feet. In addition, the 95<sup>th</sup> percentile queue for the northbound left-turn movement (250 feet) during the p.m. peak hour would extend past the driveways on the west side of the North-South Road, which would restrict vehicles from exiting, resulting in a *significant* impact.

AC                The addition of the Park-and-Ride Alternative would result in LOS D operations during the p.m. peak hour at the North-South Road/West Stockton Boulevard intersection. In addition, the eastbound left-turn movement would have a 95<sup>th</sup> percentile queue of 475 feet during the p.m. peak hour, which would exceed the provided storage of 100 feet, and the northbound left-turn movement queue (535 feet) would extend past the driveway aisles on the west side of the North-South Road, which would restrict vehicles from exiting, resulting in a *significant* impact.

### **Mitigation 6.2-7: North-South Road/West Stockton Boulevard Storage Requirements**

The following measures would be needed to mitigate the impact on the North-South Road/West Stockton Boulevard intersection to a less-than-significant level:

PP

*Extend the eastbound left-turn pocket to provide 250 feet of storage and provide an additional 150-foot left-turn ingress lane at the driveway immediately west of the North-South Road (Driveway 4).*

*Provide a left-turn lane, a through lane, and an exclusive right-turn lane on the southbound approach.*

*Relocate the two driveways on the west side of the North-South Road 50 feet to the south, OR replace the driveways with one driveway opposite to the Child Care facility driveway.*

Implementation of these mitigation measures would eliminate vehicles spilling back onto West Stockton Boulevard and the North-South Road and would provide the following benefits:

- ▶ Providing an additional left-turn ingress lane at Driveway 4 would reduce the queue for the eastbound left-turn movement to 240 feet. This assumes that about 30% of inbound vehicles (130 vehicles) would use the left-turn ingress lane at Driveway 4.
- ▶ Providing an additional left-turn ingress lane at Driveway 4 would also improve the internal circulation within the northern portion of the site. The proposed layout of the site forces all vehicles traveling from Bruceville Road (except for some vehicles using the right-in/out driveway) to travel through the North-South Road/West Stockton Boulevard intersection and through the internal intersection at the north end of the North-South Road adjacent to the retail uses.
- ▶ Relocating the driveways on the west side of the North-South Road would eliminate the close driveway spacing (60 feet) between the two driveways and would reduce conflicts between vehicles exiting onto the North-South Road and vehicles in the northbound left-turn lane. These driveways could be replaced by one driveway opposite to the Child Care facility driveway.

AC

*Provide two-left turn lanes on the northbound approach to the North-South Road/West Stockton Boulevard intersection.*

*Provide a left-turn lane, a through lane, and an exclusive right-turn lane on the southbound approach.*

*Extend the eastbound left-turn pocket to provide 250 feet of storage and provide an additional 150-foot left-turn ingress lane at the driveway immediately west of the North-South Road (Driveway 4).*

*Relocate the two driveways on the west side of the North-South Road 50 feet to the south, OR replace the driveways with one driveway opposite to the Child Care facility driveway.*

Implementation of these mitigation measures would provide LOS C operations during the p.m. peak hour with the addition of the Park-and-Ride Alternative, would eliminate

vehicles spilling back onto West Stockton Boulevard and the North-South Road, and would provide the following benefits:

- ▶ Providing dual left-turn lanes on the northbound approach would reduce the queue to 175 feet during the p.m. peak hour.
- ▶ Providing an additional left-turn ingress lane at Driveway 4 would reduce the queue for the eastbound left-turn movement to 240 feet. This assumes that about 30% of inbound vehicles (130 vehicles) would use the left-turn ingress lane at Driveway 4.
- ▶ Providing an additional left-turn ingress lane at Driveway 4 would also improve the internal circulation within the northern portion of the site. The proposed layout of the site would force all vehicles traveling from Bruceville Road (except for some vehicles using the right-in/out driveway) to travel through the North-South Road/West Stockton Boulevard intersection and through the internal intersection at the north end of the North-South Road adjacent to the retail uses.
- ▶ Relocating the driveways on the west side of the North-South Road would eliminate the close driveway spacing (60 feet) between the two driveways and would reduce conflicts between vehicles exiting onto the North-South Road and vehicles in the northbound left-turn lane. These driveways could be replaced by one driveway opposite to the Child Care facility driveway.

## **Bicycle Facilities**

### **Impact 6.2-8: Bicycle Facilities**

PP, AC      The proposed project and Park-and-Ride Alternative will not affect the existing bicycle facilities within the project vicinity. In addition, the proposed project and project alternatives do not interfere with the planned bikeways shown in the *Sacramento City/County 2010 Bikeway Master Plan*. Implementation of the proposed project or project alternatives would have ***no impact***.

## **Pedestrian Facilities**

### **Impact 6.2-9: Pedestrian Facilities**

PP, AC      The proposed project and Park-and-Ride Alternative will not affect the pedestrian circulation within the project vicinity. The traffic signal at Bruceville Road/West Stockton Boulevard will provide a protected crossing for pedestrians to access the future light rail transit station on the west side of Bruceville Road. Implementation of the proposed project or project alternatives would have ***no impact***.

## Transit Facilities

### **Impact 6.2-10: Transit**

PP, AC      The implementation of the proposed project and Park-and-Ride Alternative would not disrupt or interfere with existing or planned transit facilities or services in the study area. The proposed project would generate approximately 55 a.m. peak hour and 80 p.m. peak hour transit trips, the Park-and-Ride Alternative would generate about 35 a.m. peak hour and 55 p.m. peak hour transit trips, and the General Plan Buildout alternative would generate about 77 a.m. and 95 p.m. peak hour transit trips. In addition, the Park-and-Ride Alternative would provide a park-and-ride lot to serve the future light rail station. Because the transit trips would be distributed among the existing transit services (i.e., three bus routes serving the Cosumnes River College Transit Center) and the future light rail transit line, the additional ridership generated by the project is not expected to exceed the available or planned system capacity.

In addition, the proposed project and Park-and-Ride Alternative are consistent with the following goals identified in the Sacramento Regional Transit District Transit Master Plan (Adopted October 25, 1993):

- ▶ Land Use Coordination Goal: To promote transit-oriented land use planning and integrate land use and transportation planning policies to maximize public transit productivity
- ▶ Travel and Mobility Goal: To develop a well-integrated regional transit network comprised of inter-regional, regional, local and community-based transit systems

Implementation of the proposed project or project alternatives would have *no impact*.

### **6.2.5 LEVEL OF SIGNIFICANCE AFTER MITIGATION**

Implementation of the recommended mitigation measures would result in less than a 5-second increase in delay during the a.m. and p.m. peak hours at the SR 99 southbound off-ramp/Cosumnes River Boulevard intersection for the proposed project, Alternative AB, and Alternative AC under cumulative conditions. However, because the measure may require additional right-of-way to construct a bridge and the applicant has no control over right-of-way, this measure is infeasible, and the cumulative traffic impact of the proposed project, Alternative AB, and Alternative AC is *significant and unavoidable*. The extent of this impact would be less under Alternative AB than under the proposed project because Alternative AB would generate less traffic. The extent of this impact would be greater under Alternative AC than under the proposed project because Alternative AC would generate more traffic.

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### **6.3 AIR QUALITY**

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## **6.3 AIR QUALITY**

### **6.3.1 INTRODUCTION**

This section includes a summary of applicable regulations, existing air quality conditions, and an analysis of potential short-term and long-term air quality impacts of the proposed project and alternatives. The method of analysis for short-term construction, long-term regional (operational), local mobile source, toxic air, and odorous emissions is consistent with the recommendations of the Sacramento Metropolitan Air Quality Management District (SMAQMD) as presented in the Air Quality Thresholds of Significance (SMAQMD 1994). In addition, mitigation measures are recommended, as necessary, to reduce potentially significant adverse air quality impacts. The air quality modeling output summarized in this section is available at the City of Sacramento Planning Department, 1231 I Street, Room 300, Sacramento, California 95814.

### **6.3.2 ENVIRONMENTAL SETTING**

Air quality in a region is determined by such natural factors as topography, meteorology, and climate, in addition to the presence of existing air pollution sources. These factors are discussed below.

#### **TOPOGRAPHY, CLIMATE AND METEOROLOGY**

The project site is located in the Sacramento Valley Air Basin (SVAB), which is under the jurisdiction of the Sacramento Metropolitan Air Quality Management District (SMAQMD). The SVAB is relatively flat, bordered by mountains to the east, west, and north. Air flows into the SVAB through the Carquinez Strait, moving across the Delta, and bringing with it pollutants from the heavily populated San Francisco Bay Area. The climate is characterized by hot, dry summers and cool, rainy winters. Characteristic of SVAB winter weather are periods of dense and persistent low-level fog, which are most prevalent between storms. From May to October, the region's intense heat and sunlight lead to high ozone concentrations. Summer inversions are strong and frequent, but are less troublesome than those that occur in the fall. Autumn inversions, formed by warm air subsiding in a region of high pressure, have accompanying light winds that do not provide adequate dispersion of air pollutants (Sacramento Area Council of Governments 1991).

Most precipitation in the Central Valley area results from air masses moving in from the Pacific Ocean during the winter months. These storms usually move through the area from the west or northwest. During the winter rainy season (November through February) over half the total annual precipitation falls while the average winter temperature is a moderate 49°F. During the summer, daytime temperatures range from 20 to over 100°F. Dense fog occurs mostly in mid-winter and never in the summer. Temperatures from April through October average between 70 and 90°F with extremely low humidity. The inland location and surrounding mountains shelter the valley from much of the ocean breezes that keep the coastal regions moderate in temperature. The only breach in the mountain barrier is the Carquinez Straits, which exposes the midsection of the valley to the coastal air mass.

Winds across the project site are an important meteorological parameter because they control the dilution of locally-generated air pollutant emissions and their regional trajectory. Based on data obtained from the Sacramento Executive Airport, the closest station that measures wind speed and direction, southwest winds are the most predominant. However, in the winter, southeast winds prevail. Long-term wind data recorded at the Sacramento Executive Airport indicates that daily winds average approximately 7 mph with west winds typically averaging approximately 10 mph (ARB 1994).

Regional flow patterns affect air quality patterns by moving pollutants downwind of sources. Localized meteorological conditions, such as moderate winds, disperse pollutants and reduce pollutant concentrations. An inversion layer develops when a layer of warm air traps cooler air close to the ground. Such temperature inversions hamper dispersion by creating a ceiling over the area and trapping air pollutants near the ground. During summer mornings and afternoons, these inversions are present over the project area. During summer's longer daylight hours, plentiful sunshine provides the energy needed to fuel photochemical reactions between oxides of nitrogen (NO<sub>x</sub>) and reactive organic gases (ROG), which result in ozone (O<sub>3</sub>) formation.

In the winter, temperature inversions dominate during the night and early morning hours but frequently dissipate by afternoon. During the winter months, the greatest pollution problems are from carbon monoxide (CO) and NO<sub>x</sub>. High CO concentrations occur on winter days with strong surface inversions and light winds. Carbon monoxide transport is extremely limited.

## **EXISTING AMBIENT AIR QUALITY**

The California Air Resources Board (ARB) and the U.S. Environmental Protection Agency (EPA) currently focus on the following air pollutants as indicators of ambient air quality: ozone (O<sub>3</sub>), carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), sulfur dioxide (SO<sub>2</sub>), particulate matter (PM), and lead. Because these are the most prevalent air pollutants known to be deleterious to human health and extensive health-effects criteria documentation is available, they are commonly referred to as "criteria air pollutants."

The EPA has established primary and secondary National Ambient Air Quality Standards (NAAQS) for the following criteria air pollutants: O<sub>3</sub>, CO, NO<sub>2</sub>, SO<sub>2</sub>, respirable particulate matter (PM<sub>10</sub>), fine particulate matter (PM<sub>2.5</sub>), and lead. The primary standards protect the public health and the secondary standards protect the public welfare. In addition to the NAAQS, ARB has established California Ambient Air Quality Standards (CAAQS) for the criteria air pollutants, sulfates, hydrogen sulfide, vinyl chloride, and visibility reducing particulate matter. In most cases the CAAQS are more stringent than the NAAQS. The NAAQS and CAAQS as discussed above are listed in Table 6.3-1.

Criteria air pollutant concentrations are measured at several monitoring stations in the SVAB. The T Street air quality monitoring station is the closest in proximity to the project site with sufficient data to meet EPA and ARB criteria for quality assurance. In general, the ambient air quality measurements from the station are representative of the air quality in the vicinity of the project site. Table 6.3-2 summarizes the air quality data from the most recent three years (2000 to 2002). Ambient air quality measurements obtained from this station are considered generally representative of ambient air quality in the vicinity, given that surrounding population density and proximity to urban areas are similar to the region around the project site. Data from the three most recent years (2000 to 2002) are summarized in Table 6.3-2. Ambient air quality conditions with respect to each criteria pollutant are described below.

**Table 6.3-1  
Ambient Air Quality Standards**

Air Pollutant	California <sup>1</sup>	National <sup>2</sup>	
	Concentration <sup>5</sup>	Primary (>) <sup>3,5</sup>	Secondary (>) <sup>4,5</sup>
Ozone	0.09 ppm, 1-hr avg.	0.12 ppm, 1-hr avg. 0.08 ppm, 8-hr avg.	0.12 ppm, 1-hr avg. 0.08 ppm, 8-hr avg.
Carbon Monoxide	9 ppm, 8-hr avg. 20 ppm, 1-hr avg.	9 ppm, 8-hr avg. 35 ppm, 1-hr avg.	9 ppm, 8-hr avg. 35 ppm, 1-hr avg.
Nitrogen Dioxide	0.25 ppm, 1-hr avg.	0.053 ppm annual arithmetic mean	0.053 ppm annual arithmetic mean
Sulfur Dioxide	0.04 ppm, 24-hr avg. 0.25 ppm, 1-hr avg.	0.03 ppm, annual avg. 0.14 ppm, 24-hr avg.	0.5 ppm, 3-hr avg.
Respirable Particulate Matter (PM <sub>10</sub> )	30 µg/m <sup>3</sup> annual geometric mean 50 µg/m <sup>3</sup> , 24-hr avg.	50 µg/m <sup>3</sup> annual arithmetic mean 150 µg/m <sup>3</sup> , 24-hr avg.	50 µg/m <sup>3</sup> annual arithmetic mean 150 µg/m <sup>3</sup> , 24-hr avg.
Fine Particulate Matter (PM <sub>2.5</sub> )	No state standard	15 µg/m <sup>3</sup> annual arithmetic mean 65 µg/m <sup>3</sup> , 24-hr avg.	15 µg/m <sup>3</sup> annual arithmetic mean 65 µg/m <sup>3</sup> , 24-hr avg.
Lead	1.5 µg/m <sup>3</sup> , 30-day avg.	1.5 µg/m <sup>3</sup> calendar quarter	1.5 µg/m <sup>3</sup> calendar quarter
Sulfates	25 µg/m <sup>3</sup> , 24-hr avg.	No federal standards	
Hydrogen Sulfide	0.03 ppm, 1-hr avg.		
Vinyl Chloride	0.01 ppm, 24-hr avg.		
Visibility-Reducing Particle Matter	In sufficient amount to produce an extinction coefficient of 0.23 per kilometer—visibility of 10 miles or more (0.07—30 miles or more for Lake Tahoe) caused by particles when the relative humidity is less than 70%, 8-hr (10 a.m. to 6 p.m., PST)		

<sup>1</sup> California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1- and 24-hr), nitrogen dioxide, suspended particulate matter (PM<sub>10</sub>), and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in §70200 of Title 17 of the California Code of Regulations.

<sup>2</sup> National standards (other than ozone, suspended particulate matter [PM<sub>10</sub>], and those based on annual averages or annual arithmetic means) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hr concentration in a year, averaged over 3 years, is equal to or less than the standard. For PM<sub>10</sub>, the 24-hr standard is attained when 99% of the daily concentrations, averaged over 3 years, are equal to or less than the standard. For PM<sub>2.5</sub>, the 24-hr standard is attained when 98% of the daily concentrations, averaged over 3 years, are equal to or less than the standard.

<sup>3</sup> National Primary Standards: The levels of air quality necessary, with an adequate margin of safety, to protect the public health.

<sup>4</sup> National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

<sup>5</sup> The concentration is expressed in units in which it was promulgated where ppm=parts per million by volume and µg/m<sup>3</sup>=micrograms per cubic meter.

Source: ARB 2003

**Table 6.3-2  
Summary of Annual Ambient Air Quality Data**

	2000	2001	2002
<b>SACRAMENTO-T STREET AIR QUALITY MONITORING STATION</b>			
<b>OZONE (O<sub>3</sub>)</b>			
State Standard (1-hr. avg., 0.09 ppm)			
National Standard (1-hr./8-hr. avg., 0.12/0.08 ppm)			
Maximum Concentration (1-hr./8-hr. avg., ppm)	0.101/0.079	0.113/0.094	0.109/0.091
Number of Days State Standard Exceeded	3	2	6
Number of Days National 1-hr./8-hr. Standard Exceeded	0/0	0/3	0/3
<b>CARBON MONOXIDE (CO)</b>			
State Standard (1-hr./8-hr. avg., 20/9.1 ppm)			
National Standard (1-hr./8-hr. avg., 35/9.5 ppm)			
Maximum Concentration (1-hr./8-hr. avg., ppm)	5.9/4.43	6.7/4.41	5.6/4.31
Number of Days State Standard Exceeded	0	0	0
Number of Days National 1-hr./8-hr. Standard Exceeded	0/0	0/0	0/0
<b>NITROGEN DIOXIDE (NO<sub>2</sub>)</b>			
State Standard (1-hr. avg., 0.25 ppm)			
National Standard (annual, .053 ppm)			
Maximum Concentration (1-hr. avg., ppm)	0.084	0.093	0.084
Number of Days State Standard Exceeded	0	0	0
Annual Average (ppm)	0.019	0.019	0.020
<b>RESPIRABLE PARTICULATE MATTER (PM<sub>10</sub>)</b>			
State Standard (24-hr. avg., 50 µg/m <sup>3</sup> )			
National Standard (24-hr. av., 150 µg/m <sup>3</sup> )			
Maximum Concentration (µg/m <sup>3</sup> )	64	89	77
Number of Days State Standard Exceeded (Measured/Calculated <sup>1</sup> )	5/21	5/30	3/18
Number of Days National Standard Exceeded (Measured/Calculated <sup>1</sup> )	0/0	0/0	0/0
<b>SUSPENDED PARTICULATE (PM<sub>2.5</sub>)</b>			
No Separate State Standard			
National Standard (24-hr avg., 65 µg/m <sup>3</sup> )			
Maximum Concentration (µg/m <sup>3</sup> )	67	72	73
Number of Days National Standard Exceeded (Measured <sup>2</sup> )	1	1	4
<sup>1</sup> Measured days are those days that an actual measurement was greater than the level of the state daily standard or the national daily standard. Measurements are typically collected every six days. Calculated days are the estimated number of days that a measurement would have been greater than the level of the standard had measurements been collected every day. The number of days above the standard is not necessarily the number of violations of the standard for the year. <sup>2</sup> The number of days a measurement was greater than the level of the national daily standard. Measurements are collected everyday, every three days, or every six days, depending on the time of year and the site's monitor schedule. The number of days above the standards is not directly related to the number of violations of the standard for the year. ppm = parts per million by volume µg/m <sup>3</sup> = micrograms per cubic meter N/A = not available			
Source: California ARB 2003; U.S. EPA 2003			

Both the ARB and EPA use monitoring data to designate areas according to their attainment status for criteria air pollutants. The purpose of the designations is to identify those areas with air quality problems and to initiate planning efforts for improvement. The three basic designation categories are non-attainment, attainment, and unclassified. Unclassified is used in an area that cannot be classified on the basis of available information as meeting or not meeting the standards. In addition, the California (state) designations include a subcategory of the non-attainment designation, called non-attainment-transitional. The non-attainment-transitional designation is given to non-attainment areas that are progressing and nearing attainment. Attainment designations with respect to each criteria air pollutant are described below.

### **Ozone**

Ozone is a photochemical oxidant, a substance whose oxygen combines chemically with another substance in the presence of sunlight, and is the primary component of smog. Ozone is not directly emitted into the air, but is formed through complex chemical reactions between precursor emissions of ROG and NO<sub>x</sub> in the presence of sunlight. ROG are volatile organic compounds that are photochemically reactive. ROG emissions result primarily from incomplete combustion and the evaporation of chemical solvents and fuels. NO<sub>x</sub> is a group of gaseous compounds of nitrogen and oxygen that results from the combustion of fuels.

Ozone located in the upper atmosphere (stratosphere) acts in a beneficial manner by shielding the earth from harmful ultraviolet radiation that is emitted by the sun. However, ozone located in the lower atmosphere (troposphere) is a major health and environmental concern. Because sunlight and heat serve as catalysts for the reactions between ozone precursors, peak O<sub>3</sub> concentrations typically occur during the summer in the Northern Hemisphere (EPA 2003). In general, O<sub>3</sub> concentrations over or near urban and rural areas reflect an interplay of emissions of ozone precursors, transport meteorology, and atmospheric chemistry (Godish 1991).

The adverse health effects associated with exposure to ozone pertain primarily to the respiratory system. Scientific evidence indicates that ambient levels of ozone affect not only sensitive receptors, such as asthmatics and children, but healthy adults as well. Exposure to ambient levels of ozone ranging from 0.10 to 0.40 part per million (ppm) for 1 to 2 hours has been found to significantly alter lung functions by increasing respiratory rates and pulmonary resistance, decreasing tidal volumes, and impairing respiratory mechanics. Ambient levels of ozone above 0.12 ppm are linked to symptomatic responses that include such symptoms as throat dryness, chest tightness, shortness of breath, headache, and nausea. In addition to the above adverse health effects, evidence also exists relating ozone exposure to an increase in the permeability of respiratory epithelia; such increased permeability leads to an increase in responsiveness of the respiratory system to bronchoconstrictive challenges, and the interference or inhibition of the immune system's ability to defend against infection (Godish 1991).

As shown in Table 6.3-2, the national 1-hour ozone standard was not exceeded from 2000 to 2002; however, the state 1-hour ozone standard was exceeded three times per year in 2001 and 2002. The state 8-hour standard was exceeded a total of 11 times from 2000 to 2002. With respect to the NAAQS, Sacramento County is currently designated as a severe non-attainment area for the 1-hour ozone standard and non-attainment for the 8-hour ozone standard (ARB 2001a, 2003). In addition, Sacramento County is

currently designated as a serious non-attainment area for the state 1-hour ozone standard (ARB 2001a, 2003).

With respect to ozone air quality trends according to the 2002 California Almanac of Emissions and Air Quality (ARB 2002), peak ozone values in the SVAB have not declined as quickly over the last several years as they have in other urban areas. The maximum peak 1-hour values have remained fairly constant during the 1980s. Since 1988, the peak values have decreased slightly, and the overall decline for the 20-year period is about 15%. For the number of days above the state and national standards, the trend is more variable, but has declined since 1988. The maximum measured 1-hour concentrations have also decreased, but at a lower overall rate. It is apparent that additional emission controls would be needed to bring the area into attainment for the state and national ozone standards.

### **Carbon Monoxide**

Carbon monoxide is a colorless, odorless, and poisonous gas produced by incomplete burning of carbon in fuels, primarily from mobile (transportation) sources of pollution. In fact, 77% of the nationwide CO emissions are from mobile sources. The other 23% consists of CO emissions from wood-burning stoves, incinerators, and industrial sources. Peak CO levels are localized near areas with high concentrations of mobile (transportation) sources and occur typically during winter months when calm conditions are common.

Carbon monoxide enters the bloodstream through the lungs by combining with hemoglobin, which normally supplies oxygen to the cells. However, CO combines with hemoglobin much more readily than oxygen does, resulting in a drastic reduction in the amount of oxygen available to the cells. Adverse health effects associated with exposure to CO concentrations include such symptoms as dizziness, headaches, slow reflexes, and fatigue. CO exposure is especially harmful to individuals who suffer from cardiovascular and respiratory diseases (EPA 2003).

As shown in Table 6.3-2, neither the state nor the national CO standards were exceeded from 2000 to 2002. Sacramento County is currently designated as an attainment or unclassified/attainment area for the state and national CO standards (ARB 2001a, 2003).

With respect to CO air quality trends according to the 2002 California Almanac of Emissions and Air Quality (ARB 2002), the maximum peak 8-hour trend for the SVAB was relatively flat from 1981 to 1991, with year-to-year variability due to meteorological conditions. Since 1991, concentrations have decreased substantially. For the number of days above the state and national standards, the trend is more variable, but indicates an overall downward trend. Much of the decline in ambient CO is attributable to the introduction of cleaner fuels and newer, cleaner motor vehicles. These controls would help keep the area in attainment for both the state and national CO standards.

### **Nitrogen Dioxide**

Nitrogen dioxide is a brownish, highly reactive gas that is present in all urban environments. The major human-made sources of NO<sub>2</sub> are combustion devices, such as boilers, gas turbines, and mobile and stationary reciprocating internal combustion engines. Combustion devices primarily emit nitric oxide (NO), which reacts through oxidation in the atmosphere to form NO<sub>2</sub> (EPA 2003). The combined

emissions of NO and NO<sub>2</sub> are referred to as NO<sub>x</sub>, which is reported as equivalent NO<sub>2</sub>. Because NO<sub>2</sub> is formed and depleted by reactions associated with photochemical O<sub>3</sub>, the NO<sub>2</sub> concentration in a particular geographical area may not be representative of the local NO<sub>x</sub> emission sources.

Inhalation is the most common route of exposure to nitrogen dioxide. Because NO<sub>2</sub> has relatively low solubility in water, the principal site of toxicity is in the lower respiratory tract. The severity of the adverse health effects depends primarily on the concentration inhaled rather than the duration of exposure. An individual may experience a variety of acute symptoms, including coughing, difficulty with breathing, vomiting, headache, and eye irritation during or shortly after exposure. After a period of approximately 4 to 12 hours, an exposed individual may experience chemical pneumonitis or pulmonary edema with breathing abnormalities, cough, hemoptysis, cyanosis, chest pain, and rapid heartbeat. Severe, symptomatic NO<sub>2</sub> intoxication after acute exposure has been linked on occasion with prolonged respiratory impairment with such symptoms as chronic bronchitis and decreased lung functions.

As shown in Table 6.3-2, neither the state nor the national NO<sub>2</sub> standards were exceeded from 2000 to 2002. Sacramento County is currently designated as an attainment or unclassified/attainment area for the state and national NO<sub>2</sub> standards (ARB 2001a, 2003).

### **Sulfur Dioxide**

Sulfur dioxide is produced by such stationary sources as coal and oil combustion, steel mills, refineries, pulp and paper mills, and from nonferrous smelters. The major adverse health effects associated with SO<sub>2</sub> exposure pertain to the upper respiratory tract. Sulfur dioxide is a respiratory irritant with bronchoconstriction occurring with inhalation of SO<sub>2</sub> at 5 ppm or more. On contact with the moist mucous membranes, sulfur dioxide produces sulfurous acid, which is a direct irritant. Concentration rather than duration of the exposure is an important determinant of respiratory effects. Exposure to high concentrations of sulfur dioxide may result in edema of the lungs or glottis and respiratory paralysis.

Sacramento County is currently designated as an attainment or unclassified/attainment area for the state and national SO<sub>2</sub> standards (ARB 2001a, 2003).

### **Particulate Matter**

Respirable particulate matter with an aerodynamic diameter of 10 micrometers or less is referred to as PM<sub>10</sub>. PM<sub>10</sub> consists of particulate matter directly emitted into the air, such as fugitive dust, soot, and smoke from mobile and stationary sources, construction operations, fires and natural windblown dust, and particulate matter formed in the atmosphere by condensation and/or transformation of sulfur dioxide and reactive organic gases (EPA 2003). PM<sub>2.5</sub> includes a subgroup of finer particles that have an aerodynamic diameter of 2.5 micrometers or less (ARB 2003).

The adverse health effects associated with PM<sub>10</sub> depend on the specific composition of the particulate matter. For example, health effects may be associated with metals, polycyclic aromatic hydrocarbons, and other toxic substances adsorbed onto fine particulate matter, which is referred to as the piggybacking effect, or with fine dust particles of silica or asbestos. Generally, adverse health effects associated with PM<sub>10</sub> may result from both short-term and long-term exposure to elevated PM<sub>10</sub> concentrations and may include breathing and respiratory symptoms, aggravation of existing respiratory and cardiovascular

diseases, alterations to the immune system, carcinogenesis, and premature death (EPA 2003).  $PM_{2.5}$  poses an increased health risk because the particles can deposit deep in the lungs and contain substances that are particularly harmful to human health.

As shown in Table 6.3-2, the national 24-hour  $PM_{10}$  standard was not exceeded from 2000 to 2002; however, the state standard was exceeded a total of 13 times. The national 24-hour  $PM_{2.5}$  standard was exceeded a total of 6 times from 2000 to 2002. The state 8-hour standard was exceeded a total of 11 times from 2000 to 2002. Sacramento County is currently designated as a non-attainment area for the 24-hour state and national  $PM_{10}$  standards (ARB 2001a, 2003).

With respect to  $PM_{10}$  air quality trends according to the 2002 California Almanac of Emissions and Air Quality (ARB 2002), direct emissions are increasing in the SVAB between 1995 and 2010. This increase is due to growth in emissions from area-wide sources, primarily fugitive dust from travel on paved and unpaved roads and construction operation, and particulates from residential fuel combustion. Area-wide  $PM_{10}$  emissions have gone up as a result of population growth and increased vehicle travel.

## **Lead**

Lead is a metal found naturally in the environment as well as in manufactured products. The major sources of lead emissions have historically been motor vehicles (such as cars and trucks) and industrial sources. As a result of the phase-out of leaded gasoline, as discussed in detail below, metals processing is the major source of lead emissions to the air today. The highest levels of lead in air are generally found near lead smelters. Other stationary sources are waste incinerators, utilities, and lead-acid battery manufacturers.

Twenty years ago, cars and trucks were the major contributors of lead emissions to the air. In the early 1970s, EPA set national regulations to gradually reduce the lead content in gasoline. In 1975, unleaded gasoline was introduced for motor vehicles equipped with catalytic converters. EPA banned the use of leaded gasoline in highway vehicles in December 1995 (EPA 2003).

As a result of EPA's regulatory efforts to remove lead from gasoline, emissions of lead from the transportation sector have dramatically declined (95% between 1980 and 1999), and levels of lead in the air decreased by 94% between 1980 and 1999. Transportation sources, primarily airplanes, now contribute only 13% of lead emissions. A recent National Health and Nutrition Examination Survey reported a 78% decrease in the levels of lead in people's blood between 1976 and 1991. This dramatic decline can be attributed to the move from leaded to unleaded gasoline (as well as the removal of lead from soldered cans) (EPA 2003).

People, animals, and fish are exposed to lead mainly by breathing and ingesting it in food, water, soil, or dust. Lead accumulates in the blood, bones, muscles, and fat. Infants and young children are especially sensitive to even low levels of lead. The health and environmental impacts of lead are shown below:

Damages organs—Lead causes damage to the kidneys, liver, brain and nerves, and other organs. Exposure to lead may also lead to osteoporosis (brittle bone disease) and reproductive disorders.



Affects the brain and nerves—Excessive exposure to lead causes seizures, mental retardation, behavioral disorders, memory problems, and mood changes. Low levels of lead damage the brain and nerves in fetuses and young children, resulting in learning deficits and lowered IQ.

Affects the heart and blood—Lead exposure causes high blood pressure and increases heart disease, especially in men. Lead exposure may also lead to anemia, or weak blood.

Affects animals and plants—Wild and domestic animals can ingest lead while grazing. They experience the same kind of effects as people who are exposed to lead. Low concentrations of lead can slow down vegetation growth near industrial facilities.

Affects fish—Lead can enter water systems through runoff and from sewage and industrial waste streams. Elevated levels of lead in the water can cause reproductive damage in some aquatic life and cause blood and neurological changes in fish and other animals that live there.

### **6.3.3 REGULATORY PROVISIONS**

Air quality within the SVAB is regulated by several jurisdictions including the EPA, ARB, and the SMAQMD. Each of these jurisdictions develops rules, regulations, policies, and/or goals to attain the goals or directives imposed upon them through legislation. Although EPA regulations may not be superseded, both state and local regulations may be more stringent.

#### **FEDERAL AIR QUALITY REGULATIONS**

At the federal level, EPA has been charged with implementing national air quality programs. EPA's air quality mandates are drawn primarily from the federal Clean Air Act (CAA), which was signed into law in 1970. Congress substantially amended the CAA in 1977 and 1990.

The CAA required EPA to establish primary and secondary NAAQS, as previously discussed (Table 6.3-1). The CAA also required states exceeding the NAAQS to prepare a State Implementation Plan (SIP) showing how the standards would be met by December 1987. The CAA Amendments of 1977 (1977 CAAA) and 1990 (1990 CAAA) made major changes in deadlines for compliance with the NAAQS and required revisions to the SIPs. Sanctions were imposed for the failure of a state to submit and implement an acceptable plan, consisting of denial of federal highway funding and more stringent requirements for major stationary sources.

The 1990 CAAA requires that designated agencies in any area that does not meet the NAAQS to prepare a plan (SIP update) demonstrating the steps that would be taken to bring the area into compliance. These SIP requirements vary depending on the degree of severity for which an area is in non-attainment. The 1990 CAAA also revised the federal statute for achieving attainment of NAAQS and a new set of guidelines and planning processes for carrying out the requirements of the amendments. Provisions of §182, which relates to ozone non-attainment areas, and §187, which relates to CO non-attainment areas, emphasize strategies for reducing vehicle miles traveled (VMT). Section 182 requires submission of a plan revision that “identifies and adopts specific enforceable transportation control measures to offset any growth in emissions from growth in vehicle miles traveled or number of vehicle trips in such an area to meet statutory requirements for demonstrating periodic emission reduction requirements.”

The conformity provisions of the CAA require that federal agencies contribute to, instead of jeopardizing efforts to achieve the NAAQS. EPA required that transportation-related federal discretionary actions in 1993 and transportation projects receiving federal funds in 1997 demonstrate conformity to the approved SIP. The SIP represents a series of attainment plans by air basin that are periodically updated by air districts in consultation with regional transportation planning agencies.

## **STATE AIR QUALITY REGULATIONS**

The ARB is the agency responsible for coordination and oversight of state and local air pollution control programs in California and for implementing the California Clean Air Act (CCAA) of 1988. The CCAA requires that all air districts in the state endeavor to achieve and maintain the CAAQS by the earliest practical date. The CCAA specifies that districts should focus particular attention on reducing the emissions from transportation and area-wide emission sources, and the act provides districts with new authority to regulate indirect sources. Each district plan is to achieve a 5% annual reduction, averaged over consecutive 3-year periods, in district-wide emissions of each non-attainment pollutant or its precursors. Any additional development within the region obviously would impede the reduction goals of the CCAA.

Other ARB duties include monitoring air quality, (in conjunction with air monitoring networks maintained by air pollution control and air quality management districts, establishing CAAQS (which in many cases are more stringent than the NAAQS), and setting emissions standards for new motor vehicles. The emission standards established for motor vehicles differ, depending on various factors including the type of vehicle, model year, fuel, and engine used.

The ARB has recently adopted new diesel exhaust control measures and more stringent emission standards for various on-road mobile sources of emissions, including transit buses. In February 2000, the ARB adopted a new public transit bus fleet rule and emission standards for new urban buses. These new rules and standards provide for 1) more stringent emission standards for some new urban bus engines beginning with 2002 model year engines; 2) zero-emission bus demonstration and purchase requirements applicable to transit agencies; and 3) reporting requirements with which transit agencies must demonstrate compliance with the urban transit bus fleet rule.

## **LOCAL AIR QUALITY REGULATIONS**

The SMAQMD is the agency primarily responsible for compliance with the NAAQS and CAAQS and for ensuring that air quality conditions are maintained in Sacramento County through a comprehensive program of planning, regulation, enforcement, technical innovation, and promotion of the understanding of air quality issues. The clean air strategy of the SMAQMD includes the preparation of plans for the attainment of ambient air quality standards, adoption and enforcement of rules and regulations concerning sources of air pollution, issuance of permits for stationary sources of air pollution, inspection of stationary sources of air pollution and response to citizen complaints, monitoring of ambient air quality and meteorological conditions, and implementation of programs and regulations required by the federal and California CAAs.

The SMAQMD is responsible for implementing emissions standards and other requirements of federal and state laws regarding most types of stationary emission sources. The SMAQMD regulates air quality in the local area through its permit authority and its planning and review activities.

The SMAQMD in coordination with the air quality management districts and air pollution control districts of El Dorado, Yolo, Solano, Placer, and Sutter counties prepared and submitted the 1991 Air Quality Attainment Plan in compliance with the requirements set forth in the California CAA, which specifically addressed the non-attainment status for ozone and PM<sub>10</sub>. In addition, the California CAA requires a triennial assessment of the extent of air quality improvements and emission reductions achieved through the use of control measures. As part of the assessment, the attainment plan must be reviewed and, if necessary, revised to correct for deficiencies in progress and to incorporate new data or projections.

In an effort to reach attainment of the ozone standards, the SMAQMD adopted the 1994 Ozone Attainment Plan (OAP). The OAP stresses attainment of ozone standards and focuses on strategies reducing NO<sub>x</sub> and ROG air emissions by promoting active public involvement, enforcement of compliance with SMAQMD rules and regulations, public education in both the public and private sectors, development and promotion of transportation and land use programs designed to reduce vehicle miles traveled within the region, and implementation of stationary and mobile source control measures. Based on the projections contained in the OAP, the Sacramento region would attain clean air standards by year 2005.

The California CAA requirement for a first triennial progress report and revisions of the 1991 Air Quality Attainment Plan was first fulfilled with the preparation and adoption of the 1994 OAP, which was incorporated as part of the SIP to meet the requirements of the federal CAA and which amended the 1991 Air Quality Attainment Plan. Triennial reports were also prepared for 1997 and 2000 in compliance with the California CAA. In addition, milestone reports required under the federal CAA were prepared for 1996, 1999, and 2002. The air quality attainment plans and reports present comprehensive strategies to reduce NO<sub>x</sub>, ROG, and PM<sub>10</sub> emissions from stationary, area, mobile, and indirect sources. Such strategies include the adoption of rules and regulations; enhancement of CEQA participation; implementation of a new and modified indirect source review program; adoption of local air quality plans; and stationary-, mobile-, and indirect-source control measures.

A regional update to the 1994 regional SIP was recently agreed upon by the local air districts in an effort to avoid the lapse in the region's transportation conformity. In accordance with the requirements of the CAA, the region's transportation plan must conform or demonstrate that it does not harm the region's chances of reaching the ozone standard. The Metropolitan Transportation Plan for 2025 and the 2003/05 Metropolitan Transportation Improvement Program are the current regional transportation plans. Regions with a SIP have a motor vehicle emissions budget tied to the SIP. Transportation planners must analyze the emissions anticipated from transportation plans and improvement programs and ensure that they remain within the SIP's emissions budget. If the SIP is not updated for the region, conformity would lapse and transportation funding can be withheld from all but exempt projects (SMAQMD 2003).

As a result of recent litigation, the Federal Highway Administration (FHWA) has become more sensitive to the issue of applying the most current vehicle fleet information to a region's transportation conformity analysis. The current SIP's fleet information is approximately 10 years old. SACOG is the agency

responsible for demonstrating transportation conformity in the region. SACOG estimates that applying the most recent fleet data to the existing models would result in a conformity lapse (SMAQMD 2003).

ARB, SACOG, EPA, and FHWA have negotiated approval to use the 1994 vehicle fleet data through December 31, 2003. After that time, conformity findings can be made only if the new fleet data are used. This means that the transportation plans and improvement programs now in place for the region cannot be changed until SACOG has updated the SIP.

## **TOXIC AIR CONTAMINANTS**

Toxic Air Contaminants (TACs) are regulated through implementation of federal and state laws. Federal law uses the term “Hazardous Air Pollutants” (HAPs) to refer to the same types of compounds considered as TACs under state law. Both terms encompass essentially the same compounds. For purposes of this report, the term “TACs” would be used when referring to these pollutants. It is important to note that TACs are not considered criteria pollutants in that the federal and California CAAs do not address them specifically through the setting of NAAQS or CAAQS. However, enforcement of the NAAQS or CAAQS for the control of criteria pollutants, such as O<sub>3</sub> and PM, can result in reducing airborne emissions of TACs. For example, controls on volatile organic compound emissions to attain the O<sub>3</sub> standard can significantly reduce emissions of TACs from stationary sources. The following is a summary of the major current federal and state regulations and programs for controlling TACs.

### **Federal HAP/TAC Program**

Title III of the CAA requires the EPA to promulgate National Emissions Standards for Hazardous Air Pollutants (NESHAP) for certain categories of sources that emit one or more pollutants identified as HAPs/TACs. Emission standards may be different between “major sources” and “area sources” of TACs. (Major sources are defined as stationary sources with potential to emit more than 10 tons per year [TPY] of any TAC or more than 25 TPY of any combination of TACs; all other sources are considered area sources.) The emission standards are to be promulgated in two phases. In the first phase (1992–2000), the EPA developed technology-based emission standards designed to produce the maximum emission reduction achievable. These standards are generally referred to as requiring Maximum Achievable Control Technology (MACT). For area sources, the standards may be different, based on generally available control technology. In the second phase (2001–2008), the EPA is required to promulgate health risk–based emissions standards where such standards are deemed necessary to address risks remaining after implementation of the technology-based NESHAP standards.

The 1990 amendments to the CAA required the EPA to promulgate vehicle or fuel standards containing reasonable requirements to control toxic emissions, applying at a minimum to benzene and formaldehyde. Performance criteria were established to limit mobile source emissions of toxics, including benzene, formaldehyde, and 1,3-butadiene. In addition, §219 of the CAA required the use of reformulated gasoline in selected U.S. cities (those with the most severe O<sub>3</sub> non-attainment conditions) to further reduce mobile source emissions, including toxics.

## **State and Local TAC Programs**

The ARB works in partnership with the local air districts to enforce regulations that reduce TACs in the state. It has authority for motor vehicles, fuels, and consumer products. The ARB identifies the TACs, researches prevention or reduction methods, adopts standards for control, and enforces the standards. The local air districts have the authority for stationary or industrial type sources. Under SMAQMD Rules 201 (General Permit Requirements) and 207 (Title V-Federal Operating Permit Program), all sources that possess the potential to emit TACs are required to obtain permits from the SMAQMD. Permits may be granted to these operations if they are constructed and operated in accordance with applicable regulations, including Rule 202 (New Source Review) and Rule 904 (Air Toxics Control Measures). The SMAQMD limits emissions and public exposure to TACs through a number of programs. The SMAQMD prioritizes TAC-emitting stationary sources based on the quantity and toxicity of the TAC emissions and the proximity of the facilities to sensitive receptors. It requires a comprehensive health risk assessment for facilities that are put in the significant risk category pursuant to the Assembly Bill (AB) 2588 Program (Air Toxics “Hot Spot” Information and Assessment Act of 1987).

The ARB identified particulate emissions from diesel-fueled engines (diesel PM) as a TAC in August 1998. Diesel PM is currently the ARB’s primary TAC of concern for mobile sources, in part, because of all controlled TACs, diesel PM emissions are estimated to be responsible for approximately 70% of the total ambient TAC risk (ARB 2000). In 2000, the ARB developed and approved the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles and the Risk Management Guidance for the Permitting of New Stationary Diesel-Fueled Engines. The ARB is now implementing an aggressive plan to require cleaner diesel fuel and cleaner diesel engines and vehicles and is currently developing regulations designed to reduce diesel PM emissions from diesel-fueled engines and vehicles. The goal of each regulation is to make diesel engines as clean as possible by establishing state-of-the-art technology requirements or emission standards to reduce diesel PM emissions. These regulations will require substantial reductions in diesel PM beginning with the 2004 model year. Additional, more stringent standards will apply to engines starting in the 2007 model year. Off-road vehicles will come under more stringent regulation beginning with the 2005 model year. Each of these sets of regulations will serve to reduce diesel PM emissions and human health risks attributable to diesel-fueled vehicles and equipment. However, no regulations related to the interaction between diesel PM sources and sensitive receptors have been established.

The California legislature has also examined TAC hazards and has adopted several state bills to control TACs. Implementation of state-adopted legislation pertaining to the control of TACs is the responsibility of the ARB and local air pollution control districts. The most significant legislation potentially applicable to the proposed project is summarized below.

### **Tanner Toxics Act**

The Tanner Toxics Act established the California toxic air contaminant control program (AB 1807, Health and Safety Code §39666 et seq.) to identify and control toxic air contaminants. Under the act, the ARB is required to identify a substance as a TAC based on the review of the scientific data and the recommendations by both the Office of Environmental and Health Hazard Assessment and the Scientific Review Panel. After designation, the ARB investigates appropriate measures to limit emissions of the TACs. These measures may include emission limitations, control technologies, operation and

maintenance requirements, closed system engineering, cost, or substitution of compounds. The ARB then prepares a report on the appropriate degree of regulation and adopts Air Toxics Control Measures. These control measures are the minimum regulations that must be imposed by each of the local air districts in the form of regulations. Districts must adopt rules that are at least as stringent as the state's.

### **Air Toxics “Hot Spots” Information and Assessment Act**

The Air Toxics “Hot Spots” Information and Assessment Act (AB 2588) is a state law enacted in 1987. The law requires certain facilities to submit information regarding emissions of more than 550 toxic air contaminants to their local air pollution control districts. The act addresses public concerns that emissions from individual facilities might cause local concentration of air toxics “hot spots” at a level where individuals may be exposed to an excess risk of adverse health effects. The program requires facilities to notify all exposed persons if it is determined that there is a significant health risk. AB 2588 was amended in 1993 by Senate Bill (SB) 1731, Facility Toxic Air Contaminant Risk Reduction Audit and Plan. In accordance with SB 1731, local air districts are required to establish a program to reduce risks from existing facilities that are deemed to pose a significant health risk.

### **Waters Bill**

The Waters Bill (AB 3205) (Health and Safety Code §42301.6 through §42301.9) addresses sources of hazardous air pollutants near schools. It requires new or modified sources of hazardous air emissions located within 1,000 feet of the outer boundary of a school to give public notice to the parents or guardians of children enrolled in any school located within one-quarter mile of the source and to each address within a 1,000-foot radius.

### **ODORS**

Although offensive odors rarely cause any physical harm, they can be very unpleasant, leading to considerable stress among the public and often generating citizen complaints to local governments and the SMAQMD. The SMAQMD has determined some common types of facilities that have been known to produce odors, including wastewater treatment facilities, chemical manufacturing plants, painting/coating operations, feed lots/dairies, composting facilities, landfills, and transfer stations. Because offensive odors rarely cause any physical harm and no requirements for their control are included in state or federal air quality regulations, the SMAQMD has no rules or standards related to odor emissions other than its nuisance rule.

## **6.3.4 IMPACTS AND MITIGATION**

### **METHOD OF ANALYSIS**

Short-term construction and long-term operational emissions of ROG, NO<sub>x</sub>, and PM<sub>10</sub> were estimated using the ARB-approved URBEMIS 2001 Version 6.2.2 computer program, which is designed to model emissions for land use development (ARB 2001b). URBEMIS default assumptions and emissions factors for the SVAB were used for the calculation of emissions associated with construction operations and the use of motor vehicles, landscape maintenance equipment, and consumer products. Trip generation rates

contained in the model were adjusted to correspond with the rates presented in the traffic analysis prepared for this project.

Predicted CO concentrations at affected intersections were calculated using the CALINE4 computer model (California Department of Transportation 1989), in accordance with SMAQMD's Air Quality Thresholds of Significance (SMAQMD 1994) and the University of California, Davis (UC Davis) Institute of Transportation Studies (ITS) Transportation Project-Level Carbon Monoxide Protocol (Garza et al 1997). Predicted CO concentrations were modeled at signalized intersections projected to operate at a LOS E, or worse, during the p.m. peak hours. The 1-hour and 8-hour CO concentrations were estimated based on worst-case meteorological conditions, P.M. (evening) peak hour traffic volumes as presented in the traffic analysis (Section 6.2 of this EIR), and composite emission factors modeled using the CT-EMFAC Computer Model (California Department of Transportation 1994), and CO-specific information including background concentration and persistence for the project area.

The air quality modeling in this section was performed for the proposed project. Air quality modeling was also performed for the Park-and-Ride Alternative, which, it is anticipated, would generate the highest air quality impacts of the three development scenarios (i.e., proposed project, General Plan Buildout Alternative, Park-and-Ride Alternative). Hence, the analysis quantifies the upper limit of air emissions that could result from the development scenarios evaluated in this EIR. Modeling was not done for the General Plan Buildout Alternative because it is anticipated that this alternative would result in fewer air emissions than either of the other two development scenarios. Evaluation of this alternative at a lesser level of detail than the proposed project is permitted under §15126.6(d) of the State CEQA Guidelines. However, consistent with §15126.6(d), sufficient information is provided in this EIR for each alternative to allow for a meaningful evaluation, analysis, and comparison of the alternatives with the proposed project. Although the table includes data only for the proposed project and the Park-and-Ride Alternative, the text addresses all three development scenarios.

## **STANDARDS OF SIGNIFICANCE**

For the purpose of this analysis, the following applicable thresholds of significance, as identified by the SMAQMD (SMAQMD 1994 and 2003), are used to determine whether implementing the proposed project or alternatives would result in a significant air quality impact:

### **Short-Term Construction Emissions**

- ▶ If construction of the proposed project or alternatives would result in emissions that exceed 85 pounds per day (lbs/day) for NO<sub>x</sub>.
- ▶ If construction of the proposed project or alternatives would contribute to or result in emissions that exceed the CAAQS.

### **Long-Term Regional (Operational) Emissions**

- ▶ If operation of the proposed project or alternatives would result in regional emissions that exceed 65 pounds per day (lbs/day) for ROG and NO<sub>x</sub>.

- ▶ If operation of the proposed project or alternatives would contribute to or result in emissions that exceed the CAAQS.

### **Local Mobile Source Emissions**

- ▶ If operation of the proposed project or alternatives would result in or contribute to local CO concentrations that exceed the California 1-hr or 8-hr ambient air quality standard of 20 parts per million (ppm) or 9 ppm.

### **Odorous Emissions**

- ▶ If the construction or operation of the proposed project or alternatives would result in the exposure of sensitive receptors to an objectionable odor source.

### **Toxic Air Contaminant Emissions**

- ▶ If the construction or operation of the proposed project or alternatives would result in the exposure of sensitive receptors to toxic air contaminants that exceed 10 in one million for the Maximally Exposed Individual (MEI) to contact cancer and/or a Hazard Index of 1 for the MEI.

## **IMPACTS AND MITIGATION MEASURES**

### **Impact 6.3-1: Short-Term Construction Emissions of ROG, NO<sub>x</sub>, and PM<sub>10</sub>.**

PP, AB, AC      Construction emissions are described as “short term” or temporary in duration and have the potential to represent a significant impact with respect to air quality, especially PM<sub>10</sub>. Fugitive dust emissions are primarily associated with site preparation and vary as a function of such parameters as soil silt content, soil moisture, wind speed, acreage of disturbance area, and vehicle miles traveled onsite and offsite. ROG and NO<sub>x</sub> emissions are primarily associated with gas and diesel equipment exhaust and the application of architectural coatings. With respect to the proposed project, construction of 724 residential units and 270,256 square feet of commercial and office space would temporarily generate emissions of ROG, NO<sub>x</sub>, and PM<sub>10</sub> due to site grading and excavation, paving, application of architectural coatings, motor vehicle exhaust associated with construction equipment and employee commute trips, material transport (especially on unpaved surfaces), and other construction operations. Construction of Alternatives AB and AC would involve disturbance of a similar amount of acreage, and would involve similar amounts of construction activities. Hence, these alternatives would generate similar amounts of ROG, NO<sub>x</sub>, and PM<sub>10</sub> during construction.

Short-term construction emissions of ROG, NO<sub>x</sub>, and PM<sub>10</sub> were estimated for the proposed project using the ARB-approved URBEMIS 2001 Version 6.2.2 computer program.



URBEMIS is designed to model construction emissions for land use development projects and allows for the input of project specific information. The estimation of Phase I and Phase II daily construction emissions due to the development of the proposed project and the development alternatives are summarized in Table 6.3-3 and described in detail below. Phase I, the site preparation phase, would be anticipated to involve grading and clearing operations, and Phase II, the actual construction phase, would involve the frame erection, placement of floors, roof, skin, and windows, and the application of architectural coatings.

<b>Table 6.3-3 Summary of Short-Term Construction Emissions</b>			
<b>Source</b>	<b>ROG (lbs/day)</b>	<b>NO<sub>x</sub> (lbs/day)</b>	<b>PM<sub>10</sub> (lbs/day)</b>
<b>PROPOSED PROJECT (PP)<sup>1</sup></b>			
<b>Phase I (Site Preparation) Emissions</b>			
Site Grading (Mobile Equipment Exhaust and Fugitive Dust)	5.82	55.09	124.64
Employee Trips	2.84	4.02	0.77
Total Unmitigated	8.66	59.11	125.41
Total Mitigated <sup>3</sup>	8.37	48.09	78.32
<b>Phase II (Actual Construction) Emissions</b>			
Mobile Equipment	31.68	502.48	31.06
Stationary Equipment	1.85	1.51	0.09
Employee Trips	2.84	4.02	0.77
Architectural Coatings	160.87	-	-
Asphalt Out-gassing	6.36	-	-
Total Unmitigated	203.60	508.01	31.92
Total Mitigated <sup>3</sup>	193.66	407.51	17.95
<b>PARK-AND-RIDE ALTERNATIVE (AC)<sup>2</sup></b>			
<b>Phase I (Site Preparation) Emissions</b>			
Site Grading (Mobile Equipment Exhaust and Fugitive Dust)	5.82	55.09	164.64
Employee Trips	3.61	5.10	0.98
Total Unmitigated	9.43	60.19	165.62
Total Mitigated <sup>3</sup>	9.14	49.17	103.53
<b>Phase II (Actual Construction) Emissions</b>			
Mobile Equipment	31.68	502.48	31.06
Stationary Equipment	1.85	1.51	0.09
Employee Trips	3.61	5.10	0.98
Architectural Coatings	202.56	-	-
Asphalt Out-gassing	8.17	-	-
Total Unmitigated	247.87	509.09	32.13
Total Mitigated <sup>3</sup>	235.75	408.59	18.16
<sup>1</sup> Emissions based on default model setting for 2003 conditions in the SVAB for the construction of 724 multifamily residential units, 239,220 sq. ft. of retail use, and 30,000 sq. ft. of office use as shown in the traffic report (Fehr & Peers 2003). <sup>2</sup> Emissions based on default model setting for 2003 conditions in the SVAB for the construction of 460 multifamily residential units, 239,220 sq. ft. of retail use, 30,000 sq. ft. of office use, and 588 parking spaces as shown in the traffic report (Fehr & Peers 2003). <sup>3</sup> Based on a 20% reduction in NO <sub>x</sub> emissions and a 45% reduction IN visible emissions from heavy-duty diesel equipment and a 75% reduction in fugitive dust emissions. Source: EDAW 2003			

Based on the analysis conducted, the site preparation phase for the proposed project would result in unmitigated daily emissions of approximately 8.66 pounds per day (lbs/day) of ROG, 59.11 lbs/day of NO<sub>x</sub>, and 125.41 lbs/day of PM<sub>10</sub> (Table 6.3-3). The actual construction of the proposed project would result in unmitigated daily emissions of approximately 203.60 lbs/day of ROG, 508.01 lbs/day of NO<sub>x</sub>, and 31.92 lbs/day of PM<sub>10</sub> (Table 6.3-3). The construction of Alternatives AB and AC would result in similar levels of emissions.

Daily unmitigated emissions of NO<sub>x</sub> would exceed the SMAQMD's significance threshold of 85 lbs/day. In addition, because the Sacramento County portion of the SVAB is currently designated as non-attainment for the state and national ambient ozone and PM<sub>10</sub> standards (ARB 2001a, 2003), construction emissions of ozone precursors (ROG and NO<sub>x</sub>) and PM<sub>10</sub> would potentially contribute to a violation in the NAAQS and CAAQS. As a result, project construction-generated emissions, as well as those associated with Alternatives AB and AC, would be considered to have a *significant*, short-term air quality impact. The extent of this impact would be similar between the proposed project and each of the development alternatives.

AA No new development or associated construction emissions would occur on the project site under the No Project (No Development) Alternative. Therefore, *no impact* would occur.

**Mitigation 6.3-1: Short-Term Construction Emissions of ROG, NO<sub>x</sub>, and PM<sub>10</sub>.**

PP, AB, AC In accordance with the recommendations of the SMAQMD, the applicant shall implement the following mitigation measures to reduce temporary construction emissions. In addition to the mitigation measures identified below, construction of the proposed project is required to comply with all applicable SMAQMD rules and regulations, specifically Rule 403 regarding fugitive dust, Rule 442 regarding architectural coatings, and Rule 453 regarding asphalt paving. The applicant shall also submit to the SMAQMD a Construction Emission/Dust Control Plan and receive approval prior to groundbreaking.

To reduce NO<sub>x</sub> and visible emissions from heavy-duty diesel equipment the following measures are recommended by the SMAQMD (SMAQMD 2003):

- ▶ The project shall provide a plan for approval by the City of Sacramento and SMAQMD demonstrating that the heavy-duty (>50 horsepower) off-road vehicles to be used in the construction project, including owned, leased, and subcontractor vehicles, would achieve a project wide fleet-average 20% NO<sub>x</sub> reduction and 45% particulate reduction compared to the most recent California ARB fleet average at the time of construction; and the project representative shall submit a comprehensive inventory of all off-road construction equipment, equal to or greater than 50 horsepower, that would be used an aggregate of 40 or more hours during any portion of the construction project. The inventory shall be

updated and submitted monthly throughout the duration of the project, except that an inventory shall not be required for any 30-day period in which no construction operations occur. At least 48 hours prior to the use of subject heavy-duty off-road equipment, the project representative shall provide the City of Sacramento and SMAQMD with the anticipated construction timeline including start date, and name and phone number of the project manager and onsite foreman. Acceptable options for reducing emissions include the use of late model engines, low-emission diesel products, alternative fuels, particulate matter traps, engine retrofit technology, after-treatment products, and/or other options as they become available.

- ▶ The project shall ensure that emissions from off-road diesel powered equipment used on the project site do not exceed 40% opacity for more than three minutes in any one hour. Any equipment found to exceed 40% opacity (or Ringlemann 2.0) shall be repaired immediately, and the City of Sacramento and SMAQMD shall be notified within 48 hours of identification of non-compliant equipment. A visual survey of all in-operation equipment shall be made at least weekly, and a monthly summary of visual survey results shall be submitted throughout the duration of the project, except that the monthly summary shall not be required for any 30-day period in which no construction operations occur. The monthly summary shall include the quantity and type of vehicles surveyed as well as the dates of each survey. The City of Sacramento and SMAQMD and/or other officials may conduct periodic site inspections to determine compliance. The above recommendations shall not supercede other SMAQMD or state rules and regulations.
- ▶ The primary contractor shall be responsible to ensure that all heavy-duty equipment is properly tuned and maintained, in accordance with manufacturers' specifications.

To reduce fugitive dust emissions, in compliance with Rule 403, the following mitigation measures are recommended by the SMAQMD (SMAQMD 1994):

- ▶ All disturbed areas, including storage piles that are not being actively used for construction purposes shall be effectively stabilized of dust emissions using water, a chemical stabilizer or suppressant, or vegetative ground cover.
- ▶ All onsite unpaved roads and offsite unpaved access roads shall be effectively stabilized of dust emissions using water or a chemical stabilizer or suppressant.
- ▶ When materials are transported offsite, all material shall be covered, effectively wetted to limit visible dust emissions, or maintained with at least 6 inches of freeboard space from the top of the container.

- ▶ All operations shall limit or expeditiously remove the accumulation of project-generated mud or dirt from adjacent public streets at least once every 24 hours when operations are occurring.
- ▶ Following the addition of materials to, or the removal of materials from, the surfaces of outdoor storage piles, the storage piles shall be effectively stabilized of fugitive dust emissions using sufficient water or a chemical stabilizer/suppressant.
- ▶ Onsite vehicle speeds on unpaved roads shall be limited to 15 mph.
- ▶ Wheel washers shall be installed for all trucks and equipment exiting from unpaved areas or wheels shall be washed manually to remove accumulated dirt prior to leaving the site.
- ▶ Sandbags or other erosion control measures shall be installed to prevent silt runoff to public roadways from adjacent project areas with a slope greater than 1%.
- ▶ Excavation and grading activities shall be suspended when winds exceed 20 mph.
- ▶ The extent of areas simultaneously subject to excavation and grading shall be limited, wherever possible, to the minimum area feasible.

Implementation of the above recommended mitigation measures would result in a 20% reduction in NO<sub>x</sub> emissions and a 45% reduction visible emissions from heavy-duty diesel equipment. In addition, compliance with Rule 403 would result in a 75% reduction in fugitive dust emissions. However, daily construction emissions associated with the proposed project and each of the development alternatives would still exceed the SMAQMD's significance threshold of 85 lbs/day for NO<sub>x</sub> and thus would potentially contribute to a violation in the NAAQS and CAAQS. As a result, this impact would be *significant and unavoidable*. The extent of this impact would be similar between the proposed project and each of the development alternatives.

AA No mitigation is required.

**Impact 6.3-2: Long-Term Regional (Operational) Emissions of ROG, NO<sub>x</sub>, and PM<sub>10</sub>.**

PP Regional area- and mobile-source emissions of ROG, NO<sub>x</sub>, and PM<sub>10</sub> associated with the operation of the proposed project were estimated using the URBEMIS 2001 Version 6.2.2 computer program, which is designed to model emissions for land use development projects. URBEMIS allows land use selections that include project location specifics and trip generation rates along with double-counting and pass-by trip options. The double –counting option is designed to minimize double counting of internal vehicle trips between residential and non-residential land uses. The pass-by trip option estimates vehicle-trip emissions based on the percentage of primary

trips, diverted linked trips, and pass-by trips assumed for specific land uses.<sup>1</sup> URBEMIS accounts for area emissions from the use of natural gas, wood stoves, fireplaces, landscape maintenance equipment, and consumer products; and mobile sources emissions due to trip generation.

Regional area and mobile source emissions were estimated based on trip generation rates presented in the transportation analysis (Fehr & Peers 2003) and default model settings for 2003 conditions in the SVAB. Based on the modeling conducted, the operation of the proposed project would result in unmitigated long-term regional emissions of approximately 197.88 lbs/day of ROG, 165.61 lbs/day of NO<sub>x</sub>, and 82.42 lbs/day of PM<sub>10</sub>, as summarized in Table 6.3-4. The long-term regional emissions would be primarily associated with mobile sources rather than area sources, which consist of natural gas and landscape maintenance emissions. The proposed project uses would also result in emissions of CO. However, because CO disperses rapidly with increased distance from the source, emissions of CO are considered localized pollutants of concern rather than of regional concern. Refer to Impact 6.3-3 for analysis of local CO emissions.

<b>Table 6.3-4 Summary Long-Term Regional Emissions</b>			
	<b>ROG (lbs/day)</b>	<b>NO<sub>x</sub> (lbs/day)</b>	<b>PM<sub>10</sub> (lbs/day)</b>
<b>PROPOSED PROJECT (PP)<sup>1</sup></b>			
Area Source	36.30	7.99	0.02
Mobile Vehicle Source	161.58	157.62	82.4
Total Unmitigated <sup>3</sup>	197.88	165.61	82.42
Total Mitigated <sup>4</sup>	192.41	158.39	79.53
<b>PARK-AND-RIDE ALTERNATIVE (AC)<sup>2</sup></b>			
Area Source	23.60	9.92	0.03
Mobile Source	167.26	157.81	82.32
Total Unmitigated <sup>3</sup>	190.86	167.73	82.35
Total Mitigated <sup>4</sup>	186.64	162.59	80.22
<sup>1</sup> Emissions based on default model setting for 2003 conditions in the SVAB for the operation of 724 multifamily residential units (trip generation rate of 4.78 trips/dwelling unit), 239,220 sq. ft. of retail use (49.98 trips/1,000 sq. ft.), and 30,000 sq. ft. of office use (15.77 trips/1,000 sq. ft.) as shown in the traffic report (Fehr & Peers 2003). <sup>2</sup> Emissions based on default model setting for 2003 conditions in the SVAB for the construction of 460 multifamily residential units (trip generation rate of 4.10/dwelling unit), 239,220 sq. ft. of retail use (49.98 trips/1,000 sq. ft.), 30,000 sq. ft. of office use (15.77 trips/1,000 sq. ft.), and 588 parking spaces (3.51 trips/space) as shown in the traffic report (Fehr & Peers 2003). <sup>3</sup> Accounts for reductions due to mitigation measures in the project design (Pedestrian, transit, and bike effectiveness factors of 0.9, 0.5, 0.6). Source: EDAW 2003			

Implementation of the proposed project would require General Plan Amendments and Rezoning to permit the proposed land uses. According to the transportation

<sup>1</sup> *Primary trips* are trips made for the specific purpose of visiting the generator. The stop at that generator is the primary reason for the trip. For example, a home-to-shopping-to-home combination of trips is a primary trip set. *Pass-by trips* are trips made as intermediate stops on the way from an origin to a primary trip destination. *Pass-by trips* are attracted from traffic passing the site on an adjacent street that contains direct access to the generator. These trips do not require a diversion from another roadway. *Diverted linked trips* are trips attracted from the traffic volumes on roadways in the vicinity of the generator but that require a diversion from that roadway to another roadway to gain access to the site. These roadways could include streets or freeways adjacent to the generator but without access to the generator.

analysis, the operation of the proposed project would result in more vehicle trips and VMT than if the project site was developed under the current designation. Thus, an increase in (VMT), which would lead to an increase in mobile source emissions, may conflict with the SMAQMD's air quality planning efforts. Consequently, an increase in VMT beyond projections in local plans could potentially result in a significant adverse incremental effect on the region's ability to attain and/or maintain state and national ambient air quality standards.

Daily unmitigated emissions of ROG and NO<sub>x</sub> would exceed the SMAQMD's significance threshold of 65 lbs/day. Thus, because the Sacramento County portion of the SVAB is currently designated as non-attainment for the state and national ambient ozone and PM<sub>10</sub> standards (ARB 2001a, 2003), regional emissions of ozone precursors (ROG and NO<sub>x</sub>) and PM<sub>10</sub> would potentially contribute to a violation in the NAAQS and CAAQS. In addition, implementation of the proposed project may conflict with applicable air quality plans. As a result, operational emissions associated with the proposed project would be considered to have a *significant*, long-term air quality impact.

AB Under the General Plan Buildout Alternative (AB), the project site would be developed under the existing General Plan land use designation resulting in approximately 1,114 residential units, but no commercial. The long-term operation of AB would result in the generation of regional area- and mobile-source emissions of ROG, NO<sub>x</sub>, and PM<sub>10</sub>. The long-term regional emissions would be primarily associated with mobile sources rather than area sources, which consist of natural gas and landscape maintenance emissions. According to the transportation analysis, the implementation of Alternative AB would result in fewer trips than the proposed project (Fehr & Peers 2003). Thus, in comparison to the proposed project, the operation of Alternative AB would result in slightly fewer emissions; however, daily unmitigated emissions of ROG and NO<sub>x</sub> would still exceed the SMAQMD's significance threshold of 65 lbs/day. In addition, because the Sacramento County portion of the SVAB is currently designated as non-attainment for the state and national ambient ozone and PM<sub>10</sub> standards (ARB 2001a, 2003), construction emissions of ozone precursors (ROG and NO<sub>x</sub>) and PM<sub>10</sub> would potentially contribute to a violation in the NAAQS and CAAQS. As a result, operational emissions would be considered to have a *significant*, long-term air quality impact. The extent of this impact would be less than under the proposed project as less traffic would be generated under this alternative.

AC Under the Park-and-Ride Alternative (AC), the project would be developed as proposed, except that a 500-space park-and-ride lot would take the place of 240 residential units. According to the transportation analysis, the implementation of Alternative AC would result in slightly more trips than the proposed project (Fehr & Peers 2003). The long-term operation of Alternative AC would result in the generation of regional-, area-, and mobile-source emissions of ROG, NO<sub>x</sub>, and PM<sub>10</sub>. Based on the modeling conducted, the operation of this alternative would result in

unmitigated long-term regional emissions of approximately 190.86 lbs/day of ROG, 167.73 lbs/day of NO<sub>x</sub>, and 82.35 lbs/day of PM<sub>10</sub>, as summarized in Table 6.3-4. The long-term regional emissions would be primarily associated with mobile sources rather than area sources, which consist of natural gas and landscape maintenance emissions.

As with the proposed project, implementation of this alternative would require General Plan Amendments and Rezoning to permit the proposed land uses. The operation of Alternative AC would result in more vehicle trips and VMT than if the project site was developed under the current designation. Thus, an increase in (VMT), which would lead to an increase in mobile source emissions, may conflict with the SMAQMD's air quality planning efforts. Consequently, an increase in VMT beyond projections in local plans could potentially result in a significant adverse incremental effect on the region's ability to attain and/or maintain state and national ambient air quality standards

Daily unmitigated emissions of ROG and NO<sub>x</sub> would exceed the SMAQMD's significance threshold of 65 lbs/day. In addition, because the Sacramento County portion of the SVAB is currently designated as non-attainment for the state and national ambient ozone and PM<sub>10</sub> standards (ARB 2001a, 2003), regional emissions of ozone precursors (ROG and NO<sub>x</sub>) and PM<sub>10</sub> would potentially contribute to a violation in the NAAQS and CAAQS. In addition, implementation of the proposed project may conflict with applicable air quality plans. As a result, operational emissions would be considered to have a *significant*, long-term air quality impact. The extent of this impact would be slightly greater than under the proposed project as slightly more traffic would be generated under this alternative.

AA No new development would occur at the project site under the No Project (No Development) Alternative. Therefore, *no impact* would occur.

**Mitigation 6.3-2: Long-Term Regional (Operational) Emissions of ROG, NO<sub>x</sub>, and PM<sub>10</sub>.**

PP, AB, AC In accordance with the recommendations of the SMAQMD, the applicant shall implement the following mitigation measures to reduce long-term regional area- and mobile-source emissions of ROG, NO<sub>x</sub>, and PM<sub>10</sub>.

- ▶ Orient buildings north/south
- ▶ All electric landscape maintenance equipment
- ▶ Central water heaters
- ▶ Increase insulation beyond Title 24
- ▶ Provide street artwork and furniture
- ▶ Provide transit shelters, benches, etc.
- ▶ Provide route signs and displays
- ▶ Provide pedestrian signalization and signage
- ▶ Provide articulated storefronts (display windows for visual interest)
- ▶ Do not place long uninterrupted walls along pedestrian access routes

- ▶ Provide secure bike parking
- ▶ Provide employee lockers and showers
- ▶ Provide compressed work schedule (e.g. 9/80)

Implementation of the above recommended mitigation measures would reduce long-term regional emissions as shown in Table 6.3-4. However, daily mitigated emissions of ROG and NO<sub>x</sub> would still exceed the SMAQMD’s significance threshold of 65 lbs/day and thus would potentially contribute to a violation in the NAAQS and CAAQS under the proposed project and the development alternatives. As a result, this impact would remain *significant and unavoidable*. The extent of this impact would be less under Alternative AB than the proposed project due to the generation of less traffic under Alternative AB. The extent of this impact would be slightly greater under Alternative AC than under the proposed project due to the generation of slightly more traffic under Alternative AC.

AA No mitigation is required.

**Impact 6.3-3: Local Mobile Source Carbon Monoxide Concentration Emissions.**

PP The primary mobile source pollutant of local concern is CO. Local mobile source CO emissions near roadway intersections are a direct function of traffic volume, speed, and delay. Carbon monoxide transport is extremely limited; it disperses rapidly with distance from the source under normal meteorological conditions. Under certain meteorological conditions, however, CO concentrations close to a congested roadway or intersection may reach unhealthy levels, affecting local sensitive receptors (residents, school children, hospital patients, the elderly, etc.). As a result, the SMAQMD recommends analysis of CO emissions at a local rather than regional level.

The University of California, Davis (UC Davis) Institute of Transportation Studies (ITS) Transportation Project-Level Carbon Monoxide Protocol (Garza et al. 1997) states that signalized intersections at Level of Service (LOS) E or F represent a potential for an area CO violation, also known as a “hot spot.” Thus, modeling of CO concentrations typically is done for areas located near signalized roadway intersections that are projected to operate at an unacceptable LOS.

Because the Bruceville Road/Cosumnes River Boulevard intersection is signalized and projected to operate at an unacceptable LOS under base year conditions, 1-hour and 8-hour CO concentrations were modeled in accordance with SMAQMD’s Air Quality Thresholds of Significance (SMAQMD 1994) and the UC Davis ITS Transportation Project-Level Carbon Monoxide Protocol (Garza et al 1997). 1-hour and 8-hour CO concentrations were estimated based on worst-case meteorological conditions, p.m. peak-hour traffic volumes as presented in the traffic analysis, and composite emission factors modeled using the CT-EMFAC computer model, which account for future emission reduction attributable to technological advancements. Based on the modeling conducted, the implementation of the proposed project, as



shown in Table 6.3-5, would result in maximum 1-hour and 8-hour CO concentrations of 60.4 ppm and 36.2 ppm at the Bruceville Road/Cosumnes River Boulevard intersection. Thus, local mobile source carbon monoxide (CO) emissions due to implementation of the proposed project under base year conditions would be anticipated to result in or contribute to CO concentrations that exceed the state 1-hour or 8-hour CO ambient air quality standards of 20 parts per million (ppm) or 9 ppm, respectively. As a result, local mobile source CO emissions would be considered to have a significant, long-term air quality impact. As a result, this is considered a *significant* impact.

AB Under the General Plan Buildout Alternative (AB), the project site would be developed under the existing General Plan land use designation resulting in approximately 1,114 residential units, but no commercial. The long-term operation of AB would result in the generation of local mobile-source emissions of CO at affected intersections. According to the traffic analysis, the implementation of Alternative AB would result in fewer trips than the proposed project (Fehr & Peers 2003). Thus, in comparison to the proposed project, the operation of Alternative AB would result in slightly fewer mobile source emissions; however, local mobile source CO emissions due to implementation of Alternative AB under base year conditions would still be anticipated to result in or contribute to CO concentrations that exceed the state 1-hour or 8-hour CO ambient air quality standards of 20 parts per million (ppm) or 9 ppm, respectively. As a result, local mobile source CO emissions would be considered to have a *significant*, long-term air quality impact. The extent of this impact would be less than the proposed project as less traffic and hence less local mobile source CO would be generated.

<b>Intersection</b>	<b>Time Period</b>	<b>Maximum CO Concentration (ppm)<sup>1</sup></b>				
		<b>No Project</b>	<b>With Proposed Project (PP)</b>		<b>With Park-and-Ride Alternative (AC)</b>	
			<b>No Mitigation</b>	<b>With Mitigation</b>	<b>No Mitigation</b>	<b>With Mitigation</b>
Bruceville Road / Cosumnes River Boulevard	1-hr	43.0	60.4	36.1	58.1	37.6
	8-hr	25.9	36.2	21.9	34.8	22.6
<b>Significance Thresholds</b>	<b>1-hr</b>	<b>20</b>				
	<b>8-hr</b>	<b>9</b>				
<p>The CO concentrations are the sums of a background component, which includes the cumulative effects of all CO sources in the project vicinity, and a local component, which accounts for the effects of vehicular traffic on roadways. 1-hour and 8-hour CO concentrations were estimated at 3 and 7 meters, respectively, using the CALINE4 model based on the assumptions outlined above, a persistence factor of 0.7, and 1-hour and 8-hour CO background concentrations of 4.92 ppm and 2.46 ppm. Source: EDAW 2003</p>						

AC Under Alternative AC, the Bruceville Road/Cosumnes River Boulevard intersection is signalized and projected to operate at an unacceptable LOS under base year conditions. Thus, 1-hour and 8-hour CO concentrations were modeled in accordance with SMAQMD's Air Quality Thresholds of Significance (SMAQMD 1994) and the

UC Davis ITS Transportation Project-Level Carbon Monoxide Protocol (Garza et al 1997). The implementation of Alternative AC, as shown in Table 6.3-5, would result in maximum 1-hour and 8-hour CO concentrations of 58.1 ppm and 34.8 ppm at the Bruceville Road/Cosumnes River Boulevard intersection. Thus, local mobile source carbon monoxide (CO) emissions due to implementation of Alternative AC under base year conditions would be anticipated to result in or contribute to CO concentrations that exceed the state 1-hour or 8-hour CO ambient air quality standards of 20 parts per million (ppm) or 9 ppm, respectively. As a result, local mobile source CO emissions would be considered to have a significant, long-term air quality impact. As a result, this is considered a *significant* impact. The extent of this impact would be less than under the proposed project because, although slightly more traffic would be generated under this alternative, the peaking characteristics of this traffic would be such that a lower level of peak traffic would occur at the evaluated intersection and hence less local mobile source CO would be generated than under the proposed project.

AA No new development would occur at the project site under the No Project (No Development) Alternative. Therefore, *no impact* would occur.

**Mitigation 6.3-3: Local Mobile Source Carbon Monoxide Concentration Emissions.**

PP, AB, AC Implementation of the recommended mitigation measures identified in the traffic section of this EIR (Section 6.2) would reduce local mobile source emissions as shown in Table 6.3-5. Local mobile source CO would be anticipated to result in or contribute to CO concentrations that exceed the state 1-hour or 8-hour CO ambient air quality standards of 20 parts per million (ppm) or 9 ppm, respectively. As a result, this impact would remain *significant and unavoidable*. The extent of this impact would be lower under Alternative AB and slightly higher under Alternative AC than under the proposed project.

AA No mitigation is required.

**Impact 6.3-4: Odorous Emissions.**

PP, AC The occurrence and severity of odor impacts depends on numerous factors, including: the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of the receptors. While offensive odors rarely cause any physical harm, they still can be very unpleasant, leading to considerable distress among the public and often generating citizen complaints to local governments and regulatory agencies.

No major sources of odors have been identified off-site in the project area that would affect occupants of the proposed onsite land uses. The proposed project and Alternative AC would provide for development of the project site that could include land uses that may result in odorous emissions (e.g., restaurant, fast-food, gas station, coffee house). These odorous emissions could affect existing sensitive off-site land

uses (senior housing northwest of the project site and residences south of the project site). The senior housing north of the project site is over 1,000 feet away, and residential housing to the south is no closer than 500 feet. Given the distance from the site, this impact is considered *less than significant*. The extent of this impact would be similar between the proposed project and Alternative AC as each would result in the development of similar odor-generating land uses.

AB Development of the project site under Alternative AB would not include any major odor emission sources and no major sources of odors have been identified in the area. Therefore, *no impact* would occur.

AA No new development would occur at the project site under the No Project (No Development) Alternative. Therefore, *no impact* would occur.

#### **Mitigation 6.3-4: Odorous Emissions.**

PP, AA, AB, AC No mitigation is required.

#### **Impact 6.3-5: Stationary Source Toxic Air Emissions.**

PP, AC The proposed project and Alternative AC would each result in the development of onsite land uses (i.e., gas station, car wash, restaurants) that could generate toxic air contaminants (TACs). These TACs could potentially affect both existing off-site sensitive land uses (i.e., senior housing to the northwest, residences to the south) and proposed onsite sensitive land uses (i.e., senior housing, multi-family housing, child care).

Under SMAQMD Rules 201 (General Permit Requirements) and 207 (Title V-Federal Operating Permit Program), all sources that possess the potential to emit TACs are required to obtain permits from the SMAQMD. Permits may be granted to these operations if they are constructed and operated in accordance with applicable regulations, including Rule 202 (New Source Review) and Rule 904 (Air Toxics Control Measures). Given that compliance with applicable standards are required for the construction and operation of land uses that may result in the emissions of TACs, the TAC emissions from the routine use of TACs in operations, both on- and off-site, are expected to be within established standards. As a result, a *less-than-significant* impact would result.

AB Under Alternative AB, no land uses would be developed onsite that would have the potential to emit TACs, and thus the proposed project would not generate TAC impacts on existing off-site or proposed onsite sensitive land uses. This alternative would include the development of onsite sensitive land uses (i.e., residential) which could potentially be affected by offsite TACs generation. However, given that compliance with applicable standards are required for the construction and operation of land uses that may result in the emissions of TACs, the TAC emissions from the

routine use of TACs in operations offsite are expected to be within established standards. As a result, a *less-than-significant* impact would result. The extent of this impact would be lower than under the proposed project because, while this alternative and the proposed project would both result in less-than-significant impacts, the proposed project would result in the development of TACs generating land uses that would not be developed under this alternative.

AA No new development would occur at the project site under the No Project (No Development) Alternative. Therefore, *no impact* would occur.

**Mitigation 6.3-5: Stationary Source Toxic Air Emissions.**

PP, AB, AC, AA No mitigation is required.

**Impact 6.3-6: Mobile Source Toxic Air Emissions.**

PP, AC Diesel PM emissions from diesel-fueled vehicles and engines are the ARB's primary TAC of concern for mobile sources. Specific occupants of the retail and commercial areas have not been identified for the project site (which is to be expected in this early phase of project development). However, under the proposed project and Alternative AC, commercial land uses would be developed that would require large-sized delivery and shipping trucks that typically use diesel fuel. The diesel PM emissions generated by these trucks, including idling trucks and refrigerated units, would be produced primarily at single locations on a regular basis. Diesel PM emissions could be blown to nearby existing offsite and proposed onsite sensitive receptors, including existing adjacent senior housing and residential units, and proposed onsite senior housing, residential uses, and child care uses, but such uses are located at least 500 feet from the source. This impact is considered *less than significant*. The extent of this impact would be similar between the proposed project and Alternative AC as both would include the development of commercial uses that would require deliveries by heavy-duty diesel trucks and the same distance to any sensitive receptors.

AB No development that would require the use of heavy-duty diesel trucks is proposed. Therefore, *no impact* would occur.

AA No new development would occur at the project site under the No Project (No Development) Alternative. Therefore, *no impact* would occur.

**Mitigation 6.3-6: Mobile Source Toxic Air Emissions.**

PP, AA, AB, AC No mitigation is required.

### **Impact 6.3-7: Cumulative Air Quality Impacts**

PP, AB, AC

Implementing the proposed project and the development alternatives (Alternatives AB and AC) would result in significant air quality impacts before mitigation associated with short-term construction emissions, long-term regional emissions, and local mobile source carbon monoxide concentration emissions. These would be reduced but would remain significant after mitigation.

Short-term construction emissions are both a localized and regional occurrence in that they have the potential to affect both local air quality and air quality within the SVAB. A project that exceeds the SMAQMD's per-project construction emissions significance thresholds would have both local and SVAB implications. Hence, both local related projects (i.e., South Sacramento Corridor Phase 2 Project, Strawberry Creek Centre, Bruceville Road widening) and cumulative growth within the South Sacramento Community Plan (SSCP) area and the greater City of Sacramento would have the potential to add to the project's short-term construction emissions, resulting in cumulative short-term construction emissions. Because SMAQMD significance thresholds for construction emissions are low enough that development projects such as the College Square PUD would exceed them, because both the related projects and cumulative growth would include projects of similar size, and because feasible mitigation could reduce but not avoid exceedance of these significance thresholds, the proposed project, related projects, and other cumulative growth would result in a ***significant and unavoidable cumulative impact*** in terms of short-term construction emissions. The extent of this impact would be similar for the proposed project and each of the development alternatives because all three would disturb the same amount of land during construction and involve similar levels of construction activity.

Long-term regional emissions (both stationary and mobile source) are a regional occurrence in that they have the potential to affect the SVAB, which is in nonattainment. Hence, cumulative growth within the SSCP area and the greater City of Sacramento, including the related projects, would have the potential to add to the project's long-term regional air emissions, resulting in cumulative long-term regional emissions. Because SMAQMD significance thresholds for regional emissions are low enough that development projects such as the College Square PUD would exceed them and because it is anticipated that certain future development projects in the region would generate greater VMT than planned for by SMAQMD in its air quality attainment plan, the proposed project and cumulative growth would result in a ***significant and unavoidable cumulative*** impact in terms of long-term regional emissions. The extent of this impact would be less under the General Plan Buildout Alternative than under the proposed project because less traffic would be generated under Alternative AB. Similarly, the extent of this impact would be greater under Alternative AC because more traffic would be generated under this alternative.

Mobile source carbon monoxide concentration emissions are primarily localized occurrences in that they dissipate rapidly with distance. Therefore, only that future

cumulative development in the direct vicinity of the project site would have the potential to add to anticipated project mobile source carbon monoxide emissions. As indicated previously, the South Sacramento Corridor Phase 2 Project, Strawberry Creek Centre, and Bruceville Road widening are related projects proposed in the vicinity of the project site. Strawberry Creek Centre would be expected to generate significant mobile source carbon monoxide concentrations given that it would include the same type and scale of commercial uses as the proposed project. The other two related projects would be expected to generate significant mobile source carbon monoxide concentrations given the increase in traffic to be generated by these projects in the local area. As for the proposed project, mitigation is available to reduce these emissions, but not to less-than-significant levels. Hence, a ***significant and unavoidable cumulative impact*** would occur in the local area in terms of mobile source carbon monoxide concentration emissions. The extent of this impact would be less under Alternative AB than under the proposed project because less traffic would be generated under this alternative. The extent of this impact would be greater under Alternative AC than under the proposed project because more traffic and thus more mobile source carbon monoxide emissions would be generated.

It must be noted that the proposed project is a transit-oriented development (TOD) in that it would provide for higher density urban uses adjacent to future planned light rail facilities, which would encourage mass transit usage, and the project would provide for a complementary set of onsite land uses (i.e., residential, commercial, office, child care), which would reduce the need for offsite shopping and service trips. Although the proposed project would increase local and regional cumulative air emissions, the TOD nature of the development would reduce overall regionwide urban sprawl and regionwide traffic congestion and air emissions because it would (1) focus development in an already urbanized area of the City; (2) provide much-needed housing close to the downtown job-center, thus reducing the need for urban development in outlying areas; and (3) result in a greater proportion of future City residents using mass transit for home-to-work trips instead of motor vehicles. It would also contribute to a myriad of City and RT policies for the provision of TOD development and the reduction of traffic congestion and urban sprawl. In the long run, the proposed project would contribute to a reduction in the cumulative air emissions that would otherwise be generated in the City with more traditional mono and low-density development.

AA No new development would occur at the project site under the No Project (No Development) Alternative; therefore, there would be no contribution to the anticipated increase in areawide air emissions associated with cumulative growth. Hence, ***no impact*** would occur.

#### **Mitigation 6.3-7: Cumulative Air Quality Impacts**

PP, AB, AC The related projects should implement Mitigation Measures 6.3-1, 6.3-2, and 6.3-3.

AA No mitigation is required.

### 6.3.5 LEVEL OF SIGNIFICANCE AFTER MITIGATION

The proposed project and the development alternatives (Alternatives AB and AC) would result in *significant and unavoidable* air quality impacts after mitigation in terms: (1) short-term construction emissions, (2) long-term regional (operational) emissions, and (3) mobile source carbon monoxide concentration emissions.

The proposed project would contribute to *significant and unavoidable cumulative* impacts with respect to short-term construction air emissions, long-term regional air emissions, and local mobile source carbon monoxide concentration air emissions.

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## **6.4 NOISE**

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## **6.4 NOISE**

### **6.4.1 INTRODUCTION**

This section includes a summary of applicable regulations and a description of ambient noise conditions. It also includes an analysis of noise impacts of the proposed project and project alternatives in terms of (1) short-term construction noise; (2) long-term stationary source noise; (3) long-term mobile source noise; (4) compatibility of proposed land uses with onsite noise levels; and (5) cumulative noise. This section also recommends mitigation measures, as necessary, to reduce significant noise impacts. The noise modeling output summarized in this section is available at the City of Sacramento Planning Department, 1231 I Street, Room 300, Sacramento, California 95814.

### **6.4.2 ENVIRONMENTAL SETTING**

#### **ACOUSTIC FUNDAMENTALS**

Noise is generally defined as sound that is loud, unpleasant, unexpected, or disagreeable. Sound is mechanical energy transmitted through a medium (air) in the form of a wave due to a disturbance or vibration.

#### **Sound Properties**

A sound wave is introduced into a medium by a vibrating object. The vibrating object is the source of the disturbance which moves through the medium. The vibrating object that creates the disturbance could be a person's vocal chords, the vibrating string and sound board of a guitar or violin, or the vibrating diaphragm of a radio speaker. Regardless of what vibrating object is creating the sound wave, the particles of the medium through which the sound moves is vibrating in a back and forth motion at a given frequency (pitch). The frequency of a wave refers to how often the particles vibrate when a wave passes through the medium. The frequency of a wave is measured as the number of complete back-and-forth vibrations of a particle of the medium per unit of time. If a particle of air undergoes 1,000 longitudinal vibrations in 2 seconds, then the frequency of the wave would be 500 vibrations per second. A commonly used unit for frequency is the Hertz (Hz).

As a sound wave moves through a medium, each particle of the medium vibrates at the same frequency. This is sensible since each particle vibrates due to the motion of its nearest neighbor. The first particle of the medium begins vibrating, at say 500 Hz, and begins to set the second particle into motion at the same frequency of 500 Hz. The second particle begins vibrating at 500 Hz and thus sets the third particle of the medium into motion at 500 Hz. The process continues throughout the medium; each particle vibrates at the same frequency. And of course the frequency at which each particle vibrates is the same as the frequency of the original source of the sound wave. Subsequently, a guitar string vibrating at 500 Hz will set the air particles in the room vibrating at the same frequency of 500 Hz, which carries a sound signal to the ear of a listener which is detected as a 500 Hz sound wave.

The back-and-forth vibration motion of the particles of the medium would not be the only observable phenomenon occurring at a given frequency. Since a sound wave is a pressure wave, a detector could be

used to detect oscillations in pressure from a high pressure to a low pressure and back to a high pressure. As the compression (high pressure) and rarefaction (low pressure) disturbances move through the medium, they would reach the detector at a given frequency. For example, a compression would reach the detector 500 times per second if the frequency of the wave were 500 Hz. Similarly, a rarefaction would reach the detector 500 times per second if the frequency of the wave were 500 Hz. Thus the frequency of a sound wave not only refers to the number of back-and-forth vibrations of the particles per unit of time, but also refers to the number of compression or rarefaction disturbances which pass a given point per unit of time. A detector could be used to detect the frequency of these pressure oscillations over a given period of time. The period of the sound wave can be found by measuring the time between successive high pressure points (corresponding to the compressions) or the time between successive low pressure points (corresponding to the rarefactions). The frequency is simply the reciprocal of the period, thus as frequency increases the period decreases and vice versa.

As mentioned earlier, a wave is an energy transport phenomenon which transports energy along a medium. The amount of energy carried by a wave is related to the amplitude (loudness) of the wave. A high energy wave is characterized by high amplitude; a low energy wave is characterized by low amplitude. The amplitude of a wave refers to the maximum amount of displacement of a particle on the medium from its rest position. The energy transported by a wave is directly proportional to the square of the amplitude of the wave. This means that a doubling of the amplitude of a wave is indicative of a quadrupling of the energy transported by the wave. A tripling of the amplitude of a wave is indicative of a nine-fold increase in the amount of energy transported by the wave.

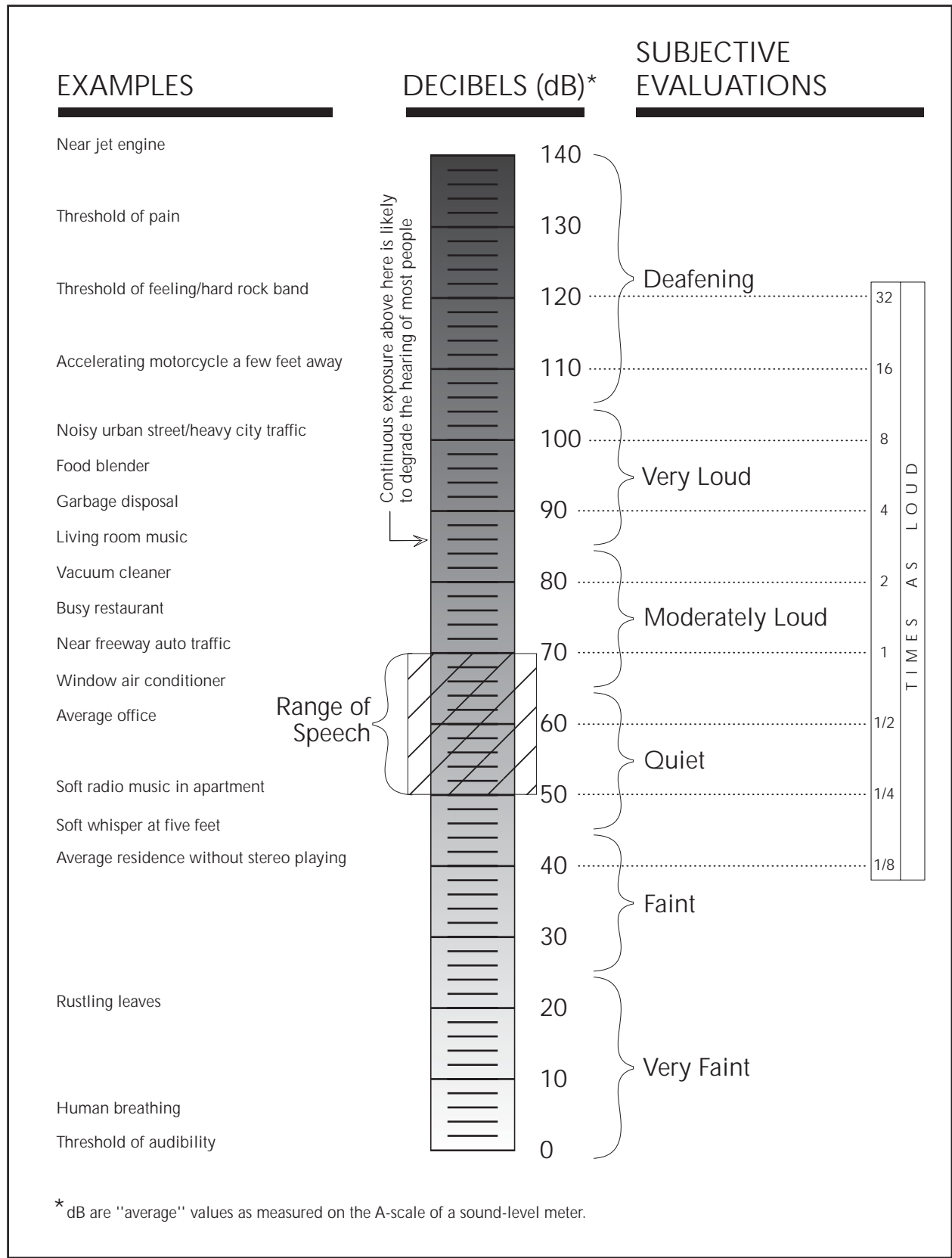
### **Sound and the Human Ear**

Due to the ability of the human ear to detect a wide range of sound pressure fluctuations, sound pressure levels are expressed in logarithmic units called decibels (dB). The sound pressure level in decibels is calculated by taking the log of the ratio between the actual sound pressure and the reference sound pressure squared. The reference sound pressure is considered the absolute hearing threshold (Caltrans 1998).

In addition, since the human ear is not equally sensitive to all sound frequencies, a specific frequency-dependent rating scale was devised to relate noise to human sensitivity. An A-weighted dB (dBA) scale performs this compensation by discriminating against frequencies in a manner approximating the sensitivity of the human ear. The basis for compensation is the faintest sound audible to the average ear at the frequency of maximum sensitivity. This A-weighted dB scale has been chosen by most authorities for purposes of environmental noise regulation. Typical indoor and outdoor noise levels are presented in Exhibit 6.4-1. As indicated, typical sounds range from 40 dBA (very quiet) to 100 dBA (very loud). Conversation is roughly 60 dBA at 3-5 feet. As background noise levels exceed 60 dBA, speech intelligibility becomes increasingly difficult. Noise becomes physically discomforting at 110 dBA.

### **Sound Propagation**

As sound (noise) propagates from the source to the receptor, the attenuation, manner of noise reduction in relation to distance, is dependent upon such factors as the inverse square law, surface characteristics, atmospheric conditions, and presence of physical barriers. The inverse square law describes the attenuation due to the pattern in which sound travels from the source to receptor. Sound travels uniformly



Sources: Egan 1972, U.S. Department of Housing and Urban Development 2002

## Typical Indoor & Outdoor Noise Levels

EXHIBIT 6.4-1

outward from a point source in a spherical pattern with an attenuation rate of 6 dBA/DD (doubling of distance).

However, from a line source sound (roadway) travels uniformly outward in a cylindrical pattern with an attenuation rate of 3 dBA/DD. The surface characteristics between the source and receptor may result in additional sound absorption and/or reflection. In addition, atmospheric conditions such as wind speed, temperature, and humidity may affect noise levels. Furthermore, the presence of a barrier between the source and receptor may also attenuate noise levels. The actual amount of attenuation is dependent upon the barrier size and noise frequency. A noise barrier may be any natural or man-made feature such as a hill, tree, building, wall, or berm (Caltrans 1998).

### **Noise Descriptors**

The selection of a proper noise descriptor for a specific source is dependant upon the spatial and temporal distribution, duration, and fluctuation of the noise. The noise descriptors most often encountered when dealing with traffic, community, and environmental noise are defined below (Caltrans 1998, Lipscomb and Taylor 1978).

- ▶ L<sub>max</sub> (Maximum Noise Level): The maximum instantaneous noise level during a specific period of time. The L<sub>max</sub> may also be referred to as the “peak (noise) level.”
- ▶ L<sub>min</sub> (Minimum Noise Level): The minimum instantaneous noise level during a specific period of time.
- ▶ L<sub>x</sub> (Statistical Descriptor): The noise level exceeded X percent of a specific period of time.
- ▶ L<sub>eq</sub> (Equivalent Noise Level): The energy mean noise level. The instantaneous noise levels during a specific period of time in dBA are converted to relative energy values. From the sum of the relative energy values, an average energy value is calculated, which is then converted back to dBA to determine the L<sub>eq</sub>.
- ▶ L<sub>dn</sub> (Day-Night Noise Level): The 24-hour L<sub>eq</sub> with a 10 dBA “penalty” for the noise-sensitive hours between 10:00 p.m. and 6:00 a.m. The L<sub>dn</sub> attempts to account for the fact that noise during this specific period of time is a potential source of disturbance with respect to normal sleeping hours.
- ▶ CNEL (Community Noise Equivalent Level): The CNEL is similar to the L<sub>dn</sub> described above, but with an additional 4.77 dBA “penalty” for the noise-sensitive hours between 7:00 p.m. to 10:00 p.m., which are typically reserved for relaxation, conversation, reading, and television. If using the same 24-hour noise data, the CNEL is typically ~0.5 dBA higher than the L<sub>dn</sub>.
- ▶ SEL (Single Event [Impulsive] Noise Level): The SEL describes a receiver’s cumulative noise exposure from a single impulsive noise event, which is defined as an acoustical event of short duration (0.5 second) and involves a change in sound pressure above some reference value (approximately 40 dB).

## **Negative Effects of Noise on Humans**

Negative effects of noise exposure include physical damage to the human auditory system, interference, and disease. Exposure to noise may result in physical damage to the auditory system, which may lead to gradual or traumatic hearing loss. Gradual hearing loss is due to sustained exposure to moderately high noise levels over a period of time as opposed to traumatic, which is due to sudden exposure to extremely high noise levels over a short period. However, gradual and traumatic hearing loss both may result in permanent hearing damage. In addition, noise may interfere with or interrupt sleep, relaxation, recreation, and communication. Although most interference may be classified as annoying, the inability to hear a warning signal may be considered dangerous. Noise may also be a contributor to diseases associated with stress, such as hypertension, anxiety, and heart disease. The degree to which noise contributes to such diseases depends on the noise frequency, band width, level, and exposure time (Caltrans 1998).

## **EXISTING NOISE ENVIRONMENT**

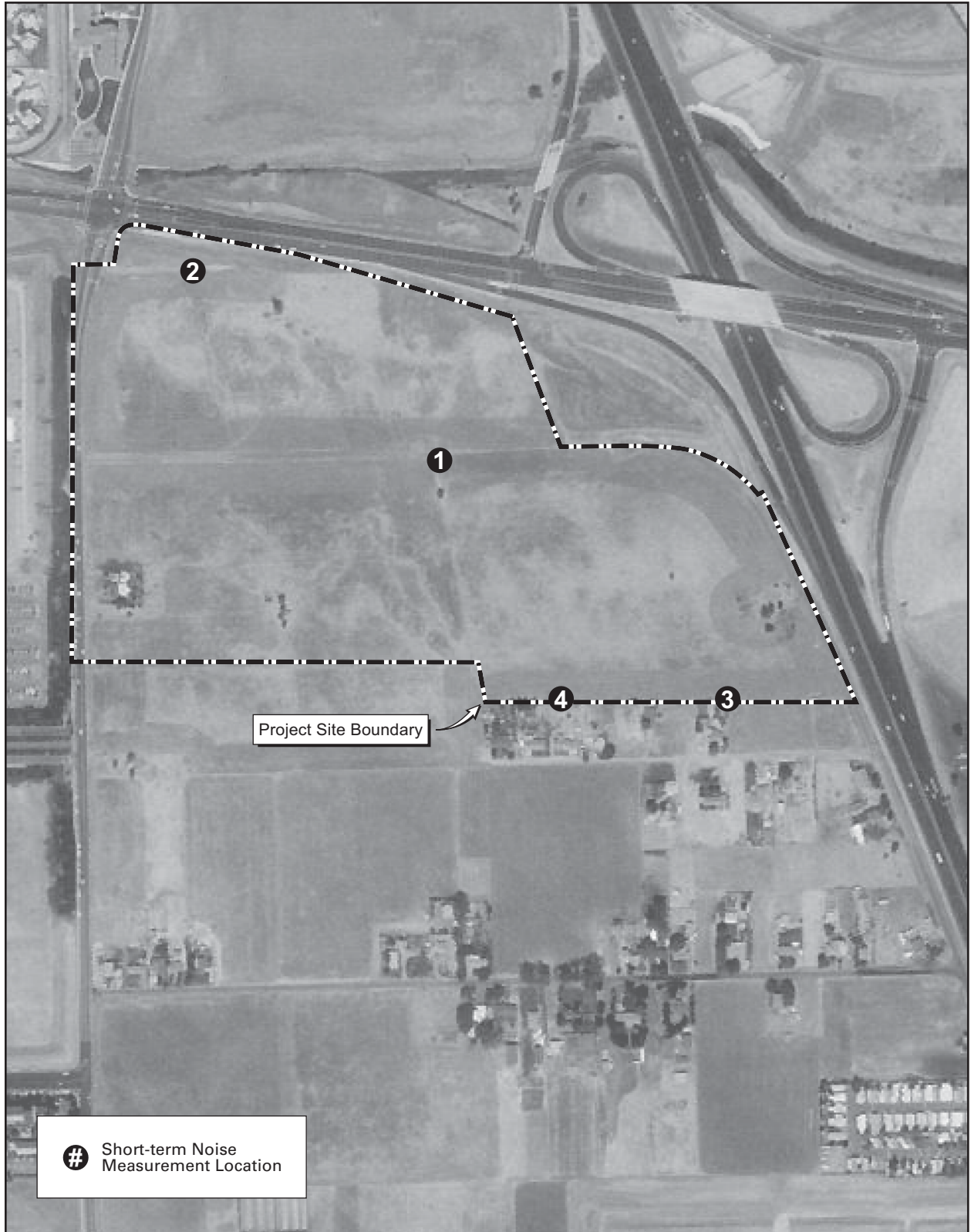
### **Existing Noise-Sensitive Land Uses**

Noise-sensitive land uses are generally considered to include those uses which would result in noise exposure that could result in health-related risks to individuals, as well as places where quiet is an essential element of their intended purpose. Residential dwellings, including senior housing, are of primary concern because of the potential for increased and prolonged exposure of individuals to both interior and exterior noise levels. Additional land uses such as parks, historic sites, cemeteries, and recreation areas are also considered sensitive to increases in exterior noise levels. Schools, churches, hotels, libraries, and other places, where low interior noise levels are essential, are also considered noise-sensitive land uses.

As discussed in Chapter 5 of this EIR, the project site is surrounded by Cosumnes River Boulevard, Strawberry Creek, vacant land and a senior citizen apartment complex to the north; vacant land and large-lot single-family residences to the south; SR 99 to the east; and Bruceville Road and Cosumnes River College to the west. Existing noise-sensitive receptors in the vicinity of the project site include the senior housing to the northwest, across the Cosumnes River Boulevard/Bruceville Road intersection, the large-lot single family residences to the south along Cotton Lane, and Cosumnes River College to the west across Bruceville Road. The single-family residential units on the north side of Cotton Lane are directly adjacent to the southern property line of the site.

### **Ambient Noise Survey**

An ambient noise survey was conducted by EDAW on May 6, 2003, to document the existing noise environment at various locations within the project area. The dominant noise source noted during the survey was vehicular traffic on Bruceville Road to the west, Cosumnes River Boulevard to the north, and SR 99 to the east of the site. Short-term (15-minute) noise level measurements were taken at four locations, as shown in Exhibit 6.4-2 during the nonpeak traffic hours using a Larson Davis model 820 sound level meter (SLM) at approximately 4.5 feet above the ground surface. The 15-min  $L_{eq}$  value along with the  $L_{max}$ ,  $L_{min}$ , and  $L_{50}$  for each ambient noise survey location is presented in Table 6.4-1. Based on the measurements conducted, average daytime noise levels (in dBA  $L_{eq}$ ) within the project site generally range from the upper 50s to low 60s, depending primarily on distance from nearby roadways and

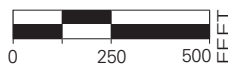


Source: U.S. Geological Survey at MSN TerraServer 1998; EDAW 2003

## Ambient Noise Measurement Locations

EXHIBIT 6.4-2

College Square PUD  
1T157.01 5/03



shielding of noise from nearby existing structures. As indicated, the highest existing ambient noise levels at the project site are near the Cosumnes River Boulevard/Bruceville Road intersection and along SR 99.

Noise Measurement Location <sup>1</sup>	Date/Time	Noise Level (dBA)			
		L <sub>eq</sub>	L <sub>max</sub>	L <sub>min</sub>	L <sub>50</sub>
1 (east end of Kastanis Way)	5/6/2003 11:10 a.m.-11:25 a.m.	48.9	57.3	44.5	47.5
2 (nw corner of project site)	5/6/2003 11:45 a.m.-12:00 p.m.	60.8	71.7	53.0	58.2
3 (east portion of Cotton Lane)	5/6/2003 12:24 p.m.-12:39 p.m.	56.5	64.6	51.3	55.2
4 (west portion of Cotton Lane)	5/6/2003 1:08 p.m.-1:23 p.m.	50.2	63.1	45.8	48.9

<sup>1</sup> Refer to Exhibit 6.4-2 for location.  
Source: EDAW 2003

### **Noise Sources**

Vehicle traffic is the primary noise source in the vicinity of the project site. The average daily traffic (ADT) volume on Cosumnes River Boulevard from Bruceville Road to SR 99 is approximately 40,900 trips, Bruceville Road from Cosumnes River Boulevard to Timberlake Way is 16,500 trips, Cosumnes River Boulevard to the project site is 22,500 trips, Bruceville Road from the project site to Shasta Avenue is 20,600 trips, and SR 99 from Sheldon Road to Cosumnes River Boulevard is 117,000 trips (Caltrans 2003, Fehr & Peers 2003). In addition, the ADT volume on West Stockton Boulevard ranges from 200 to 800 trips near the south end of the project site (Fehr & Peers 2003).

Existing roadway traffic noise levels were calculated for these roadway segments using the Federal Highway Administration (FHWA) Traffic Noise Prediction Model (FHWA 1988). Traffic data used in the analysis were obtained from the traffic analysis prepared for this project and from the California Department of Transportation (Caltrans) (Caltrans 2003, Fehr & Peers 2003). Additional input data included day/night percentages of autos, medium and heavy trucks, vehicle speeds, ground attenuation factors, and roadway widths.

Table 6.4-2 summarizes the existing L<sub>dn</sub>/CNEL at 50 feet from the near travel lane centerline and distance from roadway centerline to the 55, 60, 65 and 70 dBA L<sub>dn</sub>/CNEL contours for existing average daily traffic volumes. As indicated, traffic noise from SR 99, Cosumnes River Boulevard, and Bruceville Road reaches above 70 CNEL at 50 feet from the centerline of the nearest travel lane which means that each of these streets generates above 70 CNEL beyond the street boundaries. Because the nearest travel lanes to the project site associated with SR 99, Cosumnes River Boulevard, and Bruceville Road are located approximately 50, 10, and 5 feet from the project site, respectively, the 70 CNEL noise contour from each of these streets extends into the project site. In the case of SR 99, the 70 CNEL noise contour extends approximately 480 feet into the eastern portion of the project site.

<b>Table 6.4-2 Summary of Existing Traffic Noise Levels</b>					
<b>Roadway Segment and Location</b>	<b>Distance (ft) from Roadway Centerline to L<sub>dn</sub>/CNEL (dBA)</b>				<b>L<sub>dn</sub>/CNEL (dBA) 50 ft from Centerline of near Travel Lane</b>
	<b>70 CNEL</b>	<b>65 CNEL</b>	<b>60 CNEL</b>	<b>55 CNEL</b>	
Cosumnes River Boulevard-Bruceville Road to SR 99	162.9	346.3	743.6	1600.8	75.02
Bruceville Road-Cosumnes River Boulevard to Timberlake Way	87.9	188.9	406.7	876.0	72.96
Bruceville Road-Cosumnes River Boulevard to Project Site	107.9	232.2	500.1	1077.2	74.30
Bruceville Road-project site to Shasta Avenue	101.8	219.0	471.6	1015.7	73.92
West Stockton Boulevard-project site to Shasta Avenue	N/A	N/A	N/A	52.6	54.59
West Stockton Boulevard-Shasta Avenue to Jacinto Road	N/A	N/A	54.4	116.7	59.81
SR 99-Cosumnes River Boulevard to Sheldon Road	534.3	1149.5	2475.4	5331.7	82.86
N/A - Noise contour is within 50 feet of the roadway centerline and within the roadway right-of-way. Source: EDAW 2003					

### 6.4.3 REGULATORY PROVISIONS

#### CITY OF SACRAMENTO GENERAL PLAN

The Noise Element of the City of Sacramento General Plan establishes land use compatibility standards for noise measured at the property line of noise-sensitive land use. The Noise Element establishes standards for various land use categories with respect to transportation and nontransportation noise sources and land use compatibility noise criteria. Table 6.4-3 presents the City of Sacramento land use compatibility standards applicable to new development, without implementation of noise mitigation. Mitigation measures should be considered if the proposed development would increase the average daily noise levels at a noise-sensitive land use by more than 4 dB or cause the overall level to exceed the “normally acceptable” standard for land use compatibility. New development is considered “conditionally acceptable” provided adequate noise insulation features have been incorporated in the design of the project. The City’s noise exposure standards for land use compatibility are presented in Table 6.4-4.

<b>Table 6.4-3 City of Sacramento Maximum Acceptable Interior and Exterior Noise Levels for New Development</b>					
<b>Noise Source</b>	<b>Land Use</b>	<b>Applicable Area</b>		<b>State Requirements <sup>1</sup></b>	<b>Noise Element Requirements</b>
		<b>Interior</b>	<b>Exterior</b>		
Traffic or fixed source (industrial plants, etc.)	Single-family	X		None	L <sub>dn</sub> ≤ 45 dB
	Single-family		X	None	L <sub>dn</sub> ≤ 60 dB in backyards
	Multifamily <sup>3</sup>	X		L <sub>dn</sub> ≤ 45 dB	L <sub>dn</sub> ≤ 45 dB
	Multifamily		X	None	L <sub>dn</sub> ≤ 60 dB in common outdoor use areas



**Table 6.4-3 (Continued)**  
**City of Sacramento**  
**Maximum Acceptable Interior and Exterior Noise Levels for New Development**

Noise Source	Land Use	Applicable Area		State Requirements <sup>1</sup>	Noise Element Requirements
		Interior	Exterior		
	Schools	X		None	Noisiest hourly Leq ≤ 40 dB during school day
	Schools		X	None	L <sub>dn</sub> ≤ 60 dB
	Libraries	X		None	Noisiest hourly Leq ≤ 45 dB
	Libraries		X	None	None
Aircraft	Single-family	X		None	L <sub>dn</sub> ≤ 45 dB and maximum instantaneous levels of ≤ 50 dB in bedrooms and ≤ 55 in other habitable rooms <sup>2</sup>
	Single-family		X	CNEL ≤ 65 dB (State Aeronautics Noise Standards) requirement does not apply to Mather and McClellan AFB	CNEL ≤ 60 dB for Metro Airport CNEL ≤ 65 dB for all other areas
	Multifamily	X		L <sub>dn</sub> ≤ 45 dB	L <sub>dn</sub> ≤ 45 dB and maximum instantaneous levels of ≤ 50 dB in bedrooms and ≤ 55 in other habitable rooms <sup>2</sup>
	Multifamily		X	CNEL ≤ 65 dB (State Aeronautics Noise Standards) requirement does not apply to Mather and McClellan AFB	CNEL ≤ 60 dB for Metro Airport CNEL ≤ 65 dB for all other areas
	Schools	X		None	Noisiest hourly Leq ≤ 40 dB during school day
	Schools		X	CNEL ≤ 65 dB (State Aeronautics Noise Standards) requirement does not apply to Mather and McClellan AFB	CNEL ≤ 60 dB for Metro Airport CNEL ≤ 65 dB for all other areas
	Libraries	X		None	L <sub>dn</sub> ≤ 45 dB
	Libraries		X	None	None
Rail Traffic	Single-family	X		None	L <sub>dn</sub> ≤ 45 dB and maximum instantaneous levels of ≤ 50 dB in bedrooms and ≤ 55 in other habitable rooms <sup>2</sup>
	Single-family		X	None	L <sub>dn</sub> ≤ 60 dB
	Multifamily	X		L <sub>dn</sub> ≤ 45 dB unless there are less than 4 trains per day between 7 AM and 10 PM and there are no trains between 10 PM and 7 AM	L <sub>dn</sub> ≤ 45 dB and maximum instantaneous levels of ≤ 50 dB in bedrooms and ≤ 55 in other habitable rooms <sup>2</sup>
	Multifamily		X	None	L <sub>dn</sub> ≤ 60 dB
	Schools	X		None	Noisiest hourly Leq ≤ 40 dB during school day
	Schools		X	None	Maximum instantaneous levels ≤ 85 dB
	Libraries	X		None	Noisiest hour Leq ≤ 45 dB
	Libraries		X	None	None

<sup>1</sup> Projects for which U.S. Department of HUD financing is requested are subject to HUD noise requirements. The noise element requirements listed in this table are at least as stringent as the HUD requirements.

<sup>2</sup> The requirement for interior noise exposure is triggered when the exterior L<sub>dn</sub> exceeds 60 dB.

<sup>3</sup> Multifamily includes hotels, motels, apartment houses and dwellings other than detached single-family dwellings as defined by Title 24, Part 2, California Administrative Code.

Source: City of Sacramento General Plan 1988

<b>Table 6.4-4</b> <b>City of Sacramento</b> <b>Acceptable and Unacceptable Noise Levels by Land Use Type, L<sub>dn</sub> or CNEL</b>				
Land Use	Normally Acceptable (in dB)	Conditionally Acceptable (in dB)	Normally Unacceptable (in dB)	Clearly Unacceptable (in dB)
Transient Lodging, Hotels, and Motels	60 to 75	75 to 80	75 to 80	
Auditoriums, Concert Halls, Amphitheaters	not specified	50 to 70	not specified	above 70
Sports Arena, Outdoor Spectator Area	50 to 75	not specified	not specified	above 75
Playgrounds and Parks	50 to 70	not specified	70 to 75	above 75
Golf Courses, Water Recreation, and Cemeteries	50 to 70	not specified	70 to 80	above 80
Residential Uses	50 to 60	60 to 70	70 to 75	above 75
Schools, Libraries, Churches	50 to 60	60 to 70	70 to 80	above 80
Office Building, Business, Commercial	65	65 to 80	80	
<p><b>Normally Acceptable:</b> Specified land use is satisfactory based upon the assumption that any buildings are of normal construction without special noise requirements.</p> <p><b>Conditionally Acceptable:</b> New construction or development should be undertaken only after a detailed analysis of noise reduction requirements is made and needed noise insulation features included in the design.</p> <p><b>Normally Unacceptable:</b> New construction or development should be discouraged. If new construction or development does proceed, a detailed analysis of noise reduction requirements must be made and needed noise insulation features included in this design.</p> <p><b>Clearly Unacceptable:</b> New construction or development clearly should not be undertaken.</p>				
Source: City of Sacramento General Plan 1988				

The following General Plan noise goals and policies are applicable to the proposed project:

Goal A: Future development shall be compatible with the projected year 2016 noise environment.

Policy 1: Require an acoustical report for any project which would be exposed to noise levels in excess of those shown as normally acceptable in Figure 3 (Table 6.4-4 of this EIR). The contents of the acoustical report shall be as described in the Noise Assessment Report Guidelines. No acoustical report shall be required where City staff have an existing residential report on file which is applicable.

Policy 2: Require mitigation measures to reduce noise exposure to the “Normally Acceptable Levels” in Figure 3 (Table 6.4-4 of this EIR), except where such measures are not feasible.

Policy 3: Land uses proposed where the exterior noise level would be below the “Normally Acceptable Levels” may be approved without any requirement for interior or exterior mitigation measures.

**Goal C:** Eliminate or minimize the noise impacts of future development on existing land uses in Sacramento.

**Policy 1:** Review projects that may have noise generation potential to determine what impact they may have on existing uses. Additional acoustical analysis may be necessary to mitigate identified impacts.

**Policy 2:** Enforce the City of Sacramento Noise Ordinance as the method to control noise from sources other than transportation sources.

**CITY OF SACRAMENTO NOISE ORDINANCE**

The Sacramento City Noise Control Ordinance sets limits for exterior noise levels. The City’s noise ordinance standards are summarized in Table 6.4-5. The ordinance generally limits exterior noise levels (measured at residential land and agricultural land uses) to a maximum of 55 dBA during any cumulative 30-minute period during the daytime hours (7:00 a.m. to 10:00 p.m.), and 50 dBA during any cumulative 30-minute period during the nighttime hours (10:00 p.m. to 7:00 a.m.). The ordinance sets somewhat higher noise limits for noise of shorter duration; however, noise shall not exceed 75 dBA in the day and 70 dBA at night. Activities conditionally exempt from the noise standards include construction activities that occur during the daytime hours of 7:00 a.m. to 6:00 p.m., Monday through Saturday, and from 9:00 a.m. to 6:00 p.m. on Sunday.

<b>Table 6.4-5 City of Sacramento Noise Ordinance</b>			
<b>Land Use</b>	<b>Period of Measurement</b>	<b>Maximum Acceptable Noise Standards</b>	
		<b>Exterior Noise Standards<sup>1</sup></b>	<b>Interior Noise Standards</b>
Residential, School, Church, Hospital, Agricultural Land Uses	7:00 a.m. to 10:00 p.m.	55 dBA <sup>2</sup>	-
	10:00 p.m. to 7:00 a.m.	50 dBA <sup>2</sup>	-
Apartment, Condominium, Townhouse, Duplex, or Multi-dwelling Unit	10:00 p.m. to 7:00 a.m. <sup>3</sup>	-	45 dBA
	5 minutes/hour:		50 dBA
	15 minutes/hour:		55 dBA
	Any period of time:		55 dBA
<p>This table presents a summary of the noise ordinance standards that are considered to be most applicable to the proposed project. Refer to the City of Sacramento Municipal Code – Chapter 8.68 Noise Control, for additional noise control standards and limitations pertaining to noise-generating operations.</p> <p><sup>1</sup> The following noise standards, unless otherwise specifically indicated in City of Sacramento Municipal Code, shall apply to all properties within a designated noise area.</p> <p><sup>2</sup> Cumulative duration of intrusive sound: It is unlawful for any person within the City to create any noise which causes the noise level on the affected property, when measured in the designated noise area, to exceed for the duration of time set forth following, the specified exterior noise standards in any one hour by (noise limits shall be reduced by 5 dBA for impulsive or simple tone noise, or noise consisting of speech or music):</p> <p>A. 30 minute: +0 dBA            B. 15 minutes: +5 dBA            C. 5 minutes: +10 dBA            D. 1 minute: +15 dBA            E. Level not to be exceeded for any time: +20</p> <p>In addition to the above standards, interfering noise at schools, churches, hospitals, while the same is in use, which is 10 dBA or more greater than the ambient noise level at the building, shall be deemed excessive and unlawful. Residential use HVAC system equipment, such as pumps, fans, air conditioners, and cooling towers, shall not exceed 60 dBA at any point at least 1 foot inside the property line of the affected residential or agricultural property line, or 55 dBA when measured in the center of a neighboring patio or at the exterior window of the affected residential unit.</p> <p><sup>3</sup> Based on cumulative periods of time during any one hour. Interior noise levels, when measured in the neighboring unit, shall not exceed the specified standards for the corresponding cumulative period of time during any hour.</p> <p>Source: City of Sacramento 2003</p>			

## STATE OF CALIFORNIA

Title 24 of the California Code of Regulations establishes standards governing interior noise levels that apply to all new multifamily residential units in California. These standards require that acoustical studies be performed prior to construction at building locations where the existing  $L_{dn}$ /CNEL exceeds 60 dBA. Such acoustical studies are required to establish mitigation measures that will limit maximum  $L_{dn}$ /CNEL levels to 45 dBA in any inhabitable room. Although there are no generally applicable interior noise standards pertinent to all uses, many communities in California have adopted a  $L_{dn}$ /CNEL of 45 as an upper limit on interior noise in all residential units.

### 6.4.4 IMPACTS AND MITIGATION

#### METHODS OF ANALYSIS

Construction, area, and stationary source noise impacts were based on noise levels at noise-sensitive receptors that would result from the operation of applicable equipment assuming a noise attenuation rate of 6 dBA per doubling of distance.

The FHWA Traffic Noise Prediction Model (FHWA 1988) was used to calculate traffic noise levels along affected roadways, based on the trip distribution estimates obtained from the traffic analysis prepared for this project (Fehr & Peers 2003). The project's contribution to the existing traffic noise levels along area roadways was determined by comparing the predicted noise levels at 50 feet from the centerline of the near travel lane with and without project-generated traffic. Predicted traffic noise levels were calculated assuming a noise reduction of 3 dBA per doubling of distance from the source.

#### STANDARDS OF SIGNIFICANCE

Short-term Construction Noise Impacts. Short-term construction noise impacts would be considered significant if construction operations result in a noticeable increase (i.e., 3 dBA or greater) in ambient noise at sensitive receptors between the hours of 6:00 p.m. and 7 a.m. Monday through Saturday or 6:00 p.m. to 9:00 a.m. on Sunday.

Long-Term Operational Stationary Source Noise Impacts. Long-term stationary source noise impacts would be considered significant if the proposed project would result in noise levels that exceed the standards in the City of Sacramento Noise Code at nearby noise-sensitive land uses. As previously discussed, the ordinance generally limits exterior noise levels (measured at residential land and agricultural land uses) to a maximum of 55 dBA during any cumulative 30-minute period during the daytime hours (7:00 a.m. to 10:00 p.m.), and 50 dBA during any cumulative 30-minute period during the nighttime hours (10:00 p.m. to 7:00 a.m.).

Long-Term Traffic Noise Impacts. Long-term traffic noise impacts would be considered significant if implementation of the proposed project would result in a noticeable increase (i.e., 3 dBA or greater) in traffic noise.

Land Use Compatibility With Projected Noise Levels. Development of the proposed land uses would have a significant impact if projected onsite noise levels, under existing and future cumulative conditions,

exceed the noise criteria established by the City of Sacramento (Table 6.4-3) after a detailed analysis of noise reduction requirements and needed noise insulation features are included in the design.

## IMPACTS AND MITIGATION MEASURES

### Impact 6.4-1: Short-Term Construction Noise

PP, AB, AC Construction operations would include site grading, clearing, and excavation associated with the site preparation phase, paving, and the application of architectural coatings, in addition to other miscellaneous construction operations. According to the EPA, the noise levels of primary concern are typically associated with the site preparation phase due to the onsite equipment associated with clearing, grading, and excavation. Depending on the operations conducted, individual equipment noise levels can range from 79 to 91 dBA at 50 feet, as indicated in Table 6.4-6. The onsite equipment required for the site preparation phase is not known at this time, but would be anticipated to include at least one roller, one excavator, one loader, one backhoe, and two trucks at any one time. The simultaneous operation of such onsite construction equipment could potentially result in combined intermittent noise levels of approximately 93 dBA at 50 feet from the project site. Based on these equipment noise levels and assuming a noise attenuation rate of 6 dBA per doubling of distance from the source to receptor, exterior noise levels at the sensitive receptors located within approximately 2,300 feet of the project site could potentially exceed 60 dBA without feasible noise control. Construction operations that occur between the hours of 7 a.m. and 6 p.m. Monday through Saturday and 9 a.m. and 6 p.m. on Sunday are exempt from the applicable standards. However, if construction operations were to occur during the noise-sensitive hours of 6 p.m. to 7 a.m. Monday through Saturday or 6 p.m. to 9 a.m. on Sunday, the applicable noise standards could potentially be exceeded at nearby noise-sensitive receptors (i.e., senior housing northwest of the project site, single-family residential units south of the project site). In addition, construction operations occurring during the evening and nighttime hours could result in annoyance and/or sleep disruption to occupants of the nearby residential dwellings.

Thus, if construction operations are not limited to the hours exempt from the standards set forth in the City of Sacramento Noise Ordinance, the temporary construction noise associated with onsite equipment could potentially expose sensitive receptors to or generate noise levels in excess of the applicable noise standards and/or result in a noticeable increase (3 dBA) in ambient noise levels. Hence, a *significant* impact could occur. The extent of this impact would be similar between the proposed project and the development alternatives (Alternatives AB and AC) as all would disturb a similar amount of area and, include construction activities over a similar period of time.

AA No new development and hence no construction activities would occur at the project site under the No Project (No Development) Alternative. Therefore, *no impact* would occur.

Type of Equipment	Noise Level in dBA at 50 feet	
	Without Feasible Noise Control	With Feasible Noise Control <sup>1</sup>
Loader	79	75
Dozer or Tractor	80	75
Crane	83	75
Scraper	88	80
Excavator	88	80
Compactor	82	75
Pile Driver	101	95
Backhoe	85	75
Grader	85	75
Generator	78	75
Truck	91	75

<sup>1</sup> Feasible noise control includes the use of intake mufflers, exhaust mufflers, and engine shrouds in accordance with manufacturers' specifications.  
Sources: Federal Transit Administration 1995, EPA 1971

**Mitigation 6.4-1: Short-Term Construction Noise**

PP, AB, AC To the extent feasible, construction equipment shall be properly maintained and equipped with noise control, such as mufflers and shrouds, in accordance with manufacturers' specifications.

Construction operations involved with the proposed project shall be limited to the hours between 7 a.m. and 6 p.m. Monday through Saturday and 9 a.m. and 6 p.m. on Sunday. During such hours, these activities are exempt from the noise levels identified in the applicable standards.

AA No mitigation is required.

**Impact 6.4-2: Long-Term Area and Stationary Source Noise**

PP, AC **Residential Land Uses**

Occupation of the proposed residential dwellings could expose existing nearby residences to minor increases in ambient noise levels. Noise typically associated with such development includes amplified music, adult and children voices, as well as noise generated by various recreational activities, and lawn maintenance equipment. According to the City of Sacramento Noise Ordinance, noise sources associated with the maintenance of residential area property, provided such activities do not occur during the noise-sensitive hours of the day, are exempt from the standards. Activities associated with these land uses would result in only minor increases in ambient noise levels primarily during the day and evening hours and less frequently at night as perceived at the closest residential receptors. Noise levels generated by stationary sources, primarily industrial residential air conditioning units which are shielded, typically average less than 60 dBA at 3 feet from the source (EPA 1971). Consequently, stationary source noise

levels are not expected to exceed the City's maximum allowable exterior noise level of 60 dBA at adjacent existing or proposed noise-sensitive land uses. As a result, increased noise levels associated with the proposed residential land uses would be *less than significant*. The extent of this impact would be similar between the proposed project and Alternative AC because the residential development associated with each would include the less than significant stationary noise sources described above.

### **Nonresidential Land Uses**

Under the proposed project, the long-term operation of nonresidential land uses would include such noise sources as mechanical equipment, loading areas, and landscape maintenance equipment

Mechanical building equipment (e.g., heating, ventilation, and air conditioning systems, and boilers) associated with nonresidential land uses (commercial, retail, and office) could result in noise levels of approximately 55-85 dBA at 3 feet from the source (EPA 1971). However, such mechanical equipment systems are typically shielded from direct public exposure and usually housed on rooftops, within equipment rooms, or within exterior enclosures (EPA 1971). Therefore, it is not anticipated that noise from mechanical building equipment would adversely affect sensitive noise receptors after both shielding of these noise source and noise attenuation provided by the distance to sensitive receptors are taken into account.

Noise from the operation of loading areas, which would involve the use of forklifts and trucks, could reach intermittent levels of approximately 90 dBA at 50 feet from the source (EPA 1971). As indicated in Exhibit 3-3, the proposed onsite commercial, office and child care uses would be grouped along Cosumnes River Boulevard or West Stockton Boulevard rather than being located directly adjacent to existing sensitive noise receptors (i.e., senior housing to the northwest, and single-family residences to the south), while to the south, the proposed residential component of the project would be developed between the proposed commercial uses and the existing residences south of the project site.

For loading area noise generated in the southern portion of the project, the development of the residential component of the project between these noise sources and the southern residences would effectively buffer the southern residences from project loading area noise.

For loading area noise generated in the northern portion of the project, the loading area for the mini-anchor commercial uses and grocery store would be located approximately 240 and 420 feet from the senior housing, respectively, and would result in noise levels of approximately 76 dBA and 72 dBA at the senior housing, respectively. The drug store proposed at the corner of Cosumnes River Boulevard and Bruceville Road would not have a dedicated loading area, and thus it is anticipated that loading could occur from either the northwest and southeast sides of the building. If loading activities were to take place on the northwest side of the building, they would occur within approximately 210

feet of the senior housing and result in loading noise at the senior housing of approximately 78 dBA. If loading activities were to take place on the southeast side of the building, the building would effectively buffer loading area noise at this location from the senior housing. As indicated, loading area noise from the commercial uses proposed within the northwest portion of the project site would exceed both the daytime and nighttime outdoor stationary source noise thresholds for stationary noise sources of 55 dBA daytime and 50 dBA nighttime at the senior housing. This would represent a **significant** impact. The extent of this impact would be similar between the proposed project and Alternative AC because both would result in the development of the northwestern portion of the project site with the same commercial uses which would have the same loading areas.

The use of onsite landscape maintenance equipment, such as leaf blowers and gasoline-powered lawn mowers, could result in intermittent area noise levels that range from approximately 80 to 120 dBA at 3 feet, respectively (EPA 1971). Assuming an average equipment noise level of 100 dBA and a noise attenuation rate of 6 dBA per doubling of distance from the source, landscape maintenance equipment could result in exterior noise levels of approximately 75 dBA at 50 feet. This would result in exterior noise levels of up to 67 dBA at the existing senior housing located 140 feet northwest of the project site which would exceed the City's applicable area source exterior noise standards of 55 dBA daytime and 50 dBA nighttime at the senior housing. This would represent a **significant impact**. The extent of this impact would be the similar between the proposed project and Alternative AC because both would result in the development of the northwestern portion of the project site with the same commercial uses which would have the same requirements for landscape maintenance.

AB The General Plan Buildout Alternative would differ from the proposed project in that it would be restricted to multifamily residential development; no commercial, office, or childcare uses would be developed. Given this, the General Plan Buildout Alternative would (1) result in the same less-than-significant activity stationary source noise (i.e., noise from activity areas, mechanical equipment and landscape maintenance) as the residential component of the proposed project; and (2) avoid the significant loading area and landscape maintenance noise anticipated from the commercial component of the proposed project. Hence, a **less-than-significant** impact would occur.

AA No new development would occur at the project site under the No Project (No Development) Alternative. Therefore, **no impact** would occur.

#### **Mitigation 6.4-2: Long-Term Area and Stationary Source Noise**

PP, AC Loading activities (loading, unloading, truck movement and idling) at the proposed drug store shall occur on the southeast rather than the northwest side of the drug store building. Alternatively, the loading area for the proposed drug store shall be enclosed by a noise wall designed in conjunction with a noise consultant, and/or some other solution shall be identified by a noise consultant, to avoid significant loading activity noise impacts on the senior housing north of Cosumnes River Boulevard.



Landscape maintenance (use of leaf blowers and lawn mowers) within the portion of the proposed commercial uses located north of the northernmost Bruceville driveway shall be limited to the use of electric- rather than fuel-powered equipment.

At the time of submittal of the special permits for each of the individual project components, when the exact project design would be known, a detailed analysis of noise reduction requirements must be made by an acoustical engineer. Required noise reduction features included in the project design that would most effectively comply with the City of Sacramento and the State of California maximum acceptable interior and exterior noise levels for new development and the City's noise ordinance standards with respect to existing noise-sensitive receptors. Such noise reduction requirements may include, but are not necessarily limited to wall construction with resilient channels, staggered studs or double-stud walls, use of dual-glazed windows with laminated glass, limitation of the number and size of windows along walls located close to major noise sources, grouting or caulking to ensure exterior construction joints are air-tight, and the construction of soundwalls or berms.

AA, AB          No mitigation is required.

### **Impact 6.4-3: Long-Term Mobile Source Noise**

PP                The increase in daily traffic volumes resulting from implementation of the proposed project would generate increased noise levels along nearby roadways. The Federal Highway Administration's traffic noise prediction model (FHWA-RD-77-108) was used to calculate traffic noise levels along affected roadways for existing baseline traffic conditions, with and without implementation of the proposed project, based on the trip distribution estimates obtained from the traffic analysis prepared for this project. The project's contribution to the existing traffic noise levels along area roadways was determined by comparing the predicted noise levels with and without project-generated traffic.

Table 6.4-7 summarizes the  $L_{dn}$ /CNEL at 50 feet from the near travel lane centerline and distance from roadway centerline to the 55, 60, 65 and 70 dBA  $L_{dn}$ /CNEL contours for base year with and without the proposed project traffic with respect to the roadway segments in the project study area. In addition, Table 6.4-7 summarizes the net increase in noise level for with project conditions based on the predicted noise level at 50 feet from the near travel lane centerline in comparison to existing traffic conditions. The roadway noise levels presented in the table represent worst-case potential noise exposures, which assume no natural or artificial shielding between the roadway and the noise receptor.

Based on the traffic noise modeling contained in Table 6.4-7, project generated traffic would not result in a noticeable (i.e., 3 dBA or greater) increase in traffic noise along SR 99, Cosumnes River Boulevard, or Bruceville Road, but would result in a noticeable increase in traffic noise along (1) West Stockton Boulevard between the project site and

Table 6.4-7 Summary of Predicted Traffic Noise Levels for Base Year, Base Year + Proposed Project, and Base Year + Park-and-Ride Alternative Conditions						
Roadway Segment and Location	Distance (ft) from Roadway Centerline to L <sub>dn</sub> /CNEL (dBA)				L <sub>dn</sub> /CNEL (dBA) 50 ft from Centerline of near Travel Lane	Net Increase in Traffic Noise Level in Comparison to Existing Conditions
	70 CNEL	65 CNEL	60 CNEL	55 CNEL		
<b>Base Year</b>						
Cosumnes River Boulevard-Bruceville Road to SR 99	172.8	367.8	790.1	1701.0	75.41	+0.39
Bruceville Road-Cosumnes River Boulevard to Timberlake Way	99.8	214.7	462.4	995.9	73.79	+0.83
Bruceville Road-Cosumnes River Boulevard to Project Site	116.4	250.5	539.4	1161.7	74.80	+0.50
Bruceville Road-project site to Shasta Avenue	110.5	237.7	511.9	1102.6	74.46	+0.54
West Stockton Boulevard-project site to Shasta Avenue	N/A	N/A	N/A	52.6	54.59	0.00
West Stockton Boulevard-Shasta Avenue to Jacinto Road	N/A	N/A	54.4	116.7	59.81	0.00
SR 99/Cosumnes River Boulevard/Sheldon Road	539.8	1,116.3	2,500.7	5,386.2	82.92	+0.06
<b>Base Year + Proposed Project (PP)</b>						
Cosumnes River Boulevard-Bruceville Road to SR 99	188.4	401.8	863.6	1859.3	75.99	+0.97
Bruceville Road-Cosumnes River Boulevard to Timberlake Way	104.4	224.6	483.7	1041.8	74.09	+1.13
Bruceville Road-Cosumnes River Boulevard to Project Site	145.9	314.1	676.5	1457.1	76.27	+1.97
Bruceville Road-project site to Shasta Avenue	120.4	259.0	557.8	1201.3	75.02	+1.10
West Stockton Boulevard-project site to Shasta Avenue	N/A	N/A	106.4	228.8	64.21	+9.62
West Stockton Boulevard-Shasta Avenue to Jacinto Road	N/A	54.0	115.8	249.1	64.76	+4.95
SR 99-Cosumnes River Boulevard-Sheldon Road	542.2	1,166.5	2,511.9	5,410.4	82.95	+0.09
<b>Base Year + Park-and-Ride Alternative (AC)</b>						
Cosumnes River Boulevard-Bruceville Road to SR 99	104.7	225.3	485.2	1045.0	74.11	+0.99
Bruceville Road-Cosumnes River Boulevard to Timberlake Way	87.9	188.9	406.7	876.0	72.96	+1.15
Bruceville Road-Cosumnes River Boulevard to project site	146.7	315.9	680.3	1465.4	76.31	+2.01
Bruceville Road-project site to Shasta Avenue	120.7	259.6	559.2	1204.4	75.03	+1.11
West Stockton Boulevard-project site to Shasta Avenue	N/A	51.1	109.5	235.6	64.40	+9.81
West Stockton Boulevard-Shasta Avenue to Jacinto Road	N/A	54.0	115.8	249.1	64.76	+4.95
SR 99-Cosumnes River Boulevard-Sheldon Road	542.2	1,165.5	2,511.9	5,410.4	82.95	+0.09
N/A - Noise contour is within 50 feet of the roadway centerline and within the roadway right-of-way. Source: EDAW 2003						

Shasta Avenue; and (2) West Stockton Boulevard between Shasta Avenue and Jacinto Road. In addition, truck traffic from delivery to and from the nonresidential land uses on the local roadways (West Stockton Boulevard) could result in noise levels that exceed the applicable threshold due to tire/pavement contact, brake application, engine and exhaust noise. These increases in traffic noise along segments of West Stockton Boulevard would adversely impact the existing residences along West Stockton Boulevard from the southern boundary of the project site to Jacinto Road, and the proposed residential units along Stockton Boulevard and adjacent to the commercial, office and child care uses proposed along the south side of West Stockton Boulevard. Hence, a *significant* impact would occur.

AB Under the General Plan Buildout Alternative (AB), the project site would be developed under the existing General Plan land use designation resulting in approximately 1,114 residential units, but no commercial. The lack of commercial uses at the project site under this alternative would avoid the onsite traffic noise impacts to proposed onsite residential uses that would occur under the proposed project. However, the increase in daily traffic volumes resulting from implementation of the AB Alternative would generate increased noise levels along offsite roadways. According to the traffic analysis, the implementation of the AB Alternative would result in fewer trips than the proposed project (Fehr & Peers 2003). Thus, in comparison to the proposed project, the operation of the AB Alternative would result in slightly less traffic noise; however, traffic noise levels due to the implementation of Alternative AB would still be expected to result in a noticeable increase in ambient noise levels (i.e., 3 dBA or greater) along Stockton Boulevard between the southern portion of the project site and Jacinto Road. This would adversely impact the existing residences along West Stockton Boulevard and would represent a *significant* impact. The extent of this impact would be less than under the proposed project because less traffic and hence traffic noise would be generated offsite, and because no truck traffic would occur onsite.

AC Under the Park-and-Ride Alternative (AC), the project would be developed as proposed, except that a 500 space park-and-ride lot would be developed on the southwest parcel instead of 240 residential units. According to the traffic analysis, the implementation of the AC Alternative would result in more trips than the proposed project (Fehr & Peers 2003). The increase in daily traffic volumes resulting from implementation of the proposed project would generate increased noise levels along nearby roadways.

Based on the traffic noise modeling results contained in Table 6.4-7, traffic generated under the Park-and-Ride Alternative would not result in a noticeable (i.e., 3 dBA or greater) increase in traffic noise along SR 99, Cosumnes River Boulevard, or Bruceville Road, but would result in a noticeable increase in traffic noise along (1) West Stockton Boulevard between the project site and Shasta Avenue; and (2) West Stockton Boulevard between Shasta Avenue and Jacinto Road. In addition, truck traffic from delivery to and from the nonresidential land uses on the local roadways (West Stockton Boulevard) as well as car traffic associated with the park-and-ride lot, would be expected to result in noise levels that exceed the applicable threshold due to tire/pavement contact, brake application, engine and exhaust noise, and car alarms. These increases in traffic noise

along segments of West Stockton Boulevard would adversely impact the existing residences along West Stockton Boulevard from the southern boundary of the project site to Jacinto Road, and the proposed residential units along Stockton Boulevard and adjacent to the proposed commercial, office, child care, and park-and-ride lot uses. In addition, car traffic in the proposed park-and-ride lot would be expected to result in noise levels that exceed the applicable threshold at existing residences along Cotton Lane and Shasta Road due mainly to the potential for car alarms going off within the large 500 car lot. Hence, a *significant* impact would occur. The extent of this impact would be greater than under the proposed project given the slightly higher traffic volumes on West Stockton Boulevard under this alternative as well as the development of the park-and-ride lot.

AA No new development would occur at the project site under the No Project (No Development) Alternative. Therefore, *no impact* would occur.

### **Mitigation 6.4-3: Long-Term Mobile Source Noise**

PP, AC Onsite truck traffic and associated loading area operations shall be limited to the less noise-sensitive daytime hours of 6:00 a.m. to 8:00 p.m. Monday through Friday or 7:00 a.m. to 8:00 p.m. on Saturday and Sunday.

At the time of submittal of the special permits for each of the individual project components, when the exact project design would be known, a detailed analysis of noise reduction requirements must be made by an acoustical engineer. Required noise reduction features included in the project design that would most effectively comply with the City of Sacramento and the State of California maximum acceptable interior and exterior noise levels for new development and the City's noise ordinance standards with respect to existing noise-sensitive receptors. Such noise reduction requirements may include, but are not necessarily limited to wall construction with resilient channels, staggered studs or double-stud walls, use of dual-glazed windows with laminated glass, limitation of the number and size of windows along walls located close to major noise sources, grouting or caulking to ensure exterior construction joints are air-tight, and the construction of soundwalls or berms.

AB At the time of submittal of the special permits for each of the individual project components, when the exact project design would be known, a detailed analysis of noise reduction requirements must be made by an acoustical engineer. Required noise reduction features included in the project design that would most effectively comply with the City of Sacramento and the State of California maximum acceptable interior and exterior noise levels for new development and the City's noise ordinance standards with respect to existing noise-sensitive receptors. Such noise reduction requirements may include, but are not necessarily limited to wall construction with resilient channels, staggered studs or double-stud walls, use of dual-glazed windows with laminated glass, limitation of the number and size of windows along walls located close to major noise sources, grouting or caulking to ensure exterior construction joints are air-tight, and the construction of soundwalls or berms.

AA No mitigation is required.

**Impact 6.4-4: Compatibility of the Proposed Land Uses with Projected Onsite Noise Levels.**

PP As discussed previously, ambient noise levels in the project site are influenced primarily by vehicle traffic along area roadways. The Federal Highway Administration's traffic noise prediction model (FHWA-RD-77-108) was used to calculate traffic noise levels along affected roadways for existing baseline traffic conditions, with and without implementation of the proposed project, based on the trip distribution estimates obtained from the traffic analysis prepared for this project. The project's contribution to the existing traffic noise levels along area roadways was determined by comparing the predicted noise levels with and without project-generated traffic.

Table 6.4-7 summarizes the  $L_{dn}/CNEL$  at 50 feet from the near travel lane centerline and distance from roadway centerline to the 55, 60, 65 and 70 dBA  $L_{dn}/CNEL$  contours for base year with and without the proposed project traffic with respect to the roadway segments in the project study area. The  $L_{dn}/CNEL$  50 feet from the near travel lane centerline would be approximately 75 dBA at the north and west of the site and approximately 83 dBA in the east (refer to Table 6.4-7). The location of the noise contours should be considered to represent bands of similar noise exposure, rather than absolute lines of demarcation. Actual noise levels would vary from day to day, dependent on a number of factors, including local traffic volumes, shielding from existing structures, variations in attenuation rates due to changes in surface parameters, and meteorological conditions.

As indicated previously, the nearest travel lanes to the project site associated with SR 99, Cosumnes River Boulevard, and Bruceville Road are located approximately 50, 10, and 5 feet from the project site, respectively. Based on the modeling conducted, predicted noise levels at the project site boundaries would reach approximately 83 dBA along SR 99, 76 dBA along Cosumnes River Boulevard, and 75 dBA under Base Year + Proposed Project conditions.

Proposed onsite noise-sensitive receptors would include the child care center, multifamily residential, and senior housing. The nearest of these proposed uses to Cosumnes River Boulevard would be the Child Care Center which would be located 240 feet from, and within the 65 CNEl noise contour of, Cosumnes River Boulevard. According to Table 6.4-3, the maximum exterior noise level for new school land uses noise levels for schools, which is conservatively used here as the standard for child care facilities, is 60 dB. Based on the above, noise from Cosumnes River Boulevard could potentially exceed the City's acceptable noise exposure standards. However, the proposed commercial uses along Cosumnes River Boulevard and on the north side of West Stockton Boulevard would effectively buffer the child care center from traffic noise from Cosumnes River Boulevard. Hence, a *less-than-significant* impact would occur.

The nearest proposed onsite sensitive noise receptors to SR 99 would be the proposed senior housing to be located in the southeast corner of the project site. This housing would be located within approximately 60 feet, and well within the 70 dBA noise contour of SR 99 (which would extend approximately 500 feet into the eastern portion of the project site). According to Table 6.4-3, the maximum interior and exterior noise levels for new multifamily land uses are 45 dB and 60 dB in common outdoor use areas. Based on the above, noise from SR 99 would exceed the City's acceptable noise exposure standards. This would represent a *significant* impact.

The nearest proposed onsite sensitive noise receptors to Bruceville Road would be the proposed multifamily housing to be located in the southwest portion of the project site. This housing would be located within approximately 20 feet, and within the well within the 70 dBA noise contour of Bruceville Road (which would extend approximately 102 feet into the western portion of the project site). According to Table 6.4-3, the maximum acceptable interior and exterior noise levels for new multifamily land uses are 45 dB and 60 dB in common outdoor use areas. Based on the above, noise from Bruceville Road would exceed the City's normally acceptable noise exposure standard. This would represent a *significant* impact.

AB Under the General Plan Buildout Alternative, the whole of the project site would be developed with multifamily residential uses. Because this alternative would result in residential development along SR 99 and Bruceville Road as would the proposed project, it would result in *significant* noise compatibility impacts to these proposed onsite residential uses like the proposed project. However, the extent of these impacts would be greater because residential development under this alternative would extend the full length of the project site's frontages with SR 99 and Bruceville Road, thus adversely impacting a greater number of proposed onsite residential units.

While the proposed project would not develop noise-sensitive land uses along Cosumnes River Boulevard, the General Plan Buildout Alternative would include the development of multifamily residential uses along the project sites Cosumnes River Boulevard frontage. This housing would be located within approximately 25 feet, and well within the 70-dBA noise contour of Cosumnes River Boulevard (which would extend approximately 150 feet into the northern portion of the project site). Based on the above, noise from Cosumnes River Boulevard would exceed the City's maximum acceptable noise exposure standards. This would represent a *significant* impact.

AC Under the General Plan Buildout Alternative, a park-and-ride lot would be developed within the southwestern portion of the project site instead of multifamily residential uses, while the balance of the project site would be developed as proposed under the proposed project. Because this alternative would result in residential development along Cosumnes River Boulevard and SR 99 similar to the proposed project, it would result in the same *less-than-significant* and *significant* noise compatibility impacts, respectively.

Under this alternative, residential development would not occur along the Bruceville Road frontage as would occur under the proposed project, but rather would be set back

from Bruceville Road approximately 420 feet. Hence, the nearest proposed onsite sensitive use to Bruceville Road under this alternative would fall within the 60 dBA noise contour of Bruceville Road. Because residential development within the 60 dBA noise contour is acceptable under City guidelines, a *less-than-significant* impact would occur.

AA No new development would occur at the project site under the No Project (No Development) Alternative. Therefore, *no impact* would occur.

**Mitigation 6.4-4: Compatibility of the Proposed Land Uses with Projected Onsite Noise Levels.**

PP, AB, AC At the time of submission of the special permits for each of the individual project components, when the exact project design would be known, a detailed analysis of noise reduction requirements must be made by an acoustical engineer. Required noise reduction features included in the project design that would most effectively comply with the City of Sacramento and the State of California maximum acceptable interior and exterior noise levels for new development. Such noise reduction requirements measures could include, but are not necessarily limited to wall construction with resilient channels, staggered studs or double-stud walls, use of dual-glazed windows with laminated glass, limitation of the number and size of windows along wall located close to major noise sources, grouting or caulking to ensure exterior construction joint are air-tight, and the construction of soundwalls or berms.

AA No mitigation is required.

**Impact 6.4-5: Noise Impacts (Cumulative)**

PP, AB, AC The proposed project and the development alternatives (Alternatives AB and AC) would result in significant noise impacts before mitigation associated with short-term construction activities, long-term area and stationary sources, long-term mobile sources, and land use compatibility and significant noise impacts after mitigation associated with long-term mobile sources and land use compatibility.

Noise is a localized occurrence and attenuates with distance. Therefore, only that future cumulative development within the direct vicinity of the project site would have the potential to add to anticipated project generated noise, thus resulting in cumulative noise impacts. Several related projects are planned in the immediate vicinity of the proposed project, including the South Sacramento Corridor Phase 2 Project, Strawberry Creek Centre, and Bruceville Road Widening. In addition, vacant and/or underutilized land exists to the south of the project site which would be subject to future development.

Each of the above cumulative projects would generate the types of noise anticipated under the proposed project, and like the proposed project, would have the potential to both affect existing adjacent noise-sensitive uses in the area and result in onsite noise compatibility impacts to future noise-sensitive land uses. In addition, regional cumulative increases in traffic volumes on SR 99, Cosumnes River Boulevard, and Bruceville Road would contribute to this anticipated localized increase in noise.

Because of the proximity of the local area to major long-term mobile noise sources (i.e., SR 99, Cosumnes River Boulevard, Bruceville Road), and because cumulative development would result in an increase in traffic volumes and associated traffic noise from these sources, it is anticipated the cumulative long-term mobile source noise impacts on existing and proposed future noise-sensitive land uses in the area would represent a ***significant and unavoidable cumulative*** impact. The proposed project and the development alternatives (Alternatives AB and AC) would contribute to this impact. The extent of this impact would be similar between the proposed project and each of the development alternatives because, although the traffic volumes generated by each would vary, the differences in traffic volumes would not result in an audible (i.e., 3 dBA or more) difference in mobile-source noise.

The anticipated cumulative increases in short-term construction noise and long-term area and stationary sources noise is more problematic in that feasible mitigation is usually available to mitigate this type of noise given the low rise and nonindustrial nature of the type of cumulative development that would occur in the area. Without appropriate mitigation, cumulative development in the area could potentially result in significant short-term construction noise and long-term area and stationary sources noise. However, it is anticipated that adequate mitigation would be provided during the CEQA review of these cumulative projects to result in an overall ***less-than-significant cumulative*** impact.

AA No new development would occur at the project site under the No Project (No Development) Alternative, and therefore there would be no contribution to the anticipated increase in area-wide noise levels. Hence, ***no impact*** would occur.

#### **Mitigation 6.4-5: Noise Impacts (Cumulative)**

PP, AB, AC Cumulative development should implement Mitigation Measures 6.4-1 through 6.4-4 to the extent that these measures are applicable.

AA No mitigation is required.

#### **6.4.5 LEVEL OF SIGNIFICANCE AFTER MITIGATION**

Because the project applicant does not have control of offsite parcels, the development of a noise wall along the west side of West Stockton Boulevard from the southern boundary of the project site to Jacinto Road, which would be required to avoid significant project traffic noise impacts on the existing residences along this segment of West Stockton Boulevard, is not possible. Hence, a ***significant and unavoidable*** traffic noise impact would occur under the proposed project and each of the development alternatives (Alternatives AB and AC). The extent of this impact would be less under Alternative AB than the proposed project because Alternative AB would generate less traffic. The extent of this impact would be greater under Alternative AC than the proposed project because Alternative AC would generate more traffic.



Implementation of the recommended mitigation measures would reduce the interior and exterior noise levels of the proposed onsite sensitive uses associated with traffic noise from adjacent streets. However, interior and exterior noise levels at the proposed senior housing and multifamily residential uses would still likely exceed the acceptable levels as defined by the City in its noise compatibility standards, especially at the upper stories. As a result, a *significant and unavoidable* noise compatibility impact would occur to proposed onsite noise-sensitive uses. The extent of this impact would be higher under Alternative AB as a higher number of proposed onsite sensitive land uses would be affected, and less under Alternative AC as less proposed onsite sensitive land uses would be affected.

The proposed project would contribute to *significant and unavoidable cumulative* noise impacts with respect to long-term mobile source noise and land use compatibility.

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## **6.5 DRAINAGE**

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## **6.5 DRAINAGE/SURFACE WATER QUALITY**

### **6.5.1 INTRODUCTION**

This section of the EIR evaluates the impacts of the proposed project and alternatives on drainage and runoff water quality, and identifies mitigation measures designed to reduce any identified significant drainage and surface water quality impacts to a less-than-significant level. The information presented in this section was obtained from the following sources: *Jacinto Creek Planning Area Drainage Master Plan Report* (April 1996); *City of Sacramento General Plan Update* (January 1988); *City of Sacramento General Plan Update EIR* (1987); *South Sacramento Community Plan* (August 1986); *65<sup>th</sup> Street Transit Village DEIR* (December 2001); *College Square Preliminary Drainage Report* (December 2002); and the *College Square Project Drainage Report* (July 2003). The *College Square Preliminary Drainage Report* and *College Square Project Drainage Report* (without Appendices A & B) are included as Appendices E-1 and E-2 of this EIR.

### **6.5.2 ENVIRONMENTAL SETTING**

#### **DRAINAGE**

##### **Regional Setting**

The City of Sacramento is located at the confluence of the Sacramento River and the American River in the Sacramento River Basin. The Sacramento Basin encompasses approximately 26,500 square miles and is bounded by the Cascade Range and Trinity Mountains to the north, the Delta-Central Sierra area to the south, the Sierra Nevada Mountains to the east, and the Coast Ranges to the west. Six small tributaries of the Sacramento River pass through and provide drainage for the Sacramento General Plan Update (SGPU) area. These include Dry Creek, Magpie Creek and Arcade Creek in the northern portion of the City, and Morrison Creek, Elder Creek, and Laguna Creek in the southern portion of the City. The tributaries in the southern portion of the City join to form a single Sacramento River tributary (Morrison Creek) (Sacramento General Plan Update 1988). Forty miles south of the SGPU area, the Sacramento River joins the San Joaquin River which drains into the Sacramento Delta and San Francisco Bay.

Major storm events can produce high flows throughout the Sacramento River system. Flood control facilities along these rivers consist of a comprehensive system of dams, levees, overflow weirs, drainage pumping plants, and flood control bypass channels. Such facilities harness flood flows by regulating the amount of water passing through a particular reach of the river. The Sacramento River flood control system downstream of the American River was designed to hold a maximum flow of 110,000 cubic feet per second (cfs) with a minimum of three feet of freeboard (EDAW 2001).

During major flood control events, high flows can occur throughout the Sacramento River system. The relative timing of these flows can accentuate the flood risk, because high water levels in a primary system can result in a “backwater” effect that reduces the effective slope and capacity of the tributary system. Due to the relatively flat terrain of the Central Valley, this “backwater” effect is a significant controlling factor for most natural streams and flood control or drainage channels in the region. This effect was demonstrated during the February 1986 regional flood event.

The City of Sacramento's stormwater drainage system consists of a network of natural channels, canals, levees, subsurface drainages, and pumping stations that ultimately drain into the Sacramento and American Rivers. Stormwater in the City, specifically urban runoff, is disposed of in the City via one of four methods: (1) conveyance to the Sacramento and American rivers through sumps, pipelines, and treatment facilities organized primarily by drainage basin; (2) conveyance by the City's Combined Sewer System (CSS), along with sewage, to the Sacramento Regional Wastewater Treatment Plant (SRWTP); (3) onsite detention; or (4) discharge to a closed system (such as to a wetlands which does not discharge to the Sacramento or American rivers).

### **Local Setting**

The project site is located approximately 4.4 miles east of the Sacramento River, 2.4 miles east of Morrison Creek, one mile north of Jacinto Creek, one mile northeast of Laguna Creek, and across Cosumnes River Boulevard from Strawberry Creek and Union House Creek. Strawberry and Union House creeks are tributary to Laguna Creek, which in turn is tributary to Morrison Creek. Morrison Creek feeds into Beach Lake which is a part of the wetlands system of the Stone Lakes National Wildlife Refuge. The refuge is located between Interstate 5 (I-5) and the Sacramento River. Jacinto Creek feeds directly into the Stone Lakes wetland.

The project site is not located within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary Map, Flood Insurance Rate Map, or other flood hazard delineation map. The northern portion of the site is located within the 500-year floodplain, while the southern portion is split between the 500-year floodplain and the No Flood Zone.<sup>1</sup>

The 63-acre project site is located within the northernmost portion of a 117.5-acre watershed bounded by Cosumnes River Boulevard, Bruceville Road, State Route 99, and Shasta Avenue/Cotton Lane. This watershed, identified as Watershed #1 in the *Jacinto Creek Planning Area Drainage Master Plan Report* as well as the two subsequent drainage reports for the project, lies at an elevation of between 25 and 29 feet above mean sea level (msl).

There are currently no significant storm drains on the project site. Existing site drainage is to the north and west. To the north, existing site drainage travels to the south side of Cosumnes River Boulevard, where it enters an existing 18-inch drain which flows north to Strawberry Creek. To the west, existing site drainage drains westerly to Bruceville Road where it enters an existing inadequate ditch system which feeds into a 12" storm drain in Bruceville Road. The 12-inch storm drain flows westerly through Cosumnes River College to a pump station that discharges into Jacinto Creek.

### **Drainage Planning Setting**

Watershed #1 has been analyzed by three drainage reports. The first drainage report, *Jacinto Creek Planning Area Drainage Master Plan Report*, was prepared in 1996 for the neighboring Jacinto Creek Planning Area which lies immediately south of the project site. The second and third reports are titled

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<sup>1</sup> FEMA Q# Flood Data, 1996.

*College Square Preliminary Drainage Report* (December 2002) and *College Square Project Drainage Report* (July 2003) and have been prepared at the request of the project proponent.

All three reports contemplate that drainage from Watershed #1 will flow northward to Strawberry Creek or Union House Creek which is located directly north of the project site, along the north side of Cosumnes River Boulevard (just west of Bruceville Road. Strawberry Creek drains into Union House Creek). In this area, Strawberry Creek is a manmade concrete lined trapezoidal channel while Union House Creek is a manmade trapezoidal channel with a concrete bottom and earth side slopes. Strawberry Creek discharges into Union House Creek via a concrete lined trapezoidal chute. Strawberry Creek transitions to the lower elevation of Union House Creek (approximately 4.5 feet) via this chute.

All three drainage studies contemplate an underground storm drain system which meets the City of Sacramento drainage criteria and is capable of conveying the projected 10-year runoff from the developed watershed. The *Jacinto Creek Planning Area Drainage Master Plan Report* anticipated a system of underground pipes and box culverts which drain to Strawberry Creek. The *College Square Preliminary Drainage Report* and the *College Square Project Drainage Report* anticipate an underground pipeline system which discharges to Union House Creek in order to take advantage of the lower discharge elevation which allows a more efficient design of the underground storm drain system.

The *College Square Project Drainage Report* has analyzed the impact of the proposed College Square Development within watershed #1 on the 100-year discharges in Union House Creek. For this analysis, the land use for the balance of watershed #1 was assumed to be the same as analyzed in the *Jacinto Creek Planning Area Drainage Master Plan Report*.

## **RUNOFF WATER QUALITY**

The City relies on surface water from the Sacramento and American Rivers for most of its potable water supply. The conversion of farmland to urban uses has reduced the quantity of agricultural herbicides, pesticides, and fertilizers making their way to these surface waters, but has increased the quantity of pollutants reaching these waters from construction sites, and from residential, commercial, and industrial development. Construction activities create sediment and construction-related chemicals (e.g., fuels, paints, adhesives) that can be washed into surface waters by stormwater runoff. The deposition of pollutants (e.g., gas, oil, carbons) onto roadways by automobile traffic, the use of chemicals by residential, commercial and industrial uses, and the open storage of refuse and other materials can similarly result in the transport of pollutants to surface waters by stormwater runoff.

There are varied concentrations of pollutants carried in construction and urban runoff. The pollutant concentration in runoff is typically highest during the first major rainfall event after the dry season. In urban areas, this is known as the “first flush” which can carry a variety of accumulated pollutants from construction sites, roadways, parking lots, rooftops, and other surfaces. Pollutant concentrations in urban runoff are extremely variable and are dependent upon the storm intensity, land use, elapsed time since the previous storm, and the volume of runoff. Water Quality Ponds, grassy swales, filters, and Best Management Practices (BMPs) are often implemented to reduce construction and first flush pollutants in runoff associated with development projects.

The project site is currently in a vacant condition with approximately 5% impervious surface, and generates constituents in stormwater runoff consistent with this type of land use. As indicated previously, runoff from the project site currently drains to an existing 18-inch storm drain which discharges to Strawberry Creek or drains to an existing inadequate drainage ditch along Bruceville Road which feeds into a 12” storm drain that eventually discharges to Jacinto Creek. Strawberry Creek is tributary to Union House Creek, Laguna Creek and Morrison Creek which ultimately discharges into Beach Lake which is part of the wetland system of the Stone Lakes National Wildlife Refuge. Jacinto Creek is tributary to the Stone Lakes wetland. As indicated previously, the Stone Lakes wetland is a closed system, and does not discharge to the Sacramento River or San Joaquin Delta.

The College Square project proposes to construct grassy swales and other operational BMPs in accordance with City of Sacramento design criteria to treat post construction storm water runoff from the site. Suitable BMPs for construction activities would be implemented during project construction. The BMPs would be included as part of the Storm Water Pollution Prevention Plan (SWPPP) for construction activities as required by the State of California Regional Water Quality Control Board and the City of Sacramento.

### **6.5.3 REGULATORY PROVISIONS**

#### **DRAINAGE**

##### **FEMA/City of Sacramento Flood Plain Management Plan**

Both the Federal Emergency Management Agency (FEMA) and the City of Sacramento have regulations for construction within the 100-year floodplain. These regulations include the City of Sacramento Flood Plain Management Plan, which requires, among other things, that structures be elevated or flood proofed to a minimum of one foot above the base flood elevation identified on the FEMA Flood Insurance Rate Map (FIRM). Because the project site is located outside the 100-year floodplain, project development is not subject to this regulation.

##### **City of Sacramento City Drainage Study Requirements**

The City of Sacramento requires applicants to prepare a drainage study for their project to the satisfaction of the City Department of Utilities as a condition of approval for entitlements. This study is normally done after the project has received the conditions of entitlements, and prior to the issuance of a building permit. A result of the drainage study may be that the applicant is required to mitigate drainage impacts that are identified onsite or offsite. Mitigation may include, but not be limited to, construction of new drainage facilities onsite or offsite, enlarging existing drainage facilities, and/or providing onsite retention or detention of storm water runoff.

##### **South Sacramento Community Plan**

The South Sacramento Community Plan (SSCP) has several goals (no policies) applicable to the proposed project. These are identified below.

- ▶ Goal: Provide adequate drainage for all urbanized or developing neighborhoods.
- ▶ Goal: Create drainage systems which have as few adverse impacts on the environment as possible.

## **RUNOFF WATER QUALITY**

### **Clean Water Act, Porter-Cologne Water Quality Control Act, and NPDES**

The State Water Resources Control Board (SWRCB) and the Regional Water Quality Control Board (RWQCB) – Central Valley Region, established water quality standards required by Section 303 of the Clean Water Act (CWA) and the Porter-Cologne Water Quality Control Act. The Water Quality Control Plan, or Basin Plan, prepared by the RWQCB has established water quality standards and objectives for the Sacramento River and its tributaries, including the American River. The Basin Plan establishes water quality objectives, and implementation programs to meet stated objectives and to protect the beneficial uses of waters in the Sacramento River Basin. In cases where the Basin Plan does not contain a standard for a particular pollutant, other criteria are used to establish the standard. Other criteria may be applied from SWRCB documents (e.g., the Pollutant Policy Document) or from the Environmental Protection Agency (EPA) water quality criteria developed under Section 304(a) of the CWA.

Under Section 303(d) of the CWA, states are required to develop lists of water bodies that will not attain water quality objectives after implementation of required levels of treatment by point source dischargers (municipalities and industries). For these water bodies, Section 303(d) requires that the state identify a total maximum daily load (TMDL) for each of the listed pollutants. The TMDL is the amount of loading that the water body can receive and still be in compliance with water quality objectives. National Pollutant Discharge Elimination System (NPDES) permit limits for listed pollutants must be consistent with the waste load allocation prescribed in the TMDL. After implementation of the TMDL, the state anticipates that the problems that led to placement of a given pollutant on the 303(d) list would be remediated.

The CWA prohibits the discharge of pollutants to navigable waters from a point source unless authorized by an NPDES permit. The City of Sacramento has obtained an NPDES permit from the SWRCB under the requirements of the EPA and Section 402 of the CWA. The goal of the permit is to reduce pollutants found in urban stormwater runoff. The NPDES permit requires the use of best management practices (BMPs) to reduce pollutants in urban runoff. These BMPs include structural and source control measures designed to reduce and avoid the conveyance of pollutants to protected waters via urban runoff. For construction sites of one acre or more in size, an NPDES General Permit for Construction Related Activities is required as is the preparation of a Stormwater Pollution Prevention Plan (SWPPP). A SWPPP identifies measures to minimize sediment and pollutants in runoff from the construction site.

The receiving water bodies for the proposed project (Union House Creek, Laguna Creek, Beach Lake) are not listed as impaired water bodies under Section 303(d) of the CWA (CEPA 2002). However, the conveyance of these drainages ultimately discharge into the federal and state protected Stone Lakes National Wildlife Refuge. Hence the above referenced NPDES general permit and SWPPP provisions must be complied with.

The proposed discharge should be included in the City's NPDES permit. In addition, project construction activities would require an NPDES General Permit for Construction Related Activities. A SWPPP would need to be prepared by the applicant for these construction activities and a Notice of Intent (NOI) must be filed with State of California Regional Water Quality Control Board.

### **City of Sacramento Stormwater Management Program**

The City's Stormwater Management Program has been developed in accordance with the CWA and the City's NPDES Discharge Elimination Permit to reduce pollutants from new development to the maximum extent practicable. The City requires applicants to prepare a water quality mitigation plan for their project to the satisfaction of the City Department of Utilities. This study is normally done after the project has received the conditions of entitlements. The following are typical City of Sacramento conditions for runoff-related surface water quality impacts:

- ▶ Construction Requirements:
  - Grading, Erosion and Sediment Control Ordinance: Applicants for development must comply with the City of Sacramento's Grading, Erosion and Sediment Control Ordinance (Ordinance 93-068). This ordinance requires applicants to prepare plans to control erosion and sediment both during and after construction, prepare preliminary and final grading plans, and prepare plans to control urban runoff from the project site during construction.
  - State NPDES Permits: Projects larger than 1 acre in size are required to comply with the State NPDES General Permit for Stormwater Discharges Associated with Construction Activity. To comply with this permit, applicants must file a Notice of Intent (NOI) with the SWRCB and prepare a SWPPP prior to construction.
  - Post Construction (Permanent) Stormwater Quality Control Measures: Areas with Regional Water Quality Control Facilities: Post construction (permanent) stormwater quality control measures shall be incorporated into development to minimize the increase of urban runoff pollution caused by development of an area. For projects of larger than one acre, both source controls and onsite treatment controls are required (improvement plans must include onsite treatment control measures). Refer to the *Guidance Manual for Onsite Stormwater Quality Control Measures* dated January 2000 for appropriate source control measures

The proposed project would be subject to appropriate requirements as determined by the City Department of Utilities.

## **6.5.4 IMPACTS AND MITIGATION MEASURES**

### **METHOD OF ANALYSIS**

The evaluation of flooding impacts in this section was accomplished via a review of FEMA FIRMs to determine whether the project site is located within a 100-year floodplain and thus subject to potential flooding from 100-year storm flows.



The evaluation of drainage impacts was undertaken by qualitatively evaluating and comparing post construction water surface elevations to pre-project conditions in Union House Creek.

The evaluation of runoff water quality was accomplished by qualitatively evaluating the consistency of the proposed project with applicable runoff surface water quality plans and requirements (pre and post condition).

## **STANDARDS OF SIGNIFICANCE**

For the purpose of this EIR, an impact is considered significant if the proposed College Square PUD would result in any of the following:

- ▶ Flooding
  - Expose persons or structures to flood hazards as a result of being located within the 100-year floodplain as defined by the Federal Emergency Management Agency.
- ▶ Drainage
  - Create significant increases in the water surface elevations within downstream drainage ways (Union House Creek) as a result of development of College Square.
- ▶ Surface Water Quality
  - Be inconsistent with applicable surface water quality plans and requirements and maximize the use of BMPs to reduce urban pollutants in runoff to the maximum extent feasible. Applicable surface water quality plans and requirements include: City of Sacramento Guidance Manual for Onsite Stormwater Quality Control Measures; Clean Water Act; National Pollutant Discharge Elimination System (NPDES) General Permit for Construction Related Activities; and Storm Water Pollution Prevention Plan (SWPPP).

## **IMPACTS AND MITIGATION MEASURES**

### **Impact 6.5-1: Flooding**

PP, AA, AB, AC The project site is not located within a 100-year floodplain as defined by FEMA, and thus would not expose persons or structures to 100-year flood hazards. *No impact* would occur.

### **Mitigation 6.5-1: Flooding**

PP, AA, AB, AC No mitigation is required.

## **Impact 6.5-2: Drainage**

PP, AB, AC

The impact of the 117 acre Watershed #1 which includes the proposed project and the proposed project with the park and ride was analyzed in the *College Square Drainage Report* and found to decrease the water surface elevations in Union House Creek.. The analysis assumes the southerly neighboring 54 acres of Watershed #1, which lie south of College Square, are developed in accordance with the anticipated general plan buildout.

The proposed storm drain system (assumed to be developed under the proposed project and both of the development alternatives discussed in the *College Square Preliminary Drainage Report*) has been designed in accordance with the Sacramento City Storm Drainage Design Standards. Tables including pipe size, inverts and cover are provided in the report and included in Appendix E-2 of this EIR.

Because watershed #1 includes areas outside of the project applicant's control, it is unknown at this time exactly how those offsite areas would accommodate runoff associated with those areas. Therefore, two drainage alternatives were analyzed, as described below, that address the two drainage possibilities for these offsite areas (i.e., with detention ponds and without detention ponds). Exhibit 3-5 shows the proposed storm drain layout. Under both alternatives, (1) offsite drainage improvements would be required (a new 66" storm drain and outfall from Bruceville Road to Union House Creek); and (2) onsite grassy swales or other operational BMPs would be constructed.

1. Alternative 1 is a gravity trunk drain system that would accommodate developed flow rates for the College Square project site and existing flow rates for the offsite area tributary to the system. This alternative makes the assumption that the 54-acre offsite tributary area south of the project site, which is outside of the project applicant's control, would eventually incorporate detention ponds once those properties are developed. Those detention ponds would release flows at a rate equal to or less than the existing conditions. Under this alternative, a new storm drain system would be developed for the project. Elements would include new storm drains in Bruceville Road along the project site's frontage which vary in size from 24-inch to 60-inch; new storm drains in West Stockton Boulevard which vary from 18-inch to 60-inch; and new storm drains in the proposed North-South Road which vary from 30-inch to 42-inch.
2. Alternative 2 is also a gravity trunk drain system that would accommodate developed flow rates for the entire watershed without detention. The 54 acres within watershed #1 south of College Square would be expected under this alternative to be developed as a medium density residential use and a park. Under this alternative, new storm drains varying from 30-inch to 66-inch would be developed in Bruceville Road along the project site's frontage; new storm drains varying from 18-inch to 60-inch would be constructed in West Stockton

Boulevard; and new storm drains varying from 42-inch to 48-inch would be constructed in the proposed North-South Road.

Under both of the drainage alternatives above, new storm drains would be constructed in Bruceville Road, West Stockton Boulevard, and the proposed North-South Street. The main difference between the two alternatives is the size of the pipes. Typically, the pipes for Alternative 2 are one pipe size larger than Alternative 1 to accommodate the lack of detention in the neighboring 54 acres of watershed #1 south of the project site (Exhibit 3-5 shows pipe sizes under Alternative 1). Under both alternatives, the onsite storm drain system, the offsite storm drain system and the outfall would be sized to safely convey stormwater through and off the project site. The proposed trunk storm drain along Bruceville Road, the storm drain from the northwest corner of the project site to Union House Creek, and the associated outfall would be sized to accommodate flows from both the project site and the 54 acres of the neighboring watershed south of the site. Alternative 2 is proposed to be developed, unless the City decides to require detention within the 54 acres of Watershed #1 south of the project site, in which case Alternative 1 would be developed.

The drainage outfall for the watershed is planned at Union House Creek, approximately 400 feet downstream from the Cosumnes River Boulevard/Bruceville Road intersection. During review of the *Jacinto Creek Planning Area Drainage Master Plan Report* by the applicant's engineer (Doucet), it was observed that the report's planned drainage outfall water surface elevation at Strawberry Creek was substantially higher than the connection point of Strawberry Creek to Union House Creek. The primary reason for this substantial difference in water surface elevation is the connecting drainage chute which drops 4.5 feet between Strawberry Creek and Union House Creek. It was determined by the applicant's engineer that a new storm drain could be constructed across Cosumnes River Boulevard west of Bruceville Road, as shown in Exhibit 3-5, which could take advantage of the lower water surface elevation in Union House Creek and provide additional hydraulic gradient, which would enable the use of smaller pipes than anticipated by the *Jacinto Creek Planning Area Drainage Master Plan Report*.

As indicated above, the proposed storm drain system has been developed in accordance with the Sacramento City Storm Drainage Design Standards. The system proposes to oversize the proposed storm drain system to accommodate runoff from the southern portion of Watershed #1; and to discharge the runoff to Union House Creek. Hence, the proposed storm drain system would safely convey stormwater runoff through and off the project site without onsite or downstream flooding, and **a less-than- significant** impact would occur. The extent of this impact would be slightly less under the General Plan Buildout Alternative because slightly less post-construction runoff would be generated. The extent of this impact would be slightly greater under the Park-and-Ride Alternative because slightly more post-construction runoff would be generated. Prior to development of the site, the project applicant

would be required to submit final drainage plans to the City's Public Works Department for review and approval. Through this review and approval, the adequacy of the proposed storm drains to accommodate the required runoff volumes would be assured

As indicated above, the project applicant has proposed two alternatives for the proposed storm drain system. Alternative 1 would size the proposed storm drain facilities assuming detention within the 54-acre up-stream, off-site portion of watershed #1 (i.e., be designed with less capacity). Alternative 2 would size the proposed storm drain facilities assuming no upstream detention (i.e., be designed with greater capacity). Implementing Alternative 1 without the upstream detention could result in on-site or downstream flooding which would represent a *significant* impact.

AA The No Project (No Development) Alternative would not alter existing drainage conditions at the project site. No development would occur on the project site that would alter existing drainage patterns or the quantity of stormwater runoff generated on the project site. Hence, *no impact* would occur.

#### **Mitigation 6.5-2: Drainage**

PP, AB, AC The project applicant shall size the proposed Bruceville Road trunk storm drain, West Stockton Boulevard storm drain, and the outfall to Union House Creek assuming no onsite detention within the parcels upstream of the project site within Watershed #1 (i.e., implement the larger pipes as called for under the Alternative 2 storm drain system).

AA No mitigation is required.

#### **Impact 6.5-3: Runoff Water Quality**

PP, AB, AC The water quality plan for the proposed project (and the development alternatives) includes proposals for a comprehensive set of construction and operational BMPs to help reduce the amount of urban pollutants in stormwater runoff from the project site to the greatest extent feasible. The proposed construction and operational BMPs, and/or the BMPs most likely to be required by the RWQCB as part of the permitting for the proposed project, are discussed below.

Proposed Construction BMPs: Prior to construction, the project applicant must file a Notice of Intent to comply with the NPDES General Permit for Construction Related Activities with the Regional Water Quality Control Board (RWQCB). In compliance with the permit, the project applicant would prepare a SWPPP for all stages of construction, and the project site would be monitored by qualified erosion control inspectors for compliance with the above. Construction BMPs would be

incorporated into the project's SWPPP to reduce first flush siltation and pollutants in runoff from the project site. Such BMPs may include but not be limited to:

- ▶ Installation of straw wattle around the perimeter of the construction area.
- ▶ Slope protection, which could include tracking with machinery, hydro seeding, hydro mulching, and/or installation of erosion control blankets.
- ▶ Proper construction scheduling.
- ▶ Temporary sediment basins.
- ▶ Drain-inlet bags with straw wattle or sand bags for paved areas.
- ▶ Dust control measures (e.g., water spraying of areas under grading).
- ▶ Use of concrete washouts.
- ▶ Contained equipment maintenance area.
- ▶ Installation of stabilized construction entrances.

Proposed Operational BMPs: Storm water runoff from the project site would be diverted into onsite water quality pre-treatment systems before entering the proposed storm drain system. The project proposes a pre-treatment system consisting of grassy swales or other structural BMPs as recommended by the *City of Sacramento Guidance Manual for Onsite Stormwater Quality Control Measures* (January 2000)

Grassy Swales: The grassy swales would serve to treat the storm water by allowing settling and filtration of suspended material. The swales would discharge to the underground drainage system which drains to Union House Creek.

Oil/Grit Separation Devices: Oil/grit separation devices could be installed where grassy swales or other recommended BMPs cannot be appropriately implemented. These underground systems would provide holding devices for sediment and grit to be deposited and for floating oils to be retained, prior to storm water discharge into Union House Creek. Inlet filters, or other approved devices could help remove organic debris such as leaves and trash. These units would be maintained to assure proper performance.

Other Structural BMPs: Other structural BMPs recommended by the City of Sacramento Guidance Manual include underground hydrodynamic separators and catchment filters. If approved by the City of Sacramento, these devices could be implemented where space and treatment with grassy swales is limited. Traditional sand filters could also be installed in place of grassy swales. Such units would be maintained to assure proper performance.

The proposed project and the development alternatives would convert the project site from an existing vacant (disturbed grassland) condition to an urban condition. This conversion would increase both the volume of runoff generated on the project site (due to the development of impervious surfaces) and the amount of urban pollutants in this runoff (due to the deposition on the ground of fuels, oils, pesticides, and other contaminants typical of urban development and motor vehicle use). Provision of grassy swales or other operational BMPs would decrease the pollutant load from the project to the maximum extent practicable.

Approval of the proposed project would include compliance with the following: provision of grassy swales or other operational BMPs; implementation of the proposed BMPs in compliance with the City of Sacramento Guidance Manual for Onsite Stormwater Quality Control Measures (January 2000); and implementation of any additional measures which may be required by NPDES General Permit for Construction Related Activities and SWPPP requirements. Compliance with the above requirements would reduce the construction and operations-related runoff surface water quality impacts of the proposed project to a *less-than-significant* impact. The extent of this impact would be slightly less for the General Plan Buildout Alternative because slightly less impervious surfaces would be developed, less traffic would be generated, and hence slightly less constituent loading in runoff from the project site would occur. The extent of this impact would be slightly greater for the Park-and-Ride Alternative because slightly more impervious surfaces would be developed, more traffic would be generated, a large parking lot would be developed, and hence more constituent loading in runoff from the project site would occur.

AA The No Project (No Development) Alternative would not include construction or operational activities at the project site that would create pollutants in stormwater runoff from the project site. *No impact* would occur.

**Mitigation 6.5-3: Runoff Water Quality**

PP, AA, AB, AC No mitigation is required.

**Impact 6.5-4: Cumulative Flooding, Drainage, and Runoff Water Quality**

PP, AA AB, AC The proposed project, alternatives, and related projects (i.e., South Sacramento Corridor Phase 2 Project, Strawberry Creek Center, Bruceville Road Widening) would all be developed outside of the 100-year floodplain. Thus, none of these projects would contribute to potentially significant cumulative flooding impacts. However, some cumulative development within relatively close proximity to the South Sacramento Community Plan area, such as the incorporated community of Laguna, is currently located within the 100-year floodplain and could thus potentially be subject to flooding during 100-year storm events. The College Square PUD would not occur within a 100-year floodplain, would not be subject to flooding

during 100-year storm events, and thus would not contribute considerably to any cumulative flooding impacts. Therefore, *no significant impact* would occur with the implementation of the proposed project or each of the three alternatives as the same project site (which is not subject to 100-year flooding) would be involved under each.

Cumulative development anticipated within the area covered by the Jacinto Creek Planning Area Drainage Master Plan, Watershed #1 in conjunction with the proposed project or the development alternatives, would increase the amount of impervious surface coverage which would increase runoff and the need for storm drain improvements. If the cumulative development projects within Watershed #1 were not to develop storm drain facilities planned for the area or if the proposed cumulative development were to result in a greater amount of impervious surfaces than assumed for Watershed #1, cumulative drainage impacts could occur. Such impacts could manifest themselves as localized flooding, and/or the consumption of any existing unused capacity in area storm drain pipes to a greater degree than that planned for. After mitigation, the proposed project would be consistent with the plans and assumptions for watershed #1 and thus would not contribute to any such significant cumulative drainage impacts. Hence, a *less-than-significant* impact would occur. After mitigation, the extent of this impact would be similar between the proposed project and each of the development alternatives as adequate storm drain facilities would be provided under each. The extent of this impact would be less under the No Project (No Development) Alternative as no increase in discharge to area creeks would occur.

It is assumed that cumulative development within the SSCP would occur consistent with all runoff surface water quality requirements (as compliance with these requirements is a pre-requisite for development). However, it is not certain that all cumulative projects would maximize the use of BMPs to reduce urban pollutants in runoff to the maximum extent feasible. This is especially true of new minor projects (e.g., individual single-family homes, accessory structures) and/or operations that are not subject to CEQA or other in-depth City review. If the cumulative development were to not implement all BMPs feasible to reduce urban pollutants in stormwater runoff, the water quality of area waterways could be significantly degraded over time. Because the proposed project would maximize the use of BMPs to reduce urban pollutants in water quality to the maximum extent feasible, it would not contribute substantially to any possible significant cumulative impact. Hence, a *less-than-significant* impact would occur. The extent of this impact would be similar between the proposed project and each of the development alternatives because all three would be required to comply with applicable surface water quality regulations and plans, ensuring all three would maximize the use of BMPs. The extent of this impact would be less under the No Project (No Development) Alternative because no increase in pollutants in runoff from the project site would occur.

**Mitigation 6.5-4: Cumulative Flooding, Drainage, and Runoff Water Quality**

PP, AA, AB, AC      No mitigation is required.

**6.5.5 LEVEL OF SIGNIFICANCE AFTER MITIGATION**

The proposed project and alternatives would not result in any significant impacts with implementation of the mitigation measures recommended in this section.



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**6.6 POPULATION AND HOUSING**

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## **6.6 POPULATION AND HOUSING**

### **6.6.1 INTRODUCTION**

This section of the EIR describes the population and housing characteristics of Sacramento County, the City of Sacramento, and the South Sacramento Community Plan (SSCP) area and presents an evaluation of the population and housing impacts of the proposed project and alternatives. The evaluation includes an examination of the project's consistency with the population and housing goals of the City of Sacramento General Plan and the SSCP. It also evaluates whether the proposed project would (1) induce substantial population growth in the area, (2) displace a substantial number of existing housing units, (3) displace a substantial number of people, and (4) adversely affect the jobs/housing balance in the City.

### **6.6.2 ENVIRONMENTAL SETTING**

The College Square project site is located in the southern part of Sacramento, in the SSCP area. The project site is currently vacant and devoid of buildings. No population or housing are currently associated with the project site.

The following discussion describes the existing and projected population and housing characteristics of Sacramento County, the City of Sacramento, and the SSCP area. This discussion also describes the City's existing jobs/housing balance.

#### **POPULATION**

The U.S. Census Bureau estimated that in July 2001, the total population for Sacramento County, which comprises the incorporated cities of Citrus Heights, Elk Grove, Folsom, Galt, Isleton, and Sacramento, as well as the unincorporated areas, was 1,268,770 persons (U.S. Census Bureau 2002).

In 2000, the U.S. Census Bureau estimated that the total population for the City of Sacramento was 407,018 persons (U.S. Census Bureau 2000). Sacramento is the seventh largest city in the state and is the most populated incorporated city in Sacramento County (U.S. Census Bureau 2002). By 2015, the population of the City of Sacramento is expected to rise to approximately 512,060 persons (Sacramento Area Council of Governments [SACOG] 2001a). Based on straight line projections using the 2000 and 2015 population numbers above, the City's existing (2003) population is 428,027 persons, and the City's 2010 population will be 476,345 persons. The year 2010 is relevant because it represents the buildout year of the proposed project.

In 1998, the resident population of the SSCP area was 67,313 people. The projected population for the community plan area for 2022 is 85,987 persons (City of Sacramento Planning and Building Department 2000). Based on straight line projections using the 1998 and 2022 population numbers above, the SSCP's existing (2003) population is 71,203 persons, whereas the SSCP's 2010 population will be 76,649 persons.

## HOUSING

In 2000, Sacramento County had 473,211 dwelling units. The number of dwelling units projected for the County for 2015 is 612,752 (SACOG 2001a).

The City of Sacramento had 159,894 dwelling units in 2000. The number of dwelling units projected for the City for 2015 is 199,202 (SACOG 2001a). Based on straight line projections using the 1998 and 2022 housing numbers above, the number of existing (2003) housing units in the City is 167,754 units, and the number of housing units in the City in 2010 will be 185,837 units.

In 1998, there were 22,585 dwelling units in the SSCP area. The projected number of dwelling units in the community plan area for 2022 is 29,485 (City of Sacramento Planning and Building Department 2000). Based on straight line projections using the 1998 and 2022 housing numbers above, the number of existing (2003) housing units in the SSCP area is 23,449 units, and the number of housing units in the SSCP area in 2010 will be 26,041 units.

The project site currently has no dwelling units. The City's General Plan planned for approximately 1,114 dwelling units to be built on the site. (See Chapter 4 of this EIR for an explanation.) This is compared with the 724 dwelling units and 270,256 square feet of commercial uses that would be constructed on the project site under the proposed project.

## JOBS/HOUSING BALANCE

The jobs/housing balance concept is used to examine whether an area has a balance between its employment base and housing supply. Jobs and housing are technically in balance when an area has enough employment opportunities for most of the people who live there and enough housing opportunities for most of the people who work there.

The development of a balance between the jobs in a region and the ability of those jobs to support the households within a reasonable distance is difficult to achieve and depends on the affordability of the housing, the quality of the jobs, the size of the region, the availability of transit, and the characteristics of the future employees and residents of a community. An area that has too many jobs relative to its housing supply is likely to experience relatively rapid escalations in housing prices and intensified pressure for additional residential development. Conversely, if an area has relatively few jobs in comparison to employed residents, many of the workers are required to commute to jobs located outside the area of residence. The resulting traffic patterns can lead to road congestion and reductions in both local and regional air quality.

The City of Sacramento, in particular the Central City and North Natomas communities, is the workplace for more than half the jobs in the County (City of Sacramento 2000). The City's role as a major employment center is reflected in its jobs/housing balance, which was 1.68 (1.68 jobs for each household in the City) in 2001 (Bechtold, pers. comm., 2003) and which is projected to grow to 1.73 by July 1, 2003, based on data presented in *Projections of Population, Housing, Employment and Primary and Secondary Students* (SACOG 2001b).

In the SSCP area, the jobs/housing balance was 0.977 in 2001 and is projected to grow to 1.05 in 2025 (Bechtold, pers. comm., 2003).

Neither the City of Sacramento General Plan nor the SSCP identifies a jobs/housing goal for the City. A 1:1 jobs/housing ratio represents jobs/housing balance for a community and is the preferable jobs/housing ratio from a purely environmental perspective (i.e., would theoretically result in the fewest daily trips to get between home, work, and shopping/services).

### 6.6.3 REGULATORY PROVISIONS

#### CITY OF SACRAMENTO GENERAL PLAN

Updated in 1988, the City of Sacramento General Plan is a 20-year policy document that identifies goals, policies, programs, and actions to guide the growth and renewal of the City. The primary source of guidance in the General Plan regarding population and housing is the Housing Element. Guidance relevant to this discussion also is included among the overall urban growth policy statements and in the Residential Land Use Element, as presented in the first column of Table 6.6-1. As indicated, the City’s General Plan goals, policies, and actions for population and housing focus on (1) providing affordable housing for all income groups; (2) providing a range of housing types; (3) developing housing in an efficient manner; (4) promoting infill housing; (5) meeting the City’s required fair share of the region’s housing needs; and (6) providing housing in mixed-use developments, including transit-oriented development (TOD), to reduce traffic.

<b>Table 6.6-1 General Plan Population and Housing Goals and Policies—Assessment of Project Consistency</b>	
<b>Plan Element Goal or Policy Statement</b>	<b>Project Consistency Assessment</b>
<b>Urban Growth Policy:</b> It is the policy of the City that adequate housing opportunities be provided for all income households and that projected housing needs are accommodated.	<u>Consistent:</u> The proposed project would meet the demands of the City’s Inclusionary Housing Program, which requires that 5% and 10% of the multifamily units at the site be affordable to and occupied by low-income and very low income households, respectively. The project also would provide senior housing that would help meet the City’s senior housing needs, and it would provide apartments that could potentially be used by Cosumnes River College students.
<b>Residential Land Use Element Goal:</b> Provide affordable housing for all income groups.	<u>Consistent:</u> See the consistency assessment for the urban growth policy above.
<b>Residential Land Use Element Goal:</b> Meet the fair share regional housing needs for all economic segments within the City.	<u>Consistent:</u> See the consistency assessment for the urban growth policy above. Because the proposed project would provide affordable housing consistent with the City’s Inclusionary Housing Program, it would provide its fair share of affordable housing for the region.
<b>Residential Land Use Element Goal:</b> Provide affordable housing opportunities for all income household categories throughout the City.	<u>Consistent:</u> See the consistency assessment for the urban growth policy above.

**Table 6.6-1 (Continued)**  
**General Plan Population and Housing Goals and Policies—Assessment of Project Consistency**

<b>Plan Element Goal or Policy Statement</b>	<b>Project Consistency Assessment</b>
<p><b>Residential Land Use Element Policy:</b>            Establish methods to provide more balanced housing opportunities in communities that lack a full range of housing opportunities.</p>	<p><u>Consistent:</u> The proposed project would provide much-needed rental and senior housing to the City and the SSCP area, including affordable housing consistent with the City’s Inclusionary Housing Ordinance. In addition, the project would potentially provide housing opportunities to Cosumnes River College students.</p>
<p><b>Residential Land Use Element Policy:</b>            Support existing programs which provide affordable housing opportunities for lower income households and seek new ways to increase this housing type.</p>	<p><u>Consistent:</u> See the consistency assessment for the urban growth policy above.</p>
<p><b>Residential Land Use Element Goal:</b>            Develop residential land uses in a manner which is efficient and utilizes existing and planned urban resources.</p>	<p><u>Consistent:</u> The proposed project is a mixed-use development that includes a variety of residential uses alongside office and retail uses. It represents infill development that is an efficient use of the land and for which urban resources already exist adjacent to the project site (e.g., streets, utility infrastructure). Its location near Cosumnes River College would help to ensure efficient use of the residential and commercial space by students. In addition, the project would be located near a planned extension of RT’s light rail line, which would allow the project to take advantage of planned mass transit. The project also would increase density adjacent to planned mass transit, thus providing for a more efficient land use pattern (i.e., both increase mass transit usage and decrease traffic generation).</p>
<p><b>Residential Land Use Element Policy:</b>            Promote infill development as a means to meet future housing needs by expanding the benefits for this type of development and actively promote infill development in identified infill areas through outreach programs designed to inform the development community and property owners of this program.</p>	<p><u>Consistent:</u> The project is an infill project, surrounded on all sides by existing or approved development. The project would provide housing to help meet City housing needs, including low- and very-low income housing, consistent with the requirements of the City’s Inclusionary Housing Program. The last part of this policy (i.e., provision of outreach programs) is applicable to the City rather than to individual development projects.</p>
<p><b>Residential Land Use Element Goal:</b>            Maintain orderly residential growth in areas where urban services are readily available or can be provided in an efficient cost effective manner.</p>	<p><u>Consistent:</u> Because the project would be surrounded by existing or approved development, the extension of urban services would be accomplished in an efficient and cost-effective manner. Any such extension would be limited to extension in the project site itself. Roadway and utility infrastructure currently exists immediately adjacent to the project site, so no inefficient or costly extension of infrastructure to the project site would be required.</p>
<p><b>Residential Land Use Element Goal:</b>            Provide appropriate residential opportunities to meet the City’s required fair share of the region’s housing needs.</p>	<p><u>Consistent:</u> See the consistency assessment for the urban growth policy above. The proposed project would provide much-needed rental and senior housing to the City, the SSCP area, and the region, including affordable housing consistent with the City’s Inclusionary Housing Ordinance. In addition, the project would potentially provide housing opportunities to Cosumnes River College students.</p>
<p><b>Residential Land Use Element Policy:</b>            Provide housing opportunities in newly developing communities and in large mixed use developments in an effort to reduce travel time to and from employment centers.</p>	<p><u>Consistent:</u> The project is a mixed-use development with a residential component and office and commercial components. The residential component would provide 724 new multifamily residential and senior housing units, a portion of which would be affordable units consistent with the requirements of the City’s</p>

**Table 6.6-1 (Continued)**  
**General Plan Population and Housing Goals and Policies—Assessment of Project Consistency**

Plan Element Goal or Policy Statement	Project Consistency Assessment
	Inclusionary Housing Ordinance. This housing would be expected to be affordable and thus provide housing opportunities to the households of those onsite employees to be created by the project, as well as provide housing opportunities for seniors in the Sacramento area and students at Cosumnes River College. This unique complementary set of land uses would reduce the motor vehicle trips that would otherwise be generated at the project site with more traditional residential-only development by avoiding the need for onsite residents and college students to travel offsite for neighborhood/service commercial goods and services. The development of the project adjacent to the future RT light rail line would reduce further travel time to and from the proposed onsite and existing offsite employment centers.
<b>Residential Land Use Element Policy:</b> Use mixed use housing and employment centers to help meet housing needs and reduce traffic in new development in the City.	<u>Consistent:</u> See the consistency assessment for the previous policy.
<b>Housing Element Goal:</b> Housing Supply—Provide adequate housing sites and opportunities for all households.	<u>Consistent:</u> See the consistency assessment for the urban growth policy above.
<b>Housing Element Policy:</b> The City shall continue to promote appropriate and compatible infill housing.	<u>Consistent:</u> The project is a mixed-use development with residential, office, and commercial components that represent infill development. The residents of the project and the students of Cosumnes River College would be expected to support the commercial uses at the site and may fill some of the 890 positions created by the commercial element of the project.
<b>Housing Element Policy:</b> The City shall continue to develop and support transit oriented development along transit corridors.	<u>Consistent:</u> The design of the College Square project anticipates the future extension of Regional Transit’s light rail line into the project area. The mix of residential, office, and commercial development would be expected to ensure the efficient use of the transit system throughout the day rather than only during the morning and evening commute periods, which would be expected if the site were developed entirely as a residential project. The project would also increase urban density adjacent to the future light rail line and include a complementary set of land uses that would reduce the need for offsite trips. In all these respects, the proposed would represent TOD.
<b>Housing Element Goal:</b> Housing Mix, Balance, and Neighborhood Compatibility—Promote a variety of housing types within neighborhoods to encourage economic diversity and housing choice.	<u>Consistent:</u> See the consistency assessment for the urban growth policy above.
<b>Housing Element Goal:</b> Promote Equal Housing Opportunity	<u>Consistent:</u> See the consistency assessment for the urban growth policy above.
<b>Housing Element Policy:</b> Encourage economic integration, fair housing opportunity and the elimination of discrimination against households with special needs.	<u>Consistent:</u> See the consistency assessment for the urban growth policy above.

<b>Table 6.6-1 (Continued)</b> <b>General Plan Population and Housing Goals and Policies—Assessment of Project Consistency</b>	
<b>Plan Element Goal or Policy Statement</b>	<b>Project Consistency Assessment</b>
<b>Housing Element Policy:</b> Increase affordable housing opportunities in new developments and implement a fair share distribution of affordable housing units throughout Sacramento communities.	<u>Consistent:</u> See the consistency assessment for the urban growth policy above.

## **SOUTH SACRAMENTO COMMUNITY PLAN**

The SSCP guides planners, public officials, and landowners in their determinations relating to development of the community. Goals and policies relevant to this discussion of population and housing are included in the Residential Land Use and Housing section of the SSCP, as presented in the first column of Table 6.6-2. As indicated, The SSCP’s goals, policies, and actions for population and housing focus on (1) providing housing for the two ends of the housing and income spectrum, (2) encouraging infill development, and (3) providing adequate multifamily housing without concentrating this housing in any particular area.

<b>Table 6.6-2</b> <b>South Sacramento Community Plan Population and Housing Goals and Policies—</b> <b>Assessment of Project Consistency</b>	
<b>Plan Element Goal or Policy Statement</b>	<b>Project Consistency Assessment</b>
<b>Residential Land Use and Housing Goal:</b> Encourage more variation of housing types in South Sacramento, especially to meet the needs of the two ends of the housing and income spectrum.	<u>Consistent:</u> The proposed project would provide apartments and senior housing, both of which are in considerable demand in the SSCP area and in the greater City of Sacramento. Single-family residential development is not part of this project but is provided throughout the adjacent area. Consistent with the City’s Inclusionary Housing Program, 15% of the residential component of the proposed project would be affordable housing, with 5% affordable to and occupied by low-income households and 10% affordable to and occupied by very low income households.
<b>Residential Land Use and Housing Policy:</b> Encourage infilling of skipped over parcels within developed areas.	<u>Consistent:</u> The College Square is a classic infill project, surrounded on all sides by existing or approved development.
<b>Residential Land Use and Housing Policy:</b> Encourage high quality residential development.	<u>Consistent:</u> The SSCP designates the project site as Special Planning District, which allows the City to initiate proceedings to regulate properties under multiple ownerships to both encourage coordinated development of multiple properties and permit a range of uses not otherwise permitted to achieve the areas fullest potential. The City’s Zoning Map designates the project site with an “R Review” overlay, which requires special City review to ensure that quality design is incorporated into multifamily residential development and that consistent design is incorporated over an area covered by multiple properties. Consistent with these designations and this policy requiring high-quality residential development, the project applicant is seeking adoption of PUD guidelines and a schematic plan for the proposed project that would undergo City review and ensure high-quality residential development.

**Table 6.6-2 (Continued)**  
**South Sacramento Community Plan Population and Housing Goals and Policies—**  
**Assessment of Project Consistency**

<b>Plan Element Goal or Policy Statement</b>	<b>Project Consistency Assessment</b>
Encourage large vacant parcels to be developed as planned unit developments.	<u>Consistent:</u> See the consistency assessment for the policy above.
<b>Residential Land Use and Housing Policy:</b> Continue to provide rental and ownership assistance for qualified elderly persons, low and moderate income families and other groups with special housing needs. Satisfy the demand for elderly housing.	<u>Consistent:</u> See the consistency assessment for the first policy in this table.
<b>Residential Land Use and Housing Policy:</b> Provide adequate multiple family housing without concentrating this housing type in any particular neighborhood or along a single street.	<u>Consistent:</u> The project, which itself is a mix of uses that includes office and commercial uses in addition to multifamily residential uses, is proposed for a site surrounded by a mix of other uses. North of the site is senior housing and an area approved for commercial development, east of the area is SR 99, south of the area is single-family housing, west of the area is Cosumnes River College, and further southwest of the project site is multifamily housing.

**INCLUSIONARY HOUSING PROGRAM**

Information on the City’s Inclusionary Housing Program is drawn from the guide on the program that the City prepared for developers (City of Sacramento Planning and Building Department 2001).

The City of Sacramento adopted a mixed income housing policy on June 27, 2000, as part of its Housing Element. The policy was implemented by adoption of a mixed income housing ordinance on October 3, 2000, that established what is commonly called an inclusionary housing program. Chapter 17.190 of the City Zoning Code sets forth specific information on the requirements and operation of the program.

The purpose of the program is to help the City to achieve a diverse and balanced community with housing available for households of all income levels. The ordinance applies to residential development in new growth areas identified by the City. The College Square project site is located in one of these new growth areas.

The affordable units produced to meet a development’s inclusionary housing obligation may be single-family or multifamily housing and ownership or rental housing. Five percent of all residential units in a real estate development project that includes market rate housing must be affordable to and occupied by low-income households. A low-income household is one whose gross income does not exceed 80% of the Sacramento area median income, adjusted for family size. Ten percent of all residential units in a real estate development project that includes market rate housing must be affordable to and occupied by very low income households. A very low income household is one whose gross income does not exceed 50% of the Sacramento area median income, adjusted for family size.



## 6.6.4 IMPACTS AND MITIGATION

### METHODS OF ANALYSIS

The analysis that follows evaluates the consistency of the proposed project and the alternatives with the jobs and housing goals of the City of Sacramento by comparing the proposed project and the alternatives to each of the relevant goals, policies, and actions of the City's General Plan, SSCP, and Inclusionary Housing Program. This comparison is undertaken in tabular form, with summary conclusions. The following analysis also evaluates whether the proposed project would induce substantial population growth in the area, displace substantial numbers of existing housing units, displace substantial numbers of existing people, or adversely affect jobs/housing balance in the City. This is accomplished by making observations as to the existing conditions for each of these issues and how they would change under the proposed project.

The jobs/housing goals, policies, and actions of the City as codified in the City's planning documents and ordinances, as well as the existing jobs/housing setting, were described previously.

The number of residential units, onsite residents, and onsite employees to be generated by the proposed project and each of the project alternatives is identified in Table 6.6-3. As indicated, the proposed project would generate 724 residential units, 1,210 onsite residents, and 890 onsite employees. This is compared with 0 residential units, 0 onsite residents, and 0 onsite employees under Alternative AA; 1,114 residential units, 1,860 onsite residents, and 0 onsite employees under Alternative AB; and 460 residential units, 768 onsite residents, and 890 onsite employees under Alternative AC. Under the proposed project and Alternative AC, both multifamily residential and senior housing would be developed onsite, whereas housing under Alternative AB would be restricted to multifamily. Under the proposed project and Alternative AC, the onsite jobs to be created would be primarily neighborhood and service commercial jobs, with a small amount of office and child care jobs. No housing or jobs would be created at the project site under Alternative AA. No jobs would be created at the project site under Alternative AB.

<b>Alternative</b>	<b>Number of Dwelling Units</b>	<b>Resident Population <sup>1</sup></b>	<b>Onsite Employees <sup>2</sup></b>
PP	724	1,210	890
AA	0	0	0
AB	1,114	1,860	0
AC	460	768	890

<sup>1</sup> These figures assume 1.67 persons per dwelling unit (City of Sacramento 1995).  
<sup>2</sup> Based on an employee generation rate of 3.3 employees per 1,000 square feet of commercial from Section 17.184.050 of the City of Sacramento Zoning Ordinance.  
Source: EDAW 2003

### STANDARDS OF SIGNIFICANCE

In accordance with CEQA, a project is evaluated to determine whether it would have a significant impact on the environment. An EIR is required to focus on these impacts and offer mitigation measures to

reduce or avoid any significant impacts that are identified. The standards used to determine the significance of impacts vary depending on the nature of the project. For the purposes of this EIR, a population and housing impact is considered significant if the proposed project or project alternatives would result in the following:

- ▶ Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).
- ▶ Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere.
- ▶ Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.

Impacts regarding population inducement, the displacement of existing/proposed housing, and the displacement of people are identified as physical impacts on the environment under CEQA and are addressed as such in this section; mitigation measures are identified for those impacts that are significant. In addition to these impacts, this section presents an analysis of the project's consistency with relevant plans, along with the project's impacts on the jobs/housing balance. Because these two latter impacts are not physical impacts on the environment, they do not have significance thresholds and do not require mitigation under CEQA. These issues are addressed in this discussion because they are of concern to the City and because information relating to these issues will provide decision makers with a fuller understanding of the project's impact on population and housing in the City.

## **IMPACTS AND MITIGATION MEASURES**

### **Impact 6.6-1: Consistency with Relevant Plans (Operation)**

PP                    The City of Sacramento General Plan goals and policies relevant to this discussion of population and housing are presented in the main text of the General Plan and in the Residential Land Use Element and Housing Element of the plan. Table 6.6-1 identifies these goals and policies and indicates whether the project is consistent with them. The proposed project is a mixed-use infill development with an affordable housing element, and it would be located adjacent to an RT light rail station. As indicated in Table 6.6-1, the proposed project would support the General Plan's goals and policies regarding (1) provision of affordable housing for all income groups; (2) provision of a range of housing types; (3) development of housing in an efficient manner; (4) promotion of infill housing; (5) meeting the City's required fair share of the region's housing needs; and (6) provision of housing in mixed-use developments, including TOD, to reduce traffic.

The SSCP goals and policies relevant to this discussion of population and housing are included in the Residential Land Use and Housing Element of the community plan. Table 6.6-2 identifies these goals and policies and indicates whether the project is consistent with them. The proposed project is a mixed-use infill planned unit development that includes an affordable housing element. As indicated in Table 6.6-

2, the proposed project would support the community plan's goals and policies regarding affordable and senior housing, infill development, and planned unit development.

- AA No development would occur under the No Project (No Development) Alternative. Therefore, the project site would remain undeveloped, and no conflicts with relevant plans would occur.
- AB The General Plan Buildout Alternative would involve development of the project site entirely in residential uses. Like the proposed project, this alternative would be required to fulfill the low-income and very low income housing requirements of the City's Inclusionary Housing Program and thus would be consistent with the relevant population and housing goals and policies of the General Plan and the SSCP, which relate primarily to the provision of affordable housing. This alternative would be more effective than the proposed project in achieving the City's affordable housing objectives because it would develop more housing units and thus a greater number of affordable housing units. Like the proposed project, this alternative would be consistent with the City's call for infill development and the efficient use of existing urban services because the infrastructure already in place in the developed land around the site could be extended easily to the new development. Like the proposed project, this alternative would be developed under a PUD as required by the City's "R Review" zoning of the site, which would help to ensure high-quality development. However, unlike the proposed project, this alternative would not also fulfill several goals and policies relating to commercial development. This alternative would not be a mixed-use development, and it may not provide senior housing to the City. It would not be TOD that would include a complementary set of land uses or provide a variety of uses to encourage transit use throughout the day rather than only during commute periods. It also would not include office or commercial components, so all employed residents at the project site would be forced to travel offsite to their places of employment, increasing traffic in the area. Overall, this alternative would be more effective than the proposed project in meeting the affordable housing objectives of the City and meeting the City's required fair share of the region's housing needs, and it might be less effective than the proposed project in meeting the City's objectives for provision of housing in mixed-use developments, including TOD, to reduce traffic.
- AC Under the Park-and-Ride Alternative, the site would be developed as described for the proposed project, except that approximately 9 acres in the southwestern corner of the project site that would be dedicated to RT for a future light rail line right-of-way, park-and-ride lot, and bus transfer station instead of being developed with 264 multifamily residential units. Although fewer residential units would be developed under this alternative, the percentage of low-income and very low income housing required by the Inclusionary Housing Program would still be developed at the site, and the senior housing included in the project also would be developed under this alternative; therefore, this alternative would be consistent with the General Plan and SSCP goals and policies related to affordable housing. Like the proposed project,

this alternative would be consistent with goals and policies encouraging the development of infill sites, making efficient use of existing urban services, developing as a planned unit development, and developing as a mixed-use development that would offer employment opportunities to project residents and potentially reduce work-related travel time. Overall, this alternative would be more effective than the proposed project in meeting the City's housing objectives as they relate to mixed-use development and TOD (i.e., provision of housing in mixed-use developments, including TOD, to reduce traffic) and less effective than the proposed project in meeting the City's housing objectives of the provision of affordable housing and meeting the City's fair share of the region's housing needs.

### **Impact 6.6-2: Induce Population Growth (Operation)**

PP, AB, AC

The project site is currently unpopulated. As indicated in Table 6.6-3, implementing the proposed project would result in an onsite resident population of approximately 1,210 persons. This would represent 0.3% and 1.7% of the existing (2003) City and SSCP populations, respectively, and 0.2% and 1.6% of the 2010 City and SSCP populations, respectively. The proposed project would not directly induce substantial population growth in either the City or the SSCP area as it is planned for in the adopted General Plan. Hence, a *less-than-significant* impact would occur. As indicated in Table 6.6-3, the General Plan Buildout Alternative (AB) would generate a 35% greater onsite resident population than the proposed project, whereas the Park-and-Ride Alternative (AC) would generate a 37% smaller onsite resident population than the proposed project. Like the proposed project, these alternatives would not result in an impact in terms of direct population growth inducement.

The proposed project also would not be expected to induce a substantial amount of population growth indirectly. The project would represent infill development and would not extend roads or utility infrastructure to new areas not already served by such roads or infrastructure. However, the office and commercial component of the proposed project was not planned in the General Plan and could increase the pressure for more residential development in the area. Both the proposed project and the Park-and-Ride Alternative are expected to generate 890 new jobs (Table 6.6-3). These jobs are neighborhood serving and are expected to be filled primarily by existing area residents and are not expected to attract employees from outside the region, thus requiring substantial new housing. For these reasons, the proposed project's potential to indirectly induce population growth would be *less than significant*. The extent of this impact would be similar between the proposed project and each of the development alternatives (Alternatives AB and AC). This is because, like the proposed project, (1) each of these alternatives represents infill development, (2) neither of these alternatives would extend roads or utility infrastructure to new areas, and (3) the commercial and office components are neighborhood oriented and are not expected to draw employees from outside the region or create the need for additional housing.

AA No development would occur under the No Project (No Development) Alternative. Therefore, *no impact* would occur.

**Mitigation 6.6-2: Induce Population Growth (Operation)**

PP, AA, AB, AC No mitigation is required.

**Impact 6.6-3: Displace Existing Housing (Operation)**

PP, AA, AB, AC The project site is currently vacant. Because no housing is located on the site, no housing would be displaced under the proposed project or any of the alternatives. Therefore, *no impact* would occur.

**Mitigation 6.6-3: Displace Existing Housing (Operation)**

PP, AA, AB, AC No mitigation is required.

**Impact 6.6-4: Displace Existing Population (Operation)**

PP, AA, AB, AC Because no housing or businesses exist at the project site, no population would be displaced with implementation of the proposed project or any of the alternatives. Therefore, *no impact* would occur.

**Mitigation 6.6-4: Displace Existing Population (Operation)**

PP, AA, AB, AC No mitigation is required.

**Impact 6.6-5: Affect Jobs/Housing Balance (Operation)**

PP, AB, AC As stated previously, the City has not identified a jobs/housing balance goal. Also as mentioned earlier, a 1:1 jobs/housing ratio represents jobs/housing balance for a community and is the preferable jobs/housing ratio from a purely environmental perspective (i.e., would theoretically result in the fewest daily trips to get between home, work, and shopping/services). Because the City has no goal, this discussion of the change in the City's jobs/housing balance associated with implementing the proposed project is presented solely to inform the City of the project's effect on the theoretical 1:1 ratio, not to make a determination of significance regarding the change. See Section 6.2 of this EIR, Traffic and Circulation, which evaluates the traffic impacts of the proposed project. The traffic analysis takes into account jobs/housing balance in its project trip generation estimates for the proposed project.

As indicated previously, the City's 2001 jobs/housing ratio was 1.68 (i.e., jobs rich), whereas the SSCP's jobs/housing ratio was 0.97 (slightly housing rich). This is expected to change over time, to 1.73 and 1.05, respectively.

Based on the jobs and housing numbers in Table 6.6-3, the onsite jobs/housing ratio to be created by the proposed project and the alternatives would be 1.22 for the proposed project, 0.0 for Alternative AB, and 1.9 for Alternative AC. This means that the proposed project would generate 1.22 onsite jobs for every onsite housing unit, Alternative AB would generate 0 jobs for every onsite housing unit, and Alternative AC would generate 1.9 onsite jobs for every onsite housing unit. Alternative AA would create no jobs/housing ratio because no development would occur on the project site under this alternative.

The proposed project would be slightly jobs rich. Assuming that jobs/housing balance (i.e., a 1:1 jobs/housing ratio) is the preferred condition, the proposed project would have (1) a negative effect on jobs/housing balance in the City as a whole because it would contribute to the existing and projected future jobs-rich condition in the City, (2) a positive effect on jobs/housing balance in the SSCP in the near term because it would represent a jobs-rich project in a currently slightly housing-rich area, and (3) a negative effect on jobs/housing balance in the SSCP area in the future because it would contribute to future projected jobs-rich conditions in the SSCP area. Overall, implementing the proposed project would result in a negative jobs/housing effect because it would provide more jobs than housing in areas that are or would be jobs rich. The General Plan Buildout Alternative would have an overall positive jobs/housing effect because it would provide housing in areas that are or would be jobs rich, whereas the Park-and-Ride Alternative would have a greater negative jobs/housing effect than the proposed project because it would provide even more jobs in areas that are or would be jobs rich.

It is noted that the College Square project site is located adjacent to a planned Regional Transit light rail line (the South Sacramento Corridor Phase 2 Project). The future availability of light rail service to the project site would be a mitigating factor to any future jobs/housing imbalance, if such an imbalance were to occur associated with the proposed project or project alternatives, because onsite residents would potentially be able to travel to their places of employment by using light rail rather than by making offsite motor vehicle trips. This would also be potentially true of onsite employees who could travel to their jobs using light rail.

AA No development would occur under the No Project (No Development) Alternative. Hence, implementing this alternative would result in neither a positive nor a negative effect in terms of jobs/housing balance.

**Impact 6.6-6: Induce Population Growth (Cumulative)**

PP, AB, AC As indicated in the discussion of Impact 6.6-2, (implementing the proposed project would not induce substantial population growth in the SSCP area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure). If the cumulative development were to occur in general consistency with the General Plan and SSCP, it, too, would not result in substantial direct growth inducement because this development and

associated population have already been planned for in the City's General Plan, SSCP, Zoning Ordinance, Jacinto Creek Master Drainage Plan, and other applicable plans. Because some of this cumulative development would occur at eastern and western peripheries of the SSCP area, where large plots of open space still remain, the extension of roads and utilities to these areas could represent an indirect growth inducement impact by opening up these areas to development. However, even these open space areas have been planned for growth. Hence, cumulative development would not induce substantial population growth either directly or indirectly. A less-than-significant cumulative impact would occur.

AA No development would occur under the No Project (No Development) Alternative, so this alternative could not contribute to a cumulative impact. Therefore, *no impact* would occur.

**Mitigation 6.6-6: Induce Population Growth (Cumulative)**

PP, AA, AB, AC No mitigation is required.

**Impact 6.6-7: Displace Existing Housing and Population (Cumulative)**

PP, AA, AB, AC As described previously, no existing housing or population would be displaced with implementation of the proposed project or any of the alternatives; therefore, neither the project nor any of the alternatives could contribute to a cumulative impact. Because the vast majority of development that would occur in the region would be on vacant rather than already occupied land, substantially more housing would be created than displaced. *No impact* would occur.

**Mitigation 6.6-7: Displace Existing Housing and Population (Cumulative)**

PP, AA, AB, AC No mitigation is required.

**Impact 6.6-8: Affect Jobs/Housing Balance (Cumulative)**

PP, AB, AC Given the City of Sacramento's current and anticipated future role as an employment center in the region, it is anticipated that the City would continue to be jobs rich. The existing and projected future jobs/housing ratio numbers for the City identified earlier in this section support this conclusion. Hence, it is likely that cumulative growth in the City would continue to be jobs rich as well, continuing this trend. Certainly, the Strawberry Creek Centre project and other cumulative development in the SSCP area are expected to change the SSCP area from a housing rich to a jobs rich area over time. The proposed project and the Park-and-Ride Alternative would contribute to these jobs-rich conditions and thus would contribute to cumulative jobs/housing imbalance. Because the General Plan Buildout Alternative would be housing rich, it would not contribute to this cumulative jobs/housing imbalance.

AA No development would occur under the No Project (No Development) Alternative, so this alternative could not contribute to a cumulative jobs/housing balance impact.

#### **6.6.5 LEVEL OF SIGNIFICANCE AFTER MITIGATION**

The proposed project and alternatives would not result in any significant impacts with implementation of the mitigation measures recommended in this section.



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**6.7 LIGHT/GLARE**

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## **6.7 LIGHT/GLARE**

### **6.7.1 INTRODUCTION**

This section of the EIR describes the visual setting of the project site as it relates to light and glare and includes an evaluation of the potential light and glare impacts of the proposed project and alternatives on adjacent sensitive uses (e.g., residences) and traffic. The information presented in this section was drawn primarily from field observations, photographs from selected viewpoints, the proposed landscape plan (Exhibit 3-7), and the College Square Shopping Center Planned Unit Development (PUD) Guidelines (College Marketplace 2002). The PUD guidelines are included in their entirety as Appendix A of this EIR.

Light is a nighttime phenomenon that can have adverse impacts in two respects. First, light can have adverse impacts on adjacent sensitive uses (i.e., residential) by interfering with sleep and views of the nighttime sky. Direct illumination of residence, views by the occupants of a residence of unshielded light sources, and/or views by the occupants of extensive brightly lit areas, can each interfere with sleep and with views of the night sky. Second, light can have adverse impacts on drivers of motor vehicles by interfering with nighttime vision of the road. Views of unshielded light sources by drivers can temporarily blind drivers and cause hazardous driving conditions, especially at highway speeds.

Glare is a daytime phenomenon whereby sunlight reflects off of glass and other reflective surfaces. Glare can have adverse impacts on residential uses and drivers of motor vehicles by interfering with vision. In the case of residential uses, glare can represent a nuisance. In the case of drivers, glare can represent a safety hazard, especially at highway speeds. Glare can be generated off any reflective surface, but is generally a nuisance to residential uses and/or a safety hazard to motorists only if the glare is prolonged. Prolonged glare is typically generated by sunlight reflecting off of large glass-covered buildings and/or the windshields of a large number of cars in a large parking lot.

### **6.7.2 ENVIRONMENTAL SETTING**

The College Square project site is vacant, undeveloped land. During the day, the site and much of the surrounding area have no sources of glare. The vacant, undeveloped land north of the site, across Cosumnes River Boulevard, and south of the site have no sources of glare. The few houses in the largely undeveloped area south of the site are minor sources of glare. The primary source of glare in the area is the parking lots of Cosumnes River College, located west of the project site, across Bruceville Road.

In the evening, the site and most of the surrounding area are dark or dimly lit. The project site has no existing light sources. The undeveloped area north of the site has no sources of light. State Route (SR) 99, which runs along the eastern boundary of the site, is generally dark, lit primarily by passing vehicles. The SR 99/Calvine Road/Cosumnes River Boulevard interchange, Cosumnes River Boulevard, and Bruceville Road all have street lights which illuminate the Cosumnes River Boulevard and Bruceville Road corridors. The few houses south of the site add minimal lighting to the area.

Cosumnes River College, located east of the project site, across Bruceville Road, is the primary source of light in the area. The primary sources of light at the college are the lights at five parking lots and the stadium. The two parking lots located along the west side of Bruceville Road (lots D and E) are set back

from the roadway approximately 30 feet. A 5-foot-high berm separates the lots from Bruceville Road, preventing glare from vehicles parked in the lots from being visible east of the lots. Parking lot E is located north of the entry road into the college. The lot has 12 30-foot-tall light poles with two dim parking lot lights on each. Parking lot D, located south of the entry road and southwest of the project site, has six 15-foot-tall wooden light poles with one standard street light on each. The entry road has five street lights on each side (20-foot light poles with one dim light on each). The stadium has four 50-foot-tall light poles (two on each end) with 15 sodium-vapor lights on each. Berms enclosing the stadium on the east and west sides are approximately 20 feet tall. The stadium is open on the north and south sides.

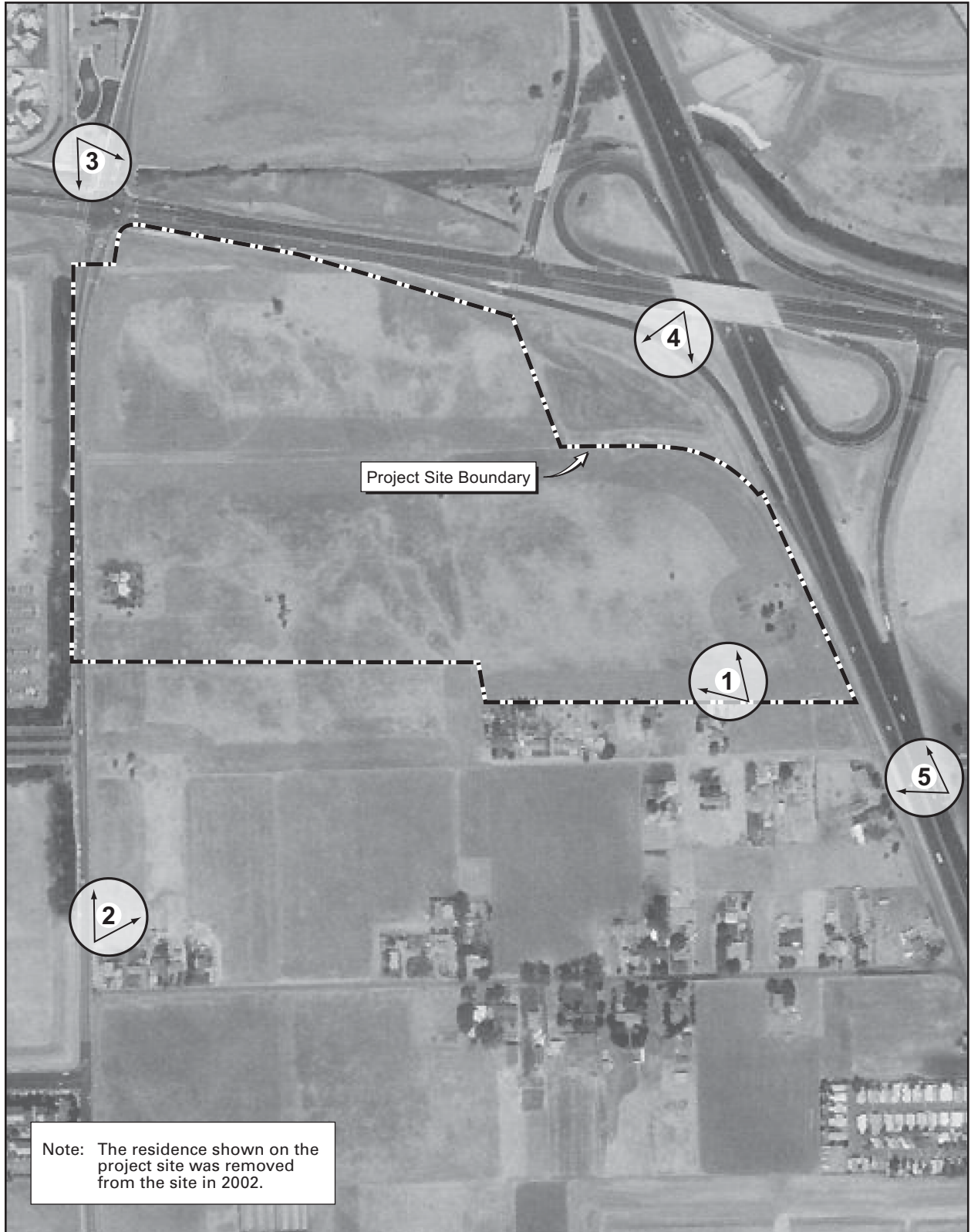
Street lights (15-foot light poles with one standard street light each) are located along the west side of Bruceville Road from Cosumnes River Boulevard southward and along both sides of Cosumnes River Boulevard eastward from Bruceville Road. A stop light is located at the intersection of Bruceville Road and Cosumnes River Boulevard.

As indicated in Exhibit 6.7-1, existing sensitive land uses that could be affected by light and glare from the project site under developed conditions include the senior housing located northwest of the site, across the Cosumnes River Boulevard/Bruceville Road intersection; the residential tract located further northwest; and residences located south of the site. The project site is also visible to motorists on nearby roadways, including SR 99, the SR 99/Cosumnes River Boulevard/Calvine Road overpass, Cosumnes River Boulevard, and Bruceville Road.

Five different viewpoints were selected for this analysis to present the reader with common views of the site from adjacent sensitive uses and streets (Exhibit 6.7-1). Viewpoint #1 is from the existing large-lot single-family residences located directly south and adjacent to the project site along Cotton Lane, looking northwest onto the project site (Exhibit 6.7-2). The view of the project site from this viewpoint is close-in and unobstructed. Viewpoint #2 is from the existing large-lot single-family residences located approximately 1,000 feet south of the project site, along Shasta Avenue and Bruceville Road, looking north and northeast onto the project site (Exhibit 6.7-2). The view from this viewpoint is set-back but relatively unobstructed. Viewpoint #3 is from the existing senior housing located northwest of the project site, across the Cosumnes River Boulevard/Bruceville Road intersection, looking southeast onto the project site (Exhibit 6.7-3). The view of the project site from this viewpoint is set back and partially obstructed by street light posts, traffic signals, traffic, and signs. Viewpoint #4 is from the SR 99/Calvine Road/Cosumnes River Boulevard overpass looking southwest and down onto the project site (Exhibit 6.7-3). The view of the project site from this viewpoint is set-back but unobstructed. Viewpoint #5 is from the northbound lanes of SR 99 located southeast of the project site, looking northwest onto the site (Exhibit 6.7-4). The view from this viewpoint is set-back and obstructed by the concrete center median of the freeway, light poles, and southbound traffic. The view from this viewpoint is also fleeting, lasting only several seconds at highway speeds until obstructed by Cosumnes River Boulevard on-ramp to southbound SR 99.

### **6.7.3 REGULATORY PROVISIONS**

No portion of SR 99 is classified as a scenic highway; therefore, no state visual resource regulations would apply to the project. The City of Sacramento General Plan (General Plan) and South Sacramento Community Plan do not address light and glare. The Sacramento Zoning Code, Chapter 17.68, Landscaping and Paving Regulations, provides regulatory guidance related to light: “Lighting, if



Source: U.S. Geological Survey at MSN TerraServer 1998

## Viewpoint Locations

EXHIBIT 6.7-1

College Square PUD  
11157.01 5/03





Viewpoint 1. Offsite perspective looking northwest to project site from housing on Cotton Lane



Viewpoint 2. Offsite perspective looking northeast to project site from housing on Shasta Avenue, near Bruceville Road

Source: EDAW 2003

## Viewpoints 1 and 2

College Square PUD  
P 1T157.01 03/03

EXHIBIT 6.7-2

EDAW



Viewpoint 3. Offsite perspective looking southeast to project site from senior housing



Viewpoint 4. Offsite perspective looking southwest to project site from Calvine Road/Cosumnes River Boulevard overpass of State Route 99

Source: EDAW 2003

## Viewpoints 3 and 4

College Square PUD  
P 1T157.01 03/03

EXHIBIT 6.7-3

EDAW



Viewpoint 5. Offsite perspective looking northwest to project site from northbound lane of State Route 99

Source: EDAW 2003

## Viewpoint 5

College Square PUD  
P 1T157.01 03/03

EXHIBIT 6.7-4

**EDAW**

provided, shall reflect away from residential areas and public streets” (17.68.030 Other site requirements, B. Exterior Lighting). Glare is not specifically addressed in the zoning code, but the code does indirectly address glare in language regarding the provision of shade at project sites, most significantly in Chapter 17.64: “Trees shall be planted and maintained throughout the surface parking lot to ensure that, within fifteen (15) years after establishment of the parking lot, at least fifty (50) percent of the parking area will be shaded” (17.64.030 H).

#### **6.7.4 IMPACTS AND MITIGATION**

##### **METHOD OF ANALYSIS**

The information presented in this section was drawn primarily from field observations, photographs from selected viewpoints, the proposed landscape plan (Exhibit 3-7), and the College Square Shopping Center Planned Unit Development (PUD) Guidelines (College Marketplace 2002). The PUD guidelines are included in their entirety as Appendix A of this EIR.

For the purposes of this analysis, a light impact is defined as a nighttime condition that involves the illumination of an adjacent sensitive property, the conversion of property from an unlit to a lit condition as seen from sensitive land uses, or the shining of light into a driver’s eyes. A glare impact is defined as a daytime condition involving the reflection of sunlight off buildings or car windshields as seen by sensitive uses and drivers. The analysis that follows assumes that the project would incorporate the design and landscaping elements described in the landscape plan and PUD guidelines.

##### **STANDARDS OF SIGNIFICANCE**

In accordance with CEQA, a project is evaluated to determine whether it would have a significant impact on the environment. An EIR is required to focus on these impacts and offer mitigation measures to reduce or avoid any significant impacts that are identified. The standards used to determine the significance of impacts varies depending on the nature of the project. For the purposes of this EIR, a light and glare impact is considered significant if the proposed project or project alternatives would result in the following:

- ▶ Create a new source of substantial glare which would adversely affect the daytime views from sensitive land uses and motorists in the area.
- ▶ Create a new source of substantial light which would adversely affect nighttime views from sensitive land uses and motorists in the area.

##### **IMPACTS AND MITIGATION**

###### **Impact 6.7-1: Light and Glare Impacts during Construction**

PP, AB, AC Construction activities associated with the proposed project and each of the development alternatives (Alternatives AB and AC) would include the use of heavy earth-moving and other construction equipment, the positioning of temporary construction trailers onsite, construction worker activity, construction worker motor vehicle trips and parking on and



adjacent to the project site, and the fencing off and lighting of construction sites within the greater project site. Onsite construction activity would occur on and off during the approximately 8-year construction period of the proposed project and the development alternatives.

City ordinances restrict construction in Sacramento to between 6 a.m. and 8 p.m. Monday through Friday, and to between 7 a.m. and 8 p.m. on Saturday and Sunday. Hence, construction activities would not occur at the project site during nighttime hours, and thus no substantial lighting would be generated associated with these construction activities. However, construction at the project site would require security lighting of specific construction sites or construction storage areas in the larger project site during the construction period. If this security lighting were to be located close to the existing residences or along SR 99, and if this lighting were to be unshielded, it could represent a new source of substantial light which would adversely affect nighttime views of sensitive land uses and motorists in the area. This would represent a *significant* impact.

Construction activities associated with the proposed project and the development alternatives would not create a new source of substantial glare because these activities would not include the handling of large expanses of glass or other reflective materials (because no high-rise buildings are proposed), and would not include the parking of large numbers of motor vehicles at a single location. Hence, a *less-than-significant* impact would occur.

AA No construction activities would occur at the project site under the No Project (No Development) Alternative. Therefore, *no impact* would occur.

#### **Mitigation 6.7-1: Light and Glare Impacts during Construction**

PP, AB, AC To the degree possible, the project applicant and construction contractors shall locate lit construction sites and construction storage areas away from existing adjacent residential uses and the SR 99 frontage. All construction security lighting shall be shielded, focused downward, and focused away from residential areas and public streets.

AA No mitigation is required.

#### **Impact 6.7-2: Light Impacts on Existing Sensitive Land Uses (Operation)**

PP Operation of the proposed project would introduce light to a previously undeveloped site, possibly affecting sensitive land uses and motorists in the vicinity of the project. The sensitive land uses that could be affected would be the senior housing located northwest of the project site, the residential tract located further to the northwest, and the residences located south of the site. In addition, motorists on SR 99 and the SR 99/Cosumnes River Boulevard/Calvine Road overpass could be affected.

The project's PUD guidelines provide guidance on reducing the light associated with the proposed project. Among the guidelines are these, drawn from Section V, Environmental Standards, F. Exterior Lighting:

- Guideline 1 Exterior lighting is to be designed in a coordinated manner that enhances the quality image of this project, provides safety and security for all users in the project and is compatible with surrounding development.
- Guideline 4 Parking lot lights shall not exceed 20 feet [in height].
- Guideline 12 No roof-top lighting, including searchlights, illuminating advertisements, or balloons, shall be permitted except in the case of security lights if deemed necessary and installed so as to not be intrusive to neighboring property owners and motorists.

Section V of the PUD guidelines also includes specific guidance on landscaping. None of this guidance directly relates to the degree of light visible from offsite. The only screening-related guidance relates to plantings used to screen service areas from onsite locations. The guidelines do address shade trees, stating that trees planted in parking areas must provide shade to at least 50% of the parking area within 15 years of planting. This guideline would indirectly serve to reduce the amount of light visible offsite.

The landscape plan prepared for the project (Exhibit 3-7) provides much more information on how landscaping at the site would screen light that might otherwise be visible offsite. As shown in the plan, the western, northern, and eastern borders of the site would be planted with an almost continuous line of large-canopy trees. Each tree is expected to reach 50-100 feet tall and provide a canopy 30-35 feet in diameter. The maximum height allowed for most of the buildings at the project site is 45 feet. The one exception is residential care facilities, which are permitted to be five stories tall. The trees identified in the landscape plan would be tall and full enough to effectively screen most of the light from neighboring sensitive land uses given the proposed lighting and building height requirements. The one exception is the southern portion of the proposed project (the project's residential component) for which the proposed landscape plan does not identify landscaping. This lack of information about proposed landscaping is partially offset by the landscaping requirements of the PUD guidelines (presented in Section V, Environmental Standards), which are applicable to the whole of the project site (including the residential portion of the project). These include landscaping objective e, "The landscape concept shall encourage and frame views of the project," and landscaping standard 6, "The minimum landscape coverage percentage for any property or project within the PUD shall be pursuant to City standards."

The most substantial impact would be on Viewpoints 1 and 2 (Exhibit 6.7-2), located south of the project site. Because the landscape plan does not identify any plantings for the residential component of the project, including along the southern boundary of the site, views from the houses south of this site would be of the apartment buildings proposed for the southern portion of the project site. Light from this portion of the

project would not be expected to illuminate adjacent sensitive property or pose a safety hazard to drivers since apartment complex lighting is typically low-key and often interspersed among buildings rather than being concentrated. However, the project would replace an existing unlit condition in this area with a lit condition that would be visible from the existing residences to the south. In the case of the existing residences along Cotton Lane (i.e., Viewpoint #1), this new lighting would be directly adjacent.

The light impact on Viewpoint 3 (Exhibit 6.7-3), the senior housing northwest of the site, would be minor. As indicated in, the primary sources of light on the northwest portion of the site would be the lights in the parking areas and the lights associated with the commercial buildings (Exhibit 3-3). Nearly all the parking area, including the lighting, would be blocked from this viewpoint by the proposed commercial buildings and by the proposed trees to be planted throughout the parking lot and along the northern and western boundaries of the site. Most of the lights from the proposed commercial buildings would also be obscured by the border of large trees proposed along the periphery of the project site. In addition, the existing intervening light sources (i.e., street lights, traffic signals) at the Cosumnes River Boulevard/Bruceville Road intersection: (1) already represent a lit environment as seen from this viewpoint; and (2) would act to partially obstruct views of the proposed project as seen from this viewpoint during nighttime hours.

The light impact on Viewpoint 4 (Exhibit 6.7-3), the SR 99/Cosumnes River Boulevard/Calvine Road overpass, northwest of the site, is a concern because project lighting would have the potential to pose a hazard for motorists driving west on the overpass. Because the overpass is elevated, the trees planted along the northern and eastern boundaries of the site and throughout the parking area would be less effective in preventing the light from reaching the motorists. However, because the overpass is elevated, the light expected to be most visible would be the light reflected on the pavement beneath the parking lot lights. The lights would stand no more than 20 feet tall and would be required by the City Zoning Code to be designed to direct light down, so drivers on the overpass would see the covered tops of the lights rather than have a direct view, and potentially distracting hazard, of the lights.

The light impact on Viewpoint 5 (Exhibit 6.7-4), SR 99 southeast of the site, would be brief at highway speeds given the short view window of the project site from this location. As indicated in Exhibit 3-3, the eastern portion of the project site along the SR 99 frontage would be developed with commercial and residential uses. Unlike elsewhere on the site, the parking spaces for this commercial area are proposed on the outer edge of the site rather than on the inside of the site, so the buildings would not obstruct offsite views of the parking area. Plantings on this side of the site would be denser than elsewhere on the site, however. In addition to the row of large trees along the edge of the site, a row of shade trees would be located along the edge of the parking area. Evergreen screen trees are planned between the apartment building and SR 99. Because of the density of the plantings along the eastern edge of the site and the very brief time (several seconds) that motorists on the freeway would pass this area, the light impact on this viewpoint would be considered minor.

As described above, the proposed project, which is subject to Zoning Code requirements and would follow the PUD guidelines regarding landscaping and lighting, would effectively minimize light impacts on sensitive land uses west, north, and east of the project site. However, the landscape plan does not identify any plantings for the residential component of the project, including the southern boundary of the project. Because the project would create a new source of substantial light that would adversely affect nighttime views south of the project site (Viewpoints #1 and 2), it would have a *significant* impact.

AA No development would occur at the project site under the No Project (No Development) Alternative. Therefore, *no impact* would occur.

AB Under the General Plan Buildout Alternative, the project site would be developed with two-story apartments and condominiums. Although developing the project site as allowed in the General Plan would not involve following the restrictive guidance of the PUD guidelines or implementing a landscape plan, the development would still be required to meet all City standards regarding lighting and landscaping, as noted in Section 6.7.3.

In addition, the project site is designated by the South Sacramento Community Plan as a Special Planning District. This designation makes any proposed development at the project site subject to City review to ensure that high-quality multifamily residential design is incorporated into the development and that consistent design is incorporated over the multiple parcels that make up the project site. Hence, it is anticipated that the City would require landscaping and lighting under this alternative that would provide for compatibility with existing adjacent land uses.

Lighting under this alternative would likely include lower-level outdoor parking lot and security lighting as is typical with apartment and condominium development. The southern portion of the project site would have similar residential development under both this alternative and the proposed project, so the light impact south of the site would be essentially the same under either development scenario.

The lower-level outdoor parking lot and security lighting under this alternative would be more compatible with the existing adjacent land uses to the north, east, and northwest than the commercial lighting under the proposed project for several reasons. First, the lighting under this alternative would be smaller in scale and less intensive than the commercial and parking lot lighting that would be developed under the proposed project. Second, lit signage would be minimal under this alternative compared to the proposed project. Third, lighting under this alternative would be distributed in and among proposed onsite apartment and condominium buildings rather than concentrated in several large areas (e.g., parking lots, store fronts) as would occur under the proposed project.

Because this alternative, like the proposed project, could have an adverse light effect on nighttime views south of the project site (Viewpoints #1 and 2), it could have a *significant* impact. The extent of this alternative's lighting impact on the existing residences to the south would be the same as under the proposed project, while the extent of this alternative's lighting impacts on the existing uses to the north, east and west would be less.

AC Under this alternative, the project site would be developed as proposed under the College Square project, except that a park-and-ride lot would be developed on the southwest parcel instead of apartment development.

Because the difference between the proposed project and this alternative would only be in the southwestern portion of the site, and because this alternative would adhere to the College Square PUD Guidelines for landscaping/screening as well as the College Square Landscape Plan (Exhibit 3-7), the light impacts of this alternative would be the same as those of the proposed project with respect to Viewpoints #3, 4 and 5.

As discussed previously for the proposed project, the College Square Landscape Plan (Exhibit 3-7) does not identify planned landscaping for the southern portion of the project site. Hence, the development of apartment uses in the southeast portion of the project site would result in the same *significant* impacts to the existing adjacent residences (Viewpoint #1) as would the proposed project. However, this lack of landscape planning would also extend to the southwest parcel which is planned for a lit nine acre, 500 space, park-and-ride lot under this alternative. While this parking lot would be developed consistent with the College Square PUD Guidelines for landscaping/screening and consistent with the City's standard landscaping requirements for parking lots, it would not include a landscape buffer treatment along the southern boundary of the project site. This would result in the development of a large, lit, unscreened parking lot that would be visible from both the westernmost of the existing residences along Cotton Lane as well as the existing residences along Shasta Avenue at Bruceville Road (Viewpoint #2). Hence, a new source of substantial light would be created which would adversely affect nighttime views of sensitive land uses. This would represent a *significant* impact. The extent of this impact would be greater than under the proposed project as a substantially greater light source would be created under this alternative.

#### **Mitigation 6.7-2: Light Impacts on Existing Sensitive Land Uses (Operation)**

PP, AB The project applicant shall ensure that the landscaping concepts shown in the landscape plan are extended to the residential component of the project and that the southern boundary of the project receives the same landscape treatment as shown in the landscape plan along the eastern, northern, and western boundaries of the project site. The project applicant also shall ensure that all project lighting is shielded, focused downward, and focused away from residential areas and public streets. Finally, the project lighting shall comply with all other applicable requirements of the City's Zoning Ordinance and other light regulations.

- AA No mitigation is required.
- AC The project applicant shall ensure that all project lighting is shielded, focused downward, and focused away from residential areas and public streets. The project lighting also shall comply with all other applicable requirements of the City's Zoning Ordinance and other light regulations. In addition, the applicant may introduce a visual barrier between the lot and views from Bruceville Road and from the residences south of the project site. The form of that barrier could be determined based on the results of noise reduction analyses conducted for the project. As described in Section 6.4, Noise, to determine the most effective means to comply with City of Sacramento and California noise requirements, a detailed analysis of noise reduction requirements would be made when special permits are submitted for each project component. If a sound wall is selected as the preferred approach to reduce noise levels associated with the park-and-ride lot, landscape treatments would be provided along the outer edge of the wall to soften the appearance of the wall. If a sound wall is not constructed along that portion of the project site, the applicant shall landscape the southern border of the site would the same landscape treatments as shown in the landscape plan along the eastern, northern, and western boundaries of the site.

**Impact 6.7-3: Glare Impacts on Existing Sensitive Land Uses (Operation)**

- PP, AB Implementation of the proposed project and the development alternatives (Alternatives AB and AC) would introduce daytime glare to a previously undeveloped site, possibly affecting sensitive land uses and motorists in the vicinity.

The College Square PUD Guidelines include guidance on reducing the glare associated with the proposed project. Among the Guidelines is the following, drawn from Section V, Environmental Standards, F. Exterior Lighting:

- Guideline 4 Site design shall consider thermal and glare impacts of construction materials on adjacent structures, walkways, streets, drives, parking areas and vegetation.

As discussed previously, the generators of substantial glare typically are either high-rise buildings that are clad in glass or other reflective surface or large parking lots, where the sun has a potential to reflect off surfaces for an extended period (as opposed to glare off a low-rise building or a single car windshield, which is very short term because of the small size of the reflective surface and the sun's movement).

The proposed project would not include any high-rise buildings. Project buildings would be a maximum of 45 feet tall, with the exception of residential care facilities, which are permitted to be five stories tall. In addition, Guideline 4 of the PUD Guidelines requires consideration of the type of construction materials to be used where such materials have the potential to result in glare on adjacent uses. Finally, the PUD Guidelines and the proposed landscape plan call for the provision of trees and other landscaping within and along the periphery of the project site. For the one area of the site where the proposed

landscape plan does not presently extend (i.e., the southern portion of the site proposed for residential uses), the Zoning Ordinance limits building height (§3, Height and Area Regulations) and regulates lighting and landscaping as noted in Section 6.7-3 of this section. Therefore, glare from project buildings would not be expected to be a problem.

The proposed project would include the development of several large parking lots. These lots would be internal to the proposed project, and would not be visible from adjacent sensitive land uses (i.e., Viewpoints 1, 2, and 3). The one exception to this would be the parking lots located between the proposed commercial uses and SR 99 (Viewpoint 5). While these lots would be small compared to the internal lots of the project, the proposed configuration of these lots includes a row of parking lots along SR 99 which, when parked with cars, could provide an extended reflective surface. However, the proposed landscape plan includes a heavy border treatment of trees and other landscaping between these proposed parking lots and SR 99 that would visually buffer these lots from the freeway; hence, glare from these parking lots would not be expected to be a problem. Those project parking lots would be visible from the SR 99/Calvine Road/Cosumnes River Boulevard overpass. While the largest of the proposed parking lots (those proposed north of West Stockton Boulevard to serve the grocery store and other commercial uses) would be visible from the overpass, the landscape plan proposes, and the City of Sacramento requires, a large number of trees within the proposed parking lot for shade purposes. These trees would break up views of the parking lot as seen from the overpass, and act as a visual buffer to reduce glare from the parking lot. In addition, as indicated in Exhibits 3-3 and 3-7, the orientation of the parking stalls in the proposed lot are east-west rather than north-south, thus avoiding the possibility that a long line of car windshields would be oriented northwestward toward the interchange.

For all these reasons stated above, the proposed project would result in a *less-than-significant impact* glare impact. The extent of this impact would be less under the General Plan Buildout Alternative (Alternative AB) because, while this alternative would not implement the landscape plan proposed under the proposed project, it would still be subject to the City's landscaping and shading requirements, and at the same time would develop low-rise apartments instead of commercial uses and large parking lots.

AA No development would occur at the project site under the No Project (No Development) Alternative. Therefore, *no impact* would occur.

AC Under the Park-and-Ride Alternative, the same land uses would be developed in the northern and eastern portions of the project site, the same proposed landscape plan would be implemented, and the same City shading requirements for parking lots would be applicable, as with the proposed project. Hence, for these portions of the project site, this alternative would result in the same less-than-significant glare impacts at adjacent viewpoints (Viewpoints #1, 3, 4, and 5) as the proposed project.

Under this alternative, a 9-acre park-and-ride lot would be developed on the southwest parcel instead of the apartments proposed on this parcel under the proposed project. As discussed under the proposed project, the City has shading requirements for parking lots

that requires a relatively high density of tree plantings within parking lots. This tree planting requirement would avoid any potential for substantial glare impacts from this parking lot on the SR 99/Calvine Road/Cosumnes River Boulevard overpass, and would reduce the amount of glare that would otherwise be generated by this parking lot as seen from the existing residences closest to the proposed parking lot along Cotton Lane as well as the existing residences along Shasta Avenue at Bruceville Road (Viewpoint #2). However, as discussed previously, the proposed landscape plan does not extend to the southwest parcel. Hence, this alternative would result in the development of a 500-space unscreened parking lot within relatively close proximity of existing residential uses, and create a new source of substantial glare which would adversely affect the daytime views of sensitive land uses and motorists in the area. This would represent a *significant* impact.

**Mitigation 6.7-3: Glare Impacts on Existing Sensitive Land Uses (Operation)**

PP, AA, AB No mitigation is required.

AC Implement Mitigation Measure 6.7-2.

**Impact 6.7-4: Light and Glare Impacts on Sensitive Land Uses (Cumulative)**

PP, AB, AC The project site and local environs are currently characterized by unlit or dimly lit areas, low glare, and low-rise development. Unlit areas include the project site, the Strawberry Creek Centre site (site of an approved but not yet constructed developed Target or similar project and commercial center directly north of the project site across Cosumnes River Boulevard), and vacant parcels to the south. Dimly lit areas include the scattering of large-lot single-family residences to the southeast, the senior housing and single-family residential subdivision to the northwest, and the ministorage business across the freeway to the west (on the south side of Calvine Road). The only notable existing lit areas are the Cosumnes River College parking lot and stadium across Bruceville Road to the east and the Cosumnes River Boulevard/Bruceville Road intersection, which has traffic signals and street lights. The only area of any daytime glare generation is the Cosumnes River College parking lot, where the sun reflects off the windshields of parked cars.

With development of the proposed project and the projects adjacent to the project site (e.g., Strawberry Creek Centre, RT Phase 2 Light Rail Corridor Project, widening of Bruceville Road and Cosumnes River Boulevard, signalized intersection at the college entrance off Bruceville Road), the area would be transformed from an unlit or dimly lit rural environment to a lit urbanized environment that also generates daytime glare. The Cosumnes River Boulevard corridor, local SR 99 frontage, and Bruceville Road corridor, in particular, would be transformed from an unlit or dimly lit environment to a lit environment, with parking lots associated with the above-listed development the source of some glare. However, the project site and the sites of the projects identified above are surrounded on all sides by urban development. Because existing light-sensitive land uses in the area are already subjected to some urban light and glare, such as that from Cosumnes River College, the Cosumnes River Boulevard/Bruceville Road intersection,



and the light from the Lowe's commercial center east of SR 99, and because each of the projects is subject to City lighting standards, landscaping standards, and other buffering requirements, the cumulative light and glare impacts would be *less than significant*.

The two development alternatives, like the proposed project, would contribute to this less-than-significant impact, with the degree of the impact slightly less under the General Plan Buildout Alternative and slightly greater under the Park-and-Ride Alternative for the reasons stated in the discussions of Impacts 6.7-2 and 6.7-3.

AA No development would occur at the project site under the No Project (No Development) Alternative. No increase in light and glare impacts would occur under this alternative because this alternative would not contribute to any significant cumulative impact that may result associated with cumulative development. *No impact* would occur.

**Mitigation 6.7-4: Light and Glare Impacts on Sensitive Land Uses (Cumulative)**

PP, AA, AB, AC No mitigation is required.

**6.4.5 LEVEL OF SIGNIFICANCE AFTER MITIGATION**

The proposed project and alternatives would not result in any significant impacts with implementation of the mitigation measures recommended in this section.

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**6.8 PUBLIC SERVICES AND UTILITIES  
(SCHOOLS, WATER, SOLID WASTE)**

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## 6.8 PUBLIC SERVICES AND UTILITIES (SCHOOLS, WATER, SOLID WASTE)

### 6.8.1 INTRODUCTION

This section of the EIR evaluates the availability of public services and utilities for the College Square development, as well as the potential changes associated with its development. The public services and utilities analyzed in this section are schools, water, and solid waste. The analysis is based on personal communications with representatives of each of the service providers, existing documentation, and information about the proposed project.

### 6.8.2 ENVIRONMENTAL SETTING

#### SCHOOLS

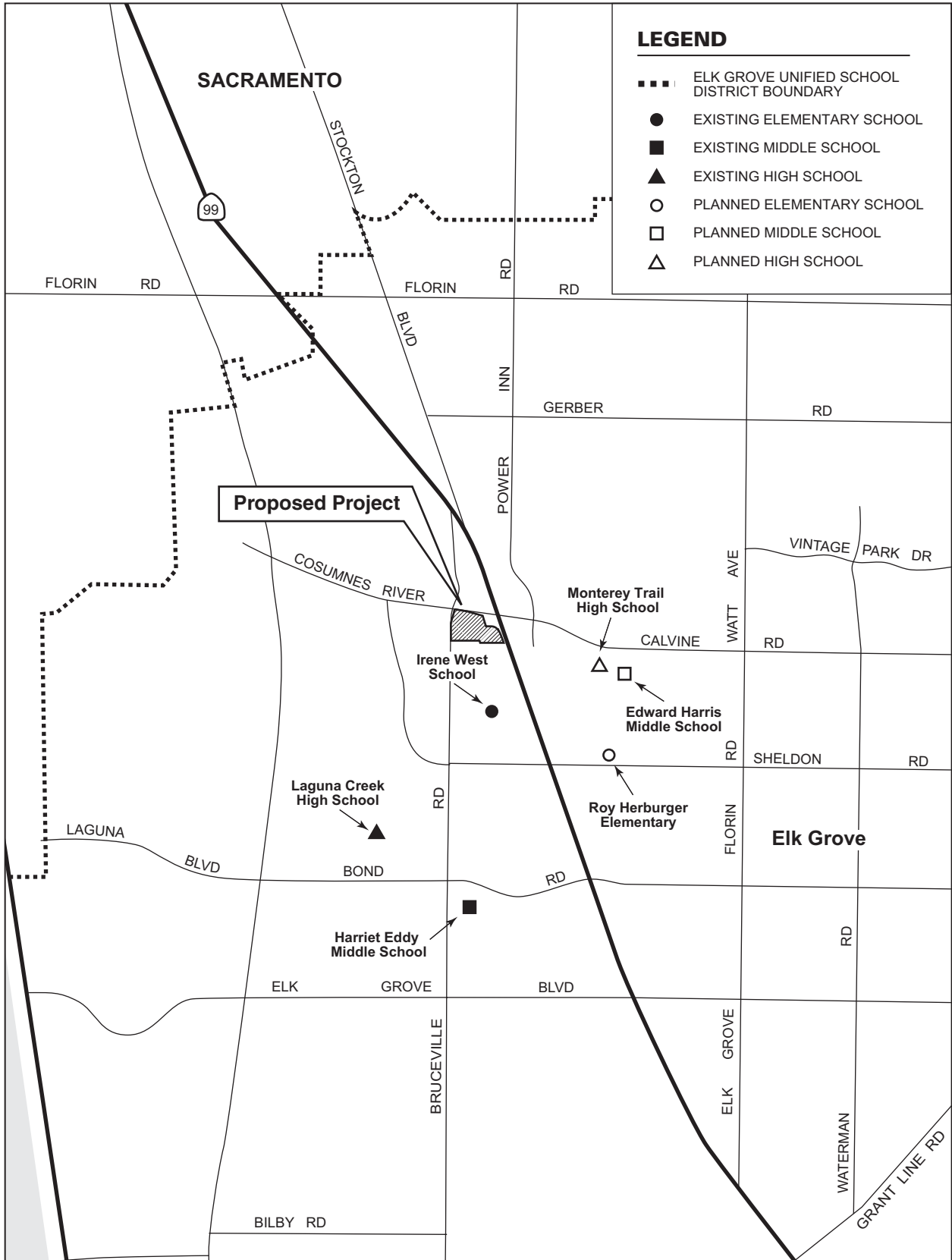
The project site is located in the City of Sacramento, in the southern portion of Sacramento County. There are eight school districts operating in Sacramento County. The project site lies within the service area of Elk Grove Unified School District (EGUSD). The EGUSD covers an area of 320 square miles and currently operates 32 elementary schools (K-6), 6 middle schools (7-8), 6 high schools (9-12), and 3 alternative high schools (Williams, pers. comm., 2003).

Within the EGUSD, the project site is located in the attendance area for Irene B. West Elementary School located at 8625 Serio Way, Harriet G. Eddy Middle School located at 9329 Soaring Oaks Drive, and Laguna Creek High School located at 9050 Vicino Drive. Students residing within this attendance area have priority for enrollment at these three schools. Current enrollment level and available capacity for each of these schools is shown in Table 6.8-1. Any unused capacity is filled with students transferred from other schools within the EGUSD. Therefore, each school typically remains at maximum enrollment levels (Williams, pers. comm., 2003). Any students over capacity are transferred to other schools within the EGUSD.

<b>School</b>	<b>Capacity <sup>1</sup></b>	<b>Current Enrollment <sup>1</sup></b>	<b>Available Capacity</b>
Irene B. West	775	772	3
Harriet G. Eddy	1,370	1,103	267
Laguna Creek	2,528	2,654	-126

<sup>1</sup> Source: EDAW 2003  
Source: Williams, pers. comm., 2003.

The EGUSD indicated in comment letter on the proposed project that it is currently impacted, overcrowded and experiencing a high rate of growth (Rosenstein, pers. comm., 2002). In anticipation of continued population growth in the EGUSD area, and because existing schools are overcrowded, an additional 5 schools (3 elementary, 1 middle, and 1 high) have been funded and are in various stages of development scheduled for completion no later than 2005 (Williams, pers. comm., 2003). None of these funded schools would be located in the attendance area of the project site (Exhibit 6.8-1). However, three of these funded schools are located in the attendance area adjacent and east of the project site.

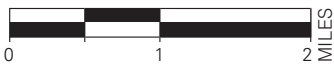


Source: California, Thomas Brothers Guide 2001

**Existing and Planned Schools**

**EXHIBIT 6.8-1**

College Square PUD  
1T157.01 4/03



Considering their proximity to the project site, these schools could potentially provide capacity for students generated by implementation of the proposed project.

The EGUSD Master Plan calls for an additional 28 schools (18 elementary, 8 middle and high, and 2 alternative high) to be developed by 2010 (Williams, pers. comm., 2003).

The project site is currently vacant and does not generate any school students.

## **WATER**

The proposed project site is located in the City of Sacramento and would be provided water service by the Water Services Department of the Department of Utilities. In addition to water supply, the Water Services Department provides water quality protection and water conservation services.

The City provides water from combined surface water and groundwater sources. The surface sources are the Sacramento and American Rivers, which the City has surface rights to and which together provide approximately 85% of water supply. The remaining 15% of water supply is provided by wells. The City of Sacramento has determined that surface water from the Sacramento and American Rivers would be able to supply water for all planned growth in the City through buildout (City of Sacramento 2000).

The nearest water main is located in Bruceville Road, adjacent to the project site. As indicated in Exhibit 3-6, City water mains in the vicinity of the project site include a 24-inch main located along the west side of Bruceville Road, approximately 40 feet west of the project site, and a 12-inch water main at the intersection of Shasta Avenue and West Stockton Boulevard, several hundred yards southeast of the project site. The 24-inch transmission main located in Bruceville Road was specifically sized to meet the needs of the land area proposed for the College Square PUD (Marshall, pers. comm., 2003). A local distribution system would be tied into this system and be placed in Bruceville Road, West Stockton Boulevard, and any other public streets in the development area (Marshall, pers. comm., 2003).

The project site is vacant and uncultivated, and does not currently generate a demand for water from the City.

## **SOLID WASTE**

The project site is located in the City of Sacramento, whose residents are provided solid waste service by the Solid Waste Division of the Department of Public Works. The Solid Waste Division provides a full range of solid waste management including collection, recycling, planning and education.

In the City of Sacramento, multifamily residential and commercial solid waste service is considered a franchise system and is open to competition. Construction contractors or property managers may select the solid waste hauler of their choice. The Sacramento Regional Solid Waste Authority (SWA) is a joint powers authority of Sacramento County and the cities of Sacramento and Citrus Heights. The SWA regulates multifamily commercial solid waste collected by franchised haulers.

Multifamily residential and commercial waste can be collected by one of 16 different solid waste haulers, including the City of Sacramento. Solid waste haulers use a variety of landfill facilities both in and out of

the county/state, including Kiefer Boulevard Landfill in Sacramento, Forward Landfill in Manteca, and Lockwood Landfill in Nevada. Because a variety of landfill facilities are used, the City of Sacramento has determined that adequate capacity exists in the system and solid waste generated by continued development within the City can be accommodated (Root, pers. comm., 2003). The City of Sacramento is also exploring options for expansion of solid waste facilities in the northern area of the City.

The nearest landfill is Keifer Boulevard Landfill, a Sacramento County-owned facility, located approximately 13 miles northeast of the project site. As of July 2000, the used capacity of Keifer Boulevard Landfill was 1,085,233,712 and the unused capacity was 88,766,288 cubic yards (California Integrated Waste Management Board 2000). According to the Sacramento County General Plan, the expected closure date of this landfill was to be in 2040 (Sacramento County 1993). However, the Solid Waste Division has stated that this landfill has capacity sufficient for the next 10-20 years (Root, pers. comm., 2003).

Forward Landfill is located approximately 50 miles south of the project site, in Manteca, California. Lockwood Landfill is located approximately 140 miles northeast of the project site, near Reno, Nevada.

The project site is vacant and does not generate any solid waste.

### **6.8.3 REGULATORY SETTING**

The proposed project is subject to the City of Sacramento General Plan, South Sacramento Community Plan (SSCP), and City of Sacramento Zoning Ordinance.

#### **SCHOOLS**

It is a goal of the General Plan to “continue to assist school districts in providing quality education facilities that will accommodate projected student enrollment growth” (City of Sacramento 2000).

It is a goal of the Community Plan to “ensure that schools can accommodate projected growth” (City of Sacramento 1986). One policy of that goal is to “continue to assist the school districts with the process of developing impaction fees” (City of Sacramento 1986).

New schools in the EGUSD are funded with a combination of local bonds, state bonds, and school impact fees. According to California Codes, Education Code Section 17620, “the governing board of any school district is authorized to levy a fee, charge, dedication, or other requirement against any construction within the boundaries of the district, for the purpose of funding the construction or reconstruction of school facilities.” This fee may be applied to both new commercial and residential construction. School impact fees are charged to new development sites within the EGUSD at current rates of \$3.41 per square foot for residential construction and \$0.34 per square foot for commercial construction (Williams, pers. comm., 2003). Building and construction regulations are noted in Chapter 15.132 of the Sacramento City Code. Per this regulation, no building permit for the construction of any new dwelling units shall be issued in an attendance area of an impacted school for which a declaration of impaction is presently in effect unless there has been filed with the director of building inspections either a certificate of mitigation or a certificate of waiver of mitigation which relates to the proposed construction (City of Sacramento 2003).

## **WATER**

It is a goal of the General Plan to “provide and improve water supply facilities to meet future growth of the city and assure a continued supply of safe potable water (City of Sacramento 2000).”

In addition to the City water goal identified above, the State of California has enacted new water legislation applicable to projects of the size proposed. Senate Bill (SB) 610 (§10910 of the Water Code) ties approval of large developments (e.g., more than 500 dwelling units) such as the proposed project to the availability of water supplies adequate to serve the proposed project as well as other anticipated growth in the water supplier’s service area. Under SB 610, a Water Supply Assessment (WSA) must be prepared by the lead agency that demonstrates the availability of adequate existing and future water supplies to serve the project. The content requirements for the assessment include, but are not limited to, identification of the existing and future water suppliers and quantification of water demand and supply by source in 5-year increments over a 20-year projection. This information must be provided for average normal, single-dry and multi-dry years.

An SB 610 WSA has been prepared for the proposed project. The assessment is included in its entirety as Appendix H of this EIR.

## **SOLID WASTE**

It is a goal of the General Plan to “provide adequate solid waste disposal facilities and services for collection, storage and reuse of refuse” (City of Sacramento 2000).

Recycling and solid waste disposal regulations are noted in Chapter 17.72 of the Sacramento City Code (City of Sacramento 2003). This regulation requires that a statement of recycling information is required for new development prior to issuance of a building permit, and must include:

- A. Site plan to include the location and design specifications of the recycling and trash enclosure(s) and receptacle(s) that shall meet the volume and material requirements and the development standards. Identify materials to be recycled.
- B. Demolition and construction plan to specify any proposed recycling of building material in the demolition of any structure on the site and to specify any recycled material to be used in the construction of the proposed development.
- C. Education/public relations program to instruct users of the development about the benefits of recycling and how to recycle.

## **6.8.4 IMPACTS AND MITIGATION**

### **METHOD OF ANALYSIS**

#### **Schools**

Project impacts on schools is evaluated by estimating the new students that would be generated within the EGUSD under the proposed project, and determining whether the schools within the EGUSD that would serve the proposed project have adequate existing and/or planned capacity to accommodate these additional students based on information about used and unused school capacity from EGUSD.

#### **Water**

Project impacts on water supply is evaluated by estimating the water that would be required to serve the proposed project, and determining whether the City has adequate water supplies to serve the proposed project based on information about existing City-wide water demand and supply from the City's Urban Water Management Plan (UWMP) and the SB 610 WSA prepared for this project.

Under SB 610, a WSA has been prepared to demonstrate the availability of adequate existing and future water supplies to serve the project. The findings and conclusions of the WSA are included in this analysis.

#### **Solid Waste**

Project impacts on solid waste service is evaluated by estimating the solid waste that would be generated by the proposed project, and determining whether the landfill(s) that would serve the proposed project have adequate existing and/or planned capacity to accommodate this solid waste based on information about used and unused landfill capacity from the City of Sacramento Department of Public Works.

### **STANDARDS OF SIGNIFICANCE**

For purposes of this EIR, a public services/utilities impact is considered significant if the proposed project would result in any of the following:

#### **Schools**

- ▶ Create a demand for school facilities (during construction or operation) that could not be met by existing or planned school facilities.

#### **Water**

- ▶ Result in construction activities that could interrupt water service to existing land uses (such as the potential to damage an existing water line or the need to re-route an existing water line during construction).



- ▶ Result in water demand (during construction or operation) that cannot be met by existing and/or planned water supply and water supply facilities.
- ▶ Result in inadequate water conveyance infrastructure to serve the project.

### **Solid Waste**

- ▶ Generate solid waste (during construction or operation) which would exceed the permitted capacity of the landfills(s) that would serve the project.

## **IMPACTS AND MITIGATION MEASURES**

### **Impact 6.8-1: School Facilities/Services (Construction)**

PP, AB, AC      At most, several dozen construction workers would be working on the project site at any one time during construction of the proposed project. However, it is not anticipated that construction workers’ families would place a demand on the school district. This is because the construction industry differs from most other industry sectors in that there is no regular place of work (i.e., construction workers commute to a job site that may change many times during the course of the year; and construction workers do not generally change their place of residence each time they change job sites. Therefore, project construction workers would not generate a substantial increase in school enrollment in the area, and a *less-than-significant* impact would occur.

AA      Conditions at the proposed project site would remain as they currently exist. No demand for school facilities would result. Therefore, *no impact* would occur.

### **Mitigation 6.8-1: School Facilities/Services (Construction)**

PP, AA, AB, AC      No mitigation is required.

### **Impact 6.8-2: School Facilities/Services (Operation)**

The estimated number of new students per multifamily housing unit is referred to as the student generation rate. According to the EGUSD, a multifamily housing unit, such as that proposed under the College Square PUD, generates approximately 0.5375 K-12 grade students per housing unit. Table 6.8-2 calculates the estimated number of new students by school level for the proposed project and project alternatives.

Under the proposed project and each of the development alternatives, the type of housing that would be developed at the project site is “multifamily” housing (i.e., condos, apartments). For this reason, Table 6.8-2 is restricted to school students that would be generated by multi-family housing at the project site (i.e., 472 units under the proposed project, 0 units under Alternative AA, 1,114 units under Alternative AB, 208 units under Alternative AC). Because senior housing does not generate new students, the 252

units of senior housing proposed under the College Square PUD project and Park-and-Ride Alternative are not included in the residential unit counts identified in Table 6.8-2.

Elk Grove School District Grade	Student Generation Rate <sup>1</sup>	Estimated New Students under No Project (AA)	Estimated New Students under G.P. Buildout (AB)	Estimated New Students under Park-and-Ride (AC)	Estimated New Students under Proposed Project (PP)
K-6	0.3057	0	341	64	144
7-8	0.0730	0	81	15	35
9-12	0.1587	0	177	33	75
Total K-12	0.5375	0	599	112	254

<sup>1</sup> Source: Williams, pers. comm., 2003.  
Source: EDAW 2003

PP, AB, AC As indicated in Table 6.8-2, the proposed project would generate an estimated 254 school students during operation (144 K-6, 35 junior high, and 75 high school students). The General Plan Buildout Alternative would generate approximately twice as many students as the proposed project, and the Park-and-Ride Alternative would generate about half as many.

As indicated previously, two of the three schools that would serve the proposed project and alternatives currently has unused capacity. Irene B West Elementary and Harriet G. Eddy Middle School, have 3 and 267 empty seats, respectively. Laguna Creek High School is currently 126 students over capacity, and therefore, has no empty seats. Five additional schools have been funded within the EGUSD to supplement existing school capacity, and 28 new schools are being planned within the EGUSD to accommodate additional population growth in the EGUSD. Finally, as required by existing regulations, the project applicant would be required to pay the state-mandated school impact fees required to mitigate impacts on schools from proposed development. The state considers payment of the state-mandated school impact fees as full and complete mitigation for impacts to schools associated with development projects (California Government Code §65995 and §65996). For all these reasons, the proposed project, General Plan Buildout Alternative, and Park-and-Ride Alternative would each result in a *less-than-significant* impact on schools. The degree of this impact would be higher under the General Plan Buildout Alternative and less under the Park-and-Ride Alternative, relative to the proposed project.

AA Conditions at the proposed project site would remain as they currently exist. No demand for school facilities would result. Therefore, *no impact* would occur.

**Mitigation 6.8-2: School Facilities/Services (Operation)**

PP, AA, AB, AC No mitigation is required.

**Impact 6.8-3: School Facilities/Services (Cumulative)**

PP, AB, AC        The proposed project in concert with past, present, and reasonably foreseeable future cumulative growth within the EGUSD service area, would create an increased demand for school services and facilities from the EGUSD. The EGUSD is making efforts to accommodate this demand through its current construction and planning program for new schools. As required by existing regulations, the cumulative development in the EGUSD service area is subject to state-mandated school impact fees to mitigate impacts on schools associated with development. The state considers payment of the state-mandated school impact fees as full and complete mitigation for impacts to schools associated with development projects (California Government Code §65995 and §65996). Therefore, a *less-than-significant* cumulative impact would occur. According to the State, the payment of these fees is sufficient to mitigate impacts on schools associated with development.

AA                    Conditions at the proposed project site would remain as they currently exist. No demand for school facilities would result. Therefore, *no impact* would occur.

**Mitigation 6.8-3: School Facilities/Services (Cumulative)**

PP, AA, AB, AC    No mitigation is required.

**Impact 6.8-4: Water Facilities/Services (Construction)**

PP, AB, AC        Project construction activities could potentially interrupt water service to existing land uses if such construction activities were to damage existing water lines or create the need to re-route existing water lines. However, the City requires that all proposed grading, excavation, construction, and utility plans be reviewed and approved by the City’s Public Works Department (Water Services Division) before construction. This requirement would avoid the potential for damage of existing water lines and would provide adequate plans for any required interim rerouting of existing water lines and thus would avoid the potential for interruption of existing water service. *No impact* would occur.

Project construction activities would create a temporary short-term demand for water from the City of Sacramento. This demand would occur associated primarily with dust suppression and construction-vehicle wash-down. The source of this water would most likely be from City fire hydrants within the vicinity of the project site (which are fed from the City’s water supply system which, in turn, is fed primarily from the American River). Because this water use would be temporary and short-term, and because it would represent a very small proportion of the total potable water use within the City, it is not anticipated that surface water supplies would be measurably affected. Therefore, a *less-than-significant* impact would occur. The degree of this impact would be similar between the proposed project and the two development alternatives as roughly the same amount of grading and other earth-moving activities would occur under each.

AA Conditions at the proposed project site would remain as they currently exist. No potential for interruption of water service or demand for water would result. Therefore, *no impact* would occur.

**Mitigation 6.8-4: Water Facilities/Services (Construction)**

PP, AA, AB, AC No mitigation is required.

**Impact 6.8-5: Water Facilities/Services (Operation)**

The proposed project would result in the development of 724 residential dwelling units, 270,256 square feet of commercial uses (i.e., neighborhood and community commercial, office, and child care), and TOD common area, all of which would create a demand for potable water. Estimated potable water demand from the SB 610 WSA is shown in Table 6.8-3. As indicated, the proposed project would consume an estimated 240,962 gallons per day (gpd) or 270 acre-feet per year (AFY) of potable water. This would represent a 100% increase in water currently consumed at the project site, 0.19% of the City’s current potable water consumption, and 0.15% of the City’s projected 2020 potable water consumption.

<b>Land Use Type</b>	<b>Gross Acres</b>	<b>Residential Units</b>	<b>Consumption Factor <sup>1</sup></b>	<b>Consumption (gpd)</b>	<b>Consumption (AFY)</b>
Commercial	25.90	--	2,680 gpd/acre	69,412	78
Office	0.94	--	2,680 gpd/acre	2,519	3
Child Care	1.42	--	2,680 gpd/acre	3,806	4
Senior Residential	0	252	225 gpd/unit	56,700	63
Multi-Family Residential	0	472	225 gpd/unit	106,200	119
TOD Common Area	0.60	--	3,750 gpd/acre	2,325	3
Other (major streets, city pond)	7.41	--	--	--	
<b>Total</b>	<b>36.27</b>	<b>724</b>		<b>240,962</b>	<b>270</b>

<sup>1</sup> Source: Marshall, pers. comm., 2003  
Source: EDAW 2003

The SB 610 WSA prepared for the College Square PUD project evaluates the adequacy of existing and future water supplies to meet the water demand created by the project in conjunction with existing and future cumulative development in the City over the next 20 years. The WSA, included as Appendix H of this EIR, accomplishes this by identifying water demand and supply in 5-year increments over a 20-year time horizon, taking into account not only existing water supplies, but also planned and/or approved water supplies not yet utilized. As indicated, future water supply for the City would consist primarily of surface water from the American River and Sacramento River, supplemented by continued groundwater withdrawal. The existing City water supply is 148,000 AFY. Normal year future City water supply would range from 205,500 AFY in 2005 to 249,000 AFY in 2020. At the same time, it is projected that future City water demand (i.e., proposed project plus existing/future city development) would range from

150,278 AFY in 2005 to 175,899 AFY in 2020. Future City water supply during normal years would thus be adequate to meet future with project water demand.

As indicated in the WSA, the proposed project would result in water demand for the project site that is approximately 80 acre-feet per year greater than that assumed for the site in the City's Urban Water Management Plan (UWMP). However, the City is projected to have a normal year surplus supply of over 73,000 acre-feet per year in 2020 regardless of whether or not the proposed project is developed. Hence, even with the incrementally greater water demand at the project site under the proposed project, future City water supply during normal years would be adequate to meet future with project water demand. This is also true during single dry and multiple dry years where it is projected that the City would have a surplus supply of approximately 63,000 acre-feet per year in 2020 regardless of whether or not the proposed project is developed.

PP, AB, AC           Based on the above, adequate water is available to serve the proposed project, and thus a *less-than-significant* impact would occur with respect to water supply.

The potable water required to serve the proposed project would be provided by the City's municipal water system. As indicated in Exhibit 3-6, water would be provided to the project by connecting to an existing 24-inch water main located along the west side of Bruceville Road. A new 12-inch water line would be constructed from this water line westward across Bruceville Road near Cosumnes River Boulevard, and then southward along the east side of Bruceville Road to the southern boundary of the project site. A 12-inch water line would be constructed along the north side of West Stockton Boulevard from the new 12-inch line in Bruceville Road to near the eastern boundary of the project site. A second 12-inch water line would be constructed on the south side of West Stockton Boulevard from Bruceville Road eastward and then southward down West Stockton Boulevard and connect to an existing 12-inch water main at Shasta Avenue. Water would be provided off the 12-inch water lines to each parcel on the project site. A booster pump would be constructed on each parcel to increase the available water pressure for their domestic needs. A separate fire protection water system would be constructed onsite which would include a booster pump system to provide the required fire flow and pressures.

Based on the above, it would appear that adequate plans are being proposed to convey water from existing water mains in the vicinity of the project site to the proposed project. This would be determined conclusively during the design phases of the project and associated City Department of Public Works review of the design plans and final map. With City review, adequate water conveyance infrastructure to serve the proposed project would be ensured. Hence, *no impact* would occur with respect to the adequacy of water conveyance infrastructure to serve the project.

The City of Sacramento Department of Utilities indicated in comment letter on the NOP that water pressure in the area is low and a standard fire flow test would be required as a condition of development (City of Sacramento 2003a). As indicated above, the project's fire protection system would include a booster pump system to provide the required fire flow and pressures. This should mitigate the existing low

water pressure condition in the area. This would be verified as part of the department's review of the design plans for the proposed fire protection system (through the required fire flow text). *No impact* would occur.

AA Conditions at the proposed project site would remain as they currently exist. No new demand for water supply would result. Therefore, *no impact* would occur.

**Mitigation 6.8-5: Water Facilities/Services (Operation)**

PP, AA, AB, AC No mitigation is required.

**Impact 6.8-6: Water Facilities/Services (Cumulative)**

PP, AB, AC See Impact 6.8-8, which also covers cumulative water supply and demand. As indicated, existing and future water supplies are and would be adequate to serve the water demand created by the proposed project in combination with cumulative growth in the City. This would represent a *less-than-significant* impact.

As indicated under Impact 6.8-8, adequate water conveyance infrastructure would be provided to serve the proposed project. Because City Department of Public Works review and approval of projects within the City is required, and because such review and approval would avoid instances where inadequate water conveyance infrastructure is available to serve new development, instances of inadequate water conveyance infrastructure to serve new development would be avoided. The proposed project in combination with cumulative development in the South Sacramento Community Plan area could eventually require that water trunk lines and pump stations serving the Community Plan area be enlarged or upgraded. Such regional improvements are carried out by the City on an ongoing basis as part of the City's Capital Improvements Program, and it is thus anticipated that adequate water conveyance infrastructure would continue to be available within the South Sacramento Community Plan area in the future. Based on the above, *no impact* would occur with respect to the adequacy of cumulative water conveyance infrastructure.

AA Conditions at the proposed project site would remain as they currently exist. No demand for or interruption of water service would result. Therefore, *no impact* would occur.

**Mitigation 6.8-6: Water Facilities/Services (Cumulative)**

PP, AA, AB, AC No mitigation is required.

**Impact 6.8-7: Solid Waste Facilities/Services (Construction)**

PP, AB, AC This construction waste would be generated associated with clearing of the project site and construction of onsite structures, utilities, and roadways. This construction

debris would represent a tiny fraction of the amount of solid waste received by the Keifer, Forward, and/or Lockwood landfills in a single day, and would be both short-term and temporary. It would not create a measurable effect on the capacity of the landfill. Therefore, a *less-than-significant impact* would occur.

AA Conditions at the project site would remain as they currently exist. No generation of solid waste would result. Therefore, *no impact* would occur.

**Mitigation 6.8-7: Solid Waste Facilities/Services (Construction)**

PP, AA, AB, AC No mitigation is required.

**Impact 6.8-8: Solid Waste Facilities/Services (Operation)**

The estimated amount of solid waste generated per unit or per square foot per day is referred to as a waste generation ratio. According to the City of Sacramento, residential units generate approximately 8 pounds per unit per day and commercial space generates approximately 1 pound per 100 square feet (sf) per day (Root, pers. comm., 2003). Table 6.8-4 calculates the estimated amount of solid waste (in pounds) generated per day for the proposed project and project alternatives.

<b>Land Use</b>	<b>Solid Waste Generation Ratio</b>	<b>Estimated Solid Waste Generated by No Project</b>	<b>Estimated Solid Waste Generated by G.P. Buildout (AB)</b>	<b>Estimated Solid Waste Generated by Park-And-Ride (AC)</b>	<b>Estimated Solid Waste Generated by Proposed Project (PP)</b>
Commercial	1 pound per 100 sf per day	--	--	2,703 pounds	2,703 pounds
Residential	8 pounds per unit per day	--	8,912 pounds	3,680 pounds	5,792 pounds
Total		--	8,912 pounds per day	6,383 pounds per day	8,495 pounds per day
Source: EDAW 2003					

PP, AB, AC As indicated in Table 6.8-4, the proposed project would generate an estimated 8,495 pounds per day of solid waste during operation while the General Plan Buildout Alternative would generate slightly more than this each day and the Park-and-Ride Alternative approximately 25% less. This waste would represent a tiny fraction of the amount of solid waste received by the Keifer, Forward, and/or Lockwood landfills in a single day and would not create a measurable effect on the capacity of the landfill. The proposed project would comply with all federal, state, and local statutes and regulations related to solid waste reduction/recycling. Therefore, a *less-than-significant impact* would occur. The extent of this impact would be slightly greater under the General Plan Buildout Alternative and slightly less under the Park-and-Ride Alternative.

AA Conditions at the proposed project site would remain as they currently exist. No generation of solid waste would result. Therefore, *no impact* would occur.

**Mitigation 6.8-8: Solid Waste Facilities/Services (Operation)**

PP, AA, AB, AC No mitigation is required.

**Impact 6.8-9: Solid Waste Facilities/Services (Cumulative)**

PP, AB, AC Development at the proposed project, as well as cumulative development within the South Sacramento area, would generate solid waste during construction and operation and would result in the need for regularly scheduled solid waste services. Because solid waste haulers use a variety of landfill facilities, and the landfills that serve the South Sacramento area have remaining capacities through the foreseeable future (based on existing growth projections) capacity exists within the landfill system and solid waste generated by construction and operation of the proposed project would be accommodated. Therefore, a *less-than-significant* impact would occur.

AA Conditions at the proposed project site would remain as they currently exist. No generation of solid waste would result. Therefore, *no impact* would occur.

**Mitigation 6.8-9: Solid Waste Facilities/Services (Cumulative)**

PP, AA, AB, AC No mitigation is required.

**6.8.5 LEVEL OF SIGNIFICANCE AFTER MITIGATION**

The proposed project and alternatives would not result in any significant impacts with implementation of the mitigation measures recommended in this section.



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**6.9 *BIOLOGICAL RESOURCES***

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## **6.9 BIOLOGICAL RESOURCES**

### **6.9.1 INTRODUCTION**

This section includes an evaluation of general and special-status biological resources that occur or potentially occur on the project site. Also presented are impacts anticipated with implementation of the project, and mitigation measures designed to reduce any identified significant impacts to a less-than-significant level

ECORP Consulting, Inc. (ECORP) performed wetland delineations for the entire site, and rare plant surveys for a portion of the site. These wetland delineations and rare plant surveys, which serve as the basis for the botanical and wetland information in this analysis, are included in Appendix F of this EIR and augment the biological resources reconnaissance, records search, and analysis undertaken for this section.

### **6.9.2 ENVIRONMENTAL SETTING**

The 63-acre project site is located at the southeast corner of the intersection of Cosumnes River Boulevard and Bruceville Road, in the City of Sacramento. The project site is generally flat sloping gently to the north and west.

The project site consists mainly of non-native annual grasslands with some scattered trees. The project area was historically used for grazing and agriculture, but is now vacant land. The entire project site is disked regularly. There is a ruderal area in the northwest corner associated with an abandoned access road. An old paved road (Kastanis Way) enters the site from Bruceville Road and dead-ends in the middle of the site. There are no buildings onsite, but remnants of an old building remain in the southwest corner. Vernal pools and seasonal marsh/wetlands are scattered throughout the site, but are concentrated in the western half. There is a constructed wetland immediately north and east of the project area which serves as a mitigation bank for the SR 99/Calvine Road/Cosumnes River Boulevard interchange. Strawberry Creek is just north of the site and across Cosumnes River Boulevard. Strawberry Creek has been channelized and the portion directly north of the project site has steep sides; however, further to the east, the creek widens in some areas and supports large stands of cattails and other riparian vegetation. The central portion of the site contains several mounds of dirt and refuse indicative of refuse dumping. There are a few scattered trees onsite, mainly landscaping tree species with a few walnut trees.

## **GENERAL BIOLOGICAL RESOURCES**

### **Vegetation**

Annual grassland is the dominant plant community on the project site. It is characterized by non-native grasses which include soft brome, medusahead, common wild oat, and Italian ryegrass. Common weedy forbs onsite include mustards, common vetch and filaree.

## Wildlife

The grasslands onsite have been used for agriculture and grazing in the past, and the site is now fallow and disked regularly. Non-native annual grassland provides only moderate habitat for wildlife species. Common species either observed or expected to occur in annual grassland habitat include western fence lizard, American crow, western meadowlark, western kingbird, mourning dove, ring-necked pheasant, voles, California ground squirrel, and black-tailed jackrabbit. Several raptors were observed foraging on the project site, including American kestrel, red-tailed hawk and white-tailed kite.

The seasonal wetlands interspersed throughout the annual grassland provide foraging habitat for shorebirds such as long-billed curlew and greater yellow-legs. Special-status invertebrates have the potential to occur in the seasonal wetlands onsite. These species are discussed in more detail below.

## **SENSITIVE BIOLOGICAL RESOURCES**

Sensitive biological resources include those that are afforded special protection through the following: CEQA, California Fish and Game Code, the federal Endangered Species Act (ESA), the California Endangered Species Act (CESA), and the federal Clean Water Act (CWA). Sensitive biological resources for this project site also include those afforded protection under the City of Sacramento General Plan Update (SGPU).

Special-status species include plants and animals in the following categories:

- ▶ species listed or proposed for listing as Threatened or Endangered under ESA or CESA,
- ▶ species considered as candidates for listing as Threatened or Endangered under ESA or CESA,
- ▶ wildlife species identified by the California Department of Fish and Game (CDFG) as California Species of Special Concern and by U.S. Fish and Wildlife Service (USFWS) as Federal Species of Concern,
- ▶ animals fully protected in California under the California Fish and Game Code, and
- ▶ plants on the California Native Plant Society's (CNPS) List 1B (plants rare, threatened or endangered in California and elsewhere) or List 2 (plants rare, threatened or endangered in California but more common elsewhere).

The following subsections discuss the special-status plant and animal species that occur or have the potential to occur on the project site based on information from the California Natural Diversity Database (CNDDB) records search, the field surveys conducted of the project site by ECORP and EDAW, and previous biological surveys conducted for the *Cosumnes River Boulevard/Calvine Road Interchange, Draft EIR*, September 1992; *Lent Ranch Marketplace, Draft EIR*, October 2000; and the *Draft South Sacramento Community Plan*, February 1986).

## **Special-Status Plants**

Exhibit 6.9-1 shows the location of previously recorded special status plant species as listed in the CNDDDB and CNPS databases for the Florin quadrangle. Table 6.9-1 lists those special-status plant species identified on and within the vicinity of the project site from the database searches and from the rare plant surveys conducted by ECORP. All six species listed below have the potential to occur in onsite vernal pools and/or seasonal wetlands.

### **Dwarf Downingia**

Dwarf downingia is a CNPS List 2 species that grows in vernal pools and seasonal wetlands in valley and foothill grasslands in the Sacramento area. The small flowers, which can be either blue or white, bloom from March to May.

### **Greene's Legenere**

Greene's legenere is CNPS List 1B species that is found in vernal pools and other seasonal wetlands with relatively long inundation periods in valley and foothill grasslands. This species produces small white flowers which bloom from April through June.

### **Sanford's Arrowhead**

Sanford's arrowhead is a CNPS List 1B species that is found in marshes, ponds, ditches and other shallow freshwater habitats. This aquatic perennial produces white flowers from May through August.

### **Slender Orcutt Grass**

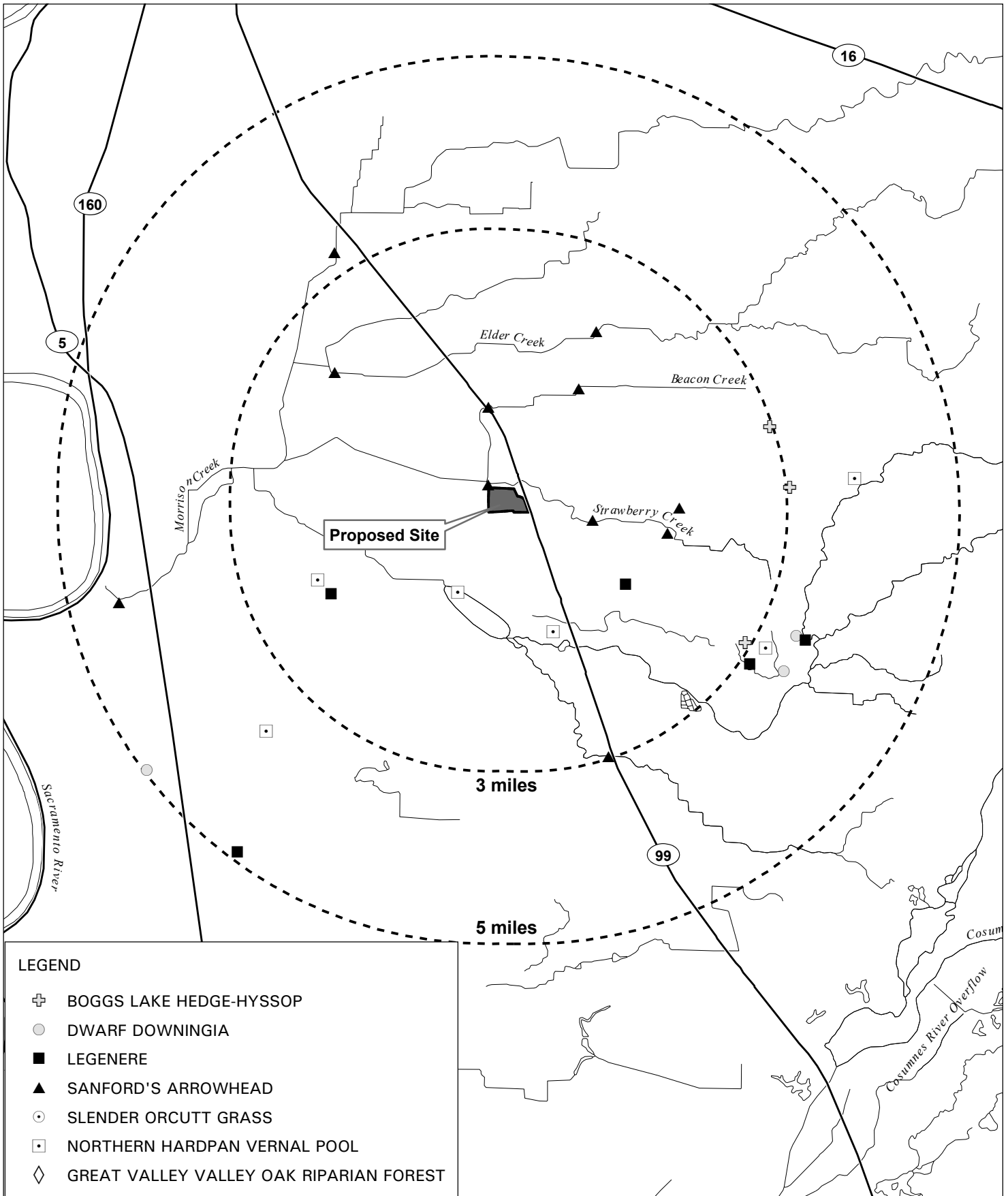
This species is a CNPS List 1B plant that is federally listed threatened and state-listed endangered. This species can be found at the bottom of vernal pools associated with grasslands. This species produces small lavender flowers from May through October.

### **Sacramento Orcutt Grass**

This species is a CNPS List 1B plant that is federally and state-listed endangered. This species is typically found in dry vernal pool beds within grassland communities. Sacramento Orcutt grass is a blue-green annual plant that produces white flowers crowded into bristly heads from April through July.

### **Bogg's Lake Hedge-Hyssop**

Bogg's Lake hedge-hyssop is a state-listed endangered, and a CNPS List 1B plant species. This small, semi-aquatic herbaceous annual is found mainly in vernal pools and lake margins. Bogg's Lake hedge-hyssop produces little white and yellow flowers on short stalks from April to August.



Source: CNDDDB 2002

### Special-Status Plant Species

EXHIBIT 6.9-1

College Square

X 1T157.01 4/03



**Table 6.9-1  
Special-Status Species Potentially Occurring in the Vicinity of the Project Site**

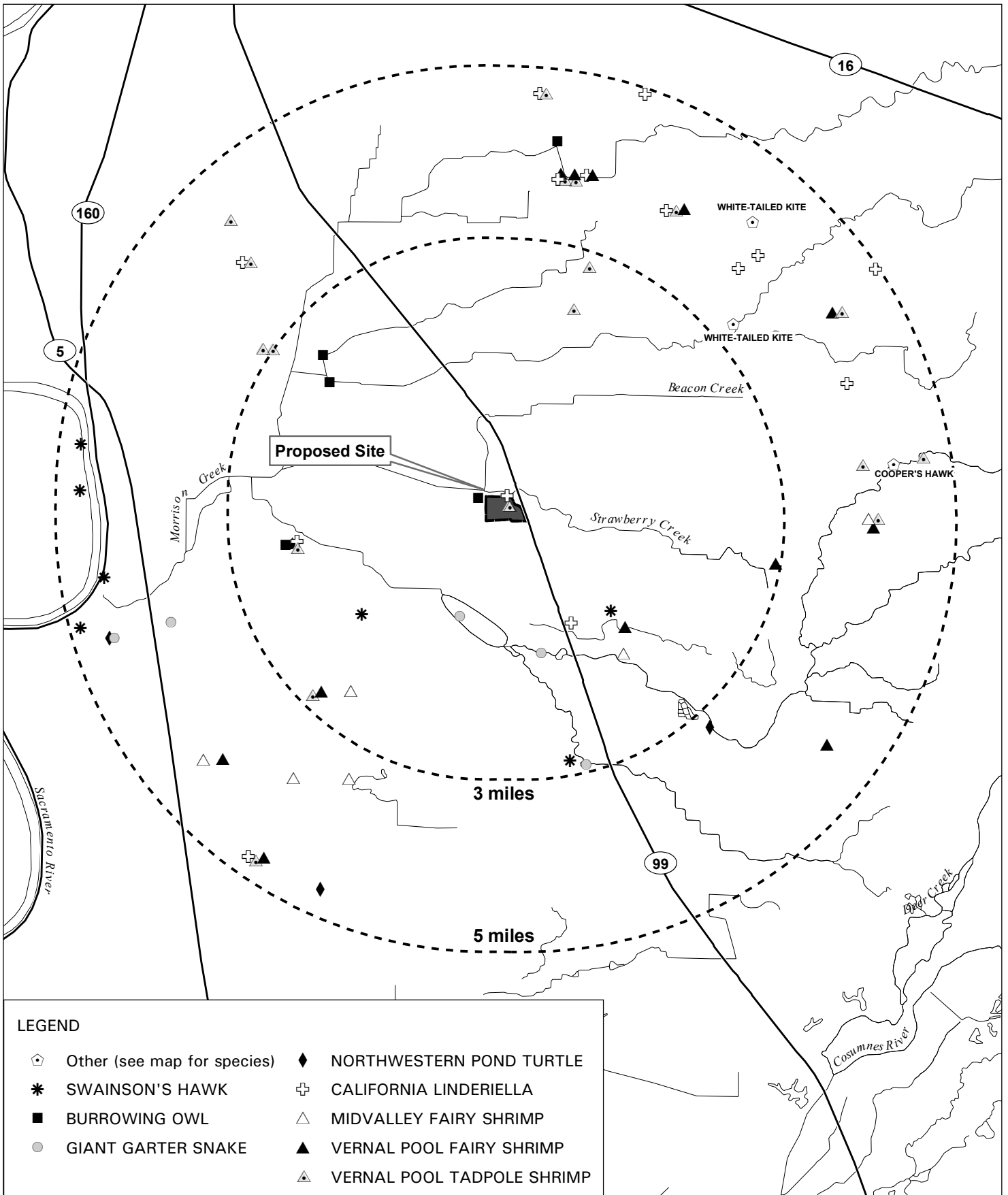
Species	Habitat	Potential to Occur	CNPS	CDFG	USFWS
<b>PLANTS</b>					
Bogg's Lake hedge-hyssop <i>Gratiola heterosepala</i>	Marshes and swamps, vernal pools	Vernal pools and other seasonal wetlands onsite provide potential habitat.	1B	CE	---
Dwarf downingia <i>Downingia pusilla</i>	Vernal pools in valley and foothill grasslands	Vernal pools onsite provide potential habitat.	2	---	---
Greene's legenere <i>Legenere limosa</i>	Vernal pools and other seasonal wetlands in valley and foothill grasslands	Vernal pools and other seasonal wetlands onsite provide potential habitat.	1B	---	--
Sacramento orcutt grass <i>Ocuttia viscida</i>	Vernal pools in valley and foothill grasslands	Vernal pools onsite provide potential habitat.	1B	CE	E
Sanford's arrowhead <i>Sagittaria sanfordii</i>	Marshes, ponds, ditches and other shallow freshwater habitats	Vernal pools onsite provide potential habitat.	1B	---	--
Slender orcutt grass <i>Orcuttia tenuis</i>	Vernal pools in valley and foothill grasslands	Vernal pools onsite provide potential habitat.	1B	CE	T
<b>INVERTEBRATES</b>					
Vernal pool fairy shrimp <i>Branchinecta lynchi</i>	Vernal pools in valley and foothill grasslands	Appropriate habitat onsite.	---	---	T
Vernal pool tadpole shrimp <i>Lepidurus packardii</i>	Vernal pools in valley and foothill grasslands	Appropriate habitat onsite.	---	---	E
California linderiella <i>Linderiella occidentalis</i>	Vernal pools in valley and foothill grasslands	Appropriate habitat onsite.	---	---	FSC
Midvalley fairy shrimp <i>Branchinecta mesovallensis</i>	Vernal pools in the Central Valley	Appropriate habitat onsite.	---	---	FSC
<b>AMPHIBIANS AND REPTILES</b>					
California tiger salamander <i>Ambystoma californiense</i>	Vernal pools and other seasonal ponds in valley and foothill grasslands	Not expected to occur on the project site. Nearest occurrence is in Galt, over 16 miles from the project site, and has since been deemed extirpated from that site. (CNDDDB 2002)	---	SSC	C
Western spadefoot <i>Scaphiopus hammondi</i>	Vernal pools and other seasonal ponds in valley and foothill grasslands	Not expected to occur on the project site. The nearest occurrence is over 13 miles to the northeast in Mather Regional Park. (CNDDDB 2002)	---	SSC	FSC
Northwestern pond turtle <i>Clemmys marmorata marmorata</i>	Freshwater marsh, ponds, lakes, and rivers	No habitat in the project area.	---	SSC	FSC
Giant garter snake <i>Thamnophis gigas</i>	Freshwater marsh, sloughs, and slow-moving rivers	Not expected to occur; only marginal habitat present.	---	T	T
<b>BIRDS</b>					
White-tailed kite <i>Elanus leucurus</i>	Grasslands, agricultural land, and open woodlands.	Appropriate habitat onsite. Observed near project site in 2003.	---	FP SSC	---
Northern harrier <i>Circus cyaneus</i>	Grasslands, marshes, agricultural land, and open woodlands	Appropriate habitat onsite.	---	SSC	---

**Table 6.9-1 (Continued)  
Special-Status Species Potentially Occurring in the Vicinity of the Project Site**

Species	Habitat	Potential to Occur	CNPS	CDFG	USFWS
Sharp-shinned hawk <i>Accipiter striatus</i>	Dense coniferous and riparian forest	No habitat in the project area.	---	SSC	---
Cooper's hawk <i>Accipiter cooperii</i>	Open woodlands and woodland margins	No habitat in project area.	---	SSC	---
Swainson's hawk <i>Buteo swainsoni</i>	Forages in grasslands and agricultural land, nests in riparian and isolated trees	Foraging and marginal nesting habitat in project area.	---	T	---
Ferruginous hawk <i>Buteo regalis</i>	Forages in grasslands, agricultural fields, and other open habitats; does not nest in California	Foraging habitat onsite, does not nest in California.	---	SSC	FSC
Merlin <i>Falco columbarius</i>	Forages in a variety of open habitats; does not nest in California	Foraging habitat present onsite, but no nesting habitat.	---	SSC	---
Prairie falcon <i>Falco mexicanus</i>	Forages in grasslands and other open dry open habitats, nests on cliffs	Foraging habitat present onsite, but no nesting habitat.	---	SSC	---
Greater sandhill crane <i>Grus canadensis tabida</i>	Grasslands, irrigated pastures, alfalfa and fallow fields	No nesting habitat. Potential low quality wintering habitat. Not expected to occur onsite.	---	T	---
Western burrowing owl <i>Athene cunicularia hypugea</i>	Grasslands, agricultural land, and open woodlands	Nesting and foraging habitat present onsite.	---	SSC	FSC
Short-eared owl <i>Asio flammeus</i>	Grasslands and other open habitats	Foraging habitat present onsite, but no nesting habitat.	---	SSC	---
Loggerhead shrike <i>Lanius ludovicianus</i>	Grasslands, shrublands, and open woodlands	Foraging and low quality nesting habitat onsite.	---	SSC	FSC
Tricolored blackbird <i>Agelaius tricolor</i>	Forages in agricultural land and grasslands; nests in marshes and other areas that support cattails or dense thickets	Foraging habitat present onsite, but no nesting habitat.	---	SSC	FSC
<p>California Native Plant Society (CNPS)            1B Plants rare, threatened, or endangered in California and elsewhere            2 Plants Rare, Threatened, or Endangered in California, but more common elsewhere</p> <p>California Department of Fish and Game (CDFG)            E State Endangered            T State Threatened            SSC California Species of Special Concern            FP Fully Protected</p> <p>U.S. Fish and Wildlife Service (USFWS)            E Federal Endangered            T Federal Threatened            C Federal Candidate            FSC Federal Species of Concern</p> <p>Source: CNDDDB 2002; EDAW 2002</p>					

**Special-Status Animals**

Exhibit 6.9-2 shows the location of previously recorded special status animal species as listed in the CNDDDB and CNPS databases for the Florin quadrangle. Table 6.9-1 lists those special-status animal species identified on and within the vicinity of the project site from the database searches and from the reconnaissance surveys conducted by ECORP and EDAW. The special-status animal species that could potentially occur onsite are discussed below.



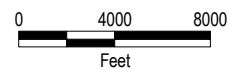
Source: CNDDDB 2002

## Special-Status Animal Species

EXHIBIT 6.9-2

College Square

X 1T157.01 4/03





## **Vernal Pool Invertebrates**

There are four special-status freshwater invertebrates that potentially occur in the vernal pools and seasonal marsh/wetlands on the project site: vernal pool fairy shrimp, vernal pool tadpole shrimp, California linderiella, and midvalley fairy shrimp.

A Biological Opinion issued in February 2002 by the USFWS determined that the proposed project may adversely affect vernal pool tadpole shrimp and vernal pool fairy shrimp. While the other two species, California linderiella and midvalley fairy shrimp, have not been recorded onsite, there are CNDDDB records of these species within 5 miles of the site. In addition, the vernal pools and seasonal marsh/wetland areas do provide appropriate habitat for these species.

## **Swainson's Hawk**

The Swainson's hawk is state listed as a Threatened species. Swainson's hawks typically nest in riparian habitats or isolated trees bordered by suitable foraging habitat (i.e., grasslands and agricultural fields). Agricultural fields and open grasslands provide important foraging habitat for Swainson's hawks. Swainson's hawks are known to nest in the vicinity of the project site. There are eight CNDDDB occurrences recorded within 5 miles of the site. The project site, with its abundance of annual grassland, provides excellent foraging habitat for Swainson's hawks. Loss of high quality foraging habitat has been identified as one of the prime management issues facing Swainson's hawks in the Central Valley (CDFG 1994, Woodbridge 1998). There are a few scattered trees onsite which may provide marginal nesting habitat for Swainson's hawk. Several trees are located in the southwest portion of the site where the buildings were once located. Individual trees are located in the northern, central, and eastern portions of the project site. There are also a few trees associated with the residences just to south of the site. The trees onsite are mainly nonnative, ornamental trees planted for landscape purposes. No nests or Swainson's hawks were observed onsite during reconnaissance surveys, however, it may have been too early for migrating birds to be back at their nesting sites.

## **Burrowing Owl**

Burrowing owl is a California Species of Special Concern and federal Species of Concern. Burrowing owl habitat is characterized by low-growing vegetation and may include annual and perennial grasslands and arid scrublands. Burrows are the essential component of burrowing owl habitat. Burrowing owls typically use burrows made by mammals, such as ground squirrels or badgers, but may also use artificial structures such as cement culverts; cement, asphalt, or wood debris piles; or openings beneath cement or asphalt pavement. No burrowing owls were observed during reconnaissance-level surveys, but California ground squirrel burrows and suitable foraging habitat are present onsite. Burrowing owls have been recorded near Cosumnes River College, adjacent to the project site (CNDDDB 2002). Therefore, there is potential for burrowing owls to forage and nest in the grasslands on the project site.

## **Giant Garter Snake**

The giant garter snake is a state and federal listed threatened species. This species is aquatic and is usually found in areas of freshwater marsh and low-gradient streams. Due to declining habitat, this snake has also adapted to drainage canals and irrigation ditches. Giant garter snakes will bask on stream banks or emergent and streamside vegetation during the active season. This species may use abandoned burrows during the inactive season. While Strawberry Creek, just north of the project site, has been channelized and is narrow with steep banks, there are some portions of the creek that widen and support extensive stands of cattails. These offsite areas provide habitat for giant garter snake. The nearest occurrence of this species is approximately 2 miles south of the project site in Laguna Creek (CNDDDB 2002). The seasonal marsh onsite provides only low quality habitat and potential access by giant garter snakes to the site from nearby Strawberry Creek is severely limited by roadways (i.e., Cosumnes River Boulevard separates Strawberry Creek from the project site). As a result, this species is not expected to occur onsite.

## **Tricolored Blackbird**

Tricolored blackbird is a federal Species of Concern and a state Species of Special Concern. This species typically nests in freshwater marsh or other areas with dense, emergent vegetation. Occasionally, they may be found nesting in other types of dense vegetation. There are several recorded observations of tricolored blackbirds within 5 miles of the study area (CNDDDB 2002). The project site's grasslands provide foraging habitat for tricolored blackbirds, but no nesting habitat occurs onsite. Strawberry Creek, directly north of the site, supports extensive stands of cattails which provide potential nesting habitat for this species.

## **Loggerhead Shrike**

Loggerhead shrike is federal Species of Concern and a state Species of Special Concern. This species typically inhabits grasslands, shrublands, and open woodlands and usually nests in dense shrub vegetation. The project site's grasslands provide foraging habitat for loggerhead shrike, but only limited nesting habitat occurs onsite.

## **Other Raptors**

In addition to the species listed above, several other species of raptors including white-tailed kite, northern harrier, and red-tailed hawk, may use the site for nesting. A red-tailed hawk and a white-tailed kite were observed during the 2003 survey. The California Fish and Game Code (Section 3503.5) provides specific protection for raptors. The removal or destruction of active raptor nests is considered a violation of Section 3503.5. The project site provides potential foraging habitat but no nesting habitat for ferruginous hawk, merlin, prairie falcon, and short-eared owl.

## **Sensitive Habitats**

Sensitive habitats include those that are of special concern to resource agencies, or that are afforded legal protection through CEQA, Section 1600 of the California Fish and Game Code, and/or Section 404 of the federal Clean Water Act (CWA). The sensitive habitats located on the project site include jurisdictional waters of the United States. They consist of vernal pools, seasonal marshes, and seasonal wetlands as indicated in Exhibit 6.9-3. Areas that meet the criteria for wetlands and other waters of the United States established by the U.S. Army Corps of Engineers (USACE) are subject to federal jurisdiction, pursuant to Section 404 of CWA.

Section 404 restricts (without prior notification of approval from USACE) placement of dredge or fill material in “Waters of the U.S.” and other adjoining wetlands.

The extent of waters of the United States under jurisdiction on the project site totals 4.932 acres. The total includes 2.398 acres of seasonal marsh/wetland and 2.534 acres of vernal pools. In addition, 1.85 acres of constructed wetland (part of the SR 99/Calvine Rd./Cosumnes River Boulevard interchange wetland mitigation bank) and 0.29 acres of seasonal marsh occur just offsite to the northeast of the project site.

### **Vernal Pools**

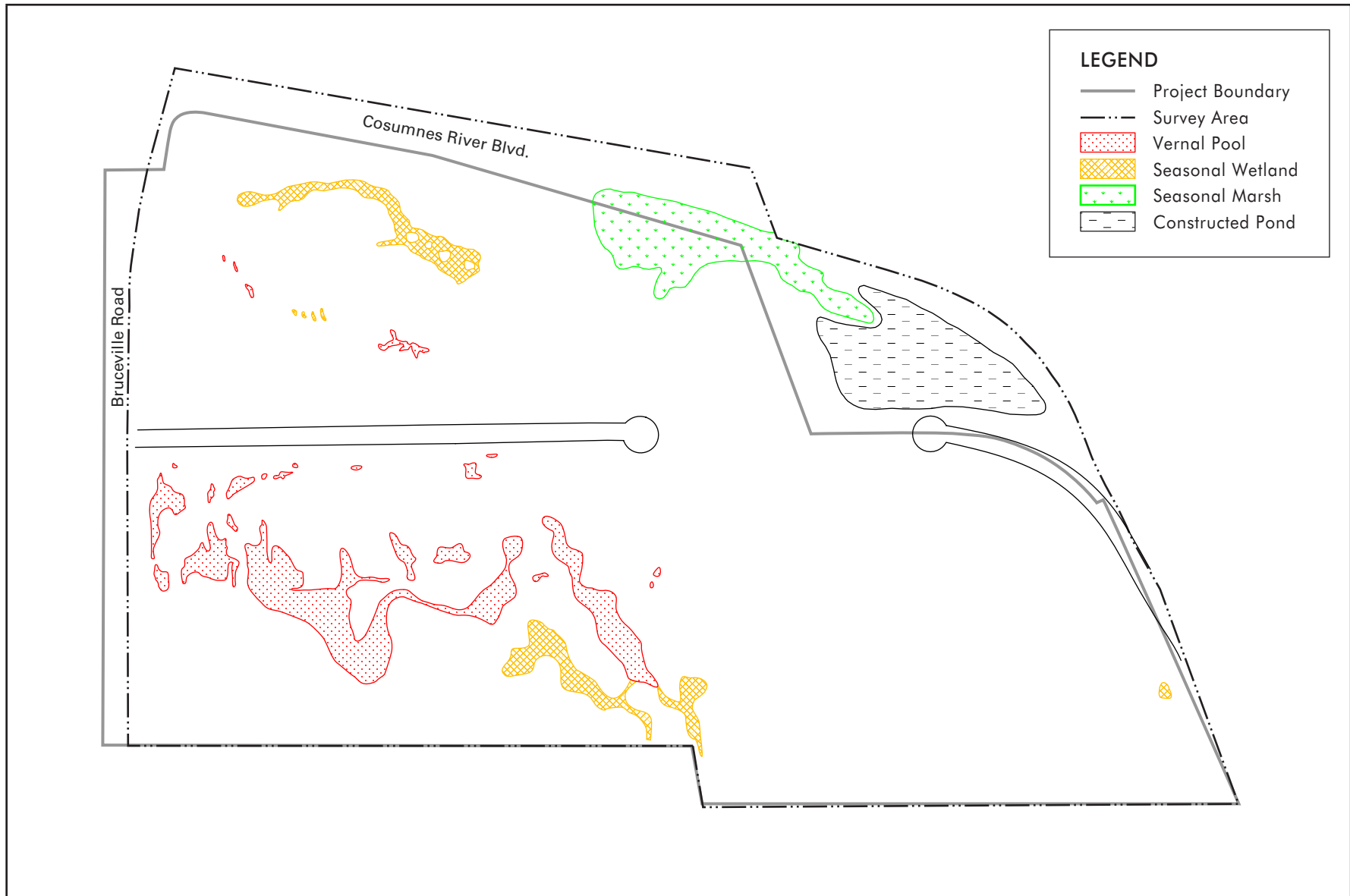
Vernal pools are depressions that are typically underlain with an impermeable or semi-permeable hardpan or duripan layer. In the Central Valley, vernal pools are usually inundated throughout the wet season and are dry by summer. The majority of vernal pools onsite are found in the southwest corner of the site (on the “southwest parcel”). There are a few small scattered vernal pools in the northwest portion of the site as well. During the October 2002 wetland delineation of the southwest parcel, ECORP biologists noted that the field had been disked just prior to the field visit (ECORP 2002). The plant species found in the vernal pools onsite include Douglas mesamint, dwarf woolly heads, annual hairgrass, Fremont’s goldfields, slender popcorn flower, Italian ryegrass and Mediterranean barley.

### **Seasonal Wetlands**

Seasonal wetlands are low-lying, isolated basins which intermittently pond water. These wetlands become inundated during the wet season and dry completely during spring and summer. The seasonal wetlands onsite consist of native as well as non-native wetland plant species such as manna grass, ryegrass, curly dock, Hyssop loosestrife, and Mediterranean barley.

### **Seasonal Marsh**

The onsite seasonal marsh is located just south of Cosumnes River Boulevard in the northeast portion of the site. A portion of the seasonal marsh continues into the offsite constructed wetland area just north and east of the project site. The marsh receives water from rainfall and runoff from Cosumnes River Boulevard. Plant species observed in the seasonal marsh during the wetland delineation by ECORP (June 2000) include tall flatsedge, Hyssop loosestrife, white water buttercup, and dotted smartweed.



Source: City of Sacramento Planning Department 2002

## Jurisdictional Waters of the United States

EXHIBIT 6.9-3

### **Constructed Wetland (Offsite)**

There is a constructed wetland northeast of the project site. This area consists of ponded water at the northeast corner with wetland vegetation around the edges. This wetland was constructed by the City of Sacramento as mitigation for the SR 99/Calvine Road/Cosumnes River Boulevard interchange.

### **6.9.3 REGULATORY PROVISIONS**

#### **FEDERAL ENDANGERED SPECIES ACT**

Pursuant to the federal Endangered Species Act (ESA), the U.S. Fish and Wildlife Service (USFWS) has authority over projects that may affect the continued existence of a federally listed species. Species are defined as Threatened or Endangered by USFWS if they are listed in Title 50 of the Code of Federal Regulations (§§17.11 or 17.12). Section 9 of ESA and federal regulations prohibit the “take” of federally listed species; take is defined under ESA, in part, as killing, harming, or harassment of such species. Under federal regulations, take is further defined to include habitat modification or degradation where it actually results in death or injury to wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. For the proposed project, a federal consultation under Section 7 of the ESA is required because development may affect federally listed species.

Take of a federally listed species may be approved through Section 7 consultation between USFWS and another federal agency, if the proposed project is sponsored by or under another federal agency’s jurisdiction. An example is applicable is when the USACE issues a Section 404 permit for wetland removal. As part of the Section 404 process, USACE initiates informal consultation with USFWS. Prior to completion of the Biological Assessment, USACE determines whether the proposed project would have “no effect” on listed Threatened or Endangered species or “may affect” these species. USFWS may concur with USACE decision or USFWS may render a “may affect” determination, formal consultation would be initiated between USFWS and the federal lead agency (i.e., USACE) via submittal of the Biological Assessment to USFWS. A Biological Assessment evaluates the effects of a project on listed and proposed Threatened and Endangered species. USFWS then prepares a Biological Opinion regarding whether the project would jeopardize the continued existence of the species.

A Biological Opinion was issued on February 7, 2002 by USFWS for adverse affects to vernal pool invertebrates on a portion of the project site, excluding the southwest parcel and the proposed stormwater outfall to Union House Creek. Because the previously issued Biological Opinion does not evaluate the effects of construction of the outfall structure to Union House Creek, consultation with USFWS would be required which could result in the amending of the existing Biological Opinion. Consultation with USFWS for listed species potentially present on the southwest parcel of the project site has also not yet occurred or else has not yet been completed. Consultation for adverse effects on listed species would be required for the southwest parcel and would require a new Biological Opinion or amending of the existing Biological Opinion.

## **CLEAN WATER ACT**

Section 404 of the Clean Water Act (CWA) establishes a requirement to obtain a permit prior to any activity that involves any discharge of dredged or fill material into “Waters of the United States,” including wetlands. Waters of the United States also include navigable waters of the United States, interstate waters, all other waters where the use or degradation or destruction of the waters could affect interstate or foreign commerce, tributaries to any of these waters, and wetlands that meet any of these criteria or that are adjacent to any of these waters or their tributaries. Pursuant to Section 404 of the CWA, USACE regulates and issues permits for such activities. Activities that require a permit under Section 404 include placing fill or riprap, grading, mechanized land clearing and dredging. Any activity that results in the deposit of dredged or fill material within the ordinary high-water mark of waters of the United States usually requires a permit, even if the area is dry at the time the activity takes place.

In 2001, the Supreme Court ruled that USACE only has jurisdiction over wetlands that are adjacent to navigable Waters of the United States, interstate waters, all other waters where the use or degradation or destruction could affect interstate or foreign commerce, tributaries to any of these waters, and wetlands that meet any of these criteria or that are adjacent to any of these waters or their tributaries. This ruling substantially weakened federal protection over isolated waters. The USACE is currently evaluating their jurisdiction over isolated waters on a case-by-case basis.

Two wetland delineation reports have been prepared covering different portions of the project site. The delineation of the wetlands for the parcel has been verified by USACE. Union House Creek is not included on either wetland delineation for the project site. A wetland delineation would be required for the portion of Union House Creek to be affected by the proposed stormwater outfall. A Section 404 permit application to fill wetlands on the main portion of the site, excluding the southwest parcel, was sent to USACE on October 30, 2000 (USFWS, Biological Opinion, 2002). This permit application would need to be revised to evaluate all effects to Jurisdictional Waters of the U.S, including construction associated with the outfall structure to Union House Creek. A Section 404 permit to fill wetlands would also be needed for the southwest parcel prior to the commencement of construction activities.

## **CALIFORNIA ENDANGERED SPECIES ACT**

Pursuant to the CESA, a permit from the CDFG is required for projects that could “take” a state-listed Threatened or Endangered species. California listed Threatened and Endangered species are provided in Title 14, California Code of Regulations Sections 670.2 and 670.5. Section 2080 of CESA prohibits “take” of any of these species. The take of State-listed species incidental to otherwise lawful activities requires a permit, pursuant to Section 2081(b) of CESA. The State has the authority to issue an incidental take permit under Section 2081 of the Fish and Game Code, or to coordinate with USFWS during the Section 10(a) or Section 7 process to make the federal permit also apply to State-listed species and CDFG will issue a letter of concurrence.

If state-listed threatened or endangered plant species are identified and take of these species would occur as a result of the proposed project, a 2081 permit would be required for these species.

## **California Fish and Game Code**

### **Section 1600 - Streambed Alteration Agreement**

All diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream or lake in California that supports wildlife resources is subject to regulation by CDFG, pursuant to Section 1600 of the California Fish and Game Code. Section 1601 states that general plans sufficient to indicate the nature of a project for construction by, or on behalf of, any state or local governmental agency shall be submitted to the department if the project would divert, obstruct, or change the natural flow or the bed, channel or bank of any river, stream or lake designated by CDFG, or use any material from the streambeds. Stream is defined as a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. A CDFG Streambed Alteration Agreement must be obtained for any project that would result in impact to a river, stream, or lake.

A 1601 Streambed Alteration Agreement from CDFG would be required for direct effects to the bed and/or bank of Union House Creek as a result of construction of the proposed stormwater outfall structure.

### **Section 3503.5 - Protection of Raptors**

Section 3503.5 of the Fish and Game Code makes it unlawful to take, possess, or destroy raptors (i.e., hawks, owls, eagles, and falcons) or their nests. This statute does not provide for the issuance of any type of incidental take permit.

## **SACRAMENTO COUNTY REGULATIONS**

The Sacramento County Planning Department is coordinating with various stakeholders (including representatives from local jurisdictions including the City of Sacramento, regulatory agencies, environmental groups, business groups, and agricultural interests) to develop a Habitat Conservation Plan (HCP) for south Sacramento County. The South Sacramento County HCP (SSCHCP) is intended to serve as a multi-species, multi-habitat conservation plan addressing the biological impacts of future urban development within the Urban Services Boundary of the County General Plan in south Sacramento County. The HCP area forms a broad arc stretching from Hwy 50 southeast to Highway 99 and across I-5 and encompassing areas such as Sunrise-Douglas, Mather, and Elk Grove. The area has extensive agriculture, grasslands, and vernal pools as well as other habitat types. The plan has not been finalized and it is not known if, or when, the plan will be approved. Hence, the SSCHCP is not addressed further in this section.

## CITY OF SACRAMENTO REGULATIONS

The City of Sacramento Heritage Tree Ordinance requires a permit from the City for the removal of any heritage tree (Title 12, Chapter 12.64 of the Sacramento City Code). A heritage tree is defined by the Ordinance as:

- ▶ any tree of any species with a trunk circumference of one hundred (100) inches or more, which is of good quality in terms of health, vigor of growth, and conformity to generally accepted horticultural standard of shape and location for its species.
- ▶ any native *Quercus* species, *Aesculus californica* or *Plantanus racemosa*, having a circumference of 36 inches or greater when a single trunk, or a cumulative circumference of 36 inches or greater when a multi-trunk.
- ▶ any tree 36 inches in circumference or greater in a riparian zone. The riparian zone is measured from the center line of the watercourse to 30 feet beyond the high water line.
- ▶ any tree, grove of trees, or woodland trees designated by resolution of the City Council to be of special historical or environmental value or of significant community benefit.

The City of Sacramento has adopted policies to preserve the value of biological resources in the Conservation and Open Space Element of the City of Sacramento General Plan Update (2000). The following policies are applicable to the proposed project.

Goal A, Policy 2: Continue to implement the Heritage Tree program according to the City Ordinance affecting such trees.

Goal C, Policy 1: Retain the habitat areas where known endangered wildlife exists to the extent feasible.

Goal D, Policy 1: Conserve vernal pools with rare and endangered species to whatever extent possible.

Goal E, Policy 1: Explore ways to reverse degradation and pollution and enhance the beauty and wildlife habitats of creeks and drainage canals.

### 6.9.4 IMPACTS AND MITIGATION MEASURES

#### METHOD OF ANALYSIS

A number of studies that address biological resources in the vicinity of the project site were reviewed for this section. These include: (1) *SR 99/Cosumnes River Boulevard/Calvine Road Interchange Draft EIR* (DEIR), September 1992; (2) *Lent Ranch Marketplace DEIR*, October 2000; (3) *Draft South Sacramento Community Plan*, February 1986; (4) *Cosumnes River Boulevard/Bruceville Road Wetland Delineation*, June 2000; (5) *Wetland Delineations for College Square*, March 2000 and October 2002; (5) *Rare Plant*



*Survey for College Square*, June 2002; and (6) *USFWS Biological Opinion for College Square*, February 2002. Relevant information in these documents is incorporated into this section and referenced as appropriate.

To obtain information on special-status species that occur in the vicinity of the project site, the following databases were searched: the California Department of Fish and Game's (CDFG) *California Natural Diversity Data Base* (CNDDB) 6<sup>th</sup> edition, and the California Native Plant Society's (CNPS) electronic *Inventory of Rare and Endangered Vascular Plants* (Florin USGS quadrangle).

During March 2000, ECORP biologists conducted a wetland delineation of the project site that excluded the southwest parcel. A wetland delineation was conducted for the southwest parcel in October 2002 by ECORP biologists. The former wetland delineation has been verified by USACE. Verification of the wetland delineation of the 20-acre College Square site was received from USACE in a letter dated April 25, 2003.

In April and June 2000, ECORP biologists conducted rare plant surveys for the project site, excluding the southwest parcel. Rare plant surveys for the southwest parcel, which was added to the project site after the 2000 surveys, are scheduled for later in 2003.

On February 7, 2002, a Biological Opinion was issued by USFWS for a portion of the project site, excluding the southwest parcel. The Biological Opinion was the end result of the Section 7 consultation between USACE and USFWS for the non-southwest parcel of the project site. The Biological Opinion was issued for vernal pool invertebrate species only; therefore, it is assumed that USFWS considers these species to be the only federally listed threatened or endangered species which may be adversely affected by the proposed project, excluding the southwest parcel and the proposed offsite storm drain and outfall to Union House Creek. The USACE will determine if Section 7 consultation and a Biological Opinion for these would be required prior to construction.

In February 2003, a reconnaissance-level survey was conducted by EDAW biologists to characterize general biological resources onsite, and to determine if any sensitive biological resources including State- and federally listed species were observed or suitable habitat for listed species is present. Focused surveys for federally- or state- listed species were not conducted.

## **STANDARDS OF SIGNIFICANCE**

Significant impacts that could occur were determined from criteria in the California Environmental Quality Act (CEQA) Guidelines. Appendix G of the State CEQA Guidelines states that a project may be deemed to have a significant impact on biological resources if it will:

- ▶ Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations or by CDFG or USFWS;

- ▶ Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by CDFG or USFWS;
- ▶ Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, rivers, etc.) through direct removal, filling, hydrological interruption, or other means;
- ▶ Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- ▶ Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; and
- ▶ Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Section 15065 (a) of the State CEQA Guidelines also states that a project has a significant effect on the environment when “the project has the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish and wildlife species, cause a fish or wildlife species to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of an endangered, rare or threatened species.”

## IMPACTS AND MITIGATION MEASURES

### **Impact 6.9-1: Loss of Burrowing Owl.**

PP, AB, AC      Burrowing owls could occupy the grasslands in the project site prior to the start of construction. No burrowing owls were observed onsite during reconnaissance-level surveys, but suitable habitat is present. Burrowing owls and their nests are protected under Section 3503.5 of California Fish and Game Code. If burrowing owls are present in construction areas, occupied burrows could be destroyed under the proposed project and the development alternatives. Burrowing owls have been observed as recently as 2002 in the playing field at Cosumnes River College (CNDDDB 2002). The loss of active burrowing owl burrows would be considered a *significant* impact. The extent of this impact would be similar between the proposed project and each of the development alternatives as generally the same amount of land would be disturbed under each.

AA      No development would occur as a result of this alternative, so no burrowing owls would be affected. *No impact* would occur.

### **Mitigation 6.9-1: Loss of Burrowing Owl.**

PP, AB, AC      The project applicant shall undertake the following:

1. Prior to construction activity, focused pre-construction surveys would be conducted by a qualified biologist for burrowing owls where suitable habitat is present within 250 feet of the proposed construction areas. Surveys would be conducted no less than 14 days and no more than 30 days prior to commencement of construction activities and surveys would be conducted in accordance with CDFG protocol (CDFG 1995).
2. If no occupied burrows are found on the project site, a letter report documenting survey methods and findings prepared by the qualified biologist would be submitted to CDFG for review and approval, and no further mitigation would be necessary.
3. If occupied burrows are found, impacts to them would be avoided by providing a construction buffer of 165 feet during the non-breeding season (September 1 through January 31) or 250 feet during the breeding season (February 1 through August 31). If construction occurs during the breeding season, the applicant would ensure that a minimum of 6.5 acres of contiguous foraging habitat is available surrounding the occupied burrowing owl nest burrow.
4. If adverse effects to occupied burrows (direct removal or construction within the buffer zone as defined in #3 above) are unavoidable, onsite passive relocation techniques approved by CDFG would be used to encourage owls to move to alternative burrows outside of the impact area. However, no occupied burrows would be disturbed during the nesting season unless a qualified biologist verifies through non-invasive methods that juveniles from the occupied burrows are foraging independently and are capable of independent survival. Mitigation for foraging habitat for relocated pairs would follow guidelines provided in the California Burrowing Owl Consortium Guidelines (1993) which range from 6.5 to 19.5 acres per pair.

AA No mitigation is required.

**Impact 6.9-2: Removal of Swainson’s Hawk Foraging and Nesting Habitat.**

PP, AB, AC Approximately 63 acres of grassland and seasonal wetland habitat that provide foraging habitat for Swainson’s hawk would be removed as a result of the implementation of the proposed project or development alternatives. In addition, several trees which provide marginal Swainson’s hawk nesting habitat would be removed under the proposed project and each of the development alternatives. While abundant foraging and nesting habitat still occur in the surrounding areas, habitat for this species is being removed at a rapid rate. This impact would be considered *significant*. The extent of this impact would be similar between the proposed project and each of the development alternatives as generally the same amount of land would be disturbed under each.

AA No development would occur as a result of this alternative, so no Swainson's hawk nests or foraging habitat would be affected. Hence, *no impact* would occur.

**Mitigation 6.9-2: Removal of Swainson's Hawk Foraging and Nesting Habitat.**

PP, AB, AC In order to reduce the impacts of the loss of foraging and nesting habitat for Swainson's hawk, the following mitigation measures shall be implemented by the project applicant.

For foraging impact: The following mitigation ratios were taken from the *CDFG Staff Report Regarding Mitigation for Impacts to Swainson's Hawks (Buteo swainsoni) in the Central Valley of California*, November 1994.

- ▶ Preserve similar habitat within a 10-mile radius of the project site to be protected through fee title or conservation easement acceptable to CDFG through the payment of fees to a Swainson's hawk foraging habitat mitigation bank. Preservation ratios are as follows:
  - 0.5 acres preserved for every acre lost if project site is located between 5 and 10 miles from a nest.
  - 0.75 acres preserved for every acre lost if project site is located between 1 and 5 miles from a nest.
  - acres preserved for every acre lost if project site is located within 1 mile of a nest.

For nesting impact:

- ▶ pre-construction surveys shall be conducted by a qualified biologist to identify active nests within ½ mile of the project site. The surveys shall be conducted no less than 14 days and no more than 30 days prior to the beginning of construction of each phase of the proposed project. To the extent feasible, guidelines provided in the *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in the Central Valley* (Technical Advisory Committee 2000) shall be followed.
- ▶ If nests are not found, no further mitigation would be required.
- ▶ If active nests are found, construction should not occur within 0.5 mile of the active nest during the breeding season (March 1 – September 15).
- ▶ If construction must occur during these months, the nests would be protected by establishing appropriate buffers around each nest. CDFG guidelines recommend

implementation of 0.25- or 0.5-mile buffers, but the size of the buffer may be adjusted if a qualified biologist and CDFG determine it would not be likely to adversely affect the nest. No project activity shall commence within the buffer area until a qualified biologist confirms that the nest is no longer active. Monitoring of the nest by a qualified biologist may be required if the activity could adversely affect the nesting Swainson's hawk.

AA No mitigation is required.

### **Impact 6.9-3: Loss of Jurisdictional Waters of the United States**

PP, AB, AC The maximum extent of jurisdictional waters of the United States that would be removed during construction of the proposed project or the development alternatives would total 4.9 acres, which consists of 2.5 acres of vernal pools, and 2.4 acres of seasonal marsh/wetland. In addition, the proposed project or development alternatives would have indirect effects on 1.85 acres of constructed wetland and 0.29 acre of seasonal marsh that occur just offsite. These indirect effects would be associated with diversion of natural surface flow into the offsite wetlands. The Biological Opinion that resulted from the Section 7 consultation between USACE and USFWS requires that runoff from the site be diverted away from the offsite constructed wetland and seasonal marsh. According to the Biological Opinion, any work within 250 feet of a wetland that supports federally listed invertebrates or the change in hydrology resulting from the diversion of runoff constitutes an indirect effect on these seasonal wetlands. The diversion from the constructed wetland and seasonal marsh, which are known to support federally listed invertebrates, would occur in this buffer area. Union House Creek would likely be considered a jurisdictional waters of the United States, and the construction of the outfall structure within this creek would require a Section 404 permit from USACE.

The main portion of the project site, excluding the southwest parcel, contains a total of 1.96 acres of wetlands. A letter from ECORP to USFWS dated December 12, 2001 outlines proposed mitigation for project's wetland impacts within this portion of the site. The wetland mitigation, revised to reflect suggested ratios determined from conversations between ECORP and USFWS, is as follows: 8.38 acres of wetlands would be created and 10.34 acres of wetlands would be preserved in order to mitigate for the direct and indirect impacts to wetlands on and adjacent to the main portion of the site, excluding the southwest parcel.

The southwest parcel of the site contains 2.97 acres of wetlands, including vernal pools and seasonal wetlands, which would be removed as a result of the proposed project or the development alternatives. The loss of wetlands on the southwest parcel should be mitigated at a minimum of a 3:1 ratio which is the same ratio used to mitigate for wetlands on the remainder of the site and agreed upon by USFWS and USACE. This 3:1 ratio includes 1:1 ratio of creation credits and 2:1 ratio of preservation credits. The impacts to protected wetlands by removal or hydrological

interruption would result in a substantial adverse effect. This impact would be considered *significant*. The extent of this impact would be similar between the proposed project and each of the development alternatives as generally the same amount of land would be disturbed under each.

AA No development would occur as a result of this alternative, so no waters of the United States would be removed or indirectly affected. Hence, *no impact* would occur.

**Mitigation 6.9-3: Loss of Jurisdictional Waters of the United States**

PP, AB, AC To mitigate direct and indirect impacts on wetlands, a minimum of 11.35 acres of wetlands shall be created and 16.28 acres of wetland shall be preserved by the project applicant and the City shall verify compliance consistent with Table 6.9-2. This mitigation is in accordance with the ratios set forth in the Biological Opinion issued February 7, 2002. In addition to these ratios, all the Terms and Conditions and the Conservation Recommendations set forth in the Biological Opinion shall be implemented<sup>1</sup>.

<b>Table 6.9-2 Wetland Mitigation for the College Square Project Site</b>							
<b>Wetland Type</b>	<b>Existing Onsite</b>	<b>Existing Offsite</b>	<b>Direct Impacts</b>	<b>Indirect Impacts</b>	<b>Creation Credits</b>	<b>Preservation Credits</b>	<b>Credit Ratio</b>
Constructed Wetland (Offsite)	--	1.85	--	1.85	5.55 3:1	5.55 3:1	6:1
Seasonal Marsh (Offsite)	--	0.29	--	0.29	0.87 (3:1)	0.87 (3:1)	6:1
Seasonal Marsh	1.21	--	1.21	--	1.21 (1:1)	2.42 (2:1)	3:1
Vernal Pool	2.53	--	2.53	--	2.53 (1:1)	5.06 (2:1)	3:1
Seasonal Wetland	1.19	--	1.19	--	1.19 (1:1)	2.38 (2:1)	3:1
<b>Total</b>	<b>4.93</b>	<b>2.14</b>	<b>4.93</b>	<b>2.14</b>	<b>11.35</b>	<b>16.28</b>	

Source: EDAW 2003, ECORP 2002, 2003.

An individual permit for discharge activities into jurisdictional waters of the United States, including wetlands, is required from the USACE under Section 404 of the Clean Water Act to fill onsite wetlands. In addition, Regional Water Quality Control Board Certification is required, pursuant to Section 401 of the Clean Water Act.

<sup>1</sup> The nine acre southwest parcel is not covered by the February 7, 2002 Biological Opinion. The wetland delineation for the southwest parcel identified approximately three acres of wetlands on the southwest parcel. The mitigation ratios identified in the table assume that USFWS concurs with the wetland delineation conducted for the southwest parcel. Final mitigation ratios for the southwest parcel will be determined by USFWS in a future Biological Opinion.

For the proposed stormwater outfall to Union House Creek: (1) a wetland delineation is required to determine the presence of Jurisdictional Waters of the United States; (2) a Section 404 permit shall be obtained from USACE for the discharge or dredge or fill material into jurisdictional waters of the United States; (3) RWQCB Certification is required, pursuant to Section 401 of the Clean Water Act; and (4) a Streambed Alteration Agreement is required by CDFG for impacts to the bed or bank of the creek.

AA No mitigation is required.

**Impact 6.9-4: Loss of Habitat for Vernal Pool Invertebrates.**

PP, AB, AC The Biological Opinion dated February 7, 2002, considers all wetlands including vernal pool, seasonal wetland and seasonal marsh, habitat for the federally listed vernal pool fairy and vernal pool tadpole shrimp. The Biological Opinion was issued for the project site, excluding the southwest parcel; however, these species are assumed to be present in the wetlands in the southwest parcel as well due to the presence of these species in the watershed. These wetland areas also provide potential habitat for California linderiella and Midvalley fairy shrimp, both federal species of special concern. As a result of this project or the development alternatives, a total of 4.9 acres of habitat for special-status invertebrates would be removed/filled and 2.14 acres of wetlands (offsite) would be indirectly impacted. The onsite habitat would become unsuitable for invertebrates as a result of the proposed action and the offsite habitat would become less suitable. This loss of this habitat would be considered a *significant* impact. The extent of this impact would be similar between the proposed project and each of the development alternatives as generally the same amount of land would be disturbed under each.

AA No development would occur as a result of this alternative, so no habitat for vernal pool invertebrates would be removed or indirectly affected. Hence, *no impact* would occur.

**Mitigation 6.9-4: Loss of Habitat for Vernal Pool Invertebrates.**

PP, AB, AC Implement Mitigation Measure 6.9-3.

AA No mitigation is required.

**Impact 6.9-5: Loss of Giant Garter Snake**

PP, AB, AC Giant garter snake is not expected to occur on the project site. The habitat onsite is low quality and the site is separated from good quality habitat (i.e., portions of Strawberry Creek) by major roadways. The project site currently drains north and west. Some of the runoff pools along Cosumnes River Boulevard while other runoff

enters a drainage ditch along Bruceville Road that feeds a storm drain system which eventually drains into Jacinto Creek. The proposed project and development alternatives would drain northwest to Union House Creek via a new storm drain line and outfall. Union House Creek is concrete-lined and not considered habitat for giant garter snake. As a result, giant garter snakes are not expected to be adversely affected by implementation of the proposed project or the development alternatives. This impact would be *less than significant*. The extent of this impact would be similar between the proposed project and each of the development alternatives as generally the same amount of land would be disturbed under each.

AA No development would occur as a result of this alternative, so no giant garter snakes would be affected. Hence, *no impact* would occur.

#### **Mitigation 6.9-5: Loss of Giant Garter Snake**

PP, AA, AB, AC No mitigation is required.

#### **Impact 6.9-6: Loss of Rare Plants**

PP, AB, AC Rare plant surveys were conducted by ECORP biologists during April and June 2000 on the constructed wetland (offsite) and the project site, excluding the southwest parcel. No rare plants were found during these surveys. Rare plant surveys for the southwest parcel were conducted in April and June 2003. The surveys did not identify any rare plants onsite. *No impact* would occur.

AA No development would occur as a result of this alternative, so no rare plants would be affected. Hence, *no impact* would occur.

#### **Mitigation 6.9-6: Loss of Rare Plants**

PP, AA, AB, AC No mitigation is required.

#### **Impact 6.9-7: Disturbance of Raptor Nests**

PP, AB, AC A few trees are scattered throughout the project site. These trees are mainly non-native, landscape trees along with a few walnut trees. These trees could be used by red-tailed hawk, white-tailed kite, and other raptors. Also, grasslands with tall, dense weeds could be used for nesting by northern harrier. During the 2003 reconnaissance survey, a white-tailed kite was observed in a small tree (approximately 10 feet tall) on the east side of Bruceville Road, directly adjacent to the project site. Grassland and approximately 10 trees that could provide raptor nest habitat would be removed with the implementation of the proposed project and development alternatives. The removal or destruction of active raptor nests is considered a violation of the California Fish and Game Code (Section 3503.5).



Disturbance to nesting raptors would be considered a *significant* impact. The extent of this impact would be similar between the proposed project and each of the development alternatives as generally the same amount of land would be disturbed under each.

AA No development would occur as a result of this alternative, so no raptor nests would be removed or disturbed. *No impact* would occur.

**Mitigation 6.9-7: Disturbance of Raptor Nests**

PP, AB, AC The following measures shall be implemented by the project applicant to reduce potential impacts to active raptor nests to a less-than-significant level:

- A. To the extent feasible, all grading and tree removal shall occur outside the raptor nesting season (September to January). If grading or tree removal is avoided during the raptor nesting season, no further mitigation shall be necessary. This measure applies to any heavy equipment activities that would occur within 500 feet of trees in or adjacent to the project site.
- B. If grading or tree removal is proposed to take place during the raptor nesting season, a focused survey for raptor nests shall be conducted by a qualified biologist during the nesting season to identify active nests on the project site. The survey would be conducted no more than 30 days prior to the beginning of grading or tree removal. The results of the survey would be summarized in a written report to be submitted to CDFG and the City of Sacramento Planning Department prior to the beginning of grading.
- C. If active nests are found, no remediation or other construction activity shall take place within 500 feet of the nest until the young have fledged (as determined by a qualified biologist). If no active nests are found during the focused survey, no further mitigation would be required.

AA No mitigation is required.

**Impact 6.9-8: Loss of Heritage Trees**

PP, AB, AC There are approximately 15 trees scattered throughout the project site. These trees are mainly non-native, landscape trees along with a few walnut trees. Several trees are located in the southwest portion of the site where the buildings were once located. Individual trees are located in the northern, central, and eastern portions of the project site. There are also a few trees associated with the residences just to south of the site. A tree survey has not been conducted to determine if heritage trees exist onsite. If these trees meet the criteria for heritage trees as set forth in the City of Sacramento Heritage Tree Ordinance, this would represent a *significant* impact. The extent of this impact would be similar between the proposed project and each of

the development alternatives (Alternatives AB and AC) since the same amount of land would be disturbed under each.

AA No development would occur as a result of this alternative, so no heritage trees would be removed or disturbed. *No impact* would occur.

**Mitigation 6.9-8: Loss of Heritage Trees**

PP, AB, AC A tree survey shall be conducted on the project site to determine if heritage trees are present as defined by the City of Sacramento Heritage Tree Ordinance.

- ▶ If no heritage trees are present onsite, no further mitigation is required.
- ▶ If heritage trees are present onsite, preserve the trees by installing temporary fencing 5 feet beyond the drip line of protected trees to minimize disturbance to the trees and their root zones in accordance with the Sacramento City Code, Chapter 12.64 Heritage Trees. Fences shall be maintained until all project activities are complete. No grading, trenching, or movement of heavy equipment shall occur within fenced areas.
- ▶ If removal of the heritage trees or construction within 5 feet of the drip line cannot be avoided, a permit under Chapter 12.64.050 of the Heritage Tree Ordinance shall be obtained. All requirements of the permit shall be implemented.

AA No mitigation is required.

**Impact 6.9-9: Biological Impacts of Offsite Storm Drainage and Outfall**

PP, AB, AC The proposed project and each of the development alternatives (AB and AC) would include the development of an off-site storm drain and outfall to Union House Creek. The proposed storm drain alignment would cross Bruceville Road and Cosumnes River Boulevard to a discharge point located several hundred feet west of the Bruceville Road/Cosumnes River Boulevard intersection. The majority of the pipeline alignment contains roadway and road shoulder. The portion of the alignment closest to the creek contains weeds and non-native vegetative. The creek at the proposed outfall location is a concrete channel and does not contain riparian vegetation. Based on the above, the proposed storm drain and outfall would result in a *less than significant* impact on biological resources. Assuming that these off-site storm drainage facilities would be the same under the proposed project and each of the development alternatives, a similar level of impact would occur under each.

AA No off-site storm drain and outfall would be developed under the No Project (No Development) Alternative, and therefore there *no impact* would occur.

**Mitigation 6.9-9: Biological Impacts of Offsite Storm Drainage and Outfall**

PP, AA, AB, AC      No mitigation is required.

**Impact 6.9-10: Cumulative Impacts on Biological Resources**

PP, AB, AC      The proposed project would result in significant biological resources impacts before mitigation associated with loss of burrowing owl, removal of Swainson’s hawk nesting and foraging habitat, loss of jurisdictional Waters of the U.S., loss of habitat for vernal pool invertebrates, disturbance of raptor nests, and loss of heritage trees. These impacts would be reduced to less-than-significant levels with implementation of the mitigation recommended in this section.

Given the presence of the above listed biological resources in the vicinity of the project site, the South Sacramento Community Plan (SSCP) area, and the greater City of Sacramento, it is anticipated that cumulative development within these areas would significantly impact the above listed biological resources before mitigation, but that on a project-by-project basis, some or all of these impacts could be avoided. Still, cumulative development within the vicinity of the project site, the SSCP area, and the greater City of Sacramento would result in a large net reduction in listed species, sensitive species, the habitats of listed species and sensitive species, wetlands, waters of the United States and the State, and heritage trees. This large net loss of biological resources would represent a *significant and unavoidable cumulative* impact. Although on a project basis, the proposed project and the development alternatives (Alternatives AB and AC) would not result in any significant impacts to biological resources after mitigation, they would contribute to this cumulative impact.

AA      No new development would occur at the project site under the No Project (No Development) Alternative, and therefore there would be *no impact* in terms of contribution to cumulative biological resources impacts.

**Mitigation 6.9-10: Cumulative Impacts on Biological Resources**

PP, AB, AC      Cumulative development should implement Mitigation Measures 6.9-1, 6.9-2, 6.9-3, 6.9-7, and 6.9-8, and should conduct rare plant surveys and implement required mitigation (similar to the proposed project and the development alternatives).

AA      No mitigation is required.

**6.9.5 LEVEL OF SIGNIFICANCE AFTER MITIGATION**

Implementation of the above mitigation measures would reduce project impacts to biological resources to a less-than-significant level.

The proposed project would contribute to *significant and unavoidable cumulative* impacts on biological resources in terms of a net reduction in listed species, sensitive species, the habitats of listed species and sensitive species, wetlands, waters of the United States and the state, and heritage trees.

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**6.10 CULTURAL RESOURCES**

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## **6.10 CULTURAL RESOURCES**

### **6.10.1 INTRODUCTION**

This section addresses known cultural resources on and within the vicinity of the project site, and the potential for unknown cultural resources to exist in the area. The analysis includes a description of the existing environmental setting, the methods used for identification/evaluation, the potential impacts associated with the proposed project, and the mitigation measures necessary to reduce impacts to a less-than-significant level.

A cultural resources investigation of the project site and vicinity was conducted by EDAW (Deis 2002). This study included a records search conducted through the North Central Information Center (NCIC) of the California Historic Resources Information System (CHRIS) to determine whether any known prehistoric or historic sites exist in the project vicinity. Documents at EDAW and various State and County repositories were also reviewed. In addition, EDAW completed an intensive field inventory of the project area. This information was used to determine if the project site contained or could contain prehistoric or historic resources, and also to assess resource significance as per California Register of Historical Resources (CRHR) criteria. The information in this section has been summarized from the cultural resources report prepared by EDAW.

Given the confidentiality requirements of the state and the NCIC, locational references to existing archaeological resource sites in this EIR section are provided in general rather than specific terms. The cultural report, which identifies the specific locations of recorded cultural resources sites within the project area, is on file for review by authorized individuals at the City of Sacramento Planning and Building Department, 1231 I Street, Room 300, Sacramento, CA 95814.

### **6.10.2 ENVIRONMENTAL SETTING**

The project site consists of multiple parcels of vacant land totaling approximately 63 acres located in the South Sacramento Community Plan area of the City of Sacramento. The site lies within Sacramento Valley at an elevation of 20 feet (6 m) above mean sea level (amsl). The site is currently surrounded by development and vacant land. Historically, the project site has been located at the edge of the Sacramento River floodplain. The main channel of the Sacramento River is currently located approximately 5 miles to the west. Before agricultural development, the natural environment was characterized by broad grasslands with scattered valley oaks and isolated wetland and slough plant communities. No buildings or other structures are located on the project site.

### **PREHISTORY**

Archaeological research in the Sacramento Valley and delta region over the last 50 years has resulted in the accumulation of a substantial body of knowledge. Basically, a cultural sequence defined by “Early,” “Middle,” and “Late” horizons of occupation defines the archaeology in the study region wherein aboriginal occupation is clearly demonstrated as early as 10,000 B.C. (cf. Beardsley 1954). More recent work at CA-Sac-42 (Milliken 1995) and CA-Sac-43 (Bouey 1995) along the Sacramento River have provided information about the local expression of prehistoric culture during Middle and Late horizons. Occupations at both sites roughly span the period from 400 BC to ca. 1400-1500 A.D. Comprehensive

overviews of regional prehistoric patterns can be found in Fredrickson (1973), Moratto (1984), and Bennyhoff (1979). Bennyhoff (1977) offers thorough consideration of the Late Prehistoric and ethnohistoric periods.

## **ETHNOGRAPHY**

The project site lies peripherally to lands known ethnographically as the territory of the Plains Miwok. These seasonal hunter/gatherers tended to settle along the lower Sacramento, Consumnes and Mokelumne rivers. According to ethnographies by Barrett (1908), Kroeber (1976), Levy (1978), Merriam (1967), and Wilson and Towne (1978), plains Miwok settlements were located near the project site. Bennyhoff (1977) suggested that CA-Sac-56, situated approximately 6 miles to the southwest, may represent the location of a village of the *Gualacomne* group, a settlement of the *Chupumne* tribelet is depicted near South Stone Lake (Bennyhoff 1977), and a village of the *Hulpumne* south of Freeport, in the vicinity of Beach Lake. The north Stone Lake area may have been shared by both the *Gualacomne* and *Chupumne* tribelets (Johnson 1974). An assemblage of mission-period beads and other contact trade items recovered at CA-Sac-56 support Bennyhoff's conclusion that Sac-56 is the location of an ethnographic village.

## **HISTORY**

Various Spanish explorers (i.e., Pedro Fages in 1772 and Jose Canizares in 1776) searching for sites for inland missions visited the Central Valley in the 1700s. Francisco Eliza sailed into the unexplored Sacramento River in 1793. Expeditions were also conducted in the early 1800s and included those of Gabriel Moraga, Jose Antonio Sanchez, and Father Narciso Duran. These explorers were followed by trappers of the Hudson Bay Company, beginning with Jedidiah Strong Smith in the late 1820s, and Joseph Walker and Ewing Young in the 1830s (Gudde 1969, Kyle 1990). An epidemic in 1833, most likely introduced by the trappers, is believed to have decimated 25-50% of the native population (Cook 1955).

Historic development within the Central Valley commenced in 1839 when John Sutter established a trading post. Later, in 1841, he was granted 11 leagues by the Mexican government, where he established New Helvetia and Sutter's Fort, now known as Sacramento (Hoover et al. 1990). European settlement was well underway in the lower Sacramento and upper San Joaquin Valleys by the 1860s. Two major roads linked Sacramento with Stockton. The lower Stockton Road paralleled the Sacramento River and was used during the drier months, with Upper Stockton Road following present-day Stockton Boulevard and State Route (SR) 99, located directly east and adjacent to the proposed project area (Sacramento County 1874, 1892; U.S. Bureau of Land Management 1855). Most of the area that was not under cultivation was being devoted to the grazing of sheep and cattle. The 1855 General Land Office (GLO) plat map does not indicate any fields in the project site but does show fields to the west in Section 16 and the extreme north end of Section 15, directly west of Upper Stockton Road. At that time, the only house in the vicinity of the project site is noted on the 1855 GLO map as Metcalf's house. It was situated in the southwest corner of Section 10, west of Stockton Road and approximately 1 mile north of the project site. Although the house is no longer in existence, the site of this house, and any associated structures, is important because of its early construction date and its association with early settlement of the region.

Some time after 1852, Alex Stevenson, an early prospector, acquired land west of Stockton Road, including the project site (Davis 1890; Thompson and West 1880 in Syda and Shapiro 1992). In the early

1900s, property west of SR 99, including the project site, was purchased by A.H. Hewitt. Although he proposed a subdivision in 1912 (*Sacramento Bee* 1912), the project never went beyond the conceptual stage (Syda and Shapiro 1992).

The railroads have played a major role in the historical development of Sacramento County. The first rail traffic in the vicinity of the project was the California Central Traction railroad, linking Sacramento to Stockton in 1905 and located approximately 0.2 mile west of the project area. Portions of this line were later sold jointly to Southern Pacific, Santa Fe, and Western Pacific Railroad Companies in 1936 (Fickewirth 1992).

## RESULTS OF THE NCIC RECORDS SEARCH

The prefield effort completed by EDAW was directed toward identifying potential and previously recorded cultural resources on and within ¼ mile of the project site. Records at the NCIC of the CHRIS were searched for information related to the project site. A summary of the findings of this records search is provided in Table 6.10-1.

<b>Report Title</b>	<b>NCIC File No.</b>	<b>Author and Date</b>	<b>Distance to Project Site</b>
<i>Reconnaissance Archeological Survey of the Morrison Stream Group in Sacramento County, California</i>	88	Johnson, Jerald J. (1974)	Small portion of survey borders the project area on the west.
<i>Valley Hi Drainage Improvement Plan, Sacramento County</i>	1891	Derr, Eleanor (1997)	Within ¼ mile
<i>Draft Environmental Impact Report, Stockton Boulevard Realignment and State Route 99 Interchange Modifications</i>	2986	Sacramento County Department of Environmental Review and Assessment (1993)	Within ¼ mile
<i>Archaeological Field Inspection of an 3.33 acre Parcel North of Wyndham Drive at Bruceville Road, Sacramento, Sacramento County, California</i>	3573	Holman (1994)	Within ¼ mile
<i>Strawberry and Jacinto Creeks Drainage Master Plan DEIR</i>	2977	Sacramento County (1994)	Within ¼ mile
<i>Nextel Communications Wireless Telecommunications Service Facility – Sacramento, Placer, and El Dorado Counties, California</i>	3789	Billat, Lorna Beth (2001)	Within ¼ mile
<i>Archaeological Survey Report for the Cosumnes River Boulevard/Calvine Road Interchange at State Route 99</i>	3844a	Syda, Keith and William Shapiro (1992)	Portions along the east and north sides of the project
<i>Historic Property Clearance Report</i>	3844b	(Mohlenbrok, David N. (1992)	Within ¼ mile
Source: North Central Information Center, CSU Sacramento 2003			

The NCIC records search revealed that several investigations have been conducted within and in the vicinity of the project site. A grove of eucalyptus and cypress trees and field associated with the historic Banks House were located approximately ¼ mile to the northwest (Derr 1997). In 1974, Johnson



conducted extensive surveys for the U.S. Army Corps of Engineers, including a corridor overlying Bruceville Road. Although no resources were noted at the project site, Johnson did record a total of 32 prehistoric sites as part of his linear survey. Fieldwork conducted near the Stockton Boulevard and SR 99 interchange did not reveal any cultural resources (Sacramento County Department of Environmental Review and Assessment 1993). Investigations associated with a proposed fiber optic route located just west of SR 99 (Billat 2001), a 3.3-acre survey near Wyndham Drive and Bruceville Road (Holman 1994), and two areas immediately east of SR 99 to the north and south of Calvine Road (Sacramento County 1994) did not result in the discovery of cultural resources. Only one study (Syda and Shapiro 1992, Mohlenbrok 1992) sampled portions of the project site itself. The field inventory resulted in the discovery of the remains of three residential properties (CA-Sac-629-631). None of these was determined to meet the criteria of significance under CEQA for inclusion in the CRHR (Syda and Shapiro 1992, Mohlenbrok 1992).

## **RESULTS OF THE NATIVE AMERICAN CONSULTATION**

EDAW consulted with the Native American Heritage Commission (NAHC) and local Native American Mi-wuk groups, including representatives of the Jackson, Ione, and Calaveras Bands; the Buena Vista Rancheria; the Wilton Rancheria; and the Central Sierra Me-wuk Cultural and Historic Preservation Committee in Tuolumne. Copies of this correspondence are included in the cultural resources report. The response from the NAHC indicates that no cultural resources or areas of sensitivity are on file on or within the vicinity of the project site. Written and phone contacts with the Native American groups above did not result in the identification of any known prehistoric cultural sites, Traditional Cultural Properties, or properties that might otherwise be of importance to local Native American prehistory, history, or present-day cultural practices.

## **RESULTS OF THE FIELD SURVEY**

Survey methods were consistent with the *Secretary of the Interior's Standards and Guidelines for Identification of Cultural Resources* (48 CFR 44720-23), and recordation of resources followed the guidelines outlined in *Instructions for Recording Historical Resources* (California Office of Historic Preservation, Sacramento 1995). On January 24, 2002, EDAW archaeologists conducted a field inspection of the approximately 63-acre project site. Dense grass cover limited surface visibility to less than 1% in approximately 60% of the project site.

An intensive search was conducted for the previously documented residential remains (CA-Sac-631), possibly located in the northwest corner (Syda and Shapiro 1992). Neither the concrete walk, area of darkened soil, or concrete and brick fragments were observed. Presumably, these remains have been removed and/or affected by construction of Cosumnes River Boulevard.

The remains of two residences/farmsteads (Cultural Sites 1 and 4) and a livestock corral/shelter (Cultural Site 3) were observed within the project site during the field survey. Each of these is described below. See the cultural resources report for Primary Records and Archaeological Site Records prepared for each of these sites by EDAW in compliance with California Department of Parks and Recreation (DPR) requirements. One or more of these sites may correspond to an onsite residence and ancillary buildings that were removed from the project site in 2002 under a City demolition permit.

### **Cultural Site 1**

These residential remains, situated directly west of West Stockton Boulevard, may be those of a small farmstead and consist of two features and miscellaneous building materials. Feature 1 is a rectangular concrete lined pit, possibly a septic tank, measuring approximately 8 feet long and 3 feet wide. Feature 2 comprises a pressure tank, well, and associated piping. A pile of asphalt shingles is located in the southern portion of the site, and concrete fragments are scattered throughout the area. Three domestic shade trees, one of which has blown down, are also present. Three steel drums are located in the possible septic tank, and miscellaneous materials, including corrugated sheet metal, lie in a depression adjacent to the well and pressure tank. Historic records on file at the Sacramento County Assessor's Office did not contain information on buildings or structures that were once located at this site.

### **Cultural Site 3**

These remains, most likely associated with livestock grazing, are located approximately ¼ mile east of Bruceville Road and ¼ mile south of Cosumnes River Boulevard. Features and other constituents consist of a well pump and casing, a large pressure tank, a pile of wood timbers and planks, corrugated tin, and a fence constructed of split posts, with hog and barbed wire. Wooden pickets form a portion of a fence that surrounds a domestic tree.

The planks and timbers are most likely the remains of a small structure/shelter for livestock, which has been completely dismantled. Similarly, the water system has also been destroyed. Fence remains are basically intact, so the general layout of the original alignment can be ascertained; however, the extent of the fencing is not certain. A review of historic Sacramento County assessor's records failed to reveal a connection between these remains and residential buildings in the area.

### **Cultural Site 4**

These scant remains of a residence/farmstead consist solely of a domestic well with pump casing, remnants of decorative wire fencing and scattered concrete and red brick fragments. Several piles of earth and construction debris to the southeast appear more recent and not related to the structure that was once located here. The suspected residence that was once located at this site has been destroyed, as well as any structures or other constituents that may have been associated with it. Sacramento County assessor's historic records indicated that the residence was demolished in the late 1960s.

## **6.10.3 REGULATORY PROVISIONS**

Cultural resources in California are protected by a number of federal, state, and local regulations. Management of cultural resources in the state is guided in large part by the provisions of CEQA.

Identified resources were assessed for significance based on criteria outlined in CEQA, which provides guidelines regarding impacts on historic and prehistoric cultural resources. CEQA states that if a project results in significant impacts on important cultural resources, then alternative plans or mitigation measures must be considered. However, only significant cultural resources need to be addressed.

CEQA guidelines define a significant historical resource as a resource listed or eligible for listing on the CRHR (Public Resources Code §5024.1). A resource may be eligible for inclusion in the CRHR if it:

- ▶ is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- ▶ is associated with the lives of persons important in our past;
- ▶ embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
- ▶ has yielded, or may be likely to yield, information important in prehistory or history.

CEQA guidelines also require consideration of unique archaeological resources (§15064.5). As defined in the Public Resource Code (§21083.2), a unique archaeological resource is an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- ▶ Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.
- ▶ Has a special and particular quality such as being the oldest of its type or the best available example of its type.
- ▶ Is directly associated with a scientifically recognized important prehistoric or historic event or person.

In addition to meeting one or more of the above criteria, historical resources eligible for listing in the CRHR must retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance. Integrity is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling and association (Office of Historic Preservation 1999).

#### **6.10.4 IMPACTS AND MITIGATION**

This section describes the cultural resource impacts that could occur with the development of the proposed project. It also identifies the standards of significance for cultural resource impacts resulting from the construction activities associated with the propose project and alternatives.

#### **METHOD OF ANALYSIS**

A cultural resources investigation of the project site was conducted by EDAW (Deis 2002). This study included a records search conducted through the North Central Information Center (NCIC) of the California Historic Resources Information System (CHRIS) to determine whether any known prehistoric or historic sites exist in the project vicinity. Documents at EDAW and various state and County repositories were also reviewed. In addition, EDAW completed an intensive field inventory of the project

area. This information was used to determine if the project area contained or could contain prehistoric or historic resources, and also to assess resource significance as per CRHR criteria. The information in this section has been summarized from the cultural resources report prepared by EDAW.

The three cultural resource sites documented by EDAW as being located on the project site were evaluated for significance according to CEQA/CRHR guidelines. Structures at all three sites have either been removed or demolished, and only a few associated features, primarily wells, fencing, construction materials, and domestic trees, remain. Therefore, because of a loss of integrity the resources cannot be considered architecturally significant, nor are they representative of a particular era or event. Archival research failed to reveal a connection with a person or groups of importance in the past, and impacts have resulted in a loss of the cultural matrix and archaeological values that can address techniques, behavior or rural life ways. Therefore, it is recommended that all three cultural sites (CS 1, CS 3, and CS 4) are not eligible under any of the CEQA guidelines for inclusion the CRHR.

## **SIGNIFICANCE TRESHOLDS**

In accordance with the CEQA, the effects of a project are evaluated to determine whether they could result in a significant adverse impact on the environment. An EIR is required to focus on these effects and offer mitigation measures to reduce or avoid any significant impacts that are identified. The criteria, or standards, used to determine the significance of impacts vary depending on the nature of the project. For the purposes of this section, an impact is considered significant if the proposed project could result in the damage or destruction of archaeological sites or artifacts that could meet the CEQA definitions for a “significant historical resource” or a “unique archaeological resource.”

## **IMPACTS AND MITIGATION MEASURES**

### **Impact 6.10-1: Known Archaeological Resources**

PP, AA, AB, AC No known prehistoric archaeological sites have been identified within or adjacent to the project site. Therefore, no further research or mitigation is required for known archaeological resources under the proposed project and each of the alternatives. Three historic archaeological sites (CS 1, CS 2, CS 4), remains of residential and ranching outbuildings and irrigation systems, were identified on the project site and evaluated. These were found to be ineligible for listing in the CRHR; therefore, no further research or mitigation is required. *No impact* would occur on known archaeological resources. The degree of the impact would be similar between the proposed project and each of the alternatives because none of these would affect known significant cultural resources.

### **Mitigation 6.10-1: Known Archaeological Resources (Plan and Project Components)**

PP, AA, AB, AC No mitigation is required.

### **Impact 6.10-2: Undiscovered Archaeological Resources**

- PP, AB, AC      There exists the possibility for the presence of undiscovered archaeological resources on the project site. Development would require grading and excavation that could disturb or damage any as-yet-undiscovered cultural resource that may be present at the project site. The General Plan Buildout Alternative and Park and Ride Alternative have land use definitions and intensities that differ from the proposed project. However, these alternatives, like the proposed project, would require grading and excavation activities that could disturb or damage as-yet-undiscovered archaeological resources. This is considered a *significant* impact. The degree of the impact would likely be similar between the proposed project and the development alternative because a similar area would be disturbed under each.
- AA                No change to existing conditions in the project area would occur under the No Project (No Development) Alternative. Because no additional grading or excavation would occur, any buried archaeological resources that may be present at the project site would remain undisturbed. Therefore, *no impact* would occur.

### **Mitigation 6.10-2: Undiscovered Archaeological Resources**

- PP, AB, AC      Future development on the project site shall comply with the following measures:
- ▶ If subsurface prehistoric or historical archaeological remains are identified during construction, work in the affected areas shall immediately stop until the find can be evaluated by a qualified archaeologist. If the find is determined to be of significance, mitigation shall consist of avoidance, and/or mitigation through data recovery.
  - ▶ In accordance with §7050.5 of the Health and Safety Code and §5097.94 and §5097.98 of the Public Resources Code, if human remains are discovered at the project site during excavation, work shall immediately stop at the construction site, the county coroner shall be contacted, and the Native American Heritage Commission shall be contacted. If the remains are determined to be Native American in origin, they shall be left intact, and the most likely descendants shall be notified.

This mitigation measure would reduce any impacts on undiscovered archaeological resources to *less-than-significant* levels.

- AA                No mitigation is required.

### **Impact 6.10-3: Cumulative Loss of Cultural Resources**

- PP, AB, AC      As urban development increases throughout the City of Sacramento and the region, cultural resources could be unearthed and damaged or destroyed. Historic and

prehistoric resources could also be altered or destroyed to make room for new development. A significant cumulative impact would occur.

AA No new development would occur on the project area under the No Project (No Development) Alternative. Therefore, no potential would exist for cultural resources in the project area to be affected under this alternative; thus, *no impact* would occur.

**Mitigation 6.10-3: Cumulative Loss of Cultural Resources**

PP, AB, AC Implement Mitigation Measure 6.10-2.

This mitigation measure would reduce any cumulative impacts on undiscovered archaeological resources to *less-than-significant* levels.

AA No mitigation is required.

**6.10.5 LEVEL OF SIGNIFICANCE AFTER MITIGATION**

The proposed project and alternatives would not result in any significant impacts with implementation of the mitigation measures recommended in this section.

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***6.11 HAZARDOUS MATERIALS***

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## **6.11 HAZARDOUS MATERIALS**

### **6.11.1 INTRODUCTION**

This section addresses potential impacts related to potential exposure of construction workers and the public to preexisting contaminants on the project site during construction of the proposed project. This section is based on the College Marketplace Phase I Environmental Site Assessment (ESA), prepared by Earthtec, Ltd., in April 2001 consistent with the American Society of Testing Materials (ASTM) standard guidelines. The Phase I ESA included (1) a computer-generated database search of government records of known hazardous materials/waste sites within a 1/8- to 1-mile radius of the project site (depending on the list searched); and (2) a site reconnaissance for visual evidence of potential hazardous materials contamination at the project site. The Phase I ESA is included in its entirety as Appendix G of this EIR.

### **6.11.2 ENVIRONMENTAL SETTING**

#### **PHYSICAL SETTING**

The project site consists of approximately 63 acres located at the southwest corner of Cosumnes River Boulevard and Highway 99, in the City of Sacramento, California. The site is currently vacant grassland that was used for agriculture. Various refuse is located at the eastern end of Kastanis Way. The site contains several piles of concrete or soils approximately 1-3 feet in height. The site also contains the remains of several foundations upon which two farm residences and an accessory structure once stood. The surrounding properties are either vacant or large-lot residential. Kastanis Way enters the project site from the west, while West Stockton Boulevard enters the project site from the southeast; both roadways dead-end on the project site. At the time the Phase I ESA was prepared, a farm residence and accessory structure were present in the southwest portion of the project site along Bruceville Road. These structures have since been demolished and removed, leaving the foundation remnants discussed above.

#### **HISTORICAL REVIEW**

The following observations are made based on a review of historic aerial photography of the project area conducted as part of the Phase I ESA.

Based on a 1937 photograph, the site and surrounding area were almost entirely farmland or agricultural structures. State Route 99 (SR 99), Bruceville Road, Calvine Road, and Cotton Lane existed as one-lane roads. The east-west oriented Union House Creek ran through the site.

A 1957 photograph shows the expansion of SR 99 into a multilane road. Although an increase in development is observed, the site and surrounding area are still mostly agricultural in nature. Containment of Union House Creek is apparent.

A 1964 photograph shows little change from the 1957 photograph. Further containment of Union House Creek is apparent; however, it is not known whether this is a result of seasonal changes or land management.



A 1972 photograph shows little change from the 1964 photograph. Cosumnes River College has been constructed to the west of the site.

A 1984 photograph shows the further expansion of SR 99 and the development of tract homes east of Cosumnes River College.

A 1993 photograph shows no change from the 1984 photograph.

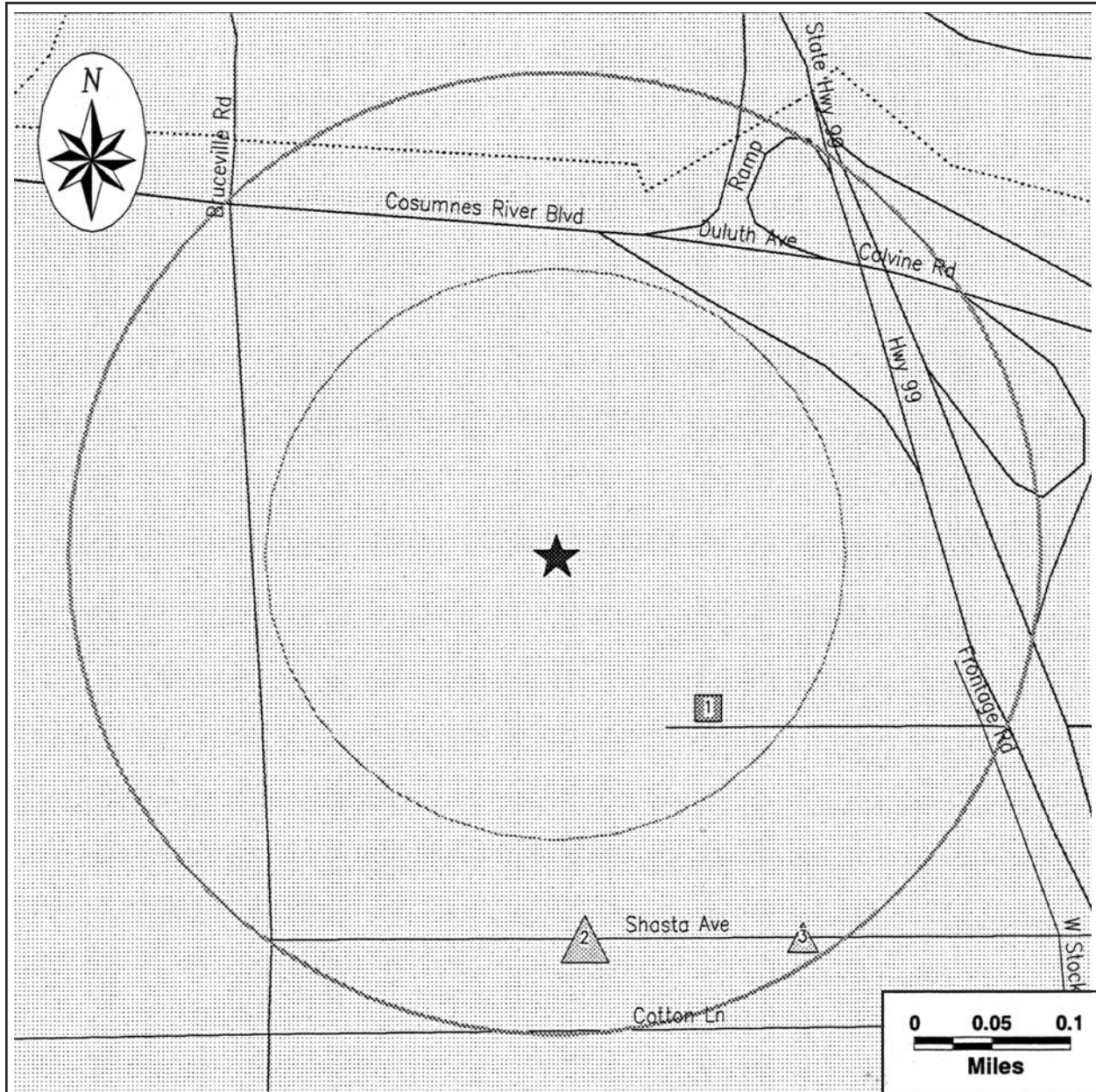
## **RESULTS OF THE RECORDS SEARCH**

The Phase I ESA included computer-generated database searches of known sites with potential or existing hazardous materials within a 1/8- to 1-mile radius of the project site (depending on the list searched). The databases are based on records kept by federal, state, and local agencies that are responsible for recording incidents of contamination and permitting transfer, storage, or disposal facilities that handle hazardous materials. The following is a list of the databases consulted as part of the records search:

- ▶ National Priorities List (NPL) of Superfund Sites;
- ▶ Resource Conservation and Recovery Information System (RCRIS);
- ▶ CalSites;
- ▶ Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS);
- ▶ Leaking Underground Storage Tanks (LUST);
- ▶ California Solid Waste Facility Information System (SWIS);
- ▶ California Deed Restrictions;
- ▶ Cortese;
- ▶ U.S. Geological Survey (USGS)/California Water Wells;
- ▶ California Spills;
- ▶ US Environmental Protection Agency (EPA) Toxic Release Inventory System (TRIS);
- ▶ California Underground/Aboveground Storage Tanks (UST/AST); and
- ▶ Emergency Response Notification System (ERNS).

The records search identified 11 sites that were unmapped because they had inadequate address information. However, review of federal, state, and local database information has shown that each of these 11 sites is outside the 1-mile search radius of the project site. For this reason, they are not reviewed further in this EIR.

As indicated in Exhibits 6.11-1 and 6.11-2, the records search further identified four database hits representing a total of three listed hazardous materials sites within the 1-mile search radius of the project site (none of which were identified on the project site). A summary description of each of these databases and search results is presented below.

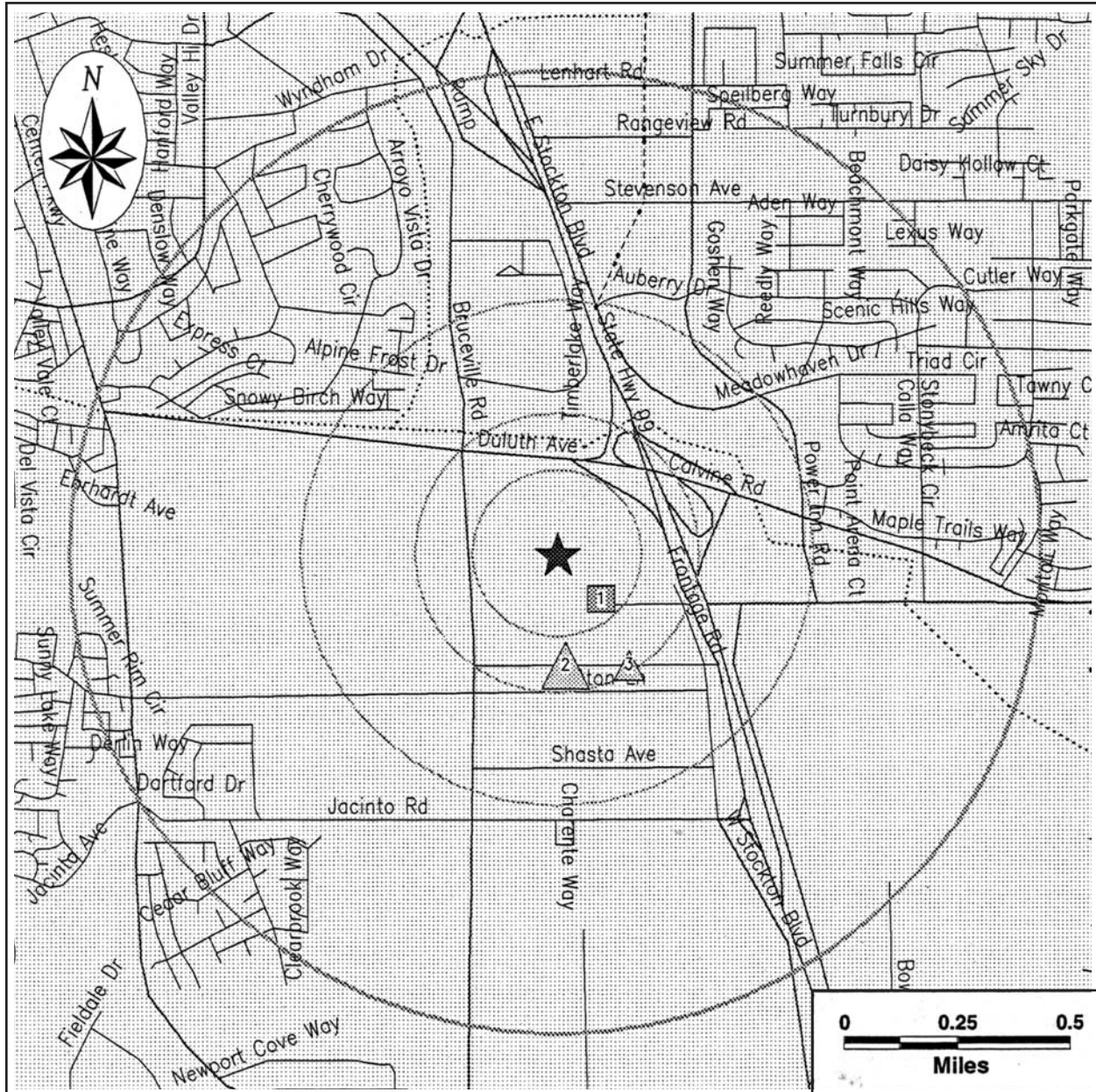


<b>Subject Site</b> 	<b>Category:</b> <b>Databases Searched to:</b>	<b>A</b> 1 mi.	<b>B</b> 1/2 mi.	<b>C</b> 1/4 mi.	<b>D</b> 1/8 mi.
	<b>Single Sites</b> 				
	<b>Multiple Sites</b> 				
Highways and Major Roads Roads Railroads Rivers or Water Bodies Utilities	<b>NPL, SPL, CORRACTS (TSD)</b> <b>CERCLIS\ NFRAP, TSD, LUST, SWLF, SCL</b> <b>RCRA VIOL, TRIS, UST</b> <b>ERNS, GENERATORS</b>	If additional databases are listed in the cover page of the report they are also displayed on this map. The map symbol used corresponds to the database category letter A,B,C,D.			

Source: VISTA Information Solutions, Inc. 2001

### Map of Sites within 1/4 Mile

EXHIBIT 6.11-1



Subject Site	Category:	A	B	C	D
★	Databases Searched to:	1 mi.	1/2 mi.	1/4 mi.	1/8 mi.
	Single Sites	◆	■	▲	●
	Multiple Sites	◆	■	▲	●
Highways and Major Roads Roads Railroads Rivers or Water Bodies Utilities	NPL, SPL, CORRACTS (TSD)	CERCLIS\ NFRAP, TSD, LUST, SWLF, SCL	RCRA VIOL, TRIS, UST	ERNS, GENERATORS	
<p>If additional databases are listed in the cover page of the report they are also displayed on this map. The map symbol used corresponds to the database category letter A,B,C,D.</p>					

Source: VISTA Information Solutions, Inc. 2001

## Map of Sites within One Mile

EXHIBIT 6.11-2

## **USGS/California Water Wells Database**

The groundwater database contains groundwater site inventory, groundwater level data, and water quality data. A search of the groundwater database identified one site within the ½-mile search radius of the project area. The USGS domestic water well identified as number 382710121244201 is located approximately 0.08 mile southeast of the project site.

## **California UST/AST**

The State Water Resources Control Board (SWRCB) and Regional Water Quality Control Board (RWQCB) administer programs and policies to protect California's water resources, including UST and AST programs. A search of the UST/AST database identified three sites within the ¼-mile search radius of the project site. One UST is registered to the Valley Hi C.O. facility located at 7601 Shasta Avenue, approximately 0.19 mile south of the project site. One UST is registered to the Citizens Telecom Company of California facility also located at 7601 Shasta Avenue. Two USTs are registered to the Albert Zayas Excavating facility, located at 7816 Shasta Avenue, approximately 0.23 mile southeast of the project site. No violations have been reported at these facilities.

## **RESULTS OF THE SITE RECONNAISSANCE**

The site reconnaissance did not reveal any visual evidence of potential hazardous materials contamination at the project site.

### **6.11.3 REGULATORY PROVISIONS**

#### **HAZARDOUS MATERIALS MANAGEMENT**

##### **Federal**

Many agencies regulate hazardous substances. These include federal agencies such as the EPA or the Occupational Safety and Health Administration (OSHA). The following represents federal laws and guidelines governing hazardous substances:

- ▶ Federal Water Pollution Control Act,
- ▶ Clean Air Act,
- ▶ Occupational Safety and Health Act,
- ▶ Federal Insecticide, Fungicide, and Rodenticide Act,
- ▶ Comprehensive Environmental Response Compensation and Liability Act,
- ▶ Guidelines for Carcinogens and Biohazards,
- ▶ Superfund Amendments and Reauthorization Act Title III,
- ▶ Resource Conservation and Recovery Act (RCRA),
- ▶ Safe Drinking Water Act, and
- ▶ Toxic Substances Control Act.

At the federal level, the principal agency regulating the generation, transport, and disposal of hazardous substances is the EPA, under the authority of the Resource Conservation and Recovery Act. The EPA regulates hazardous substances sites under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA). Applicable federal regulations are contained primarily in Titles 29, 40, and 49 of the Code of Federal Regulations (CFR).

## **State**

The California Environmental Protection Agency (CalEPA) and the Office of Emergency Services (OES) of the State of California establish rules governing the use of hazardous substances. The SWRCB has primary responsibility to protect water quality and supply.

Applicable state laws include the following:

- ▶ Porter Cologne Water Quality Act,
- ▶ Public Safety/Fire Regulations/Building Codes,
- ▶ Hazardous Substances Control Law,
- ▶ Hazardous Substances Information and Training Act,
- ▶ Hazardous Substances Release Response Plans and Inventory Act,
- ▶ Air Toxics Hot Spots and Emissions Inventory Law, and
- ▶ Underground Storage of Hazardous Substances Act.

Within Cal-EPA, the Department of Toxic Substance Control (DTSC) has primary responsibility, with delegation of enforcement to local jurisdictions that enter into agreements with the state agency, for the generation, transport, and disposal of hazardous substances under the authority of the Hazardous Waste Control Law (HWCL). State regulations applicable to hazardous substances are indexed in Title 26 of the California Code of Regulations (CCR).

## **GROUNDWATER**

As described above, the SWRCB and the RWQCB are the responsible agencies for implementing regulations designed to protect California waters, including groundwater. The RWQCB is responsible for overseeing groundwater contamination investigations and remedial activities. The RWQCB implements the clean-up standards required for sites of contaminated groundwater and assures site compliance with appropriate state regulations. The RWQCB is responsible for overseeing the discharge of water (from dewatering during construction activities) to surface waters. The Cal-EPA DTSC and California Occupational Safety and Health Administration (Cal-OSHA) are the agencies that are responsible for overseeing that appropriate measures are taken to protect workers from exposure to potential groundwater contaminants.

Sacramento County is responsible for enforcing the state regulations, both in the City of Sacramento and the County, governing hazardous substance generators, hazardous substance storage, and underground storage tanks (including inspections, enforcement, and removals). The Sacramento County Environmental Management Department (EMD) regulates the use, storage, and disposal of hazardous substances in Sacramento County by issuing permits, monitoring regulatory compliance, investigating complaints, and other enforcement activities. EMD reviews technical aspects of hazardous substance site

cleanups, and oversees remediation of certain contaminated sites resulting from leaking underground storage tanks. EMD is also responsible for providing technical assistance to public and private entities which seek to minimize the generation of hazardous substances.

Goals and policies have been developed by the County of Sacramento concerning the management of hazardous substances to protect human health and the environment (Sacramento County Hazardous Waste Management Plan 1998, Sacramento General Plan 1988).

## **HAZARDOUS SUBSTANCES HANDLING**

### **Federal**

The RCRA established a federal hazardous substance “cradle-to-grave” regulatory program that is administered by the EPA. Under the RCRA, the EPA regulates the generation, transportation, treatment, storage, and disposal of hazardous substances.

The RCRA was amended in 1984 by the Hazardous and Solid Waste Act (HSWA), which affirmed and extended the “cradle-to-grave” system of regulating hazardous substances. The HSWA specifically prohibits the use of certain techniques for the disposal of some hazardous substances.

Under the RCRA, individual states may implement their own hazardous substance management programs as long as they are consistent with, and at least as strict as, the RCRA. EPA must approve state programs intended to implement the RCRA requirements.

### **State**

The current state program was created by the enactment of the HWCL, which is administered by the DTSC. The DTSC regulations govern the generation, transportation, and disposal of hazardous substances.

Regulations implementing the HWCL list hazardous chemicals and common substances that may be hazardous; establish criteria for identifying, packaging and labeling hazardous substances; prescribe management of hazardous substances; establish permit requirements for hazardous substances treatment, storage, disposal, and transportation; and identify hazardous substances that cannot be deposited in landfills.

Under both RCRA and the HWCL, the generator of a hazardous substance must complete a manifest that accompanies the waste from the point of generation to the ultimate treatment, storage, or disposal location. The manifest describes the waste, its intended destination, and other regulatory information about the waste. Copies must be filed with the DTSC. Generators must also match copies of waste manifests with receipts from the treatment, storage, or disposal facility to which it sends waste.

## **HAZARDOUS SUBSTANCES WORKER SAFETY**

### **Federal**

The federal OSHA is the agency responsible for ensuring worker safety. OSHA sets federal standards for implementation of training in the work place, exposure limits, and safety procedures in the handling of hazardous substances (as well as other hazards). OSHA also establishes criteria by which each state can implement its own health and safety program.

### **State**

Cal-OSHA assumes primary responsibility for developing and enforcing work place safety regulations within the State. Cal-OSHA standards are more stringent than federal regulations.

Cal-OSHA regulations concerning the use of hazardous substances include requirements for safety training, availability of safety equipment, hazardous substances exposure warnings, and emergency action and fire prevention plan preparation. Cal-OSHA enforces the hazard communication program regulations, which include provisions for identifying and labeling hazardous substances, describing the hazards of chemicals, and documenting employee training programs.

Both federal and State laws include special provisions for hazard communication to employees who work with and /or encounter hazardous materials and wastes. The training must include safe methods for handling hazardous substances, an explanation of Material Safety Data Sheets, use of emergency response equipment, implementation of an emergency response plan and use of personal protective equipment.

### **6.11.4 IMPACTS AND MITIGATION**

#### **METHOD OF ANALYSIS**

This analysis is based on a review of the College Marketplace Phase I Environmental Site Assessment prepared by Earthtec, Ltd., in April 2001 and is included in its entirety as Appendix G of this EIR. The Phase I ESA included (1) a computer-generated database search of government records of known hazardous materials/waste sites within a 1/8- to 1-mile radius of the project site (depending on the list searched); and (2) a site reconnaissance for visual evidence of potential hazardous materials contamination at the project site

#### **STANDARDS OF SIGNIFICANCE**

In accordance with CEQA, the effects of a project are evaluated to determine whether implementing the project would result in a significant adverse impact on the environment. An EIR is required to focus on these effects and offer mitigation measures to reduce or avoid any significant impacts that are identified. The criteria, or standards, used to determine the significance of impacts may vary depending on the nature of the project. For the purposes of this EIR, an impact is considered significant if the proposed project would:

- ▶ Expose people (e.g., residents, pedestrians, construction workers) to existing contaminated soil (or associated vapors) during construction activities and after construction.
- ▶ Expose people (e.g., residents, pedestrians, construction workers) to asbestos-containing materials during construction activities and after construction.
- ▶ Expose people (e.g., residents, pedestrians, construction workers) to existing contaminated groundwater (or associated vapors) during dewatering activities.

## IMPACTS AND MITIGATION MEASURES

### **Impact 6.11-1: Hazardous Materials – Soil Contamination**

PP, AB, AC      Implementation of the proposed project is anticipated to include construction activities. Based on the results of the Phase I ESA, there is no documented known or suspected soil contamination at the project site. While no known contamination exists at the project site, there is the potential that as of yet undiscovered soil contamination may exist at the site which could be unearthed during construction-related earth-moving activities and potentially expose persons to contamination. Any exposure of people to contaminated soil during construction is considered a *significant* impact. The degree of this impact would likely be similar between the proposed project and each of the development alternatives as earth-moving operations would occur at the project site under each.

In addition to the potential for exposure to soil contamination during construction, development of the proposed project, especially the residential uses, could increase the population that could be exposed during operation to any currently unidentified contaminated soils which may exist at the project site. Any exposure of people to contaminated soil during operation is considered a *significant* impact. The degree of this impact would likely be similar between the proposed project and each of the development alternatives as earth moving operations would occur at the project site under each.

AA      There would be no impact related to contaminated soil associated with this alternative since there would be no construction in the proposed project area. Any soil contamination which may exist at the site would not be disturbed. Therefore, *no impact* would occur.

### **Mitigation 6.11-1: Hazardous Materials – Soil Contamination**

PP, AB, AC      If discolored soil, storage tanks or other evidence of potential soil contamination is unearthed during construction-related earth work, or if noxious odors are encountered during said earth work, construction activities shall immediately cease at the construction site. A qualified environmental consultant shall collect and analyze soil samples from the construction site. If contaminants are identified in the samples, the applicant shall coordinate with the Sacramento County EMD for direction on



appropriate remediation measures and procedures prior to the commencement of construction activities.

With implementation of the above mitigation measures, this impact would be reduced to a *less-than-significant* level.

AA No mitigation is required.

**Impact 6.11-2: Hazardous Materials – Asbestos-Containing Materials**

PP, AB, AC The project site does not contain any existing structures, and thus the proposed project and development alternatives would not include the demolition and/or renovation of structures which may contain asbestos. Therefore, *no impact* would occur.

AA There would be no impact related to asbestos-containing materials associated with this alternative because there would be no construction activities on the project site and no existing structures are located on the project site that may contain asbestos. Therefore, *no impact* would occur.

**Mitigation 6.11-2: Hazardous Materials – Asbestos-Containing Materials**

PP, AA, AB, AC No mitigation is required.

**Impact 6.11-3: Hazardous Materials – Groundwater Contamination**

PP, AB, AC Implementation of the proposed project could include excavation activities. The groundwater aquifer in the area of the project is located approximately 95 feet below the existing surface elevation so that contact with the aquifer during construction is unlikely (USGS 1982). The grading activities associated with preparation of this site would be minor, involving moving no more than a few feet of soil. No driven pilings or deep excavation is required for foundation supports. The results of the Phase I ESA indicate that there are no documented known or suspected cases of contaminated groundwater in the project area. Construction workers would not be exposed to contaminants in groundwater. This represents a *less-than-significant* impact. The degree of this impact would likely be similar between the proposed project and each of the development alternatives as the area of disturbance would be similar under each.

AA There would be no impact related to contaminated groundwater associated with this alternative because there would be no construction activities in the proposed project area. Therefore, *no impact* would occur.

**Mitigation 6.11-3: Hazardous Materials – Groundwater Contamination**

PP, AA, AB, AC No mitigation is required.

#### **Impact 6.11-4: Hazardous Materials – Cumulative Impacts**

- PP, AB, AC Cumulative development anticipated within the City of Sacramento, in conjunction with the proposed project, could increase the potential exposure hazard to unknown preexisting contaminants. If Phase I Environmental Site Assessments (ESAs) are not prepared for this cumulative development, and if any mitigation measures identified in these ESAs that are required to avoid a significant exposure hazard to any preexisting hazardous contamination at the cumulative development sites are not implemented, a *potentially significant* impact could occur. Because the proposed project would be required to comply with applicable regulations, and because site-specific mitigation measures have been identified to avoid exposure to any unknown preexisting contaminants that may be present at the project site, the proposed project would not contribute to any such significant cumulative impact.
- AA No new development would occur within the proposed project area. Therefore, no increase in the potential exposure to hazardous materials would occur under this alternative, and thus *no impact* would result associated with cumulative development.

#### **Mitigation 6.11-4: Hazardous Materials – Cumulative Impacts**

- PP, AB, AC The applicants of the cumulative projects shall have prepared Phase I Environmental Site Assessments (ESAs) for their projects and shall implement any mitigation measures recommended in those ESAs to avoid potential exposure hazards to any preexisting hazardous materials contamination on the cumulative development sites.
- AA No mitigation is required.

#### **6.11.5 LEVEL OF SIGNIFICANCE AFTER MITIGATION**

The proposed project and alternatives would not result in any significant impacts with implementation of the mitigation measures recommended in this section.

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**7      *COMPARATIVE MERITS OF THE ALTERNATIVES***

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## **7 COMPARATIVE MERITS OF THE ALTERNATIVES**

### **7.1 INTRODUCTION**

The guiding principles for analysis of alternatives in an EIR are provided by §15126.6 of the California Environmental Quality Act Guidelines (State CEQA Guidelines). Section 15126.6 indicates that the alternatives analysis must evaluate the comparative merits of the alternatives against the proposed project, must identify the “environmentally superior alternative,” and must explain why the environmentally superior alternative was selected from among the alternatives evaluated. If the environmentally superior alternative is the No Project Alternative, CEQA requires that another environmentally superior alternative be selected from among the remaining alternatives being considered. CEQA permits the evaluation to be conducted in less detail than is done for the proposed project, as long as the information provided in the EIR about each alternative is sufficient to allow for a meaningful evaluation, analysis, and comparison of the alternatives.

Chapter 6 of this EIR, Environmental Analysis, includes an analysis of the potential environmental impacts of the proposed project and each of the three alternatives evaluated. On the basis of this analysis, the following sections provide a relative comparison of the alternatives to the proposed project and identify the environmentally superior alternative.

### **7.2 COMPARATIVE MERITS OF THE ALTERNATIVES**

Table 7-1 identifies whether each of the alternatives would have “greater,” “less,” or “similar” impacts compared to those of the proposed project for each of the 57 environmental issues evaluated in Chapter 6 of this EIR.

### **7.3 ENVIRONMENTALLY SUPERIOR ALTERNATIVE**

As indicated in Table 7-1, both the No Project (No Development) and General Plan Buildout Alternatives would have less of an impact overall as compared to the proposed project. The No Project (No Development) Alternative would have less of an impact in 48 of the 56 environmental issue areas, similar impacts in nine of the issue areas, and greater impacts in zero issue areas. The General Plan Buildout Alternative would have less of an impact in 15 issue areas, similar impacts in 38 issue areas, and greater impacts in 4 issue areas.

The Park-and Ride Alternative would have greater impact overall compared to the proposed project. This alternative would have less of an impact in 4 issue areas, similar impacts in 45 issue areas, and greater impacts in 8 issue areas (i.e., the cases of greater impacts would exceed those of less of an impact).

Based on Table 7-1 and the above, the No Project (No Development) Alternative would have less of an impact than the proposed project in most of the environmental issues evaluated and would not result in greater impacts in any of the environmental issues evaluated. This would be followed by the General Plan Buildout Alternative, the proposed project, and finally the Park-and-Ride Alternative, with the Park-and-Ride Alternative affecting the greatest number of impact categories.

**Table 7-1  
Comparison of the Environmental Impacts of the Proposed Project and Alternatives**

Environmental Issue	Alternative		
	No Project (No Development) (AA)	General Plan Buildout (AB)	Park-and-Ride (AC)
<b>Traffic and Circulation</b>			
6.2-1 through 6.2-5: Intersections	Less	Less	Similar
6.2-6 through 6.2-8: Onsite Circulation	Less	Less	Similar
6.2-9 Bicycle Facilities	Similar	Similar	Similar
6.2-10 Pedestrian Facilities	Similar	Similar	Similar
6.2-11 Transit	Similar	Similar	Similar
<b>Air Quality</b>			
6.3-1 Short-Term Construction Emissions of ROG, NO <sub>x</sub> , and PM <sub>10</sub>	Less	Similar	Similar
6.3-2 Long-Term Regional (Operational) Emissions of ROG, NO <sub>x</sub> , and PM <sub>10</sub>	Less	Less	Greater
6.3-3 Local Mobile Source Carbon Monoxide Concentration Emissions	Less	Less	Less
6.3-4 Odorous Emissions	Less	Less	Similar
6.3-5 Stationary Source Toxic Air Emissions	Less	Less	Similar
6.3-6 Mobile Source Toxic Air Emissions	Less	Less	Similar
6.3-7 Cumulative Air Quality Impacts	Less	Similar	Greater
<b>Noise</b>			
6.4-1 Short-Term Construction Noise	Less	Similar	Similar
6.4-2 Long-Term Area and Stationary Source Noise	Less	Less	Similar
6.4-3 Long-Term Mobile Source Noise	Less	Less	Greater
6.4-4 Compatibility of the Proposed Land Uses with Projected Onsite Noise Levels	Less	Greater	Similar
6.4-5 Noise Impacts (Cumulative)	Less	Similar	Similar
<b>Drainage and Surface Water Quality</b>			
6.5-1 Flooding	Similar	Similar	Similar
6.5-2 Drainage	Less	Less	Greater
6.5-3 Runoff Water Quality	Less	Less	Greater
6.5-4 Cumulative Flooding, Drainage, and Runoff Water Quality	Less	Similar	Similar
<b>Population and Housing</b>			
6.6-1 Consistency with Relevant Plans (Operation)	Not applicable	Not applicable	Not applicable
6.6-2 Induce Population Growth (Operation)	Less	Greater	Less
6.6-3 Displace Existing Housing (Operation)	Similar	Similar	Similar
6.6-4 Displace Existing Population (Operation)	Similar	Similar	Similar
6.6-5 Affect Jobs/Housing Balance (Operation)	Not applicable	Not applicable	Not applicable
6.6-6 Induce Population Growth (Cumulative)	Less	Similar	Similar
6.6-7 Displace Existing Housing and Population (Cumulative)	Similar	Similar	Similar
6.6-8 Affect Jobs/Housing Balance (Cumulative)	Less	Less	Similar
<b>Light and Glare</b>			
6.7-1 Light and Glare Impacts during Construction	Less	Similar	Similar
6.7-2 Light Impacts on Existing Sensitive Land Uses (Operation)	Less	Less	Greater
6.7-3 Glare Impacts on Existing Sensitive Land Uses (Operation)	Less	Less	Greater

<b>Table 7-1 (Continued)</b>				
<b>Comparison of the Environmental Impacts of the Proposed Project and Alternatives</b>				
<b>Environmental Issue</b>		<b>Alternative</b>		
		<b>No Project (No Development) (AA)</b>	<b>General Plan Buildout (AB)</b>	<b>Park-and-Ride (AC)</b>
6.7-4	Light and Glare Impacts on Sensitive Land Uses (Cumulative)	Less	Less	Greater
<b>Public Services and Utilities</b>				
6.8-1	School Facilities/Services (Construction)	Less	Similar	Similar
6.8-2	School Facilities/Services (Operation)	Less	Greater	Less
6.8-3	School Facilities/Services (Cumulative)	Less	Similar	Similar
6.8-4	Water Facilities/Services (Construction)	Less	Similar	Similar
6.8-5	Water Facilities/Services (Operation)	Less	Similar	Similar
6.8-6	Water Facilities/Services (Cumulative)	Less	Similar	Similar
6.8-7	Solid Waste Facilities/Services (Construction)	Less	Similar	Similar
6.8-8	Solid Waste Facilities/Services (Operation)	Less	Greater	Less
6.8-9	Solid Waste Facilities/Services (Cumulative)	Less	Similar	Similar
<b>Biological Resources</b>				
6.9-1	Loss of Burrowing Owl	Less	Similar	Similar
6.9-2	Removal of Swainson's Hawk Foraging and Nesting Habitat	Less	Similar	Similar
6.9-3	Loss of Jurisdictional Waters of the United States	Less	Similar	Similar
6.9-4	Loss of Habitat for Vernal Pool Invertebrates.	Less	Similar	Similar
6.9-5	Loss of Giant Garter Snake	Less	Similar	Similar
6.9-6	Loss of Rare Plants	Less	Similar	Similar
6.9-7	Disturbance of Raptor Nests	Less	Similar	Similar
6.9-8	Loss of Heritage Trees	Less	Similar	Similar
6.9-9	Biological Impacts of Offsite Storm Drain and Outfall	Less	Similar	Similar
6.9-10	Cumulative Impacts on Biological Resources	Less	Similar	Similar
<b>Cultural Resources</b>				
6.10-1	Known Archaeological Resources	Similar	Similar	Similar
6.10-2	Undiscovered Archaeological Resources	Less	Similar	Similar
6.10-3	Cumulative Loss of Cultural Resources	Less	Similar	Similar
<b>Hazardous Materials</b>				
6.11-1	Hazardous Materials – Soil Contamination	Less	Similar	Similar
6.11-2	Hazardous Materials – Asbestos-Containing Materials	Similar	Similar	Similar
6.11-3	Hazardous Materials – Groundwater Contamination	Less	Similar	Similar
6.11-4	Hazardous Materials – Cumulative Impacts	Less	Similar	Similar
<b>Totals:</b>	Greater impact	0	4	8
	Less impact	48	15	4
	Similar impact	9	38	45
Source: EDAW 2003				

For these reasons, the No Project (No Development) Alternative would be the environmentally superior alternative. However, the State CEQA Guidelines (§15126.6[e][2]) requires that if the No Project Alternative is identified as the environmentally superior alternative, an environmentally superior alternative should be identified from among the remaining alternatives. Consistent with this requirement, the General Plan Buildout Alternative, which affects the next lowest number of issue areas, is identified as the environmentally superior alternative.

The General Plan Buildout Alternative would implement the General Plan Land Use Map and would result in the development of the storm drain system planned for the site in the Jacinto Creek Planning Area Drainage Master Plan (April 15, 1996). This alternative would also achieve several of the City's objectives for the proposed project, including providing housing opportunities for residents of the City, providing senior and low-income housing, and providing higher density land uses adjacent to planned mass transit facilities which would encourage mass transit usage. The project applicant's objective for the proposed project of providing utility line extensions to multifamily-zoned parcels to the south would be achieved with this alternative. However, the applicant's other stated objectives may not be achieved, including providing an urban infill project focused on neighborhood and community retail services, supporting the City's jobs/housing balance goals, and providing a major employment center adjacent to light rail.

In addition to not being as effective as the proposed project in meeting the City's and applicant's objectives for the proposed project, it is also noted that, although the General Plan Buildout Alternative would result in less of an impact of traffic and air quality than the proposed project, it would not be as effective in reducing regionwide traffic congestion, air quality, emissions, and urban sprawl as the proposed project. This is because the proposed project would represent transit-oriented development (TOD) in that it would provide for higher density urban uses adjacent to future planned light rail facilities, which would encourage mass transit use, and would provide for a complementary set of onsite land uses (i.e., residential, commercial, office, child care), which would reduce the need for offsite shopping and service trips. Although the General Plan Buildout Alternative would increase density adjacent to the future planned South Sacramento Corridor Phase 2 Project light rail line, this alternative would not develop the higher density residential development that would occur under the proposed project and would not provide for a complementary set of onsite land uses. In the long run, the proposed project would contribute to a reduction in the cumulative traffic, air emissions, and urban sprawl that would otherwise be generated in the City with the more traditional mono lower density development that would occur at the project site under the General Plan Buildout Alternative.

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**8      *GROWTH-INDUCING IMPACTS***

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## 8 GROWTH-INDUCING IMPACTS

### 8.1 INTRODUCTION

Section 15126.2(d) of the State CEQA Guidelines requires that an EIR discuss the growth-inducing impacts of a proposed project. Specifically, CEQA states:

Discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth (a major expansion of a waste water treatment plant might, for example, allow for more construction in service areas). Increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. Also discuss the characteristic of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.

Growth-inducing impacts can result from development that directly or indirectly induces additional growth. Examples of growth-inducement include: (1) redesignation of property from agricultural to urban uses, thus increasing the potential for adjacent farmland to also be redesignated to urban uses; (2) the development of new housing or job-generating uses that would be sufficient in quantity to create a substantial demand for new jobs and housing, respectively; (3) the development of new schools as part of a proposed project with excess capacity to serve adjacent currently undeveloped areas; (4) the extension of roads and utilities to an area not currently served by such infrastructure; and (5) the oversizing of new utility lines to a project site which may have additional capacity to serve currently undeveloped areas nearby.

Growth inducement itself is not an environmental effect, but may lead to environmental effects. Such environmental effects could include increased demand on other community and public services and infrastructure, increased traffic and noise, degradation of air or water quality, degradation or loss of plant or animal habitats, or conversion of agricultural and open space land to urban uses.

### 8.2 GROWTH-INDUCING IMPACTS

The College Square project site is located in south Sacramento, in an area designated for urban development by the City of Sacramento General Plan. The project site is surrounded on all sides by existing or approved urban development, and represents an infill project rather than an extension of an urban boundary into non-urbanized areas. The project would not convert agricultural land to an urban use or speed the conversion of adjacent farmland to an urban use, and would not extend roadways or utility lines into an area not already served by such infrastructure. In these respects, the proposed project would not foster economic, population, or housing growth on adjacent parcels, and thus would not be growth inducing.

The proposed project would not include the development of new schools, parks, police stations, fire stations, or other public service systems, that would increase the service capacity of the surrounding area.

Any public service enhancements associated with the proposed project would be restricted to that required to serve the project only (via the payment of service impact fees such as the State-mandated school impact fee or City in-lieu park fee). No excess public service capacity would be created. In this respect, the proposed project would not be growth inducing.

The proposed project would include the extension of existing utilities to the project site itself. However, the proposed project would not include the extension of utility infrastructure to adjacent parcels not currently served by such infrastructure, and would not increase the capacity of utility infrastructure such that adjacent parcels not currently served by utility infrastructure could be served in the future. The project would include the development of oversized drainage infrastructure to serve upstream development within Watershed #1. However, this oversized drainage infrastructure has been planned for in the Jacinto Creek Master Drainage Plan, and development of the upstream area within Watershed #1 is planned for more intensive urban development by the General Plan, SSCP, and Master Plan. Hence, in these respects, the proposed project would not be growth inducing.

Although the proposed project would include new residential and commercial development, this development (1) has been planned for by the City's General Plan, SSCP, and Zoning Ordinance; (2) would represent infill development rather than the extension of new development into undeveloped areas; and (3) would be consistent with most General Plan and SSCP land use policies. Furthermore, although the proposed project would permit a greater amount of commercial development than is currently permitted at the project site by the General Plan and existing zoning, the project would result in less residential development than is currently permitted, and the jobs to be created would be primarily lower-income service jobs and thus would be expected to be filled by existing residents in the City rather than by new residents that move to the area specifically for the low-income service jobs to be created. Hence, the project would not directly induce substantial population growth in the SSCP area.

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**9      *SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS***

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## 9 SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS

### 9.1 INTRODUCTION

Consistent with the requirements of §15126.2(b) of the State CEQA Guidelines, this chapter identifies the significant impacts of the proposed project, as well as cumulative impacts, that could not be eliminated or reduced to a less-than-significant level by available mitigation measures. The final determination of significant impacts will be made by the City Council of the City of Sacramento as part of its certification action.

### 9.2 SUMMARY OF SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS

The significant and unavoidable adverse impacts of the proposed project are identified and discussed at the ends of the relevant sections of Chapter 6 of this EIR. The significant and unavoidable adverse impacts identified in these sections are summarized below by impact number as they appear in Chapter 6.

- ▶ 6.2-5 - SR 99 Southbound Off-Ramp/Cosumnes River Boulevard – Year 2025: The addition of the proposed project would add more than 5 seconds of delay to a.m. (Level of Service [LOS] D) and p.m. (LOS E) operations. The required mitigation of providing an additional right-turn lane on the State Route (SR) 99 southbound off-ramp to Cosumnes River Boulevard is infeasible because it requires the acquisition of additional right-of-way.
- ▶ 6.3-1 - Short-Term Construction Emissions of ROG, NO<sub>x</sub>, and PM<sub>10</sub>: Daily construction emissions would exceed the Sacramento Metropolitan Air Quality Management District's (SMAQMD's) significance threshold of 85 pounds per day for oxides of nitrogen (NO<sub>x</sub>), and construction emissions of ozone precursors (reactive organic gases [ROG] and NO<sub>x</sub>) and PM<sub>10</sub> would potentially contribute to a violation in the National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS).
- ▶ 6.3-2 - Long-Term Regional (Operational) Emissions of ROG, NO<sub>x</sub>, and PM<sub>10</sub>: Daily mitigated emissions of ROG and NO<sub>x</sub> would exceed the SMAQMD's significance threshold of 65 pounds per day, and regional emissions of ozone precursors (ROG and NO<sub>x</sub>) and PM<sub>10</sub> would potentially contribute to a violation in the NAAQS and CAAQS.
- ▶ 6.3-3 - Local Mobile Source Carbon Monoxide Concentration Emissions: Local mobile source carbon monoxide (CO) would be anticipated to result in or contribute to CO concentrations that exceed the state 1-hour or 8-hour CO ambient air quality standards of 20 parts per million (ppm) or 9 ppm, respectively.
- ▶ 6.3-7 - Cumulative Air Quality Impacts: The proposed project would contribute to a cumulative exceedance of applicable air quality emissions standards associated with short-term construction emissions, long-term regional emissions, and local mobile source carbon monoxide concentration emissions.
- ▶ 6.4-3 - Long-Term Mobile Source Noise: The increase in daily traffic volumes would generate increased noise levels along nearby roadways and result in a noticeable increase in ambient noise

levels (i.e., 3 dBA or greater) at nearby existing offsite noise-sensitive land uses along west Stockton Boulevard south of the project site.

- ▶ 6.4-4 - Compatibility of the Proposed Land Uses with Projected Onsite Noise Levels: Exterior noise levels associated with existing and future traffic noise levels at the project site would exceed applicable noise standards adopted by Sacramento County for land use compatibility at proposed noise-sensitive land uses (i.e., senior housing, multi-family residences).
- ▶ 6.4-5 - Cumulative Noise Impacts: Because of the proximity of the local area to major long-term mobile noise sources (i.e., SR 99, Cosumnes River Boulevard, Bruceville Road, West Stockton Boulevard) and because cumulative development would result in an increase in traffic volumes and associated traffic noise from these sources, the proposed project would contribute to the cumulative long-term mobile source noise impacts on existing and proposed future noise-sensitive land uses in the area.
- ▶ 6.9-10 - Cumulative Impacts on Biological Resources: Cumulative development in the vicinity of the project site, the South Sacramento Community Plan area, and the greater City of Sacramento would result in a large net reduction in listed species, sensitive species, the habitats of listed species and sensitive species, wetlands, waters of the United States and the state, and heritage trees. Although on a project basis, implementing the proposed project would not result in significant impacts on biological resources after mitigation, it would contribute to this cumulative impact on biological resources.

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***10 LIST OF ACRONYMS AND ABBREVIATIONS***

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## 10 LIST OF ACRONYMS AND ABBREVIATIONS

AA	No Project (No Development) Alternative
AB	Assembly bill
AB	General Plan Buildout Alternative
AC	Park-and-Ride Alternative
ADT	average daily traffic
AFY	acre-feet per year
amsl	above mean sea level
APN	assessor's parcel number
ARB	California Air Resources Board
AST	aboveground storage tank
ASTM	American Society of Testing Materials
BMP	best management practice
BOD	biochemical oxygen demand
CAA	federal Clean Air Act
CAAA	Clean Air Act amendments
CAAQS	California Ambient Air Quality Standards
Cal-EPA	California Environmental Protection Agency
Cal-OSHA	California Occupational Safety and Health Administration
Caltrans	California Department of Transportation
CCAA	California Clean Air Act
CCR	California Code of Regulations
CDFG	California Department of Fish and Game
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
cfs	cubic feet per second
CHRIS	California Historic Resources Information System
City	City of Sacramento
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	carbon monoxide
COD	chemical oxygen demand
County	Sacramento County
CPUC	California Public Utilities Commission
CRHR	California Register of Historical Resources
CSS	Combined Sewer System
CWA	Clean Water Act

dB	decibel
dBA	A-weighted decibel scale
DD	doubling of distance
DEIR	draft environmental impact report
DP	dissolved phosphorous
DPR	California Department of Parks and Recreation
DTSC	Department of Toxic Substances Control
du	dwelling unit
du/ac	dwelling units per acre
du/na	dwelling units per net acre
EGUSD	Elk Grove Unified School District
EIR	environmental impact report
EMD	Sacramento County Environmental Management Department
EPA	U.S. Environmental Protection Agency
ESA	federal Endangered Species Act
ESA	Phase I Environmental Site Assessment
FEIR	final environmental impact report
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
General Plan	City of Sacramento General Plan
GLO	General Land Office
GPA	General Plan Amendment
gpd	gallons per day
HAP	hazardous air pollutant
HCM	highway capacity manual
HCP	habitat conservation plan
HSWA	Hazardous and Solid Waste Act
HWCL	Hazardous Waste Control Law
ITE	Institute of Transportation Engineers
ITS	Institute of Transportation Studies
JCPA	Jacinto Creek Planning Area
KSF	thousand square feet
L <sub>eq</sub>	equivalent noise level
L <sub>dn</sub>	day-night noise level
L <sub>max</sub>	maximum noise level
L <sub>min</sub>	minimum noise level
LOS	level of service



m	meter
MACT	Maximum Achievable Control Technology
Master Plan	Jacinto Creek Drainage Master Plan
MEI	Maximally Exposed Individual
mg/L	milligrams per liter
msl	mean sea level
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NCIC	North Central Information Center
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NPDES	National Pollutant Discharge Elimination System
NO	nitric oxide
NOI	notice of intent
NO <sub>x</sub>	oxides of nitrogen
NO <sub>2</sub>	nitrogen dioxide
OAP	ozone attainment plan
OES	Office of Emergency Services
OSHA	federal Occupational Safety and Health Administration
O <sub>3</sub>	ozone
PAH	Poly-Aromatic Hydrocarbons
Pb	total lead
PM	particulate matter
PM <sub>2.5</sub>	fine particulate matter
PM <sub>10</sub>	respirable particulate matter
PUD	planned unit development
PP	proposed project
ppm	parts per million
proposed project	College Square Planned Unit Development
Pub. Res. Code	Public Resources Code
RCRA	Resource Conservation and Recovery Act
ROG	reactive organic gases
ROW	right-of-way
RT	Sacramento Regional Transit District
RWQCB	Regional Water Quality Control Board
SACOG	Sacramento Area Council of Governments
SB	Senate bill
SEL	Single Event (Impulsive) Noise Level
sf	square foot
SGPU	City of Sacramento General Plan Update
SHPO	State Historic Preservation Officer

SIP	state implementation plan
SMAQMD	Sacramento Metropolitan Air Quality Management District
SO <sub>2</sub>	sulfur dioxide
SR	state route
SRCSD	Sacramento Regional County Sanitation District
SRWTP	Sacramento Regional Wastewater Treatment Plant
SSCHP	South Sacramento County Habitat Conservation Plan
STC	sound transmission control
SVAB	Sacramento Valley Air Basin
SWA	Sacramento Regional Solid Waste Authority
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
TAZ	traffic analysis zone
TCu	total copper
TKN	total Kjeldahl nitrogen
TOD	transit-oriented development
TP	total phosphorous
TPY	tons per year
TRPA	Tahoe Regional Planning Agency
TSS	total suspended solids
TZn	total zinc
UC Davis	University of California, Davis
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
UST	underground storage tank
UWMP	urban water management plan
VMT	vehicle miles traveled
WSA	water supply assessment
µg/L	micrograms per liter
µg/m <sup>3</sup>	micrograms per cubic meter

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***11 EIR AUTHORS AND PERSONS CONSULTED***

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# 11 EIR AUTHORS AND PERSONS CONSULTED

## LEAD AGENCY

### City of Sacramento

Planning and Building Department/Planning Division

EIR Project Manager.....L.E. Buford

Planning Project Manager.....Thomas Pace

Utilities Department/Engineering Services Division

Senior Engineer.....Glenn Marshall, P.E.

Public Works Department/Development Services Division

Senior Engineer.....Stephen Pyburn, C.E., T.E.

Assistant Engineer .....Samar Hajeer

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Field Biologist/Botanist ..... Susan Capell

Field Biologist/Botanist ..... Sandra Starr

**The Hoyt Company (Planning)**

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**RBF (Drainage)**

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**12    *REFERENCES***

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