

# THE METROPOLITAN PROJECT

Sacramento, California

Draft  
Environmental Impact Report  
Volume I

Prepared for:  
The City of Sacramento

Prepared by:  
GAIL ERVIN CONSULTING

July 11, 2006





# **THE METROPOLITAN PROJECT**

Sacramento, California

## Draft Environmental Impact Report Volume I

Prepared for:

**The City of Sacramento**

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# **1. INTRODUCTION**

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# 1.0 INTRODUCTION

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## PURPOSE OF THE ENVIRONMENTAL IMPACT REPORT

This Environmental Impact Report (EIR) has been prepared in accordance with the California Environmental Quality Act of 1970 (CEQA), as amended (Public Resources Code, Section 21000, et seq.) and the State Guidelines for Implementation of the California Environmental Quality Act of 1970, as amended (California Code of Regulations Section 15000, et seq.). This report complies with the rules, regulations, and procedures for implementation of CEQA adopted by the City of Sacramento, and has been prepared to evaluate the environmental impacts associated with construction and operation of The Metropolitan Project (proposed project, PO5-205). The Metropolitan Project would construct 320 condominium units over ground floor retail and podium parking at the northeast corner of 10<sup>th</sup> and J streets in Downtown Sacramento.

CEQA provides for the evaluation of a project's effect on the environment. When a project could have a significant and unavoidable effect on the environment, the agency with primary responsibility over the approval of the project (the lead agency) is required to prepare an EIR. An EIR is an informational document prepared to inform public agency decision-makers and the public of the significant environmental effect of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project. The public agency must consider the information in the EIR along with other information which may be presented to the agency (CEQA Guidelines Section 15121). The EIR process is specifically designed to describe the objective evaluation of potentially significant direct, indirect, and cumulative impacts of the proposed project; to identify alternatives that reduce or eliminate the project's significant effects; and to identify feasible measures that mitigate significant effects of the project. In addition, CEQA requires that an EIR identify those adverse impacts determined to remain significant after mitigation.

The City of Sacramento (City) is the lead agency for preparation of The Metropolitan Project EIR. In accordance with CEQA regulations, a Notice of Preparation (NOP) was released by the City on April 28, 2006, with a comment period beginning on April 28, 2006 and ending on May 30, 2006. Per State CEQA Guidelines Section 15082, the NOP informs responsible agencies and the public that the proposed project could have a significant effect on the environment, and to solicit their comments and input. The NOP was distributed to responsible agencies, interested parties and organizations, and landowners within 1,000 feet of the Project Site and private organizations and individuals that have stated an interest in the project. A copy of the NOP and comments received on the NOP are included in this EIR as Appendix A.

Comments on the NOP expressed concerns regarding:

- Traffic impacts on State highways and local streets;
- Construction-generated and operational air emissions;
- Shading impacts on Cesar E. Chavez Plaza;
- Green building features, energy conservation and any affordable housing impacts;
- Construction noise impacts on K Street

The content of this EIR has been guided by substantial environmental issues raised during the NOP process, the Initial Study (Appendix B), existing data and maps available for the area, a preliminary environmental evaluation, field inspection, and coordination with affected agencies and interested parties. All potential impacts that were determined to be less than significant in the Initial Study have been excluded from further analysis in this EIR, as further discussed below.

This Draft EIR is subject to review and comment by the public as well as by all responsible and other interested jurisdictions, agencies, and organizations during a period of 45 days. A public hearing will be held on this Draft EIR for the proposed project during the 45-day public review period.

Written responses to timely comments on the Draft EIR will be prepared. The responses to comments may specify changes to the Draft EIR. Responses to comments, together with the Draft EIR and any changes to the Draft EIR therein specified will become the Final EIR.

The proposed project is subject to the approval of the City of Sacramento Design Review and Preservation Board (DRPB) and the City Planning Commission (CPC). The Final EIR will be presented to the City for certification as to its adequacy under CEQA prior to any discretionary action taken by the DRPB and the CPC. Before the lead agency can approve the project, the lead agency must certify that the EIR has been completed in compliance with CEQA, that the decision-making body has reviewed and considered the information in the EIR, and that the EIR reflects the independent judgment of the lead agency. The City certification hearing is anticipated in October 2006. Project approval would also entail adoption of Findings of Fact and a Statement of Overriding Considerations by the CPC.

## **LEAD AGENCY**

The City of Sacramento (City) is the lead agency for preparation of The Metropolitan Project EIR. Sections 15050 and 15367 of State CEQA Guidelines define the lead agency as the "public agency which has the principal responsibility for carrying out or approving a project."

## **REQUIRED DISCRETIONARY ACTIONS**

The City would be required to certify that the EIR adequately identifies the significant environmental effects of the proposed project, pursuant to CEQA, the State CEQA Guidelines, and the City of Sacramento CEQA Guidelines. In order to develop the proposed project, approval of the following discretionary actions are necessary:

- Certification of the Environmental Impact Report and Adoption of Findings and a Mitigation Monitoring Plan
- Tentative Map to designate the site for condominium purposes
- Special Permit to construct 320 condominium units in the Central Business District (C-3-SPD) zone
- Special Permit for a Major Project over 75,000 gross square feet in the Central Business District (C-3-SPD) zone
- Special Permit to allow tandem parking
- Variance to reduce the required maneuvering area from 26 feet to 25 feet

## LEAD AGENCY CONTACT

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No Responsible Agency, which is defined as a public agency other than the lead agency that has discretionary approval over the project, has been identified.

## HOW TO USE THIS REPORT

This document provides a wide array of environmental information in different levels of detail. The document is structured in a manner to allow the reader to easily track information from the Project Description (Chapter 2) through the Summary (Chapter 3) and the Impact Analyses (Chapter 5). Impacts are numbered consecutively, and where appropriate, are associated with a mitigation measure that is correspondingly numbered. This numbering system is carried over into the summary to allow easy location of the document's conclusions regarding a particular impact.

The document can be read in a number of ways depending on the reader's available time or interest in a particular issue. The briefest approach to the document involves reading only the summary (Chapter 3). A somewhat more detailed reading of the document might involve careful reading of the full project description (Chapter 2) and description of alternatives (Chapter 6), as well as the summary. For those with an interest in a particular issue, it may be appropriate to add to the above a specific chapter or set of chapters. Finally, one can read the document in its entirety for a detailed presentation of all potential environmental effects of the project as proposed, and alternatives to the project.

CEQA requires that each EIR contain areas of description and analysis. The following list identifies areas of particular interest and the corresponding sections in this EIR:

<b>Required Description and Analysis</b>	<b>Chapter of the EIR</b>
Description of Project (Guidelines Section 15124)	Chapter 2
Summary (Guidelines Section 15123)	Chapter 3
Land Use, Zoning and Consistency with Adopted Plans and Policies	Chapter 4
Environmental Setting and Environmental Impacts (Guidelines sections 15126 and 15143)	Chapter 5
a) Significant Environmental Effects	
b) Effects That Cannot be Avoided	
c) Mitigation Measures	
Alternatives to the Proposed Project	Chapter 6

Growth Inducing Impacts (Guidelines Section 15126)	Chapter 7
Cumulative Impacts	Chapter 7
Unavoidable Significant Environmental Effects (Guidelines Section 15126)	Chapter 7

Section 15127 of the CEQA Guidelines requires that additional EIR chapters be prepared for projects that require an amendment to existing plans. The proposed The Metropolitan Project does not require a plan amendment. Thus, this EIR does not include a discussion of “irreversible effects and short term uses versus long term productivity” as identified in CEQA for projects inconsistent with adopted plans.

## SCOPE OF THIS EIR

As noted above, this EIR provides an overall analysis of the potentially significant impacts associated with implementation of the proposed project. The City of Sacramento, as lead agency, identified potentially significant impacts in the Initial Study for this EIR that could result from implementation of the proposed project. Based on the Initial Study (see Appendix B), the City determined the following technical issues would be addressed in this EIR:

- Air Quality
- Cultural and Historic Resources
- Hazards and Hazardous Materials
- Noise and Vibration
- Public Services and Utilities
- Transportation and Circulation
- Urban Design and Aesthetics

Land Use and Planning is not considered a technical issue, but policies related to land use and planning as they apply to the proposed project are addressed in Chapter 4.

The Initial Study (Appendix B) documents the justification for considering issues potentially significant, or less-than-significant. Please refer to the Initial Study for a discussion of why the following issues were identified as less-than-significant, and are not evaluated separately in this EIR:

- Agricultural Resources
- Biological Resources
- Geology & Soils
- Hydrology & Water Quality
- Mineral Resources
- Population & Housing
- Recreation

## PREVIOUS ENVIRONMENTAL DOCUMENTS AND DOCUMENTS INCORPORATED BY REFERENCE

Section 15150 of the State CEQA Guidelines allows incorporation by reference of “all or portions of another document which is a matter of public record or is generally available to the public.” Incorporation by reference is used principally as a means of reducing the size of EIRs. The Metropolitan Project EIR relies, in part, on data, environmental evaluations, mitigation measures, and other components of EIRs and plans prepared by the City of Sacramento for areas within the project vicinity. These documents are listed here and incorporated by reference as source documents for this EIR. All documents are available for public review and inspection at the City of Sacramento Development Services Department, City of Sacramento, New City Hall, 915 I Street, 3rd Floor, Sacramento, California 95814.

- *City of Sacramento General Plan*, City of Sacramento, updated and adopted January 1988; as revised by Council in 2000 and 2003.
- *City of Sacramento General Plan, Draft and Final Environmental Impact Report*, City of Sacramento, Draft EIR is dated March 2, 1987 and Final EIR is dated September 30, 1987.
- *City of Sacramento Zoning Code, current through Ordinance 2005-097 and the February 2006 code supplement*, City of Sacramento, <http://www.qcode.us/codes/sacramento/>.
- *Cultural and Entertainment District Master Plan*, City of Sacramento, adopted May 1990.
- *Guide to Air Quality Assessment in Sacramento County*, Sacramento Metropolitan Air Quality Management District, July 2004.
- *Historic Preservation Chapter of the City Code, Title 15, Chapter 15.124*, City of Sacramento, current through Ordinance 2005-097 and the February 2006 code supplement, City of Sacramento, <http://www.qcode.us/codes/sacramento/>.
- *Map of Hollow Sidewalk Locations*, Development Engineering and Finance Department, City of Sacramento.
- *Merged Downtown Redevelopment Plan Amendment EIR*, Redevelopment Agency of the City of Sacramento, Downtown Development Group, November 5, 2004.
- *Preservation Element of the City's General Plan*, City of Sacramento, adopted April, 25, 2000.
- *Recommended Housing Strategy for the Central City*, Sacramento Housing and Redevelopment Agency and City of Sacramento Department of Planning and Development, May 1991.
- *Sacramento Central City Community Plan*, City of Sacramento, adopted May 15, 1980, with amendments through April 8, 2003.
- *Sacramento Register*, City of Sacramento Listing of Landmarks, Historic Districts, and Contributing Resources. Updated March 2005. Updated per Sacramento City Code Title 15.
- *Sacramento Urban Design Plan, Central Business District Urban Design Framework Plan*, Sacramento Housing and Redevelopment Agency, adopted February 18, 1987.

- *The Towers on Capitol Mall Draft Environmental Impact Report, City of Sacramento, May 2005.*

## **2. PROJECT DESCRIPTION**

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## 2.0 PROJECT DESCRIPTION

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### INTRODUCTION

The proposed project would require a Special Permit for a major project and to allow condominiums, Tentative Map, variance, and Design Review for a proposed new 420 foot high, 39-story mixed-use residential tower development at the northeast corner of 10<sup>th</sup> and J streets. The building would accommodate 320 residential condominium units, with commercial/retail space at street level facing both 10<sup>th</sup> and J streets, and 514 parking spaces. This chapter describes the location and setting of the proposed project site, and provides a detailed description of the proposed project's characteristics and objectives.

### PROJECT LOCATION AND SITE CHARACTERISTICS

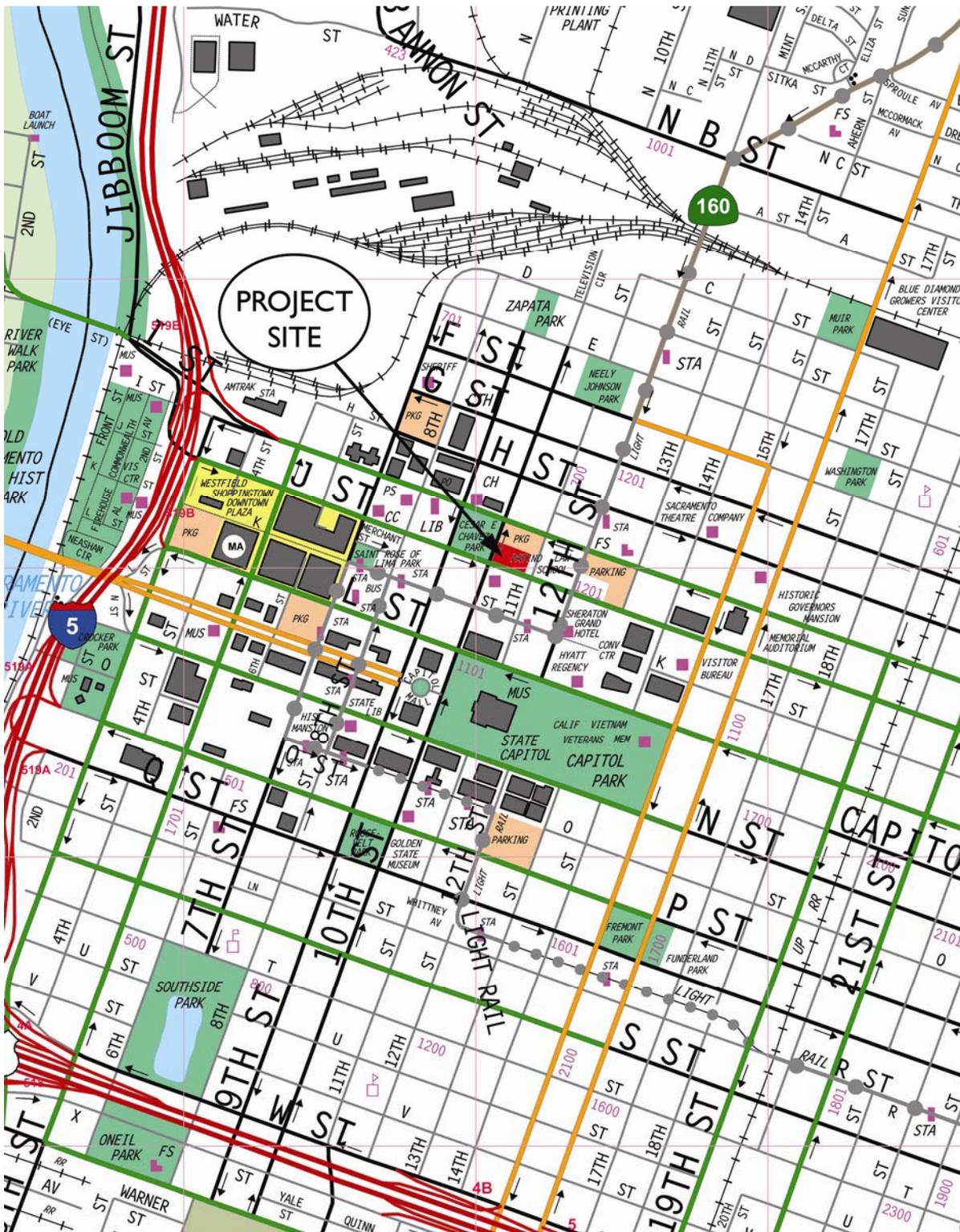
The 0.955 acre proposed site is generally located between the alley south of I Street on the north, J Street on the south, 10<sup>th</sup> Street on the west, and 11<sup>th</sup> Street on the east (**Figure 2.0-1**). The parcels in the project are: 921 10<sup>th</sup> Street (006-0044-012), 927 10<sup>th</sup> Street (006-0044-011), 1009 J Street (006-0044-010), 1013 J Street (006-0044-009), and 1023 J Street (006-0044-013) (**Figure 2.0-2**).

The proposed project site is within the Central Business District (CBD) of the City of Sacramento. The proposed site is designated Community/Neighborhood Commercial & Offices on the Sacramento City General Plan, and is zoned Special Planning District - Central Business District (C-3/CBD). The site is also located within the planning areas of the following City plans: Merged Downtown Redevelopment Plan, Cultural and Entertainment Master Plan, Central City Community Plan, and Central City Housing Strategy.

The surrounding area is typified by mixed-use commercial, retail, residential, and office uses of medium to high density. There is a diverse mix of uses facing Cesar Chavez Plaza, including City Hall, the historic Public Library, high-rise office, mid-rise residential, retail, and the rehabilitation of an office building into a boutique hotel. K Street, a pedestrian mall with light rail transit, is located one block to the south, and the State Capitol is located two blocks south. The proposed project is located in an area with a high volume of pedestrian and vehicle traffic during business hours along 10<sup>th</sup> and J streets; both are one-way three-lane major arterial roads. The site is 10 blocks east of the Interstate 5 (I-5) off-ramp, and six blocks west of 16<sup>th</sup> Street, which provides access to the Capitol City Freeway.

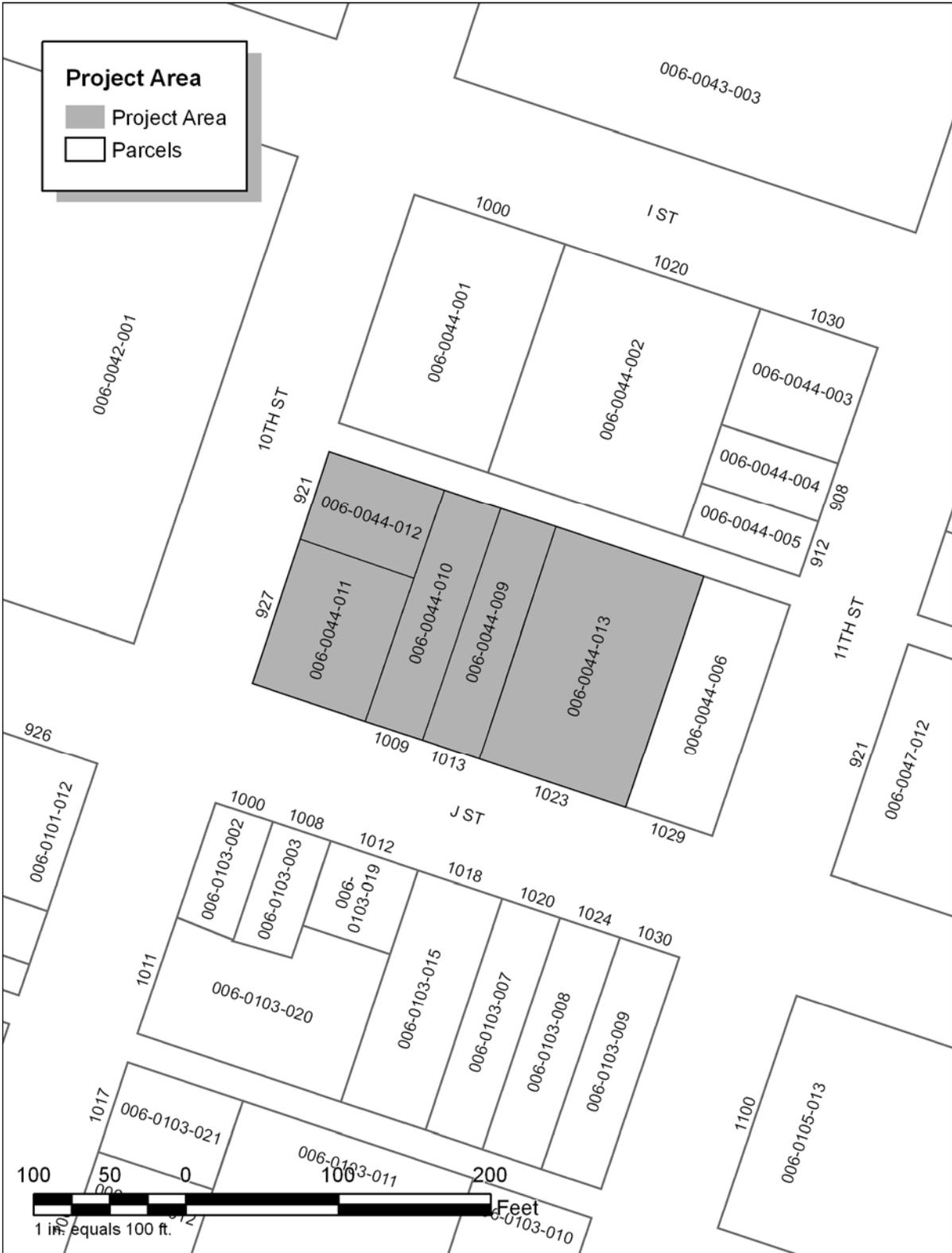
The 1000 block of J Street experiences blighting conditions characterized by vacant and deteriorating buildings, defined by the Redevelopment Agency as uneconomic land uses and small and irregularly sized lots unsuitable for modern use. There are currently five existing, vacant buildings on the site, constructed between the 1880s and 1960s. The structures range in height from two stories to seven stories, and there is a portion of the 19<sup>th</sup> Century alley located north of the project site remaining. None of the structures are listed on the City of Sacramento Listing of Landmarks, Historic Districts, and Contributing Resources.

2.0 PROJECT DESCRIPTION



Source: Ervin Consulting, 2006

**FIGURE 2.0-1  
PROJECT LOCATION**



Source: Ervin Consulting, 2006

**FIGURE 2.0-2  
PARCEL MAP**

### BACKGROUND

In the late 1990s, a high-rise was planned on this part of the half-block to accommodate a larger concentration of city agencies. The City then turned away from this block to look at a site at 8<sup>th</sup> and J streets, where it owned half the site, for the new civic building. The City ultimately constructed the new city offices behind City Hall on I Street. The site was purchased by the current developer in 2005.

In 2002, there was some effort to preserve the Biltmore Hotel because of some historic interior features. The issue was brought before the City Council, however the Council voted to table the issue until such time that a project was proposed on the site. The Broiler Restaurant was relocated and other tenants were moved from the Biltmore. The entire site is now vacant, most of the buildings have been vacant for several years, and the Biltmore Hotel and Broiler buildings have become significantly deteriorated and subject to frequent break-ins.

### PROJECT SITE EXISTING LAND USES

There are currently five structures on the proposed site that would be demolished for the project, and some surface parking along the alley. Buildings include the seven-story Plaza Building (Redman's Wigwam Hall and Hotel) at 921 10<sup>th</sup> Street (1906), the three-story RCA (Retail Credit Association) Building (1940) at the corner of 10<sup>th</sup> and J streets, the three-story Biltmore Hotel building (1850), the two-story Broiler Restaurant building (1850), and a former state office building (1965). Although four of the structures are more than fifty years old, none of the buildings are currently listed on the City's Official Listing of Structures and Preservation Areas with Architectural or Historical Significance. The site is located outside the Plaza Park Historic District.

There are currently no trees or landscaping on the property or along the sidewalks, except for three small trees in planters located on J Street. All structures on the site are vacant, and cover approximately 69 percent of the site. The remainder of the site is paved for surface parking behind the former Broiler Restaurant and Biltmore Hotel buildings.

### SURROUNDING LAND USES

The surrounding properties to the proposed project are all zoned C-3, Special Planning District, and include:

- **North**  
City of Sacramento Parking Structure, with a cafe, hair salon, and City of Sacramento Information Technology Department in ground floor retail
- **South**  
Various commercial and retail businesses such as restaurants, copy/print store, liquor/cigar store, a law office/library, and sewing machine store (across J Street). A condominium tower is proposed on this block.
- **East**  
An office building, and the Elks Lodge No. 6 and Fed-Ex Kinko's across 11th Street
- **West**  
Cesar Chavez Park/Plaza; the US Bank Building and Sacramento Library are located across the Plaza.

## PROJECT OBJECTIVES

The objectives of the proposed project are to:

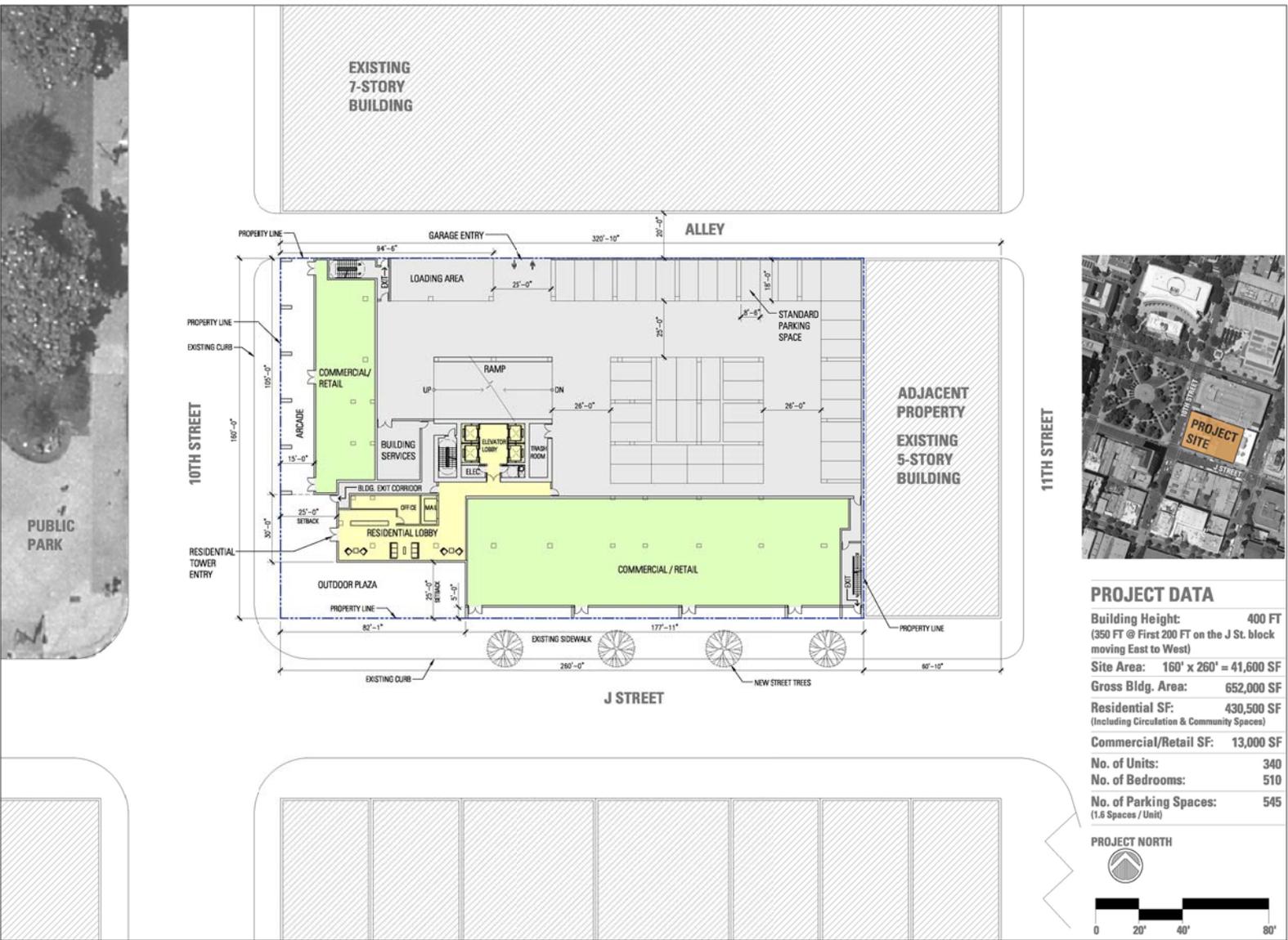
- Create a high-quality development that enhances and defines the Downtown skyline and aids in the revitalization of Downtown by creating a project that is socially and economically vital, helping to re-establish Downtown as a destination
- Provide high-end restaurant and retail that benefits residents and visitors in the CBD and contributes to the vitality of the community
- Create a mixed-use development that provides a combination of residential and retail uses to serve a range of users
- Promote development of high-density urban housing in the CBD
- Create a development that is financially feasible without negatively affecting existing City resources, including the City's Capitol View Corridor

## PROJECT ELEMENTS

The proposed project would demolish the existing structures on the proposed site, and construct a 642,000 gross square foot residential condominium building, with ground floor retail and parking. The proposed site is 160 by 260 feet, covering most of the City half-block between J Street and the alley between J and I streets. Residential gross square footage, including circulation and community spaces, would encompass 430,500 sf, and there would be 13,000 sf of ground floor retail/commercial space fronting 10<sup>th</sup> and J streets. A residential lobby would be located facing the corner of 10<sup>th</sup> and J streets behind a 25 foot outdoor plaza. An exterior 15 foot deep arcade or plaza would be located along 10<sup>th</sup> Street to allow for patio dining. Ingress and egress to the parking garage, loading areas and building services would be located on the alley. **(Figure 2.0-3, Site Plan).**

The project would provide 320 condominium units with residential amenities such as private balconies, an infinity (seemingly rimless) swimming pool, fitness and recreation rooms, and landscape and open space terrace areas. Parking would be provided on one or one and a half sub-grade levels, and six above grade levels for a total of 514 spaces **(Figure 2.0-4, Sections)**. The top of the building would be split into three levels, with the pool and penthouses on the lowest. There would be an upstairs terrace for the penthouses, and a room with mechanical systems. The condos would range from 700 to 1,300 sf, feature ample window space, and include open air balconies on all units. Two-story lofts would be available right above the ground-floor retail/commercial space, and some penthouses may have two floors **(Figures 2.0-5 through 2.0-15)**.

The building would be 420 feet in height; this would include 350 feet at the first 200 feet on the J Street block moving from east to west, which is within the 350 foot zone for the Capitol View Protection Ordinance **(Figures 2.0-16 and 2.0-17, Elevations)**. There is no height limitation for the half block facing 10<sup>th</sup> Street. The building's step-like design is intended to be consistent with the Downtown area's existing high-rise focus.



**PROJECT DATA**

Building Height:	400 FT (350 FT @ First 200 FT on the J St. block moving East to West)
Site Area:	160' x 260' = 41,600 SF
Gross Bldg. Area:	652,000 SF
Residential SF:	430,500 SF (Including Circulation & Community Spaces)
Commercial/Retail SF:	13,000 SF
No. of Units:	340
No. of Bedrooms:	510
No. of Parking Spaces:	545 (1.6 Spaces / Unit)

PROJECT NORTH



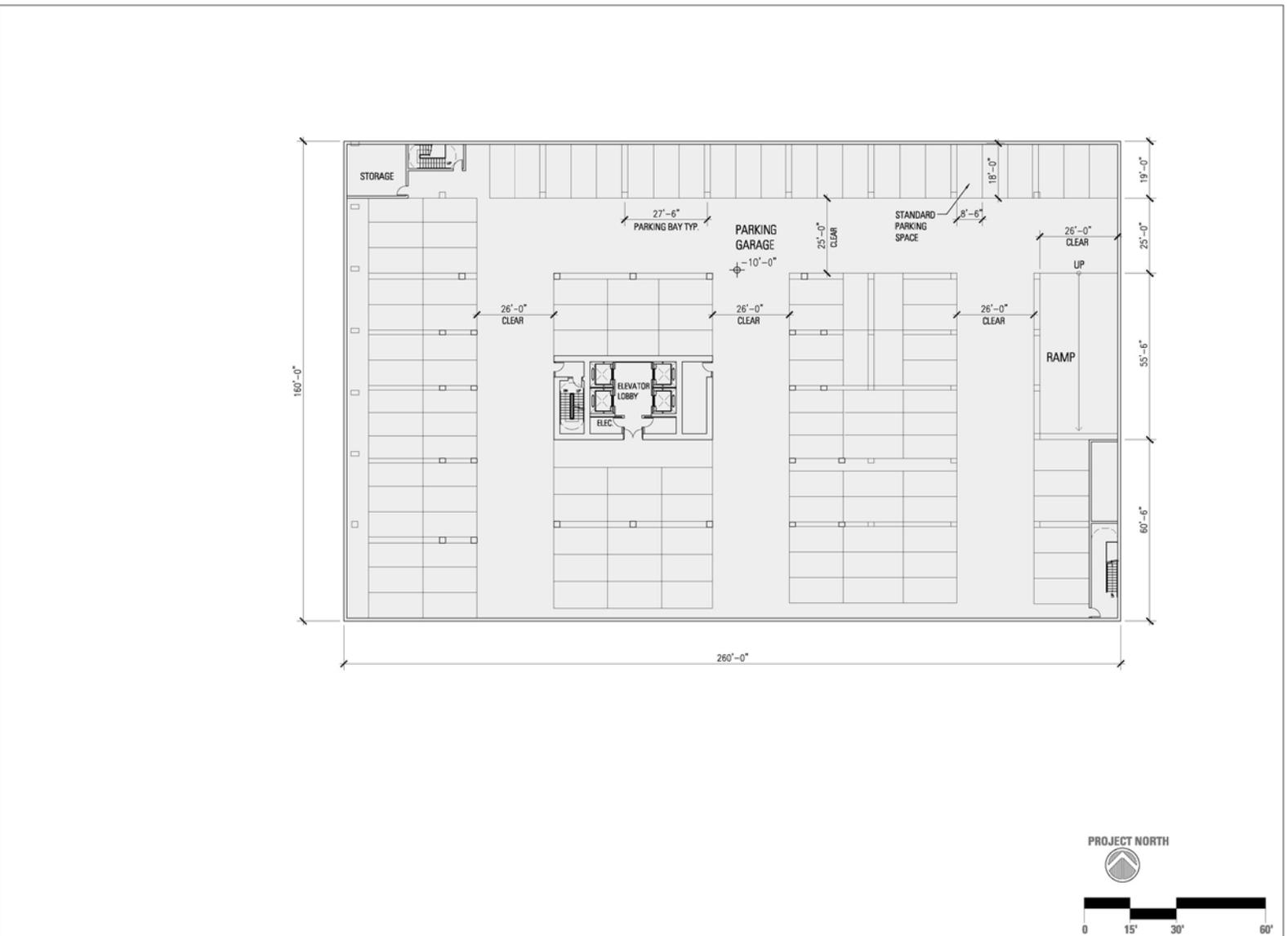
Source: KwanHemmi, 2006

**FIGURE 2.0-3**  
**SITE PLAN**



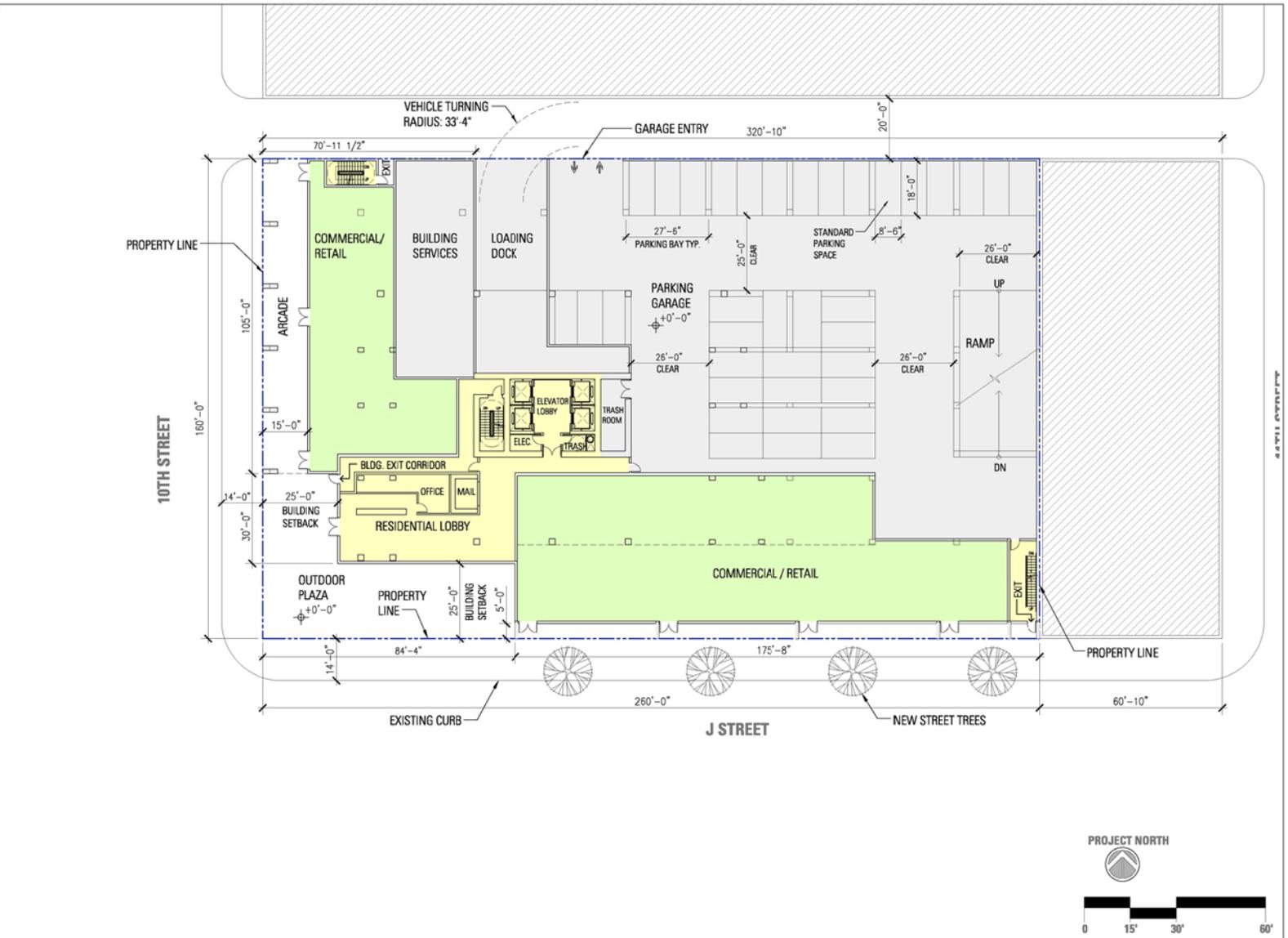
Source: KwanHemmi, 2006

FIGURE 2.0-4  
BUILDING SECTIONS



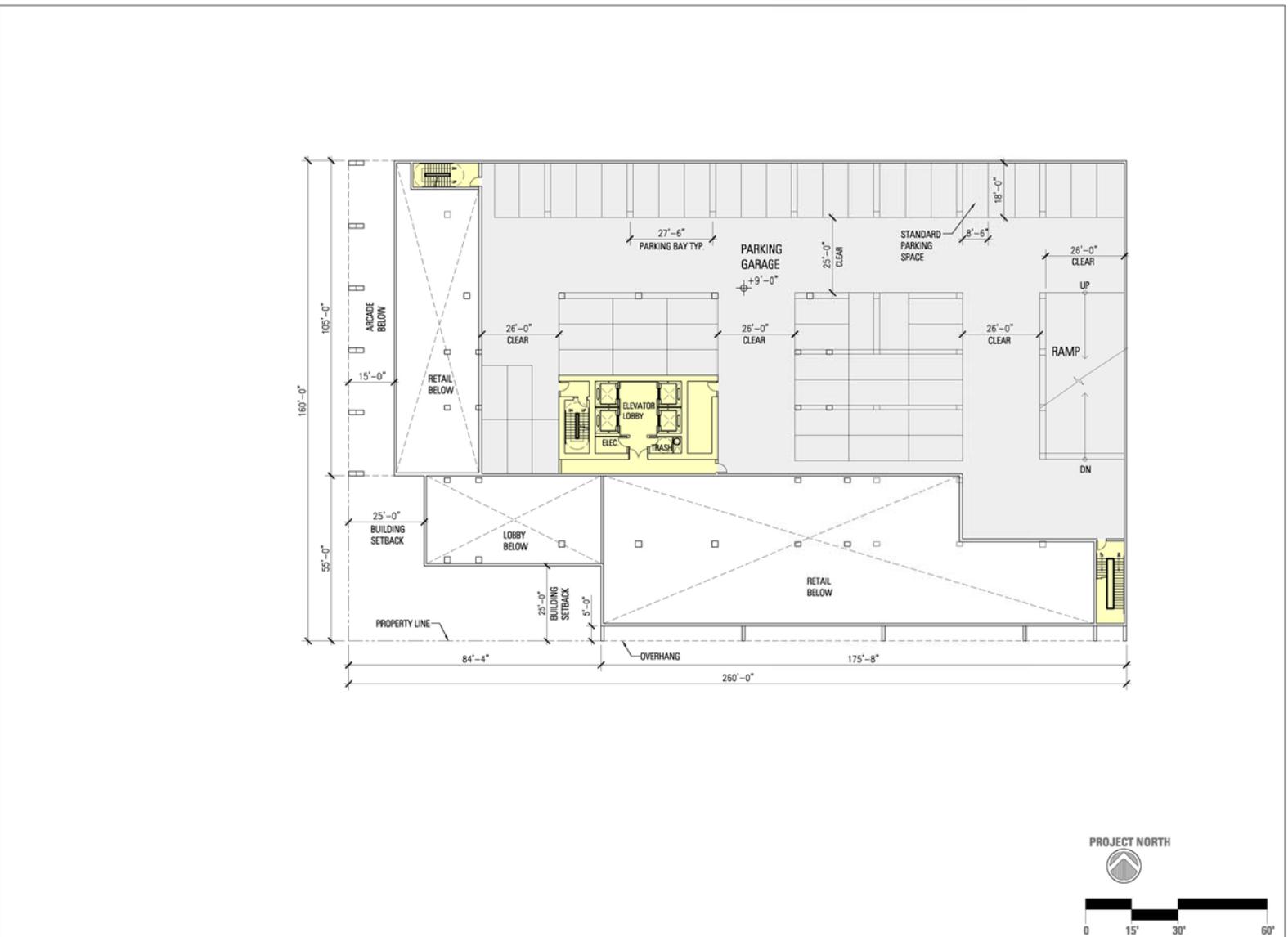
Source: KwanHenmi, 2006

**FIGURE 2.0-5**  
**BASEMENT FLOOR PLAN**

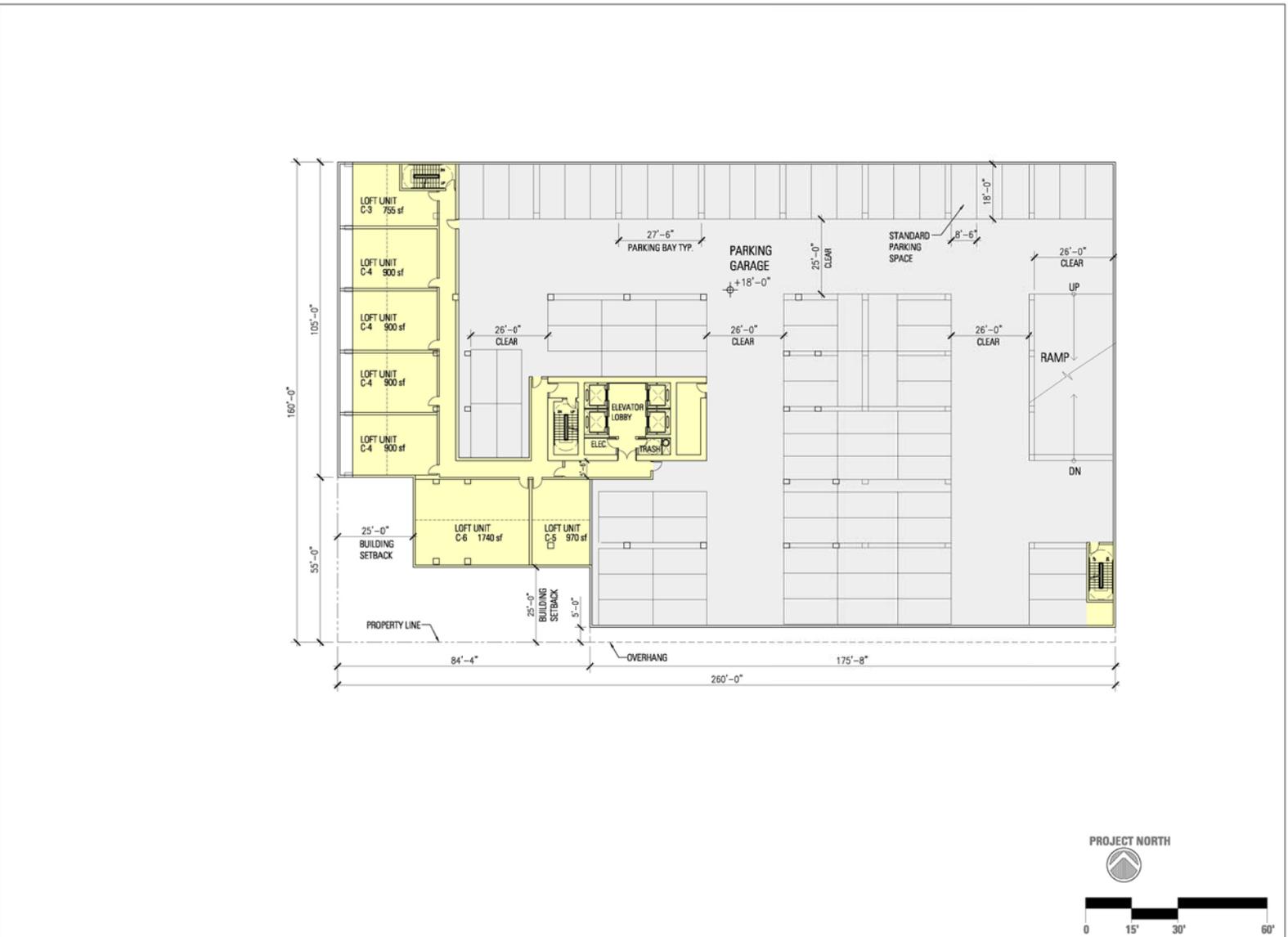


Source: KwanHemmi, 2006

**FIGURE 2.0-6**  
**FIRST FLOOR PLAN**

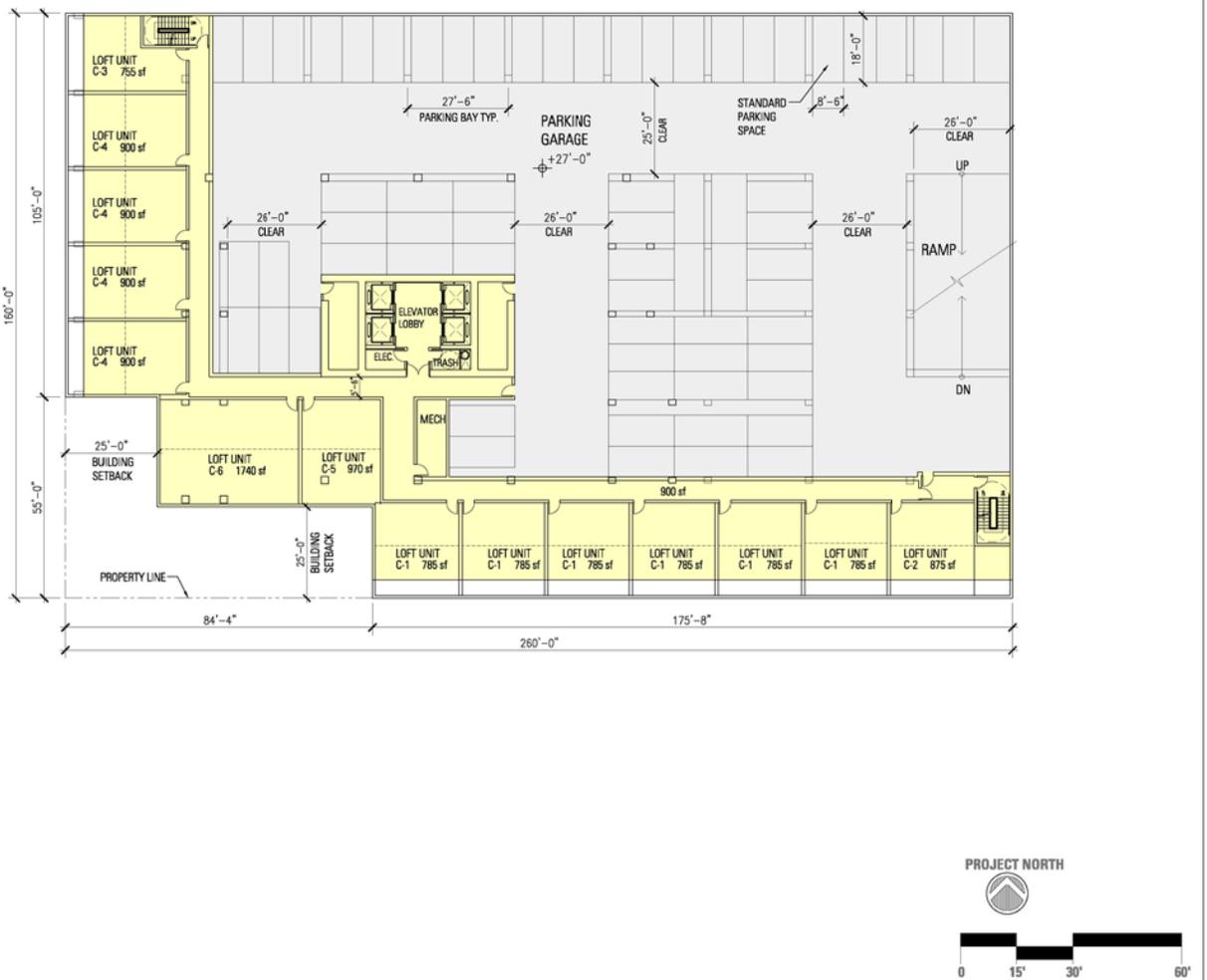


Source: KwanHenmi, 2006  
**FIGURE 2.0-7**  
**SECOND FLOOR PLAN**



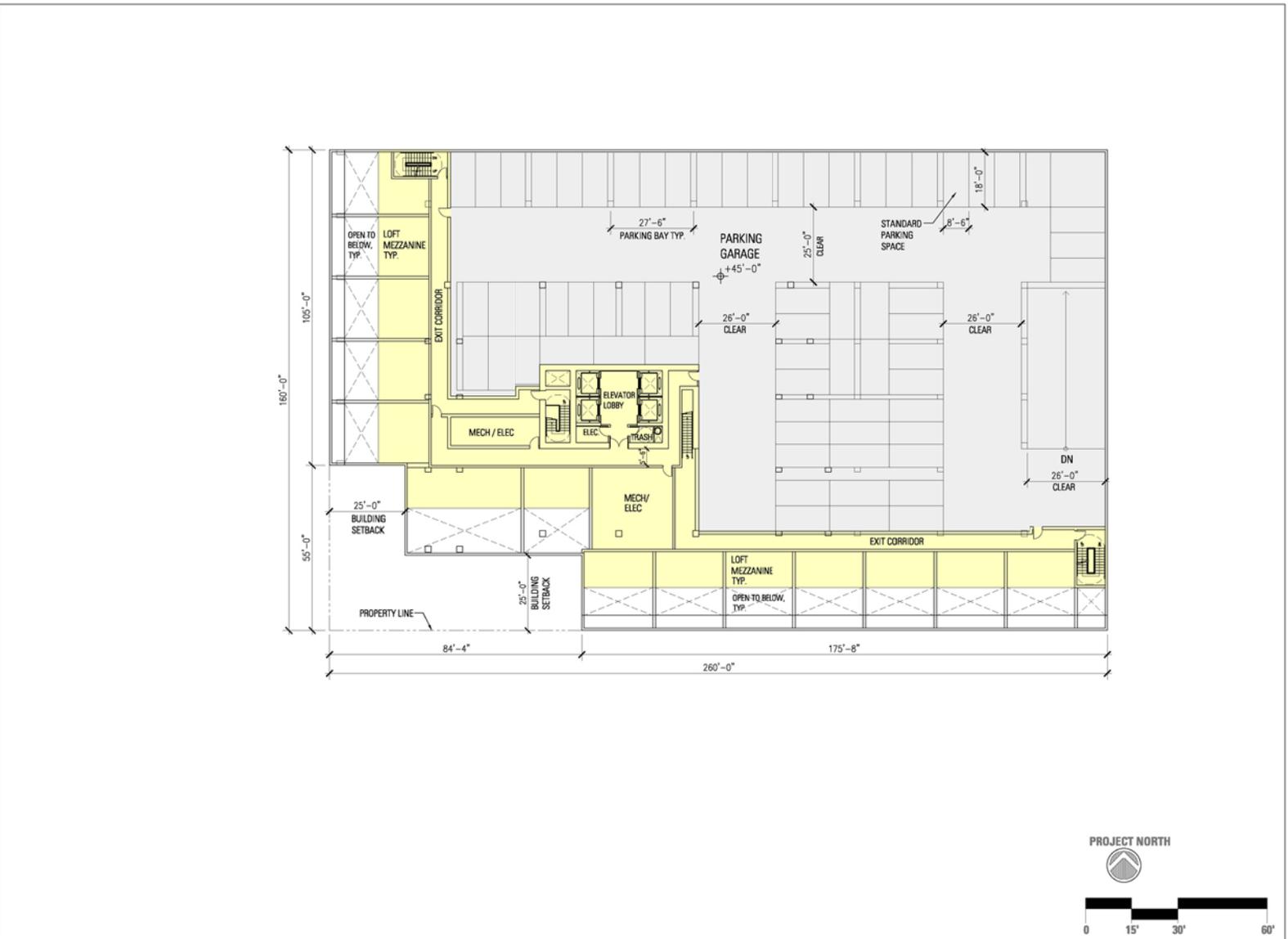
Source: KwanHenmi, 2006

**FIGURE 2.0-8**  
**THIRD & FOURTH FLOOR PLAN**



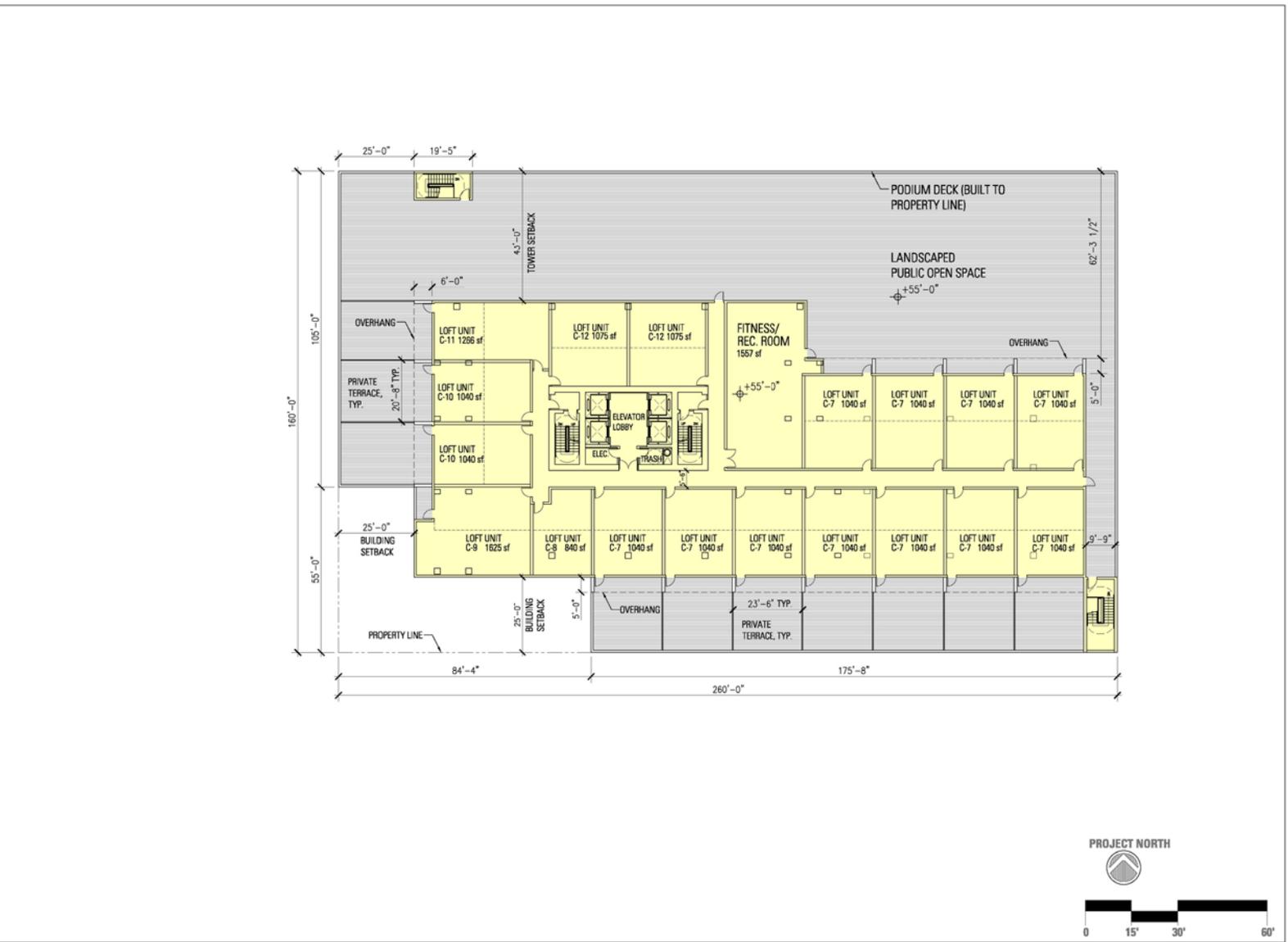
Source: KwanHenmi, 2006

FIGURE 2.0-9  
FIFTH FLOOR PLAN

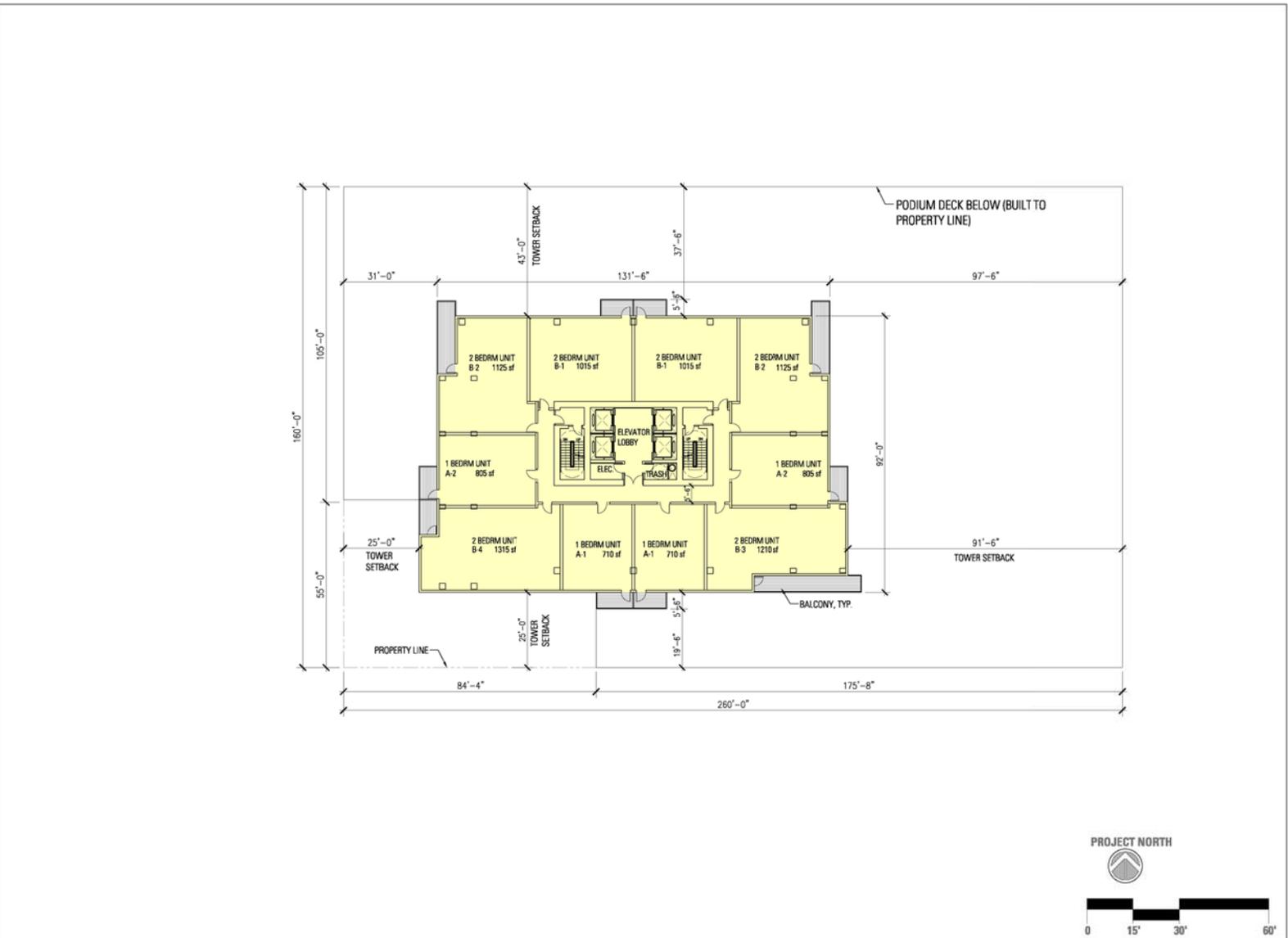


Source: KwanHenmi, 2006

**FIGURE 2.0-10**  
**SIXTH FLOOR PLAN**

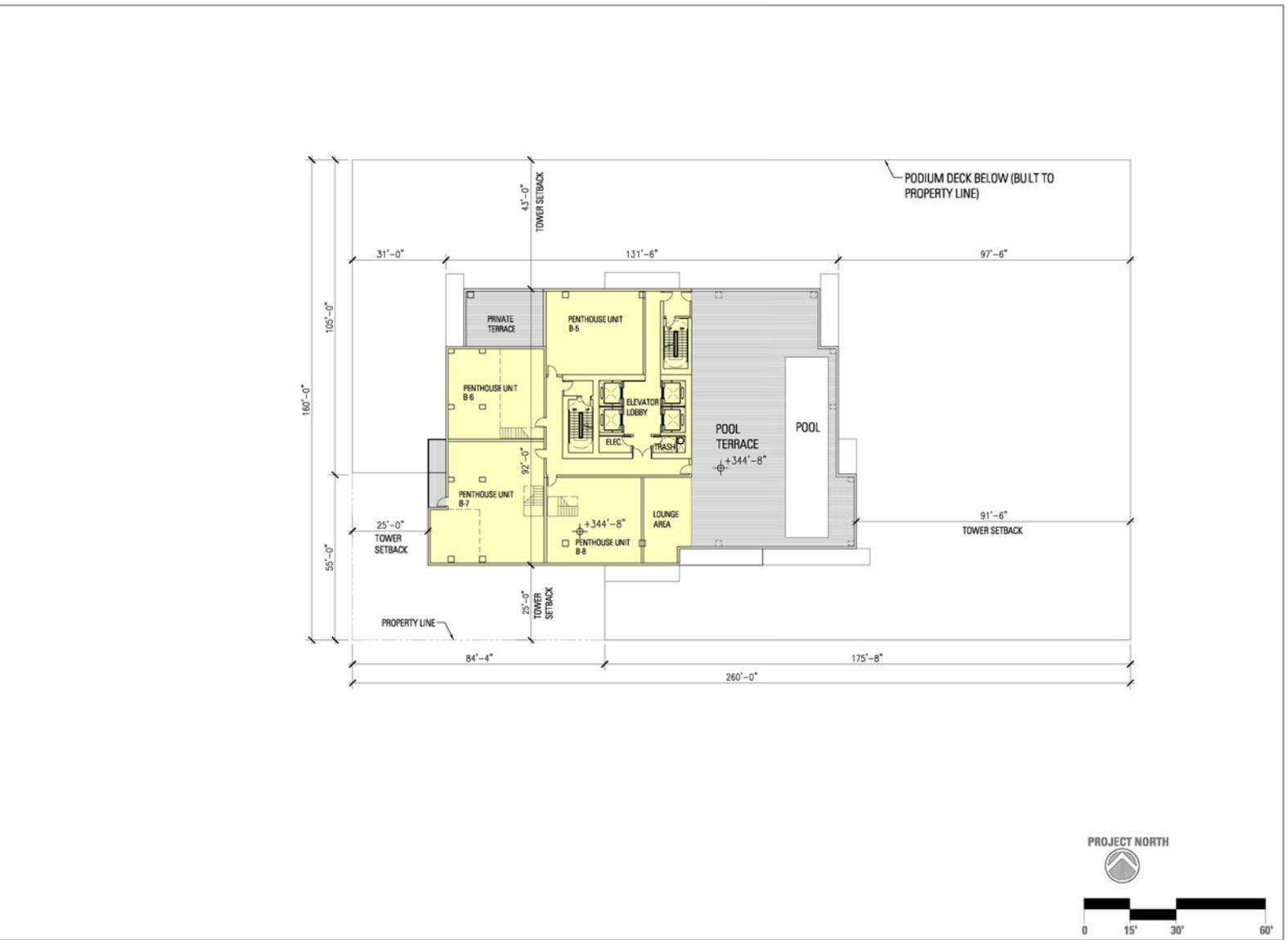


Source: KwanHemmi, 2006  
**FIGURE 2.0-11 SEVENTH (PODIUM) FLOOR PLAN**



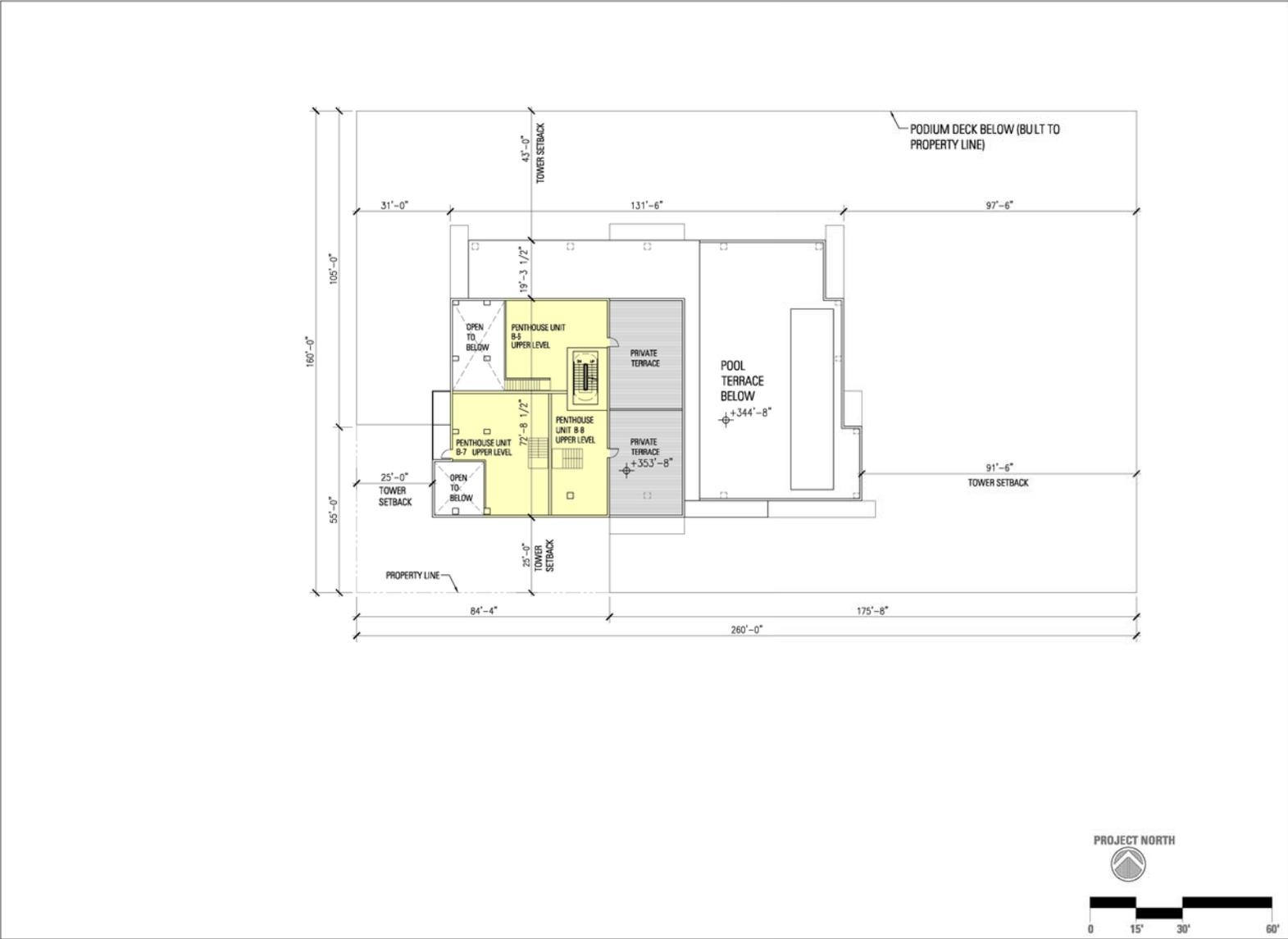
Source: KwanHenmi, 2006

**FIGURE 2.0-12**  
**TOWER FLOOR PLAN (LEVELS 9-35)**



Source: KwanHenmi, 2006

**FIGURE 2.0-13**  
**TOWER FLOOR PLAN (LEVEL 37)**



Source: KwanHenmi, 2006

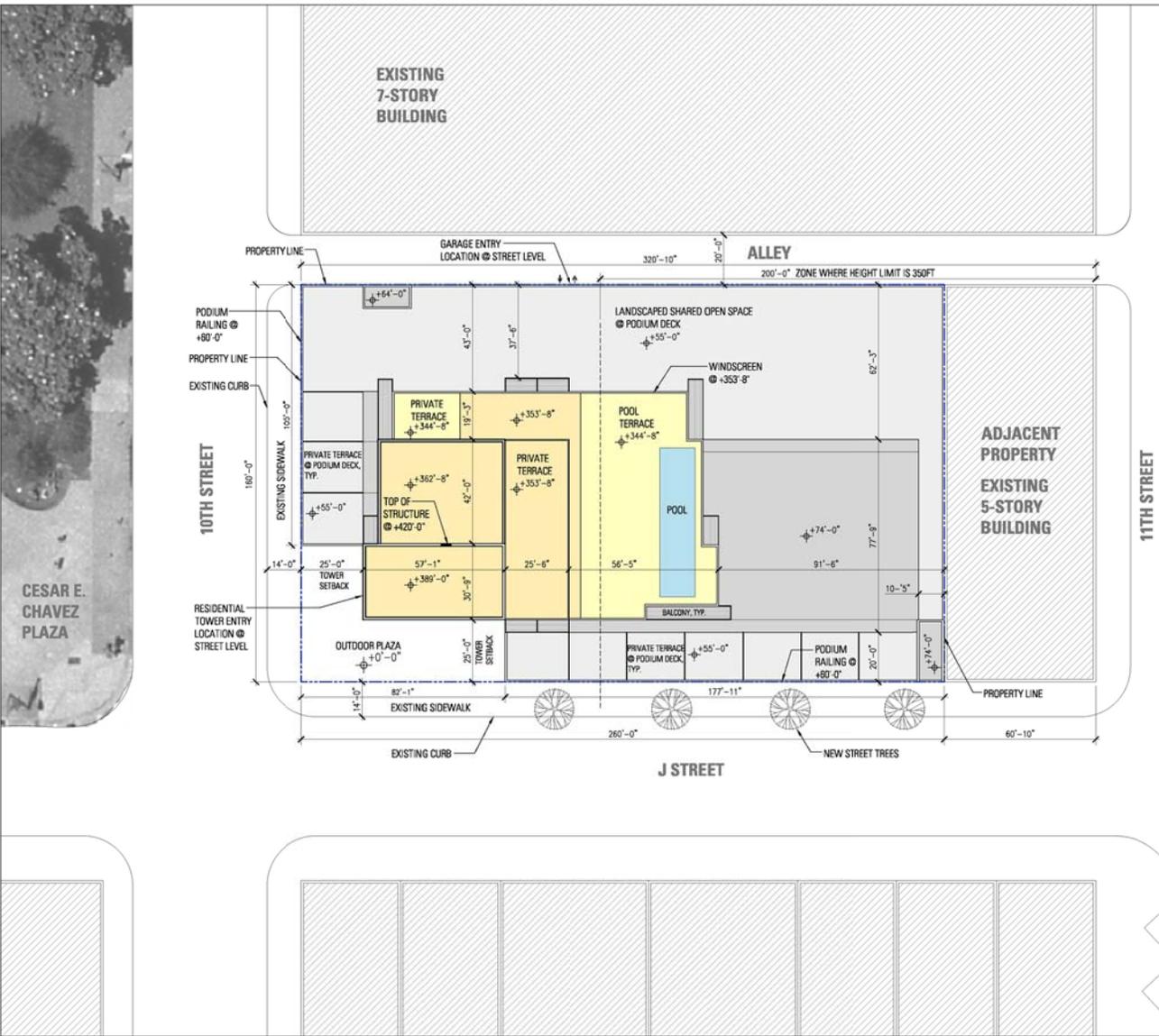
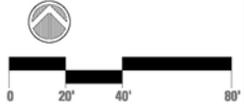
FIGURE 2.0-14  
TOWER FLOOR PLAN (LEVEL 38)



**PROJECT DATA**

<b>Building Height:</b>	420 FT (350 FT @ First 200 FT on the J St. block moving East to West)
<b>Site Area:</b>	160' x 260' = 41,600 SF
<b>Gross Bldg. Area:</b>	642,000 SF
<b>Residential SF:</b>	430,500 SF (Including Circulation & Community Spaces)
<b>Commercial/Retail SF:</b>	13,000 SF
<b>No. of Units:</b>	320
<b>No. of Bedrooms:</b>	490
<b>No. of Parking Spaces:</b>	514 (1.6 spaces / unit) City Requirement is 1 space/unit + 1 guest space per 15 units = 342 spaces
<b>Parking Counts:</b>	
Basement:	121 Spaces
First Floor:	36 Spaces
Second Floor:	55 Spaces
Third Floor:	85 Spaces
Fourth Floor:	85 Spaces
Fifth Floor:	66 Spaces
Sixth Floor:	66 Spaces
<b>TOTAL:</b>	514 Spaces

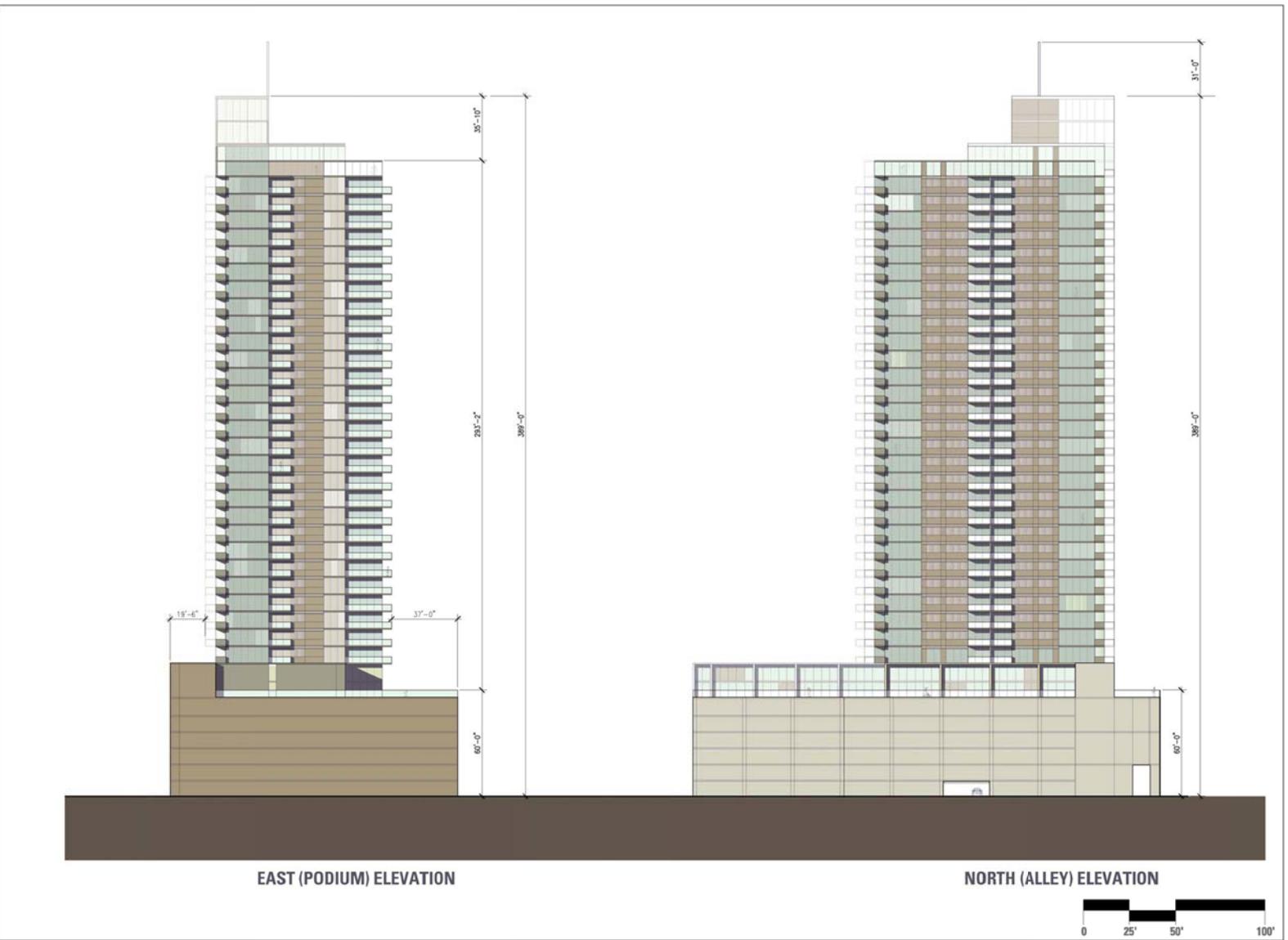
**PROJECT NORTH**



Source: KwanHemmi, 2006  
**FIGURE 2.0-15**  
**SITE PLAN ROOF PLAN VIEW**



Source: KwanHenmi, 2006  
**FIGURE 2.0-16**  
**SOUTH & WEST ELEVATIONS**



Source: KwanHenmi, 2006

**FIGURE 2.0-17**  
**NORTH & EAST ELEVATIONS**

## **FIRE PROTECTION ELEMENTS**

The proposed project would provide a freight elevator serving all levels in lieu of a heliport for fire safety. The proposed project would further be required to comply with the City's ordinance for high-rise buildings (Chapter 15.100) that requires a number of systems within the building to ensure occupant safety in the event of fire. Those systems, which would be subject to review and approval by the City, include, but may not be limited to:

- Standby and emergency electrical power systems
- Fire alarm and related equipment
- Firefighters phone and voice communication systems
- Enclosed stairway pressurization system
- Smoke evacuation and control systems (mechanical equipment)
- Other fire protection and extinguishing systems
- Fire department breathing air system
- Fire hydrant system
- Automatic fire sprinkler system
- Fire apparatus access roadways
- Elevators and controls
- All equipment and their rooms
- Compliance with all applicable requirements in Titles 19 and 24, California Code of Regulations and the Uniform Building Code, Uniform Fire Code, and National Fire Protection Association (N.F.P.A.) codes and standards
- Complete exit systems

## **UTILITIES AND INFRASTRUCTURE**

### ***Wastewater and Storm Drainage***

The proposed project is located in an area of the Central City served by the City of Sacramento's combined sewer system (CSS) for both wastewater and stormwater disposal. An existing 10-inch to 12-inch sewer line is located in the alley and conveys sewer flows from the proposed site to the east. The City would require the construction of on- or off-site storage of wastewater and/or stormwater for use during storm events that could result in overflows, or the applicant could be required to pay city mitigation fees towards system-wide capacity improvements.

### ***Water Supply***

There are existing 8-inch water lines in 10<sup>th</sup> Street and in the alley currently serving the buildings on the proposed site, connecting to a 36-inch water main in I Street. Water supply would be provided to the proposed project via the existing infrastructure for the Downtown area; engineering studies to determine if the connections and water lines need to be upgraded to meet fire flows are not yet complete.

### ***Circulation***

As discussed above, the proposed project is bounded by J Street to the south, 10<sup>th</sup> Street to the west, and the alley between I and J streets to the north. J Street is a three-lane, one-way arterial that serves as a primary eastbound connector between Interstate 5 (I-5) to the west and the Capitol City Freeway to the east. 10th Street is a three-lane, one-way arterial that runs northbound from the W-X Freeway to the south to C Street to the north. The alley located on the northern edge of the proposed site is two-way between 10<sup>th</sup> and 11<sup>th</sup> streets, providing ingress and egress to the parking garage and loading dock. All street intersections in the project vicinity are signalized.

### ***Parking***

Parking would be provided in one or one and a half sub-grade floors and six above grade levels. The parking garage would be accessed from the alley between I and J streets. The parking garage would include a total of 514 spaces, providing an average of 1.6 spaces per dwelling unit. This exceeds the City's parking requirements and will provide more parking for residents and commercial uses, as well as the public.

### **SITE PREPARATION**

To accommodate the proposed project, the entire site would be cleared, including demolition of the existing five buildings and the surface parking located along the alley. Although the existing buildings are constructed below street grade, some additional excavation would be required for the sub-grade component of the proposed project; this excavation may be limited by the existing below-grade historic hollow sidewalk features. The building foundation would sit atop a deep foundation system, consisting of piles driven into the ground to a depth of between 40 and 75 feet. The actual depth of piles would be determined based upon the performance of test piles.

### **NOISE ATTENUATION**

The proposed project would use standard construction practices, which includes noise attenuation techniques that can achieve exterior-to-interior noise reduction in residential units by 30 dBA or more, as is discussed in Section 5.4, Noise/ Vibration. In addition, the proposed project would be required to comply with the City's noise ordinance.

### **ENERGY FEATURES**

The proposed project would include energy-saving equipment, lighting, windows, and other energy conservation measures. Although specific features have not been determined at this time, lighting conservation would include installation of such features as occupancy sensors to automatically turn off lights when not in use, lighting reflectors, electronic ballasts, and energy efficient lamps. Window glazing for the project would include low-E glass. Conservation efforts are also expected to involve improved HVAC systems with microprocessor-controlled energy management systems.

**PROJECT SCHEDULE**

The proposed project would initiate demolition upon approval of the project, anticipated in October 2006. Building construction would begin approximately 3 months after site clearance begins, with a construction period of approximately 14 months.

**PROJECT APPROVALS**

As a public agency principally responsible for approving the proposed project, the City of Sacramento is considered the Lead Agency under the California Environmental Quality Act (CEQA). The City of Sacramento has the authority to either approve or reject the project. In addition to certification of the Environmental Impact Report (EIR), additional entitlements have been requested for the proposed project. The proposed project would require the following:

***City of Sacramento***

- Certification of the EIR and Adoption of Findings and a Mitigation Monitoring Plan
- Tentative Map to designate the site for condominium purposes
- Special Permit to construct 320 condominium units in the CBD (C-3-SPD) zone
- Special Permit for a Major Project over 75,000 gross square feet in the CBD (C-3-SPD) zone
- Special Permit to allow tandem parking
- Variance to reduce the required maneuvering area from 26 feet to 25 feet

***Other Agencies***

- **Sacramento Metropolitan Air Quality Management District (SMAQMD) Permits:** SMAQMD requires any business or person to obtain an Authority to Construct/Permit to Operate before installing or operating new equipment or processes that may release air pollutants to ensure that all SMAQMD rules and regulations are considered. The proposed project may need permits for such equipment as industrial boilers used for heating the building or diesel generators could be used for emergency back-up power.



# **3. SUMMARY OF IMPACTS AND MITIGATION MEASURES**

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## **3.0 SUMMARY OF IMPACTS AND MITIGATION MEASURES**

### **PROJECT UNDER REVIEW**

The proposed project would require special permits for a major project, condominium construction, and tandem parking, approval of a tentative map and variance, and Design Review for a proposed new 420-foot high, 39-story mixed-use residential tower development at the corner of 10<sup>th</sup> and J streets in the Sacramento Central Business District. The building would accommodate 320 residential condominium units, with ground floor commercial/retail space facing both 10th and J streets, over podium parking with 514 off-street parking spaces (1.6 spaces per unit). The building would include residential amenities such as private balconies, a swimming pool, fitness and recreation rooms, and landscape and open space terrace areas. Five vacant structures and surface parking currently on the site would be demolished.

### **SUMMARY OF IMPACTS**

#### **EFFECTS FOUND TO BE LESS THAN SIGNIFICANT**

As listed in Table 3-2, below, this EIR discusses a number of impacts of the proposed project that were identified as less than significant that require no mitigation. These impacts are analyzed Chapter 5, Environmental Analysis, in the following sub-chapters:

- Sub-Chapter 5.1 Air Quality and Microclimate
- Sub-Chapter 5.2 Cultural and Historic Resources
- Sub-Chapter 5.3 Hazards and Hazardous Materials
- Sub-Chapter 5.4 Noise and Vibration
- Sub-Chapter 5.5 Public Services and Utilities
- Sub-Chapter 5.6 Transportation and Circulation
- Sub-Chapter 5.7 Urban Design and Aesthetics

Other impacts were identified that could be reduced to a less-than significant level with implementation of proposed mitigation measures, as discussed below.

#### **SIGNIFICANT IMPACTS**

A significant effect on the environment is defined by California Environmental Quality Act (CEQA) as a substantial or potentially substantial adverse change in any of the physical conditions within the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance (CEQA Guidelines Section 15382). Implementation of the proposed project would result in significant impacts to some of these resources, which are fully analyzed in Sub-Chapters 5.1 through 5.7 of this document and summarized in Table 3.0-1, below.

### ***Impacts and Mitigation Measures***

This EIR discusses mitigation measures that could be implemented by the City and/or the project applicant to reduce potential adverse impacts to a level that is considered less than significant. Such mitigation measures are noted in this document and are found in each sub-chapter.

### ***Significant and Unavoidable Impacts***

In some cases mitigation measures may not be available, or the application of feasible mitigation measures cannot reduce an impact to less-than-significant levels. The following are the significant and unavoidable impacts that were identified for both project-level and cumulative impacts:

#### ***Project-Specific Significant and Unavoidable Impacts***

- Impact 5.4-1 Short-term construction noise at Sensitive Receptors
- Impact 5.6-2 Freeway Mainline: The project would increase traffic volumes on the freeway mainline
- Impact 5.6-3 Freeway Interchanges: The project would increase traffic volumes at the freeway interchanges

#### ***Cumulative Significant and Unavoidable Impacts***

- Impact 5.2-3 Cumulative loss of cultural resources
- Impact 5.6-11 Cumulative impacts to freeway mainline under near term plus project condition
- Impact 5.6-12 Cumulative impacts to freeway merge/ diverge/ weave areas under near term plus project condition
- Impact 5.6-13 Cumulative impacts to freeway ramp queues under near term plus project condition
- Impact 5.6-18 Cumulative impacts to freeway mainline under long term plus project condition
- Impact 5.6-19 Cumulative impacts to freeway merge/ diverge/ weave areas under long term plus project condition
- Impact 5.6-20 Cumulative impacts to freeway ramp queues under long term plus project condition

## **ALTERNATIVES TO THE PROPOSED PROJECT**

The EIR analyzes the following alternatives to the proposed project:

- ***No Project/ No Development Alternative***  
The No Project/No Development Alternative assumes that the proposed project would not occur and there would be no new development of the site. This alternative assumes the existing buildings on the site would remain in their current vacant condition.

- **No Project/ Existing Zoning Alternative**

The No Project/ Existing Zoning Alternative assumes that three of the existing structures would be retained and rehabilitated, and a new 75,000 sf office building would be constructed in place of the deteriorating Biltmore Hotel and Broiler buildings, consistent with the existing land use designations and zoning on the site, without the need for any special permits.

- **Mixed Use Rehabilitation Alternative**

The Mixed Use Rehabilitation Alternative assumes that all structures on the site would be rehabilitated for residential uses with ground floor retail. Buildings over 50 years old and remaining historical features on the project site (those individually ineligible for listing but of some historic value) would be retained where possible and rehabilitated consistent with the Secretary of the Interior's Standards and Guidelines for the Treatment of Historic Structures.

The relative effects of the alternatives are identified by impact area in Chapter 6, Alternatives.

## POTENTIAL AREAS OF CONCERN/CONTROVERSY

Several comments were received on the Notice of Preparation for the project from public agencies and adjacent landowners. Those comments addressed traffic on Interstate 5 (I-5) on- and off-ramps, local traffic, air quality, noise, wastewater, visual impacts, and energy use. One concern regarding noise and construction impacts to the Crest Theater on K Street appeared to be addressing a different project proposed for the south side of J Street at 11<sup>th</sup> Street; however, concerns regarding noise and vibration impacts on the Crest Theater are addressed in this EIR. There were no controversies identified regarding the proposed project.

## SUMMARY TABLE

Table 3.0-1 (Summary of Impacts and Mitigation Measures) has been organized to correspond with the environmental issues discussed in Chapter 5. The summary table is arranged in four columns:

- Environmental impacts (Impact)
- Level of significance without mitigation (Significance)
- Mitigation measures (Mitigation Measure)
- The level of significance after implementation of mitigation measures (Residual Significance)

If an impact is determined to be significant or potentially significant, mitigation measures are identified, where appropriate and feasible. More than one mitigation measure may be required to reduce the impact to a less-than-significant level. This EIR assumes that all applicable plans, policies, and regulations would be implemented, including, but not necessarily limited to, the City of Sacramento General Plan, laws, and requirements or recommendations of the City of Sacramento. Applicable plans, policies, and regulations are identified and described in the Regulatory Setting of each issue area and within the relevant impact analysis. A description of the organization of the environmental analysis, as well as key foundational assumptions regarding the approach to the analysis, is provided in Chapter 5.0 (Introduction to the Analysis).

**TABLE 3.0-1  
ENVIRONMENTAL IMPACTS OF THE PROPOSED PROJECT AND DEVELOPMENT ALTERNATIVES**

Impact	Significance Prior to Mitigation <sup>1</sup>	Mitigation Measure(s)	Significance After Mitigation
<b>5.1 Air Quality/Microclimate</b>			
<p>Impact 5.1-1: Short-Term Construction Increases in Ozone Precursors</p> <p>The proposed project would involve demolition and construction activities that would result in increased emissions of NOX and ROG, which are precursors to ozone.</p>	S	<p>5.1-1 The following measures shall be incorporated into construction practices and approved by SMAQMD prior to the start of demolition and construction:</p> <ul style="list-style-type: none"> <li>(a) The project shall provide a plan for approval by 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, will achieve a project wide fleet average of 20 percent NOX reduction and 45 percent particulate reduction compared to the most recent CARB fleet average at the time of construction.</li> <li>(b) The project representative shall submit to SMAQMD a comprehensive inventory of all off-road construction equipment, equal to or greater than 50 horsepower, that will be used an aggregate of 40 or more hours during any portion of the construction project. The inventory shall include the horsepower rating, engine production year, and projected hours of use or fuel throughput for each piece of equipment. The inventory shall be updated and submitted monthly throughout the duration of the project, except that an inventory shall not be required for any 30-day period in which no construction activity occurs. At least 48 hours prior to the use of subject heavy-duty off-road equipment, the project representative shall provide SMAQMD with the anticipated construction timeline, including start date and name and phone number of the project manager and on-site foreman.</li> <li>(c) The project shall ensure that emissions from all off-road diesel powered equipment used on the project site do not exceed 40 percent opacity for more than three minutes in any one hour. Any equipment found to exceed 40 percent opacity (or Ringelmann 2.0) shall be repaired immediately 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,</li> </ul>	LS

<sup>1</sup> LS = Less-than-Significant

PS = Potentially Significant

S = Significant

SU = Significant and Unavoidable

Impact	Significance Prior to Mitigation <sup>1</sup>	Mitigation Measure(s)	Significance After Mitigation
		<p>and a monthly summary of the 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 activity occurs. The monthly summary shall include the quantity and type of vehicles surveyed as well as the dates of each survey. The AQMD and/or other officials may conduct periodic site inspections to determine compliance. Nothing in this section shall supersede other AQMD or state rules or regulations.</p> <p>(d) The project representative shall implement additional aggressive mitigation measures in consultation with SMAQMD, using existing technology on the construction fleet such as aqueous diesel fuel and cooled exhaust gas recirculation systems to reduce emissions below SMAQMD thresholds, or shall pay a \$179,673 off-site mitigation fee prior to the issuance of grading permits.</p>	
<p>Impact 5.1-2: Short-Term Construction Increases in PM10 Emissions</p> <p>While grading emissions are below SMAQMD criteria, demolition emissions have the potential to cause or contribute to violations of the PM10 ambient air quality standards, in particular, the more stringent CAAQS.</p>	<p>S</p>	<p>Keeping soil or other material moist is the most effective mitigation measure for the control of fugitive dust during all demolition activities. Fugitive dust emissions can be almost completely eliminated by this mitigation.</p> <p>5.1-2 The following measures shall be incorporated into construction practices during demolition activity:</p> <p>(a) The project shall ensure that all demolished material will be completely wetted during demolition and during any subsequent disturbance of the material.</p> <p>(b) The project shall ensure that piles of demolished material, when not being disturbed, are either completely wetted or completely covered.</p> <p>(c) Two feet of freeboard space shall be maintained on all trucks transporting demolished material.</p>	<p>LS</p>
<p>Impact 5.1-3: Project Specific Operational Increases in Regional Criteria Pollutants</p> <p>Operation of the proposed project would result in long-term emissions of ozone precursors; neither NOx nor ROG emissions would exceed the SMAQMD threshold of significance.</p>	<p>LS</p>	<p>None required</p>	<p>LS</p>

Impact	Significance Prior to Mitigation <sup>1</sup>	Mitigation Measure(s)	Significance After Mitigation
<p>Impact 5.1-4: Project specific Impacts on CO concentrations at intersections and congested roadways</p> <p>Project CO emissions, if combined with CO emissions from other nearby projects, can result in hotspots that violate the state one-hour or eight-hour AAQS.</p>	LS	None required	LS
<p>Impact 5.1-4: Project specific Impacts on CO concentrations at intersections and congested roadways</p> <p>Project CO emissions, if combined with CO emissions from other nearby projects, can result in hotspots that violate the state one-hour or eight-hour AAQS.</p>	LS	None required	LS
<p>Impact 5.1-5: Shadow Conditions</p> <p>Shadows added by the project would cover a portion of the Cesar Chavez Plaza Park for intervals of one to two hours during the mid- and late afternoon.</p>	LS	None required	LS
<p>Impact 5.1-6: The proposed project could contribute to cumulative CO levels.</p>	LS	None required	LS
<p>Impact 5.1-7: The proposed project could contribute to cumulative levels of ozone precursors</p>	LS	None required	LS
<b>5.2 Cultural and Historic Resources</b>			
<p>Impact 5.2-1 Loss or degradation of known or undiscovered prehistoric and historic resources</p> <p>It is possible for buried archaeological resources to be uncovered during any subsurface construction activities, and such resources and their immediate surrounding matrix could be damaged.</p>	S	<p>The following mitigation measures should be used and monitored during construction activities:</p> <p>5.2-1a: The project proponent shall hire a qualified professional to formulate and implement a research design and field strategy with regard to possible sub-surface resource. Testing shall include geophysical mapping of the near-surface, ground-truthing using both the geophysical maps and historic maps, followed by evaluation of discovered resources for CRHR eligibility. All testing shall be conducted prior to initiation of construction for the project. Based on the results of testing, recommendations shall be provided, which may include additional testing, data recovery, future construction monitoring, as well as preparation of an Unanticipated Discovery Plan. All</p>	LS

Impact	Significance Prior to Mitigation <sup>1</sup>	Mitigation Measure(s)	Significance After Mitigation
		<p>recommendations shall be submitted to the City of Sacramento's Preservation Director for approval.</p> <p>5.2-1b: The project applicant shall hire a professional archaeologist to perform archaeological monitoring during ground-disturbing construction activities for the duration of the project. If resources are discovered during construction, the procedure laid out in the Unanticipated Discovery Plan will be followed.</p> <p>5.2-1c If significant findings are made, historic materials and artifacts shall be incorporated into an interpretive display in the proposed building, or grouped with other projects to produce a larger more comprehensive exhibit or display in coordination with the Manager of the History and Science Division. The interpretive display shall include a history of the site uses including information on the various ethnics groups that dominated the site. Display of all historic materials and artifacts shall follow the standard practices and procedures generally accepted in museum curation, and shall be made available to the Manager of the History and Science Division for review and comment before they are constructed and installed. All collected materials shall be archived at an appropriate curation facility at the project applicant's expense.</p> <p>5.2-1d All activities related to the data recovery of the site shall be recorded and compiled into a report and submitted to both the City and the North Central Information Center. In addition, appropriate public outreach material such as a leaflet, pamphlet, or booklet shall be developed detailing any finds and their historic context. All reports shall be deposited with the city's archive - the Sacramento Archives and Museum Collection Center (SAMCC), and shall include original photographs and negatives or high resolution digital scans in a TIF format on high quality CD's or DVD's. Reports if produced in a digital format shall be deposited as both a hard copy and a digital copy. A release shall be included that allows SAMCC the right to reproduce all documents and graphics (including photographs) without restriction.</p>	

Impact	Significance Prior to Mitigation <sup>1</sup>	Mitigation Measure(s)	Significance After Mitigation
<p>Impact 5.2-2 Potential alteration or demolition of historic resources</p> <p>The proposed project would demolish several buildings on the project site that are over 50 years old and could damage existing hollow sidewalk structures and granite curbstones during construction.</p>	PS	<p>5.2-2 Retain the original granite curbstones in place during project construction; if that is not possible, all curbstones shall be carefully removed and stored during sidewalk demolition and replaced back in their original location during sidewalk reconstruction.</p>	LS
<p>Impact 5.2-3 Cumulative loss of cultural resources</p> <p>As urban development increases throughout the City of Sacramento and the region, cumulative development in the City could result in archaeological resources being unearthed and damaged or destroyed, destroying their value as a resource.</p>	S	Implement Mitigation Measures 5.2-1a, 5.2-1b, and 5.2-1c.	SU
<b>5.3 Hazards and Hazardous Materials</b>			
<p>Impact 5.3-1 Construction disturbance of potentially contaminated soil and structures</p> <p>Historical uses of the properties on the site may have created releases of hazardous substances or petroleum products which may be masked by the present or recent uses of the property.</p>	S	<p>5.3.1a Prior to any demolition activities on the project site, conduct an interior survey to evaluate the presence of asbestos containing materials, lead based paint, PCB containing electrical and hydraulic fluids, and/or CFCs, as well as any other potential environmental concerns (i.e., aboveground/underground fuel tanks, elevator shafts/hydraulic lifts, floor drains/sumps, chemical storage/disposal) which may be present within structures on the properties.</p> <p>5.3-1b The City shall require in construction contract documents that a hazardous materials removal team be on-call and available for immediate response during site preparation, excavation, and any pile driving construction activities. Hazardous material removal activities may be contracted to a qualified hazardous materials removal contractor.</p> <p>Construction contract documents shall require the hazardous material removal contractor or subcontractor to comply with the following:</p> <p>(1) Prepare a hazardous material discovery and response contingency plan for review by the City of Sacramento Fire Department. The fire department will act as the first responder to a condition of extreme emergency (i.e., fire, emergency medical assistance, etc).</p> <p>(2) In the event that a condition or suspected condition of soil and/or</p>	LS

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		<p>groundwater contamination are discovered during construction, work shall cease or be restricted to an unaffected area of the site as the situation warrants and the City shall be immediately notified. Upon notification, the City shall notify the Sacramento County Environmental Management Department (SCEMD) of the contamination condition, and the hazardous material removal contractor shall prepare a site remediation plan and a site safety plan, the latter of which is required by OSHA for the protection of construction workers. Similarly, the hazardous material removal contractor shall follow and implement all directives of the SCEMD and any other jurisdictional authorities that might become involved in the remediation process.</p> <p>(3) Preparation of any remediation plan shall include in its focus measures to be taken to protect the public from exposure to potential site hazards and shall include a certification that the remediation measures would clean up the contaminants, dispose of the wastes properly, and protect public health in accordance with federal, state, and local requirements.</p> <p>(4) Obtain closure and/or No Further Action letters from the appropriate agency(ies).</p> <p>(5) Construction contract documents shall include provisions for the proper handling and disposal of contaminated soil and/or dewatering water (including groundwater and contaminated rainwater) in accordance with federal, state, and local requirements.</p>	
<b>5.4 NOISE/VIBRATION</b>			
Impact 5.4-1 Construction noise at sensitive receptors Demolition of existing structures and construction of the proposed project would temporarily increase noise levels during construction.	S	<p>The following mitigation measures are required for the proposed project to minimize construction noise impacts. Implementation of these mitigation measures before and during construction would reduce the magnitude and severity of construction noise impacts; however, short-term significant noise impacts would remain as part of the construction phase:</p> <p>5.4-1a Erect a solid 6 to 8 foot plywood construction/noise barrier along the exposed project boundaries. The barrier should not contain any significant gaps at its base or face, except for site access and surveying openings.</p>	SU

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		<p>5.4-1b Construction activities shall comply with the City of Sacramento Noise Ordinance. Demolition and pile driving activities shall be coordinated with adjacent land uses in order to minimize potential disturbance of planned activities.</p> <p>5.4-1c Pile holes will be pre-drilled to the maximum feasible depth. This will reduce the number of blows required to seat the pile, and will concentrate the pile driving activity closer to the ground where noise can be attenuated more effectively by the construction/noise barrier.</p> <p>5.4-1d Locate fixed construction equipment such as compressors and generators as far as possible from sensitive receptors. Shroud or shield all impact tools, and muffle or shield all intake and exhaust ports on power construction equipment.</p> <p>5.4-1e Designate a disturbance coordinator and conspicuously post this person's number around the project site and in adjacent public spaces. The disturbance coordinator will receive all public complaints about construction noise disturbances and will be responsible for determining the cause of the complaint, and implement any feasible measures to be taken to alleviate the problem.</p>	
<p>Impact 5.4-2 Construction-induced vibration impacts could cause architectural damage to nearby historic structures and annoyance to nearby sensitive receivers</p>	<p>PS</p>	<p>The following mitigation measures would reduce the potential for vibration damage to adjacent structures to less-than-significant levels:</p> <p>5.4-2a Implement mitigation measure 5.4-1c.</p> <p>5.4-2b Prior to demolition, the pre-existing condition of all buildings within a 50-foot radius will be recorded in order to evaluate damage from construction activities. Fixtures and finishes within a 50-foot radius of construction activities susceptible to damage will be documented (photographically and in writing) prior to construction. All damage will be repaired back to its pre-existing condition.</p> <p>5.4-2c If fire sprinkler failures are reported in surrounding buildings to the disturbance coordinator, the contractor shall provide monitoring during construction and repairs to sprinkler systems shall be provided.</p> <p>5.4-2d During demolition and construction, should damage occur despite the above mitigation measures, construction operations</p>	<p>LS</p>

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		shall be halted and the problem activity shall be identified. A qualified engineer shall establish vibration limits based on soil conditions and the types of buildings in the immediate area. The contractor shall monitor the buildings throughout the remaining construction period and follow all recommendations of the qualified engineer to repair any damage that has occurred to the pre-existing state, and to avoid any further structural damage.	
Impact 5.4-3 The operation of the proposed project could expose existing receptors to significant increases in ambient noise	LS	None required	LS
Impact 5.4-4 The operation of the proposed project could expose new sensitive receptors to excessive exterior noise levels	LS	None required	LS
Impact 5.4-5 The operation of the proposed project could expose new sensitive receptors to excessive interior noise levels	PS	The following mitigation measures would reduce the potential for interior noise level impacts to less-than-significant levels:  5.4-5 Windows for the residential floors below the 15th floor, along J Street, would be required to have a minimum STC rating of 33. The project applicant shall submit an acoustical review of interior noise levels prior to being issued building permits. The review should verify that the proposed building façade construction is sufficient to achieve an interior noise level of 45 dB Ldn or less.	LS
Impact 5.4-6 The proposed project would add to cumulative noise levels in the project vicinity	LS	None required	LS
<b>5.5 PUBLIC SERVICES AND UTILITIES</b>			
Impact 5.5-1 Substantial sewage increases to combined sewer system flows  The proposed project would result in CSS flows that exceed the City's screening criteria for project-generated wastewater flows by 215.2 ESD.	LS	None required	LS
Impact 5.5-2 Combined sewer service system impacts from dewatering activities  The proposed project would result in excavation for one sub-grade level and pile driving that would reach	PS	The following mitigation measures are identified for the proposed project:  5.5-2a Prior to issuance of the building permit construction contract documents shall include provisions for the proper handling and disposal of contaminated dewatering water in accordance with	LS

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groundwater levels; resulting in the need for dewatering and disposal of wastewater into the CSS.		federal, state, and local requirements. 5.5-2b If the City or SRCSD determines that groundwater extracted during dewatering activities does not meet applicable standards for discharge into the city sewer system, the contractor shall implement groundwater treatment systems that treat groundwater to standards established by the Central Valley RWQCB, City, and SRCSD.	
Impact 5.5-3 Potential cumulative demand for the construction of new wastewater treatment facilities or expansion of existing facilities	LS	None required	LS
<b>5.6 TRANSPORTATION AND CIRCULATION</b>			
Impact 5.6-1 Intersections: The project would increase traffic volumes at study area intersections The project would increase traffic volumes in the study area under Baseline Plus Project scenario.	LS	None required	LS
Impact 5.6-2 Freeway Mainline: The project would increase traffic volumes on the freeway mainline The changes in freeway system operating conditions with the addition of project-generated traffic exceed the standards of significance for impacts to the freeway system, since traffic is added to freeway segments already operating at LOS F.	S	None available	SU
Impact 5.6-3 Freeway Interchanges: The project would increase traffic volumes at the freeway interchanges The changes in freeway system operating conditions with the addition of project-generated traffic exceed the standards of significance for impacts to the freeway system, since traffic is added to freeway interchanges already operating at LOS F.	S	None available	SU
Impact 5.6-4 Freeway Ramp Queuing: The project would increase the length of freeway ramp queues	LS	None required	LS

Impact	Significance Prior to Mitigation <sup>1</sup>	Mitigation Measure(s)	Significance After Mitigation
Impact 5.6-5 Bikeways: The project would result in the addition of employees, patrons, residents, and visitors to the site, some of whom would travel by bicycle	LS	None required	LS
Impact 5.6-6 Pedestrian Facilities: The project would result in the addition of employees, patrons, residents, and visitors to the site	LS	None required	LS
Impact 5.6-7 Transit Services: The project would increase demand for transit services	LS	None required	LS
Impact 5.6-8 Parking: The project would increase demand for parking  Based upon the development application, the project is required to provide 342 spaces. The project is proposing 514 spaces.	LS	None required	LS
Impact 5.6-9 Construction: The construction of the project may include the temporary closure of numerous transportation facilities, including portions of City streets, sidewalks, bikeways, on-street parking, off-street parking, and transit facilities	S	5.6-9 Prior to the beginning of construction, a construction traffic management plan shall be prepared by the applicant to the satisfaction of the City traffic engineer, Regional Transit, and any other affected agency.	LS

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<p>Impact 5.6-10 Cumulative impacts to study intersection under near term plus project condition</p> <p>The proposed Downtown projects would add traffic to study intersections and cause significant impacts for near-term cumulative conditions at the following intersections:</p> <ul style="list-style-type: none"> <li>a) 3rd Street / J Street, where the level of service without the proposed projects would be LOS F during the a.m. peak hour and project generated traffic would increase the average vehicle delay by 34.7 seconds.</li> <li>b) 3rd Street / L Street, where the level of service without the proposed projects would be LOS E during the p.m. peak hour and project generated traffic would increase the average vehicle delay by 43.9 seconds.</li> <li>c) 3rd Street / N Street, where the traffic generated by the project would degrade the level of service from LOS C to LOS D during the a.m. peak hour.</li> <li>d) 3rd Street / P Street, where the traffic generated by the project would degrade the level of service from LOS C to LOS D during the p.m. peak hour.</li> <li>e) 5th Street / L Street, where the traffic generated by the project would degrade the level of service from LOS C to LOS E during the p.m. peak hour.</li> <li>f) 7th Street / L Street, where the traffic generated by the project would degrade the level of service from LOS B to LOS D during the p.m. peak hour.</li> <li>g) 8th Street / L Street, where the traffic generated by the project would degrade the level of service from LOS B to LOS D during the p.m. peak hour.</li> <li>h) 9th Street / J Street, where the traffic generated by the project would degrade the level of service from LOS B to LOS E during the p.m. peak hour.</li> </ul>	<p>S</p>	<p>5.6-10a At the 3rd Street / J Street intersection, modify the traffic signal phase splits during the a.m. peak period by increasing the phase time for the southbound I-5 off-ramp approach (eastbound) to 40 seconds, maintaining the 50 second phase time for the northbound I-5 off-ramp, and decreasing the north and southbound 3rd Street phase time to 10 seconds. This mitigation measure would reduce average vehicle delay by 33 seconds during the a.m. peak hour and would reduce the near-term cumulative impact to a less-than-significant level. The applicant of the proposed project shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.</p> <p>5.6-10b At the 3rd Street / L Street intersection, modify the westbound approach to provide one left-turn lane, two through lanes (to the northbound I-5 on-ramp), and one right-turn lane. This mitigation measure would reduce average vehicle delay by 40 seconds during the p.m. peak hour and maintain LOS C operations during the a.m. peak hour. The mitigation measure would reduce the near-term cumulative impact to a less-than-significant level.</p> <p>5.6-10c At the 3rd Street / N Street intersection, modify the traffic signal phase splits during the a.m. peak period by increasing the southbound 3rd Street signal phase time to 34 seconds, decreasing the eastbound N Street approach to 15 seconds, and maintaining the phase time for the eastbound Tower Bridge approach at 21 seconds. This mitigation measure would improve traffic operations to LOS C during the a.m. peak hour and would reduce the near-term cumulative impact to a less-than-significant level. The applicant of the proposed project shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.</p> <p>5.6-10d At the 3rd Street / P Street intersection, modify the traffic signal phase splits during the p.m. peak period by increasing the signal phase time to 32 seconds for the westbound P Street approach and decreasing the southbound 3rd Street approach to 18 seconds. This mitigation measure would improve traffic operations to LOS C during the p.m. peak hour and would reduce the near-term cumulative impact to a less-than-significant</p>	<p>LS</p>

Impact	Significance Prior to Mitigation <sup>1</sup>	Mitigation Measure(s)	Significance After Mitigation
<p>i) 10th Street / J Street, where the traffic generated by the project would degrade the level of service from LOS C to LOS E during the p.m. peak hour.</p> <p>j) 12th Street / J Street, where the traffic generated by the project would degrade the level of service from LOS C to LOS E during the p.m. peak hour.</p> <p>k) 15th Street / J Street, where the level of service without the proposed projects would be LOS D during the p.m. peak hour and project generated traffic would increase the average vehicle delay by 54.4 seconds.</p> <p>l) 15th Street / X Street, where the level of service without the proposed projects would be LOS E during the p.m. peak hour and project generated traffic would increase the average vehicle delay by 21.5 seconds.</p> <p>m) 16th Street / H Street, where the traffic generated by the project would degrade the level of service from LOS C to LOS D during the p.m. peak hour.</p>		<p>level. The applicant of the proposed project shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.</p> <p>5.6-10e At the 5th Street / L Street intersection, modify the traffic signal phase splits during the p.m. peak period by increasing the signal phase time to 28 seconds for the westbound L Street approach and decreasing the northbound and southbound 5th Street approaches to 42 seconds. This mitigation measure would improve traffic operations to LOS C during the p.m. peak hour and would reduce the near-term cumulative impact to a less-than-significant level. The applicant of the proposed project shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.</p> <p>5.6-10f At the 7th Street / L Street intersection, modify the traffic signal phase splits during the p.m. peak period by increasing the signal phase time to 22 seconds for the westbound L Street approach and decreasing the northbound and southbound 5th Street approaches to 28 seconds. This mitigation measure would improve traffic operations to LOS C during the p.m. peak hour and would reduce the near-term cumulative impact to a less-than-significant level. The applicant of the proposed project shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.</p> <p>5.6-10g At the 8th Street / L Street intersection, modify the traffic signal phase splits during the p.m. peak period by increasing the signal phase time to 25 seconds for the westbound L Street approach and decreasing the northbound 8th Street signal phase time to 25 seconds. This mitigation measure would improve traffic operations to LOS B during the p.m. peak hour and would reduce the near-term cumulative impact to a less-than-significant level. The applicant of the proposed project shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.</p> <p>5.6-10h At the 9th Street / J Street intersection, modify the traffic signal phase splits during the p.m. peak period by increasing the signal phase time to 28 seconds for the eastbound J Street approach</p>	

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		<p>and decreasing the southbound 9th Street signal phase time to 22 seconds. This mitigation measure would improve traffic operations to LOS C during the p.m. peak hour and would reduce the near-term cumulative impact to a less-than-significant level. The applicant of the proposed project shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.</p> <p>5.6-10i At the 10th Street / J Street intersection, modify the traffic signal phase splits during the p.m. peak period by increasing the signal phase time to 28 seconds for the eastbound J Street approach and decreasing the northbound 10th Street signal phase time to 22 seconds. This mitigation measure would improve traffic operations to LOS C during the p.m. peak hour and would reduce the near-term cumulative impact to a less-than-significant level. The applicant of the proposed project shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.</p> <p>5.6-10j At the 12th Street / J Street intersection, modify the traffic signal phase splits during the p.m. peak period by increasing the signal phase time to 22 seconds for the eastbound J Street approach and decreasing the 12th Street signal phase time to 28 seconds. This mitigation measure would improve traffic operations to LOS C during the p.m. peak hour and would reduce the near-term cumulative impact to a less-than-significant level. The applicant of the proposed project shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.</p> <p>5.6-10k At the 15th Street / J Street intersection, modify the traffic signal phase splits during the p.m. peak period by increasing the phase time for the eastbound J Street approach to 30 seconds, and decreasing the southbound 15th Street signal phase time to 20 seconds. This mitigation measure would reduce average vehicle delay by 61.4 seconds during the p.m. peak hour and would reduce the near-term cumulative impact to a less-than-significant level. The applicant of the proposed project shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.</p> <p>5.6-10l At the 15th Street / X Street intersection, modify the traffic signal</p>	

Impact	Significance Prior to Mitigation <sup>1</sup>	Mitigation Measure(s)	Significance After Mitigation
		<p>phase splits during the p.m. peak period by increasing the phase time for the southbound 15th Street approach to 28 seconds, decreasing the eastbound U.S. 50 off-ramp phase time to 28 seconds, and maintaining 17 seconds for the X Street approach. This mitigation measure would reduce average vehicle delay by 34.4 seconds during the p.m. peak hour and would reduce the near-term cumulative impact to a less-than-significant level. The applicant of the proposed project shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.</p> <p>5.6-10m At the 16th Street / H Street intersection, modify the traffic signal phase splits during the p.m. peak period by increasing the phase time for the northbound 15th Street approach to 26 seconds, decreasing the phase times for the eastbound H Street left-turning movement and through movements to 18 and 24 seconds, respectively, and maintaining 6 seconds for the westbound H Street right-turning movement. This mitigation measure would improve traffic operations to LOS C during the p.m. peak hour and would reduce the near-term cumulative impact to a less-than-significant level. The applicant of the proposed project shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.22 seconds. This mitigation measure would improve traffic operations to LOS C during the p.m. peak hour and would reduce the near-term cumulative impact to a less-than-significant level. The applicant of the proposed project shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.</p>	
<p>Impact 5.6-11 Cumulative impacts to freeway mainline under near term plus project condition</p> <p>The proposed Downtown projects would add traffic to I-5 freeway segments that would operate at LOS F without the projects.</p>	S	<p>5.6-11 No feasible mitigation measures were identified that would reduce the impact of the project on I-5 freeway mainline segments. Widening the freeway would reduce the impact but was not considered feasible.</p>	SU
<p>Impact 5.6-12 Cumulative impacts to freeway merge/diverge/ weave areas under near term plus project condition</p>	S	<p>5.6-12 No feasible mitigation measures were identified that would reduce the impact of the project on I-5 and U.S. 50 freeway ramps. Widening the freeway would reduce the impact but was</p>	SU

Impact	Significance Prior to Mitigation <sup>1</sup>	Mitigation Measure(s)	Significance After Mitigation
<p>The proposed Downtown projects would add traffic to I-5 and U.S. 50 freeway ramps that would operate at LOS F without the projects.</p>		<p>not considered feasible.</p>	
<p>Impact 5.6-13 Cumulative impacts to freeway ramp queues under near term plus project condition</p> <p>The proposed Downtown projects would add traffic to the northbound I-5 off-ramp to J Street, which currently experiences queues during the a.m. peak hour that extend onto the freeway mainline, and would cause queues for the southbound I-5 off-ramp to J Street to extend onto the freeway mainline during the a.m. peak hour.</p>	<p>S</p>	<p>5.6-13 Mitigation measure (a) would reduce the queue for the southbound I-5 off-ramp at J Street to 6,125 feet during the a.m. peak hour, but this would not be enough to eliminate the near-term cumulative impact. This mitigation measure would not affect the northbound I-5 off-ramp queue at J Street, and no other feasible mitigation measures were identified that would reduce the impact of the projects at that location. Widening the freeway would reduce the impact but was not considered feasible.</p>	<p>SU</p>
<p>Impact 5.6-14 Cumulative impacts to transit system under near term plus project condition</p>	<p>LS</p>	<p>None required</p>	<p>LS</p>
<p>Impact 5.6-15 Cumulative impacts to bikeway under near term plus project condition</p>	<p>LS</p>	<p>None required</p>	<p>LS</p>
<p>Impact 5.6-16 Cumulative impacts to pedestrian circulation under near term plus project condition</p>	<p>LS</p>	<p>None required</p>	<p>LS</p>
<p>Impact 5.6-17 Cumulative impacts to study intersection under long term plus project condition</p> <p>The proposed Downtown projects would add traffic to study intersections and cause significant impacts for long-term cumulative conditions at the following intersections:</p> <p>a) 3rd Street / J Street, where the level of service without the proposed projects would be LOS F during the a.m. peak hour and project generated traffic would increase the average vehicle delay by 34.2 seconds; and where the level of service without the proposed projects would be LOS D during the p.m. peak hour and project generated traffic would increase the average vehicle delay by 6.8 seconds.</p>	<p>S</p>	<p>5.6-17a At the 3rd Street / J Street intersection, implement the near-term Mitigation Measure (a) (modification of signal phase splits) and also modify the lanes on the southbound I-5 off-ramp approach (eastbound) to provide one combination left/through lane, one through lane, one combination through/ right lane, and one exclusive right turn lane. This mitigation measure would reduce average vehicle delay during the a.m. peak hour by 32.5 seconds and would improve traffic operations during the p.m. peak hour to LOS C. This mitigation measure would reduce the long-term cumulative impact to a less-than-significant level. The applicant of the proposed project shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.</p> <p>5.6-17b At the 3rd Street / L Street intersection, implement the near-term Mitigation Measure (b) (modification of the westbound approach</p>	<p>LS</p>

Impact	Significance Prior to Mitigation <sup>1</sup>	Mitigation Measure(s)	Significance After Mitigation
<ul style="list-style-type: none"> <li>b) 3rd Street / L Street, where the level of service without the proposed projects would be LOS E during the p.m. peak hour and project generated traffic would increase the average vehicle delay by 44.1 seconds.</li> <li>c) 3rd Street / N Street, where the traffic generated by the project would degrade the level of service from LOS C to LOS D during the a.m. peak hour.</li> <li>d) 3rd Street / P Street, where the traffic generated by the project would degrade the level of service from LOS C to LOS D during the p.m. peak hour.</li> <li>e) 5th Street / I Street, where the level of service without the proposed projects would be LOS E during the p.m. peak hour and project generated traffic would increase the average vehicle delay by 6.1 seconds.</li> <li>f) 5th Street / L Street, where the traffic generated by the project would degrade the level of service from LOS C to LOS D during the p.m. peak hour.</li> <li>g) 7th Street / L Street, where the traffic generated by the project would degrade the level of service from LOS B to LOS D during the p.m. peak hour.</li> <li>h) 8th Street / L Street, where the traffic generated by the project would degrade the level of service from LOS B to LOS D during the p.m. peak hour.</li> <li>i) 9th Street / J Street, where the traffic generated by the project would degrade the level of service from LOS B to LOS E during the p.m. peak hour.</li> <li>j) 10th Street / J Street, where the traffic generated by the project would degrade the level of service from LOS C to LOS E during the p.m. peak hour.</li> <li>k) 12th Street / J Street, where the traffic generated by the project would degrade the level of service from LOS C to LOS E during the p.m. peak hour.</li> </ul>		<p>lanes) and also modify the traffic signal phase splits during the p.m. peak period by increasing the southbound 3rd Street approach to 23 seconds, decreasing the westbound L Street signal phase time to 38 seconds, and decreasing the northbound 3rd Street left-turning movement to 9 seconds. This mitigation measure would reduce average vehicle delay by 43.5 seconds during the p.m. peak hour and provide LOS C traffic operations during the a.m. peak hour. This mitigation measure would reduce the near-term cumulative impact to a less-than-significant level. The applicant of the proposed project shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.</p> <p>5.6-17c At the 3rd Street / N Street intersection, implement the near-term Mitigation Measure (c) (modification of signal phase splits). This mitigation measure would improve traffic operations to LOS C during the a.m. peak hour and would reduce the long-term cumulative impact to a less-than-significant level. The applicant of the proposed project shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.</p> <p>5.6-17d At the 3rd Street / P Street intersection, implement the near-term Mitigation Measure (d) (modification of signal phase splits). This mitigation measure would improve traffic operations to LOS C during the p.m. peak hour and would reduce the long-term cumulative impact to a less-than-significant level. The applicant of the proposed project shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.</p> <p>5.6-17e At the 5th Street / I Street intersection, modify the traffic signal phase splits during the p.m. peak period by increasing the signal phase time to 30 seconds for the northbound and southbound 5th Street approaches and decreasing the westbound I Street approach to 70 seconds. This mitigation measure would improve traffic operations to LOS C during the p.m. peak hour and would reduce the long-term cumulative impact to a less-than-significant level. The applicant of the proposed project shall pay a fair share to recover the costs of the City's Traffic</p>	

Impact	Significance Prior to Mitigation <sup>1</sup>	Mitigation Measure(s)	Significance After Mitigation
<p>l) 15th Street / J Street, where the level of service without the proposed projects would be LOS D during the p.m. peak hour and project generated traffic would increase the average vehicle delay by 52.9 seconds.</p> <p>m) 15th Street / X Street, where the level of service without the proposed projects would be LOS E during the p.m. peak hour and project generated traffic would increase the average vehicle delay by 20.8 seconds.</p> <p>n) 16th Street / H Street, where the traffic generated by the project would degrade the level of service from LOS C to LOS D during the p.m. peak hour.</p>		<p>Operation Center monitoring and retiming of this intersection.</p> <p>5.6-17f At the 5th Street / L Street intersection, implement the near-term Mitigation Measure (e) (modification of signal phase splits). This mitigation measure would improve traffic operations to LOS C during the p.m. peak hour and would reduce the long-term cumulative impact to a less-than-significant level. The applicant of the proposed project shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.</p> <p>5.6-17g At the 7th Street / L Street intersection, implement the near-term Mitigation Measure (f) (modification of signal phase splits). This mitigation measure would improve traffic operations to LOS C during the p.m. peak hour and would reduce the long-term cumulative impact to a less-than-significant level. The applicant of the proposed project shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.</p> <p>5.6-17h At the 8th Street / L Street intersection, implement the near-term Mitigation Measure (g) (modification of signal phase splits). This mitigation measure would improve traffic operations to LOS B during the p.m. peak hour and would reduce the long-term cumulative impact to a less-than-significant level. The applicant of the proposed project shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.</p> <p>5.6-17i At the 9th Street / J Street intersection, implement the near-term Mitigation Measure (h) (modification of signal phase splits). This mitigation measure would improve traffic operations to LOS C during the p.m. peak hour and would reduce the long-term cumulative impact to a less-than-significant level. The applicant of the proposed project shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.</p> <p>5.6-17j At the 10th Street / J Street intersection, implement the near-term Mitigation Measure (i) (modification of signal phase splits). This mitigation measure would improve traffic operations to LOS C during the p.m. peak hour and would reduce the long-term cumulative impact to a less-than-significant level. The applicant</p>	

Impact	Significance Prior to Mitigation <sup>1</sup>	Mitigation Measure(s)	Significance After Mitigation
		<p>of the proposed project shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.</p> <p>5.6-17k At the 12th Street / J Street intersection, modify the traffic signal phase splits during the p.m. peak period by increasing the eastbound J Street approach to 23 seconds and decreasing the southbound 12th Street and northbound right-turn movement signal phase time to 27 seconds. This mitigation measure would improve traffic operations to LOS C during the p.m. peak hour and would reduce the long-term cumulative impact to a less-than-significant level.</p> <p>5.6-17l At the 15th Street / J Street intersection, implement the near-term Mitigation Measure (k) (modification of signal phase splits). This mitigation measure would reduce average delay by 59.2 seconds during the p.m. peak hour and would reduce the long-term cumulative impact to a less-than-significant level. The applicant of the proposed project shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.</p> <p>5.6-17m At the 15th Street / X Street intersection, implement the near-term Mitigation Measure (l) (modification of signal phase splits). This mitigation measure would reduce average vehicle delay by 32.8 seconds during the p.m. peak hour and would reduce the long-term cumulative impact to a less-than-significant level. The applicant of the proposed project shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.</p> <p>5.6-17n At the 16th Street / H Street intersection, implement the near-term Mitigation Measure (m) (modification of signal phase splits). This mitigation measure would improve traffic operations to LOS C during the p.m. peak hour and would reduce the long-term cumulative impact to a less-than-significant level. The applicant of the proposed project shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.</p>	
Impact 5.6-18 Cumulative impacts to freeway mainline	S	No feasible mitigation measures were identified that would reduce the	SU

Impact	Significance Prior to Mitigation <sup>1</sup>	Mitigation Measure(s)	Significance After Mitigation
<p>under long term plus project condition</p> <p>The proposed Downtown projects would add traffic to I-5 freeway segments that would operate at LOS F without the projects.</p>		<p>impact of the project on I-5 freeway mainline segments. Widening the freeway would reduce the impact but was not considered feasible.</p>	
<p>Impact 5.6-19 Cumulative impacts to freeway merge/diverge/ weave areas under long term plus project condition</p> <p>The proposed Downtown projects would add traffic to I-5 and U.S. 50 freeway ramps that would operate at LOS F without the projects.</p>	S	<p>No feasible mitigation measures were identified that would reduce the impact of the project on I-5 and U.S. 50 freeway ramps. Widening the freeway would reduce the impact but was not considered feasible.</p>	SU
<p>Impact 5.6-20 Cumulative impacts to freeway ramp queues under long term plus project condition</p> <p>The proposed Downtown projects would add traffic to the northbound I-5 off-ramp to J Street during both the a.m. and p.m. peak hours, and the southbound I-5 off-ramp to J Street during the a.m. peak hour when the queue would exceed the ramp's storage capacity without the proposed projects.</p>	S	<p>5.6-20 The near-term Mitigation Measure (a) would reduce the queue for the northbound I-5 off-ramp queue at J Street during the p.m. peak hour to 1,725 lane feet and would reduce the long-term cumulative impact during this time period to a less-than-significant level. This mitigation measure would not significantly affect this northbound I-5 off-ramp queue at J Street during the a.m. peak hour. The mitigation measure would reduce the queue for the southbound I-5 off-ramp at J Street to 6,100 feet during the a.m. peak hour, but this would not be enough reduction to eliminate the long-range cumulative impact. Widening the freeway would reduce the impact but was not considered feasible.</p>	SU
<b>5.7 URBAN DESIGN AND AESTHETICS</b>			
<p>Impact 5.7-1 Substantial alteration to the existing visual character or quality of the project site and its surroundings</p>	LS	<p>None required</p>	LS
<p>Impact 5.7-2: Light and glare on roadways and sidewalks</p> <p>The proposed project could result in noticeable reflected glare for drivers traveling on certain city streets in mid-afternoon in the spring and in the fall.</p>	S	<p>Implementation of the following mitigation measures would ensure that exterior glass surfaces would minimize the amount of glare by requiring that surfaces avoid highly reflective materials.</p> <p>5.7-2 (a) Prior to the issuance of building permits, construction drawings shall indicate that the configuration of exterior light fixtures emphasize close spacing and lower intensity light that is directed downward in order to minimize glare on adjacent uses.</p> <p>5.7-2 (b) Highly reflective mirrored glass walls shall not be used as a primary building material for facades. Instead, Low E glass shall</p>	LS

Impact	Significance Prior to Mitigation <sup>1</sup>	Mitigation Measure(s)	Significance After Mitigation
		be used in order to reduce the reflective qualities of the building, while maintaining energy efficiency.	
Impact 5.7-3 Substantial cumulative degradation of the existing visual character or quality of the project site and its surroundings  The proposed project, in combination with other proposed high rise towers in the Central Business District, would alter the features and scale of J Street and the Downtown skyline.	LS	None required	LS
Impact 5.7-4 Cumulative light and glare on roadways and sidewalks  The proposed project would be one of numerous planned high-rise developments in the Central City that would introduce new sources of light and glare in the area surrounding the proposed project.	S	Implement Mitigation Measures 5.7-2 (a) and (b)	LS



# **4. LAND USE AND PLANNING**

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## **4.0 LAND USE AND PLANNING**

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### **INTRODUCTION**

This chapter of the Environmental Impact Report (EIR) provides an overview of the land use and planning effects that may result from development of the Metropolitan Project. This discussion differs from other discussions in that plan inconsistencies are addressed as opposed to environmental impacts and mitigation measures. Section 15125(d) of the California Environmental Quality Act (CEQA) Guidelines states that “(t)he EIR shall discuss any inconsistencies between the proposed project and applicable general plans and regional plans.”

Physical environmental impacts that could result from the proposed project or alternatives, or from inconsistencies with adopted policies designed to reduce physical effects, are discussed in the respective environmental analysis chapters in this document.

This chapter describes existing and planned land uses in and adjacent to the project site, including current land uses, land use designations, and zoning. Inconsistencies between the proposed project and the City of Sacramento General Plan, the Central City Community Plan (CCCP), the City’s Comprehensive Zoning Ordinance, Central City Housing Strategy, Merged Downtown Redevelopment Plan, Capitol View Protection Ordinance, and Cultural and Entertainment District Master Plan are discussed in the following sections. Title 15 of the City Code identifies findings and policies related to historic preservation and the City of Sacramento Listing of Landmarks, Historic Districts, and Contributing Resources (updated August 2004). This requirement is further addressed in Chapter 6.4, Cultural Resources. Consistency with the Sacramento Downtown Urban Design Plan is discussed in Chapter 5.7, Urban Design and Aesthetics.

No comments relating to land use or planning issues were raised in comment letters received in response to the Notice of Preparation (NOP).

### **ENVIRONMENTAL SETTING**

The proposed Metropolitan Project is located within the CCCP area, in the district commonly known as the Central Business District (CBD). The CBD extends roughly from H and I streets on the north, 16th Street on the east, N Street on the south, and 3rd Street or Interstate 5 (I-5) on the west (CCCP, 12/93). The Core District surrounds the CBD, from H Street on the north, 16th Street on the east, R Street on the south, and the Sacramento River on the west (CCCP, 12/93).

The CBD and Core areas serve as the government, civic, and financial center for the Sacramento region, and include the State Capitol and many affiliated State buildings. Through historic growth and development and the planned efforts of the City and Redevelopment Agency, the City of Sacramento has promoted the concept of a compact urban core in the Central City. In accordance with policies such as the Urban Design Plan and the CBD Zone, the CBD is the only area in the City with no height limitations, except within the two block area around Capitol Park subject to the Capitol View Protection Ordinance. As a consequence, this part of the Central City includes a number of high rise office towers including the Wells Fargo Building (5th and Capitol Mall - 30 stories), Capitol Bank of Commerce Center (300 Capitol Mall - 18 stories), the Plaza Office Towers Building (555 Capitol Mall - 15 stories), the Renaissance Tower (8th and K - 26 stories), the US Bank Building (8th and J - 26 stories), the Esquire Plaza

Office Building (13th and K - 28 stories), and several new towers recently approved on Capitol Mall.

The proposed project site is located on most of a half block at the northeast corner of 10<sup>th</sup> and J streets, facing Cesar Chavez Plaza. The project site is currently occupied by five vacant buildings and surface parking off the alley. The blocks surrounding the project contain principally office, office support, retail, restaurants, city and state administration buildings, a post office, a public library, and parking structures. The Alkali Flat residential neighborhood is located north of City Hall and H Street, two blocks north of the project site. Historically, the half-block containing the project site has included a variety of small-scale commercial/retail and apartment uses.

Cesar E. Chavez Plaza, located across 10<sup>th</sup> Street, is a one square block park between 9<sup>th</sup> and 10<sup>th</sup> streets, and I and J streets. Along the south edge of the Plaza, the historic 926 J Street Building on the southwest corner of 10<sup>th</sup> and J streets is being renovated for a boutique hotel, and retail storefronts are located to the west along J Street to the historic Ruhstaller building. A mid-rise residential project is located at the southwest corner of 9<sup>th</sup> and J streets.

West of the project site, along the western edge of the Plaza, is the US Bank Plaza Building and Sacramento Central Library, actually consisting of four separate structures. The structures are the US Bank Plaza Tower, a 26-story, 374-foot office tower; Central Library, the renovated main library in Sacramento; the Library Administration building; and a multi-level parking garage. These four building components are situated on the entire block between I, J, 8<sup>th</sup> and 9<sup>th</sup> streets.

Immediately north of the project site is an eight-level parking structure with ground floor retail, and the CalEPA Office complex (25 stories, 372 feet in height) across I Street. The historic Sacramento City Hall is located on the north edge of the Plaza along government oriented I Street, with the Federal Building, the County Jail, the Federal Courthouse, and the Amtrak Railroad Depot lining the north side of I Street between 10<sup>th</sup> Street and I-5.

## **LAND USE AND ZONING DESIGNATIONS**

The proposed project site is designated Community/Neighborhood Commercial and Offices in the General Plan, and zoned C-3-SPD (Central Business District Special Planning District). The C-3-SPD zone is intended for the City's most intense retail, commercial, and office development. Residential uses are permitted by right in the C-3-SPD zone subject to Design Review or a Plan Review. The site is also designated General Commercial, Multi-Use Central Business District by the CCCP.

## **REGULATORY CONTEXT**

### ***Federal***

There are no applicable federal agencies, plans, or policies that oversee local planning issues.

### ***State***

There are no applicable state agencies, plans, or policies that oversee local planning issues.

## **Local**

### City of Sacramento General Plan

The City of Sacramento General Plan is a twenty-year, long-term comprehensive policy guide for physical, economic, and environmental growth and renewal of the City. The General Plan is strongly oriented toward physical development of land uses, a circulation network, and supporting facilities and services. It is comprised of goals, policies, programs, and actions, which are based on an assessment of current and future needs and available resources. The document is the principal tool for City use in evaluating public and private building projects and municipal service improvements. Conformance of projects and improvements with the General Plan is a major step toward their approval.

The last comprehensive update to the City's General Plan was completed in 1988 covering the planning period through 2006. A General Plan Update and EIR is currently in progress, and is anticipated to be completed in 2007. Objectives for the new General Plan Update include incorporating the current City Council's vision and policy directions for Sacramento's long-term future into the scope of the General Plan, including recent policy development efforts, and reevaluating land uses within Areas of Opportunity for Reuse. Areas of Opportunity for Reuse include several developed areas where changes of land use are encouraged.

The current General Plan is divided into ten chapters including an overall policy summary, state-mandated and optional elements, and an implementation chapter. The existing General Plan land use designations for the project site are shown in **Figure 4.0-1**. The project lies within an area designated as Community/Neighborhood Commercial and Offices; the specific policies and guidelines for General Plan categories are found in the CCCP.

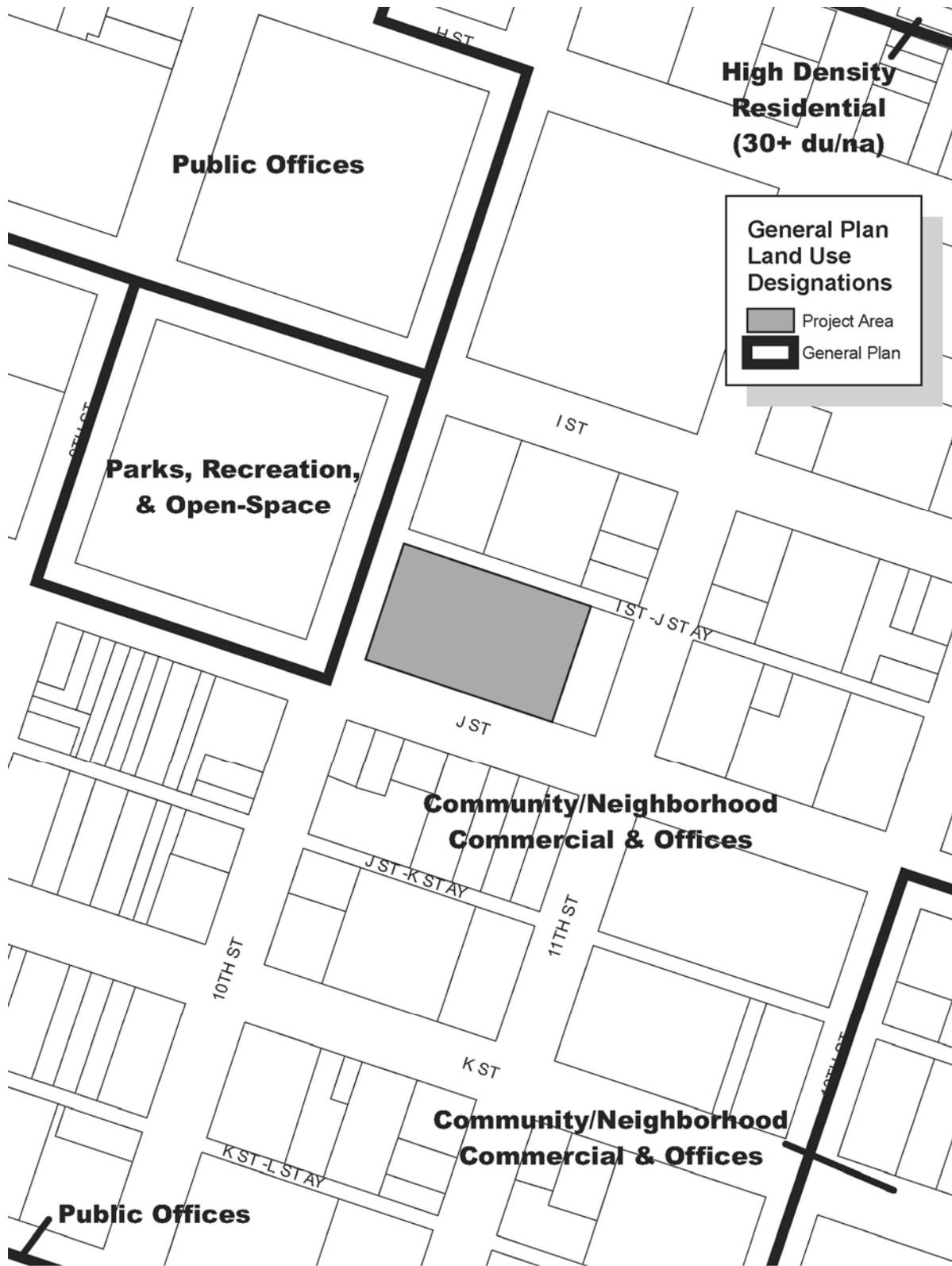
The General Plan elements most relevant to the project site are the Commerce and Industry Land Use Element, Residential Land Use Element, Housing Element, and Preservation Element. The Commerce and Industry Land Use Element specifically provides that notwithstanding the land use designations shown on the General Plan map, mixed-uses, including residential, may be allowed where the project is located in the Central City or is adjacent to a high activity node along a light rail transit corridor. Both these conditions apply to the project site.

The General Plan includes specific goals and policies that apply to the proposed project and/or alternatives, as follows:

#### *Section 1: The General Plan for Sacramento*

It is the policy of the City that:

- That adequate quality housing opportunities be provided for all income households and that projected housing needs are accommodated (Policy 2)
- ...to provide continued support of private and public efforts that promote the Central City's role as the region's commercial office, employment, and cultural center, and at the same time provide close-by housing within identifiable residential neighborhoods (Policy 3a)



Source: Ervin Consulting; 2006

**FIGURE 4.0-1  
EXISTING GENERAL PLAN DESIGNATIONS**

- a) redevelopment/blight abatement
  - ... to promote infill development, rehabilitation, and reuse that contributes positively to the surrounding area and assists in meeting neighborhood and other City goals, including the following (Policy 5):
    - a) neighborhood conservation and enhancement
    - b) economic development, particularly neighborhood serving retail, office, and employment
    - c) historic preservation
    - d) provision of a range of housing types within communities and neighborhoods, including opportunities for owner-occupied and move-up housing
    - e) development supportive of transit and other alternative modes of transportation
    - f) trip reduction and air quality improvement
    - g) environmental improvement
  - ...to promote sustainable and balanced development that makes efficient and effective use of land resources and existing infrastructure by using the following Smart Growth Principles:
    - a. Mix land uses and support vibrant city centers by giving preference to the redevelopment of city centers and transit oriented development within existing transportation corridors with vertically or horizontally integrated mixed-uses to create vibrant urban places
    - b. Create a range of housing opportunities and choices with a diversity of affordable housing near employment centers
    - c. Foster walkable, close-knit neighborhoods through a system of fully connected activity centers, streets, pedestrian paths, and bike routes
    - d. Preserve open space, farmland, natural beauty, and critical environmental areas within the urban environment and on the urban edge
    - e. Concentrate new development and target infrastructure investments within the urban core of the region to allow for efficient use of existing facilities, infill, and reuse areas
    - f. Encourage citizen and stakeholder participation in development decisions by fostering an open and inclusive dialogue that promotes alliances and partnerships to meet community needs

### *Section 2: Residential Land Use Element*

The Residential Land Use Element of the General Plan contains the following overall goals:

- Maintain and improve the quality and character of residential neighborhoods in the City (Overall Goal A)
- Provide affordable housing for all income groups (Overall Goal B)
- Meet the fair share regional housing needs for all economic segments within the City (Overall Goal C)

- Develop residential land uses in a manner which is efficient and utilizes existing and planned urban resources (Specific Goal C)
- Maintain orderly residential growth in areas where urban services are readily available or can be provided in an efficient cost effective manner (Specific Goal D)
- Provide appropriate residential opportunities to meet the City's required fair share of the region's housing needs (Specific Goal E)

### *Section 3: Housing Element*

- Provide adequate housing sites and opportunities for all households (Goal 1)
- Provide housing assistance to low- and moderate-income households (Goal 2)
- Promote a variety of housing types with neighborhoods to encourage economic diversity and housing choice (Goal 3)
- Promote quality residential infill development in infill areas or designated infill sites through flexible development standards (Goal 5, Policy 5D)
- Promote equal housing opportunity (Goal 9)

### *Section 4: Commerce and Industry Land Use Element*

The Commerce and Industry Land Use Element addresses a broad range of economic activities, facilities, and support systems that constitute Sacramento's economic base. It presents Sacramento's program for fostering economic development and ensuring the continued vitality of the City's commercial and industrial districts. The applicable goals of the Commerce and Industry Land Use Element are as follows:

#### Overall Goals

- Maintain and enhance downtown's role as regional office, retail, and employment center, with special emphasis given to promoting visitor service and cultural/entertainment uses (Goal A)
- Promote the reuse and revitalization of existing developed areas, with special emphasis on commercial and industrial districts (Goal B)

#### Downtown Sacramento

- Promote the successful development of mixed-use projects in the Central City (Goal B).
- Actively support and encourage mixed use commercial, office, and residential development in identified areas of opportunity (Goal B, Policy 1)

### *Section 5: Circulation Element*

- Maximum project densities and intensities should be encouraged within ¼ mile of light rail stations, consistent with the adopted policies of Regional Transit, the recommendations of the Transit for Livable Communities project, and the adopted land use plans and policies of the City (Goal A, Policy 8)
- Maintain the quality of the City's street system (Goal B)

- Encourage the use of light rail transit and other alternative methods of transportation to facilitate the circulation in the downtown core (Goal C, Policy 1, Section 5-15)
- Provide an adequate amount of parking to support continued downtown development prosperity, alternative modes of transportation, and the Central City Urban Design Plan (Goal D, Section 5-15)
- Provide additional parking as part of development projects and in free standing parking structures (Goal D, Policy 1, Section 5-16)

### *Section 10: Preservation Element*

- To protect and preserve important historic and cultural resources that serve as significant, visible reminders of the city's social and architectural history (Goal B)
- To foster public awareness and appreciation of the City's heritage and its historic and cultural resources (Goal D)
- To identify and protect archaeological resources that enrich our understanding of the early Sacramento area (Goal E)
- To provide incentives to encourage owners of historic properties to preserve and upgrade their properties (Goal F)

### *Central City Community Plan (CCCP)*

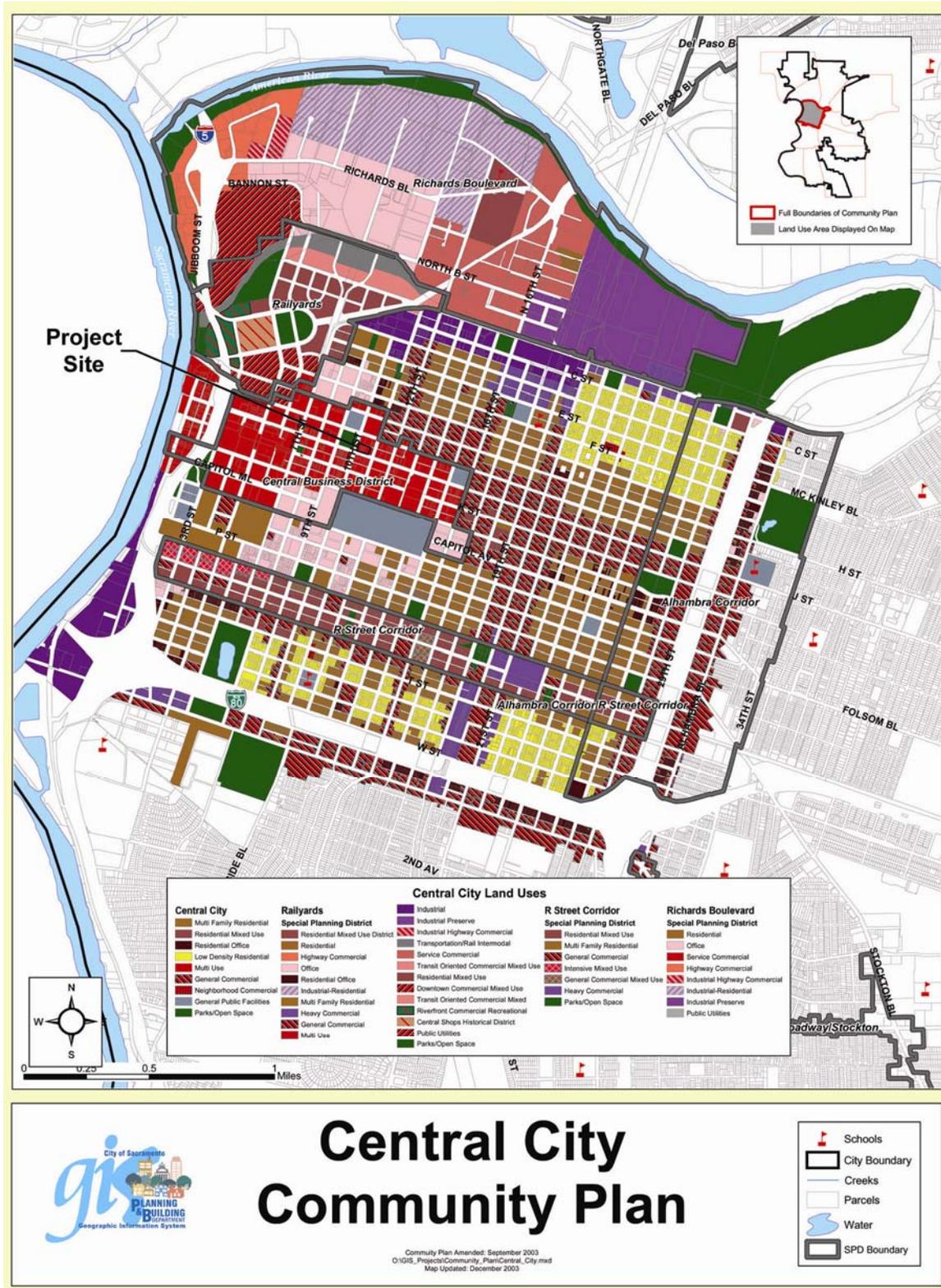
The 1980 CCCP is a component of the City's General Plan, and serves as a guide for the public and private development and revitalization of the Central City area. Current CCCP boundaries were adopted in November 1995. The CCCP provides the policy framework for an area bounded generally by the American River on the north, Broadway on the south, Alhambra Boulevard on the east, and the Sacramento River on the west. This area contains approximately 700 blocks of property commonly referred to as the Old City, as well as the areas known as the Southern Pacific Railyards, Richards Boulevard, and Sutter's Landing. The proposed project is located within the Old City.

The land use element is an essential part of a Community Plan. This element provides the basis for zoning of individual property. Both the land use element and the zoning applied after adoption of the Community Plan ensure that the use and design of new buildings complement the desired character of an area.

The project lies within an area designated as Community/Neighborhood Commercial and Offices according to the Sacramento General Plan. The specific policies and guidelines for General Plan categories are found in the CCCP. The proposed project site is located within the Central Business District sub-area of the CCCP, and is designated Multi-Use (**Figure 4.0-2**). The plan does not include a specific definition of Multi-Use, but instead translates this land use designation into zoning categories, as discussed later in this section. Within the Central City, residential uses are allowed in the C-3-SPD zone by right.

The applicable goals for the CBD included in the Central City Community Plan are:

- **Primary Goal**  
Continue revitalization of the Sacramento Central City area as a viable living, working, shopping, and cultural environment with a full range of day and night activities (Primary Goal, pg. 3)



Source: City of Sacramento GIS Department

**FIGURE 4.0-2  
CENTRAL CITY COMMUNITY PLAN**

- **Urban Development Goal**  
Provide for organized development of the Central City whereby the many interrelated land use components of the area support and reinforce each other and the vitality of the community (Urban Development Goal, pg. 6).
- **Commercial Goal**  
Provide for a range of commercial activities which meet the needs of the residents, employees, and visitors to the Central City.
- **Environmental Goal**  
Improve the physical quality of the environment for Central City residents, shoppers, employees, and visitors. Create an attractive urban setting through the preservation of existing amenities in the Central City.
- **Environmental Sub-Goal**  
Support programs for the preservation of historically and architecturally significant structures which are important to the unique character of the Central City.
- **Environmental Goal**  
Ensure that property contaminated by hazardous substances is remediated to the extent necessary to protect the health and safety of all possible site users and users of adjacent sites, consistent with applicable laws and regulations.
- **Housing and Residential Goal**  
Provide adequate housing for all residents of the Central City at all socioeconomic levels and, in particular provide the opportunity for low- and moderate-income persons to reside within the Central City. Further, provide a choice of housing types by developing new housing and conserving existing housing.
- **Housing and Residential Sub-Goal**  
Provide rental and home ownership opportunities to meet the needs of elderly persons, low- and moderate-income families, and other groups with specialized housing needs.
- **Transportation Sub-Goal**  
Provide adequate off-street parking to meet the needs of shoppers, visitors and residents; and restrain the projected increase in parking spaces needed for long-term employee parking by promoting public transit improvements, carpool programs, employer sponsored bus passes, and other alternatives to single occupant car usage.

### Zoning Code

Title 17 of the Sacramento City Code serves as the City's zoning code. Zoning is a local jurisdictional land use control that regulates the type and nature of development. Zoning ordinances regulate specific development characteristics, such as building height, bulk, and use, lot coverage, and parking requirements.

The purpose of the City's Zoning Ordinance is to regulate the use of land, building, or other structures for residences, commerce, industry, and other uses required by the community. It regulates the location, height, size of buildings or structures, yards, courts, open spaces, amount of building coverage permitted in each zone, and population density. The Ordinance also divides the City of Sacramento into zones of such shape, size, and number best suited to

carry out these regulations, and to provide for their enforcement, and ensure the provision of adequate open space for aesthetic and environmental amenities.

The proposed project site is designated Special Planning District - Central Business District (C-3 SPD) (**Figure 4.0-3**). This zone is described in Section 17.20.010 of the City Municipal Code, and applies to approximately 70 blocks of the Central City. This zone also includes additional design guidelines (landscaping, outdoor cafes, etc.) found in the Sacramento Urban Design Plan, consisting of the urban design, architectural design, and streetscape design guidelines adopted for the CBD-SPD zone, which are discussed in sub-chapter 5.7, Urban Design and Aesthetics. A special permit is required to construct a building exceeding 75,000 square feet.

The CBD or C-3 zone is the only classification which has no height limit and is intended for the most intense retail, commercial, and office developments in the city. The goals of the CBD-SPD are as follows:

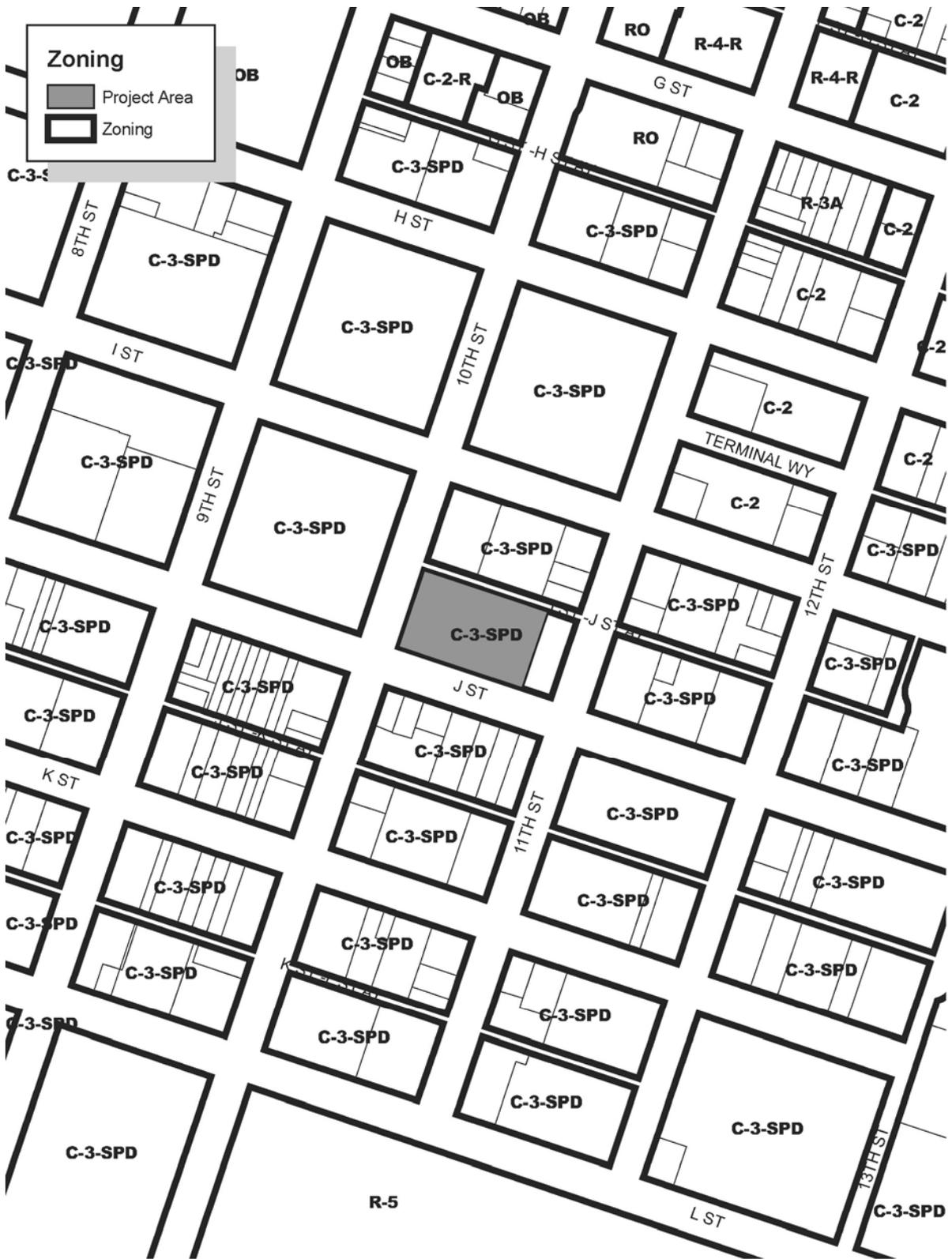
- a) Accelerate the economic revitalization process by creating a marketplace attractive to private investment;
- b) Achieve a plan for long-term economic growth through private sector incentive measures;
- c) Enhance the character of Sacramento's downtown and ensure the development of well-designed new projects by adopting the architectural design guidelines;
- d) Provide for a pleasant, rich, and diverse pedestrian experience by implementing the streetscape design guidelines;
- e) Provide for the humanization of the downtown through promotion of the arts, program of special events and activities, and overall excellence of design. (Ord. 2004-005 § 2; Ord. 99-015 § 5-1.1-A)

### *Sacramento City Historic Preservation Regulations*

Title 15 of the Sacramento City Code provides for the identification and protection of significant historic resources in the City. Pursuant to Title 15 of the City Code, the City has established a preservation program to protect and maintain the character of architecturally, historically, and culturally significant structures and sites within the City of Sacramento. New development is directed toward achieving compatible new construction that enhances existing historic values rather than diminishing them. The values of identified Historic Districts and significant historic structures are to be protected as significant resources for the general welfare of the public.

The City of Sacramento is a Certified Local Government (CLG) certified by the National Park Service and the State Office of Historic Preservation under the National Historic Preservation Act. As a CLG the City has agreed to apply the standards of the National Register of Historic Places in the survey, evaluation, and designation of historic properties. The Sacramento City Preservation Ordinance (Sacramento City Code Title 15, Chapter 15.124) specifies the same criteria for local designation as the National and California Registers. Sacramento City surveys adopted by the Design Review and Preservation Board (DRPB) and adopted by the City Council are reviewed by the State Office of Historic Preservation (OHP) and are entered in the State Historic Resources Inventory maintained by OHP.

At the conclusion of two earlier surveys, one of pre-1920 Residential Structures, and one of pre-1942 Non-Residential Structures within the Old City area bounded by Alhambra Boulevard, the B Street levee, the WX Street freeway, and Sacramento River (updated August 2004) the City



Source: Ervin Consulting, 2006

**FIGURE 4.0-3  
ZONING MAP**

Council designated by ordinance certain structures, Landmarks, and Historic Districts for listing in the Sacramento register (the ordinances adopting designations and deletions of landmarks, contributing resources, and historic districts are known collectively as the City of Sacramento

Listing of Landmarks, Historic Districts, and Contributing Resources). Protection of Landmarks may include interior spaces and features, as well as exteriors of structures.

The DRPB approval of applications to alter individually-listed structures are based on compliance with the Sacramento Register and the Secretary of the Interior's Standards for the Treatment of Historic Properties. DRPB approval is required prior to issuance of a building permit. Historic structures listed in the Sacramento register are eligible for review under the provisions of the State Historical Building Code. Consistency with this ordinance is addressed in Chapter 5.2, Cultural Resources.

#### Capitol View Protection Ordinance

On February 18, 1992, the City Council adopted the Capitol View Protection Requirements (Ordinance No. 92-008), which establishes height restrictions, setback requirements, and parking regulations for properties surrounding the State Capitol (**Figure 4.0-4**). The purpose of the Capitol View Protection Requirements is to protect the State Capitol building and the surrounding grounds of Capitol Park from adverse effects of nearby development. The proposed project partially falls within the area designated for height limits and is subject to the ordinance. The proposed project would be restricted to a 350-foot building height on the eastern portion of the site. No additional setbacks are imposed on this site under the Ordinance. Consistency with this ordinance is addressed in Chapter 5.7, Urban Design.

#### Central City Housing Strategy

The City Council adopted the Central City Housing Strategy in December 1991, which provides numerous recommendations for the preservation, maintenance, and enhancement of residential uses in the downtown area to improve the jobs/housing balance. Key recommendations of the Housing Strategy which relate to the proposed project are noted below, and labeled according to the numbering convention used in the Housing Strategy:

#### *Housing Production Recommendations*

- HP20: Participate in the construction of new housing projects to demonstrate the market for new housing in the Central City
- HP22: Require the production or funding of housing- either on-site or off-site, but within the Central City- as a component of new redevelopment projects
- HP24: Require any project receiving financial assistance to provide 20 percent affordable (very low-, low-, and moderate-income) housing units

#### Merged Downtown Sacramento Redevelopment Plan

The Merged Downtown Redevelopment Plan (Redevelopment Plan) was adopted by the Redevelopment Agency on June 17, 1986, and was last amended March 15, 2005 in accordance with the Community Redevelopment Law of the State of California. The Amended Redevelopment Plan provides the Redevelopment Agency with powers, duties, and obligations to implement and continue its program for the redevelopment, rehabilitation, and revitalization of

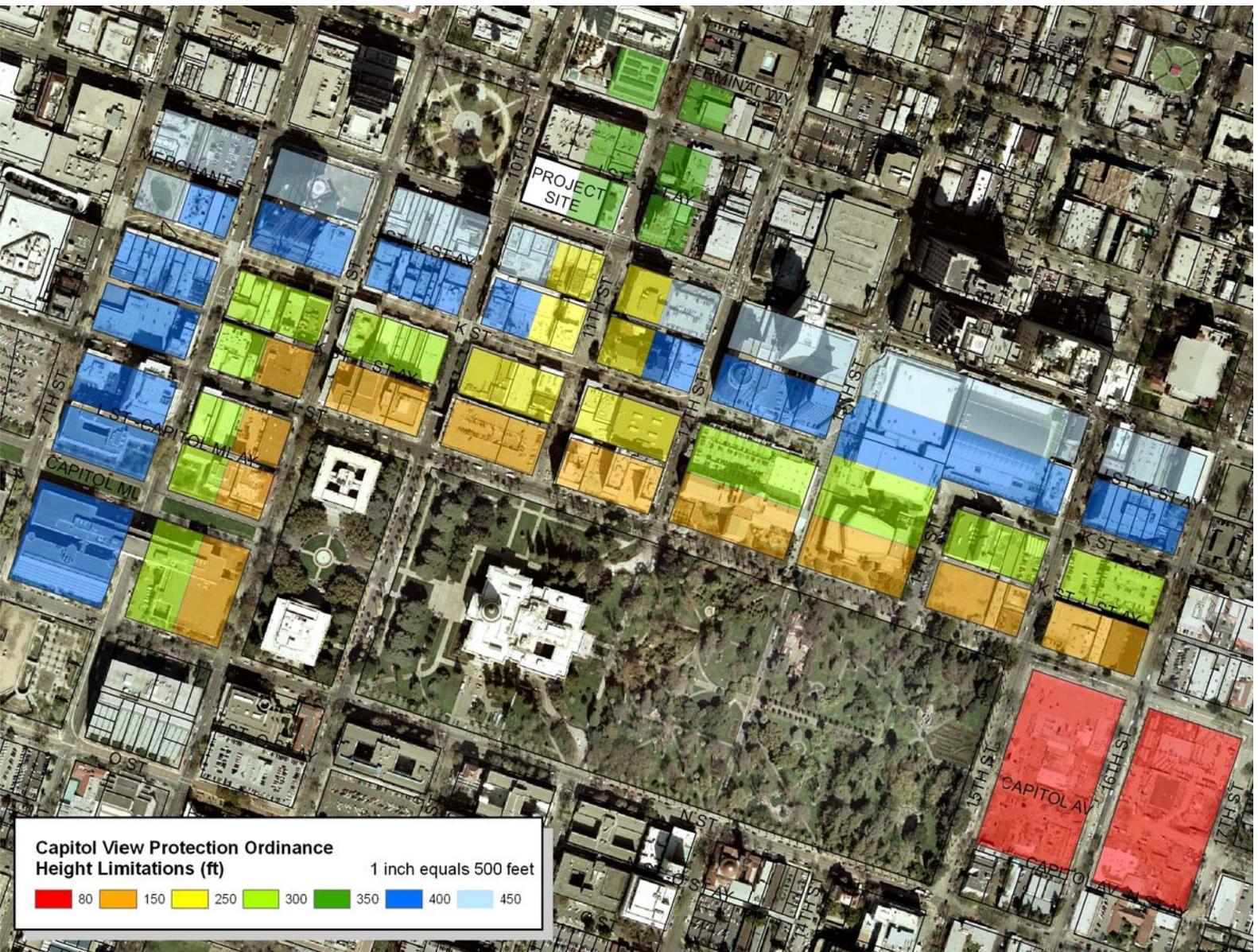


FIGURE 4.0-4  
CAPITOL VIEW PROTECTION ORDINANCE

the redevelopment project area, with a key focus on existing blight (**Figure 4.0-5**). The key goals and objectives of the Redevelopment Plan that apply to the proposed project include the following:

- Goal 2: The assembly of land into parcels suitable for modern, integrated development with improved pedestrian and vehicular circulation in the Merged project site
- Goal 3: The replanning, redesign, and development of undeveloped areas which are stagnant or improperly utilized
- Goal 4: The strengthening of retail and other commercial functions in the downtown area
- Goal 8: The expansion and improvement of the community's supply of housing, including low- and moderate-income housing
- Goal 10: The preservation and/or restoration, where feasible, of historically or architecturally significant structures
- Goal 11: The provision of opportunities for participation by owners and business tenants in the revitalization of their properties

The specific redevelopment strategy that applies to the project site includes:

*Strategy #4: Development of Housing and Mixed-Use Projects as Revitalization Catalysts*

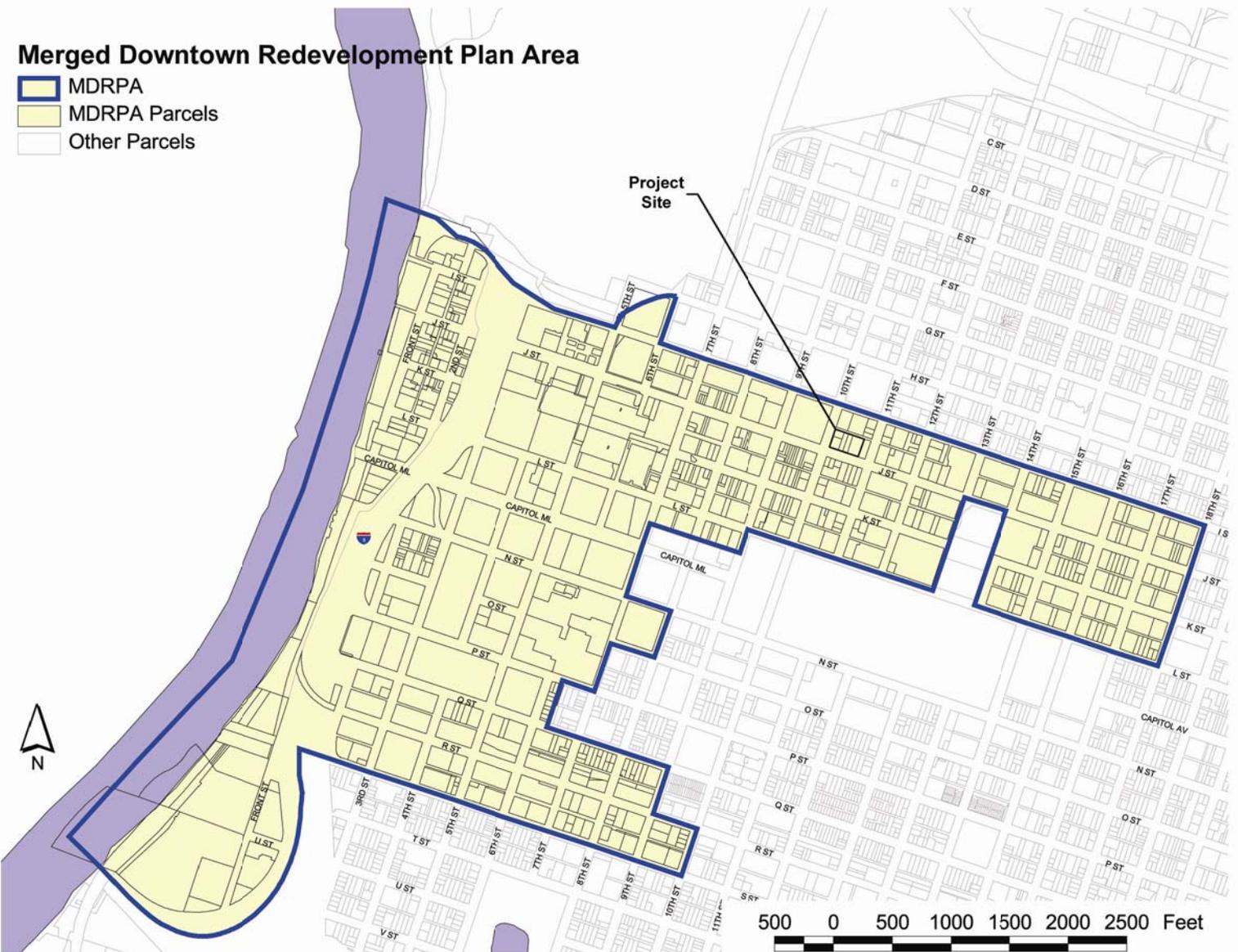
Continue to support development of housing and mixed-use projects in the Central City with an emphasis on developments that will build a critical mass of residential population to support other activities in the CBD.

*Sacramento Downtown Cultural and Entertainment District Master Plan*

On May 22, 1990, the City Council adopted the Downtown Cultural and Entertainment District Master Plan. The northern portion of the project site falls within the boundaries of this Master Plan (**Figure 4.0-6**). The Master Plan works "to enhance the mix and vitality of activities and their linkages."

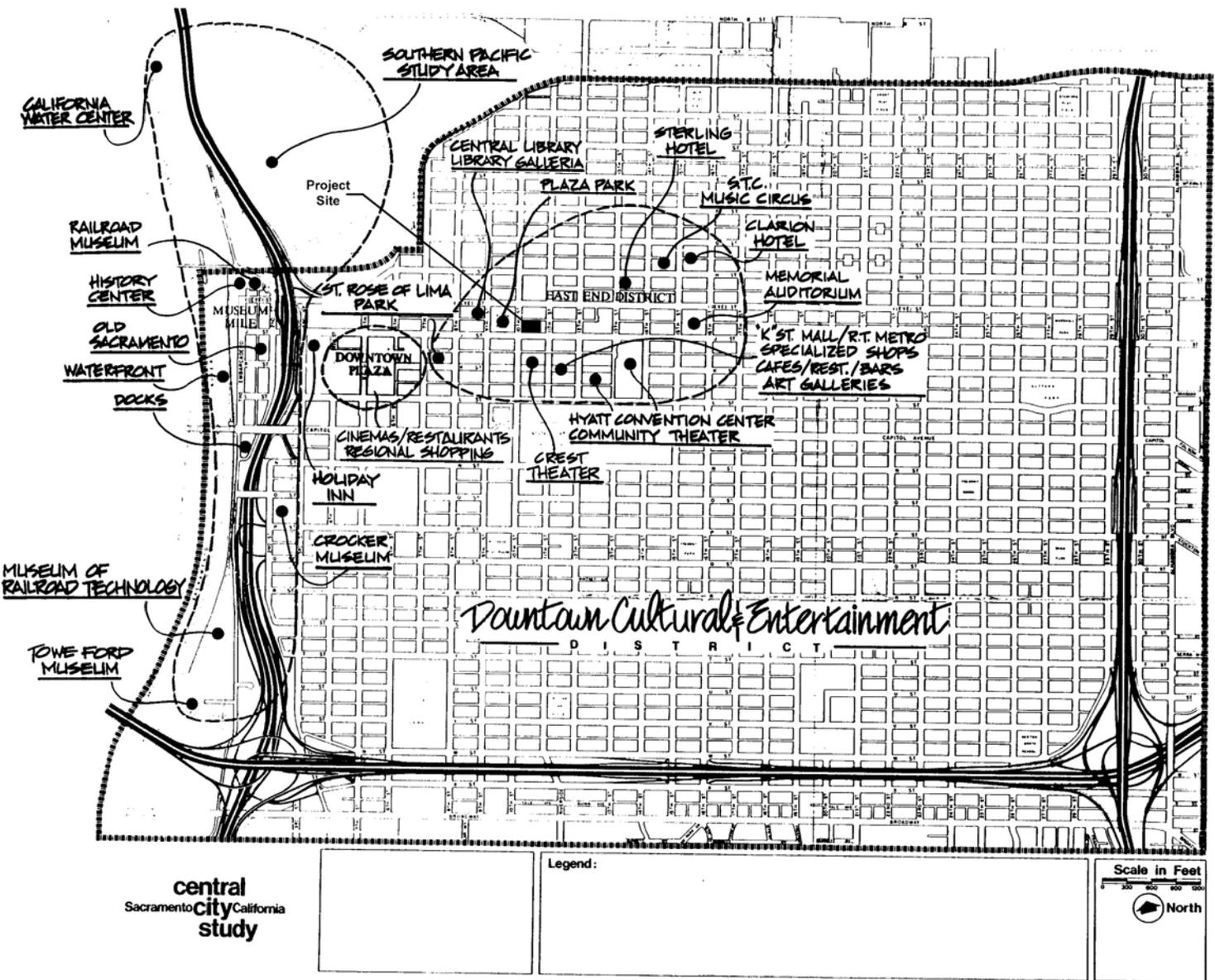
The Master Plan identifies the means of implementing the cultural and entertainment facilities and activities necessary to achieve the goal of a lively and active downtown. Key recommendations applicable to the proposed project include:

5. "Encourage and enhance the pedestrian experience by creating a comfortable and pleasing environment through the use of special lighting, thematic signage, public art, well-designed street furniture, water features, and indigenous landscaping. Acknowledge the significance of pedestrian circulation and linkages between event sites, restaurants, and parking."
7. "...encourage the inclusion of cultural facilities, entertainment venues, and supporting retail uses in mixed-use development projects."
8. "...increase the viability of retail, restaurant, nightclub, and entertainment uses. Further enhance the environment of these types of businesses by removing present economic disincentives." The Master Plan also recognizes ground floor retail as an important component to establishing street level interest and continuity.



Source: City of Sacramento GIS Department

**FIGURE 4.0-5**  
**MERGED DOWNTOWN REDEVELOPMENT PLAN**



Source: City of Sacramento

FIGURE 4.0-6  
DOWNTOWN CULTURAL & ENTERTAINMENT DISTRICT

central  
Sacramento City California  
study

## LAND USE EVALUATION

This section evaluates the proposed project for compatibility with existing and planned adjacent land uses and for consistency with adopted plans, policies, and zoning designations. Environmental impacts resulting from the proposed project are discussed in the applicable environmental sections in this EIR. This section differs from impact discussions in that only compatibility and consistency issues are discussed, as opposed to environmental impacts and mitigation measures. This discussion complies with Section 15125(d) of the CEQA Guidelines, which requires EIRs to discuss inconsistencies with general plans and regional plans as part of the environmental setting.

### COMPATIBILITY WITH EXISTING AND PLANNED ADJACENT LAND USES

The proposed project would substantially alter and intensify development of the project site. Specifically, the project would replace five existing vacant buildings with the development of a 39-story residential tower on podium parking with ground floor retail. The immediate project vicinity contains a broad mix of public, retail, office, residential, and commercial uses, including numerous high-rise buildings and public open space. The proposed intensity and use is **compatible** with adjacent high-rise office, retail, and public facilities and in keeping with the adopted plans and policies for the area that designate and zone the site CBD, allowing for the most intense types of development. Furthermore, the proposed project would improve the jobs/housing balance in the Central City and increase the economic viability of the existing uses in the CBD.

### CONSISTENCY WITH ADOPTED PLANS, POLICIES, AND ZONING

#### *City of Sacramento General Plan*

The proposed project includes residential, retail, and parking uses that are allowed under the Community/Neighborhood Commercial and Offices designation, and thus is **consistent** with the General Plan designation. Based on this consistency, the City Planning Department has determined that no General Plan amendments are necessary for the proposed project. The proposed project supports the General Plan goals, particularly the goals and policies related to maintaining and strengthening Downtown's role as a major regional office, retail, commercial, and cultural/entertainment center by meeting the goals and policies promoting downtown housing development. It would provide a mix of downtown commercial, residential, and retail uses, and maximize development on an otherwise underutilized and blighted parcel. The mixed-use nature of the proposed project meets the intent of the General Plan's goals of mixed-use development and increases housing choices in Downtown Sacramento. The project site is located within one block of light rail transit, is located on major bus routes, and provides sufficient additional parking consistent with the Circulation Element's goals to support continued downtown development prosperity and alternative transportation modes. Therefore, the proposed project would be considered consistent with the intent of the City's goals and policies pertaining to the provision of residential and commercial facilities.

### ***Central City Community Plan***

The residential and retail/commercial uses in the proposed project are allowable uses in the Multi-Use designation, and would be **consistent** with the CCCP. Based on this consistency, the City Planning Department has determined that no Community Plan Amendments are necessary for the project. The proposed project supports and conforms to the goals for development of interrelated land use components in the CBD. The project site is within the CBD area set aside for the most intense developments, with good pedestrian linkages to related retail, cultural and entertainment facilities, Cesar E. Chavez Plaza, and governmental office buildings such as City Hall, the federal building, and the Post Office, and the State Capitol. The proposed project includes housing and is specifically designed to meet the Primary Goal of continued revitalization of the Sacramento Central City area as a viable living, working, shopping and cultural environment with a full range of day and night activities. The residential and retail uses of the proposed project would be consistent with the remaining identified goals of the Community Plan area. Therefore, the proposed project would be generally consistent with the intent of the CCCP goals and policies.

### ***City of Sacramento Zoning Ordinance***

The proposed project is located in the Central Business District Zone-Special Planning District (C-3-SPD). The proposed use, height, and lot configuration for the proposed project conforms to the adopted C-3-SPD zoning. The City Planning Department in its preliminary review of the project determined that the proposed project is **consistent** with the adopted zoning, and that no zone change is necessary. The C-3-SPD has no height limit except in those areas restricted by the Capitol View Protection Ordinance, and is intended for the most intense retail, commercial, and office development in the City. Residential uses are permitted by right within the Central Business District; in order to allow the development of a condominium tower on the proposed project site, a special permit allowing the development of condominium uses would be required. With the issuance of the required permits for condominium units, the proposed project would be considered consistent with the City's Zoning Ordinance.

The proposed project would generally conform to Zoning Ordinance goals and requirements for the C-3 zone. It would revitalize the area by developing vacant and underutilized parcels. It would conform to a variety of community plan and urban design-oriented plans (discussed in Section 5.7, Urban Design), thereby supporting the urban development goal. It provides both downtown residential development and commercial uses, which will support economic growth. Therefore, the proposed project would not conflict with the City's Zoning Ordinance.

### ***Merged Downtown Redevelopment Plan***

The proposed project would develop retail, residential, and commercial uses on underutilized and vacant parcels, which would be **consistent** with the Merged Downtown Redevelopment Plan. Additional off-street parking opportunities would be provided; the project would exceed City parking requirements, therefore adding to the parking supply in the CBD. The proposed project would add street trees along 10<sup>th</sup> and J streets, and other streetscape improvements. The consolidation of parcels and development of retail and residential uses on the project site would provide more retail development and introduce a significant number of new residents and some employees within a block of K Street's retail and light rail transit. Therefore, the proposed project would not conflict with the goals and objectives of the Merged Downtown Redevelopment Plan.

### ***Central City Housing Strategy***

Housing Strategies HP 20 and HP22 strive to increase the downtown housing supply, which the proposed project would provide. The proposed project would be consistent with recommendations HP20 and HP22, but only market rate housing is proposed on the site. However, housing is not identified as a priority for this site. Therefore, the proposed project is **consistent** with the Housing Strategy.

### ***Capitol View Protection Ordinance***

Approximately 200 feet west of 11<sup>th</sup> Street, the project site is within the 350-foot height restrictions of the Ordinance. The residential tower is oriented towards the western portion of the site along 10<sup>th</sup> Street, and steps down towards 11<sup>th</sup> Street. The proposed project would be a maximum of 335-feet in height measured to the floor of highest living area along the eastern portion of the site. There is no height restriction on the western portion of the site. Therefore, the proposed project would be **consistent** with the Capitol View Protection requirements.

### ***Sacramento Downtown Cultural and Entertainment District Master Plan***

The proposed project would meet Recommendation 4 by providing residential uses within a block of light rail transit and extensive bus service along J Street. The proposed project would also make streetscape improvements and provide a sidewalk arcade and outdoor plaza across from Cesar Chavez Plaza. Development of the proposed project would remove present economic disincentives caused by the current vacant and blighted condition of the site, consistent with Recommendation 8. Therefore, the proposed project would be **consistent** with the Cultural and Entertainment District Master Plan.



# **5. ENVIRONMENTAL ANALYSIS**

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## **5.0 INTRODUCTION TO THE ANALYSIS**

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### **FORMAT OF THE ENVIRONMENTAL ANALYSIS**

Each analysis chapter is organized to discuss the environmental setting, regulatory setting, project impact, method of analysis, standards of significance, and mitigation measures, as discussed below. References are consolidated in Chapter 8.

#### **EXISTING CONDITIONS**

According to Section 15125 of the California Environmental Quality Act (CEQA) Guidelines, an Environmental Impact Report (EIR) must include a description of the existing physical environmental conditions in the vicinity of the proposed project to provide the baseline condition against which project-related impacts are compared. Normally, the baseline condition is the physical condition that exists when the Notice of Preparation (NOP) is published, although CEQA Guidelines recognize that the date for establishing an environmental baseline cannot be rigid. The NOP for the proposed project EIR was published on April 26, 2006. Because physical environmental conditions may vary over a range of time periods, the use of environmental baselines that differ from the date of the NOP is reasonable and appropriate when doing so results in a more accurate or conservative environmental analysis.

For analytical purposes, impacts associated with implementation of the proposed project are derived from two fundamental components of the existing baseline environmental setting—existing conditions at the time the NOP was published and conditions that exist at build-out of the Sacramento General Plan. It is appropriate to evaluate project-level impacts against the conditions that exist when the NOP was published for most issue areas. For issue areas either directly or indirectly related to infrastructure, project-level impacts are more conservatively analyzed against future baseline conditions that consider General Plan and approved growth, because improvements (e.g., roadway widenings, intersection improvements, wastewater distribution and conveyance, solid waste disposal, water supply, electricity, and natural gas supplies) must consider and accommodate ultimate demand.

The cumulative baseline used in the Air Quality and Noise analyses was derived from the Transportation and Circulation analysis prepared by DKS Associates in coordination with the City of Sacramento. The project level transportation analysis is based on the City's Cumulative Traffic Study completed in March 2006 by Dowling Associates, which identified existing conditions and a cumulative baseline for downtown traffic based on a list of proposed projects in the Downtown Study Area.

#### **REGULATORY CONTEXT**

The Regulatory Context provides a summary of federal, state, and local regulations, plans, policies, and laws that are relevant to each issue area.

## **IMPACTS AND MITIGATION MEASURES**

This section is further divided into the following subsections, as described below.

### ***Method of Analysis***

This subsection identifies the methodology used in that sub-chapter to analyze potential environmental impacts.

### ***Standards of Significance***

The CEQA Guidelines define a significant effect on the environment as “a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic and aesthetic significance” (CEQA Guidelines Section 15382). Definitions of significance vary with the physical conditions affected and the setting in which the change occurs. The CEQA Guidelines set forth physical impacts that trigger the requirement to make mandatory findings of significance (CEQA Guidelines, Section 15091). For all environmental issues, this EIR identifies specific standards of significance.

Where explicit quantification of significance is identified, such as a violation of an ambient air quality standard, this quantity is used to assess the level of significance of a particular impact in this EIR. For less easily quantifiable impacts, events or occurrences that would be regarded as significant or potentially significant were identified. For example, growth-inducing impacts would be identified as significant if the project results in a level, rate, or character of growth that (among other criteria) exceeds the capacity of existing infrastructure and services. Where the substantial effect of an impact is not identified in the CEQA Guidelines, the criteria for evaluating the significance of potential impacts were determined and identified in this document.

### ***Project-Specific Impacts and Mitigation Measures***

This section describes the potential environmental impacts of the proposed project and, based upon the thresholds of significance, concludes whether the project specific environmental impacts would be considered significant, potentially significant, or less than significant. Each impact is summarized in an impact statement, followed by a more detailed discussion of the potential impacts and the significance of each impact before mitigation.

Each impact is provided as a summary block prior to the impact discussion to allow for easy reference. The impact number consists of the section of the EIR in which that impact is identified followed by a hyphen to indicate the number of the impact in that sub-chapter. For example, Impact 5.1-1 is the first impact identified in sub-chapter 5.1.

The analysis of environmental impacts considers both the construction and operational phases associated with implementation of the proposed project. As required by Section 15126.2(a) of the CEQA Guidelines, direct, indirect, short-term, long-term, on-site, and/or off-site impacts are addressed, as appropriate, for the environmental issue area being analyzed.

A significant effect is defined by Section 15382 of the CEQA Guidelines as “a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of

historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment... [but] may be considered in determining whether the physical change is significant.” The Draft EIR uses the following terms to describe the level of significance of impacts identified during the course of the environmental analysis:

- **Significant and Unavoidable Impact (SU)**—Impact that exceeds the defined threshold(s) of significance and cannot be eliminated or reduced to a less-than-significant level through the implementation of feasible mitigation measures.
- **Significant Impact (S)**—Impact that exceeds the defined threshold(s) of significance. For purposes of this document, pre-mitigation impacts that exceed the defined threshold(s) of significance are referred to as significant; however, when the impacts cannot be eliminated or reduced to a less-than-significant level through the implementation of feasible mitigation measures, these impacts are referred to as significant and unavoidable.
- **Less-Than-Significant Impact (LS)**—Impact that does not exceed the defined threshold(s) of significance. This term is used for impacts for which mitigation measure(s) identified can reduce a pre-mitigation impact to a less-than-significant level.
- **No Impact (NI)** —The project would result in no impact.

### ***Cumulative Impacts and Mitigation Measures***

This section describes the potential cumulatively significant environmental impacts of the proposed project in combination with other proposed projects and future development in the vicinity. As described for project specific impacts above, potential impacts are measured against thresholds of significance, and the analysis concludes whether the cumulative environmental impacts would be considered significant, potentially significant, or less than significant. Each cumulative impact is summarized in an impact statement, followed by a more detailed discussion of the potential impacts and the significance of each impact before mitigation.

### ***Mitigation Measures***

This section is provided for both project specific and cumulative impacts, and provides feasible mitigation measures that could reduce the severity of the identified impact. In addition to feasible mitigation measures, it is assumed that the project applicant would also continue to comply with all applicable local, State, and federal laws and regulations, and these laws and regulations are considered to be part of the project description. In many instances, the actions that are necessary to reduce a project impact are already required by local, State, or federal law. Similarly, established design guidelines or other requirements that the City regularly recognizes and follows for development projects are also considered part of the project description. In this EIR, such requirements are identified and considered in the impact assessment *prior to* the identification of additional project-specific mitigation measures that would reduce the level of significance of impacts.

### ***Significance after Mitigation***

Following the description of applicable policies and regulations, as well as mitigation measures, each impact section concludes with a statement regarding whether the impact, following implementation of the mitigation measure(s) and/or the continuation of existing policies and

regulations, would remain significant, and thus would be reduced to a less-than-significant level or be significant and unavoidable.

## **5.1 AIR QUALITY**



## **5.1 AIR QUALITY/MICROCLIMATE**

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### **INTRODUCTION**

This section assesses the potential air quality effects of the Metropolitan Project (proposed project) and recommends mitigation measures to reduce or eliminate significant impacts. This section describes the climate in the project area; existing air quality conditions for criteria air pollutants and toxic air contaminants; and applicable federal, State, and regional air quality standards. This section analyzes the air quality effects caused by stationary and mobile sources related to construction and operation of the proposed project. Microclimate issues relating to shadowing effects and solar glare are also discussed in this chapter.

As discussed in the Initial Study (Appendix B), there are no substantial odor sources in the project vicinity and the proposed project would not generate substantial odors. This issue is not further discussed in this section.

Public comments received in response to the NOP (Appendix A) covered a range of air quality issues. The Sacramento Metropolitan Air Quality Management District (SMAQMD) requested that potential impacts to regional air quality be analyzed and mitigated, and also provided guidance on preparing the air quality analysis of this EIR. A member of the public also identified a concern with shadow effects and air quality. All of these issues and concerns have been addressed in this section.

Sources reviewed for this section include the SMAQMD Guide to Air Quality Assessment in Sacramento County, the City of Sacramento General Plan, and the California Air Resources Board (CARB) web site.

### **EXISTING CONDITIONS**

The Central City is the most densely developed area of the region, with several freeways, extensive transit, heavy rail, and surface street traffic congestion. This area is a part of the Sacramento regional air basin, which is influenced by the region's climate, topography, and pollutant sources that result in a potential for high concentrations of regional and localized air pollutants.

The proposed project site is located in the City of Sacramento Central Business District (CBD), adjacent to Cesar Chavez Plaza Park, a one city block public park. Surrounding land uses include parking, office, retail, and park; there are no known land uses (such as dry cleaners or industrial uses) that emit toxic air contaminants near the site. The site is 8 blocks from the nearest freeway, and 10<sup>th</sup> and J streets are projected to contain less than 30,000 vehicles per day under future 2030 conditions.

### **CLIMATE AND METEOROLOGY**

Climate and air quality are determined by the geographic location, topography, and urbanization of an area. This section describes pertinent characteristics of the air basin and provides an overview of the physical conditions affecting pollutant dispersion in the project area.

### ***Climate***

The project site is located in the City of Sacramento, which lies within the Sacramento Valley Air Basin (SVAB). The climate of the SVAB is Mediterranean in character, with mild, rainy winter weather from November through March. Rainfall averages nearly 20 inches per year, with almost all occurring between November and March. The climate is warm to hot, with dry weather from May through September, with maximum temperatures frequently approaching or exceeding 100 degrees Fahrenheit. The physiographic features giving shape to the SVAB are the Coast Range to the west, the Sierra Nevada to the east, and the Cascade Range to the north. These ranges channel winds through the Sacramento Valley, but also inhibit dispersion of pollutant emissions.

The City is 55 miles northeast of the Carquinez Strait, a sea-level gap between the Coast Range and the Diablo Range. The intervening terrain between Sacramento and the strait is primarily flat. The prevailing wind is from the south, primarily because of marine breezes through the Carquinez Strait. During winter, sea breezes diminish and winds blow from the north more frequently.

### ***Meteorological Influences on Air Quality***

Vertical dispersion of air pollutants in the SVAB is often hampered by the presence of a persistent temperature inversion in the atmospheric layers of the earth's surface. The net input of cumulative pollutants into the atmosphere from mobile and stationary sources does not vary substantially by season. The duration of an inversion layer increases the concentration of pollutants in the inversion layer. Strong winds or daytime warming of the surface air layer is required to disperse the pollutants horizontally. During the winter, motor vehicle emissions such as carbon monoxide (CO) and nitrogen dioxide (NO<sub>2</sub>) are of concern because of low inversions and stagnant air that prevent them from dispersing. Ozone (O<sub>3</sub>) is less prevalent in the winter due to the lack of intense sunlight needed to produce it from its chemical precursors, volatile organic compounds (VOCs) and oxides of nitrogen (NO<sub>x</sub>) with higher O<sub>3</sub> levels occurring between the late spring and early fall.

### **CRITERIA AIR POLLUTANTS**

Air Pollution is a general term that refers to one or more chemical substances that degrade the quality of the atmosphere. Individual air pollutants may adversely affect human or animal health, reduce visibility, damage property, and reduce the productivity or vigor of crops and natural vegetation.

Seven air pollutants have been identified by the U.S. Environmental Protection Agency (EPA) as being of concern nationwide: CO; O<sub>3</sub>; NO<sub>2</sub>; particulate matter sized 10 microns or less (PM<sub>10</sub>), also called respirable particulate and suspended particulate; fine particulate matter equal to or less than 2.5 microns in size (PM<sub>2.5</sub>); sulfur dioxide (SO<sub>2</sub>); and lead (Pb). These pollutants are collectively referred to as criteria pollutants. The sources of these pollutants, their effects on human health and the nation's welfare, and their final deposition in the atmosphere vary considerably.

Most of the criteria pollutants are directly emitted. Ozone, however, is a secondary pollutant that is formed in the atmosphere by chemical reactions between NO<sub>x</sub> and VOCs, most commonly referred to as reactive organic gases (ROG). According to the most recent

emissions inventory data for Sacramento County, mobile sources are the largest contributors of both ROG and NO<sub>x</sub>.

Criteria air pollutants are classified in each air basin, county, or in some cases, within a specific urbanized area. The classification is determined by comparing actual monitoring data with State and federal standards. If a pollutant concentration is lower than the standard, the area is classified as attainment for that pollutant. If an area exceeds the standard, the area is classified as nonattainment for that pollutant. If there is not enough data available to determine whether the standard has been exceeded in an area, the area is designated unclassified.

The ambient air quality standards and the SVAB's attainment status for the criteria pollutants are summarized in **Table 5.1-1**. **Table 5.1-2** lists the health effects associated with these pollutants. Monitors that collect air quality data are located throughout the SVAB. The closest monitoring station to the project site is the Sacramento, T-Street station, located in downtown Sacramento at 1309 T Street. This monitoring station is operated by the CARB. Recent air quality data collected at this monitoring site is summarized in **Table 5.1-3**.

### ***Existing Attainment Status***

The EPA and CARB have designated the Sacramento region as a serious nonattainment area for O<sub>3</sub>, with special requirements for the attainment of National Ambient Air Quality Standards (NAAQS). (The Sacramento region was designated as a severe ozone nonattainment area prior to EPA's revocation of the 1-hour ozone standard on June 15, 2005.) These requirements include use of reasonably available control technology (RACT), vapor recovery on fuel systems, motor vehicle inspection and maintenance programs, emission offsets, transportation control measures, and other reductions in VOCs and NO<sub>x</sub>.

The County is also designated nonattainment/moderate for federal 24-hour PM<sub>10</sub> AAQS and nonattainment for state 24-hour PM<sub>10</sub> AAQS (Environmental Protection Agency, December 2004 and California Air Resources Board, March 2005). It is designated as attainment for the 24-hour and annual federal PM<sub>2.5</sub> standards and unclassified for the state annual PM<sub>2.5</sub> standard. In addition, the County is designated as an attainment area for federal and state SO<sub>2</sub>, NO<sub>2</sub>, and CO standards.

### ***Ozone (O<sub>3</sub>)***

O<sub>3</sub> is the principal component of smog, and is formed in the atmosphere through a series of reactions involving ROG and NO<sub>x</sub> in the presence of sunlight. ROG and NO<sub>x</sub> are called precursors of O<sub>3</sub>; NO<sub>x</sub> includes various combinations of nitrogen and oxygen, including NO, NO<sub>2</sub>, NO<sub>3</sub>, etc. O<sub>3</sub> is a principal cause of lung and eye irritation in the urban environment. Significant O<sub>3</sub> concentrations are normally produced only in the summer, when atmospheric inversions are greatest and temperatures are high. ROG and NO<sub>x</sub> emissions are critical in O<sub>3</sub> formation. Control strategies for O<sub>3</sub> have focused on reducing emissions from vehicles, industrial processes using solvents and coatings, and consumer products.

**TABLE 5.1-1  
NATIONAL AND CALIFORNIA AMBIENT AIR QUALITY STANDARDS**

Pollutant	Averaging Time	California Standards <sup>1</sup>	Federal Standards <sup>2</sup>	
		Concentration <sup>3</sup>	Primary <sup>3,4</sup>	Secondary <sup>3,5</sup>
Ozone (O <sub>3</sub> )	1 Hour	0.09 ppm (180 µg/m <sup>3</sup> )	--	Same as Primary Standard
	8 Hour	0.07 ppm <sup>7</sup> (137 µg/m <sup>3</sup> )	0.08 ppm (157 µg/m <sup>3</sup> ) <sup>6</sup>	
Carbon Monoxide (CO)	8 Hour	9.0 ppm (10 mg/m <sup>3</sup> )	9 ppm (10 mg/m <sup>3</sup> )	None
	1 Hour	20 ppm (23 mg/m <sup>3</sup> )	35 ppm (40 mg/m <sup>3</sup> )	
Nitrogen Dioxide (NO <sub>2</sub> )	Annual Arithmetic Mean	-	0.053 ppm (100 µg/m <sup>3</sup> )	Same as Primary Standard
	1 Hour	0.25 ppm (470 µg/m <sup>3</sup> )	-	
Sulfur Dioxide (SO <sub>2</sub> )	Annual Arithmetic Mean	-	0.030 ppm (80 µg/m <sup>3</sup> )	-
	24 Hour	0.04 ppm (105 µg/m <sup>3</sup> )	0.14 ppm (365 µg/m <sup>3</sup> )	-
	3 Hour	-	-	0.5 ppm (1300 µg/m <sup>3</sup> )
	1 Hour	0.25 ppm (655 µg/m <sup>3</sup> )	-	-
Respirable Particulate Matter (PM <sub>10</sub> )	24 Hour	50 µg/m <sup>3</sup>	150 µg/m <sup>3</sup>	Same as Primary Standard
	Annual Arithmetic Mean	20 µg/m <sup>3</sup>	50 µg/ m <sup>3</sup>	
Fine Particulate Matter (PM <sub>2.5</sub> )	24 Hour	No separate state standard	65 µg/m <sup>3</sup>	Same as Primary Standard
	Annual Arithmetic Mean	12 µg/m <sup>3</sup>	15 µg/m <sup>3</sup>	
Lead (Pb) <sup>7</sup>	30 Day Average	1.5 µg/m <sup>3</sup>	-	-
	Calendar Quarter	-	1.5 µg/m <sup>3</sup>	Same as Primary Standard
Visibility Reducing Particles	8 Hour	Extinction coefficient of 0.23 per kilometer – visibility within 10 miles or more due to particles when the relative humidity is less than 70 percent. Method: Beta Attenuation and Transmittance through Filter Tape	No Federal Standards	
Sulfates (SO <sub>4</sub> )	24 Hour	25 µg/m <sup>3</sup>		
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m <sup>3</sup> )		
Vinyl Chloride <sup>7</sup>	24 Hour	0.01 ppm (26 µg/m <sup>3</sup> )		
<b>See footnotes on next page</b>				

Pollutant	Averaging Time	California Standards <sup>1</sup>	Federal Standards <sup>2</sup>	
		Concentration <sup>3</sup>	Primary <sup>3,4</sup>	Secondary <sup>3,5</sup>
<p><sup>1</sup> California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, suspended particulate matter—PM10, PM2.5, 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 Section 70200 of Title 17 of the California Code of Regulations.</p> <p><sup>2</sup> National standards (other than ozone, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest eight hour concentration in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m3 is equal to or less than one. For PM2.5, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact U.S. EPA for further clarification and current federal policies.</p> <p><sup>3</sup> Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.</p> <p><sup>4</sup> National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.</p> <p><sup>5</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.</p> <p><sup>6</sup> New federal 8-hour ozone and fine particulate matter standards were promulgated by U.S. EPA on July 18, 1997. Contact U.S. EPA for further clarification and current federal policies.</p> <p><sup>7</sup> The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.</p>				

Source: California Air Resources Board (CARB) 5/17/06

**TABLE 5.2-2  
HEALTH EFFECTS SUMMARY OF THE MAJOR CRITERIA AIR POLLUTANTS**

Air Pollutant	Adverse Effects
Ozone	Eye irritation; Respiratory function impairment
Carbon Monoxide	Impairment of oxygen transport in the blood stream; Aggravation of cardiovascular disease; Impairment of central nervous system function; Fatigue, headache, confusion, dizziness; Can be fatal in the case of very high concentrations in enclosed places
Particulate Matter	May be inhaled and lodge in and irritate the lungs Increased risk of chronic respiratory disease with long exposure; Altered lung function in children; May produce acute illness with sulfur dioxide
Nitrogen Dioxide	Increased risk of acute and chronic respiratory disease
Sulfur Dioxide	Irritation of lung tissue; Increased risk of acute and chronic respiratory disease

Source: Monterey Bay Unified Air Pollution Control District – CEQA Air Quality Guidelines, 1995, revised 2004. Pages 3-1 to 3-5.

**TABLE 5.1-3  
SUMMARY OF AIR POLLUTANT DATA FROM T STREET MONITORING STATION, SACRAMENTO  
(COMPARED TO FEDERAL AND STATE STANDARDS)**

Pollutant	2003	2004	2005
<b>OZONE (1-HOUR)</b>			
Highest 1-hour (ppm)	0.111	0.105	0.108
Days>0.125 ppm (Fed)	0	0	0
Days>0.09 ppm (Cal)	4	1	4
<b>OZONE (8-HOUR)</b>			
Highest 8-hour (ppm)	0.091	0.075	0.087
Days>0.08 (Fed) <sup>1</sup>	1	0	1
<b>CARBON MONOXIDE</b>			
Highest 8-hour (ppm)	3.40	2.96	4.31
Days>=9.5 ppm (Fed)	0	0	0
Days>=9.1 ppm (Cal)	0	0	0
<b>PARTICULATE MATTER (PM<sub>10</sub>)</b>			
Highest federal Concentration	65	58	53
Highest State Concentration	66	58	55
Days>50 ug/m <sub>3</sub> (Cal)	1	1	4
Days>150 ug/m <sub>3</sub> (Fed)	0	0	0
<b>PARTICULATE MATTER (PM<sub>2.5</sub>)<sup>2</sup></b>			
Highest 24-hour (ug/m <sub>3</sub> )	49.0	46.0	51.0
Days>65 ug/m <sub>3</sub> (Fed)	0	0	0
<b>NITROGEN DIOXIDE</b>			
Highest 1-hour (ppm)	0.084	0.072	0.071
Days>.25 ppm (Cal)	0	0	0
Annual (Fed) > 0.053 ppm	0	0	0
<sup>1</sup> There is no State 8-hour ozone standard.		<sup>2</sup> There is no State 24-hour PM <sub>2.5</sub> standard	

Source: California Air Resources Board. www.arb.ca.gov site accessed 6/8/06

### Respirable Particulate Matter (PM<sub>10</sub>)

Particulate matter includes both liquid and solid particles of a wide range of sizes and composition. While some PM<sub>10</sub> comes from automobile exhaust, the principal source in Sacramento County is dust from construction, and from the action of vehicle wheels on paved and unpaved roads. In other areas, agriculture, wind-blown sand, and fireplaces can be important sources. PM<sub>10</sub> can cause increased respiratory disease, lung damage, and premature death. Control of PM<sub>10</sub> is through the control of dust at construction-sites, the cleaning of paved roads, and the wetting or paving of frequently used unpaved roads.

*Fine Particulate Matter (PM<sub>2.5</sub>)*

The sources, health effects, and control of PM<sub>2.5</sub> are similar to those of PM<sub>10</sub>. In 1997, the EPA determined that the health effects of PM<sub>2.5</sub> were severe enough to warrant an additional standard. The SMAQMD started testing for this constituent in 1999 and 2001.

*Carbon Monoxide (CO)*

CO is a colorless and odorless gas which, in the urban environment, is associated primarily with the incomplete combustion of fossil fuels in motor vehicles. Relatively high concentrations are typically found near crowded intersections and along heavily used roadways carrying slow-moving traffic. Even under the severest meteorological and traffic conditions, high concentrations of CO are limited to locations within a relatively short distance (300 to 600 feet) of heavily traveled roadways. Overall CO emissions are decreasing as a result of the Federal Motor Vehicle Control Program, which has mandated increasingly lower emission levels for vehicles manufactured since 1973. CO concentrations are typically higher in winter. As a result, California has required the use of oxygenated gasoline in the winter months to reduce CO emissions.

*Nitrogen Dioxide (NO<sub>2</sub>)*

NO<sub>2</sub> is a product of combustion, and is generated in vehicles and in stationary sources, such as power plants and boilers. NO<sub>2</sub> can cause lung damage. As noted above, NO<sub>2</sub> is part of the NO<sub>x</sub> family, and is a principal contributor to ozone and smog.

*Sulfur Dioxide (SO<sub>2</sub>)*

SO<sub>2</sub> is a combustion product, with the primary source being power plants and heavy industry that use coal or oil as fuel. SO<sub>2</sub> is also a product of diesel engine combustion. The health effects of SO<sub>2</sub> include lung disease and breathing problems for asthmatics. SO<sub>2</sub> in the atmosphere contributes to the formation of acid rain. In the SVAB, there is relatively little use of coal and oil, and SO<sub>2</sub> is of lesser concern than in many other parts of the country.

*Lead (Pb)*

Lead is a stable compound which persists and accumulates both in the environment and in animals. The lead used in gasoline anti-knock additives represented a major source of lead emissions to the atmosphere. However, lead emissions have significantly decreased due to the near elimination of the use of leaded gasoline.

**TOXIC AIR CONTAMINANTS (TACs)**

In addition to the criteria air pollutants, another group of airborne substances called TACs are known to be highly hazardous to health, even in small quantities. TACs are airborne substances capable of causing short-term (acute) and/or long-term (chronic or carcinogenic) adverse human health effects (injury or illness). TACs are classified as non-criteria pollutants, because no ambient air standards have been established for them. The effects of these substances are very diverse and their health impacts tend to be local rather than regional.

TACs can be emitted from a variety of common sources, including gasoline stations, automobiles, dry cleaners, industrial operations, and painting operations. Natural source emissions include windblown dust and wildfires. Farms, construction-sites, and residential

areas can also contribute to toxic air emissions. CARB has also recently identified diesel particulate matter as a toxic air contaminant.

CARB and SMAQMD have determined that any source that poses a risk to the general population that is equal to or greater than 10 people out of 1 million contracting cancer as excessive. When estimating this risk, it is assumed that an individual is exposed to the maximum concentration of any given TAC continuously for 70 years.

CARB has conducted studies to determine the total cancer inhalation risk to individuals due to outdoor toxic pollutant levels. According to the map prepared by CARB showing the estimated inhalation cancer risk for TACs in the State of California, the project site is located in an area with an existing estimated risk that is greater than 750 cancer cases per one million people. This represents the lifetime risk that between 750 and 1000 people in one million may contract cancer from inhalation of toxic compounds at current ambient concentrations. While toxic air contaminants are produced by many different sources, the largest contributor to inhalation cancer risk in California is diesel particulates.

Diesel particulate matter is emitted into the air via heavy-duty diesel trucks, construction equipment, and passenger cars. According to CARB's Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles, the existing average statewide potential cancer risk from diesel particulate matter is over 500 potential cancer cases per one million people. Based on CARB's data, the existing ambient TAC risk in the Central City already exceeds the 10 cancer cases per 1 million people risk threshold.

### **SENSITIVE RECEPTORS**

The location of a development project is a major factor in determining whether it will result in localized air quality impacts. The potential for adverse air quality impacts increases as the distance between the source of emissions and members of the public decreases. Impacts on sensitive receptors are of particular concern. Sensitive receptors are facilities that house or attract children, the elderly, people with illnesses, or others who are especially sensitive to the effects of air pollutants. Hospitals, schools, convalescent facilities, and residential areas are examples of sensitive receptors. Residential uses are considered sensitive because people in residential areas are often at home for extended periods of time, so they can be exposed to pollutants for extended periods. Recreational areas are considered moderately sensitive to poor air quality because vigorous exercise associated with recreation places a high demand on the human respiratory function.

Cesar Chavez Plaza Park is generally used for passive recreation and community events; although as residential development increases in the vicinity, more casual sports using the park may occur. Residential uses are under construction at 9<sup>th</sup> and J streets and are proposed for the south side of J Street. The proposed project would bring new sensitive receptors into a high traffic area.

Air quality problems arise when sources of air pollutants and sensitive receptors are located near one another. SMAQMD notes that a sensitive receptor in close proximity to a congested intersection or roadway with high levels of emissions from motor vehicles, with high concentrations of carbon monoxide, fine particulate matter, or toxic air contaminants, is a common concern. A sensitive receptor close to a source of high levels of nuisance dust emissions is also a concern.

## **EXISTING EMISSION SOURCES AND CONCENTRATIONS**

SMAQMD has identified several types of emission sources which need to be considered when evaluating the impacts of a project under CEQA. For many development projects, motor vehicle trips are the principal source of air pollution; projects in this category, such as shopping centers, office buildings, arenas, and residential developments, are often referred to as indirect sources. Such sources do not directly emit significant amounts of air pollutants from on-site activities but cause emissions from motor vehicles traveling to and from the development over its planning lifetime.

Most development projects also generate what are known as area source emissions. Area source emissions are relatively small quantities of air pollutants when considered individually, but cumulatively may represent significant emissions. Water heaters, fireplaces, lawn maintenance equipment, and application of paints and lacquers are examples of area source emissions.

Certain projects may directly generate stationary or point source emissions from operations. Examples of facilities with point sources include manufacturing plants, quarries, and print shops.

Project-related construction emission impacts are also a significant contributor to regional air pollution. On- and off-road construction vehicles, along with on-site portable equipment such as generators and air compressors, generate exhaust emissions. Construction vehicles and equipment operation can also cause unacceptable levels of entrained dust (PM<sub>10</sub>). Even though they are temporary, in some cases construction emissions may be quantitatively greater on a daily basis than emissions from the operation of the development once it is built.

## **SHADE CHARACTERISTICS**

The path of a shadow is opposite to the path of the sun. The sun rises in the east and sets in the west; therefore shadows cast in the morning would fall to the west. During the noon hour, when the sun is overhead to the south, shadows will fall to the north of structures and eventually be cast to the east as the sun sets to the west. The direction in which a building will cast a shadow, as well as the length and size of that shadow, is determined by the sun's position in the sky. During the course of the year, the arc of the sun through the sky is at its highest point during the summer months and at its lowest point in the winter months. As a result, shadows are typically shortest during the summer solstice (June 21) and longest at the winter solstice (December 21) for any given time of the day. Within a given day, shadows are generally longest in the early morning and late evening when the sun is closest to the horizon.

## **REGULATORY CONTEXT**

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

Local air quality management districts have been given authority by the state to manage their own stationary source emissions. CARB requires that local air quality management districts develop their own strategies for achieving compliance with the National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS), but maintains regulatory authority over these strategies, as well as all mobile source emissions throughout the state.

The AAQS define clean air. Specifically, air quality standards establish the concentration above which a pollutant is known to cause adverse health effects to sensitive groups within the population, such as children and the elderly. The amount of pollutants released and the atmosphere's ability to transport and dilute the pollutants affect a given pollutant's concentration in the atmosphere. Factors affecting transport and dilution include terrain, wind, atmospheric stability, and for photochemical pollutants, sunlight. Sacramento's poor air quality can largely be attributed to emissions, geography, and meteorology.

## **FEDERAL**

### ***Clean Air Act (CAA)***

The Federal CAA (42 U.S.C. §§7401-7671q) requires the adoption of NAAQS to protect the public health and welfare from the effects of air pollution. Pollutants subject to the NAAQS are referred to as criteria pollutants, as discussed above. The federal standards for criteria pollutants and other regulated air pollutants are shown in Table 5.1-1, above.

### ***Ozone Standards***

The federal eight-hour O<sub>3</sub> standard was established in response to human health studies indicating that longer O<sub>3</sub> exposures at lower levels also resulted in adverse health effects, including coughing, increased asthma attacks, chronic lung inflammation, decreased lung function, and decreased lung defenses against bacterial infections. The eight-hour standard now applies, along with California's own one-hour O<sub>3</sub> standard; the federal one-hour O<sub>3</sub> standard was revoked on June 15, 2005. The Sacramento area has already been designated as serious for the eight-hour standard.

### ***Federal Ozone Attainment Plan***

The SVAB is subject to a Federal Ozone Attainment Plan (the Sacramento Area Regional Ozone Attainment Plan). This plan was adopted by five air districts in the Sacramento area in order to build upon existing state and local air quality programs. The Plan contains adopted measures, implementation and adoption schedules for new measures, emission inventories, modeling results, contingency measures, and emissions reduction demonstrations that guide reduction of emissions in the Sacramento Region. The region has an attainment date of June, 2013 for the eight-hour standard. Currently, the eight-hour attainment plan is scheduled to be adopted by April of 2007.

## **STATE**

The State of California, for purposes of air quality classification, has divided the state into meteorologically and geographically similar areas called air basins. Each air basin is

responsible for meeting NAAQS and CAAQS for criteria pollutants and is classified by the EPA and CARB as an attainment or nonattainment area for each pollutant.

CARB is responsible for enforcing the California Clean Air Act of 1988 (26 California Health and Safety Code [CH&SC §10000 et seq.]). The California Clean Air Act established a legal mandate to achieve the CAAQS by the earliest possible date. These state standards apply to the same seven criteria pollutants as the NAAQS, and also include sulfate, visibility reducing particles, hydrogen sulfide, and vinyl chloride. These CAAQS are generally more restrictive than the NAAQS. The CAAQS are also summarized in Table 5.1-1, above.

### ***California Clean Air Act (CCAA)***

The CCAA of 1988 requires nonattainment areas to achieve and maintain the state ambient air quality standards by the earliest practicable date and local air districts to develop plans for attaining the state O<sub>3</sub>, CO, SO<sub>2</sub>, and NO<sub>2</sub> standards. In compliance with the CCAA, the SMAQMD prepared and submitted the 1991 Air Quality Attainment plan (AQAP) to mainly address Sacramento County's nonattainment status for O<sub>3</sub> and CO, and although not required, PM<sub>10</sub>. The CCAA also requires that once every three years the districts are to assess their progress toward attaining the air quality standards. The triennial assessment is to report the extent of air quality improvement and the amounts of emission reductions achieved from control measures for the preceding three year period. SMAQMD adopted the 2003 Triennial Report April 28, 2005. The report, prepared pursuant to California Health and Safety Code section 40925, identifies "all feasible measures" the SMAQMD will study or adopt over the next three years. The report also describes historical trends in air quality, updates emissions inventories, and evaluates the SMAQMD's implementation of air pollution control measures.

### ***Toxic Air Contaminants (TACs)***

Regulation of TACs is achieved through federal and State controls on individual sources; the 1990 Federal CAA Amendments offer a comprehensive plan for achieving significant reduction in both mobile and stationary source emissions of certain designated Hazardous Air Pollutants (HAP). All major stationary sources of designated HAPs are required to obtain and pay the required fees for an operating permit under Title V of the federal CAA Amendments.

The Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588), California Health and Safety Code Section 44300 et seq, provides for the regulation of over 200 air toxics and is the primary air contaminant legislation in the State. Under the Act, local air districts may request that a facility account for its TAC emissions. Local air districts then prioritize facilities on the basis of emissions, and high priority designated facilities are required to submit a health risk assessment and communicate the results to the affected public. The TAC control strategy involves reviewing new sources to ensure compliance with required emission controls and limits, maintaining an inventory of existing sources of TACs, and developing new rules and regulations to reduce TAC emissions. The purpose of AB 2588 is to identify and inventory toxic air emissions and to communicate the potential for adverse health effects to the public.

Assembly Bill 1807 (AB 1807), enacted in September 1983, sets forth a procedure for the identification and control of TACs in California. CARB is responsible for the identification and control of TACs, except pesticide use. AB 1807 defines a TAC as an air pollutant that may cause or contribute to an increase in mortality or an increase in serious illness, or which may

pose a present or potential hazard to human health. CARB prepares identification reports on candidate substances under consideration for listing as TACs. The reports and summaries describe the use of and the extent of emissions in California resulting in public exposure, together with their potential health effects.

CARB has recently identified diesel particulate matter as a TAC under the 1807 program. Diesel particulate matter is emitted into the air via heavy-duty diesel trucks, construction equipment, and passenger cars. In October 2000, CARB released the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles. This plan identifies diesel particulate matter as the predominant TAC in California and proposes methods for reducing diesel emissions.

TAC impacts are assessed using a standard Maximally Exposed Individual (MEI) health risk of 10 people in 1 million. CARB and the local air district have determined that any source that poses a risk to the general population that is equal to or greater than 10 people out of 1 million contracting cancer as excessive. When estimating this risk, it is assumed that an individual is exposed to the maximum concentration of any given TAC, continuously for 70 years. If the risk of such exposure levels meets or exceeds the threshold of 10 excess cancer cases per 1 million people, then CARB and local air district require the installation of best available control technology (BACT) or maximum available control technology (MACT) to reduce the risk threshold. This ensures that the toxic source is being controlled to the fullest extent possible using current technology.

## **LOCAL**

### ***Sacramento Metropolitan Air Quality Management District (SMAQMD)***

SMAQMD has jurisdiction over most air quality matters in Sacramento County (County). The District is responsible for implementing certain programs and regulations required by the Federal CAA and the CCAA, and has prepared plans to attain national and state ambient air quality standards. SMAQMD adopted the Sacramento Area Regional Ozone Attainment Plan—commonly referred to as the 1994 State Implementation Plan (SIP) for Sacramento—which identifies a comprehensive regional strategy to reduce emissions to the level required for attainment of the federal standards.

The Sacramento Federal Ozone Nonattainment Area (SFNA) is comprised of all or portions of five air districts in the southern portion of the Sacramento air basin. Although the Sacramento Metropolitan region currently does not meet the federal O<sub>3</sub> standard, it has made significant progress in the reduction of O<sub>3</sub> precursors since 1994 due to regional, state, and federal control measures. The Sacramento area has satisfied the milestone rate-of-progress requirements. Equating overall progress towards attainment, the region has exceeded its planned goals for VOC emission reductions and has met its NO<sub>x</sub> reduction target in 2002 (Sacramento Area 2002 Milestone Report, 2003). The reports, which are available from the SMAQMD, detail the substantial progress already made, and reinforce the need to aggressively pursue the efforts laid out in the 1994 SIP.

The Sacramento Regional Nonattainment Area 8-Hour Ozone Rate-of-Progress Plan (February 2006) evaluates how existing control strategies and already approved control measure commitments will provide the necessary future emission reductions to meet the Federal CAA requirements for reasonable further progress during 1990-1996 and 2002-

2008. This document fulfills the federal 8-hour ozone requirements for the 2002-2008 Rate-of-Progress Plan for the Sacramento regional nonattainment area, and updates the emission inventory and sets new motor vehicle emission budgets for transportation conformity purposes.

SMAQMD regulation and permit requirements apply to most industrial processes (e.g., manufacturing facilities, cement terminals, food processing), many commercial activities (e.g., print shops, drycleaners, gasoline stations), and other miscellaneous activities (including demolition of buildings containing asbestos and aeration of contaminated soils).

For PM<sub>10</sub>, the other criteria pollutant of concern for the Sacramento Region, Sacramento currently meets the federal standard, but has not yet been officially re-designated to attainment by the EPA. Since monitoring data shows that the PM<sub>10</sub> standard is being met in practice, no PM<sub>10</sub> plan exists in the SMAQMD.

The SMAQMD has several rules that relate to the proposed project, which are summarized below:

- **Rule 402 – Nuisance**  
Prohibits a person from discharging, from any source whatsoever, such quantities of air contaminants or other materials which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public or which endanger the comfort, repose, health, or safety of any such person or the public or which cause or have a natural tendency to cause injury or damage to business or property.
- **Rule 403 – Fugitive Dust**  
Requires a person to take every reasonable precaution not to cause or allow the emissions of fugitive dust from being airborne beyond the property line from which the emission originates, from construction, handling or storage activity, or any wrecking, excavation, grading, clearing of land, or solid waste disposal operation.
- **Rule 442 – Architectural Coatings**  
Sets VOC limits for coatings that are applied to stationary structures or their appurtenances. The rule also specifies storage and cleanup requirements for these coatings.
- **Rule 460 – Adhesives and Sealants**  
Limits VOC from the application of products used for bonding two surfaces. Also regulates the storage and disposal of solvents associated with such applications.
- **Rule 401 – Ringelmann Chart**  
Prohibits individuals from discharging into the atmosphere from any single source of emissions whatsoever any air contaminant whose opacity exceeds certain specified limits.
- **Rule 411 – Boiler NO<sub>x</sub>**  
Sets NO<sub>x</sub> and CO emissions from industrial, institutional, and commercial boilers, steam generators, and process heaters.
- **Rule 902 – Asbestos**  
Requires developer or contractor to notify SMAQMD of any regulated renovation or demolition activity. Also contains specific requirements for surveying, notification, removal, and disposal of asbestos-containing material.

### ***City of Sacramento General Plan***

The City of Sacramento General Plan does not contain an Air Quality Element and there are no specific goals or policies that pertain to air quality.

### ***Sacramento Central City Community Plan***

In addition to the General Plan, the City of Sacramento has also developed plans that are more specific to the various communities in the City. The City's Central City Community Plan contains the following sub goal under its environmental goal:

- Provide an environment which is free of annoying noise and continue to reduce air pollution.

## **IMPACTS AND MITIGATION MEASURES**

### **METHOD OF ANALYSIS**

The analysis in this section focuses on the nature and magnitude of the change in the air quality environment due to the construction and operation of the proposed project. Air pollutant emissions would result from construction activities, project operations, and increased traffic volumes. SMAQMD has published air quality thresholds of significance for use by lead agencies when making a determination of significance for a project. SMAQMD thresholds establish standards for three types of impacts— short-term impacts from construction, long-term impacts from project operation, and cumulative impacts. The net increase in emissions generated by these activities and other secondary sources have been estimated and compared to thresholds of significance recommended by SMAQMD. The methodology for estimating emissions, as described in SMAQMD's Guide to Air Quality Assessment in Sacramento County, was used in this analysis.

The analysis in this section also focuses on the nature and magnitude of the change in the shade environment due to the construction and operation of the proposed project.

### ***Construction***

Construction emissions were calculated by estimating the equipment that would be used during the most intensive periods of clearing and grading of the project site, excavation of the site, and construction of the proposed structures and their associated support facilities. The worst-case daily construction emissions associated with these activities were estimated using emission factors from the URBEMIS 2002 (version 8.7) emissions model developed for CARB, as recommended by SMAQMD (Jeanne Borkehagen, July 2006).

### ***Operational Emissions***

Operational emissions refer to the emissions that are generated by the normal day-to-day activity of the project. These activities include heating and cooling of the building, landscape maintenance, emissions from increased traffic, and the use of consumer products by residents and employees.

The average daily emission factors for operational emissions of criteria pollutants are estimated by using emission factors in the URBEMIS 2002 emissions model. Emissions from increased vehicle traffic, also known as mobile source emissions, are also calculated using the URBEMIS 2002 emissions model and the daily trip generation rates used in the traffic study (Traffic and Circulation, sub-chapter 5.6) conducted for the proposed project.

### ***Localized CO Concentrations***

The SMAQMD handbook was used to estimate CO concentrations from the proposed project. It was determined that the project's impacts were well below the concentrations that would trigger the need for CALINE 4 dispersion modeling.

## **STANDARDS OF SIGNIFICANCE**

### ***Air Quality Impacts***

For the purposes of this EIR, impacts to air quality are considered significant if the proposed project would exceed the SMAQMD thresholds of significance adopted in 2002, as follows:

- ***Ozone and Particulate Matter***

An increase of NO<sub>x</sub> above 85 pounds per day for short-term effects (construction) would result in a significant impact. An increase of either ozone precursor, NO<sub>x</sub> or ROG, above 65 pounds per day for long-term effects (operation) would result in a significant impact (as revised by SMAQMD, March 2002). The threshold of significance for PM<sub>10</sub> is a concentration based threshold equivalent to the CAAQS. For PM<sub>10</sub>, a project would have a significant impact if it would emit pollutants at a level equal to or greater than five percent of the CAAQS (50 micrograms/cubic meter for 24 hours) if there were an existing or projected violation; however, if a project is below the ROG and NO<sub>x</sub> thresholds, it can be assumed that the project is below the PM<sub>10</sub> threshold as well (SMAQMD, 2004).
- ***Carbon Monoxide***

The pollutant of concern for sensitive receptors is CO. Motor vehicle emissions are the dominant source of CO in Sacramento County (SMAQMD, 2004). For purposes of environmental analysis, sensitive receptor locations generally include parks, sidewalks, transit stops, hospitals, rest homes, schools, playgrounds, and residences. Commercial buildings are generally not considered sensitive receptors. Carbon monoxide concentrations are considered significant if they exceed the one-hour CAAQS of 20.0 parts per million (ppm) or the eight-hour CAAQS of 9.0 ppm (CAAQS are more stringent than their federal counterparts).
- ***Cumulative Air Quality Impacts***

Development projects are considered by SMAQMD to be cumulatively significant if the project requires a change in the existing land use designation (i.e., general plan amendment, rezone), and projected emissions (ROG, NO<sub>x</sub>) of the proposed project are greater than the emissions anticipated for the site if developed under the existing land use designation.

### **Shadow Impacts**

The City of Sacramento does not have a standard for the length of time public spaces, parks, solar equipment, or residences could be in shadow during the winter months before the impact is considered significant. A potentially significant shadow impact is identified if a project would introduce new large-scale shadowing effects to public spaces, parks, solar equipment, or residences during the winter months when shade is not desirable.

### **PROJECT-SPECIFIC IMPACTS AND MITIGATION MEASURES**

#### **Impact 5.1-1: Short-term construction increases in ozone precursors**

The proposed project would involve demolition and construction activities that would result in increased emissions of NO<sub>x</sub> and ROG, which are precursors to ozone. This would be a **significant impact**.

Construction will include demolition of the existing, grading and site preparation for new construction, and construction activities such as laying asphalt and architectural coatings. SMAQMD has not developed a threshold of significance for ROG from construction because ROG from architectural coatings can be regulated by SMAQMD Rule 442. However, because heavy-duty diesel construction equipment emits more NO<sub>x</sub> than ROG, SMAQMD has developed a threshold for construction NO<sub>x</sub> of 85 pounds-per-day.

Emissions from construction equipment (i.e., graders, backhoes, haul trucks etc.) are shown in **Table 5.1-4**. The modeling indicates that emissions of NO<sub>x</sub> during the demolition phase could reach a maximum of 56.13 pounds-per day, and NO<sub>x</sub> emissions during the grading phase of construction could reach maximum levels of 54.94 pounds per day, and levels of NO<sub>x</sub> during the construction phase could reach maximum levels of 233.86 pounds per day. This would be above the 85 pounds-per-day threshold of significance for construction NO<sub>x</sub>.

**TABLE 5.1-4  
URBEMIS2002 SUMMARY REPORT FOR CONSTRUCTION EMISSIONS**

<b>Emissions Estimates<sup>1</sup></b>	<b>ROG</b>	<b>NO<sub>x</sub></b>	<b>CO</b>	<b>SO<sub>2</sub></b>	<b>PM<sub>10</sub></b>
Phase 1 Demolition	7.56	56.13	61.35	0.03	6.53
Phase 2 Grading	7.93	54.94	62.74	0.00	11.84
Phase 3 Construction - 2007	31.32	233.86	235.71	0.03	19.96
Phase 3 Construction - 2008	31.26	222.51	243.34	0.00	9.60
Significance Threshold	None	85	None	None	None
<b>Exceeds Threshold</b>	—	<b>YES</b>	—	—	—

<sup>1</sup> Emissions estimates are in pounds per day for summer, 2007

Mitigation measures exist that can reduce emissions of construction NO<sub>x</sub>. SMAQMD requires standard mitigation measures to result in a minimum 20 percent NO<sub>x</sub> reduction. Additional aggressive measures are available to further reduce impacts if the required mitigations would not put the emissions below the threshold; in lieu of additional measures, SMAQMD would require an off-site mitigation fee based on pounds of NO<sub>x</sub> remaining above the threshold.

As of June 1, 2006, the SMAQMD is using an updated mitigation fee rate of \$14,300 per ton of emissions. The mitigation fee is based on the Carl Moyer Program cost effectiveness cap; in January 2006, the Carl Moyer Program Guidelines were amended, accounting for this increase in mitigation fee rate. Assuming the construction mitigation measures outlined below achieve a 20 percent NO<sub>x</sub> reduction, the fee required for this project is calculated to be \$179,673. The mitigation fee calculations are shown in Appendix C.

### Mitigation

5.1-1 *The following measures shall be incorporated into construction practices and approved by SMAQMD prior to the start of demolition and construction:*

- (a) *The project shall provide a plan for approval by SMAQMD demonstrating that the heavy-duty (>50 horsepower) off-road vehicles to be used in the construction project, including owned, leased, and subcontractor vehicles, will achieve a project wide fleet average of 20 percent NO<sub>x</sub> reduction and 45 percent particulate reduction compared to the most recent CARB fleet average at the time of construction.*
- (b) *The project representative shall submit to SMAQMD a comprehensive inventory of all off-road construction equipment, equal to or greater than 50 horsepower, that will be used an aggregate of 40 or more hours during any portion of the construction project. The inventory shall include the horsepower rating, engine production year, and projected hours of use or fuel throughput for each piece of equipment. The inventory shall be updated and submitted monthly throughout the duration of the project, except that an inventory shall not be required for any 30-day period in which no construction activity occurs. At least 48 hours prior to the use of subject heavy-duty off-road equipment, the project representative shall provide SMAQMD with the anticipated construction timeline, including start date and name and phone number of the project manager and on-site foreman.*
- (c) *The project shall ensure that emissions from all off-road diesel powered equipment used on the project site do not exceed 40 percent opacity for more than three minutes in any one hour. Any equipment found to exceed 40 percent opacity (or Ringelmann 2.0) shall be repaired immediately 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 the 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 activity occurs. The monthly summary shall include the quantity and type of vehicles surveyed as well as the dates of each survey. The AQMD and/or other officials may conduct periodic site inspections to determine compliance. Nothing in this section shall supersede other AQMD or state rules or regulations.*

- (d) *The project representative shall implement additional aggressive mitigation measures in consultation with SMAQMD, using existing technology on the construction fleet such as aqueous diesel fuel and cooled exhaust gas recirculation systems to reduce emissions below SMAQMD thresholds, or shall pay a \$179,673 off-site mitigation fee prior to the issuance of grading permits.*

Significance after Mitigation

Less than significant

**Impact 5.1-2: Short-term construction increases in PM<sub>10</sub> emissions**

Construction will include demolition of the existing structures, grading, and site preparation for new construction. PM<sub>10</sub> emissions in the form of fugitive dust would vary from day to day, depending on the level and type of construction activity (demolition and grading), silt content of the soil, prevailing weather, and result from construction equipment and motor vehicles. While grading emissions are below SMAQMD criteria, demolition emissions have the potential to cause or contribute to violations of the PM<sub>10</sub> ambient air quality standards, in particular, the more stringent CAAQS. This would be a **significant** impact.

One of the largest sources of construction-related PM<sub>10</sub> emissions would be associated with the demolition of the existing structures. Demolition activities are required to conform to the rules and guidelines outlined in SMAQMD Rule 403 (Fugitive Dust) concerning fugitive dust associated with construction activities, including demolition. Rule 403 requires the application of water or chemicals for the control of fugitive dust associated with demolition, clearing of land, construction of roadways, and any other construction operation that may potentially generate dust—including the stockpiling of dust-producing materials.

Demolition activity is also subject to SMAQMD Rule 902 (Asbestos). This rule is intended to limit asbestos emissions from demolition or renovation of structures and the associated disturbance of asbestos-containing waste material generated or handled during these activities. The rule addresses the EPA National Emission Standards for Hazardous Air Pollutants (NESHAP) and provides additional requirements to cover non-NESHAP areas. The rule requires SMAQMD to be notified before demolition or renovation activity occurs. This notification includes a description of structures and methods utilized to determine the presence of asbestos or lack thereof. All asbestos-containing material found on the site must be removed prior to demolition or renovation activity in accordance with the requirements of Rule 902. Project compliance with Rule 902 would ensure that asbestos-containing materials would be disposed of appropriately. Compliance with the requirements of this measure would avoid a significant construction-related air quality impact of demolition by preventing the release of asbestos emissions. Although PM<sub>10</sub> emissions associated with demolition can be quite large, these emissions will be reduced by compliance with Rules 403 and 902, and will take place over a relatively short period of time.

The region is currently in non-attainment for PM<sub>10</sub>, with regular and frequent violations of the State 24-hour standard occurring over the past five years. The State 24-hour PM<sub>10</sub> standard is sometimes exceeded in the vicinity of construction-sites during construction. Air pollution-sensitive land uses and activities adjacent to construction-sites may also be exposed more frequently to ambient dust concentrations that exceed the ambient standards. In order to reduce construction-phase dust emissions, standard dust abatement measures are routinely required by the City as a part of the development permit process. Such measures typically

include watering all construction-sites as necessary to reduce dust emissions, covering stockpiles and haul trucks, sweeping dirt from paved surfaces, and suspending earthmoving activities on very windy days.

The SMAQMD/CEQA Guidelines do not provide guidance on evaluating emissions from demolition activities.

### *Grading*

SMAQMD has established a screening approach to determine if particulate matter emissions from construction projects have the potential to cause or contribute to violations of the CAAQS. Construction projects below 15 acres may implement mitigation measures specified in Table B.1 (Particulate Matter Screening Levels for Construction Projects) in the SMAQMD's *Guide to Air Quality Assessment*.

The proposed project will encompass less than one acre. Based on Table B.1, no mitigation would be required for a project of this size to ensure that its PM<sub>10</sub> emissions do not exceed the 30 µg/m<sup>3</sup> threshold of significance. Based upon SMAQMD's screening table for PM<sub>10</sub> emissions, the proposed project's construction PM<sub>10</sub> impact would not contribute emissions of PM<sub>10</sub> that would lead to a violation of the PM<sub>10</sub> CAAQS.

### Mitigation

Keeping soil or other material moist is the most effective mitigation measure for the control of fugitive dust during all demolition activities. Fugitive dust emissions can be almost completely eliminated by this mitigation.

- 5.1-2 *The following measures shall be incorporated into construction practices during demolition activity:*
- (a) *The project shall ensure that all demolished material will be completely wetted during demolition and during any subsequent disturbance of the material.*
  - (b) *The project shall ensure that piles of demolished material, when not being disturbed, are either completely wetted or completely covered.*
  - (c) *Two feet of freeboard space shall be maintained on all trucks transporting demolished material.*

### Significance after Mitigation

Less than significant

### **Impact 5.1-3: Project specific operational increases in regional criteria pollutants**

Operation of the proposed project would result in long-term emissions of ozone precursors; neither NO<sub>x</sub> nor ROG emissions would exceed the SMAQMD threshold of significance, representing in a **less-than-significant** air quality impact.

In addition to construction-related emissions, the total project emissions include mobile sources, non-permitted stationary or area sources, and permitted stationary devices once

the building is occupied. The largest source of these emissions would be the vehicle trips that are created by people living and working at the proposed project. Smaller sources of precursors would be created by fuel-burning equipment, such as that used for the heating and cooling of the building and by various consumer products used by building occupants.

The proposed project would generate both vehicular trips and air pollutant emissions. Trip generation rates for each land use were based on the traffic modeling provided by DKS Associates (Traffic and Circulation, sub-chapter 5.6). The operational emissions were estimated using the URBEMIS 2002 (version 8.7) computer model distributed for use by the CARB and recommended for use by SMAQMD. The estimated emissions are listed in **Table 5.1-5**. The emission calculations are shown in Appendix C.

Compliance with mandatory federal, state, and local requirements (including those of SMAQMD, the City’s Trip Reduction Ordinance; In-Lieu Parking Ordinance; Bicycle Parking Facilities Ordinance; Infill Incentives Program; and several adopted programs and policies to mitigate air quality impacts, primarily by promoting public transit and other alternatives to automobile travel) is required by the City.

**TABLE 5.1-5  
URBEMIS2002 SUMMARY REPORT FOR UNMITIGATED OPERATIONAL EMISSIONS**

<b>Emissions Estimates<sup>1</sup></b>	<b>ROG</b>	<b>NO<sub>x</sub></b>	<b>CO</b>	<b>SO<sub>2</sub></b>	<b>PM<sub>10</sub></b>
Condo/townhouse high rise	9.73	7.30	74.90	0.04	7.16
General Retail Space	5.57	5.82	56.25	0.03	4.97
<b>Total Operational Emissions</b>	<b>15.30</b>	<b>13.12</b>	<b>131.15</b>	<b>0.07</b>	<b>12.13</b>
Significance Threshold	65	65	None	None	None
<b>Exceeds Threshold</b>	No	No	—	—	—

<sup>1</sup> Emissions estimates are in pounds per day for summer, 2007

SMAQMD lists possible operational mitigation measures in Appendix E of its *Guide to Air Quality Assessment*. Feasible operational mitigation measures for the proposed project target O<sub>3</sub> precursors such as ROG and NO<sub>x</sub>. One key source of these O<sub>3</sub> precursors is automotive vehicle exhaust. Since the proposed project is a mixed-use development, measures to promote bicycling and pedestrian transportation are a design feature of the project. The following features, such as mixed-uses and transit access, were accounted for in the trip generation rates and are reflected in the low operational emissions for the project:

- #9 – High density residential, mixed, or retail/commercial uses within ¼ mile of existing transit, linking with activity centers and other planned infrastructure (2.0 emissions reduction factor (ERF) for light rail).
- #26 – Average residential density 7 d.u. per acre or greater (4.5 ERF for 30+ du/acre).
- #27 – Multiple and direct street routing (grid style) (2.5 ERF).

- #29 – Development of projects predominantly characterized by properties on which various uses, such as office, commercial, institutional, and residential, are combined in a single building or on a single site. A “single site” may include contiguous properties (3.0 ERF).
- Separate, safe, and convenient bicycle and pedestrian paths connecting residential, commercial, and office uses (2.0 ERF).
- The project provides a development pattern that eliminates physical barriers such as walls, berms, landscaping, and slopes between residential and non-residential uses that impede bicycle or pedestrian circulation (1.0 ERF).

Mitigation

None required

**Impact 5.1-4: Project specific impacts on CO concentrations at intersections and congested roadways**

Project CO emissions, if combined with CO emissions from other nearby projects, can result in hotspots that violate the state one-hour or eight-hour AAQS. While passenger vehicles emit O<sub>3</sub> precursors such as ROG and NO<sub>x</sub>, these precursors do not have direct localized impacts. However, motor vehicles also generate CO, which is a directly emitted pollutant. This would be a **less-than-significant** impact.

CO levels are highest at intersections where there is congestion and traffic is slow. To the extent that increases in traffic volumes from the proposed project reduce existing level of service (LOS) rates, busy intersections could experience higher concentrations of CO. Where intersections operate at LOS D or worse, which is usually considered to be unacceptable for traffic circulation, CO concentrations could be elevated.

Intersections would be modeled for possible CO exceedances if the traffic study showed that the intersection would be reduced from an acceptable LOS to an unacceptable LOS as a result of the proposed project. According to the traffic study (Transportation and Circulation, sub-chapter 5.6), no intersections in the project vicinity would be lowered from acceptable to unacceptable LOS due to project traffic, which indicates that the project would not significantly add to congestion on surrounding roadways, and no modeling is necessary. The proposed project would not increase the potential for high CO concentrations. Therefore, the proposed project would result in a less-than-significant impact on CO concentrations.

Mitigation

None required

**Impact 5.1-5: Shadow conditions**

Construction of the proposed project would add new shadow to the vicinity of the project site. Shadows added by the project would include new large-scale shadowing effects on Cesar Chavez Plaza Park in the early spring and fall. The new shadow would cover a portion of the Plaza for intervals of one to two hours during the mid- and late afternoon. This would be a **less-than-significant impact**.

As described in Section 2.0, Project Description, the proposed project would construct a base that fills most of the half-block between 10th and 11th streets along J Street, and would place a residential tower close to the intersection of 10th and J streets.

Shadow from the proposed building would generally extend to the northwest of the site in the morning, to the north at noon, and to the northeast and east in the late afternoon. Mid-day shadows would be longer in the winter months, with the longest noontime shadow occurring on the winter solstice, December 21st. Mid-day shadows would be shorter in the summer months, with the shortest noontime shadow occurring on the summer solstice, June 21st. Between the spring equinox and the summer solstice, shadows would continue to shorten quickly, and then would slow in May. Shadow conditions would be noticeably different in late April to those at the time of the equinox.

**Figure 5.1-1** shows the shadows cast by the proposed project at 9 am during both the summer and winter solstice, assuming the shadow is uninterrupted by intervening buildings. The shadow during the winter solstice would cover approximately the north/northeastern third of Cesar Chavez Plaza Park at 9 am, and extend across the Federal Post Office building to the County Administration building. The outdoor seating for the Plaza café, located on the west side of the Plaza, would generally not be affected by the shadow, which would move to the northeast toward City Hall. The northern portion of the Plaza would already be in shadow from the eight-level City parking garage located immediately north of the project site.

**Figure 5.1-2** shows the shadows cast by the proposed project at noon during both the summer and winter solstice. Winter shadows would extend north across and blend with the shadow of the parking garage over the 10<sup>th</sup> and I streets intersection, and continue over the eastern portion of the new City Hall.

**Figure 5.1-3** shows the shadows cast by the proposed project at 4:00 p.m. during both the summer and winter solstice. Winter shadows would lengthen and extend in a northeasterly direction into Alkali Flat, almost to E Street.

Because of the architecture of the residential tower, the shadow width would be relatively narrow, approximately 160 feet wide, and would move fairly rapidly across the landscape.

Between the winter solstice and the spring equinox, shadows would shorten, slowly at first and then faster. Shadow conditions would be similar in late January to those at the solstice, which occurs in late December. In late January the noontime shadows would be 85% as long as those on the solstice. Noontime shadows will be noticeably shorter in late February, only 60% as long as on the solstice. By the spring equinox, in late March, the noontime shadow would be about 42% as long as on the winter solstice.

Shadows from the project would include new large-scale shadowing effects on a portion of Cesar Chavez Plaza Park at the winter solstice during the morning hours. However, these shadows would not reach the Cafe, and will have moved out of the Plaza by noon when more use of the Plaza tends to occur. Afternoon shadow impacts north of H Street would mostly be obstructed by intervening buildings, and would be of limited duration. The shadow impacts of the proposed project are considered to be ***less than significant***.

Mitigation

None required



Source: Kwan Henmi, 2006

**FIGURE 5.1-1**  
**SHADOW CAST**  
**9 AM SUMMER AND WINTER SOLSTICE**



Source: Kwan Henmi, 2006

**FIGURE 5.1-2**  
**SHADOW CAST**  
**12 PM SUMMER AND WINTER SOLSTICE**



Source: Kwan Henmi, 2006

**FIGURE 5.1-3**  
**SHADOW CAST**  
**4 PM SUMMER AND WINTER SOLSTICE**

### CUMULATIVE IMPACTS AND MITIGATION MEASURES

The cumulative context depends on the pollutant being analyzed. For localized pollutants such as CO and PM<sub>10</sub>, the cumulative context would include existing and proposed future development in the immediate vicinity of the proposed project. For this project, PM<sub>10</sub> and TACs are only issued during construction and are of temporary duration. For O<sub>3</sub>, which is a regional pollutant, the cumulative context would be the existing and future development over the entire Sacramento Ozone Nonattainment Area.

***Impact 5.1-6: The proposed project could contribute to cumulative CO levels.***

Concentrations of CO that could violate the CAAQS would most likely occur at the busiest intersections in the vicinity of the proposed project. To the extent that the proposed project causes conditions at intersections to degrade from an acceptable to an unacceptable LOS, CO concentrations have the potential to exceed the CAAQS. According to the traffic study (Transportation and Circulation, sub-chapter 5.6), the changes in intersection operating conditions with the addition of project-generated traffic do not exceed the standards of significance for impacts to intersections at any of the 52 study area intersections. Therefore, this would be a ***less-than-significant cumulative impact***.

Mitigation

None required

***Impact 5.1-7: The proposed project could contribute to cumulative levels of ozone precursors***

As indicated in the thresholds of significance, a project would be considered to have significant cumulative air quality impacts if the project requires a change in the existing land use designation (i.e., general plan amendment, rezone), and projected emissions (ROG, NO<sub>x</sub>, or PM<sub>10</sub>) of the proposed project are greater than the emissions anticipated for the site if developed under the existing land use designation. This would be a ***less-than-significant cumulative impact***.

The proposed project is consistent with the existing land use designation, which is designated mixed-use in the Central City Community Plan. The project does involve a special permit for the construction of condominiums in the C-3 zone; however, because residential uses result in a lower traffic generation than office uses, vehicular emissions would be less under the proposed project than if a mixed-use office project were constructed on the same site. Therefore, cumulative impacts would be less-than-significant.

Mitigation

None required

## **5.2 CULTURAL AND HISTORIC RESOURCES**



## **5.2 CULTURAL AND HISTORIC RESOURCES**

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### **INTRODUCTION**

This section describes the history of the City block on which the Metropolitan Project is proposed, as well as any known historic archaeological resources that are located on or adjacent to the site. The extent to which development of the proposed project could remove, damage, or destroy existing historic archaeological resources is evaluated. Archaeological resources were assessed by Tremaine and Associates, Inc. (Appendix D), and historical resources were assessed by Historic Environment Consultants (Appendix E).

There were no comments received during the NOP comment period concerning cultural or historic resources.

### **ENVIRONMENTAL SETTING**

The project site contains several buildings greater than 50 years old, and nineteenth century hollow sidewalks are present along both the 10<sup>th</sup> and J streets frontages. The site also contains one of the last remaining remnants of a nineteenth century historic alley.

### **PREHISTORIC BACKGROUND**

The Sacramento Valley was likely occupied and used by humans during the late Pleistocene and early Holocene (14,000 to 8,000 B.P.<sup>1</sup>); however, the archaeological record of such use is sparse. This lack of archaeological evidence is understandable given that such evidence is likely buried under accumulated gravels and silts and few sites have been excavated beyond a couple of meters in depth (Moratto 1984; Meyer and Rosenthal 1997).

Little is known about prehistoric occupations in the Central Valley during this early period (12,000-8000 B.P.); however, there is no reason to believe that Paleo-Indian populations did not occupy this area. As is typically noted in cultural resource assessments for Sacramento, “older villages might have existed on extinct land forms, however due to the silting effects of these major rivers (*American and Sacramento*) through time, these landforms would be so deeply buried that they have not been detected as yet” (Gross 2000:20). It is thought that early populations traveled in relatively small groups, were highly mobile, and settled around wetlands (e.g., lakes and rivers) where large game was also likely to congregate.

The latter part of this period (10,000-8,000 B.P.) saw a general warming trend resulting in the drying of Pleistocene lakes and an overall shift in flora and fauna distributions. Sites dating to this time identified in northern California are recognized by the presence of large stemmed points, collectively referred to as Great Basin Stemmed series (McGuire and Nelson 2002:13). Bifaces, scrapers, cores, and eccentrics (better known as crescents) are also characteristic of this time period. The presence of crescents, which typically date from 7,500 to 8,500 B.P. (Garret Fenenga, 2004) provide credible evidence that the Sacramento area was occupied at a very early time. Obsidian sourcing conducted on tools from northern

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<sup>1</sup> There are three temporal references: B.C. - before Christ; A.D. - *anno Domini* (in the year of our Lord); and B.P. - before present (1950), which is used in the prehistory discussion in this document.

California sites indicates that toolstone was acquired from a variety of quarries, some at distances up to 200 km (McGuire and Nelson 2002; cf. West and Welch 2001). Most of these sites are found near ancient lakeshores or within marshlands, leading some to associate the settlement/subsistence pattern with Bedwell's (1970) Western Pluvial Lakes Tradition.

Like the previous period, the Lower Archaic (8,000-5,000 B.P.) is poorly understood in the Central Valley. Few sites in the region have been found owing to the fact that evidence from this time period is largely buried. Meyer and Rosenthal (1997) discovered a buried component in the Kellogg Creek drainage at about four meters deep (370-420 cm below surface). It yielded a sparse but diverse assemblage, including traces of freshwater mussel, low to moderate densities of faunal material, hand stones, milling slabs, large cobble-core tools, and large projectile points and Bifaces fragments. This assemblage reflects long-term, periodic use of the valley. Macro floral remains (acorn and cucumber) indicate only short-term seasonal use, probably associated with a highly mobile adaptation. Another Lower Archaic component was recently discovered in downtown Sacramento, buried 3.5 to 6.5 meters deep. Those studies, however, are ongoing.

The Middle Archaic Period (5,000-2,200 B.P.) identified as the Early Horizon under the Central California Taxonomic System (CCTS) is distinguished as one that emphasized hunting, as evidenced by the relative proportions of tools representative of hunting, fishing, and gathering activities. Artifacts characteristic of this period include distinctive shell ornaments and charmstones, large projectile points with concave bases and stemmed points, baked clay balls (used for cooking), and milling tools. Net weights, bone fishhooks, and bone spear tips provide evidence of fishing (Bennyhoff 1950; Ragir 1972).

Sites associated with the Upper Archaic Period (2,200-1,000 B.P.) contain substantial midden<sup>2</sup> deposits with shell, mammal and fish bone, charcoal, milling tools, and other artifacts. The number of mortars and pestles increases during this time, indicating a greater reliance on acorn and nuts. The increase in obsidian, shell, and bead assemblages observed at sites of this time period is thought to indicate a greater complexity of exchange networks and social stratification. This period is well represented at several large mound sites situated along the Sacramento and American rivers.

The Emergent Period dates between 1,000 B.P. (950 A.D.) and the arrival of the Spanish in central California (i.e., 1800s) and is identified as the Late Horizon under the CCTS (Fredrickson, 1973). This period involves a dramatic change in general economy, characterized by large village sites situated on high ground, increased evidence of acorn and nut processing, introduction and use of the bow and arrow (indicated by small projectile points), and use of clamshell disc beads as the primary medium of exchange. Sites from this time period often include items of Euro-American manufacture, such as glass trade beads or worked bottle glass. Like the Upper Archaic Period, several sites along the Sacramento and American rivers have components dating to this time.

As a result of the record search and literature review, one prehistoric site (CA-SAC 38) was recorded within a one-block radius of the project site and two other prehistoric sites (CA-SAC-36 and RT-1) were recorded within a half-mile radius of the project.

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<sup>2</sup> A mound or deposit containing shells, animal bones, and other refuse that indicates the site of a human settlement.

Site CA-SAC-38 is located across the street from the Metropolitan Project, at the intersection of I and 10<sup>th</sup> streets (within Cesar Chavez Plaza and under the Sacramento City Hall and the CalEPA building) (Heizer 1934a; Hider and Mikesell 1991; Tremaine 2006). This site is noted as the village of Sa'cum in the 1850 lithograph (Casselear and Bainbridge n.d.). A portion of SAC-38 has been excavated as part of the City Hall expansion project (Tremaine-report in progress, 2006). The site appears to be quite large and spans over 8,000 years of prehistory. Several Native American burials were recovered.

Site CA-SAC-36 is located six blocks south of the Metropolitan Project, at 10<sup>th</sup> and P streets. No additional information is provided on the site record, except that a house was located on the site at the time it was recorded (Heizer 1934b).

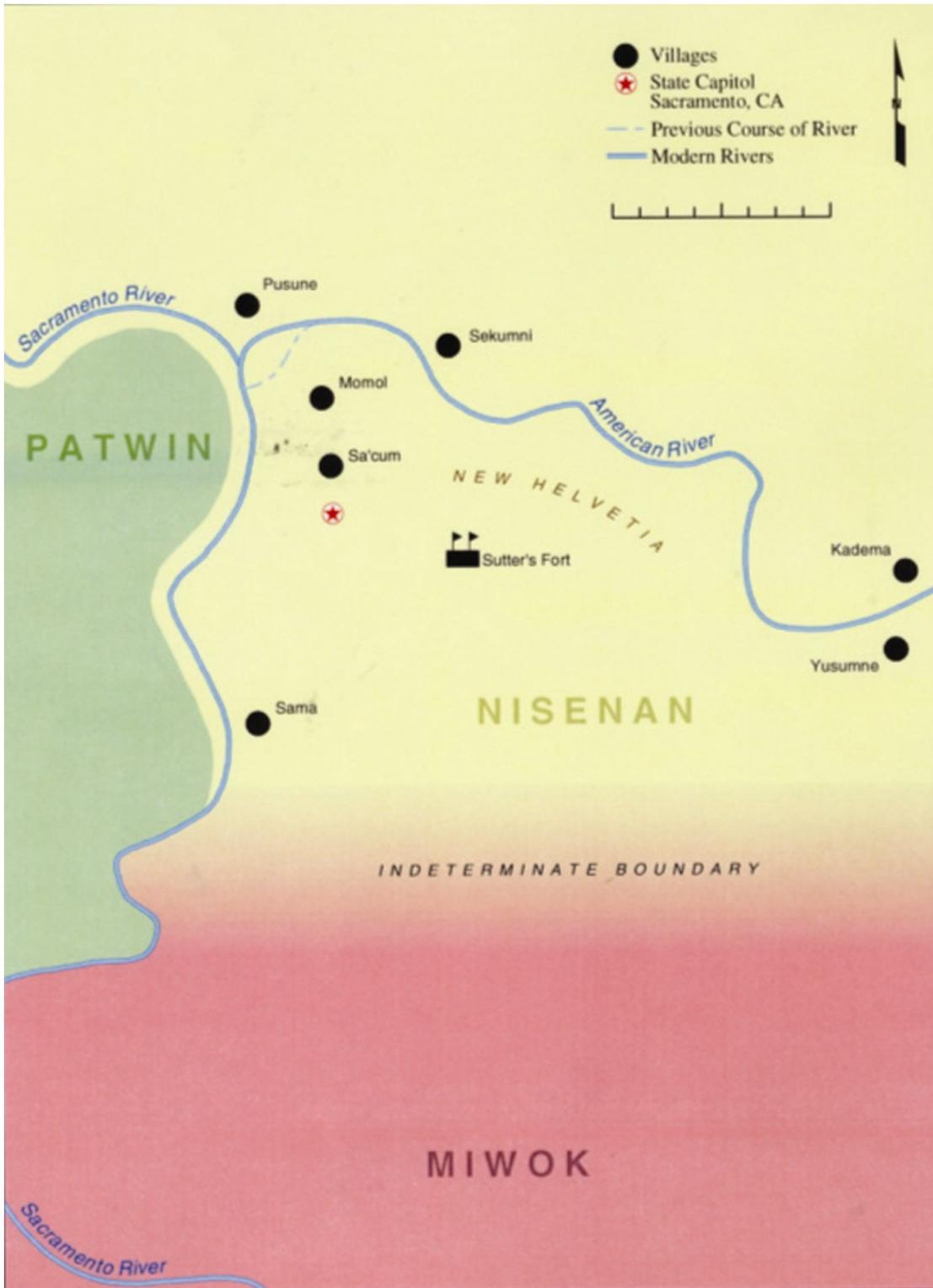
As part of the Downtown Sacramento Amtrak and Folsom Corridor Light Rail Transit Project, an unanticipated discovery (RT-1) was made during archaeological monitoring of trenching work on 6<sup>th</sup> and H streets (Tremaine 2006). It is situated approximately 1,400 feet northwest of the proposed Metropolitan Project. Of primary concern were human skeletal remains identified at nine feet below street grade, lying beneath a concrete duct bank. These were determined to be Native American in origin based on the presence of olivella shell beads lining the base of the cranium. Additional burials, cremations, hearth features, and the floor of a large semi-subterranean assembly house were found. This site is situated on what, historically, would have been the east side of Sutter Lake.

#### **ETHNOGRAPHY**

The project site falls within land occupied ethnographically by the Nisenan. The Nisenan occupied a territory bounded by the crest of the Sierra to the east, the west bank of the Sacramento River to the west, between the Yuba and Feather rivers to the north, and the Cosumnes River to the south, as noted on **Figure 5.2-1**. (Matson 1972:39; Wilson and Towne 1978:387).

The neighboring Miwok, whose main territory was south of the Cosumnes River, occupied a portion of the southern Nisenan territory, from a few miles south of the confluence of the American River to the Cosumnes River (Wilson and Towne 1982:3; cf. Bennyhoff 1977). This is thought to have been a recent movement northward by the Miwok as a result of efforts by the Spanish to remove the Miwok to the missions (Wilson and Towne 1982).

Most Nisenan were unaffected by the missions established elsewhere in California in the 1700s and occupied their native territory until 1826, when Hudson's Bay fur trappers entered the Sacramento Valley. By the late 1840s, Euro-American intrusion and settlement in the valley had significantly influenced the aboriginal way of life. Those who had survived outbreaks of disease (e.g., the 1833 malaria epidemic) and hostilities became laborers on Euro-American farms and ranches or were subjugated to reservations established by the government (Johnson 1978:351). By the time ethnographers began to collect information about the Nisenan, only a handful of people were left who knew few details about life before 1840. As such, ethnographic knowledge of the Nisenan is limited.



Source: Bennyhoff 1977:165, Map 3

**FIGURE 5.2-1**  
**ETHNOGRAPHIC TERRITORY**

The Nisenan, who with the Maidu and Konkow form a subgroup of the California Penutian linguistic family, are often referred to in literature as Southern Maidu (Wilson and Towne 1978:387). The Nisenan exploited the abundant river resources, in particular Chinook salmon, trout, perch, and sturgeon. Major villages were located on natural rises, or knolls, ridges, or terraces along the American River and other stream courses, with temporary seasonal occupation sites located near important resources (Kroeber 1925:395; Wilson and Towne 1978).

The Nisenan situated their larger, permanent settlements on high ground along the Sacramento and American Rivers and in the foothills; the valley floor was typically used as temporary hunting and gathering ground (Bennyhoff 1977; Kroeber 1925, 1932; Levy 1978; Wilson and Towne 1978). Several ethnographic Nisenan villages have been identified near the confluence of the Sacramento and American rivers – Pusune, Momol, Sekumni, and Sama (cf. Bennyhoff 1977:165, Map 3 and Wilson and Towne 1978:388, Fig.1.). Sama was considered the southern-most Nisenan village along the Sacramento River. Pusune was an important village, perhaps serving as a regional center for the other smaller villages located along the American River. Kadema and Yuseumne are located just a little further upstream along the American River. Both Nisenan and Kanakas (Hawaiian natives who came with Sutter) occupied the village of Kadema (Wilson and Towne 1982:21).

As noted above, a small village identified in a historic drawing (circa 1852) as the Indian village of Sa'cum was located in downtown Sacramento, within what is today Cesar Chavez Plaza. Although not identified by ethnographers, this village is now documented as a prehistoric site (SAC-38), most recently occupied by Native Americans during the Emergent Period.

Prehistoric archaeological sites in the area of the American River are typically found on natural rises or levees that protected the occupants from recurrent flood events. Often artificial mounds are created on these high spots. In fact, many of these sites can be identified on early topographic maps as elevated areas (about 25 feet in elevation) in an otherwise fairly flat flood plain.

### ***Project Site Archaeological Resource Potential***

The proximity of the proposed project site to the previously recorded prehistoric site CA-SAC-38, also known as Sa'cum, is particularly noteworthy. The exact boundaries of the site remain unknown as all of it is either under fill or pavement. There is a strong possibility that the site extends to the east and thus may be an impacted resource.

Archival research (i.e., review of assessor's maps) results suggest it is also very likely that trash deposits and foundations from pre-1880s structures may be encountered during subsurface construction activities. From the block study, it is apparent that many of the individuals, such as George Lorenz and Peter Bohl, owned the lots for several decades. Due to the fact that there was no organized trash disposal program, a portion of the lots may have been used by the occupants for refuse disposal.<sup>3</sup> A few of the lot inhabitants lived there a

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<sup>3</sup> Left up to the individuals, most trash in nineteenth century America was deposited in backyard privies, alleys, and in other low lying areas, such as lakes, sloughs, and ponds (Strasser 1999). A formal disposal center with crematory was not established in Sacramento until 1895, and an organized form of garbage disposal was not initiated until well into the twentieth century (Sacramento Department of Public Works, 2003). Therefore, prior to the turn of the twentieth century, residents managed their trash through burning and burial, or carting and dumping.

long time, suggesting that deposits of household and business debris representing several decades of accumulation might be found.

Historic flooding and preventative actions taken probably had an effect on the historic deposits within the project. Shortly after the town was established, in the winter of 1850, nearly eighty percent of the town was inundated with floodwaters reaching depths of four to six feet. Cesar Chavez Plaza was one of the few high spots above water where settlers took refuge. The area surrounding the plaza was probably blanketed with a layer of flood deposit, providing a dateable layer if it survives.

Subsequent flood events in 1854 and 1861 probably also left their marks. In 1872 the [Cesar Chavez] Plaza, formerly the high spot, was filled five feet above historic grade after the raising of the adjacent streets (Lagomarsino 1969). Street-raising as well as flood deposits resulted in the burial of historic resources.

Fire may have also had an effect on historic deposits within the project area. The first two devastating fires in Sacramento occurred in 1852 and 1854, but left the area along J Street east of the public square undamaged (Severson 1973:107). Nevertheless, a fire is known to have destroyed the properties at 1009 through 1015 J Street in 1879. This occurred despite the fact that the local fire-house, historically known as Young America Fire Company, was virtually next door, north of the alley fronting 10th Street. The remains of the fire, if observable, can be helpful in documenting the time period (e.g., finds below the burn event should pre-date 1879 and those above the burn event should post-date 1879).

### **HISTORIC SETTING**

Sacramento began with the first permanent settlement established by John Sutter near the banks of the American River in 1839. After exploring other sites along the American and Feather Rivers, he chose a little knoll on the land now designated as 26th to 28th streets, between K and L streets. Sutter built his fort, constructed a flour mill, developed an irrigation system for his pastures, erected a distillery, and organized extensive hunting and trapping expeditions. When an employee discovered gold at Sutter's sawmill in Coloma in 1848, the news created an international Gold Rush to Sacramento and the foothill areas to the north and east. Very quickly, Sacramento was transformed from its beginnings as a fort and agricultural settlement, to a busy new city.

At that time, the American River entered the Sacramento River near the current Water Filtration Plant and Interstate 5. The flow of the river deposited a sand bar just below the mouth of the river, significantly raising the bed of the river and diminishing its depth. Ocean-going ships coming up the Sacramento River could get no closer to the Gold fields and were forced to unload their cargo and passengers along Front Street on Sutter's embarcadero. This area became the critical point of entry to Sacramento and Gold Rush sites and grew quickly, outdistancing the growth of both Sutter's Fort and Sutter's planned settlement, Sutters town.

The first growth took place along the Sacramento River, (presently the site of Old Sacramento) encouraged by the coming and going of river traffic that tied the new city to the Bay Area and the sea. The Old City area of Sacramento was laid out in 1848 at John Sutter Jr.'s request, by Captain W. Warner and Lt. William Tecumseh Sherman (later to become famous in the Civil War). It extended from the Sacramento River east to the current Alhambra Boulevard, and from the railroad levee on the north of downtown to just south of X

Street (Highway 50 freeway) on the south. The street pattern included a numbering system from Front Street (1st) to 30th Street with north/south running streets, and from the Railroad levee (B Street) through the alphabet to Broadway, running east/west. Each block of lots within this rectangle contained eight 80 foot by 160 foot lots, with an alley running between the four lots on the north side of the alley and the four on the south of it. (The one exception to this pattern is the strip of larger blocks between 12th and 13th streets, which held ten 80 foot by 160 foot lots, with the east/west alley separating five on the north and five on the south.)

In 1860 construction began on the Capitol Building, just southeast of the Central Business District (CBD) at that time. The Capitol and State government grew more active as many statewide issues gained in importance and political activities increased, and was one of the most significant factors leading to the growth of the Capitol Area. A number of notable hotels for visitors to the legislature, lobbyists, and businessmen were built downtown, and the core of the City was an active, attractive, and economically successful area. The presence of the State Capitol, Capitol grounds, and accompanying classical and impressive sister buildings contributed stature, elegance, and stability to the downtown area of the City.

Sacramento's largest employer, however, was the Southern Pacific (SP) Railroad, originally the Central Pacific Railroad. The railyards, located near the former Sutter's Lake just south of the original American River bed, grew to be the largest such working/manufacturing railyard west of the Mississippi. The yards contained giant forges, stamp mills, blacksmith shops, lumber mills, electrical and brake shops, paint shops, and a hospital, and was essentially a city unto itself. The SP shops even had their own police and fire departments.

Since the Gold Rush, agriculture has also been a key component of the evolution of the Sacramento Valley and California. The enormous influx of immigrants to the California gold fields in 1849 generated a large market for supplies to feed them. Before that time, there were no towns with stable food sources, virtually no farms, no railroad transportation, and few roads for wagons to supply the hordes of people that descended upon the gold fields. Some observed potential profit from providing supplies and others turned to ranching and farming to survive. The Sacramento Valley proved a rich resource and wheat and grain soon became as important products as gold had been. The northern wheat fields supplied countries around the world for many years. However, by the end of the 19<sup>th</sup> Century cheaper foreign grains were being imported and wheat and grains became unprofitable. California farmers responded by turning to the production of fruits, nuts, and vegetables.

The Great Depression slowed and stymied growth in Sacramento during the 1930s. Although California and Sacramento were not hit as hard as the rest of the country, the effects were still significant. Some banks closed, businesses were ruined and some homes were lost due to foreclosure. As jobless and homeless people arrived from the Midwest and South, hobo camps began to appear around Sacramento particularly in the area north of downtown and along the American River. By the mid 1930s commerce in Sacramento began to grow slowly and by the late 1930s home building was starting to recover.

The outbreak of the Second World War was good news for Sacramento. Defense contracts, the heightened need for canned agricultural products, and the increased jobs and activity at the Army Depot, Mather and McClellan Air Force Bases, had the effect of improving the Sacramento economy. During World War II, building and construction slowed dramatically, with building materials conserved for the war effort.

Due to the flight to the suburbs that occurred after the war, and the efforts to retain downtown customers by modernizing its buildings and accommodating the expanded age of the auto with parking meters and garages, the area became less inviting to shoppers and dwellers and the downtown area began to decline. This decline in activity, the introduction of a number of buildings accommodating State workers and other daytime offices and the popularity of free parking at suburban shopping centers, combined to create a downtown less friendly to residential uses; the area lacked schools and grocery stores and was fairly deserted on evenings and weekends. The urban renewal programs of the 1960s resulted in a significant cumulative loss of historic fabric.

### ***Historic Setting of the Central Business District***

The first commercial growth in Sacramento took place along the Sacramento River (presently the site of Old Sacramento), encouraged by the coming and going of river traffic that tied the new city to the Bay Area and the sea. As it grew, the city expanded to the east, with J Street becoming a major path to and from the gold fields. At 12<sup>th</sup> Street, the path split, with one road continuing along J Street toward Hangtown [Placerville] and Coloma, and the other road branching toward Auburn and Marysville. Thus J Street became the principal path to the gold fields for wagon trains, suppliers, and gold seekers, as well as the principal route back from the mines, a conduit bringing millions of dollars worth of gold down J Street into Sacramento over time. As a result, the block faces on J and K Street became occupied with buildings first, before much other construction had taken place.

Flooding was a major problem throughout the nineteenth century, with most businesses, residences, and farms devastated at one time or another by extensive floods. The American River originally approached within a few hundred feet of the Sacramento River and then turned south. In 1868, a new channel for the river was created by deepening the slough north of the original location, and blocking the original channel. The bend was filled in and a spur levee built to deflect the current.

Disastrous floods occurred in Sacramento in the winter of 1861-62 and the decision was eventually made to raise the levels of all the streets by fourteen feet along J and K streets. This general effort began in 1869. Property owners bore the cost of raising the grade in front of their land, of raising their own buildings and sidewalks to meet the new level, and of installing a brick bulkhead along their frontage to hold the street fill. Furthermore, wood-frame buildings could not be raised to the new grade or moved onto lots within fire limits. Some merchants jacked their buildings up and put new foundations and storerooms underneath them in order to have the main floor of the building at the new street level. Others added floors on top of the structure already in place.

The City constructed brick bulwarks supporting a brick wall on each side of the streets along the outer edge of the sidewalks, and filled in the center with dirt to reach the new street level. This left a gap between the wall holding the center of the street and the front of the buildings. Former windows and doors at the original level now faced a brick wall on the other side of their former sidewalks. The gap was covered by a new sidewalk supported by a series of steel I beams extending between the bulwarks and the buildings at their new ground floor. A series of brick barrel vaults between the beams filled in the space between the beams and supported flat new street sidewalks above the space between the bulwarks and the new level of the buildings.

Over time, merchants used this under-the-sidewalk area to suit their needs. Some inserted elevators in the sidewalk and used them to deliver store inventories to basement storage from street level trucks. Others constructed stairways in the sidewalk down to the basement level and installed businesses such as barber shops, stores, bars and saloons, and restaurants beneath the sidewalk and used the basements for storage.

This created long corridors beneath the sidewalks—between the bulwarks and wall containing the street infill, and the old fronts of buildings on the original ground level. When completed, one could walk from one end of the block to the other beneath the sidewalk. Over time, in order to secure individual basements from entry, brick walls were erected under the sidewalks between buildings, providing each with a room or space the width of the sidewalk and the length of the building. This area has become known as the Underground of Downtown Sacramento or as Hollow Sidewalks. A few remnants of this early Sacramento era still remain in downtown Sacramento today, including on the project site (**Figure 5.2-2 Hollow Sidewalk Locations**).

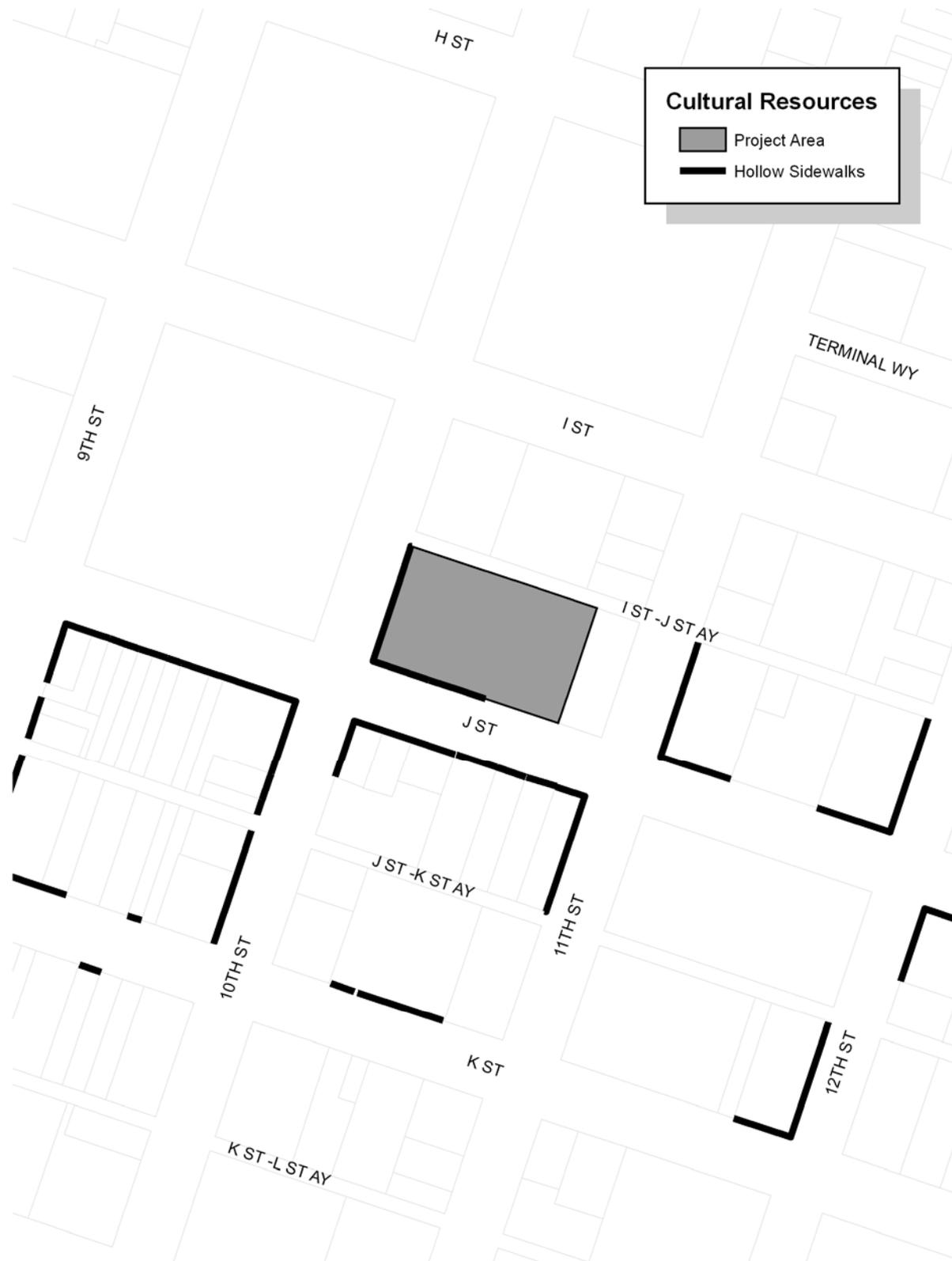
The space was accessed in many instances by metal elevators in the sidewalk that rose to street surface for the loading or unloading of goods and then lowered to basement level under the sidewalk of various businesses. Filtered light from above was often provided to the space by the insertion of sections of thick small glass blocks in the sidewalk. There were also a few instances of portions of the sidewalk left open adjacent to buildings that still retained businesses on the original ground level. There were stairways that extended from the new sidewalk level down to the lower level under the sidewalk, providing access to basement businesses or offices. While none of these have remained to the present, the shadow patterns of stairways on the existing walls of a few buildings indicate their former existence.

While this project raised the facing street levels one story, the alleys retained their original ground level, as did the rear facades of buildings facing the streets. At the east and west ends of the alleys, the alley street descended to original street level and then back up to the new level. This facilitated the delivery and loading of goods and provided basement access to businesses, hotels, and other tenants.

Over time, most of the original underground sidewalk construction configuration has been modified or removed by the city through encapsulation by concrete or stabilization by metal or timber supports, in order to strengthen sidewalks that often had been supported only by crumbling nineteenth century brick.

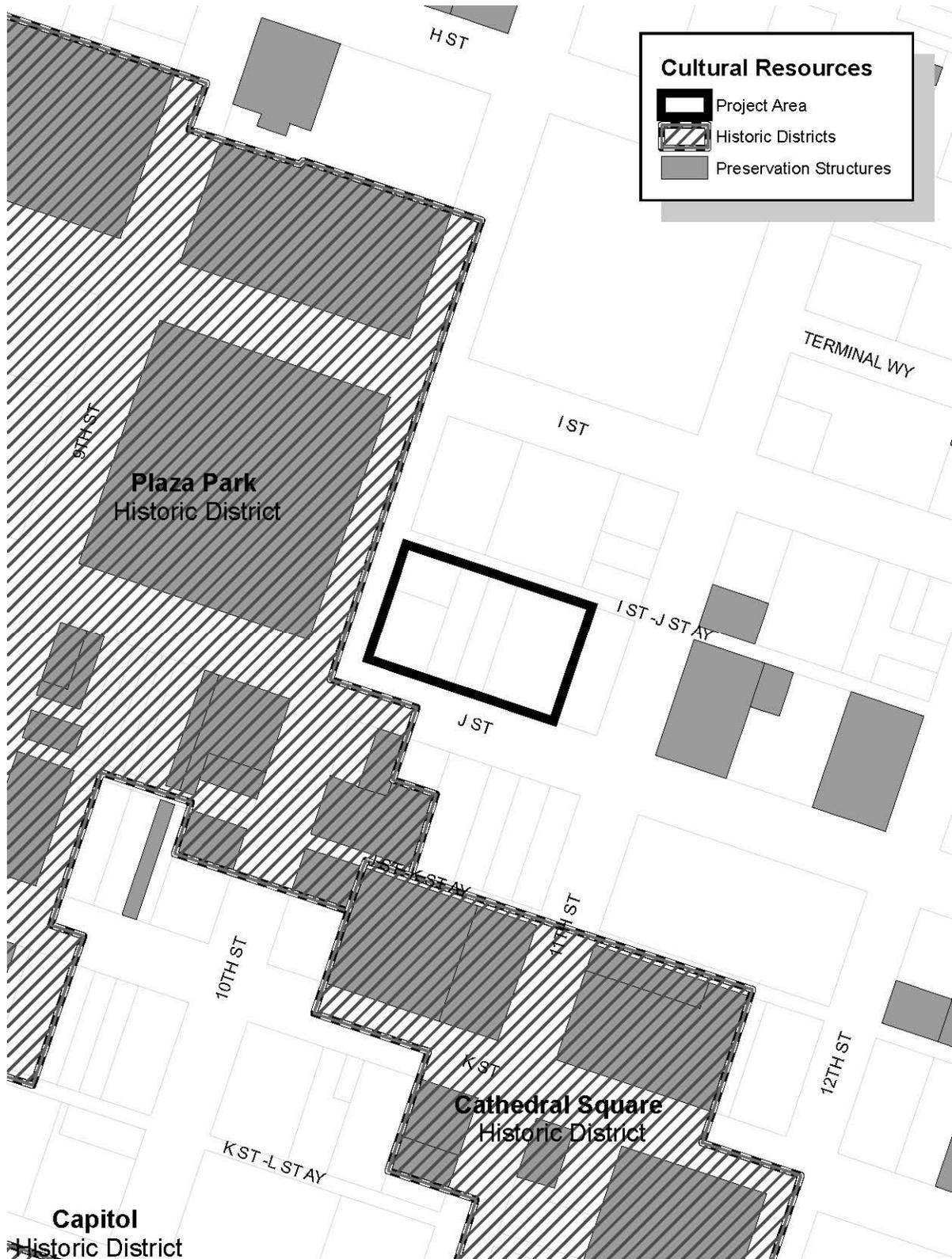
### ***Historic Properties within a One-Block Radius***

Although the project site does not lie within a historic district; it is located between two approved historic districts, the Cathedral Square Historic District and the Plaza Park Historic District (City of Sacramento 2005). Numerous historic properties within a one-block radius of the project are on file within the Historic Property Datafile for Sacramento County, the Sacramento Register, and National Register of Historic Places (NRHP) (**Figure 5.2-3 Historic Districts**). The NRHP properties include: the Elks Temple (921 11th Street); Sacramento City Library (828 I Street); Masonic Temple (1131 J Street); Ruhstaller Building (900 J Street); Hotel Regis (1024 K Street); and Mohr & Yoerk Building, Ransohoffs (1031 K Street).



Source: Ervin Consulting 2006

**FIGURE 5.2-2**  
**HOLLOW SIDEWALK LOCATIONS**



Source: Ervin Consulting 2006

**FIGURE 5.2-3**  
**HISTORIC DISTRICTS AND STRUCTURES**

### ***[Cesar Chavez] Plaza Park/Central Business District Historic District***

The Plaza Park/Central Business District Historic District, adjacent to the project site, represents the core of Sacramento's business district with a particular focus on the era between 1910 and 1930. Of additional importance is the age of some of the structures which date back to the very early commercial development of the City when J Street was one of the major transportation routes to the northern gold fields. Many of the buildings along J Street still retain evidence of the original structures built prior to the raising of the streets in their basements and under the sidewalks. Many alleys in this area still retain their cobblestone paving. A number of the sidewalks in the area have their original curbstones.

### ***Cathedral Square Historic District***

The strongest theme in this District, adjacent to the project site, is that given by the Cathedral of the Blessed Sacrament built in 1887. This structure dominates the view from 11<sup>th</sup>, 12<sup>th</sup>, and K streets. The retail and hotel structure facing the Cathedral, even though its use has changed, still supports the architectural feel of the area. The 11<sup>th</sup> and L streets building and the Senator Hotel Building, even though a block away from the Cathedral, continued the same architectural quality of the District. This architectural elegance reflects to some degree the association of the area to the adjacent Capitol to the south. Although the District is only separated from the Capitol by L Street, it is the heaving landscaping of the Capitol grounds as well as the dramatic change of use that provides the southern boundary.

The Historic District is generally bounded by the K Street alleyway to the north, between 10<sup>th</sup> and 12<sup>th</sup> streets, and L Street to the south.

### ***19<sup>th</sup> Century Old City Alleys***

When the Old City area of Sacramento was laid out in 1848, alleys between the blocks were laid out running east/west dividing the blocks into north and south half-blocks.

While the street-raising project, because of flooding, raised the facing street levels one story, the alleys retained their original lower ground level, as did the rear facades of buildings facing the elevated streets. At the east and west ends of the alleys, the alley street descended to original street level and then back up to the new level. Over time, the main street-face businesses often expanded their buildings back toward the alleys. Retention of the original levels of the buildings in the middle of the blocks facilitated the delivery and loading of goods and provided basement access and storage for businesses, hotels, and other tenants whose principal facades stood on the street facades.

Character-defining features of alley buildings include brick construction, segmented arched windows with brick sills and arched door openings, flat arches in windows and doors, stepped brick parapets, brick chimney stacks along the periphery of buildings, and some patterned brick areas. Building setbacks from the edge of the alley are varied according to the depth of the building. Many of the alley-level building doors are metal. There are occasional volunteer trees or bushes, some cobble-stone surfaced alleys, and some angled bays projecting from buildings over the alley. Spaces on lots whose buildings do not extend completely back to the alley are often used for parking and business or delivery access.

Over time, many of the street facades of downtown buildings have been altered, but often the alley elevation, with its purely utilitarian function, has remained less modified. As a result, some of the more intact nineteenth century building facades remaining in the downtown area are those located in the alleys. These alley facades thus often provide a better image of the post Gold Rush Sacramento than downtown street-face facades.

Some groupings of remaining alley elevations convey a strong sense of time and place reflecting late Gold Rush and mid- to late-nineteenth century construction. As such, they provide valuable visual information of Sacramento's early years. These groupings contribute significantly to the character and image of Sacramento's historic downtown, its important heritage, and its evolution over time.

Further, the alley configuration also provides an otherwise limited opportunity to view and understand this unique aspect of the city's history when its streets were raised to their current level. Sacramento's unusual underground level is highlighted by the alley configuration with its lower original mid-block level, and slope up to current street levels on each end. The form and image of the downtown alleys is a critical character-defining feature of downtown Sacramento and its historic districts.

There are a few groups of alley buildings remaining in the downtown that reflect the character of alleys from the nineteenth century. One of these representative alleys, Copenhagen Alley, occurs on the east end of the alley between 10th and 11th streets, and J to K streets. This group of alley elevations of buildings at the following addresses, located south of the proposed project site, is a good representative of a downtown alley district: 1016-18, 1020, 1024, and 1030 J Street and 1027-31 K Street.

Other alley portions of interest in the downtown area include the Greyhound Alley District which is comprised of the alley elevations of 708, 712-714, 716, 720, and 724 K Street, located on the north side of the alley between 7th and 8th streets. The back of the Greyhound Bus Depot is opposite these elevations on the south.

The portion of the alley on the project site possesses some elements of character-defining alley features with its rear brick elevations and nineteenth century building scale, and is further discussed below.

### ***Summary of the Proposed Project Site History***

Since J Street served as the primary route to the northern gold fields, the property uses along the street tended to complement that purpose and were primarily related to transportation and lodging. Hundreds of teamsters with huge freight wagons streamed up and down J Street every day. Businesses sprang up along the street, particularly between 8<sup>th</sup> and 13<sup>th</sup> streets, to service this trade.

In the 1850s the 927 J Street site appears to have held a bakery. In the 1850s and 1860s, 1009 J Street was the Illinois House Hotel, while 1013-15 J Street was a blacksmith and wagon maker. In the 1850s the 1021 J parcel was occupied by a boarding house and a blacksmith and in the later 1800s it was the Central Livery Stables—which also housed a blacksmith shop. In the 1870s both 1009 and 1013-15 J Street were a wagon and plow works operated by W.B. Ready. In the mid-1870s they were incorporated as the Sacramento Plow Factory. In 1879 the plow factory became bankrupt and the buildings on both sites burned in the summer of that year. In December of 1882, the Russ House hotel was

completed by John Bruener on the 1009 J Street parcel, and is basically the building that occupies the site today. At about the same time Bruener also built 1013-15 J Street, which was initially occupied by Ingram Carriage Works and by 1889 was the home of Marcus Hirsch, Junk Dealer. In 1884 Peter Bohl built a three story business building at 927 10<sup>th</sup> Street, with ground floor retail and two floors of lodging.

In the 1895 Sanborn Map, the 921 10<sup>th</sup> Street site contained three single family dwellings. Peter Bohl acquired one of the single family dwellings at the rear of his 927 10<sup>th</sup> Street building in the late 1890s, constructing an addition to his building at the rear and remodeling the exterior of the building. The hotel at 1009 J Street was operating as The Rhein Hotel, and 1013-15 J Street was still occupied by Marcus Hirsch's junk operation. In 1897 a restaurant was opened in the ground floor of the hotel, with the Central Livery Stables still next door.

Two trends began to affect the project site at the turn of the 19<sup>th</sup> to 20<sup>th</sup> century. One was the advent of the automobile, which not only revolutionized transportation but also brought an abrupt end to the horse and wagon era. While the project site had its share of wagon makers, stables, and blacksmiths, the need for their services dwindled rapidly between 1910 and 1920 and their buildings and spaces were converted to other uses.

Another trend around the turn of the century was the move of the retail center away from Old Sacramento and further out along J and K streets. A good example was the Public Market that was erected at 13<sup>th</sup> and J streets in 1923. Mrs. Elizabeth Glide worked with renowned architect Julia Morgan to build the beautiful Beaux Arts building which housed dozens of retailers and service providers. It also brought Sacramento's first example of the technical innovation of refrigerated display cases for grocers and butchers. The Public Market building replaced the old Telegraph Stables a complex which included a barn, brick carriage house, combination wood frame hotel and restaurant, and a horse shoer, all built in the 1860s to service the teamsters. In 1925, Weinstock-Lubin & Company opened its elegant new department store at 12<sup>th</sup> & K streets, thus moving up from 4<sup>th</sup> & K streets.

Events like these created more value for real estate in the project vicinity, and it encouraged owners to remodel their properties and to find new uses for them. In 1906 the Redman's Lodge Hall and Hotel was constructed at 921 10<sup>th</sup> Street. In 1923 the building's owner, architect Arthur Lamb, converted the building to offices in a remodel that brought it to its current appearance and renamed it the Plaza Building.

In the early teens the residential units above 1013-15 J Street were incorporated into the hotel at 1009 ½ J Street. In 1917, remodeling of the hotel and 1013-15 J Street brought these two buildings to their current appearance. A second retail outlet was added to the ground floor of the hotel and it became known as the Biltmore. Hirsch & Son Plumbing Supplies moved to the 1021 J Street building that formerly housed the livery stable, and the 1013-15 J Street building had two retail outlets installed in its ground floor.

In 1940, the building at 927 J Street was demolished and the building that presently occupies the site was constructed. Its initial tenant was the Retail Credit Association. In 1949, The Antecevich Restaurant occupied the 1013-15 J Street building and it became known as The Broiler. The Broiler occupied half of that building until the late 1990s.

Although it was remodeled for new uses, the old Central Livery Stables stayed intact until it was demolished and replaced in 1962-63 by the office building which currently occupies the site.

#### PARCEL DESCRIPTIONS – HISTORIC SIGNIFICANCE

Historic Environment Consultants reviewed each existing structure for its architectural and historical significance (Appendix E). The information from the HEC report is summarized below.

#### **921 10<sup>th</sup> Street: Redman's Lodge**

The Redman's Lodge Hall was designed in the spring of 1906 by E.B. Wilson and construction began (**Figure 5.2-4**). The building was completed in the spring of 1907. Although it has seven bands of horizontal windows, the building was originally four stories with two bands of horizontal windows providing illumination for lodge halls with 19' ceilings.



Source: Historic Environment Consultants, 2006

**FIGURE 5.2-4**  
**921 10<sup>TH</sup> STREET: REDMAN'S LODGE**

The structure has experienced alterations that have substantially changed its original appearance. The building was altered to an unknown degree in 1923, and again after the City of Sacramento assumed ownership in the 1970s, experiencing substantial changes to the design of the façade that have modified its earlier and original image. The original windows have since been replaced. The building no longer reflects its 1907 or early 1920s design.

The structure has experienced alterations that have substantially changed its original appearance. Its primary importance as a resource is due to its past cultural and historical associations as the Redman's Wigwam, and the site of a session of the State Legislature. Due to substantial modifications and limited architectural values, the building does not appear to meet criteria for listing in the National Register of Historic Places.

**927 10<sup>th</sup> Street: Retail Credit Association Building**

The three-story building, originally designed by prominent local architect Harry Devine, is located on the corner of 10<sup>th</sup> and J streets opposite Cesar Chavez Plaza (**Figure 5.2-5**). A reinforced concrete building with a stucco/plaster surface, its image reflects an early interpretation of International style. The current appearance of the building is a modification of its original 1940s design.



Source: Historic Environment Consultants, 2006

**FIGURE 5.2-5**  
**927 10<sup>TH</sup> STREET: RETAIL CREDIT ASSOCIATION BUILDING**

The building has experienced several alterations. It was remodeled in 1955 for the First Western Bank. It was subsequently again remodeled for use as Sacramento City offices, probably in the late 1970s. The current appearance of the building reflects these modifications.

The building does not appear to be individually eligible for listing in the National Register of Historic Places, due to alterations. Even though the building was designed by a prominent local architect in a style that was important to Sacramento's architectural evolution, that image has been modified. While the building reflects a significant era in the city's architectural heritage, the alterations, particularly those on the ground floor, have limited its eligibility for Sacramento Register listing, and the National Register of Historic Places. The building does not appear to meet criteria for eligibility for listing in the Sacramento Register, the California Register of Historical Resources, or the National Register of Historic Places.

***1009 J Street: Biltmore Hotel: formerly the Russ Hotel, Omaha Hotel, Rhein Hotel, The Pleasant***

The Biltmore Hotel is a three-story wood frame and brick building containing rooms and apartments clustered around a central, three-story, open stairwell (**Figure 5.2-6**). The upper two stories of the building are surfaced with painted cement plaster, and the ground floor is surfaced with green ceramic tile. The original cornice has been modified and its current configuration includes a horizontal panel on the building's top surface, created by the application of wood or concrete plaster members. The rear of the building, the north elevation, reveals more of the building's original appearance, with segmented arched windows on the upper two floors, and brick surface. Two covered and balustraded balconies project from the rear at the second and third floor levels. A stepped parapet and brick chimney stacks are visible along the edge of the building at the rear and sides. Alterations include the resurfacing and modification of the entire façade, including the commercial shop areas on the ground floor flanking the central stairwell.

A connecting passage between the Biltmore and Broiler buildings was created on the second floor to allow access to the rooms above the Broiler through the Biltmore Hotel when the Broiler's second floor became part of the hotel.

Since 1918, when it became The Biltmore, the hotel has remained in continuous use as a residential hotel until it was vacated in May of 2001. The Biltmore Hotel building has served a variety of important housing and commercial functions that reflected the evolution of downtown Sacramento from the late 1800s until 2001, a period of approximately 118 years. The property was owned by John Breuner, who became a well-known local businessman, managing the primary furniture store in Sacramento for many years. The building possesses some degree of local importance as an example of an important building type for its era, and as the longtime property of the locally prominent Breuner family.

Physically, the Hotel has been completely altered from its original exterior appearance. Nevertheless, the central stairway and landings of the second and third floors have still retained some degree of their original character and detail. The balusters that encircle the stairwell are turned, and partly original, partly heightened to meet building code requirements. The heightening of the balustrades has been carefully executed, as has the raising of the second floor newel posts to match their height, but they have been modified. The hallways and most of the simple paneled room doors have retained much of their early character, although the transoms have been covered.



Source: Historic Environment Consultants, 2006

**FIGURE 5.2-6**  
**1009 J STREET: BILTMORE HOTEL**

A notable interior feature is the three-story stairwell space. An original wainscoting molding reflects what was probably the height of the original wainscoting, but the wainscoting material has been removed. The halls and doors above The Broiler are somewhat more varied, but are similar to those of the Biltmore. A hall between the two buildings on the second floor still exists, providing access to both buildings at the second floor level.

While the interior does suggest a feeling of time and place that belong to an early era, and reflects a remnant of a building type and environment that was once important in Sacramento, even it has experienced alterations that detract from its originality. Associations of the building with its notable owner are of limited significance since the Breuners owned other property and never used this site as a dwelling. Additionally, the façade no longer reflects its period of significance or era. Due to a lack of integrity, the building does not appear to meet criteria for listing on the National Register of Historic Places. When the building was still occupied, it may have met listing criteria for the Sacramento Register or the California Register of Historical Resources based on the rarity of its interior building type. However, the interior of the building has substantially deteriorated since its vacancy, diminishing its eligibility.

**1013 J Street: Broiler Restaurant**

The Broiler is a two-story brick building with commercial and former restaurant spaces on the ground level, and rooms on the second floor (**Figure 5.2-7**). It is commonly referred to as The Broiler, because it housed a long-time Sacramento restaurant by that name.



Source: Historic Environment Consultants, 2006

**FIGURE 5.2-7**  
**1013 J STREET: BROILER RESTAURANT**

The upper façade of the building is currently surfaced with cement stucco. The street level shops divide the façade into two equal shop areas; the one on the west was The Broiler restaurant and the one on the east held a variety of businesses. The second floor of the building contains lodging rooms that were connected to and accessed through the adjacent Biltmore Hotel. Sacramento furniture dealer John Breuner was the owner of record in 1882.

The former restaurant interior has not been demolished though vacant. The adjacent shop space does not contain significant character-defining architectural features. The interior of the second floor holds rooms accessed by hallways without distinctive design features, but with transomed doors and simple moldings. Access to the second floor is through a hall and stairway from the Biltmore Hotel.

While The Broiler restaurant has served as a Sacramento cultural landmark for many years, the building has experienced substantial modification. Its exterior appearance has changed several times according to its various uses, and the building has lost integrity as a result. This loss of integrity has diminished its significance as a representative of its era, style, or building type. Due to loss of integrity and limited architectural and historic values, the property does not appear to meet eligibility criteria for listing in the National Register of Historic Places, or the Sacramento Register.

### ***Hollow Sidewalks***

The areas under the sidewalks associated with the proposed project buildings have been modified (**Figure 5.2-8**). The remaining brick bulwarks have been partially buried, or concrete poured to create ledges along the street side walls. The original brick barrel vaults have been removed and/or plastered over with concrete.



Source: Historic Environment Consultants, 2006

**FIGURE 5.2-8**  
**HOLLOW SIDEWALKS – 927 10TH STREET**

### ***Sidewalk Elements***

There are two sets of metal sidewalk elevator doors in the sidewalk between the northeast corner of 10<sup>th</sup> and J Streets and the alley to the north. The one furthest north appears to be the oldest. The retention of a former sidewalk element would be educational in an interpretive display of the hollow sidewalks and how they functioned; however, only the doors remain, and the elevator framework and mechanism are gone.

### **19<sup>th</sup> Century J Street Alley**

The western portion of the alley between I and J streets and 10th and 11th streets accesses the existing buildings on the proposed project site. This portion of the alley possesses some elements of character-defining alley features with its rear brick elevations and nineteenth century building scale (**Figure 5.2-9**).



Source: Gail Ervin Consulting, 2006

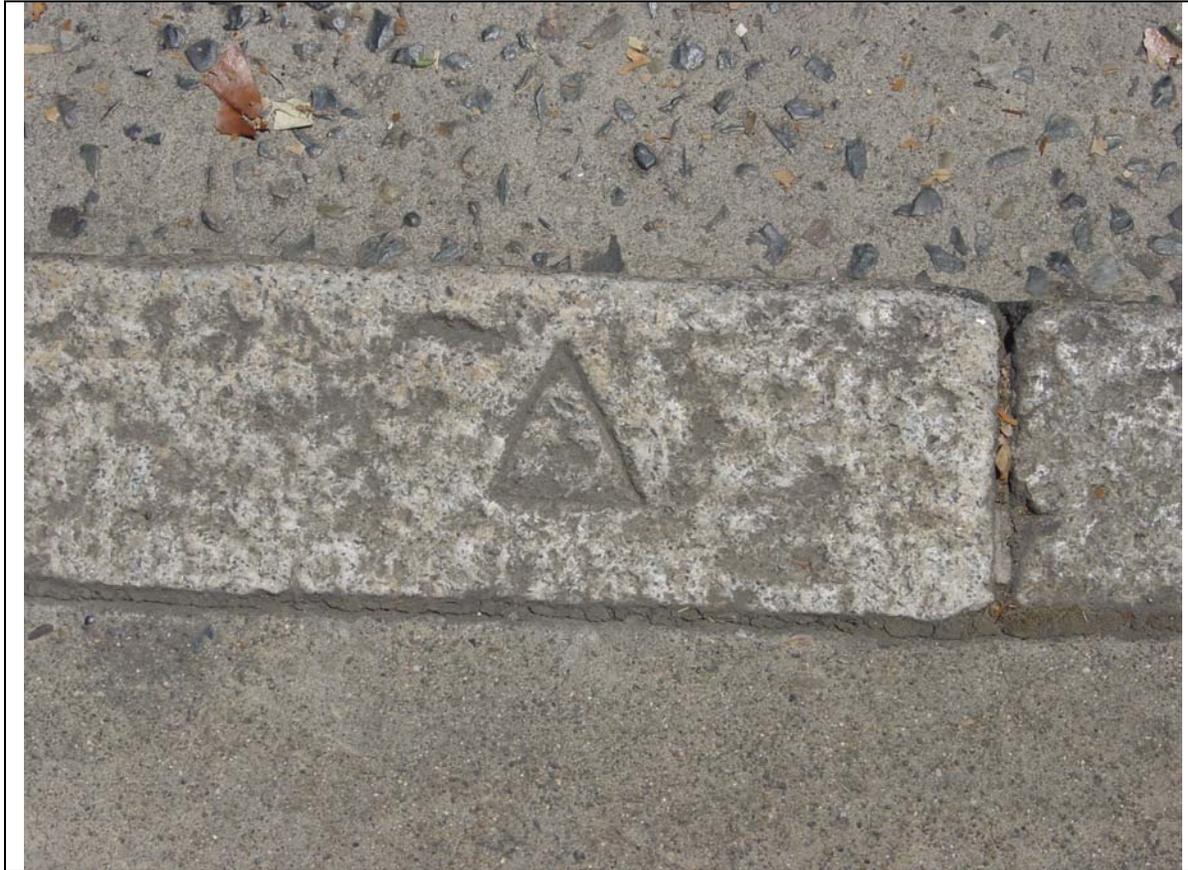
**FIGURE 5.2-9**  
**19<sup>TH</sup> CENTURY J STREET ALLEY**

However, the rear elevations of the Broiler and Biltmore Hotel at 1009 J Street and 1013-15 J Street have been substantially altered. The rear of the RCA building, 927 10th Street, stands on the corner of 10th and J Streets and has little alley exposure. The building at 921 10th Street contains some standard rear elevation elements in terms of brick arched openings that have been painted and/or filled in, but does not reflect nineteenth century building origins. Overall, the alley image has been diminished due to alterations and does not convey its late nineteenth century character as strongly as other downtown alley resources mentioned above.

### **Granite Curbstones**

There are a number of city blocks in downtown Sacramento that still contain portions of granite curbstones. They are easily identifiable due to their hand-hewn texture and granite composition, and some even still hold the original rings used to tie up horses. The indication

that they were installed when horses were still in use downtown suggests that they may date from the late nineteenth century. It is not known if they were installed as an element of the raising of the streets in the 1860s or not, but there seems to be no mention of them in newspaper articles of the times discussing this major project, so perhaps their installation occurred later. Some of the concrete sidewalks abutting them still bear the imprint of the “A. Teichert Company” which laid sidewalks in Sacramento in the nineteenth century and later (**Figure 5.2-10**).



Source: Historic Environment Consultants, 2006

**FIGURE 5.2-10  
GRANITE CURBSTONES**

Some of these curbstones still exist within the project area along J Street between 10<sup>th</sup> and 11<sup>th</sup> Streets. The granite curb along J Street extends from the west edge of the Biltmore Hotel at 1009 J Street east to halfway along the width of 1017-23 J Street.

The granite curbstones are a character-defining feature of downtown Sacramento and should be retained in place if possible, or relocated back in their original location during project construction.

## REGULATORY CONTEXT

Historic and prehistoric resources of importance throughout the City and County of Sacramento are inventoried and governed by national, state, and local laws and regulations. The regulations that apply to cultural and historic resources in the City are discussed below.

### FEDERAL

The National Historic Preservation Act of 1966 established the National Register of Historic Places (NRHP) as the official national listing of important historic and prehistoric resources worthy of preservation. The NRHP includes districts, sites, buildings, structures, and objects with local, regional, state, or national significance. The definition of historic property includes "any prehistoric or historic district, site, building, structure, or object included in or eligible for inclusion in, the National Register" (Advisory Council on Historic Preservation, 1986). A historic property must meet specific criteria to be considered eligible for listing on the NRHP.

Projects carried out by a federal agency, require approval or licensing by a federal agency, or that utilize federal funds in the design and construction of a project are subject to the National Environmental Policy Act (NEPA). In addition, a project with the federal involvement of a significant historical resource must comply with the provisions of Section 106 of the National Historic Preservation Act and is reviewed by the State Historic Preservation Officer (SHPO) in the State Office of Historic Preservation. Under Section 106, SHPO must concur in a finding of significance concerning the resource and concerning the potential impact of the project on the resource and hence the environment.

Under federal law a significant historical resource is a building or a district, which is eligible for listing on the NRHP. Criteria for listing on the NRHP are almost identical to those of the California Register and the Sacramento Register, and include a consideration of integrity, as discussed below. CEQA uses California Register criteria; Historic Environment Consultants evaluated properties base upon National Register criteria, but the criteria are very similar and there is no substantive difference in conclusions relative to properties' eligibility for the California Register.

### STATE

The State Historic Resources Commission and Office of Historic Preservation (OHP), within the Department of Parks and Recreation, administer the State's historic preservation programs. The OHP oversees State agency compliance with State preservation statutes and programs, administers federal preservation programs in California, and state programs such as the California Register of Historic Resources (California Register). The California Register is a guide to identifying the State's historical resources and establishes a list of those properties that are to be protected from substantial adverse change (Public Resources Code Section 5024.1).

The California Public Resources Code defines a historical resource to include, but is not limited to, any object, building, structure, site, area, place, record, or manuscript which is historically or archaeologically significant or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California (PRC §5010.1(j)).

In California the standard of historical (including archeological) significance is listing in, or eligibility for listing in, the California Register. The California Register is the authoritative guide to be used by state and local agencies to identify the state's historical resources (PRC §5024.1(a)). It includes properties nominated to and placed on the register by the State Historic Resources Commission, properties listed in or formally determined eligible (under §106 of the National Historic Preservation Act) for listing in the NRHP (PRC §5024.1(b) and (d)(1)). Both individual properties and historic districts may be listed in the California Register (PRC §5024.1(e)(1)(2)).

In addition to properties listed, or formally determined eligible for listing, historical resources or districts designated or listed as city or county landmarks or locally listed pursuant to any city or county ordinance are presumed to be eligible for listing in the register unless a preponderance of evidence in the record indicates that it is not historically or culturally significant (PRC §21084.1). Historical resources identified as significant in historical resource surveys conducted by local governments also may be eligible for listing (PRC §5024.1(e)(3)), if the survey meets one or more of the criteria for eligibility set forth in PRC §5024.1(g). Further, if a historical resource is not listed in the California Register, is not designated by a local agency, and is not identified as significant in a historical survey, a lead agency may determine that the resource may be a historical resource as defined in the Public Resources Code §5020.1(j) or §5024.1 (California Environmental Quality Act (CEQA) Guidelines, §15064.5(a)(4)).

The criteria for listing in the California Register are defined in statute (PRC §5024.1 (C )(1-4)), in the CEQA Guidelines (California Code of Regulations Title 14 Ch 3 §15064.5 (3)(A-D) and in the Guidelines for the California Register of Historical Resources (CCR Title 14, Ch. 11.5 §4852(b)(1-4)). These criteria are very similar to the federal criteria for listing in the National Register of Historic Places. The criteria include:

1. It is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States.
2. It is associated with the lives of persons important to local, California, or national history.
3. It embodies the distinctive characteristic of a type, period, region, or method of construction, or represents the work of a master or possesses high artistic values.
4. It has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

One or more of these criteria may apply to a single property or a district.

In addition to meeting the above criteria, a property or district must possess integrity. Integrity is defined as the authenticity of a historical resource's physical identity evidenced by the survival of characteristics that existed during the resource's period of significance. A property must retain enough of its historic character or appearance to be recognizable as a historical resource and to convey the reasons for its significance (CCR Title 14, Ch 11.5 §4852(C)).

**LOCAL*****Sacramento City Historic Preservation Regulations***

Title 15 of the Sacramento City Code provides for the identification and protection of significant historic resources in the City. Pursuant to Title 15 of the City Code, the City has established a preservation program to protect and maintain the character of architecturally, historically, and culturally significant structures and sites within the City of Sacramento. New development is directed toward achieving compatible new construction that enhances existing historic values rather than diminishing them. The values of identified Historic Districts and significant historic structures are to be protected as significant resources for the general welfare of the public.

The City of Sacramento is a Certified Local Government (CLG) certified by the National Park Service and the State Office of Historic Preservation under the National Historic Preservation Act. As a CLG the City has agreed to apply the standards of the National Register of Historic Places in the survey, evaluation, and designation of historic properties. The Sacramento City Preservation Ordinance (Sacramento City Code Title 15, Chapter 15.124) specifies the same criteria for local designation as the National and California Registers. Sacramento City surveys adopted by the Design Review and Preservation Board (DRPB) and adopted by the City Council are reviewed by the State Office of Historic Preservation and are entered in the State Historic Resources Inventory maintained by the State Office.

At the conclusion of two earlier surveys, one of pre-1920 Residential Structures, and one of pre-1942 Non-Residential Structures within the Old City area bounded by Alhambra Boulevard, the B Street levee, the WX Street freeway and the Sacramento River (as updated in October, 1998) the City Council designated by ordinance certain structures, Landmarks, and Historic Districts for listing in the Sacramento Register (the ordinances adopting designations and deletions of landmarks, contributing resources and historic districts are known collectively as the Sacramento Register). Protection of Landmarks may include interior spaces and features as well as exteriors of structures.

The DRPB's approval of applications to alter individually-listed structures are based on compliance with the Sacramento Register and the Secretary of the Interior's Standards for the Treatment of Historic Properties. DRPB approval is required prior to issuance of a building permit. Historic structures listed in the Sacramento Register are eligible for review under the provisions of the State Historical Building Code.

***City of Sacramento Preservation Element***

The City of Sacramento adopted a Preservation Element in the General Plan in April 2000. The overarching goal of the Preservation Element is:

“To retain and celebrate Sacramento’s heritage and recognize its importance to the City’s unique character, identity, economy, and quality of life.”

The Element is further divided into six major goal and policy sections, each with a single goal and many policy statements to achieve the stated goal. Applicable goals and policies are as follows:

Goal A: To establish and maintain a comprehensive citywide preservation program.

Applicable policies under this goal include:

- A.1 The City shall promote the recognition, preservation, and enhancement of historic and cultural resources throughout the city.
- A.2 The City shall promote the preservation, restoration, enhancement, and recognition of historic and cultural resources. Historic and cultural resources include not only sites and structures, but also features such as infrastructure (e.g. bridges, canals, roads, and trails), signs, landscaping and trees, open space areas, lighting and hardscape (e.g., sidewalks, paving) that are important to the overall context.
- A.5 The City shall coordinate with SHRA, other City departments, and the State Office of Historic Preservation to ensure that Section 106 of the National Historic Preservation Act review and compliance activities are carried out appropriately.

Goal B: To protect and preserve important historic and cultural resources that serve as significant, visible reminders of the city's social and architectural history.

Applicable policies under this goal include:

- B.2 The City shall review new development, alterations, and rehabilitation/remodels in design review areas, Historic Districts, and other areas of historic resources for compatibility with the surrounding historic context.
- B.4 The City shall work with its partners on the local, state, and federal levels to ensure that historic preservation rules and regulations are implemented.
- B.6 The City shall promote the conservation of historic neighborhoods to encourage preservation of structures and other features. In these areas, the City shall encourage the maintenance or conversion of parkway strips to landscaping, maintenance, and replication of historic sidewalk patterns, use of historic street lamps and street signs, and maintenance or restoration of historic park features.

Goal D: To foster public awareness and appreciation of the City's heritage and its historic and cultural resources.

- D.1 The City shall support and recognize private and public preservation work and awareness ceremonies.
- D.2 The City shall encourage identification of historic resources through plaques and markers.

Goal E: To identify and protect archaeological resources that enrich our understanding of the early Sacramento area (Goal E).

- E.3 The City shall not knowingly approve any public or private project that may adversely affect an archaeological site.
- E.5 The City shall encourage the preservation and display of archaeological artifacts in public buildings.

## IMPACTS AND MITIGATION MEASURES

### METHOD OF ANALYSIS

Historic research was conducted at the Sacramento Archives and Museum Collection Center (SAMCC), the Sacramento History Room at the Sacramento Public Library, the California State Library, and the City of Sacramento Planning Department. Historic maps (e.g., Sanborn Fire Insurance Maps, City and County maps) were consulted, as were local newspapers, photographic collections, and city directories. The County Assessor records were a valuable resource for analyzing settlement and land use patterns over several decades. Several histories of Sacramento were consulted, particularly the historical survey prepared by Steven Avella. Tremaine and Associates, Inc. prepared the Cultural Resource Sensitivity Study used in this analysis (Appendix D), and Historic Environment Consultants prepared the Historic Assessment for the 10<sup>th</sup> and J Streets Development Project for the project site (Appendix E).

### STANDARDS OF SIGNIFICANCE

Cultural resource impacts may be considered significant if the proposed project would result in one or more of the following:

- Create a substantial adverse change in the significance of a historic archaeological resource, pursuant to Section 15064.5 of the State CEQA Guidelines, or
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

The CEQA Guidelines define a “substantial adverse change in the significance of a historical resource” to mean “physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a historical resource would be materially impaired” (CEQA Guidelines §15064.5(b)(1)). CEQA Guidelines, section 15064.5, subdivision (b)(2), defines “materially impaired” for purposes of the definition of “substantial adverse change...” as follows:

The significance of a historic resource is materially impaired when a project:

- (A) Demolishes or materially alters in an adverse manner those physical characteristics of a historic resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register of Historical Resources; or

- (B) Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to section 5020.1(k) of the Public Resources Code or its identification in a historical resources survey meeting the requirements of §5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or
- (C) Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register of Historical Resources as determined by a lead agency for purposes of CEQA (CEQA Guidelines, §15064.5(b)(2)).

### PROJECT SPECIFIC IMPACTS AND MITIGATION MEASURES

#### ***Impact 5.2-1 Loss or degradation of known or undiscovered prehistoric and historic resources***

The project site is located in an area of the City that was settled early in its history, and could contain unknown sub-surface resources. Both prehistoric and historic archaeological resources have been identified throughout the vicinity of the project site. Implementation of the proposed project would include ground disturbing activities such as infrastructure improvements, grading, trenching, and excavating for development. The proposed project would likely encounter cultural resources during construction activities relating to earlier periods of Sacramento's history. It is possible for buried resources to be uncovered during any subsurface construction activities, and such resources and their immediate surrounding matrix could be damaged. This would be a **significant** impact.

The project site is considered very sensitive for both prehistoric deposits and historic resources. Given the presence of known ethnographic village, Sa'Cum, directly across the street, it is likely that prehistoric remains exist within the project site. Similarly, due to the extensive historical use of the project site, there is strong potential for encountering historic subsurface features (e.g., privy pits, refuse dumps, and architectural foundations) associated with the second half of the 19th century as well as material remains from later era occupants from the first half of the 20th century.

The findings presented in the Cultural Resource Sensitivity Study provide a context for predicting where significant archaeological deposits may have survived. It is recommended that this context be used in conjunction with detailed plans of where ground disturbance will occur to develop a testing strategy for locating/identifying buried cultural resources and research design for the evaluation of resources prior to construction.

#### Mitigation

The following mitigation measures should be used and monitored during construction activities:

- 5.2-1a: *The project proponent shall hire a qualified professional to formulate and implement a research design and field strategy with regard to possible sub-surface resource. Testing shall include geophysical mapping of the near-surface,*

ground-truthing using both the geophysical maps and historic maps, followed by evaluation of discovered resources for CRHR eligibility. All testing shall be conducted prior to initiation of construction for the project. Based on the results of testing, recommendations shall be provided, which may include additional testing, data recovery, future construction monitoring, as well as preparation of an Unanticipated Discovery Plan. All recommendations shall be submitted to the City of Sacramento's Preservation Director for approval.

- 5.2-1b: The project applicant shall hire a professional archaeologist to perform archaeological monitoring during ground-disturbing construction activities for the duration of the project. If resources are discovered during construction, the procedure laid out in the Unanticipated Discovery Plan will be followed.
- 5.2-1c If significant findings are made, historic materials and artifacts shall be incorporated into an interpretive display in the proposed building, or grouped with other projects to produce a larger more comprehensive exhibit or display in coordination with the Manager of the History and Science Division. The interpretive display shall include a history of the site uses including information on the various ethnics groups that dominated the site. Display of all historic materials and artifacts shall follow the standard practices and procedures generally accepted in museum curation, and shall be made available to the Manager of the History and Science Division for review and comment before they are constructed and installed. All collected materials shall be archived at an appropriate curation facility at the project applicant's expense.
- 5.2-1d All activities related to the data recovery of the site shall be recorded and compiled into a report and submitted to both the City and the North Central Information Center. In addition, appropriate public outreach material such as a leaflet, pamphlet, or booklet shall be developed detailing any finds and their historic context. All reports shall be deposited with the city's archive - the Sacramento Archives and Museum Collection Center (SAMCC), and shall include original photographs and negatives or high resolution digital scans in a TIF format on high quality CD's or DVD's. Reports if produced in a digital format shall be deposited as both a hard copy and a digital copy. A release shall be included that allows SAMCC the right to reproduce all documents and graphics (including photographs) without restriction.

#### Significance after Mitigation

Less than significant

#### **Impact 5.2-2 Potential alteration or demolition of historic resources**

The proposed project would demolish several buildings on the project site that are over 50 years old and could damage existing hollow sidewalk structures and granite curbstones during construction. This would be a **potentially significant** impact.

The five buildings that will be affected by the proposed project are those at the following addresses, all but one of which is older than 50 years:

- 921 10th Street, Plaza Building, formerly Redman's Lodge and Hotel

- 927 10th Street, former Retail Credit Association Building
- 1009 J Street, former Biltmore Hotel
- 1013-15 J Street, former Broiler Restaurant

The building at 1021 J Street was not described and evaluated as it is less than 50 years of age and is not considered historic.

None of the buildings on the project site are listed on the Sacramento Register, the California Register of Historical Resources, or the National Register of Historic Places. In 2001, the Design Review/Preservation Board considered 1009 J Street and 1013-1015 J Street buildings as possible contributors to a potential future Downtown District. Further action to create a merged Downtown District with these and nearby buildings as contributors was not taken.

The Plaza Building at 921 10<sup>th</sup> Street was built about 1907, was substantially altered approximately three times, and no longer resembles its original image or the one created in 1923 by Sacramento architect Arthur Lamb. The alley image has been modified by the infill of original brick arched openings and its contribution to a nineteenth century alley character is weak. The area beneath the sidewalk has been modified and no longer fully represents the original brick bulwark and brick barrel vault configuration, although the sidewalk has retained a pair of probably original metal sidewalk elevator doors in the sidewalk between the northeast corner of 10<sup>th</sup> and J Streets and the alley to the north. The one furthest north appears to be the oldest. The retention of a former sidewalk element would be educational in an interpretive display of hollow sidewalks and how they functioned.

The RCA Building at 927 10th Street, originally designed by Sacramento architect Harry Devine in 1940, has been substantially altered and its image modified. The area beneath the sidewalk has been altered and does not strongly reflect the original sidewalk construction configuration. The alley is not readily accessible to the rear of this building because it stands on a corner and is blocked from the alley by the Biltmore and former Redmen's Lodge.

The façade of the Biltmore Hotel at 1009 J Street, built in 1882, has been altered and the interior has become substantially deteriorated. While the interior still retains its original configuration, it has substantially deteriorated subsequent to its vacancy. The area beneath the sidewalk has been modified and no longer reflects the original configuration of the sidewalk support system. The alley elevation contains some character-defining alley elements, and the original brick chimneys are visible projecting from the east and west sides of the roof, but it is substantially altered at the street level.

The Broiler at 1013 J Street has been modified on both the interior and the exterior. The second floor, which once was part of the Biltmore and somewhat resembled it in the interior, is substantially deteriorated. The ground floor interior is altered. The alley elevation contains some of the character-defining alley elements but is altered at the alley level and its contribution to the alley image is limited.

The building at 1021 J Street is less than fifty years old, and is not historic. The area beneath the sidewalk has been partially filled in with dirt and a deep narrow ditch extending the width of the building has been excavated adjacent to the earth infill. It also lacks the brick barrel-vaulted support of the sidewalk above. The rear elevation of the building does not contribute to the historic image of the alley.

None of the buildings proposed for demolition as a result of the proposed project possess adequate physical integrity, architectural distinction, or historical significance to meet criteria for listing on the Sacramento Register, the California Register for Historical Resources, or the National Register of Historic Places. The Hollow Sidewalks and 19<sup>th</sup> Century J Street Alley also do not meet the criteria for listing because they have been substantially altered and do not contain much cultural integrity.

The areas under the sidewalks associated with the proposed project buildings have been modified; the remaining brick bulwarks have been partially buried, or concrete poured to create ledges along the street side walls. The original brick barrel vaults have been removed and/or plastered over with concrete. The hollow sidewalks on the project site do not contribute to the historic integrity of the project vicinity.

The western portion of the alley between I and J streets and 10th and 11th streets accesses the existing buildings on the proposed project site. This portion of the alley possesses some elements of character-defining alley features with its rear brick elevations and nineteenth century building scale. However, the alley image has been diminished due to alterations and does not convey its late nineteenth century character as strongly as other downtown alley resources.

However, there are granite curbstones along J Street from the west edge of the Biltmore Hotel at 1009 J Street east to halfway along the width of 1017-23 J Street. The granite curbstones are a character-defining feature of downtown Sacramento and should be retained in place if possible, or relocated back in their original location during project construction. Permanent loss of the granite curbstones would be a potentially significant impact.

#### Mitigation

5.2-2 *Retain the original granite curbstones in place during project construction; if that is not possible, all curbstones shall be carefully removed and stored during sidewalk demolition and replaced back in their original location during sidewalk reconstruction.*

#### Significance after Mitigation

Less than significant

### **CUMULATIVE IMPACTS AND MITIGATION MEASURES**

The cumulative context for the proposed project is buildout of the City of Sacramento General Plan. Artifacts and other cultural resources have been recorded during prior surveys throughout the City and County of Sacramento, especially in the downtown area, indicating a high sensitivity for historic archaeological resources.

#### **Impact 5.2-3 Cumulative loss of cultural resources**

Based upon previous surveys and research, Sacramento has been inhabited by prehistoric and historic peoples for thousands of years. Over time, human activity in the area has left remnants of that activity. As urban development increases throughout the City of Sacramento and the region, cumulative development in the City could result in archaeological resources being unearthed and damaged or destroyed. Their removal,

destruction, or significant alteration from their place of origin would destroy their value as a resource and thus be a ***cumulative significant impact*** on cultural resources.

Because all significant cultural resources are unique and non-renewable members of finite classes, all adverse effects or negative impacts erode a dwindling resources base. The loss of any one designated archaeological site affects all others in a region because these other properties are best understood completely in the context of the cultural system of which they (and the destroyed resource) were a part.

Given the presence of known ethnographic village, Sa'cum, directly across the street, it is likely that prehistoric remains exist within the project site and extend beyond the property boundaries. Proper planning and appropriate mitigation can help to capture and preserve knowledge of such resources and can provide opportunities for increasing our understanding of the past environmental conditions and cultures by recording data about sites discovered and preserving artifacts found. Federal, State and local laws are also in place, as discussed above, that protect these resources; in addition, compliance with Mitigation Measure 5.2-1 would ensure the proper steps are taken for the proper handling and treatment of resources that may still exist on the proposed project site. However, even with existing regulations and compliance with required mitigation, the project's contribution to the potential loss of these resources, combined with the loss of resources over the years by previous development, would not be reduced to a level that would be considered less than significant. Therefore, the project's cumulative contribution would be considerable, resulting in a significant and unavoidable impact.

### Mitigation

Implement Mitigation Measures 5.2-1a, 5.2-1b, and 5.2-1c.

### Significance after Mitigation

These mitigation measures would reduce the magnitude of potential cumulative impacts to historic resources, but not to less-than-significant levels. This impact remains ***significant and unavoidable***.

## **5.3 HAZARDS & HAZARDOUS MATERIALS**



## **5.3 HAZARDS & HAZARDOUS MATERIALS**

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### **INTRODUCTION**

This section addresses the hazards to the public resulting from the use or disposal of hazardous materials on the Metropolitan Project site, as well as the anticipated effects of known or suspected hazardous substance contamination.

As discussed in the Initial Study, the proposed project site will not interfere with an emergency evacuation plan or increase the fire hazard in areas with flammable brush, grass, or trees; this issue is not discussed in the EIR.

There were no comments regarding potential hazards and hazardous impacts received during the NOP review period.

### **ENVIRONMENTAL SETTING**

#### **BACKGROUND INFORMATION ON HAZARDOUS MATERIALS**

##### ***Terminology of Hazards and Hazardous Materials***

Under Title 22 of the California Code of Regulations (CCR), a hazardous material is defined as a substance or combination of substances that may cause or significantly contribute to an increase in mortality or an increase in serious, irreversible, or incapacitating illness, or may pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported or disposed of, or otherwise managed (CCR, Title 22, Chapter 11, Article 2, Section 66261.10).

Hazardous wastes are hazardous substances that no longer have practical use, such as materials that have been discarded, discharged, spilled, or contaminated or are being stored until they can be properly disposed of. According to Title 22 of the California Code of Regulations, hazardous materials and hazardous wastes are classified according to four properties: toxic, ignitable, corrosive, and reactive (CCR, Title 22, Chapter 11, Article 3).

- Toxic substances may cause short-term or long-lasting health effects, ranging from temporary effects to permanent disability or death. Toxic substances can cause eye or skin irritation, disorientation, headache, nausea, allergic reactions, acute poisoning, chronic illness, and other adverse health effects, depending on the level of exposure. Carcinogens (substances known to cause cancer) are a special class of toxic substances. Examples of toxic substances include most heavy metals, pesticides, and benzene (a carcinogenic component of gasoline).
- Ignitable substances, such as gasoline, hexane, and natural gas, are hazardous because of their flammable properties.
- Corrosive substances, such as sulfuric acid (battery acid) and lye, can damage other materials or cause severe burns upon contact.
- Reactive substances, such as explosives, pressurized canisters, and pure sodium metal (which reacts violently when exposed to water), may cause explosions or generate gases or fumes.

Soil that is excavated from a site containing hazardous materials is a hazardous waste if it exceeds specific CCR Title 22 criteria. Remediation (cleanup) of hazardous wastes found at a project site is generally required if those materials are excavated. Cleanup requirements

are determined on a case-by-case basis by the agency with lead jurisdiction over the project.

## **EXISTING CONDITIONS**

### **EXISTING HAZARDS AND HAZARDOUS MATERIAL CONTAMINATION**

The project site and its vicinity is an extensively developed area containing commercial, office, and residential uses. The topography is flat, and groundwater levels in the vicinity are known to vary between 10 feet and 25 feet below the ground surface (bgs) in summer and may rise to 5 feet bgs in spring. Local groundwater is reported to flow easterly (northeast to southeast).

Historic uses of the site were identified through a review of Sanborn Fire Maps from 1895, 1915, 1952, 1964, and 1970, and a review of a review of Sacramento Directory Co. (1952 to 1972), R.L. Polk (1977 to 1982), and Haines and Company Criss-Cross Directories (1988 to 2001), prepared as part of the cultural resources assessment. Since the 1850s, the site has hosted the following uses over the last 150 years:

- 921 10<sup>th</sup> Street - lodge halls, single family dwelling, hotel, office uses
- 927 10<sup>th</sup> Street - bakery, retail, lodging, office uses
- 1009 J Street - hotel, wagon and plow works, restaurant, retail, residential
- 1013 J Street – blacksmith and wagon maker (1850-1860), wagon and plow works, carriage works, junk dealer (1889-1914), residential, retail, restaurant
- 1023 J Street - boarding house, blacksmith (1850s), stables, plumbing supply store, office

There are no specific items of concern identified for the site. However, due to the age of the existing structures, the presence of asbestos containing materials, lead based paint, Polychlorinated Biphenyls (PCB) containing electrical and hydraulic fluids, and/or chlorofluorocarbons (CFCs) is likely. Other potential environmental concerns (i.e., boilers, elevator shafts/hydraulic lifts, floor drains/sumps) may be present within the vacant structures on the properties.

Adjacent to the site, a former Chevron occupied the space where the City's parking garage was constructed. A gasoline release has been remediated with well abandonment in October 2005; a no further action letter has been requested for the site (GeoTracker Data Base, 2006).

### ***Sacramento Rail Yard Contamination Issues***

The Union Pacific Transportation Company's Sacramento Rail Yard is a 240-acre facility located northwest of the project site and east of the Sacramento River. The facility has been in operation as a locomotive maintenance yard since approximately 1863. Historically, the site was used for heavy maintenance and rebuilding of locomotives for the Southern Pacific Rail System. Facilities located on the site included: foundries, machine shops, paint shops, and rail car manufacturing facilities. Liquid wastes generated at the site were disposed into an industrial wastewater sewer system, constructed over 100 years ago, which conveyed the wastes into the Sacramento regional sewer system. As a result of historic activities at the site, soils beneath the property are contaminated with chlorinated solvents, petroleum hydrocarbons, polynuclear aromatic hydrocarbons, and metals.

In October 1988, the Department of Toxic Substance Control (DTSC) approved a work plan and schedule for investigation and cleanup of the Sacramento Rail Yard. Based on historic usage and known contamination, the site was divided into six study areas: Central Shops, Central Corridor, Car Shop Nine, Lagoon, Northern Shops, and Sacramento Station. Three additional study areas have also been identified by the DTSC: Battery Shop Yard, Ponds and Ditch, and Sand Piles. In addition, groundwater contamination associated with historic site activities has been observed beneath the property and off-site into the downtown area. These off-site groundwater contaminants are primarily chlorinated solvents.

Groundwater in the vicinity of the Rail Yard generally flows to the south; the groundwater contamination plume extends from the site south to P Street and west to 12<sup>th</sup> Street and is referred to as the South Plume (**Figure 6.3-1**). Volatile Organic Compounds (VOCs) have been detected in the near-surface unsaturated zone (less than approximately 25 feet bgs) to as deep as approximately 180 feet bgs. The largest areal extent of VOCs in the South Plume reportedly occurs in what is known as the Gravel Zone, which extends from approximately 65 feet bgs to approximately 90 feet bgs.

The South Plume is currently being treated with two groundwater extraction systems, located in the Central Shops Study Area on P Street between 7<sup>th</sup> and 9<sup>th</sup> streets. According to a 2003 Annual Groundwater Monitoring Report, concentrations of VOCs, semi-volatile organic compounds (SVOCs), Total Petroleum Hydrocarbons (TPH), and metals were observed in groundwater samples collected from the Sacramento Rail Yard. In addition, free product was observed in wells located in the western portion of the Central Shops Study Area. Current data suggests that the two groundwater extraction systems are achieving their goals of removing the source of the contamination and capturing the southern extent of the plume. Remediation is expected to be completed in September 2006. Based on the on-going remediation at the site, it is not considered to pose an immediate environmental concern; however, it should be kept in mind if groundwater is encountered during site activities.

#### ***Federal Courthouse Contamination Issues***

The Federal Courthouse was reportedly constructed on land that had previously been occupied by automotive repair and fueling. Soils were impacted by petroleum hydrocarbons, VOCs, polycyclic aromatic hydrocarbons, and lead. Groundwater was found to be impacted by benzene, petroleum hydrocarbons, and chloroform. Contaminated soils were excavated and disposed at an approved location, and groundwater was pumped and treated. Remediation was completed in October 1996. The site is a voluntary clean-up site and has been certified since June 28, 1996.

Local groundwater is reported to flow easterly (northeast to southeast). Based on this information, the Courthouse site is located slightly up-gradient from the project site, and therefore groundwater beneath the project site may be impacted from this contamination source. Based on the on-going remediation at the Courthouse site, it is not considered to pose an immediate environmental concern; however, it should be kept in mind if groundwater is encountered during site activities.

#### **POTENTIAL RECEPTORS**

The sensitivity of potential receptors in the areas of known or potential hazardous materials contamination is dependent primarily on an individual's potential pathway for exposure. Hazardous materials exposure on the project site could occur through exposure to contaminated groundwater during construction or building materials such as asbestos or

lead-based paint, and/or contaminated soil during demolition and construction. With respect to this possible form of hazardous materials exposure, construction workers have the highest potential for exposure to groundwater, asbestos, and/or soil contamination. Although other potential receptors include residential uses, there are no residents within 300 feet of the project site.

## **REGULATORY CONTEXT**

### **FEDERAL**

Many agencies regulate hazardous substances. These include federal agencies such as the Environmental Protection Agency (EPA), the federal Occupational Safety and Health Administration (OSHA), the Nuclear Regulatory Commission (NRC), the U.S. Department of Transportation (DOT), and the National Institutes of Health (NIH). The following federal laws and guidelines govern hazardous substances:

- Federal Water Pollution Control Act
- Clean Air Act (CAA)
- Occupational Safety and Health Act
- Federal Insecticide, Fungicide, and Rodenticide Act
- Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Guidelines for Carcinogens and Biohazards
- Superfund Amendments and Reauthorization Act, Title III
- Resource Conservation and Recovery Act (RCRA)
- Safe Drinking Water Act
- 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 RCRA. The EPA regulates hazardous substance sites under CERCLA. Applicable federal regulations are contained primarily in Titles 29, 40, and 49 of the CFR.

### ***Hazardous Substances Handling Requirements***

The RCRA established an all-encompassing federal regulatory program for hazardous substances that is administered by 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 those programs are consistent with, and at least as strict as, the RCRA. The EPA must approve state programs intended to implement the RCRA requirements.

### ***Hazardous Substances Worker Safety Requirements***

OSHA is the agency responsible for ensuring worker safety. OSHA sets federal standards for implementation of training in the workplace, 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**

The CalEPA and the Office of Emergency Services (OES) of the State of California establish rules governing the use of hazardous substances in the state. The State Water Resources Control Board (SWRCB) has primary responsibility to protect water quality and supply.

Applicable State laws include the following:

- Porter Cologne Water Quality Act
- Public safety and fire regulations and building codes
- Hazardous Substance Control Law
- Hazardous Substances Information and Training Act
- Hazardous Substances Release Response Plans and Inventory Act
- Air Toxics Hot Spots and Emissions Inventory Law
- Underground Storage of Hazardous Substances Act

Within Cal/EPA, the DTSC (formerly the Department of Health Services) has primary regulatory responsibility for the generation, transport, and disposal of hazardous substances under the authority of the Hazardous Waste Control Law (HWCL). DTSC can delegate this enforcement role to local jurisdictions that enter into agreements with the state agency. State regulations applicable to hazardous substances are codified in Titles 8, 22, and 26 of the California Code of Regulations (CCR), and their enabling legislation set forth in Chapter 6.95 of the California Health and Safety Code. These regulations must be implemented by employers/businesses, as appropriate, and are monitored by the State and/or local jurisdictions such as the City of Sacramento Fire Department and Sacramento County Emergency Management Department (SCEMD).

#### ***Hazardous Substances Handling Requirements***

In California, the Hazardous Waste Management Program (HWMP) regulates hazardous waste through its permitting, enforcement, and Unified Program activities. The HWMP is authorized by the EPA to implement the RCRA program in California and develops regulations, policies, guidance, technical assistance, and training to ensure the safe storage, treatment, transportation, and disposal of hazardous wastes.

Regulations implementing the HWCL list 791 hazardous chemicals and 20 or 30 more 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 the 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 Requirements***

Cal/OSHA assumes primary responsibility for developing and enforcing workplace safety regulations within California. 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.

### **LOCAL**

Sacramento County is responsible for enforcing the state regulations, both in the city and the county, governing hazardous substance generators, hazardous substance storage, and underground storage tanks (USTs) (including inspections, enforcement, and removals). The Sacramento County Hazardous Materials Division (HMD) regulates the use, storage, and disposal of hazardous substances in Sacramento County by issuing permits, monitoring regulatory compliance, investigating complaints, and other enforcement activities. HMD reviews technical aspects of hazardous substance site cleanup operations and oversees remediation of certain contaminated sites resulting from leaking underground storage tanks (LUSTs). HMD is also responsible for providing technical assistance to public and private entities that seek to minimize the generation of hazardous substances.

Goals and policies have been developed by the City and County of Sacramento concerning the management of hazardous substances to protect human health and the environment (Sacramento County Hazardous Waste Management Plan, 1988; 1986 to 2006 General Plan for Sacramento, 1987).

### ***Sacramento City General Plan***

The following are relevant City of Sacramento General Plan goals and policies that apply to the Project Area:

Goal A: Provide for the health and safety of the citizens of Sacramento and for the protection of the environment by reducing exposure to hazardous substances and waste.

- Goal A Policy 1: Work with the county, state, and federal agencies and responsible parties to identify, contain, and cleanup sites that contain hazardous substances.
- Goal A Policy 4: Coordinate with Sacramento County, state, and federal governments to ensure compatibility among plans, programs, regulations, and safeguards.

## IMPACTS AND MITIGATION MEASURES

### METHOD OF ANALYSIS

This analysis is based on a review of current lists made available by regulatory agencies with jurisdiction over storage, monitoring, and cleanup of hazardous wastes and a site visit conducted on May 8, 2006. No Phase I environmental site assessment has been completed for the project site.

### STANDARDS OF SIGNIFICANCE

A project would have a significant hazards impact if, through construction activities, attracting people to the site, or use of hazardous materials, it would:

- expose people (e.g., residents, pedestrians, construction workers) to existing contaminated soil during construction activities.
- expose people (e.g., residents, pedestrians, construction workers) to asbestos-containing materials.
- expose people (e.g., residents, pedestrians, construction workers) to existing contaminated groundwater during dewatering activities.

### PROJECT-SPECIFIC IMPACTS AND MITIGATION MEASURES

#### ***Impact 5.3-1 Construction disturbance of potentially contaminated soil and structures***

Historical uses of the properties on the site may have created releases of hazardous substances or petroleum products which may be masked by the present or recent uses of the property. This would be a ***significant impact***.

Due to the age of the existing structures, the presence of asbestos containing materials, lead based paint, PCB-containing electrical and hydraulic fluids, and/or CFCs is likely. Demolition and excavation of the existing structures on the site could cause a release of such materials.

Disturbance of asbestos containing materials (ACM) may result in asbestos exposure hazards to human health and the environment. Human health or environmental exposure to lead may result if lead-based paint is chipping and then accidentally ingested. Lead-based paint must be removed and disposed of during demolition in accordance with applicable federal, state, and local regulations to minimize potential risks to human health and the environment. Demolition activities would be subject to all applicable federal, state, and local regulations to minimize potential risks to human health and the environment, and worker and public safeguards included in the demolition contract.

Excavation also has the potential to damage previously unidentified USTs with some remaining petroleum products that could result in the exposure of construction workers and result in associated significant adverse health effects. Uncovering these materials and soil contamination during demolition and construction activities could result in the exposure of construction workers and result in associated significant adverse health effects.

#### Mitigation

- 5.3.1a *Prior to any demolition activities on the project site, conduct an interior survey to evaluate the presence of asbestos containing materials, lead based paint, PCB containing electrical and hydraulic fluids, and/or CFCs, as well as any other*

*potential environmental concerns (i.e., aboveground/underground fuel tanks, elevator shafts/hydraulic lifts, floor drains/sumps, chemical storage/disposal) which may be present within structures on the properties.*

- 5.3-1b *The City shall require in construction contract documents that a hazardous materials removal team be on-call and available for immediate response during site preparation, excavation, and any pile driving construction activities. Hazardous material removal activities may be contracted to a qualified hazardous materials removal contractor.*

*Construction contract documents shall require the hazardous material removal contractor or subcontractor to comply with the following:*

- (1) Prepare a hazardous material discovery and response contingency plan for review by the City of Sacramento Fire Department. The fire department will act as the first responder to a condition of extreme emergency (i.e., fire, emergency medical assistance, etc).*
- (2) In the event that a condition or suspected condition of soil and/or groundwater contamination are discovered during construction, work shall cease or be restricted to an unaffected area of the site as the situation warrants and the City shall be immediately notified. Upon notification, the City shall notify the Sacramento County Environmental Management Department (SCEMD) of the contamination condition, and the hazardous material removal contractor shall prepare a site remediation plan and a site safety plan, the latter of which is required by OSHA for the protection of construction workers. Similarly, the hazardous material removal contractor shall follow and implement all directives of the SCEMD and any other jurisdictional authorities that might become involved in the remediation process.*
- (3) Preparation of any remediation plan shall include in its focus measures to be taken to protect the public from exposure to potential site hazards and shall include a certification that the remediation measures would clean up the contaminants, dispose of the wastes properly, and protect public health in accordance with federal, state, and local requirements.*
- (4) Obtain closure and/or No Further Action letters from the appropriate agency(ies).*
- (5) Construction contract documents shall include provisions for the proper handling and disposal of contaminated soil and/or dewatering water (including groundwater and contaminated rainwater) in accordance with federal, state, and local requirements.*

Significance after Mitigation

Less than significant

## **5.4 NOISE**



## 5.4 NOISE/VIBRATION

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### INTRODUCTION

This section describes the existing noise environment in the area of the Metropolitan Project (proposed project), and the potential of the proposed project to significantly increase noise levels due to project construction and operation. The relevant noise standards are contained within the Health and Safety Element of the City of Sacramento General Plan and in the California State Building Code, Title 24, Chapters 2-35. These standards were used to evaluate the need for on-site noise mitigation measures. The potential for construction vibration to damage any adjacent historic structures is also discussed in this chapter. The noise assessment was prepared by j.c. brennan & associates; traffic inputs for the noise assessment were provided by DKS Associates and Dowling Associates.

As discussed in the Initial Study (Appendix B), the proposed project site is not located within an airport land use plan area or within two miles of an airport or private airstrip. Development of the project site would not expose people within the vicinity of the proposed project to excessive airport noise levels, and this issue is not discussed in the EIR.

There was one comment received during the NOP review period regarding potential noise impacts to the Crest Theater.

### ENVIRONMENTAL SETTING

#### BACKGROUND INFORMATION ON NOISE AND VIBRATION

##### *Fundamentals of Environmental Sound and Noise*

Noise is often described as unwanted sound. Sound is defined as any pressure variation in the air that the human ear can detect. If the pressure variations occur frequently enough (at least 20 times per second), then they can be heard and hence are called sound. The number of pressure variations per second is called the frequency of sound, and is expressed as cycles per second or Hertz (Hz).

Measuring sound directly in terms of pressure would require a very large and awkward range of numbers. To avoid this, the decibel scale was devised. The decibel scale uses the hearing threshold (20 micropascals), as a point of reference, defined as 0 dB. Other sound pressures are then compared to this reference pressure, and the logarithm is taken to keep the numbers in a practical range. The decibel scale allows a million-fold increase in pressure to be expressed as 120 dB, and changes in levels (dB) correspond closely to human perception of relative loudness.

The perceived loudness of sounds is dependent upon many factors, including sound pressure level and frequency content. However, within the usual range of environmental noise levels, perception of loudness is relatively predictable, and can be approximated by A-weighted sound levels. There is a strong correlation between A-weighted sound levels (expressed as dBA) and the way the human ear perceives noise. For this reason, the A-

weighted sound level has become the standard tool of environmental noise assessment. All noise levels reported in this section are in terms of A-weighted levels.

The decibel scale is logarithmic, not linear. In other words, two sound levels 10 dB apart differ in acoustic energy by a factor of 10. When the standard logarithmic decibel is A-weighted, an increase of 10 dBA is generally perceived as a doubling in loudness. For example, a 70 dBA sound is half as loud as an 80 dBA sound, and twice as loud as a 60 dBA sound.

Community noise is commonly described in terms of the ambient noise level, which is defined as the all-encompassing noise level associated with a given environment. A common statistical tool to measure the ambient noise level is the average, or equivalent, sound level ( $L_{eq}$ ), which corresponds to a steady state A weighted sound level containing the same total energy as a time varying signal over a given time period (usually one hour). The  $L_{eq}$  is the foundation of the composite noise descriptor,  $L_{dn}$ , and shows very good correlation with community response to noise.

The day/night average level ( $L_{dn}$ ) is based upon the average noise level over a 24-hour day, with a +10 decibel weighing applied to noise occurring during nighttime (10:00 p.m. to 7:00 a.m.) hours. The nighttime penalty is based upon the assumption that people react to nighttime noise exposures as though they were twice as loud as daytime exposures. Because  $L_{dn}$  represents a 24-hour average, it tends to disguise short-term variations in the noise environment.

Environmental noise within an urbanized area typically fluctuates over time. **Table 5.4-1** lists several examples of the noise levels associated with common situations

### Effects of Noise on People

The effects of noise on people can be placed in three categories:

- Subjective effects of annoyance, nuisance, and dissatisfaction
- Interference with activities such as speech, sleep, and learning
- Physiological effects such as hearing loss or sudden startling

Environmental noise typically produces effects in the first two categories. Workers in industrial plants can experience noise in the last category. There is no completely satisfactory way to measure the subjective effects of noise or the corresponding reactions of annoyance and dissatisfaction. A wide variation in individual thresholds of annoyance exists and different tolerances to noise tend to develop based on an individual's past experiences with noise.

Thus, an important way of predicting a human reaction to a new noise environment is the way it compares to the existing environment to which one has adapted: the so-called ambient noise level. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will be judged by those hearing it.

**TABLE 5.4-1  
TYPICAL NOISE LEVELS**

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	--110--	Rock Band
Jet Fly-over at 300 m (1,000 ft)	--100--	
Gas Lawn Mower at 1 m (3 ft)	--90--	
Diesel Truck at 15 m (50 ft), at 80 km/hr (50 mph)	--80--	Food Blender at 1 m (3 ft) Garbage Disposal at 1 m (3 ft)
Noisy Urban Area, Daytime Gas Lawn Mower, 30 m (100 ft)	--70--	Vacuum Cleaner at 3 m (10 ft)
Commercial Area Heavy Traffic at 90 m (300 ft)	--60--	Normal Speech at 1 m (3 ft)
Quiet Urban Daytime	--50--	Large Business Office Dishwasher in Next Room
Quiet Urban Nighttime	--40--	Theater, Large Conference Room (Background)
Quiet Suburban Nighttime	--30--	Library
Quiet Rural Nighttime	--20--	Bedroom at Night, Concert Hall (Background)
	--10--	Broadcast/Recording Studio
Lowest Threshold of Human Hearing	--0--	Lowest Threshold of Human Hearing

Source: Caltrans, Technical Noise Supplement, Traffic Noise Analysis Protocol. October 1998.

With regard to increases in an A-weighted noise level, the following relationships occur:

- Except in carefully controlled laboratory experiments, a change of 1 dBA cannot be perceived;
- Outside of the laboratory, a 3 dBA change is considered a just-perceivable difference;
- A change in level of at least 5 dBA is required before any noticeable change in human response would be expected; and
- A 10 dBA change is subjectively heard as approximately a doubling in loudness, and can cause an adverse response.

Stationary point sources of noise – including stationary mobile sources such as idling vehicles – attenuate (lessen) at a rate of 6 to 9 dBA per doubling of distance from the source, depending on environmental conditions (i.e. atmospheric conditions and either vegetative or manufactured noise barriers, etc.). Widely distributed noises, such as a large industrial facility spread over many acres, or a street with moving vehicles, would typically attenuate at a lower rate.

### ***Fundamentals of Groundborne Vibration***

Vibration is like noise in that it involves a source, a transmission path, and a receiver. While vibration is related to noise, it differs in that noise is generally considered to be pressure waves transmitted through air, whereas vibration usually consists of the excitation of a structure or surface. As with noise, vibration consists of an amplitude and frequency. A person's perception to the vibration will depend on their individual sensitivity to vibration, as well as the amplitude and frequency of the source and the response of the object which is vibrating.

Vibration can be measured in terms of acceleration, velocity, or displacement. A common practice is to monitor vibrations in terms of peak particle velocities using units of inches per second (in/sec). Certain construction-related activities, such as pile driving, may generate substantial vibration levels. Human and structural response to different vibration levels is influenced by a number of factors, including ground type, distance between the source and receptor, duration, and the number of perceived vibration events.

**Table 5.4-2** indicates that the threshold for damage to structures ranges from 2 to 6 in/sec. One-half this minimum threshold or 1 in/sec peak particle velocity (PPV) is considered a safe criterion that would protect against architectural or structural damage. The threshold of human annoyance is considered to be 0.1 in/sec. However, depending on the activity (or inactivity) a person is engaged in, vibrations may be annoying at much lower levels than those shown in Table 5.4-2. Elderly, retired, or ill people staying mostly at home, people reading in a quiet environment, people involved in vibration sensitive hobbies or other activities are but a few examples of people that are potentially annoyed by much lower vibration levels. To people in this category, even vibrations near the threshold of perception may be annoying. Therefore, one-half of the threshold of human annoyance, or .05 in/sec PPV, is considered a reasonable criterion that would protect against human annoyance in most cases.

## **EXISTING CONDITIONS**

Noise at the project site, in the downtown area of Sacramento, is typical of an urban city environment. The primary noise sources are associated with automobile traffic on surface streets. Temporary sources such as construction are also common, and can affect adjacent uses for extended periods. Key noise sources in the vicinity include vehicular noise along I, J, and 10<sup>th</sup> streets, and occasional concerts and events in Cesar Chavez Plaza Park.

**TABLE 5.4-2  
GENERAL HUMAN AND STRUCTURAL RESPONSES TO VIBRATION LEVELS**

<b>Effects on Structures &amp; People</b>	<b>Peak Vibration Threshold (in/sec PPV)</b>
Structural damage to commercial structures	6
Structural damage to residential buildings	2
Architectural damage	1.0
General threshold of human annoyance	0.1
General threshold of human perception	0.01

Sources: *Survey of Earth-borne Vibrations due to Highway Construction and Highway Traffic*, Caltrans 1976.  
*Final Environmental Impact Report: Richmond Transport Project*, Orion Environmental Associates, 1990.  
*Weekly Progress Report for Vibration Monitoring for Richmond Transport*, Wilson, Ihrigg & Associates, 1994

Day-night noise levels ( $L_{dn}$ ) along nearby surface streets and commercial properties exceed 60 dBA. A residential land use's noise exposure level in the City of Sacramento varies dramatically depending on the level of noise buffering from adjacent buildings in addition to proximity of intersecting streets. The City of Sacramento has acknowledged that the existing and future noise environment in the downtown Sacramento area in many cases exceeds the City's own goals, and that this condition cannot be feasibly mitigated (City of Sacramento, 1987).

#### **EXISTING NOISE RECEPTORS**

Some land uses are considered more sensitive to ambient noise levels than others. Noise associated with sensitive receptors is generally considered to be human activities where land uses may be subject to the stress of significant interference from noise. Land uses often associated with sensitive receptors generally include residences, schools, libraries, hospitals, and passive recreational areas. Sensitive noise receptors may also include threatened or endangered noise sensitive biological species. Noise sensitive land uses are typically given special attention in order to achieve protection from excessive noise.

Sensitivity is a function of noise exposure (in terms of both exposure duration and insulation from noise) and the types of activities involved. In the vicinity of the proposed project, sensitive land uses include Cesar Chavez Plaza Park and the City of Sacramento Main Library, as well as outdoor restaurant and theater uses on J and K streets. These land uses could potentially experience noise impacts associated with project construction and/or increased traffic from project operation.

Historic buildings listed in the City's Historic Register are considered land uses sensitive to vibration. Historic structures that could be affected by construction activities include properties within a radius of one block around the project site that are listed on the Register: 915 I Street (Historic City Hall), 900 J Street (Ruhstaller Building), 926 J Street (Cal Western Life Insurance Co.); 1008 J Street (Fred Mayes Jewelers Clock), 1013 K Street (Crest Theater), 1010-1012 10<sup>th</sup> Street (Ms. Dora Werner-Hair Dresser), 1016-1020 10<sup>th</sup> Street (Hart Brothers Cafeteria), 1017 10<sup>th</sup> Street, 1019-1021 10<sup>th</sup> Street (Sacramento Glass and

Crockery Company), 915 11<sup>th</sup> Street, 921 11<sup>th</sup> Street (Elks Building), and 1106 11th Street (Hotel Regis).

#### EXISTING AMBIENT DAYTIME NOISE LEVELS

To generally quantify existing ambient noise levels in the project vicinity, a short-term ambient noise survey was conducted at five locations surrounding the project site on the morning of June 6, 2006. The ambient noise measurement locations are shown on **Figure 5.4-1**.

A Larson Davis Laboratories (LDL) Model 820 precision integrating sound level meter was used for the ambient noise level measurement survey. The meter was calibrated before and after use with an LDL Model CAL200 acoustical calibrator to ensure the accuracy of the measurements. The equipment used meets all pertinent specifications of the American National Standards Institute for Type 1 sound level meters (ANSI S1.4).

The sound level meter was programmed to record the maximum and average noise level at each site during the survey. The maximum value, denoted  $L_{max}$ , represents the highest noise level measured. The average value, denoted  $L_{eq}$ , represents the energy average of all of the noise received by the sound level meter microphone during the monitoring period. **Table 5.4-3** shows the summary of the noise measurement data.

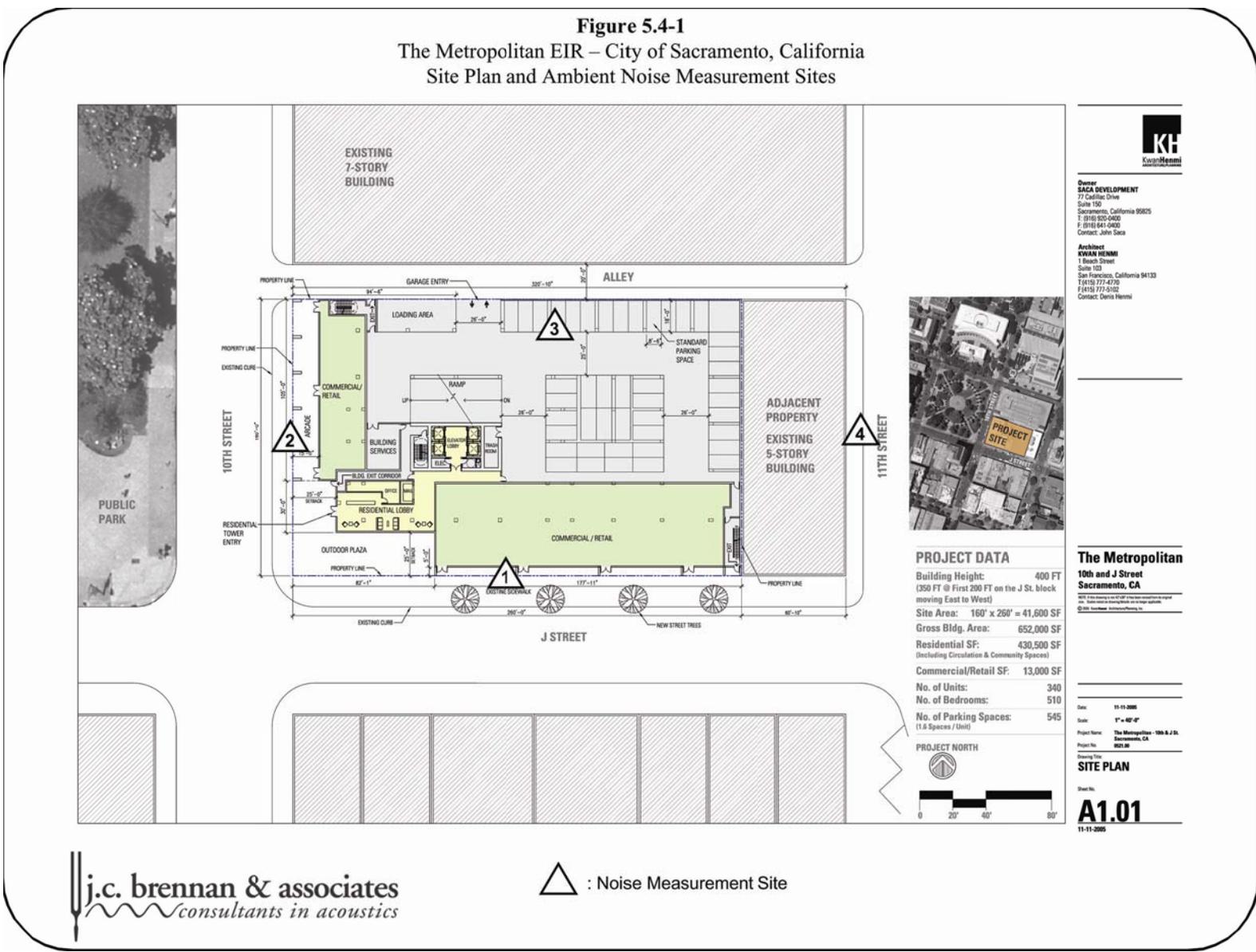
**TABLE 5.4-3**  
**SUMMARY OF EXISTING BACKGROUND NOISE MEASUREMENT DATA**

Site	Time	Notes	Measured Noise Levels	
			$L_{eq}$	$L_{max}$
1	10:33 am	J Street traffic is primary noise source with occasional traffic noise from 10 <sup>th</sup> Street.	69 dB	82 dB
2	10:55 am	J Street traffic is primary noise source with occasional traffic noise from 10 <sup>th</sup> Street.	67 dB	82 dB
3	11:10 am	Exercising of Backup generator on south side of existing parking garage building is constant noise source	72 dB	72 dB
4	11:20 am	J Street traffic is primary noise source with occasional traffic noise from 11 <sup>th</sup> Street.	64 dB	75 dB

Source: j.c. brennan & associates, Inc., 2006

Source: j.c. brennan & associates, Inc., 2006  
**FIGURE 5.4-1**  
**AMBIENT NOISE MEASUREMENT LOCATIONS**

**Figure 5.4-1**  
 The Metropolitan EIR – City of Sacramento, California  
 Site Plan and Ambient Noise Measurement Sites



**Owner**  
 SACA DEVELOPMENT  
 77 Cadillac Drive  
 Suite 150  
 Sacramento, California 95825  
 T (916) 522-0400  
 F (916) 641-0400  
 Contact: John Saca

**Architect**  
 KWAN HEMMI  
 1 Beach Street  
 Suite 103  
 San Francisco, California 94133  
 T (415) 777-4770  
 F (415) 777-5102  
 Contact: Denis Hemmi



**PROJECT DATA**

**Building Height:** 400 FT  
 (350 FT @ First 200 FT on the J St. block  
 moving East to West)  
**Site Area:** 160' x 260' = 41,600 SF  
**Gross Bldg. Area:** 652,000 SF  
**Residential SF:** 430,500 SF  
 (Including Circulation & Community Spaces)  
**Commercial/Retail SF:** 13,000 SF  
**No. of Units:** 340  
**No. of Bedrooms:** 510  
**No. of Parking Spaces:** 545  
 (1.8 Spaces / Unit)

**The Metropolitan**  
 10th and J Street  
 Sacramento, CA

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Date: 11-11-2005  
 Scale: 1" = 40'-0"

Project Name: The Metropolitan - 10th & J St.  
 Sacramento, CA  
 Project No: 002136

**SITE PLAN**

Sheet No:  
**A1.01**

11-11-2005

**PROJECT NORTH**



**j.c. brennan & associates**  
*consultants in acoustics*

△ : Noise Measurement Site

### Existing Roadway Noise Levels

To predict existing noise levels due to traffic, the Federal Highway Administration Highway Traffic Noise Prediction Model (FHWA RD-77-108) was used. The model is based upon the Calveno reference noise factors for automobiles, medium trucks, and heavy trucks, with consideration given to vehicle volume, speed, roadway configuration, distance to the receiver, and the acoustical characteristics of the site. The FHWA model was developed to predict hourly  $L_{eq}$  values for free-flowing traffic conditions.

Traffic volumes for existing conditions were obtained from DKS Associates in the form of peak hour intersection movements. The a.m. peak hour traffic volumes were compiled into segment volumes and converted into daily traffic volumes using a factor of 10. Truck usage and vehicle speeds on the local area roadways were estimated from field observations.

**Table 5.4-4** shows the existing traffic noise levels in terms of  $L_{dn}$  at a reference distance of 50 feet from the centerlines of the existing project-area roadways identified in the traffic study (existing conditions). This table also shows the distances to existing traffic noise contours. A complete listing of the FHWA Model input data is contained in Appendix F.

**TABLE 5.4-4**  
**EXISTING AVERAGE DAILY TRAFFIC VOLUMES (ADT)**  
**NOISE LEVELS AND DISTANCES TO CONTOURS**

Intersection	Direction	$L_{dn}$ @ 50 Feet (dB)	Distance to Contours (feet)		
			70 dB	65 dB	60 dB
3rd & J	West	72.8	96	302	957
3rd & J	North	60.2	5	16	52
3rd & L	North	65.8	19	59	188
3rd & Capitol Mall	North	65.1	16	51	162
3rd & Capitol Mall	West	65.8	19	61	191
3rd & N	North	65.0	16	50	157
3rd & N	West	64.0	13	40	126
3rd & P	North	62.2	8	27	84
3rd & P	West	66.0	20	63	200
3rd & Q	North	62.2	8	26	83
3rd & Q	South	65.0	16	50	159
3rd & Q	West	70.6	58	182	575
5th & I	North	66.2	21	66	208
5th & I	West	66.5	22	71	225
5th & J	North	66.7	23	74	235
5th & J	West	71.9	77	245	774
5th & L	West	65.4	17	54	172
5th & Capitol Mall	North	66.1	21	65	206
5th & Capitol Mall	East	64.4	14	43	136
5th & Capitol Mall	West	67.3	27	84	266
5th & N	North	65.3	17	54	170
5th & N	East	65.5	18	56	179
5th & N	West	64.7	15	46	146
5th & P	North	67.5	28	88	279
5th & P	West	64.7	15	47	147

Intersection	Direction	L <sub>dn</sub> @ 50 Feet (dB)	Distance to Contours (feet)		
			70 dB	65 dB	60 dB
5th & P	East	65.1	16	51	162
5th & Q	North	66.4	22	69	217
5th & Q	West	70.4	55	173	547
5th & Q	South	62.5	9	28	90
5th & Q	East	69.2	42	133	420
7th & I	West	66.6	23	73	229
7th & I	North	63.8	12	38	121
7th & J	West	70.5	57	179	565
7th & J	North	64.1	13	40	127
7th & L	North	64.0	13	40	127
7th & L	West	66.2	21	66	209
7th & L	South	64.2	13	41	130
8th & I	North	63.6	11	36	114
8th & I	West	66.9	24	77	242
8th & J	North	64.5	14	44	140
8th & J	West	70.3	53	169	533
8th & L	North	63.7	12	37	118
8th & L	West	66.3	21	67	212
8th & L	South	63.2	10	33	105
9th & I	North	63.1	10	32	101
9th & I	West	67.2	26	82	261
9th & J	North	62.4	9	27	87
9th & J	West	69.3	43	135	426
9th & L	North	63.0	10	32	100
9th & L	West	67.5	28	88	278
9th & L	South	64.1	13	41	129
9th & P	North	64.7	15	47	147
9th & P	West	65.6	18	57	181
9th & Q	North	64.5	14	44	140
9th & Q	West	68.4	35	111	350
9th & Q	South	64.0	13	40	126
10th & I	North	65.0	16	50	160
10th & I	West	66.8	24	76	240
10th & J	North	65.7	19	59	185
10th & J	West	68.8	38	121	382
10th & L	North	66.8	24	75	239
10th & L	West	68.0	32	100	315
10th & L	South	66.7	23	73	232
10th & P	North	68.6	36	114	361
10th & P	West	65.1	16	51	162
10th & P	East	64.1	13	41	129
10th & Q	North	68.0	31	99	312
10th & Q	West	68.6	36	115	364
10th & Q	South	66.8	24	76	241
10th & Q	East	67.7	29	93	293
12th & H	North	68.9	39	122	386
12th & H	West	63.6	11	36	115
12th & H	East	65.4	17	54	171

5.4 NOISE/VIBRATION

Intersection	Direction	L <sub>dn</sub> @ 50 Feet (dB)	Distance to Contours (feet)		
			70 dB	65 dB	60 dB
12th & I	North	67.6	29	92	289
12th & I	West	66.9	25	78	245
12th & J	North	66.2	21	65	206
12th & J	West	68.6	36	114	360
12th & L	North	65.5	18	55	175
12th & L	West	68.1	32	102	324
15th & H	North	64.7	15	47	147
15th & H	West	64.4	14	44	138
15th & J	North	65.7	19	59	186
15th & J	West	67.4	28	87	276
15th & L	North	66.1	20	65	205
15th & L	West	67.1	25	80	254
15th & P	North	65.4	17	55	174
15th & P	West	67.4	28	88	277
15th & Q	North	65.2	16	52	165
15th & Q	West	65.4	17	54	172
15th & Q	South	65.2	17	53	167
15th & W	North	64.8	15	48	151
15th & W	West	66.5	22	70	222
15th & X	North	65.3	17	54	171
15th & X	West	67.6	29	91	288
15th & X	South	63.8	12	38	121
16th & H	North	67.7	29	93	294
16th & H	West	63.0	10	31	99
16th & H	East	62.0	8	25	79
16th & I	North	67.0	25	79	248
16th & I	West	66.8	24	75	237
16th & I	East	66.0	20	64	201
16th & J	North	68.7	37	118	372
16th & J	West	67.8	30	94	299
16th & J	East	67.5	28	90	284
16th & L	North	68.3	33	106	335
16th & L	West	66.4	22	69	217
16th & L	East	65.8	19	60	189
16th & P	North	68.8	38	119	375
16th & P	West	67.3	27	84	266
16th & P	East	67.1	26	81	255
16th & Q	North	68.9	39	122	385
16th & Q	West	65.9	19	61	194
16th & Q	South	68.2	33	104	328
16th & Q	East	64.4	14	43	137
16th & W	North	69.4	44	139	439
16th & W	West	66.5	22	71	224
16th & W	East	68.9	38	122	385
16th & X	North	67.4	28	88	278
16th & X	West	68.2	33	106	334
16th & X	South	68.1	33	103	326
16th & X	East	68.8	38	121	381

Intersection	Direction	L <sub>dn</sub> @ 50 Feet (dB)	Distance to Contours (feet)		
			70 dB	65 dB	60 dB
29th & J	North	68.2	33	106	334
29th & J	West	66.1	20	65	204
29th & J	South	67.5	28	88	278
30th & J	North	64.1	13	41	129
30th & J	West	66.7	23	74	234
30th & J	South	64.5	14	45	142
30th & J	East	66.9	25	78	246
11th & I	North	59.7	5	15	47
11th & I	West	66.2	21	67	211
11th & J	North	60.0	5	16	50
11th & J	West	69.0	40	125	396

Notes: Distances to traffic noise contours are measured in feet from the centerlines of the roadways.  
Source: FHWA-RD-77-108 with inputs from DKS Associates, and j.c. brennan & associates, Inc.

### ***Existing Groundborne Vibration***

Usually, the most likely existing source of groundborne vibration at a project site is roadway truck and bus traffic. Based upon Caltrans research, the maximum vibration levels from truck traffic would not be expected to exceed 0.08 in/sec Peak Particle Velocity (PPV) at a distance of 16 feet from the centerline of the nearest lane of travel. The proposed project property lines are located approximately 30 feet from the centerlines of the adjacent City streets. At this distance, the Caltrans research indicates that PPV vibrations from truck passages would be expected to not exceed 0.05 in/sec. This level is considered to be in the range of perceptibility but not likely to cause architectural or structural damage to buildings.

## **REGULATORY CONTEXT**

### **FEDERAL**

There are no federal regulations related to noise that apply to the proposed project.

### **STATE**

#### ***State of California Noise Insulation Standards***

California Noise Insulation Standards (Cal. Admin. Code Title 24, Chapter 2-35) apply to all multi-family dwellings built in the state. Single-family residences are exempt from these regulations. The regulations require that all multi-family dwellings with exterior noise exposures greater than 60 dBA CNEL must be insulated such that the interior noise level will not exceed 45 dBA CNEL. These requirements apply to all roadway, rail, and airport noise sources.

**LOCAL**

***City of Sacramento Health and Safety Element***

The City of Sacramento's noise policies and guidelines are contained in the General Plan Health and Safety Element. This Element establishes noise exposure standards for different land uses (**Table 5.4-5**). The normally acceptable exterior noise level for commercial land uses is 65 dB,  $L_{dn}$  or less, with a conditionally acceptable range up to 80 dB,  $L_{dn}$  or less. The normally acceptable exterior noise level for residential uses is 60 dB,  $L_{dn}$  or less, with a conditionally acceptable range up to 70 dB,  $L_{dn}$  or less. In instances where attainment of the normally acceptable exterior noise level is not possible with best available noise reduction measures, the Noise Element allows an exterior noise level exceeding the acceptable  $L_{dn}$ , up to the conditionally acceptable range, provided that noise level reduction measures have been implemented and that interior noise level standards are achieved.

The Element also contains specific goals and policies governing noise sources and receptors to provide for noise and land use compatibility. The goals and policies pertinent to activities in the City are summarized below.

**Goal A: *Future development should be compatible with the projected year 2016 noise environment.***

Goal A Policy: Require an acoustical report for any project that would be exposed to noise levels in excess of those shown as normally acceptable (in Table 5.4-4).

Goal A Policy: Require mitigation measures to reduce noise exposure to normally acceptable levels, except where such measures are not feasible.

Goal A Policy: Eliminate or minimize the noise impacts of future developments on existing land uses in Sacramento.

Goal C Policy: 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.

Goal C Policy: Enforce the City of Sacramento noise ordinance as the method to control noise from sources other than transportation sources.

**Goal D: *Reduce noise levels in areas where noise exposure presently exceeds the standards established.***

Goal D Policy: Enforce the provisions of Sections 27-150 and 27-151 of the State Motor Vehicle Code, which requires all vehicles to be equipped with a properly maintained muffler and that exhaust systems not be modified.

Goal D Policy: Encourage the incorporation of the latest noise control technology in all projects.

A listing of all policies, along with detailed descriptions of each policy, can be found in the Health and Safety Element.

**TABLE 5.4-5  
NOISE EXPOSURE STANDARDS**

Land Use Category	Community Noise Exposure L <sub>dn</sub> or CNEL, dB					
	55	60	65	70	75	80
RESIDENTIAL						
TRANSIENT LODGING MOTELS, HOTELS						
SCHOOLS, LIBRARIES, CHURCHES, HOSPITALS, NURSING HOMES						
AUDITORIUMS, CONCERT HALLS, AMTHITHEATERS						
SPORTS AREA, OUTDOOR SPECTATOR SPORTS						
PLAYGROUNDS, NEIGHBORHOOD PARKS						
GOLF COURSES, RIDING STABLES, WATER RECREATION, CEMETARIES						
OFFICE BUILDINGS, BUSINESS COMMERCIAL AND PROFESSIONAL						
INDUSTRIAL, MANUFACTURING, UTILITIES, AGRICULTURE						

 **NORMALLY ACCEPTABLE**

Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise requirements

 **NORMALLY UNACCEPTABLE**

New construction or development should be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirement must be made and needed noise insulation features included in the design.

 **CONDITIONALLY ACCEPTABLE**

New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design.

 **CLEARLY UNACCEPTABLE**

New construction or development clearly should not be undertaken.

Source: City of Sacramento General Plan, 1988

### **Sacramento Central City Community Plan**

In addition to the General Plan, the City of Sacramento has also developed plans that are more specific to the various communities in the City. The City's Central City Community Plan contains the following sub goal under its environmental goal:

Sub-goal: Provide an environment which is free of annoying noise and continue to reduce air pollution.

### **City of Sacramento Noise Control Ordinance**

The City of Sacramento Noise Control Ordinance, found in the Sacramento Municipal Code Title 8 – Health and Safety, Chapter 8.68, sets limits for exterior noise levels on designated residential property. The ordinance states that noise shall not exceed 55 dBA during any cumulative 30-minute period in any hour during the day (7:00 a.m. to 10:00 p.m.), and 50 dBA during any cumulative 30-minute period in any hour during the night (10:00 p.m. to 7:00 a.m.). The ordinance sets somewhat higher noise limits for noise of shorter duration; however, noise shall never exceed 75 dBA in the day and 70 dBA at night.

Construction activities are conditionally exempt from the Noise Ordinance. Construction activities are exempt from the noise standard from 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. Noise sources due to the erection (including excavation), demolition, alteration or repair of any building or structure between the 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 are exempt from the noise control ordinance, provided that the operation of an internal combustion engine is equipped with suitable exhaust and intake silencers which are in good working order.

### **City of Sacramento Zoning Code**

Section 17.24.050 of the City's Zoning Code requires that the residential component of mixed-use projects be subject to the following development standards:

#### Noise Standards

The building design of all new residential structures within an area of the city above 60 dB L<sub>dn</sub> shall incorporate the following construction standards in order to reduce interior noise levels:

- All penetrations of exterior walls shall include one-half inch airspace. This space shall be filled loosely with fiberglass insulation. The space shall then be sealed airtight on both sides of the wall with a resilient, non-hardening caulking or mastic.
- The roof shall be finished with a minimum seven-sixteenths inch oriented strand board (OSB) or plywood of equivalent surface weight, minimum 30 lb. felt paper and minimum 240 lb/square foot composition shingles or equivalent.
- Skylights over private spaces shall not be used unless they have a minimum sound transmission class (STC) rating of 29.
- Windows shall have a minimum STC rating of 29.

- Windows shall have an air filtration rate of less than or equal to 0.15 cubic feet per minute per linear foot (CFM/linear ft). when tested with a 25 mile per hour wind per American Society for Testing Materials (ASTM) standards.
- Sliding glass doors shall have a minimum STC rating of 29.
- A Heating, Ventilation, and Air Conditioning (HVAC) system shall be installed which will provide minimum air circulation and fresh air supply requirements as specified in the Uniform Building Code (UBC).
- Gravity vent openings in attic space shall not exceed code minimum in size and number.
- Alternative methods and materials may be used to achieve an interior noise level of 45 dB  $L_{dn}$  or less, subject to the approval by the Environmental Coordinator.

## IMPACTS AND MITIGATION MEASURES

### METHOD OF ANALYSIS

#### ***Traffic Noise Impact Assessment Methodology***

To assess noise impacts due to project-related traffic increases on the local roadway network, j.c. brennan & associates predicted traffic noise levels at a representative distance for baseline and future, project and no-project conditions. Noise impacts are identified at existing noise-sensitive areas if the noise level increases which result from the project exceed the City's significance threshold.

To describe existing and projected noise levels due to traffic, the Federal Highway Administration Highway Traffic Noise Prediction Model (FHWA RD-77-108) was used. The model is based upon the Calveno reference noise factors for automobiles, medium trucks and heavy trucks, with consideration given to vehicle volume, speed, roadway configuration, distance to the receiver, and the acoustical characteristics of the site. The FHWA model was developed to predict hourly  $L_{eq}$  values for free-flowing traffic conditions. To predict traffic noise levels in terms of  $L_{dn}$ , it is necessary to adjust the input volume to account for the day/night distribution of traffic.

Traffic volumes for baseline and future conditions and scenarios are contained in the Transportation Section (sub-chapter 5.6) of this document. The predicted increases in traffic noise levels on the local roadway network for baseline and future conditions which would result from the project are provided in terms of  $L_{dn}$  at a standard distance of 50 feet from the centerlines of the project-area roadways.

#### ***Construction Noise and Vibration Impact Methodology***

Construction noise was analyzed using data compiled by the US Environmental Protection Agency (EPA) that lists typical noise levels at 50 feet for construction equipment and various construction activities. Vibration from construction was evaluated using data from the Federal Railroad Administration that lists typical vibration decibels at various distances for common construction equipment.

### STANDARDS OF SIGNIFICANCE

Thresholds of significance are those established by the Title 24 standards and by the City's General Plan Noise Element and the City Noise Ordinance. Noise and vibration impacts resulting from the implementation of the proposed project would be considered significant if they cause any of the following results:

- Exterior noise levels at the proposed project which are above the upper value of the normally acceptable category for various land uses (SGPU DEIR AA-27) caused by noise level increases due to the project;
- Residential interior noise levels of Ldn 45 dB or greater caused by noise level increases due to the project;
- Construction noise levels not in compliance with the City of Sacramento Noise Ordinance;
- Occupied existing and project residential and commercial areas are exposed to vibration peak particle velocities greater than 0.5 inches per second due to project construction;
- Project residential and commercial areas are exposed to vibration peak particle velocities greater than 0.5 inches per second due to highway traffic and rail operations; and
- Historic buildings and archaeological sites are exposed to vibration peak particle velocities greater than 0.25 inches per second due to project construction, highway traffic, and rail operations.

### PROJECT-SPECIFIC IMPACTS AND MITIGATION MEASURES

#### ***Impact 5.4-1 Construction noise at sensitive receptors***

Demolition of existing structures and construction of the proposed project would temporarily increase noise levels during construction. This would be a ***short-term significant*** impact.

Noise from construction activities would add to the noise environment in the immediate project vicinity. Activities involved in typical construction would generate maximum noise levels, as indicated in **Table 5.4-6**, ranging from 80 to 89 dB at a distance of 50 feet. Pile-driving activities would result in much higher noise levels ranging from 96-107 dB.

Noise would also be generated during the construction phase by increased truck traffic on area roadways. A significant project-generated noise source would be truck traffic associated with transport of heavy materials and equipment to and from construction sites. This noise increase would be of short duration, and would likely occur primarily during daytime hours.

**TABLE 5.4-6  
NOISE LEVELS OF TYPICAL CONSTRUCTION EQUIPMENT**

Equipment Type	Typical Equipment Level (dBA)- 50 ft from Source
Air Compressor	81
Backhoe	85
Concrete Pump	82
Concrete Breaker	82
Truck Crane	88
Dozer	87
Generator	78
Loader	84
Paver	88
Pneumatic Tools	85
Water Pump	76
Power Hand Saw	78
Shovel	82
Trucks	88
Pile Driver (Impact)	107
Pile Driver (Sonic)	96

Source: Bolt, Beranek and Newman, Noise from Construction Equipment and Operations, Building Equipment and Home Appliances, U.S. EPA, 1971.

Because construction would occur during hours when buildings surrounding the project site are occupied, construction noise could impact these uses. This would be especially true during those periods where pile-driving would occur. As shown in Table 5.4-7, pile-driving could produce peak levels of up to 107 dBA  $L_{eq}$  at 50 feet. Since noise from a point source usually attenuates at approximately 6 dBA per doubling of distance, this would result in pile-driving noise of about 101 dBA  $L_{eq}$  at 100 feet and 95 dBA  $L_{eq}$  at 200 feet. There are numerous retail and commercial buildings within 200 feet of the proposed project along the south side of J Street, and outdoor activities at Cesar Chavez Plaza Park would be significantly impacted during pile driving activities. Uses on K Street, including the Crest Theater, would be more than 200 feet from the project site and buffered by the intervening buildings on J Street. The parking garage to the north would buffer the CalEPA building from direct construction noise.

Noise levels of 95 dBA  $L_{eq}$  would be clearly noticeable at these buildings and for visitors to Cesar Chavez Plaza Park, as well as buildings surrounding the Plaza such as City Hall and the Main Library. Pile-driving noise would most likely be loud enough to cause annoyance to the occupants of these buildings, especially considering that pile-driving does not produce continuous noise, but sharp, intermittent noise peaks.

The City of Sacramento noise ordinance exempts construction activities from the specified noise ordinance standards during the 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. Generally, if a construction project adheres to the construction times identified in the noise ordinance, construction noise is exempted. Although the City of Sacramento Municipal Code exempts construction activities from the noise standards specified elsewhere in the Municipal Code, pile driving and other construction activities, such as the use of jackhammers and tractors, would expose sensitive receptors in the vicinity to high levels of noise during the day. Therefore, construction noise would be a short-term significant impact on sensitive receptors.

Mitigation

The following mitigation measures are required for the proposed project to minimize construction noise impacts. Implementation of these mitigation measures before and during construction would reduce the magnitude and severity of construction noise impacts; however, short-term significant noise impacts would remain as part of the construction phase:

- 5.4-1a *Erect a solid 6 to 8 foot plywood construction/noise barrier along the exposed project boundaries. The barrier should not contain any significant gaps at its base or face, except for site access and surveying openings.*
- 5.4-1b *Construction activities shall comply with the City of Sacramento Noise Ordinance. Demolition and pile driving activities shall be coordinated with adjacent land uses in order to minimize potential disturbance of planned activities.*
- 5.4-1c *Pile holes will be pre-drilled to the maximum feasible depth. This will reduce the number of blows required to seat the pile, and will concentrate the pile driving activity closer to the ground where noise can be attenuated more effectively by the construction/noise barrier.*
- 5.4-1d *Locate fixed construction equipment such as compressors and generators as far as possible from sensitive receptors. Shroud or shield all impact tools, and muffle or shield all intake and exhaust ports on power construction equipment.*
- 5.4-1e *Designate a disturbance coordinator and conspicuously post this person's number around the project site and in adjacent public spaces. The disturbance coordinator will receive all public complaints about construction noise disturbances and will be responsible for determining the cause of the complaint, and implement any feasible measures to be taken to alleviate the problem.*

Significance after Mitigation

**Short-term significant and unavoidable**

**Impact 5.4-2 Construction-induced vibration impacts could cause architectural damage to nearby historic structures and annoyance to nearby sensitive receivers**

Construction activities for the proposed project would generate construction-induced vibration that could damage nearby historic buildings if they are exposed to excessive

groundborne vibrations. The vicinity of the proposed project contains the [Cesar Chavez] Plaza Park/Central Business District Historic District and various buildings that are listed Landmark structures. The construction related vibrations could also cause annoyance to nearby sensitive receivers. This would be a ***potentially significant impact***.

Construction activities can generate ground-borne vibrations. These vibrations can pose a risk to nearby structures. Constant or transient vibrations can weaken structures, crack facades, and disturb occupants.

Construction vibrations can either be transient, random, or continuous. Transient construction vibrations occur from blasting, impact pile driving, and wrecking balls. Continuous vibrations result from vibratory pile drivers, large pumps, and compressors. Random vibrations can result from jack hammers, pavement breakers, and heavy construction equipment.

The most significant source of ground-borne vibrations would from pile-drivers during periods of construction on the project site. Based upon research published by the Federal Transit Administration, pile-driving can result in peak particle velocity (PPV) values up to 1.158 in/sec with more typical values around 0.644 in/sec at a distance of 25 feet. The closest listed historic building to the project site is on the south side of J Street. Table 5.4-2, above indicates that the threshold for damage to structures ranges from 2.0 to 6.0 in/sec.

The vibration study for the Esquire Plaza Office/IMAX Theater construction, located two blocks east at the northwest corner of 13th and K streets, was reviewed to estimate the potential for vibration impacts on nearby historic structures. Soils beneath the Esquire Plaza Office/IMAX Theater site are consistent with soils at the project site. The Esquire Plaza Office/IMAX Theater facade was measured five feet from the pile hole, and no damage was observed during pile driving. The vibration report concluded that indicator pile driving at the Esquire Plaza Office/IMAX Theater site generated vibrations well below the threshold for architectural damage to historic buildings. All pile holes were pre-drilled. No damage was observed and none would be expected based on the available criteria.

Other previous pile driving monitoring for the Convention Center and the Attorney General's office building projects similarly identified vibrations well below the threshold for architectural damage to historic buildings. However, while no structural damage occurred, these studies did note that it is possible for fire sprinklers to break at joints at vibration levels below current criteria. Because of the expected low vibration levels, no vibration monitoring should be necessary for the proposed project. Noise mitigation measure 5.4-1, above, requires pre-drilling of pile holes, which would result in conditions similar to those at the Esquire Plaza Office/IMAX Theater site. Since fire sprinkler failure has been observed in the past, monitoring should begin only if such failures are observed in surrounding office buildings. However, without pre-drilling of pile holes, construction induced vibration impacts would be potentially significant.

#### Mitigation

The following mitigation measures would reduce the potential for vibration damage to adjacent structures to less-than-significant levels:

*5.4-2a Implement mitigation measure 5.4-1c.*

- 5.4-2b *Prior to demolition, the pre-existing condition of all buildings within a 50-foot radius will be recorded in order to evaluate damage from construction activities. Fixtures and finishes within a 50-foot radius of construction activities susceptible to damage will be documented (photographically and in writing) prior to construction. All damage will be repaired back to its pre-existing condition.*
- 5.4-2c *If fire sprinkler failures are reported in surrounding buildings to the disturbance coordinator, the contractor shall provide monitoring during construction and repairs to sprinkler systems shall be provided.*
- 5.4-2d *During demolition and construction, should damage occur despite the above mitigation measures, construction operations shall be halted and the problem activity shall be identified. A qualified engineer shall establish vibration limits based on soil conditions and the types of buildings in the immediate area. The contractor shall monitor the buildings throughout the remaining construction period and follow all recommendations of the qualified engineer to repair any damage that has occurred to the pre-existing state, and to avoid any further structural damage.*

Significance after Mitigation

Less than significant

**Impact 5.4-3 *The operation of the proposed project could expose existing receptors to significant increases in ambient noise***

The proposed project would increase ambient noise levels by increasing traffic on local roads. The City of Sacramento considers a 4 dB increase in traffic noise levels at noise sensitive uses to be the threshold of significance, except where ambient noise levels already exceed the City's standards an increase in the ambient level by 3 dBA Ldn or more would be significant. The proposed project's impact on ambient noise levels is ***less than significant***.

To assess noise impacts due to project-related traffic increases on the local roadway network, traffic noise levels are predicted at a representative distance for both baseline and future, project and no-project conditions. To describe existing and projected noise levels due to traffic, the Federal Highway Administration Highway Traffic Noise Prediction Model (FHWA RD-77-108) was used. The model is based upon the Calveno reference noise factors for automobiles, medium trucks, and heavy trucks, with consideration given to vehicle volume, speed, roadway configuration, distance to the receiver, and the acoustical characteristics of the site. The FHWA model was developed to predict hourly  $L_{eq}$  values for free-flowing traffic conditions. To predict traffic noise levels in terms of  $L_{dn}$ , it is necessary to adjust the input volume to account for the day/night distribution of traffic.

Traffic volumes for baseline and cumulative conditions and scenarios are contained in the Transportation and Circulation Section (sub-chapter 5.6) of this document. **Table 5.4-7** shows the predicted increases in traffic noise levels on the local roadway network for baseline and cumulative conditions which would result from the project. These Tables are provided in terms of  $L_{dn}$  at a standard distance of 50 feet from the centerlines of the project-area roadways. Appendix F provides the complete inputs and results of the FHWA traffic noise prediction model.

**TABLE 5.4-7  
PREDICTED TRAFFIC NOISE LEVEL AND PROJECT-RELATED TRAFFIC NOISE LEVEL INCREASES**

Roadway	Direction	L <sub>dn</sub> @ 50 Feet (Surface Streets), dB					
		Baseline	Baseline + Project	Change vs. Baseline	Cumulative (2030)	Cumulative (2030) + Project	Change vs. Cumulative(2030)
3rd & J	West	73.2	73.2	0.0	73.6	73.8	0.3
3rd & J	North	60.2	60.2	0.0	63.0	63.1	0.1
3rd & L	North	66.2	66.3	0.1	67.9	68.2	0.3
3rd & Capitol Mall	North	67.0	67.0	0.0	68.4	68.7	0.3
3rd & Capitol Mall	West	67.4	67.4	0.0	68.2	68.6	0.4
3rd & N	North	65.6	65.6	0.0	66.9	67.6	0.6
3rd & N	West	64.1	64.1	0.0	65.1	65.5	0.4
3rd & P	North	63.2	63.2	0.0	64.8	65.2	0.4
3rd & P	West	66.2	66.2	0.0	67.3	67.6	0.4
3rd & Q	North	62.2	62.2	0.0	64.5	64.5	0.0
3rd & Q	South	64.1	64.1	0.0	67.7	67.7	0.0
3rd & Q	West	71.6	71.6	0.0	72.4	72.7	0.3
5th & I	North	66.3	66.3	0.0	67.9	67.9	0.0
5th & I	West	66.7	66.9	0.2	68.3	68.7	0.5
5th & J	North	66.7	66.7	0.0	68.3	68.4	0.1
5th & J	West	72.2	72.2	0.0	72.4	72.7	0.2
5th & L	West	65.7	65.8	0.1	66.2	67.4	1.3
5th & Capitol Mall	North	66.0	66.0	0.0	67.6	68.0	0.4
5th & Capitol Mall	East	67.0	67.0	0.0	67.0	67.5	0.5
5th & Capitol Mall	West	68.7	68.7	0.0	69.3	69.8	0.4
5th & N	North	65.7	65.7	0.0	66.3	67.0	0.7
5th & N	East	65.7	65.7	0.0	67.3	69.0	1.7
5th & N	West	64.8	64.8	0.0	66.8	68.1	1.3
5th & P	North	67.0	67.0	0.0	67.0	68.2	1.2
5th & P	West	65.4	65.4	0.0	66.8	66.9	0.1
5th & P	East	65.8	65.8	0.0	66.5	67.2	0.7
5th & Q	North	66.7	66.7	0.0	68.5	69.1	0.6
5th & Q	West	71.5	71.5	0.0	71.5	71.8	0.4
5th & Q	South	62.5	62.5	0.0	66.5	66.5	0.0
5th & Q	East	70.5	70.5	0.0	70.5	70.6	0.1
7th & I	West	66.8	66.9	0.2	68.4	68.9	0.4
7th & I	North	64.6	64.6	0.0	66.2	67.0	0.8
7th & J	West	70.9	70.9	0.0	70.9	71.4	0.5
7th & J	North	64.0	64.2	0.1	65.5	66.8	1.3
7th & L	North	65.0	65.1	0.1	66.2	67.0	0.8
7th & L	West	66.4	66.5	0.1	67.9	68.8	0.9
7th & L	South	65.5	65.5	0.0	65.5	66.0	0.5
8th & I	North	63.9	63.9	0.0	65.4	65.7	0.3

5.4 NOISE/VIBRATION

Roadway	Direction	L <sub>dn</sub> @ 50 Feet (Surface Streets), dB					
		Baseline	Baseline + Project	Change vs. Baseline	Cumulative (2030)	Cumulative (2030) +Project	Change vs. Cumulative(2030)
8th & I	West	67.0	67.2	0.2	68.1	68.8	0.7
8th & J	North	65.0	65.0	0.0	66.2	66.8	0.6
8th & J	West	70.6	70.7	0.0	70.6	71.3	0.6
8th & L	North	65.3	65.3	0.0	65.8	67.3	1.5
8th & L	West	66.8	66.8	0.0	67.3	68.8	1.5
8th & L	South	64.0	64.0	0.0	65.1	66.0	0.9
9th & I	North	64.2	64.2	0.0	65.8	65.8	0.0
9th & I	West	67.2	67.4	0.2	68.6	69.0	0.4
9th & J	North	64.6	64.7	0.1	64.7	65.2	0.5
9th & J	West	70.0	70.0	0.0	70.0	70.7	0.7
9th & L	North	64.5	64.5	0.1	64.5	66.2	1.7
9th & L	West	68.4	68.4	0.0	68.4	70.4	2.0
9th & L	South	65.2	65.3	0.1	65.3	65.6	0.3
9th & P	North	66.3	66.4	0.0	66.6	67.0	0.3
9th & P	West	66.0	66.0	0.0	66.8	67.2	0.5
9th & Q	North	66.4	66.4	0.0	66.4	66.8	0.4
9th & Q	West	69.5	69.5	0.0	70.0	70.0	0.0
9th & Q	South	67.6	67.7	0.0	67.6	67.9	0.2
10th & I	North	65.1	65.1	0.0	66.2	66.2	0.1
10th & I	West	67.3	67.5	0.3	68.0	68.7	0.7
10th & J	North	65.7	65.9	0.2	67.7	67.7	-0.1
10th & J	West	69.2	69.2	0.0	69.5	69.8	0.3
10th & L	North	66.8	66.9	0.0	68.5	68.5	0.0
10th & L	West	68.8	68.8	0.0	68.8	70.2	1.4
10th & L	South	67.0	67.0	0.0	68.5	69.0	0.5
10th & P	North	68.7	68.8	0.0	69.5	69.8	0.3
10th & P	West	65.8	65.8	0.0	66.5	67.0	0.5
10th & P	East	66.0	66.0	0.0	66.9	67.0	0.1
10th & Q	North	68.3	68.3	0.0	68.8	69.3	0.6
10th & Q	West	68.7	68.7	0.0	69.3	69.4	0.0
10th & Q	South	67.2	67.3	0.0	68.1	68.7	0.7
10th & Q	East	67.8	67.8	0.0	68.7	68.8	0.0
12th & H	North	69.3	69.3	0.0	69.3	69.6	0.3
12th & H	West	63.6	63.7	0.1	67.1	67.2	0.1
12th & H	East	65.5	65.5	0.0	67.8	67.8	0.0
12th & I	North	68.2	68.2	0.0	68.2	68.5	0.3
12th & I	West	67.3	67.4	0.0	68.7	68.9	0.2
12th & J	North	66.4	66.4	0.0	66.6	67.2	0.5
12th & J	West	68.9	69.0	0.1	68.9	69.5	0.5
12th & L	North	65.7	65.7	0.0	65.8	66.5	0.7
12th & L	West	68.8	68.8	0.0	68.8	69.8	1.0
15th & H	North	64.7	64.7	0.0	66.0	66.0	0.0
15th & H	West	64.4	64.5	0.0	66.3	66.4	0.1
15th & J	North	65.7	65.7	0.0	67.1	67.1	0.0
15th & J	West	68.3	68.4	0.1	68.3	68.8	0.5
15th & L	North	66.4	66.4	0.1	66.6	66.9	0.3

Roadway	Direction	L <sub>dn</sub> @ 50 Feet (Surface Streets), dB					
		Baseline	Baseline + Project	Change vs. Baseline	Cumulative (2030)	Cumulative (2030) + Project	Change vs. Cumulative(2030)
15th & L	West	67.7	67.8	0.0	67.9	68.8	0.9
15th & P	North	65.7	65.8	0.1	65.9	66.4	0.4
15th & P	West	67.7	67.7	0.0	68.2	68.2	0.1
15th & Q	North	65.4	65.5	0.1	65.5	65.9	0.4
15th & Q	West	65.5	65.5	0.0	66.6	67.1	0.5
15th & Q	South	65.5	65.5	0.1	65.5	65.9	0.4
15th & W	North	65.0	65.1	0.1	65.0	65.5	0.4
15th & W	West	66.5	66.5	0.0	67.6	67.6	0.0
15th & X	North	65.5	65.6	0.1	65.5	65.9	0.4
15th & X	West	67.6	67.6	0.0	65.5	65.5	0.0
15th & X	South	63.8	63.8	0.0	63.9	63.9	0.0
16th & H	North	67.9	67.9	0.0	68.4	68.6	0.2
16th & H	West	63.0	63.0	0.1	64.8	65.0	0.1
16th & H	East	62.0	62.0	0.0	62.6	62.6	0.0
16th & I	North	67.2	67.2	0.0	67.4	67.6	0.2
16th & I	West	66.8	66.8	0.0	68.9	68.9	0.1
16th & I	East	66.0	66.0	0.0	68.3	68.3	0.0
16th & J	North	68.9	68.9	0.0	69.6	69.7	0.2
16th & J	West	68.1	68.1	0.0	69.1	69.4	0.3
16th & J	East	67.7	67.7	0.0	68.9	69.0	0.1
16th & L	North	68.4	68.4	0.0	68.9	69.0	0.1
16th & L	West	67.1	67.2	0.0	67.1	68.2	1.0
16th & L	East	66.2	66.2	0.0	66.2	67.0	0.7
16th & P	North	69.1	69.1	0.0	69.6	70.0	0.4
16th & P	West	67.5	67.5	0.0	67.8	67.9	0.1
16th & P	East	67.4	67.4	0.0	67.5	67.6	0.1
16th & Q	North	69.1	69.1	0.0	69.8	70.1	0.3
16th & Q	West	66.0	66.0	0.0	67.3	67.4	0.1
16th & Q	South	68.5	68.5	0.0	69.0	69.3	0.4
16th & Q	East	64.6	64.6	0.0	65.7	65.8	0.1
16th & W	North	69.7	69.7	0.0	70.4	70.7	0.3
16th & W	West	66.5	66.5	0.0	67.6	67.6	0.0
16th & W	East	69.1	69.2	0.0	66.6	66.6	0.0
16th & X	North	69.7	69.7	0.0	70.9	70.9	0.0
16th & X	West	68.3	68.4	0.0	69.0	69.2	0.2
16th & X	South	68.1	68.1	0.0	69.5	69.5	0.0
16th & X	East	66.2	66.2	0.1	66.6	66.9	0.3
29th & J	North	67.5	67.5	0.0	67.5	67.5	0.0
29th & J	West	66.3	66.3	0.0	67.4	67.4	0.0
29th & J	South	66.8	66.8	0.0	67.4	67.4	0.0
30th & J	North	65.5	65.5	0.0	65.5	65.5	0.0
30th & J	West	67.3	67.3	0.0	67.6	67.6	0.0
30th & J	South	65.2	65.2	0.0	66.7	66.7	0.0
30th & J	East	67.2	67.2	0.0	68.4	68.4	0.0
11th & I	North	59.9	60.2	0.2	NA	NA	NA

Roadway	Direction	L <sub>dn</sub> @ 50 Feet (Surface Streets), dB					
		Baseline	Baseline + Project	Change vs. Baseline	Cumulative (2030)	Cumulative (2030) + Project	Change vs. Cumulative(2030)
11th & I	West	66.7	66.7	0.0	NA	NA	NA
11th & J	North	60.0	60.5	0.5	NA	NA	NA
11th & J	West	69.3	69.3	0.0	NA	NA	NA

Source: j.c. brennan & associates, Inc., FHWA RD-77-108 Traffic Noise Prediction Model and DKS & Dowling Associates Transportation Consultants.

The proposed project will generate increased traffic on the existing roadway network. The proposed project-generated traffic is expected to result in traffic noise level increases over existing baseline levels of less than 1 dB on the existing project area roadways, as indicated by Table 5.4-7. Because the predicted increase in traffic noise levels which would result from the proposed project do not exceed the City's thresholds of significance, this impact is considered less-than-significant.

#### Mitigation Measure

None required

#### **Impact 5.4-4 The operation of the proposed project could expose new sensitive receptors to excessive exterior noise levels**

The Sacramento General Plan specifies an acceptable exterior noise level of 60 dB L<sub>dn</sub> for common outdoor areas at multi-family uses, and 70 dB L<sub>dn</sub> for parks. Outdoor areas for the residential tower would include courtyards, balconies, or common patios. An outdoor pool area is proposed on the 37<sup>th</sup> floor. This would place the pool and terrace area approximately 340 feet above street level. Exterior balconies are proposed for residential units on J and 10<sup>th</sup> streets starting approximately 20 feet above street level. These areas would not qualify as common outdoor areas. Because the project could expose new noise sensitive uses to exterior traffic noise levels in excess of the City of Sacramento exterior noise level standards, this impact is considered **less than significant**.

The lowest balconies on J Street would be set back approximately 35 feet from the nearest traffic lane, and the first loft unit balcony on J Street would be located 50 feet above street level over two levels of parking, and 60 feet to the top of the windscreen on the terrace. The closest line of sight distance on J Street would be approximately 60 feet to the first balcony.

Loft unit balconies on 10<sup>th</sup> Street would be set back approximately 45 feet from the nearest traffic lane, and located 20 feet above street level, directly above the retail uses. The closest line of sight distance would be approximately 50 feet to the first balcony on 10<sup>th</sup> Street.

To determine the future traffic noise levels on the project site, j.c. brennan & associates used the predicted future traffic data for the year 2030 provided by DKS and Dowling Associates Transportation Consultants. **Table 5.4-8** shows the predicted future traffic noise

levels on the project site. Appendix F shows the inputs and results to the FHWA noise prediction model.

Table 5.4-8 data indicates that all residential balconies facing J or 10<sup>th</sup> streets are expected to be exposed to exterior traffic noise levels exceeding the City of Sacramento 60 dB L<sub>dn</sub> exterior noise level standard. Balconies facing J Street from the 5<sup>th</sup> through 15<sup>th</sup> floors are expected to be exposed to traffic noise levels in the Normally Unacceptable range of 70-75 dB L<sub>dn</sub>. Balconies facing J Street from the 15<sup>th</sup> through 38<sup>th</sup> floors are expected to be exposed to traffic noise levels in the conditionally acceptable range of 60-70 dB L<sub>dn</sub>.

Balconies facing 10<sup>th</sup> Street from the 3<sup>rd</sup> through 38<sup>th</sup> floors are expected to be exposed to traffic noise levels in the conditionally acceptable range of 60-70 dB L<sub>dn</sub>.

The pool terrace level is predicted to comply with the City of Sacramento 60 dB L<sub>dn</sub> exterior noise level standard.

**TABLE 5.4-8  
PREDICTED FUTURE TRAFFIC NOISE LEVELS**

Location(s)	Noise Level, L <sub>dn</sub> <sup>2</sup>	Distance to Noise Contours <sup>1</sup>	
		60 dB , L <sub>dn</sub>	65 dB L, L <sub>dn</sub>
J Street – Ground Floor	73 dB	1562'	494'
J Street – 5 <sup>th</sup> Floor Loft	74 dB		
J Street – 6 <sup>th</sup> Floor Loft	74 dB		
J Street – 7 <sup>th</sup> Floor Residential	72 dB		
J Street – 15 <sup>th</sup> Floor Residential	70 dB		
J Street – 38 <sup>th</sup> Floor Residential	67 dB		
J Street – Pool Deck <sup>3</sup>	56 dB		
10 <sup>th</sup> Street – Ground Floor	67 dB	419'	133'
10 <sup>th</sup> Street – 3 <sup>rd</sup> Floor Loft	70 dB		
10 <sup>th</sup> Street – 4 <sup>th</sup> Floor Loft	69 dB		
10 <sup>th</sup> Street – 5 <sup>th</sup> Floor Loft	69 dB		
10 <sup>th</sup> Street – 6 <sup>th</sup> Floor Loft	68 dB		
10 <sup>th</sup> Street – 7 <sup>th</sup> Floor Residential	67 dB		
10 <sup>th</sup> Street – 38 <sup>th</sup> Floor Residential	61 dB		

<sup>1</sup> Predicted distances to noise level contours are measured in feet from the roadway centerline.  
<sup>2</sup> Noise propagation was considered to occur under acoustically "hard" site conditions. Additionally, a +3 dB adjustment was added to elevated receivers to account for building reflections and lost ground attenuation.  
<sup>3</sup> Noise levels at the pool terrace level include a -10 dB offset to account for building facade shielding provided by the edge of the roof and the 9' tall windscreen.

Note: A complete listing of FHWA Model inputs and results is provided in Appendix F.  
Source: j.c. brennan, Inc., 2006

Based upon the analysis contained in Table 5.4-8, most residential balconies along J Street or 10<sup>th</sup> Street are predicted to be exposed to traffic noise levels exceeding the City of Sacramento's normally acceptable 60 dB L<sub>dn</sub> exterior noise level standard. However, there is no practical way to mitigate exterior noise levels at elevated residential balconies, without totally enclosing them. A common practice in many jurisdictions, including the City of Sacramento is to apply the exterior noise level standard at another outdoor area such as the proposed pool terrace area which would be located on the 37<sup>th</sup> floor of the proposed residential tower. This location is predicted to comply with the City of Sacramento 60 dB L<sub>dn</sub> exterior noise level standard and would provide all residents with an outdoor area which is not exposed to elevated traffic noise levels. The City of Sacramento applies the exterior noise level standard for common areas at the swimming pool terrace level; therefore no exterior noise mitigation would be required.

### Mitigation Measure

None required

### ***Impact 5.4-5 The operation of the proposed project could expose new sensitive receptors to excessive interior noise levels***

The Sacramento General Plan establishes an acceptable interior noise level standard of 45 dB L<sub>dn</sub> for residential uses exposed to traffic noise. Because the project could expose new noise sensitive uses to exterior traffic noise levels in excess of the City of Sacramento exterior noise level standards, this impact is considered ***potentially significant***.

Modern residential construction typically provides a 25-30 dB exterior-to-interior noise level reduction. The residential units located on the 5<sup>th</sup> and 6<sup>th</sup> floors along J Street are predicted to be exposed to exterior traffic noise levels of 74 dB L<sub>dn</sub>. Therefore, an exterior-to-interior noise level reduction of 29 dB would be required to achieve an interior noise level of 45 dB L<sub>dn</sub>. In order to ensure an exterior-to-interior noise level reduction of 29 dB, it is anticipated that all windows would be required to have a minimum STC rating of 33 for residential facades exposed to exterior noise levels exceeding 70 dB L<sub>dn</sub>. This would include all residential floors below the 15<sup>th</sup> floor along J Street, as indicated in Table 5.4-8, above. However, because building construction details are not currently available, this requirement would need to be verified when building plans become available.

### Mitigation

The following mitigation measures would reduce the potential for interior noise level impacts to less-than-significant levels:

- 5.4-5 *Windows for the residential floors below the 15<sup>th</sup> floor, along J Street, would be required to have a minimum STC rating of 33. The project applicant shall submit an acoustical review of interior noise levels prior to being issued building permits. The review should verify that the proposed building façade construction is sufficient to achieve an interior noise level of 45 dB L<sub>dn</sub> or less.*

### Significance after Mitigation

Less than significant

## CUMULATIVE IMPACTS AND MITIGATION MEASURES

The cumulative context for noise impacts associated with the proposed project consists of the existing and future noise sources that could affect the project or surrounding uses. Noise generated by construction would be temporary, and would not add to the permanent noise environment or be considered as part of the cumulative context.

### ***Impact 5.4-6 The proposed project would add to cumulative noise levels in the project vicinity***

The cumulative context for noise impacts associated with the proposed project consists of the existing and future noise sources that could affect the project or surrounding uses. Noise generated by construction would be temporary, and would not add to the permanent noise environment or be considered as part of the cumulative context. The total noise impact of the proposed project would be fairly small and would not be a substantial increase to the existing future noise environment. Thus, the proposed project would result in a ***less-than-significant cumulative impact***.

#### Traffic

Cumulative noise impacts would occur primarily as a result of increased traffic on local roadways due to the proposed project and other projects within the Downtown area. Table 5.4-7, above, shows cumulative 2030 traffic noise levels with and without the proposed project. As shown, the proposed project would contribute no more than 2 dB  $L_{dn}$  to noise levels on roadways fronting residential uses along J and 10<sup>th</sup> streets. This is less than the City of Sacramento 3 dB threshold of significance for roadways already exceeding the City's standards.

#### Non-Traffic Noise

The proposed project is not expected to create substantial non-traffic noise. Non-traffic noise includes increased pedestrian activity from the additional residential and retail uses of the site. The number of people walking and interacting on surrounding roads would increase. This could raise noise levels on these streets slightly as more people utilize amenities in the area. This is not expected to substantially influence interior or exterior noise levels at nearby receptors. Mechanical equipment installed for heating, cooling, ventilation, and power supply would be placed indoors in a mechanical penthouse at approximately 360 feet. Any noise from this equipment would not be audible outside the building. Consequently, this would not add to any cumulative noise levels.

#### Cumulative Conclusion

The combination of traffic and non-traffic noise from the proposed project would not produce noise levels that would exceed City standards or produce isolated events that could disrupt sleep. As discussed above, the proposed project would not create noticeable non-transportation or stationary noise. Increased project-related traffic would increase traffic noise levels by a maximum of 2.0 dBA  $L_{dn}$  on local roadways. This would be far less than the 4 dBA at which noise increases become readily noticeable, and less than the 3 dBA  $L_{dn}$  standard of significance. Consequently, the total noise impact of the proposed project would be fairly small and would not be a substantial increase to the existing future noise environment. The proposed project would result in a less-than-significant cumulative impact.

Mitigation

None required

## **5.5 PUBLIC SERVICES**



## **5.5 PUBLIC SERVICES AND UTILITIES**

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### **INTRODUCTION**

This section addresses the demand for public utilities and services generated by the Metropolitan Project (proposed project) and the ability of current systems to accommodate the demand. Impacts to fire services and wastewater/stormwater are discussed in this chapter.

The wastewater and storm drainage section discusses the existing condition of the City's wastewater and stormwater collection and treatment systems and estimates the wastewater generated by the proposed project. Information for this analysis was obtained from the Sacramento General Plan and conversations with the City's Utilities Department.

The Initial Study (see Appendix B) determined that impacts to the following utilities and services would be less than significant: law enforcement, schools, libraries, parks, solid waste, water service, energy and natural gas, and telecommunications.

Subsequent to issuance of the NOP, the Fire Department has determined that fire impacts would not be a physical impact, but a funding issue being negotiated with the City Council directly. Therefore, fire impacts will not be discussed further in this EIR.

A comment on the NOP addressed energy consumption of the proposed project. As discussed in the Initial Study, the proposed project would include up-to-date energy-saving equipment and lighting, as well as other energy conservation measures, so the proposed project would not result in the unnecessary, inefficient, or wasteful use of resources. This impact was determined to be less than significant and is not further addressed in the EIR.

The Sacramento Regional Community Sanitation District (SRCSD) responded to the NOP and indicated the District does not have any specific concerns. SRCSD expects that if the project is subject to currently established policies, ordinances, fees, and to conditions of approval, then mitigation measures within the EIR will adequately address the sewage aspects of the project. The SRCSD anticipates a less than significant impact to the sewage facilities due to mitigation.

### **WASTEWATER AND STORMWATER**

Approximately 7,000 acres of the downtown area, including the project site, are served by the City's Combined Sewer Service System (CSS). In addition to the downtown area, approximately 2,200 acres encompassing River Park, CSUS, and the eastern Sacramento area contribute sanitary sewage flows to the CSS.

The CSS system consists of a single network of pipelines that collect both storm water drainage and sanitary sewer discharges from the downtown area. The CSS also includes facilities such as pumping stations, the Pioneer Reservoir off-line storage, and the two primary treatment plants: the City's Combined Wastewater Treatment Plant (CWTP) and Pioneer Reservoir. The collection system is divided into networks and consists of trunks, interceptors, reliefs, force mains, laterals, and other pipelines. Trunk sewers represent seventy percent of the total collection system capacity (5,000,000 cubic feet total capacity).

The CSS conveys flows from the City south to the Sacramento Regional Wastewater Treatment Plant (SRWTP), approximately five miles south near the unincorporated community of Freeport. Currently, the City has an agreement with SRWTP to deliver no more than 60 million gallons per day (mgd) peak flow from the City's Sump 2 service area to the regional interceptor sewer. During dry weather, approximately 25 mgd flows to the SRWTP from Sump 2. The SRWTP is a 181-mgd pure oxygen activated sludge treatment plant that includes raw influent and effluent pumping, primary clarification, secondary treatment with the high-purity oxygen activated sludge process, disinfection, solids thickening, and anaerobic solids digestion (SRWTP 2020 Master Plan).

When CSS flows are greater than the City's contract amount with SRWTP, CSS flows are diverted to the CWTP located near South Land Park Drive and 35th Avenue, where an additional 130 mgd of combined wastewater receives primary treatment with disinfection and discharge to the Sacramento River. Wet weather flows are known to exceed system capacity during heavy storm events. Flows during heavy storm events which are in excess of the 190 mgd combined capacities of the SRWTP (60 mgd) and CWTP (130 mgd), result in a combined sewer overflow (CSO).

During CSO events, flows to Sump 2 greater than 190 mgd are diverted to the 28 million gallon Pioneer Interceptor and Reservoir for storage. During major storms, Sump 1/IA also pumps up to 120 mgd to the Pioneer Reservoir. The stored combined wastewater is diverted back to the SRWTP or the CWTP for treatment as treatment capacity allows, or is discharged directly to the Sacramento River without treatment if storm flows exceed total treatment and storage capacity.

During extreme high flow conditions, discharges of untreated combined wastewater may occur at the bypass point for Sump 1A. Discharges at this bypass point have not occurred in the last twenty years according to Department of Utilities staff. The CWTP and sumps are currently being managed under an interim operations plan dated 15 November 1994. Collected screenings are hauled to a landfill, and sludge and other solids removed from liquid wastes are pumped through the collection system to the SRWTP.

The CSS has inadequate hydraulic capacity and is in need of rehabilitation. Since many of the pipelines are too small and have too flat a slope to accommodate flows during moderate and intense storms, outflows of combined sewage and stormwater from the CSS have occurred over the years out of plumbing fixtures located in basements and low-lying drop inlets and maintenance holes onto the streets. In addition, localized flooding of stormwater occurs in several areas because runoff is greater than the CSS pipeline capacity.

Exposure of people to untreated wastewater creates a health risk. On June 22, 1990, the California Regional Water Quality Control Board, Central Valley Region (RWQCB) adopted Cease and Desist Order No. 90-179, requiring the City of Sacramento to cease and desist CSS discharges into the Sacramento River in violation of RWQCB Order No. 85-342. The Cease and Desist Order (and amendments 91-199 and 92-217) required the City to undertake operational improvements on the CSS, and perform a risk assessment on the known and potential health impacts of CSOs.

In compliance with the Order, the City submitted numerous alternatives to improve the CSS, as well as performed a public health risk assessment from outflows of the CSS. The City concluded that completely separating the sewer and storm water systems and conducting rehabilitation of the CSS would have adverse effects to City streets and would be economically

infeasible. Thus the City identified a long-term control plan (CSS Improvement Program) which includes system improvements to reduce CSO events. Rehabilitation of the CWTP and the remaining sewers is being conducted over a ten to fifteen year period. The CSS Improvement Program complies with the federal EPA's CSO Control Policy in terms of both required implementation steps and CSO discharge limits. Since implementation of the Program, there has been a substantial decrease in CSOs to the Sacramento River (2001-2006 CIP, Utilities Program Overview).

On March 22, 1996, RWQCB rescinded the Cease and Desist Order and issued a new National Pollutant Discharge Elimination System (NPDES) permit (Order No. 96-090) that includes a schedule for implementing the initial phase of the CSS Improvement Program. In June 2000, the City of Sacramento began work to upgrade the combined sewer system in the older part of the city.

Completed projects include a local 1.4 million gallon underground storage facility in operation at 42<sup>nd</sup> and R streets, the rehabilitation of Sump 1/1A that increased its capacity from 130 million gallons per day (mgd) to 200 mgd, conversion of Pioneer Reservoir to a primary treatment facility by providing disinfection, construction of a 3 million-gallon underground storage facility at 49<sup>th</sup> and V streets, improvements to Sump 2 to improve operations and increase capacity from 530 mgd to 720 mgd, an in-line storage project in Broadway near Tahoe Park, and an in-line storage in the Land Park area. Other planned and funded improvements include an underground storage at the old Union Pacific Railyard near Sacramento City College, improvements to the CWTP on 35<sup>th</sup> Avenue, and rehabilitation of various portions of the collection system.

Sewer projects receiving new or additional significant funding in FY2006/07 include:

- 5th Street Combined Sewer Replacement R to U Streets (XN56) - This project will replace the existing combined sewer pipe with a larger pipe that will connect to the recently completed 66-inch inlet to Sump 1. This project is particularly valuable to address increased development in the Downtown Area by increasing the capacity of a major trunk to Sump 1.
- S Street Brick Interceptor Replacement, 9th to 11th Streets (XN34) – Funds in this existing project (XN34) will be augmented to add a parallel pipeline from 7th to 11th streets. This scope change will increase capacity of the S Street line and complete all contemplated work in this area at the same time to avoid excessive impacts to the neighborhood.
- Sump 2 Switchgear Replacement (XN46) - The electrical equipment at Sump 2, constructed in 1914, is antiquated and needs replacement. Sump 2 pumps all combined flows greater than 210 million gallons per day (mgd) and are therefore needed to prevent flooding from storms and route combined wastewater to the City's two primary treatment plants. In addition, Sump 2 operation is necessary to protect river water quality and ensure adherence to the City's NPDES permit for operating the CSS.
- Sump 1 Automation (XN45) - This project consists of automating the operation of Sump 1. Sump 1 is the City's oldest pump station, constructed in 1906. Although it has seen improvements over the years, the station still needs to be started and operated manually. Since Sump 1 is only used during large storms, when staffing requirements are already strained, enabling Sump 1 to be operated automatically will enhance operational flexibility.

The existing CSS collection system for the proposed project includes a 10-inch to 12-inch sewer line located in the alley that conveys sewer flows from the project site to the east.

## **REGULATORY CONTEXT**

### ***Federal***

#### ***Federal and State Clean Water Act***

The Federal Clean Water Act and regulations set forth by the California Department of Health Services and SWRCB are aimed primarily at discharges of effluent to surface waters. Title 40 of the Code of Federal Regulations (CFR) Part 503, Title 23 California Code of Regulations, and standards established by the Central Valley RWQCB regulate the disposal of biosolids.

### ***State***

#### ***Environmental Protection Agency's National CSO Control Policy***

In April 1994, the U.S. EPA issued its CSO Policy for controlling discharges to the nation's waters from combined sewer systems (40 CFR Part 122). One of the cornerstones of the CSO Policy is the requirement for Nine Minimum Controls (NMCs), which apply to every CSS in the nation. The NMCs are defined as the minimum technology-based actions or measures designed to reduce CSOs and their effects on receiving water quality without extensive engineering studies or major construction. This policy stipulates that at least 85 percent of the average annual CSS storm flow be captured and receive primary treatment with disinfection prior to discharge.

The results of a five-year monitoring effort and study (Effluent and Receiving Water Quality and Toxicity Summary Report for 1991-1995) found that the City is in compliance with this policy and has generally treated 92 percent of the total CSS storm flow volume prior to discharge. This monitoring effort was completed prior to implementation of the improvements detailed in the CSS Improvement and Rehabilitation Plan.

In addition, the City's NPDES Permit (No. CA0079111) requires that the CWTP be in operation when Pioneer Reservoir is discharging to the river. This plan ensures that the City maximizes flow to the public-owned treatment works, which is one of the NMCs in EPA's National CSO Policy.

### ***Regional***

#### ***Sacramento Regional County Sanitation District***

The SRCSD is responsible for providing wastewater service to the majority of Sacramento County, including the cities of Sacramento and Folsom. The SRCSD maintains and operates its own wastewater collection and conveyance system, as well as the SRWTP. Construction discharges into the CSS, such as dewatering activities, require a wastewater discharge permit from the SRCSD. The City and the County have set this permit to ensure no significant impacts occur from dewatering activities. As part of the permit, SRCSD sets standards for discharge limitations, and requires monitoring activities to be performed by the permittee, the submittal of monitoring reports to SRCSD, and payment of associated discharge fees.

**Local****Combined System Development Fee**

The City of Sacramento has developed a sewer ordinance amendment to replace the Mitigation Agreement previously required for developers.<sup>1</sup> The ordinance was adopted March 15, 2005. The ordinance requires a development fee for projects within the CSS service boundary. Key aspects of the CSS development fee include:

- A fee of \$2,633 equivalent single-family dwelling unit (ESD)<sup>2</sup> that will be subject to periodic adjustments.
- The first 25 ESDs of a development will be charged \$106 per ESD.
- CSS development fees may be fully or partially offset by constructing cost sharing in the construction or mitigation project.
- The fee approximates the cost to construct local storage to mitigate impacts downstream.
- Fees will be collected into a fund for the City to construct larger projects to mitigate multiple developments.

**Sacramento General Plan – Public Facilities and Services Element**

- **Goal A**  
Provide and maintain a high quality of public facilities and services to all areas of the City.
- **Goal C**  
Provide infrastructure for identified infill areas
- **Goal E**  
Design public facilities in such a manner as to ensure safety and attractiveness.

**IMPACTS AND MITIGATION MEASURES****METHOD OF ANALYSIS**

Potential impacts to public services and utilities were based on the proposed project's estimated effect on staffing, equipment, emergency response times, and/or adequacy of supplies, proposed infrastructure, and/or facilities.

The proposed project's effects on the CSS would be considered significant if they exceeded the following screening criteria provided by the City of Sacramento Department of Utilities:

- If the proposed project or project alternatives would increase the impervious surface area by greater than 0.25 acre; or,
- If the proposed project or project alternatives would increase the equivalent single family dwelling unit (ESD) sanitary sewer flows by greater than 40 ESDs.

<sup>1</sup> City of Sacramento, Department of Utilities, Memorandum subject: Combined Sewer System Development Fee, March 1, 2004

<sup>2</sup> 1 ESD equals 400 gallons per day

A site is considered vacant by the Utilities Department if it was vacant in 1990 when the Cease and Desist Order was issued. Since the project site was vacated within the last five years, no increase in impervious surface area was considered.

To determine the wastewater demand of the proposed project, sewage use factors were developed in consultation with the City of Sacramento Utilities Department. This analysis uses the following generation rates:

- Multi-family residential = 0.75 ESD/unit
- General commercial (retail) = 0.2 ESD/1,000 sf (gross floor area)
- Restaurant = 2.0 ESD/1,000 sf

The wastewater and stormwater demand for the project was estimated using the generation rates, then compared to CSS infrastructure and treatment capacity to determine if existing infrastructure is sufficient to serve the proposed project.

### STANDARDS OF SIGNIFICANCE

For the purposes of this EIR, impacts to fire and wastewater resources are considered significant if the proposed project would result in:

- A need for new or physically altered fire service facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for fire services.
- The construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

### PROJECT-SPECIFIC IMPACTS AND MITIGATION MEASURES

#### ***Impact 5.5-1 Substantial sewage increases to combined sewer system flows***

The proposed project would result in CSS flows that exceed the City's screening criteria for project-generated wastewater flows by 215.2 ESD. New CSS infrastructure or facilities or expansion of existing CSS infrastructure or facilities would be required to prevent sewer overflow or flooding. This would be a ***less than significant*** impact.

The proposed project would substantially increase wastewater flows from 320 residential units and 13,000 sf of retail/commercial and restaurant uses; for purposes of the analysis, 7,000 sf was assumed for restaurant, and 6,000 sf for retail/commercial. Estimated wastewater flow generation from the proposed project is over 255 ESD, as shown in Table 5.5-1, which substantially exceeds the City screening criteria of 40 ESD for substantial additions to CSS flows. Increased flows generated by the project would further worsen existing capacity problems with the CSS.

The City requires that existing and proposed storm drainage and sewer flow calculations be submitted to the Department of Utilities. Any necessary sanitary sewer lines and connections will be designed and constructed to the standards set forth in the City of Sacramento Sewer Design Standard.

**TABLE 5.5-1  
PROJECTED WASTEWATER FLOW GENERATION**

Use	Wastewater Generation Rate (1 ESD = 400 gpd)	Proposed Project Square footage/units	ESD	Wastewater (gpd)
Retail	0.2 ESD/1,000 gsf	6,000 sf	1.2 ESD	480
Restaurant	2.0 ESD/1,000 gsf	7,000 sf	14 ESD	5,600
Residential	.75 ESD/d.u.	320 du	240 ESD	96,000
<b>Projected Additional Wastewater Flow</b>			<b>255.2 ESD</b>	<b>102,080</b>

gsf = gross square feet

Source: Gail Ervin Consulting, 2006

As stated above, localized flooding and CSOs occur during severe storm events, which would be exacerbated by additional flows from the proposed project. However, the City is currently implementing system-wide improvements to the CSS and the proposed project would be required to contribute funds toward City improvements to the CSS or, alternatively, complete on- or off-site improvements to store project wastewater during storm events.

Absent system improvements, flooding and CSOs would continue. However, compliance with the City's Combined System Development Fee ordinance would reduce the project impact by providing (1) additional capacity in the City's system to reduce the potential for flooding and CSOs system-wide, or (2) requiring storage of project flows to ensure that the proposed project would not contribute to flooding and CSOs. This would reduce this impact to a less-than significant level.

Mitigation

None required

**Impact 5.5-2 Combined sewer service system impacts from dewatering activities**

The proposed project would result in excavation for one sub-grade level and pile driving that would reach groundwater levels. This would result in the need for dewatering and disposal of wastewater into the CSS. Such construction discharges into the CSS would be required to obtain City and SRCSD approvals prior dewatering activities. This impact is considered a **potentially significant impact**.

Excavation activities of the proposed project could reach groundwater levels and require dewatering activities. Since the project site is in the vicinity of the Southern Pacific Railyards contaminated groundwater plume, de-watering activities could result in the discharge of contaminated groundwater. Exposure to groundwater could occur during pile driving operations. Encountering contaminated groundwater without taking proper precautions could result in the exposure of construction workers and consequently result in associated significant adverse health effects.

Groundwater discharges may contain toxic and/or explosive chemicals that could be harmful to the environment and to service workers working in the City's sewer system. Groundwater discharges to the sewer system go beyond the original design of the City's system, thus removing existing sewer capacity from other system users and potentially causing overflows or restricting development. The additional water from groundwater discharges must be conveyed and pumped by the City's existing facilities. The additional volume of water increases the City's operations and maintenance costs through increased capacity, power, and maintenance costs.

Because of these impacts, the City has developed specific requirements that must be met by developers and contractors regarding construction dewatering. All new groundwater discharges to the Combined or Separated Sewers must be regulated and monitored by the Department of Utilities (City Council Resolution #92-439). Long-term foundation or basement dewatering discharges to the CSS over the life of a project are not allowed. The CSS does not have adequate capacity to allow for dewatering discharges for foundations or basements. All foundations and basements must be designed without the need for dewatering.

Currently, the Department of Utilities only recognizes two types of construction groundwater discharges, limited discharges and long-term discharges. Limited discharges are short groundwater discharges of 7-days or less. Limited discharges must be approved through the Department of Utilities by acceptance letter. Long-term discharges are construction-related groundwater discharges of greater duration than 7-days. Long-term discharge must be approved through the Department of Utilities and the City Manager through a Memorandum of Understanding (MOU) process.

The Groundwater MOU has a term of one year and requires the discharger to:

- a) Provide a description of the groundwater discharge,
- b) Obtain a Regional Sanitation District permit,
- c) Obtain approval from the RWQCB if discharge is part of groundwater cleanup or contains contaminants above Maximum Contaminant Levels (MCLs)
- d) Pay fees based on flow amounts when a fee schedule is established by ordinance,
- e) Comply with any new pertinent laws,
- f) Assess and repair sewer lines if the discharge exceeds MCLs,
- g) Suspend discharges during storm events or at City request,
- h) Provide shut-off switches accessible to the City, and
- i) Indemnify the City against all claims related to the MOU.

Mitigation

The following mitigation measures are identified for the proposed project:

- 5.5-2a *Prior to issuance of the building permit construction contract documents shall include provisions for the proper handling and disposal of contaminated dewatering water in accordance with federal, state, and local requirements.*
- 5.5-2b *If the City or SRCSD determines that groundwater extracted during dewatering activities does not meet applicable standards for discharge into the city sewer system, the contractor shall implement groundwater treatment systems that treat*

*groundwater to standards established by the Central Valley RWQCB, City, and SRCSD.*

Significance after Mitigation

Less than significant

**CUMULATIVE IMPACTS AND MITIGATION MEASURES**

Cumulative impacts to fire services require examination of all development within the Sacramento Fire Department service area, primarily downtown Sacramento. Cumulative impacts to the CSS require examination of all development within the CSS service area, primarily the Sump 2 service area in downtown Sacramento.

***Impact 5.5-3 Potential cumulative demand for the construction of new wastewater treatment facilities or expansion of existing facilities***

Although the proposed project would contribute only an additional 0.1 mgd to the combined flows, in combination with other proposed projects in the Downtown area, this could result in substantial new cumulative flows to the SRWTP. This would be a ***less-than-significant*** impact.

As noted above, an expansion is planned for the SRWTP that is intended to serve the anticipated build-out of the service area through 2020. However, the City of Sacramento is currently under contract to the SRCSD to deliver no more than 60 mgd peak flow from the City's Sump 2 service area to the regional interceptor sewer. Cumulative increased sewage flows generated by the proposed project in combination with other proposed development in the Sump 2 service area has the potential to exceed the capacity provided under the City's contract.

This may cause the wet weather peak flow from the Sump 2 service area to exceed the 60-mgd contained in the current agreement, requiring additional interceptor/treatment capacity to be provided.

The City has identified improvements to the older portions of the City's CSS to meet increased demand, including future upgrades to the interceptors that connect into the SRWTP. Because the project site is located in a developed area of the City, new infrastructure would not be required to service an increase in wastewater flows.

SRCSD's Regional 2020 Master Plan accommodates for expansions of the treatment plant as growth occurs, based on the Sacramento Area Council of Government's regional population projections. The Master Plan is intended to ensure that the SRWTP facilities have sufficient capacity to meet planned growth in the service area through the year 2020; it is updated every five years to account for changes in existing and projected population. The ultimate planned expansion of the SRWTP is expected to be able to accommodate projected increased sewer flows. Impact fees have been established by the SRCSD in anticipation of new facilities needed to meet the cumulative demand of growth in the City and County of Sacramento, as identified in the SWRTP Master Plan. These fees are required for the proposed project to provide for its fair share cost of the anticipated future construction of relief interceptor sewer and treatment facilities.

The Department of Utilities has completed many of the CSS Improvement and Rehabilitation Program projects, including the rehabilitation and upsizing of Sump 2, construction of new

regional storage projects, and numerous rehabilitation and replacement projects throughout the system. The City continues to complete improvements according to the program, including additional storage facilities, and the improvement and expansion of existing facilities. The City has also identified improvements to the older portions of the City's CSS to meet increased demand, including future upgrades to the interceptors that connect into the SRWTP. As previously discussed, the City is implementing a new fee program to ensure that these improvements are sufficiently funded. In addition, the proposed project will be required, as a standard condition of approval for the project, to pay all required SRCSD Impact Fees for the proposed new development to provide for its fair share cost of the construction of relief interceptor sewer and treatment facilities. Therefore, with implementation of the existing programs and fees to ensure that capacity is available as growth occurs, the cumulative impact would be less than significant.

Mitigation

None required

## **5.6 TRANSPORTATION AND CIRCULATION**



## 5.6 TRANSPORTATION AND CIRCULATION

### INTRODUCTION

This Transportation and Circulation section discusses existing, baseline, and cumulative transportation and circulation conditions associated with the Metropolitan Project. The analysis includes consideration of automobile traffic impacts on roadway capacity, transit impacts, bicycle impacts, pedestrian impacts, and parking impacts. Quantitative analyses of a.m. and p.m. peak hour conditions have been conducted for the following scenarios:

- Existing Conditions
- Baseline
- Baseline plus Project
- Near-Term (2013)
- Near-Term (2013) plus Projects
- Long-Term (2030)
- Long-Term (2030) plus Project

### TRAFFIC ANALYSIS SCENARIOS

**Table 5.6-1** describes the traffic analysis scenarios. The four cumulative scenarios involving Near-Term and Long-Term conditions have been analyzed in the Sacramento Downtown Traffic Study, which is included as Appendix H to this document. The project will be sharing in the cost of mitigation of cumulative impacts identified in the study.

**TABLE 5.6-1  
DESCRIPTION OF TRAFFIC ANALYSIS SCENARIOS**

Scenario	Description of Scenario
<b>Existing Conditions</b>	
Existing	Existing conditions in the study area without any additional development.
<b>Baseline Conditions</b>	
Baseline	Existing conditions plus traffic associated with Crocker Art Museum Expansion, 301 Capitol Mall, 601 Capitol Mall, Metro Place Office / Residential, 15 <sup>th</sup> and L Streets Hotel, CalPERS Headquarters Expansion, Sutter Medical Center, Trinity Cathedral, CADA East End Gateway Residential, and Capitol West End projects.
Baseline Plus Project	Baseline conditions plus Metropolitan traffic.
<b>Cumulative Conditions</b>	
Cumulative Near-Term (Year 2013)	Year 2013 conditions in the study area without any changes to the project site.
Cumulative Near-Term (Year 2013) Plus Projects	Year 2013 conditions in the study area plus traffic associated with 800 K Street, 831 L Street, Westfield Shoppingtown Downtown Plaza Expansion, 500 Capitol Mall, Epic Tower, Cathedral Square, 701 L Street, and The Library Lofts projects.
Cumulative Long-Term (Year 2030)	Year 2030 conditions in the study area without any changes to the project site.
Cumulative Long-Term (Year 2030) Plus Projects	Year 2030 conditions in the study area plus traffic associated with 800 K Street, 831 L Street, Westfield Shoppingtown Downtown Plaza Expansion, 500 Capitol Mall, Cathedral Square, Epic Tower, 701 L Street, and The Library Lofts projects.

Source: DKS Associates, 2006.

### **SOURCES REVIEWED**

The preparation of the Transportation and Circulation section included review of various sources of information. These sources include, but are not limited to, the following:

- City of Sacramento General Plan
- Central City Community Plan
- 2010 Bikeway Master Plan
- Metropolitan Transportation Plan
- Sacramento Regional Transit Master Plan
- 2000 Highway Capacity Manual
- Trip Generation, Seventh Edition
- Parking Generation, Third Edition
- Sacramento Central City Two-Way Conversion Studies
- Sacramento Downtown Traffic Study

Comments on the Notice of Preparation (See Appendix C) were received from the California Department of Transportation (Caltrans) identifying the need to evaluate the impacts of the proposed project on I-5 mainline and ramp operations.

### **PROPOSED PROJECT**

As illustrated in **Figure 5.6-1**, the proposed project is located on the northeast corner of 10<sup>th</sup> and J streets. The site has frontage on 10<sup>th</sup> Street, J Street, and the alley. **Figure 5.6-2** illustrates the proposed site plan.

Major transportation elements of the proposed project include:

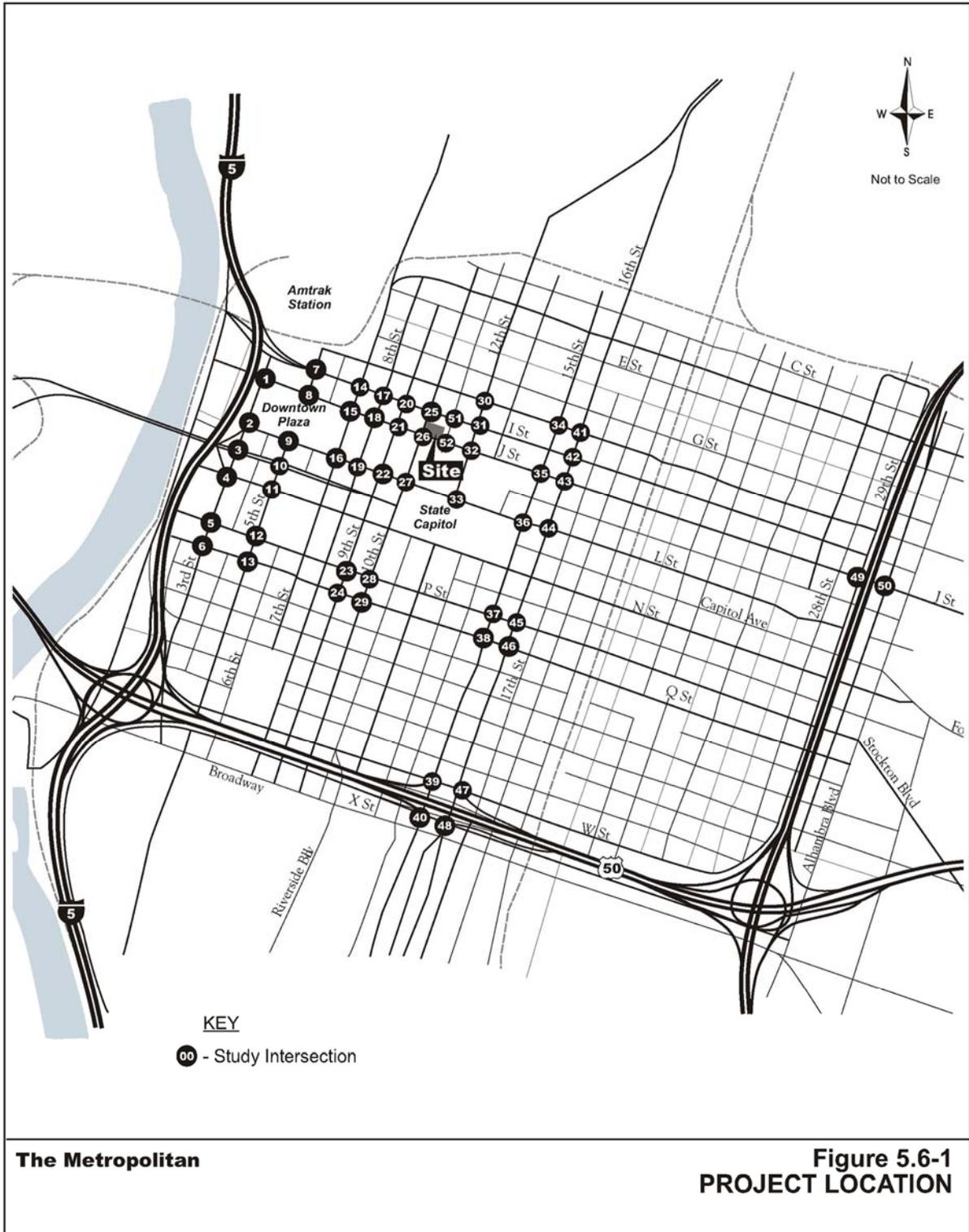
- 514 parking spaces in a parking garage integrated with the building.
- Access to the parking garage from the alley.
- Loading dock access from the alley.

### **ENVIRONMENTAL SETTING**

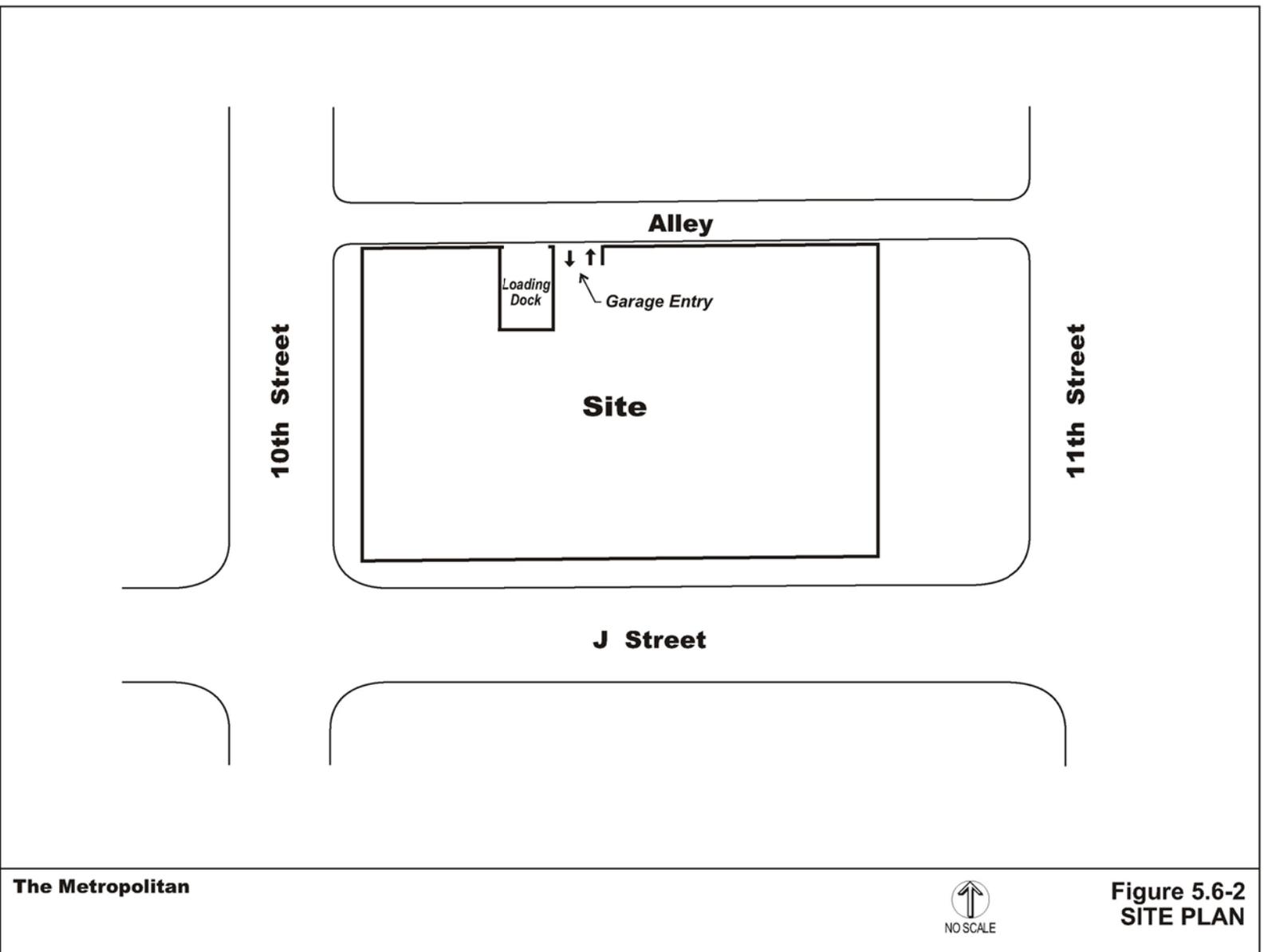
The roadway, transit, bicycle, and pedestrian components of the transportation system are described below. Figure 5.6-1 illustrates the roadway system within the study area.

#### **REGIONAL ROADWAYS**

Regional vehicular access to Downtown Sacramento is provided primarily by the freeway system that serves the central areas of Sacramento. Interstate 5 (I-5) is a north-south facility located just west of Downtown. Access from Downtown to I-5 is provided via I, L and P streets, and access from I-5 to Downtown is provided via J and Q streets. To the south, I-5 provides access to southern portions of the City and County, as well as other Central Valley communities. To the north, I-5 provides access to I-80, northern portions of the City and County, Sacramento International Airport, and other Central Valley communities.



Source: DKS Associates, 2006.



Source: DKS Associates, 2006.

**FIGURE 5.6-2  
SITE PLAN**

The east-west U.S. Route 50 (U.S. 50) lies approximately 1.5 miles south of Downtown. Access to U.S. 50 from Downtown is provided via 9<sup>th</sup> and 15<sup>th</sup> streets to the 11<sup>th</sup> and 16<sup>th</sup> streets on-ramps. Access from U.S. 50 to Downtown is provided from the 16<sup>th</sup> and 10<sup>th</sup> streets off-ramps. To the east, U.S. 50 serves eastern portions of the City and County and extends into El Dorado County. To the west, U.S. 50 extends via the Pioneer Bridge to West Sacramento and Yolo County.

Business Loop Interstate 80 (Business 80), also known as State Route 51 between US 50 and Auburn Avenue, lies approximately 2 miles east of Downtown. Although access between Downtown and Business 80 is available at several locations along the east edge of Central City, more direct access to Business 80 is provided via State Route 160 (SR 160) via 12<sup>th</sup> and 16<sup>th</sup> streets. SR 160 provides access to North Sacramento, northeastern portions of the City and County, South Natomas via Northgate Boulevard, and I-80 extending into Placer County.

### **LOCAL ROADWAYS**

Downtown Sacramento is served by a grid street system. North-south streets have numbered street names and east-west streets have lettered street names. Near Downtown, many streets operate as one-way facilities. In general, the one-way streets carry three travel lanes, with parking permitted along both curbs. Two-way streets generally have one lane in each direction with parking on both sides of the street. To accommodate critical traffic volumes and turning movements in selected locations, parking has been prohibited to provide additional lanes. Most major intersections in Downtown are signal-controlled.

Important east-west streets for Downtown access include H, J, N, Q, and X streets, which are one-way eastbound, and I, L, P, and W streets, which are one-way westbound. Capitol Mall is a two-way east-west facility that extends from the Tower Bridge to the State Capitol at 10<sup>th</sup> Street. Capitol Mall has two to three lanes in each direction between the Tower Bridge and 9<sup>th</sup> Street, separated by a grass median. Between 9<sup>th</sup> and 10<sup>th</sup> streets, the roadway includes a mid-block traffic circle.

Important north-south streets for Downtown access include 3<sup>rd</sup>, 7<sup>th</sup>, 9<sup>th</sup>, 12<sup>th</sup>, and 15<sup>th</sup> streets, which are one-way southbound (except for a portion of 3<sup>rd</sup> street between J and L streets and the proposed segment between L and Capitol Mall) and 5<sup>th</sup>, 8<sup>th</sup>, 10<sup>th</sup>, and 16<sup>th</sup> streets, which are one-way northbound (except for a portion of 5<sup>th</sup> Street between J and L streets).

Adjacent to the project site, J Street is one-way eastbound with three through travel lanes. 10<sup>th</sup> Street is one-way northbound with three through travel lanes. The alley to the north of the project is two-directional. Near the site, 11<sup>th</sup> Street is two-way with one through travel lane in each direction.

### **EXISTING ROADWAY OPERATING CONDITIONS**

#### ***Study Area***

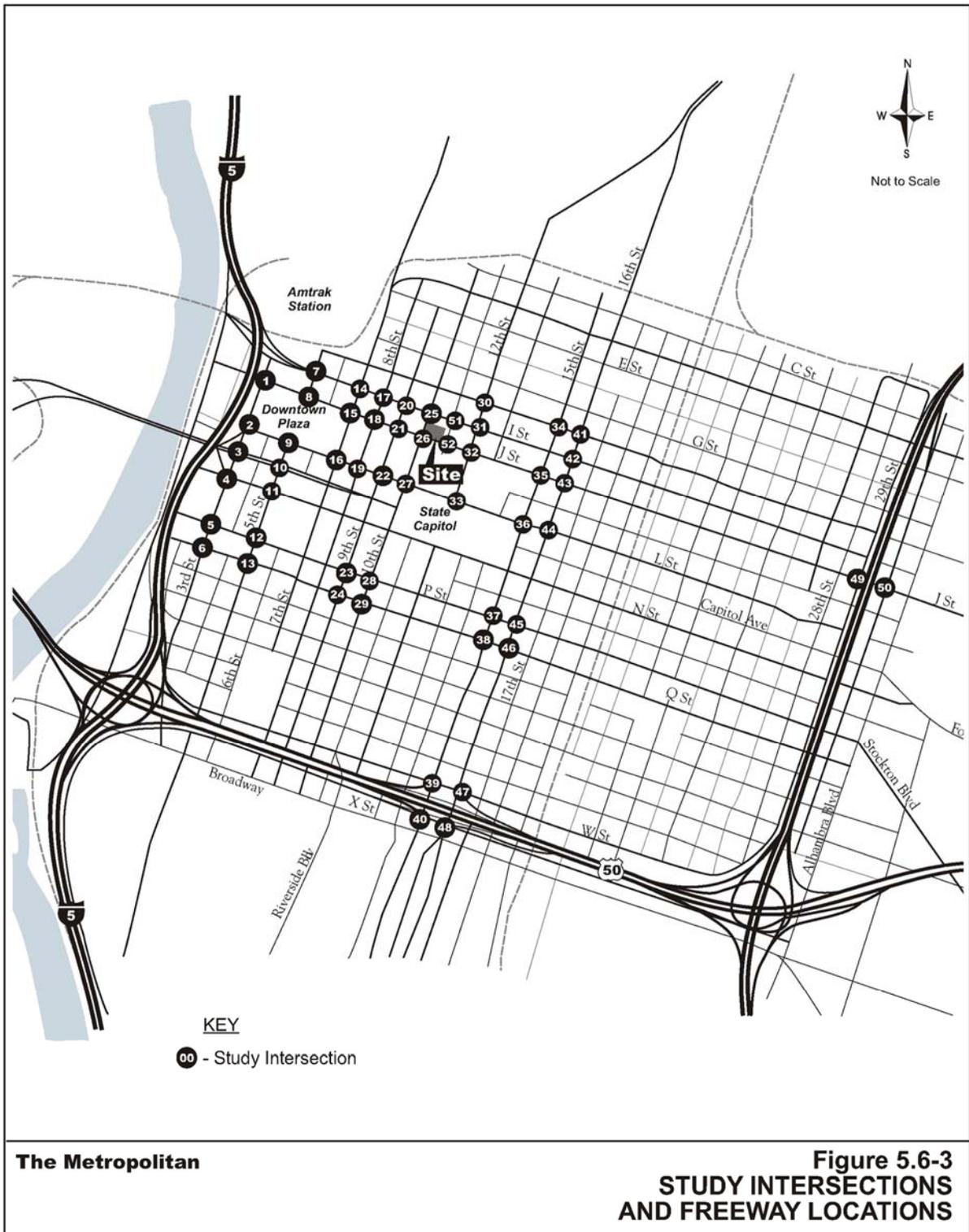
For traffic analysis purposes, a set of intersections and freeway system elements was selected based upon the anticipated volume of project traffic, the distributional patterns of project traffic, and known locations of operational difficulty.

As illustrated in **Figure 5.6-3**, the study area includes the following fifty-four intersections:

- |   |  |  |
|---|--|--|
| 1. 3 <sup>rd</sup> Street / J Street      | 19. 8 <sup>th</sup> Street / L Street  | 36. 15 <sup>th</sup> Street / L Street |
| 2. 3 <sup>rd</sup> Street / L Street      | 20. 9 <sup>th</sup> Street / I Street  | 37. 15 <sup>th</sup> Street / P Street |
| 3. 3 <sup>rd</sup> Street / Capitol Mall  | 21. 9 <sup>th</sup> Street / J Street  | 38. 15 <sup>th</sup> Street / Q Street |
| 4. 3 <sup>rd</sup> Street / N Street      | 22. 9 <sup>th</sup> Street / L Street  | 39. 15 <sup>th</sup> Street / W Street |
| 5. 3 <sup>rd</sup> Street / P Street      | 23. 9 <sup>th</sup> Street / P Street  | 40. 15 <sup>th</sup> Street / X Street |
| 6. 3 <sup>rd</sup> Street / Q Street      | 24. 9 <sup>th</sup> Street / Q Street  | 41. 16 <sup>th</sup> Street / H Street |
| 7. 5 <sup>th</sup> Street / I Street      | 25. 10 <sup>th</sup> Street / I Street | 42. 16 <sup>th</sup> Street / I Street |
| 8. 5 <sup>th</sup> Street / J Street      | 26. 10 <sup>th</sup> Street / J Street | 43. 16 <sup>th</sup> Street / J Street |
| 9. 5 <sup>th</sup> Street / L Street      | 27. 10 <sup>th</sup> Street / L Street | 44. 16 <sup>th</sup> Street / L Street |
| 10. 5 <sup>th</sup> Street / Capitol Mall | 28. 10 <sup>th</sup> Street / P Street | 45. 16 <sup>th</sup> Street / P Street |
| 11. 5 <sup>th</sup> Street / N Street     | 29. 10 <sup>th</sup> Street / Q Street | 46. 16 <sup>th</sup> Street / Q Street |
| 12. 5 <sup>th</sup> Street / P Street     | 30. 12 <sup>th</sup> Street / H Street | 47. 16 <sup>th</sup> Street / W Street |
| 13. 5 <sup>th</sup> Street / Q Street     | 31. 12 <sup>th</sup> Street / I Street | 48. 16 <sup>th</sup> Street / X Street |
| 14. 7 <sup>th</sup> Street / I Street     | 32. 12 <sup>th</sup> Street / J Street | 49. 29 <sup>th</sup> Street / J Street |
| 15. 7 <sup>th</sup> Street / J Street     | 33. 12 <sup>th</sup> Street / L Street | 50. 30 <sup>th</sup> Street / J Street |
| 16. 7 <sup>th</sup> Street / L Street     | 34. 15 <sup>th</sup> Street / H Street | 51. 11 <sup>th</sup> Street / I Street |
| 17. 8 <sup>th</sup> Street / I Street     | 35. 15 <sup>th</sup> Street / J Street | 52. 11 <sup>th</sup> Street / J Street |
| 18. 8 <sup>th</sup> Street / J Street     |  |  |

The following mainline sections on the freeway system are included in the study area:

- I-5 Northbound
  - South of US 50 on-ramp
  - North of US 50 on-ramp
  - South of L Street on-ramp
  - South of I Street on-ramp
  - South of Richards Boulevard off-ramp
- I-5 Southbound
  - North of Richards Boulevard on-ramp
  - North of J Street off-ramp
  - North of I Street on-ramp
  - North of US 50 off-ramp
- US 50 Eastbound
  - West of I-5 on-ramp
  - West of 15<sup>th</sup> Street off-ramp
  - West of 10<sup>th</sup> Street on-ramp
  - West of 16<sup>th</sup> Street on-ramp
- US 50 Westbound
  - East of SR 99 on-ramp
  - East of 10<sup>th</sup> Street off-ramp
  - East of 15<sup>th</sup> Street on-ramp
  - East of I-5 off-ramp



Source: DKS Associates, 2006.

The following merge/ diverge/ weaving areas on the freeway system are included in the study area:

- |                               |  |
|-------------------------------|--|
| ▪ I-5 Northbound              | ▪ US 50 Eastbound                                      |
| ▪ US 50 on-ramp               | ▪ I-5 on-ramp  |
| ▪ P Street to J Street weave  | ▪ 15 <sup>th</sup> Street off-ramp                     |
| ▪ L Street on-ramp            | ▪ 10 <sup>th</sup> Street on-ramp                      |
| ▪ I Street on-ramp            | ▪ 16 <sup>th</sup> Street to Business 80 / SR 99 weave |
| ▪ Richards Boulevard off-ramp | ▪ US 50 Westbound                                      |
| ▪ I-5 Southbound              | ▪ Business 80 to 16 <sup>th</sup> Street weave         |
| ▪ Richards Boulevard on-ramp  | ▪ 10 <sup>th</sup> Street off-ramp                     |
| ▪ J Street off-ramp           | ▪ 15 <sup>th</sup> Street on-ramp                      |
| ▪ I Street to Q Street weave  | ▪ I-5 off-ramp   |
| ▪ US 50 off-ramp              |  |

The following freeway ramp queuing areas are included in the study area:

- |                                    |  |
|------------------------------------|--|
| • I-5 Northbound                   | • US 50 Eastbound 15 <sup>th</sup> Street off-ramp |
| • Q Street off-ramp                | • US 50 Westbound                                  |
| • J Street off-ramp                | • 16 <sup>th</sup> Street off-ramp                 |
| • I-5 Southbound J Street off-ramp | • 10 <sup>th</sup> Street off-ramp                 |

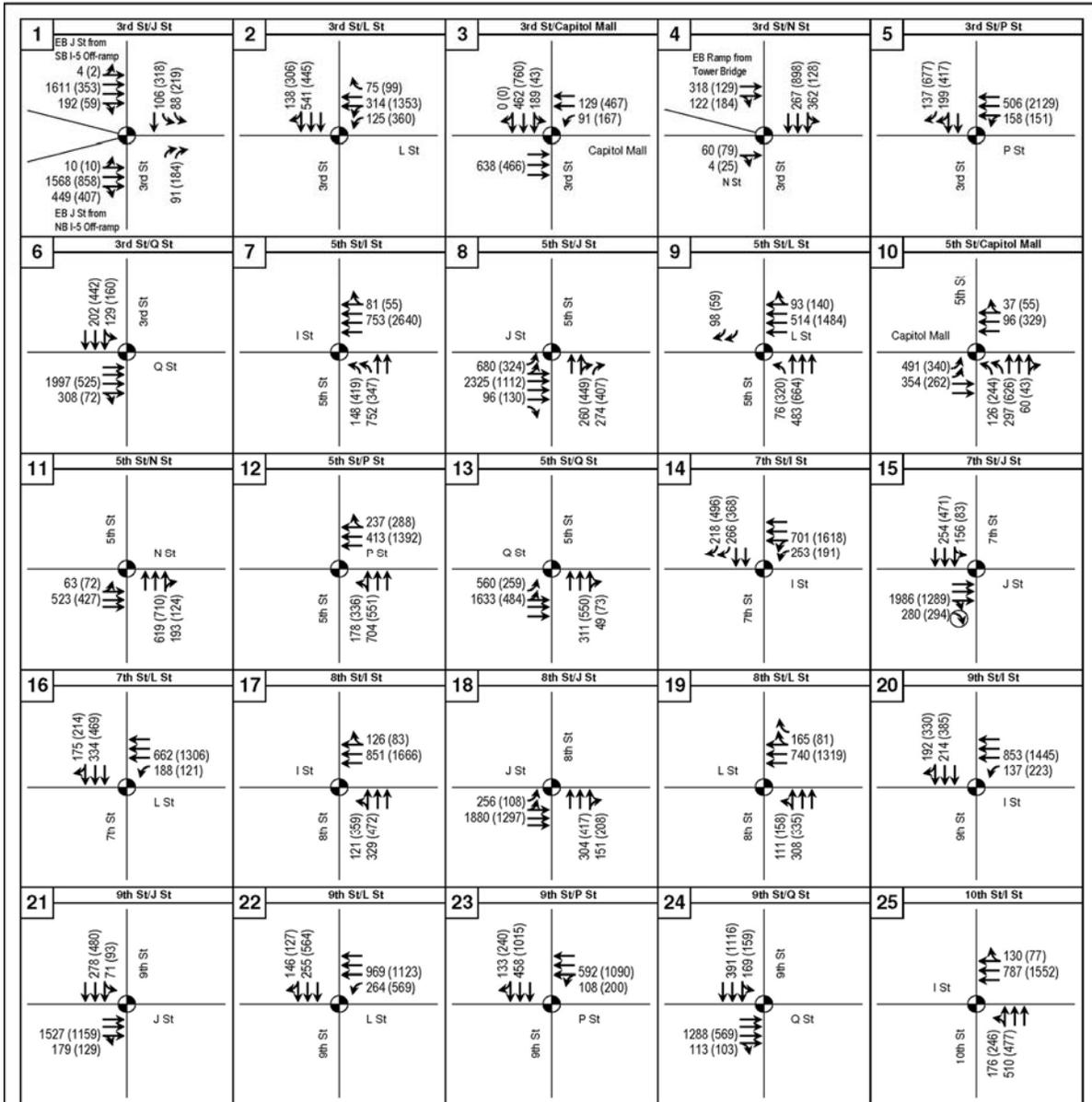
Traffic counts were collected at each of the study area intersections and freeway ramps during the a.m. and p.m. peak commuter periods between September 2004 and April 2006. Recent freeway mainline and ramp count data was obtained from Caltrans.

**Figure 5.6-4** illustrates existing intersection geometry (approach lanes and traffic control), as well as existing a.m. and p.m. peak hour traffic counts.

**ANALYSIS METHODOLOGY**

Field reconnaissance was undertaken to ascertain the traffic control characteristics of each of the study area intersections and freeway system elements. Determination of roadway operating conditions is based upon comparison of known or projected traffic volumes during peak hours to roadway capacity. In an urban setting, roadway capacity is generally governed by intersection characteristics, and intersection delay is used to determine levels of service (LOS). LOS describe roadway operating conditions. LOS is a qualitative measure of the effect of a number of factors, including speed and travel time, traffic interruptions, freedom to maneuver, safety, driving comfort and convenience, delay, and operating costs. LOS are designated A through F from best to worst, which cover the entire range of traffic operations that might occur. LOS A through E generally represent traffic volumes at less than roadway capacity, while LOS F represents over capacity and/or forced flow conditions.

The City of Sacramento General Plan includes a goal of maintaining LOS C throughout the roadway network. Because of the constraints of existing development in the City, and because of other environmental concerns, this goal cannot always be met. Caltrans utilizes a LOS E standard for the Sacramento urban freeway system.



**KEY**  
 31 (27) = AM (PM) peak hour traffic volume  
 = Signalized intersection  
 = Intersection approach lane  
 = Lane provided during AM peak, only  
 = Lane provided during PM peak, only

Sources: Sacramento Downtown Traffic Study, Dowling Associates, 2006; DKS Associates, 2006

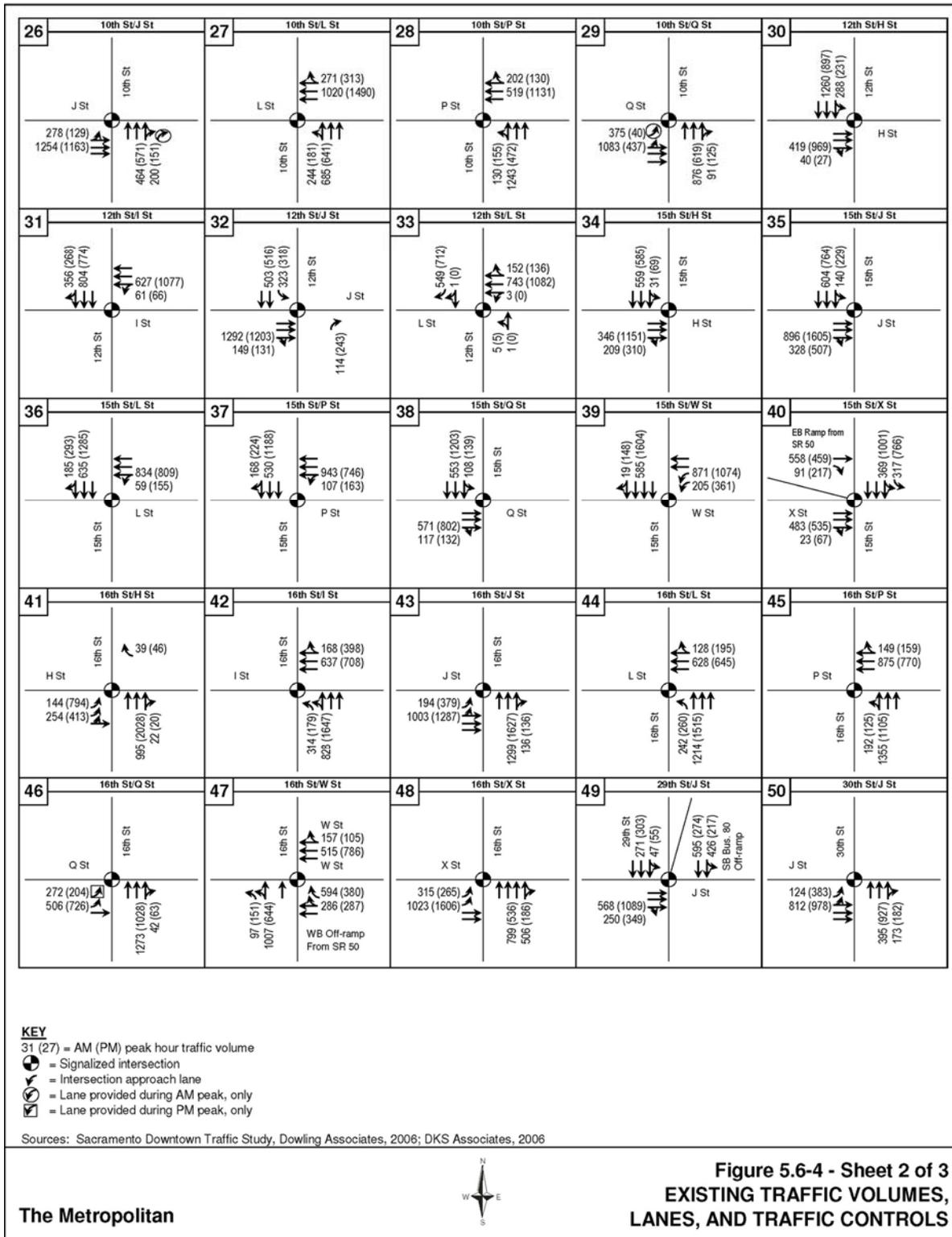
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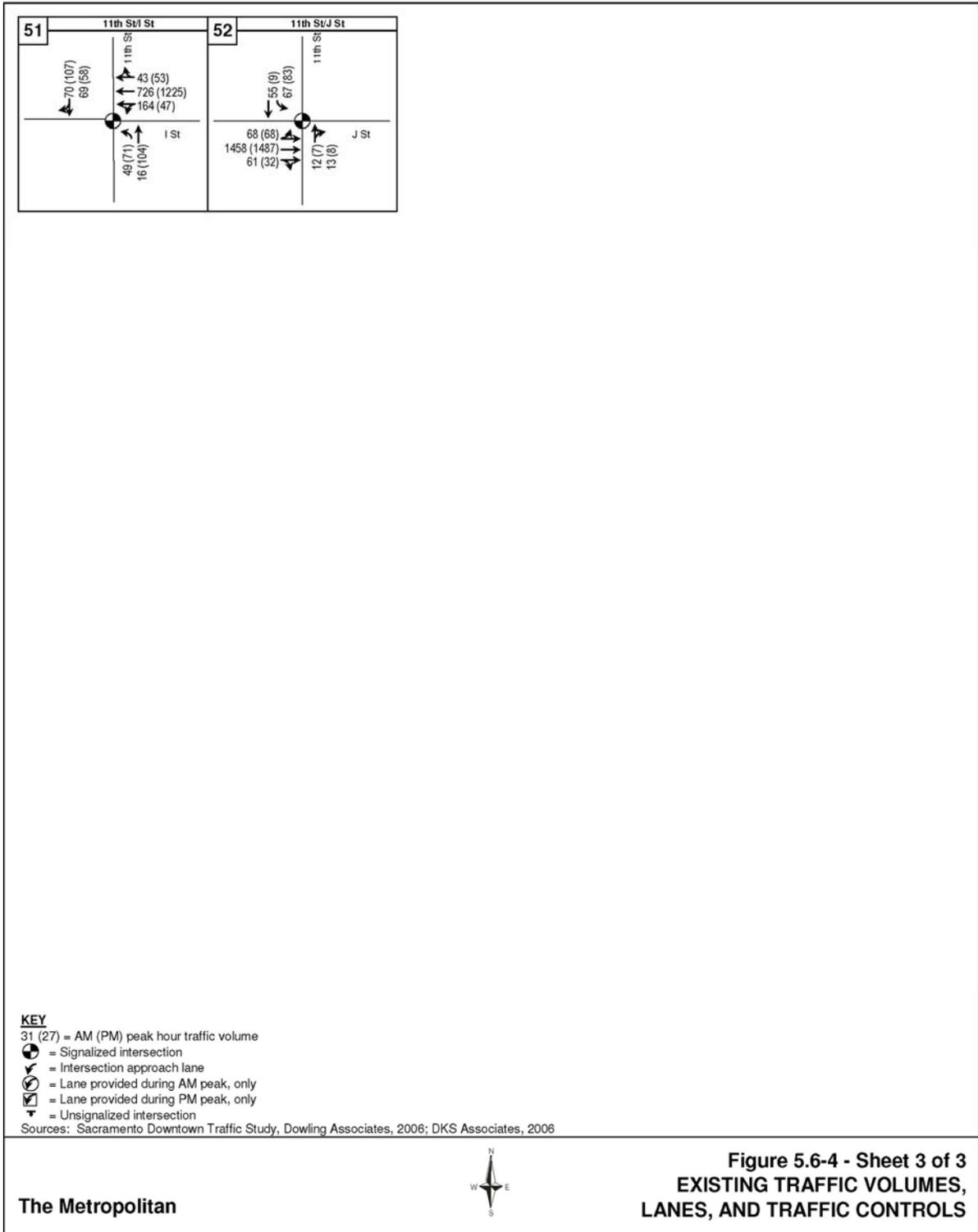
**Figure 5.6-4 - Sheet 1 of 3  
 EXISTING TRAFFIC VOLUMES,  
 LANES, AND TRAFFIC CONTROLS**

Source: DKS Associates, 2006.

# 5.6 TRANSPORTATION AND CIRCULATION



Source: DKS Associates, 2006.



Source: DKS Associates, 2006.

### Intersection Analysis

Intersection analyses were conducted using a methodology outlined in the Transportation Research Board's Special Report 209, *Highway Capacity Manual*, 2000. The methodology utilized is known as operational analysis. This procedure calculates an average control delay per vehicle at an intersection, and assigns a level of service designation based upon the delay. The method also provides a calculation of the volume-to-capacity (v/c) ratio of the critical movements at signalized intersections. **Tables 5.6-2 and 5.6-3** present the level of service criteria for signalized and unsignalized intersections, respectively.

**TABLE 5.6-2  
LEVEL OF SERVICE CRITERIA – SIGNALIZED INTERSECTIONS**

Level of Service (LOS)	Control Delay Per Vehicle (seconds)	Description
A	< 10.0	Very low control delay. Occurs when progression is extremely favorable and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.
B	> 10.0 and < 20.0	Generally occurs with good progression, short cycle lengths, or both. More vehicles stop than with LOS "A," causing higher levels of average delay.
C	> 20.0 and < 35.0	These higher delays may result from fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant at this level, though many still pass through the intersection without stopping.
D	> 35.0 and < 55.0	The influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high v/c ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.
E	> 55.0 and < 80.0	These high delay values generally indicate poor progression, long cycle lengths, and high v/c ratios. Individual cycle failures are frequent occurrences.
F	> 80.0	This level, considered to be unacceptable to most drivers, often occurs with oversaturation, that is, when arrival flow rates exceed the capacity of the intersection. It may also occur at high v/c ratios below 1.0 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing causes to such delay levels.

Source: Highway Capacity Manual, Transportation Research Board, Special Report No. 209, Washington, D.C., 2000.

**TABLE 5.6-3  
LEVEL OF SERVICE CRITERIA – UNSIGNALIZED INTERSECTIONS**

Level of Service (LOS)	Total Delay Per Vehicle (seconds)
A	< 10
B	> 10 and < 15
C	> 15 and < 25
D	> 25 and < 35
E	> 35 and < 50
F	> 50

Source: Highway Capacity Manual, Transportation Research Board, Special Report No. 209, Washington, D.C., 2000.

### ***Freeway Analysis***

Freeway mainline segments were analyzed utilizing a methodology outlined in the Transportation Research Board's Special Report 209, Highway Capacity Manual (2000). Maximum service flow rates of 2,200 vehicles per lane per hour for typical freeway lanes and 1,600 vehicles per lane per hour for auxiliary lanes were utilized, based upon data collected by Caltrans in the Sacramento urban area. **Tables 5.6-4 through 5.6-6** present the level of service criteria for freeway mainline, ramp junction, and weaving segments, respectively.

**TABLE 5.6-4  
LEVEL OF SERVICE CRITERIA – FREEWAY MAINLINE**

Level of Service (LOS)	Maximum Volume-to-Capacity Ratio	Maximum Density (passenger vehicles per mile per lane)
A	0.32	11
B	0.53	18
C	0.74	26
D	0.90	35
E	1.00	45
F	Varies	Varies

Source: Highway Capacity Manual, Transportation Research Board, Special Report No. 209, Washington, D.C., 2000.

**TABLE 5.6-5  
LEVEL OF SERVICE CRITERIA – FREEWAY RAMP JUNCTIONS**

Level of Service (LOS)	Maximum Density (Passenger Cars Per Mile Per Lane)
A	10
B	20
C	28
D	35
E	Greater than 35
F	Demand flows exceed capacity.

Source: Highway Capacity Manual, Transportation Research Board, Special Report No. 209, Washington, D.C., 2000.

**TABLE 5.6-6  
LEVEL OF SERVICE CRITERIA – FREEWAY WEAVING SEGMENTS**

Level of Service (LOS)	Maximum Density (Passenger Cars Per Mile Per Lane)
A	10
B	20
C	28
D	35
E	43
F	Greater than 43

Source: Highway Capacity Manual, Transportation Research Board, Special Report No. 209, Washington, D.C., 2000.

## ANALYSIS RESULTS

### *Intersections*

**Table 5.6-7** summarizes the existing a.m. and p.m. peak hour operating conditions at the study area intersections. At unsignalized intersections, the average intersection level of service is utilized to determine conformity with the City's goal. Individual movements may operate at worse LOS. All study intersections currently operate at or above the City's level of service C goal except for the 3<sup>rd</sup> Street/J Street intersection, which operates at LOS D during the a.m. peak hour.

**TABLE 5.6-7  
EXISTING INTERSECTION OPERATING CONDITIONS**

Intersection	A.M. Peak Hour		P.M. Peak Hour	
	LOS	Delay (seconds)	LOS	Delay (seconds)
3 <sup>rd</sup> St / J St	D	44.4	B	15.7
3 <sup>rd</sup> St / L St	B	13.2	B	15.4
3 <sup>rd</sup> St / Capitol Mall	B	19.0	B	18.1
3 <sup>rd</sup> St / N St	C	21.1	B	19.0
3 <sup>rd</sup> St / P St	A	8.9	B	14.1
3 <sup>rd</sup> St / Q St	A	9.7	B	10.3
5 <sup>th</sup> St / I St	B	11.0	B	14.6
5 <sup>th</sup> St / J St	C	20.5	B	11.4
5 <sup>th</sup> St / L St	B	13.8	C	21.7
5 <sup>th</sup> St / Capitol Mall	C	20.2	B	18.0
5 <sup>th</sup> St / N St	B	13.2	B	13.2
5 <sup>th</sup> St / P St	B	10.3	B	12.0
5 <sup>th</sup> St / Q St	A	9.5	A	9.9
7 <sup>th</sup> St / I St	A	9.8	B	18.2
7 <sup>th</sup> St / J St	B	16.5	B	12.4
7 <sup>th</sup> St / L St	B	11.2	B	14.5
8 <sup>th</sup> St / I St	B	10.3	B	17.5
8 <sup>th</sup> St / J St	B	16.1	B	12.1
8 <sup>th</sup> St / L St	B	11.5	B	15.2
9 <sup>th</sup> St / I St	B	12.7	C	20.7
9 <sup>th</sup> St / J St	B	18.1	B	12.4
9 <sup>th</sup> St / L St	A	9.6	B	11.5
9 <sup>th</sup> St / P St	A	9.0	B	10.8
9 <sup>th</sup> St / Q St	B	10.6	B	10.9
10 <sup>th</sup> St / I St	B	14.4	C	21.2
10 <sup>th</sup> St / J St	C	21.3	B	16.6
10 <sup>th</sup> St / L St	B	12.0	B	13.5
10 <sup>th</sup> St / P St	B	11.4	A	8.6
10 <sup>th</sup> St / Q St	B	10.9	A	8.5
12 <sup>th</sup> St / H St	B	16.5	B	13.3
12 <sup>th</sup> St / I St	A	6.3	A	7.3
12 <sup>th</sup> St / J St	B	16.1	B	14.3
12 <sup>th</sup> St / L St	B	12.6	B	14.0

Intersection	A.M. Peak Hour		P.M. Peak Hour	
	LOS	Delay (seconds)	LOS	Delay (seconds)
15 <sup>th</sup> St / H St	A	9.7	B	11.9
15 <sup>th</sup> St / J St	B	11.1	B	19.9
15 <sup>th</sup> St / L St	B	10.9	B	11.2
15 <sup>th</sup> St / P St	B	11.2	B	11.0
15 <sup>th</sup> St / Q St	B	10.0	B	11.1
15 <sup>th</sup> St / W St	B	12.3	B	14.4
15 <sup>th</sup> St / X St	C	22.5	C	29.5
16 <sup>th</sup> St / H St	B	11.3	B	17.3
16 <sup>th</sup> St / I St	B	10.3	B	11.5
16 <sup>th</sup> St / J St	B	11.6	B	13.2
16 <sup>th</sup> St / L St	B	10.8	B	11.8
16 <sup>th</sup> St / P St	B	11.3	B	10.8
16 <sup>th</sup> St / Q St	B	11.6	A	9.9
16 <sup>th</sup> St / W St	C	23.5	C	23.7
16 <sup>th</sup> St / X St	B	13.7	B	15.8
29 <sup>th</sup> St / J St	C	28.6	C	22.0
30 <sup>th</sup> St / J St	B	12.2	B	14.0
11 <sup>th</sup> St / I St	A	8.4	A	9.2
11 <sup>th</sup> St / J St	A	9.3	A	9.2

Source: DKS Associates, 2006.

### **Freeway System**

**Tables 5.6-8** through **5.6-10** summarize the existing a.m. and p.m. peak hour operating conditions on the freeway system. Some segments of the freeway system do not operate within Caltrans' LOS E goal. Due to downstream congestion, I-5 northbound and southbound exhibits LOS F conditions in the study area in the p.m. peak hour. The interchange of I-5 and US 50 experiences congestion during both a.m. and p.m. peak hours. Queuing from the intersection of 3<sup>rd</sup> and J streets extends onto the northbound freeway mainline during the a.m. peak hour.

**TABLE 5.6-8  
EXISTING PEAK HOUR FREEWAY MAINLINE OPERATING CONDITIONS**

Facility / Direction	Location	Volume		Volume / Capacity Ratio		LOS	
		AM	PM	AM	PM	AM	PM
Northbound I-5	South of US 50 on-ramp	3,417	2,872	0.54	0.46	C	F <sup>1</sup>
	North of US 50 on-ramp	7,119	5,235	0.85	0.62	D	F <sup>1</sup>
	South of L Street on-ramp	5,279	3,841	0.84	0.61	D	F <sup>1</sup>
	South of I Street on-ramp	5,471	4,598	0.65	0.55	C	F <sup>1</sup>
	South of Richards Blvd off-ramp	5,806	6,011	0.58	0.60	C	F <sup>1</sup>
Southbound I-5	North of Richards Blvd on-ramp	7,628	5,797	0.91	0.69	E	C
	North of J Street on-ramp	8,104	6,568	0.96	0.78	E	D
	North of I Street on-ramp	6,437	6,295	0.77	0.75	D	F <sup>1</sup>
	North of US 50 off-ramp	5,978	6,149	0.63	0.65	C	F <sup>1</sup>
Eastbound US 50	West of I-5 on-ramp	3,176	1,434	0.38	0.17	B	A
	West of 15 <sup>th</sup> Street off-ramp	8,183	6,334	0.68	0.52	C	B
	West of 10 <sup>th</sup> Street on-ramp	7,534	5,658	0.72	0.54	C	C
	West of 16 <sup>th</sup> Street on-ramp	8,319	6,403	0.69	0.53	C	B
Westbound US 50	East of Hwy 51/US 99 on-ramp	3,637	3,250	0.36	0.33	B	B
	East of 10 <sup>th</sup> Street off-ramp	6,483	6,058	0.62	0.58	C	C
	East of 15 <sup>th</sup> Street on-ramp	5,555	5,709	0.53	0.54	B	C
	East of I-5 off ramp	6,029	6,375	0.48	0.51	B	B

LOS "F" conditions due to queuing from downstream bottleneck.

Source: Sacramento Downtown Traffic Study, Dowling Associates, 2006.

**TABLE 5.6-9  
EXISTING PEAK HOUR FREEWAY INTERCHANGE OPERATING CONDITIONS**

Facility / Direction	Location	AM Peak Hour			PM Peak Hour		
		LOS	Density <sup>1</sup> (Flow)	Volume	LOS	Density <sup>1</sup> (Flow)	Volume
Northbound I-5	US 50 on-ramp	F	41.52	3,269	D	28.76	1,997
	P Street to J Street weave	C	23.09	7,306	C	18.62	5,920
	L Street on-ramp	C	(209)	192	C	(826)	757
	I Street on-ramp	B	11.61	335	B	18.69	1,413
	Richards Boulevard off-ramp	B	19.05	659	C	21.82	349

Facility / Direction	Location	AM Peak Hour			PM Peak Hour		
		LOS	Density <sup>1</sup> (Flow)	Volume	LOS	Density <sup>1</sup> (Flow)	Volume
Southbound I-5	Richards Boulevard on-ramp	C	(519)	476	C	(841)	771
	J Street off-ramp	B	19.37	1,667	B	15.70	273
	I Street to Q Street weave	B	18.56	6,725	C	23.27	7,342
	US 50 off-ramp	F	14.29	3,809	F	14.70	4,301
Eastbound US 50	I-5 on-ramp	F	44.94	5,007	F	40.99	4,900
	15 <sup>th</sup> Street off-ramp	D	32.34	649	C	24.88	676
	10 <sup>th</sup> Street on-ramp	B	18.89	785	B	15.23	745
	16 <sup>th</sup> Street to Business 80 / SR99 weave	D	31.68	8,975	C	25.64	6,743
Westbound US 50	Business 80 to 16 <sup>th</sup> Street weave	B	15.88	4,880	B	16.33	4,883
	10 <sup>th</sup> Street off-ramp	C	26.83	928	C	22.01	349
	15 <sup>th</sup> Street on-ramp	C	27.81	474	D	30.04	666
	I-5 off-ramp	F	(4,203)	3,853	B	(3,574)	3,276

Density in units of passenger vehicles per lane per mile. Units in parentheses indicate ramp flow rate in passenger car equivalents.

Source: Sacramento Downtown Traffic Study, Dowling Associates, 2006.

**TABLE 5.6-10  
EXISTING PEAK HOUR FREEWAY RAMP QUEUING**

Location	Storage Capacity (feet)	AM Peak Hour		PM Peak Hour	
		Queue (feet)	Adequate Capacity	Queue (feet)	Adequate Capacity
I-5 NB Q Street off-ramp	3,500	700	Yes	150	Yes
I-5 NB J Street off-ramp	1,750	3,450	No	825	Yes
I-5 SB J Street off-ramp	3,600	3,000	Yes	600	Yes
US 50 EB 15 <sup>th</sup> Street off-ramp	1,600	600	Yes	650	Yes
US 50 WB 16 <sup>th</sup> Street off-ramp	1,625	975	Yes	900	Yes

Source: Sacramento Downtown Traffic Study, Dowling Associates, 2006.

**Bicycle System**

A Sacramento City/County Bicycle Task Force developed a 2010 Bikeway Master Plan for the region. The Master Plan is a policy document that was prepared to coordinate and

develop a bikeway system that will benefit and serve the recreational and transportation needs of the public. Officially designated bicycle facilities are classified as follows:

- Class I: Off-street bike trails or paths which are physically separated from streets or roads used by motorized vehicles.
- Class II: On street bike lanes with signs, striped lane markings, and pavement legends.
- Class III: On-street bike routes marked by signs and shared with motor vehicles and pedestrians. Optional four-inch edge lines painted on the pavement.

**Figure 5.6-5** illustrates existing and planned bikeways in the study area. In the immediate site vicinity, an on-street bikeway exists along 11<sup>th</sup> Street north of J Street. On-street bikeways are proposed along G and H streets north of the project site.

### ***Transit System***

RT operates 80 bus routes and 26.9 miles of light rail covering a 418 square-mile service area. Buses and light rail run 365 days a year using 76 light rail vehicles, 258 buses powered by compressed natural gas (CNG) and 17 shuttle vans. Buses operate daily from 5:00 a.m. to 11:30 p.m. every 15 to 60 minutes, depending on the route. Light rail trains operate from 4:30 a.m. to 1:00 a.m. daily with service every 15 minutes during the day and every 30 minutes in the evening. **Figure 5.6-6** illustrates transit services in the study area.

Nearby light rail stations include 12<sup>th</sup> and I streets to the east, Cathedral Square (K Street between 10<sup>th</sup> and 12<sup>th</sup> streets), and Saint Rose of Lima Park (K Street between 7<sup>th</sup> and 9<sup>th</sup> streets).

Numerous RT bus routes operate along J Street, including routes 30, 31, 36, 62, 63, 64, and Capital Shuttle Route 141. Capital Shuttle Route 142 operates along 10<sup>th</sup> Street adjacent to the project site.

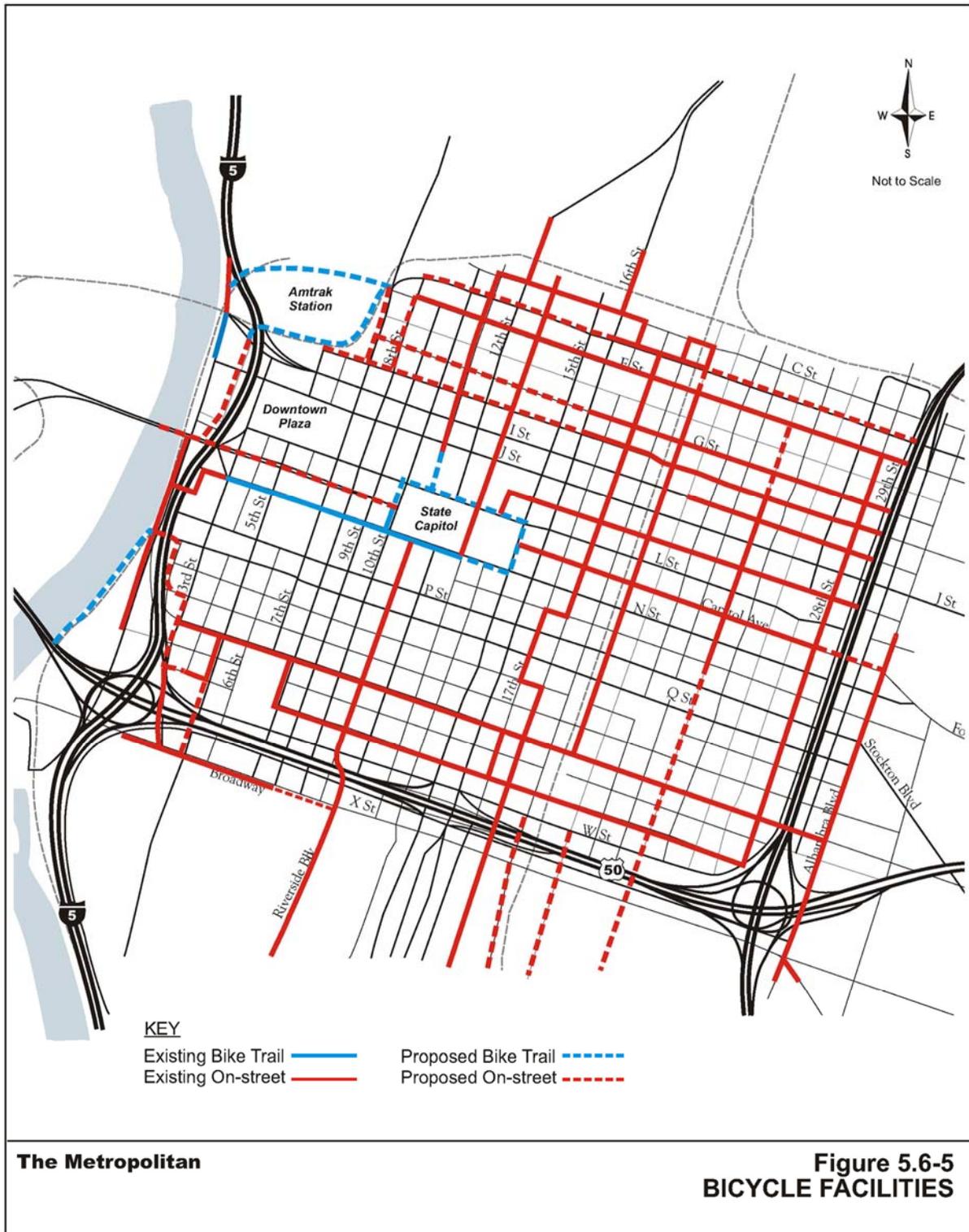
The Amador Regional Transit System (ARTS) operates commuter service from Amador County to Downtown Sacramento. The Amador Sacramento Express route operates along J and L streets near the project site. One trip operates to Downtown Sacramento in the a.m., and one trip operates from Downtown Sacramento in the p.m.

Capitol Corridor rail service operates between Colfax and the San Francisco Bay Area/San Jose, with a Sacramento stop at the Amtrak Station at 5<sup>th</sup> and I streets. Several trains and connecting buses operate in both eastbound and westbound directions during peak commuter periods.

El Dorado Transit operates commuter service between El Dorado County and Downtown Sacramento, with ten trips to Downtown Sacramento in the a.m. and eleven trips from Downtown Sacramento in the p.m. Nearby stops are located at 11<sup>th</sup> and J streets, and at 11<sup>th</sup> and H streets.

Elk Grove Transit (e-tran) operates commuter service between the City of Elk Grove and Downtown Sacramento. Buses operate along 7<sup>th</sup> and 8<sup>th</sup> streets near the project site, with some service along H and L streets. Seven routes serve Downtown Sacramento.

Placer County Transit operates the Placer County Commuter Express between Placer County and Downtown Sacramento. Two inbound trips to Downtown Sacramento operate in the a.m. and two outbound trips from Sacramento operate in the p.m. A nearby stop is located at 11<sup>th</sup> and J streets.



Source: DKS Associates, 2006.



The City of Roseville (Roseville Transit) operates seven commuter routes to Downtown Sacramento. Nearby stops are located at 12<sup>th</sup> and I streets, and at 11<sup>th</sup> and H streets.

The San Joaquin Regional Transit District operates commuter service between Stockton and Downtown Sacramento. Two inbound buses to Downtown Sacramento operate during the a.m., and two outbound buses from Downtown Sacramento operate during the p.m.

Yolobus operates many bus routes between Yolo County (including West Sacramento, Davis, and Woodland) and Downtown Sacramento. Yolobus also provides service between Downtown Sacramento and Sacramento International Airport.

Yuba-Sutter Transit operates commuter service between Yuba and Sutter Counties (including Marysville and Yuba City) and Downtown Sacramento. Four routes operate in the a.m. to Downtown Sacramento, and four routes operate in the p.m. from Downtown Sacramento. In addition, three midday round trips are provided. A nearby stop is located at 11<sup>th</sup> and J streets.

### ***Pedestrian System***

Throughout the study area, sidewalks are provided on both sides of the majority of City streets. Pedestrian signals are included at most signalized intersections. Many pedestrians are observed in the study area, accessing residences, offices, businesses, and transit services.

### ***Parking***

#### *Off-Street*

The proposed office building will include a parking structure designed to accommodate 514 vehicles.

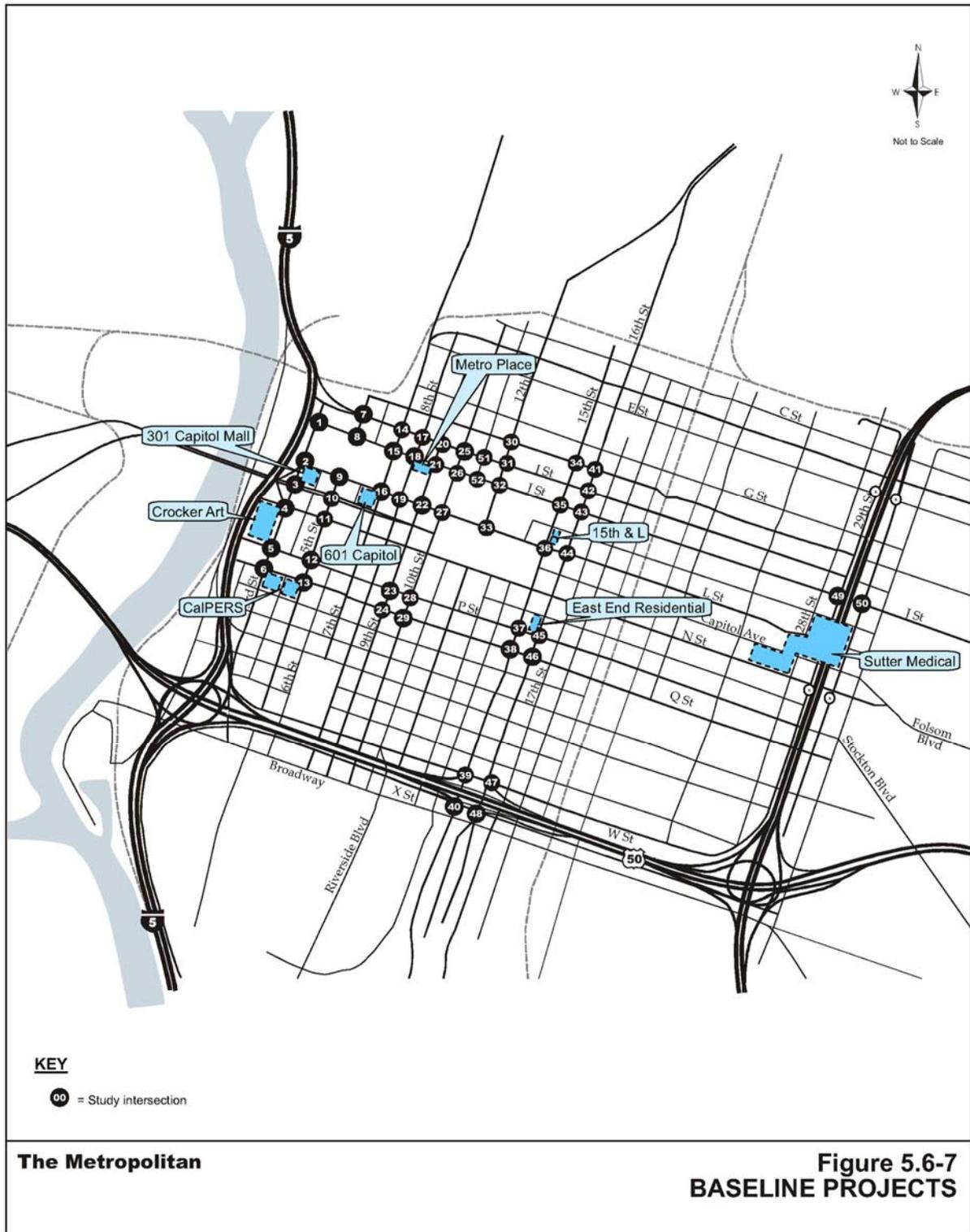
#### *On-Street*

Within approximately one-block of the project, there are approximately 245 on-street parking spaces. Based on data collected during 2005 for the Central City Parking Master Plan, 189 of these spaces (77 percent) were occupied on a typical midday period. The project is not expected to substantially increase or decrease the number of on-street parking spaces.

## **BASELINE ROADWAY OPERATING CONDITIONS**

Several major development projects have been approved or proposed in the site vicinity. These projects will add traffic to the roadway network in the study area. In addition, changes to the study area roadway system are also anticipated to be implemented shortly. The Baseline projects, illustrated in **Figure 5.6-7**, include:

1. Crocker Art Museum Expansion
2. 301 Capitol Mall
3. 601 Capitol Mall
4. Metro Place Office / Residential
5. 15<sup>th</sup> and L streets Hotel
6. CalPERS Headquarters Expansion



Source: DKS Associates, 2006.

7. Sutter Medical Center Expansion
8. Trinity Cathedral Expansion
9. CADA East End Gateway Residential
10. Capitol West End Project Central Plant Renovation
11. Conversion of 3<sup>rd</sup> Street to two-way operations between I and J streets
12. Amtrak / Folsom Corridor Light Rail Extension – Amtrak Extension (Regional Transit)

### **BASELINE ANALYSIS RESULTS**

**Figure 5.6-8** illustrates baseline intersection geometry (approach lanes and traffic control), as well as baseline a.m. and p.m. peak hour traffic volumes.

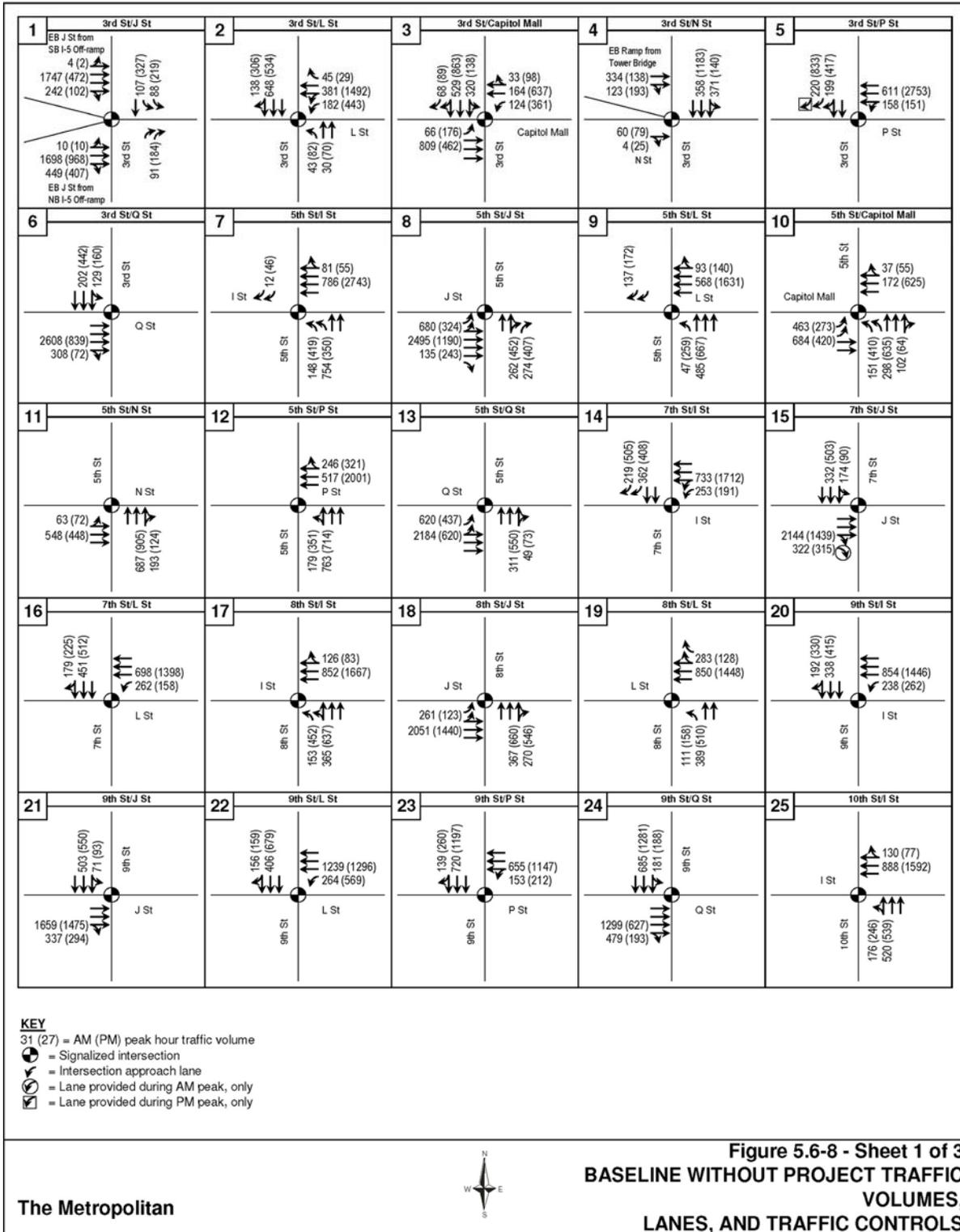
#### ***Intersections***

**Table 5.6-11** summarizes the baseline a.m. and p.m. peak hour operating conditions at the study area intersections. At unsignalized intersections, the average intersection LOS is utilized to determine conformity with the City's goal. Individual movements may operate at worse levels of service. After completion of the baseline projects, levels of service are expected to comply with the City's LOS C traffic operations standard at all but the following three locations:

- 3<sup>rd</sup> Street/J Street, where the intersection would operate at LOS E during the a.m. peak hour;
- 3<sup>rd</sup> Street/L Street, where the intersection would operate at LOS D during the p.m. peak hour; and
- 15<sup>th</sup> Street/J Street, where the intersection would operate at LOS D during the p.m. peak hour.

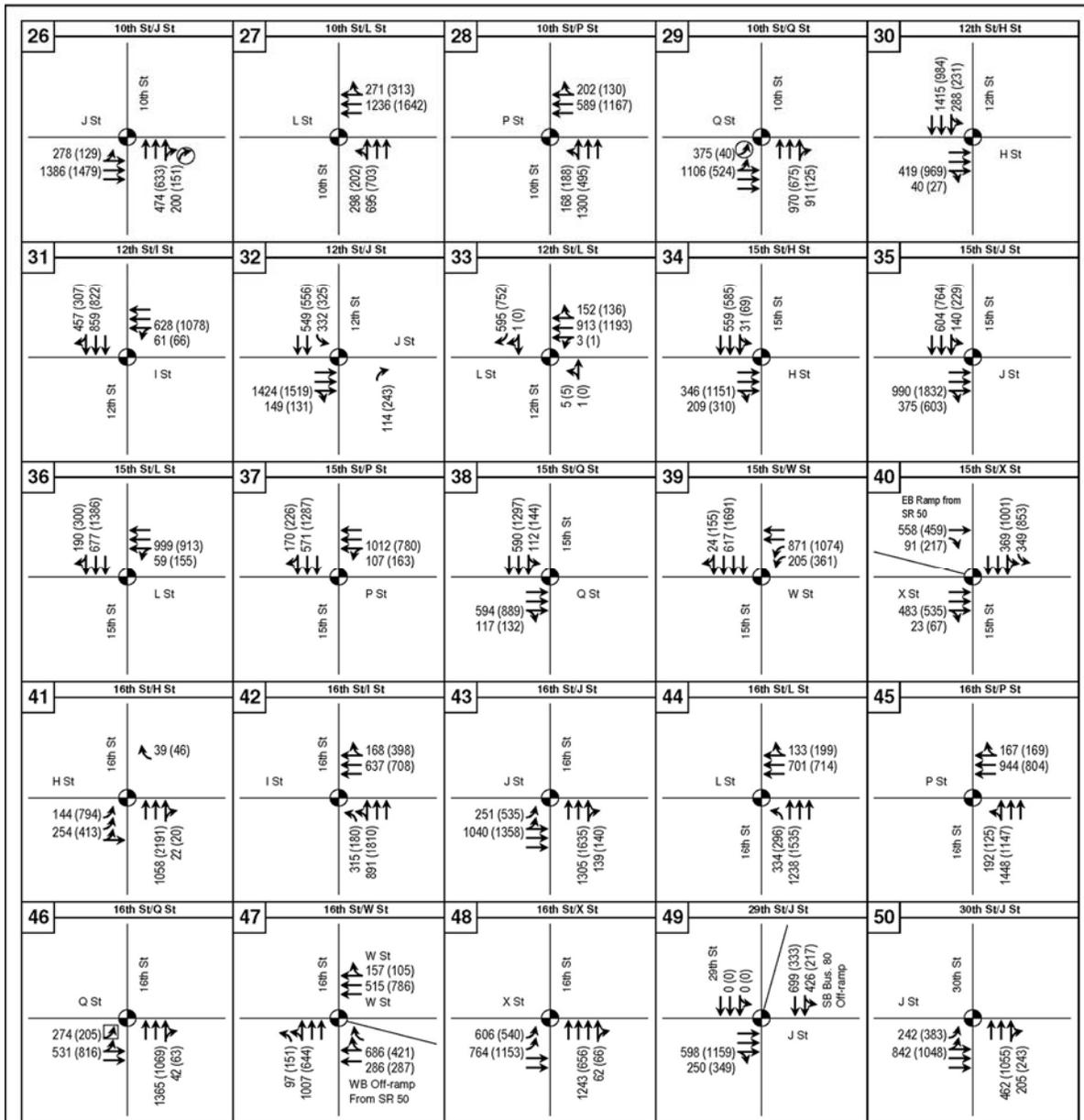
#### ***Freeway System***

**Tables 5.6-12 through 5.6-14** summarize the baseline a.m. and p.m. peak hour operating conditions on the freeway system. Some segments of the freeway system will not operate within Caltrans' LOS E goal. Southbound I-5 north of J Street is expected to operate at LOS F during the a.m. peak hour. Due to downstream congestion, I-5 northbound and southbound exhibits LOS F conditions in the study area in the p.m. peak hour. The interchange of I-5 and US 50 experiences congestion during both a.m. and p.m. peak hours. Queuing from the intersection of 3<sup>rd</sup> and J streets extends onto the northbound and southbound freeway mainline during the a.m. peak hour.



Source: DKS Associates, 2006.

# 5.6 TRANSPORTATION AND CIRCULATION



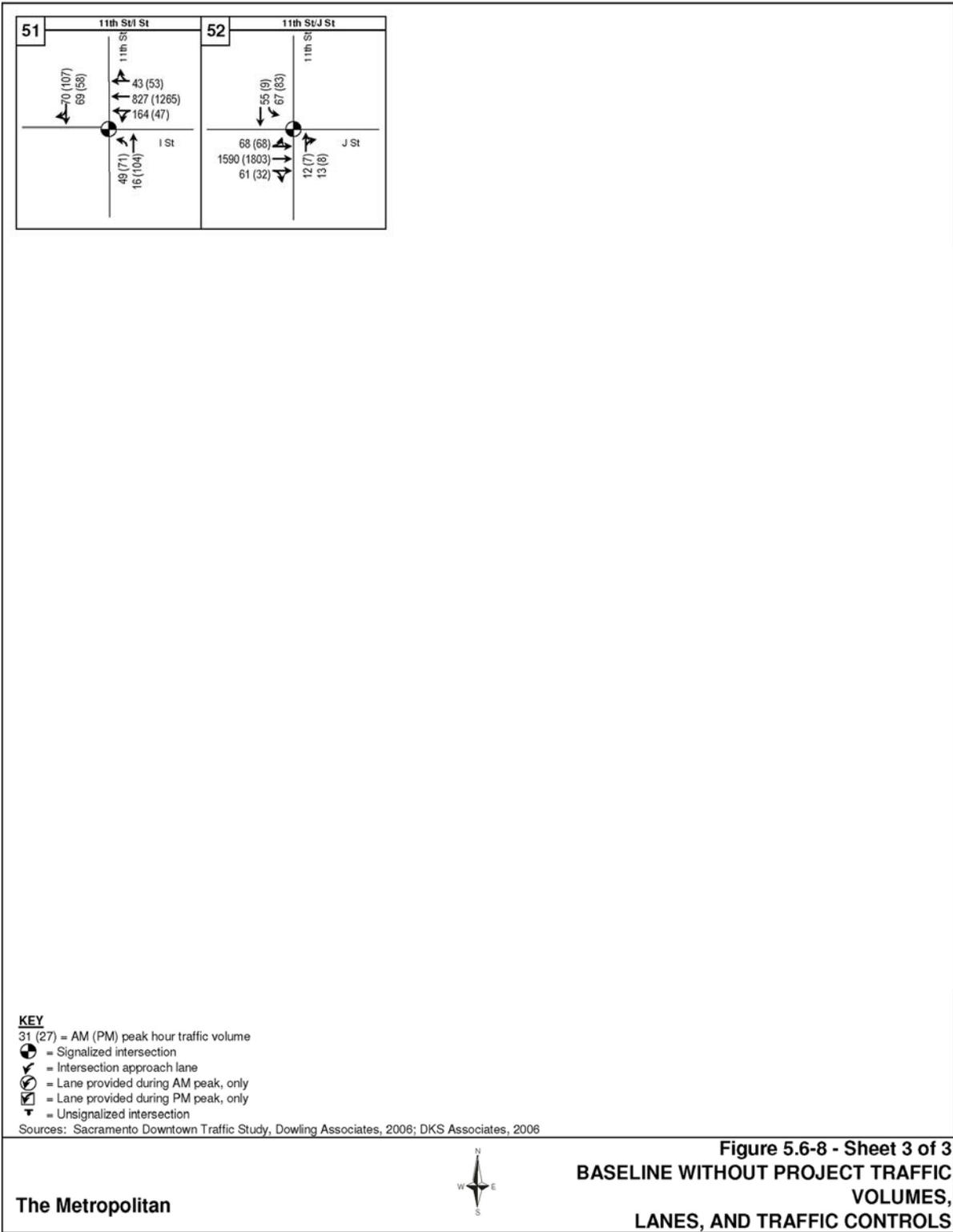
**KEY**  
 31 (27) = AM (PM) peak hour traffic volume  
 = Signalized intersection  
 = Intersection approach lane  
 = Lane provided during AM peak, only  
 = Lane provided during PM peak, only

The Metropolitan



**Figure 5.6-8 - Sheet 2 of 3  
 BASELINE WITHOUT PROJECT TRAFFIC  
 VOLUMES,  
 LANES, AND TRAFFIC CONTROLS**

Source: DKS Associates, 2006.



Source: DKS Associates, 2006.

**TABLE 5.6-11  
BASELINE INTERSECTION OPERATING CONDITIONS**

Intersection	A.M. Peak Hour		P.M. Peak Hour	
	LOS	Delay (seconds)	LOS	Delay (seconds)
3 <sup>rd</sup> St / J St	E	59.9	B	18.2
3 <sup>rd</sup> St / L St	B	18.6	D	43.8
3 <sup>rd</sup> St / Capitol Mall	C	21.2	C	23.2
3 <sup>rd</sup> St / N St	C	20.9	B	19.6
3 <sup>rd</sup> St / P St	A	9.2	C	27.6
3 <sup>rd</sup> St / Q St	B	11.6	A	9.7
5 <sup>th</sup> St / I St	A	11.1	C	20.6
5 <sup>th</sup> St / J St	C	21.7	B	11.6
5 <sup>th</sup> St / L St	B	14.0	C	24.3
5 <sup>th</sup> St / Capitol Mall	B	19.2	B	19.0
5 <sup>th</sup> St / N St	B	13.4	B	13.8
5 <sup>th</sup> St / P St	B	10.7	B	16.1
5 <sup>th</sup> St / Q St	B	11.1	A	9.8
7 <sup>th</sup> St / I St	A	10.0	B	18.6
7 <sup>th</sup> St / J St	B	17.8	B	13.6
7 <sup>th</sup> St / L St	B	11.5	B	15.4
8 <sup>th</sup> St / I St	B	10.3	B	18.4
8 <sup>th</sup> St / J St	B	18.0	B	14.6
8 <sup>th</sup> St / L St	B	12.3	B	16.4
9 <sup>th</sup> St / I St	B	13.0	C	20.8
9 <sup>th</sup> St / J St	C	21.0	B	17.0
9 <sup>th</sup> St / L St	B	10.4	B	12.0
9 <sup>th</sup> St / P St	A	9.5	B	11.4
9 <sup>th</sup> St / Q St	B	11.5	B	11.6
10 <sup>th</sup> St / I St	B	14.9	C	21.9
10 <sup>th</sup> St / J St	C	22.0	C	21.0
10 <sup>th</sup> St / L St	B	12.7	B	14.8
10 <sup>th</sup> St / P St	B	11.8	A	8.9
10 <sup>th</sup> St / Q St	B	11.0	A	8.8
12 <sup>th</sup> St / H St	B	18.1	B	13.7
12 <sup>th</sup> St / I St	A	6.6	A	7.6
12 <sup>th</sup> St / J St	B	18.8	C	21.2
12 <sup>th</sup> St / L St	B	13.2	B	14.6

Intersection	A.M. Peak Hour		P.M. Peak Hour	
	LOS	Delay (seconds)	LOS	Delay (seconds)
15 <sup>th</sup> St / H St	A	9.7	B	11.9
15 <sup>th</sup> St / J St	B	11.6	<b>D</b>	<b>49.2</b>
15 <sup>th</sup> St / L St	B	11.5	B	11.7
15 <sup>th</sup> St / P St	B	11.4	B	11.3
15 <sup>th</sup> St / Q St	B	10.1	B	11.4
15 <sup>th</sup> St / W St	B	12.4	B	14.5
15 <sup>th</sup> St / X St	C	22.5	C	32.1
16 <sup>th</sup> St / H St	B	11.5	C	21.6
16 <sup>th</sup> St / I St	B	10.4	B	11.7
16 <sup>th</sup> St / J St	B	11.7	B	13.5
16 <sup>th</sup> St / L St	B	11.0	B	11.9
16 <sup>th</sup> St / P St	B	11.8	B	10.9
16 <sup>th</sup> St / Q St	B	11.9	B	10.2
16 <sup>th</sup> St / W St	C	24.0	C	24.1
16 <sup>th</sup> St / X St	B	13.8	B	16.3
29 <sup>th</sup> St / J St	C	34.1	C	22.8
30 <sup>th</sup> St / J St	B	12.6	B	14.8
11 <sup>th</sup> St / I St	A	8.4	A	9.2
11 <sup>th</sup> St / J St	A	9.7	B	10.4

Source: DKS Associates, 2006.

**TABLE 5.6-12  
BASELINE PEAK HOUR FREEWAY MAINLINE OPERATING CONDITIONS**

Facility / Direction	Location	Volume		Volume / Capacity Ratio		LOS	
		AM	PM	AM	PM	AM	PM
Northbound I-5	South of US 50 on-ramp	3,539	2,959	0.56	0.47	C	F <sup>1</sup>
	North of US 50 on-ramp	7,249	5,346	0.86	0.64	D	F <sup>1</sup>
	South of L Street on-ramp	5,330	4,960	0.85	0.79	D	F <sup>1</sup>
	South of I Street on-ramp	5,522	5,717	0.66	0.68	C	F <sup>1</sup>
	South of Richards Blvd off-ramp	5,881	7,196	0.59	0.72	C	F <sup>1</sup>

Facility / Direction	Location	Volume		Volume / Capacity Ratio		LOS	
		AM	PM	AM	PM	AM	PM
Southbound I-5	North of Richards Blvd on-ramp	8,124	6,086	0.97	0.72	E	C
	North of J Street on-ramp	8,600	6,857	1.02	0.82	F	D
	North of I Street on-ramp	6,607	6,281	0.79	0.75	D	F <sup>1</sup>
	North of US 50 off-ramp	5,846	6,036	0.62	0.64	C	F <sup>1</sup>
Eastbound US 50	West of I-5 on-ramp	3,197	1,446	0.38	0.17	B	A
	West of 15 <sup>th</sup> Street off-ramp	8,278	6,441	0.68	0.53	C	C
	West of 10 <sup>th</sup> Street on-ramp	7,629	5,765	0.73	0.55	C	C
	West of 16 <sup>th</sup> Street on-ramp	8,465	6,795	0.70	0.56	C	C
Westbound US 50	East of Hwy 51/US 99 on-ramp	4,065	3,447	0.41	0.34	B	B
	East of 10 <sup>th</sup> Street off-ramp	6,854	6,281	0.65	0.60	C	C
	East of 15 <sup>th</sup> Street on-ramp	5,645	5,857	0.54	0.56	C	C
	East of I-5 off ramp	6,124	6,530	0.49	0.52	B	B
LOS "F" conditions due to queuing from downstream bottleneck.							

Source: Sacramento Downtown Traffic Study, Dowling Associates, 2006.

**TABLE 5.6-13  
BASELINE PEAK HOUR FREEWAY INTERCHANGE OPERATING CONDITIONS**

Facility / Direction	Location	AM Peak Hour			PM Peak Hour		
		LOS	Density <sup>1</sup> (Flow)	Volume	LOS	Density <sup>1</sup> (Flow)	Volume
Northbound I-5	US 50 on-ramp	F	42.16	3,277	D	29.37	2,021
	P Street to J Street weave	C	24.15	7,487	C	21.11	6,345
	L Street on-ramp	C	(209)	192	C	(826)	757
	I Street on-ramp	B	11.90	359	C	21.22	1,479
	Richards Boulevard off-ramp	B	19.31	659	C	26.69	349
Southbound I-5	Richards Boulevard on-ramp	C	(519)	476	C	(841)	771
	J Street off-ramp	C	20.56	1,993	B	16.39	576
	I Street to Q Street weave	B	19.74	6,904	C	23.76	7,356
	US 50 off-ramp	F	13.97	3,809	F	14.43	4,301
Eastbound	I-5 on-ramp	F	45.58	5,081	F	41.77	4,995

Facility / Direction	Location	AM Peak Hour			PM Peak Hour		
		LOS	Density <sup>1</sup> (Flow)	Volume	LOS	Density <sup>1</sup> (Flow)	Volume
US 50	15 <sup>th</sup> Street off-ramp	D	32.74	649	C	25.32	676
	10 <sup>th</sup> Street on-ramp	B	19.47	836	B	17.70	1,030
	16 <sup>th</sup> Street to Business 80 / SR99 weave	D	32.77	9,153	D	28.24	7,206
Westbound US 50	Business 80 to 16 <sup>th</sup> Street weave	B	17.52	5,343	B	17.37	5,147
	10 <sup>th</sup> Street off-ramp	D	29.86	1,209	C	23.33	424
	15 <sup>th</sup> Street on-ramp	D	28.25	479	D	30.75	673
	I-5 off-ramp	F	(4,292)	3,934	B	(3,713)	3,404

Density in units of passenger vehicles per lane per mile. Units in parentheses indicate ramp flow rate in passenger car equivalents.

Source: Sacramento Downtown Traffic Study, Dowling Associates, 2006.

**TABLE 5.6-14  
BASELINE PEAK HOUR FREEWAY RAMP QUEUING**

Location	Storage Capacity (feet)	AM Peak Hour		PM Peak Hour	
		Queue (feet)	Adequate Capacity	Queue (feet)	Adequate Capacity
I-5 NB Q Street off-ramp	3,500	1,000	Yes	250	Yes
I-5 NB J Street off-ramp	1,750	4,050	No	1,050	Yes
I-5 SB J Street off-ramp	3,600	3,800	No	800	Yes
US 50 EB 15 <sup>th</sup> Street off-ramp	1,600	600	Yes	650	Yes
US 50 WB 16 <sup>th</sup> Street off-ramp	1,625	1,175	Yes	1,050	Yes

Source: Sacramento Downtown Traffic Study, Dowling Associates, 2006.

## REGULATORY SETTING

Roadway operations are regulated by agencies with jurisdiction of the particular roadway. Study area roadways are under the jurisdiction of the City of Sacramento (City surface streets) and Caltrans (freeway system).

The City of Sacramento’s General Plan includes three overall goals related to transportation:

- Create a safe, efficient surface transportation network for the movement of people and goods.
- Provide all citizens in all communities of the City with access to a transportation network that serves both the City and the region, either by personal vehicle or transit. Make a special effort to maximize alternatives to single-occupant vehicle use, such as public transit.

- Maintain a desirable quality of life, including good air quality, while supporting planned land use and population growth.

The General Plan also includes the following goals related to transportation planning:

- Establish and implement a comprehensive regional transportation plan that identifies needs, integrates the existing transportation network with planned growth, and proposes new facilities.
- Consider air quality along with traffic flow efficiency when making decisions about transportation.

The General Plan includes the following goals related to streets and roads:

- Create a street system that would ensure the safe and efficient movement of people and goods within and through communities and to other areas in the City and region.
- Maintain the quality of the City's street system.
- Create and maintain a street system that protects residential neighborhoods from unnecessary levels of traffic.
- Work towards achieving an overall Level of Service C on the City's local and major street systems.

The General Plan includes the following additional goals for non-vehicular transportation:

- Pedestrians: Increase the use of the pedestrian mode as a mode of choice for all areas of the City.
- Bikeways: Develop bicycling as a major transportation and recreational mode.

The City of Sacramento's Central City Community Plan (CCCP) contains the following transportation goal:

- Encourage the development of an overall balance system of transportation which emphasizes public transit, protects residential neighborhoods, promotes alternatives to the single occupant automobile commuter, and which provides for safe, convenient, and efficient movement of people and goods in and through the Central City.

The CCCP also includes the following sub-goals:

- Establish a major street system which will route vehicular traffic to the activity areas of the Central City without directing such traffic through residential neighborhoods.
- Improve vehicular circulation and reduce traffic congestion in the Central Business District area, without causing negative impacts on streets within residential areas.
- Support programs aimed at significantly increasing transit riders.
- Provide adequate off-street parking to meet the needs of shoppers, visitors, and residents.
- Restrain the projected increase in parking spaces needed for long-term employee parking by promoting public transit improvements, carpool programs, employer sponsored bus passes, and other alternatives to the single occupant car usage.

- Assist in providing Park 'n Ride facilities in suburban areas linked to the Central City by express public transit.
- Reduce the adverse impact of commuter parking on residential streets.
- Develop a safe commuter bikeway system within the Central City with connections to major facilities in and outside the Central City area.
- Provide for safe pedestrian movement in the Central City circulation system through increased enforcement of pedestrian right-of-way laws and reducing traffic speed and volumes through appropriate means on residential streets.
- Retain necessary railroad trackage needed to serve industrial uses. Convert unneeded railroad rights-of-way to transit and/or other appropriate land uses which will facilitate transit use.
- Develop a truck route system that will accommodate the needs of the business community and minimize the impact of truck movements on traffic and residential neighborhoods.
- Utilize public policies to encourage public transit usage and carpooling, including publicly and privately paid transit passes.
- Use appropriate measures to require new developments to assist in transit improvements in lieu of major investments in parking facilities.

## IMPACTS AND MITIGATION MEASURES

### METHODS OF ANALYSIS

Analysis of the Baseline Plus Project scenario consists of estimating the traffic generated by the proposed project, and assigning that traffic to the roadway network. The resultant a.m. and p.m. peak hour traffic volumes on the City street system and freeway network are utilized to determine roadway operating conditions. The resultant conditions are compared to baseline conditions in accordance with standards of significance to determine the significance of project traffic impacts.

### *Trip Generation*

Trip generation of the proposed project is based upon information compiled by the Institute of Transportation Engineers (Trip Generation, Seventh Edition, 2003 and Trip Generation Handbook, 2004). The methodology is taken from the Sacramento Downtown Traffic Study (Dowling Associates, 2006). **Table 5.6-15** shows the number of trips that would be generated by the proposed project. In summary, the proposed project would generate 2,221 new external vehicle trips on an average day. Of the external trips, 136 external trips would occur during the weekday morning peak hour and 207 external trips during the weekday evening peak hour.

The external trips were derived by adjusting the Institute of Transportation Engineers (ITE) trip generation estimates. ITE trip generation estimates are based on empirical data collected at suburban locations throughout the United States. Adjustments to the ITE trip generation estimates were made to account for higher transit ridership, higher levels of walking and bicycle use, and the interaction of land uses in the Downtown area. Adjustments for the higher use of transit and walk, bike, and other non-auto travel were based on information contained in the Pre-Census Travel Behavior Report: Analysis of the 2000 SACOG Household Travel Survey (DKS Associates, 2001).

**TABLE 5.6-15  
VEHICULAR TRIP GENERATION**

Land Use	Trips Generated						
	Weekday	A.M. Peak Hour			P.M. Peak Hour		
		Entering	Exiting	Total	Entering	Exiting	Total
Retail (Shopping Center) 13,000 square feet	1,803	28	18	46	78	85	163
High Rise Residential Condominium 320 units	1,430	23	99	122	77	47	124
<b>Total Project Trips</b>	<b>3,233</b>	<b>51</b>	<b>117</b>	<b>168</b>	<b>155</b>	<b>132</b>	<b>287</b>
Transit Adjustments	-77	-2	-3	-5	-4	-4	-8
Walk, Bike, and Other Non-Auto Travel Adjustments	-346	-5	-10	-15	-16	-14	-30
Internal Trips Within This Project	-311	-4	-4	-8	-15	-15	-30
Trips to / from Other proposed projects	-278	-2	-2	-4	-6	-6	-12
<b>New External Trips</b>	<b>2,221</b>	<b>38</b>	<b>98</b>	<b>136</b>	<b>114</b>	<b>93</b>	<b>207</b>

Source: DKS Associates, 2006.

After the adjustments were made for transit, walk, bike, and other non-auto travel, an adjustment was made to account for internal trips between different types of land uses within each project site. The internal trip adjustments were performed using procedures recommended by the Institute of Transportation Engineers for multi-use developments (Trip Generation Handbook). Internal trips are trips that would occur between different land uses on the same site without accessing the external street system.

Finally, adjustments were made to account for trips likely to be made by non-motorized travel modes among the new projects proposed for Downtown. The ITE method for determining internal trips was used and considered all the proposed downtown projects as one project (because of the ease of walking between the new projects). Only the trips generated over and above the internal trips for each individual project were considered appropriate for this adjustment.

No pass-by trips were assumed for Downtown retail uses because it is not convenient to drive by, park, and stop to shop as would be the case in suburban locations. Most of these types of trips would be served by non-motorized travel modes – walking or biking.

### ***Trip Distribution and Assignment***

The distribution of trips associated with the project site was derived from the SACMET travel demand model, observations of travel patterns near the site, and knowledge of the proposed access locations associated with the project. **Figure 5.6-9** illustrates the trip distribution percentages for the project.

### **STANDARDS OF SIGNIFICANCE**

The standards of significance in this analysis are based upon the current practice of the appropriate regulatory agencies.

### ***Intersections***

In the City of Sacramento, a significant traffic impact (intersection) occurs when:

- the traffic generated by a project degrades peak period level of service from A, B, or C (without project) to D, E, or F (with project); or,
- the LOS (without project) is D, E, or F, and project generated traffic increases the peak period average vehicle delay by five seconds or more.

### ***Freeway System***

Caltrans considers the following to be significant impacts:

- Off-ramps with vehicle queues that extend into the ramp's deceleration area or onto the freeway.
- Project traffic increases that cause any ramp's merge/diverge LOS to be worse than the freeway's LOS.
- Project traffic increases that cause the freeway level of service to deteriorate beyond level of service E.
- The project adds traffic to a freeway facility already operating at LOS F.

### ***Bikeways***

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.

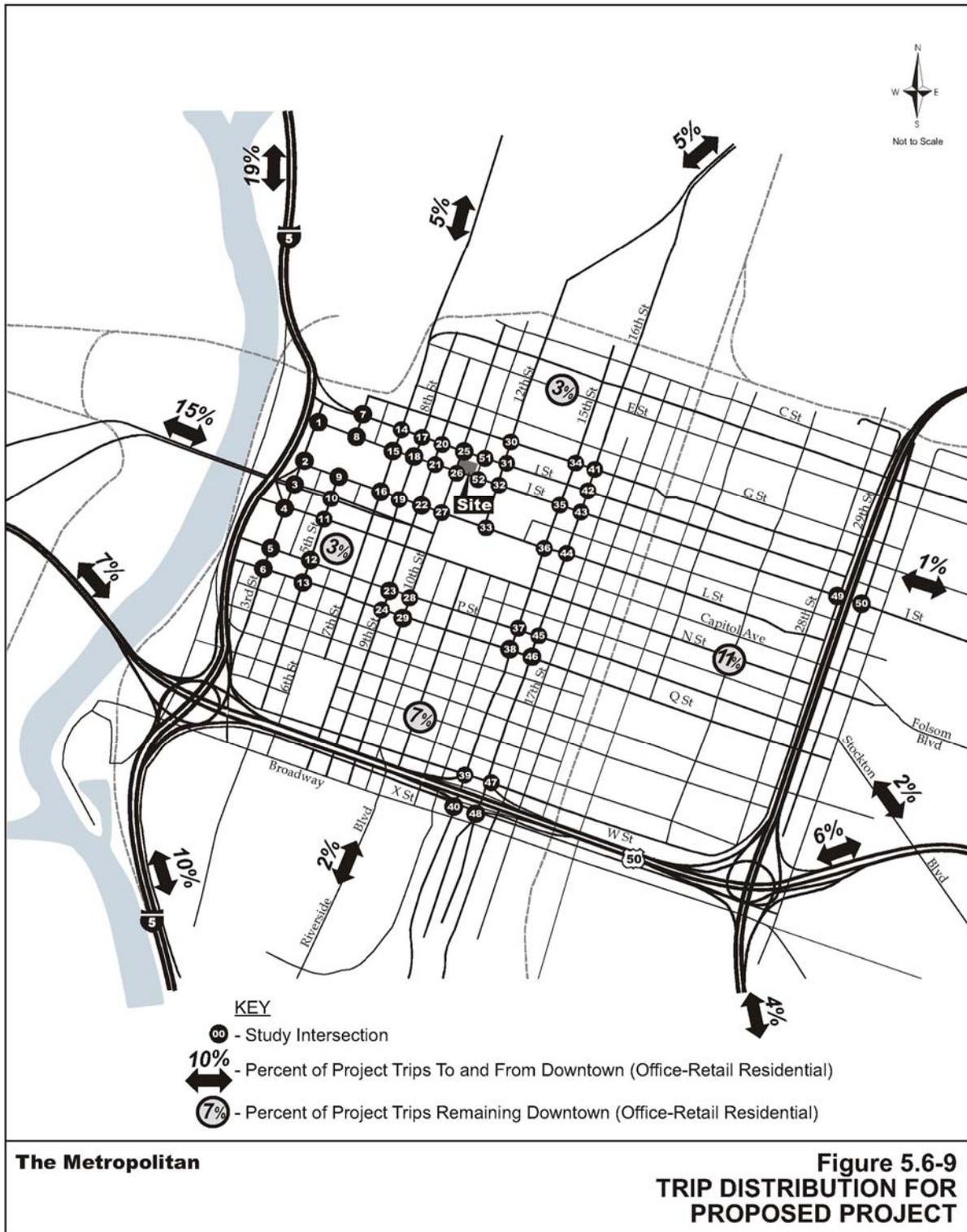
A significant bikeway impact could occur if the project were to result in unsafe conditions for bicyclists, including unsafe bicycle/pedestrian or bicycle/motor vehicle conflicts.

### ***Pedestrian Facilities***

A significant pedestrian circulation impact would occur if the project were to result in unsafe conditions for pedestrians, including unsafe increase pedestrian/bicycle or pedestrian/motor vehicle conflicts.

### ***Transit System***

A significant impact to the transit system would occur where 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.



Source: DKS Associates, 2006.

**Parking**

A significant impact to parking would occur if the proposed project parking supply were less than the estimated parking demand.

**PROJECT-SPECIFIC IMPACTS AND MITIGATION MEASURES – BASELINE CONDITIONS****Impact 5.6-1 Intersections: The project would increase traffic volumes at study area intersections**

The project would increase traffic volumes in the study area; **Table 5.6-16** summarizes the resultant conditions. **Figure 5.6-10** illustrates the a.m. and p.m. peak hour intersection volumes and geometry for the Baseline Plus Project scenario. The changes in intersection operating conditions with the addition of project-generated traffic does not exceed the standards of significance for impacts to intersections at any of the 52 study area intersections. Intersection impacts are considered *less than significant*.

Mitigation

None required

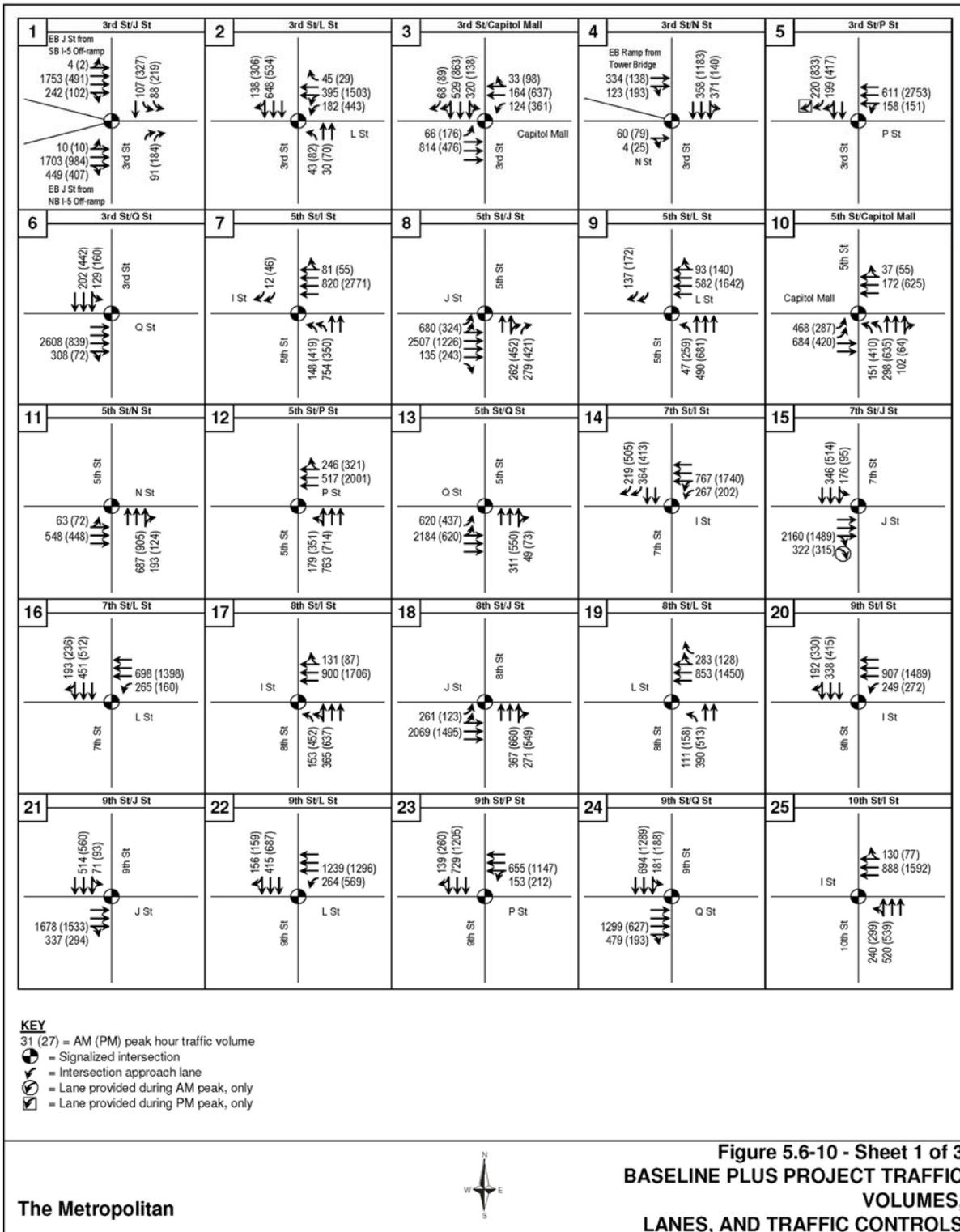
**TABLE 5.6-16  
BASELINE PLUS PROJECT INTERSECTION OPERATING CONDITIONS**

Intersection	A.M. Peak Hour		P.M. Peak Hour	
	LOS	Delay (seconds)	LOS	Delay (seconds)
3 <sup>rd</sup> St / J St	E	60.6	B	18.6
3 <sup>rd</sup> St / L St	B	18.7	D	45.3
3 <sup>rd</sup> St / Capitol Mall	C	21.2	C	23.3
3 <sup>rd</sup> St / N St	C	20.9	B	19.6
3 <sup>rd</sup> St / P St	A	9.2	C	27.6
3 <sup>rd</sup> St / Q St	B	11.6	A	9.7
5 <sup>th</sup> St / I St	A	11.2	C	20.6
5 <sup>th</sup> St / J St	C	21.8	B	11.7
5 <sup>th</sup> St / L St	B	14.1	C	24.6
5 <sup>th</sup> St / Capitol Mall	B	19.2	B	19.0
5 <sup>th</sup> St / N St	B	13.4	B	13.8
5 <sup>th</sup> St / P St	B	10.7	B	16.1
5 <sup>th</sup> St / Q St	B	11.1	A	9.8
7 <sup>th</sup> St / I St	A	10.0	B	18.6
7 <sup>th</sup> St / J St	B	18.0	B	14.0
7 <sup>th</sup> St / L St	B	11.5	B	15.4
8 <sup>th</sup> St / I St	B	10.4	B	18.4
8 <sup>th</sup> St / J St	B	18.1	B	14.8
8 <sup>th</sup> St / L St	B	12.3	B	16.4

## 5.6 TRANSPORTATION AND CIRCULATION

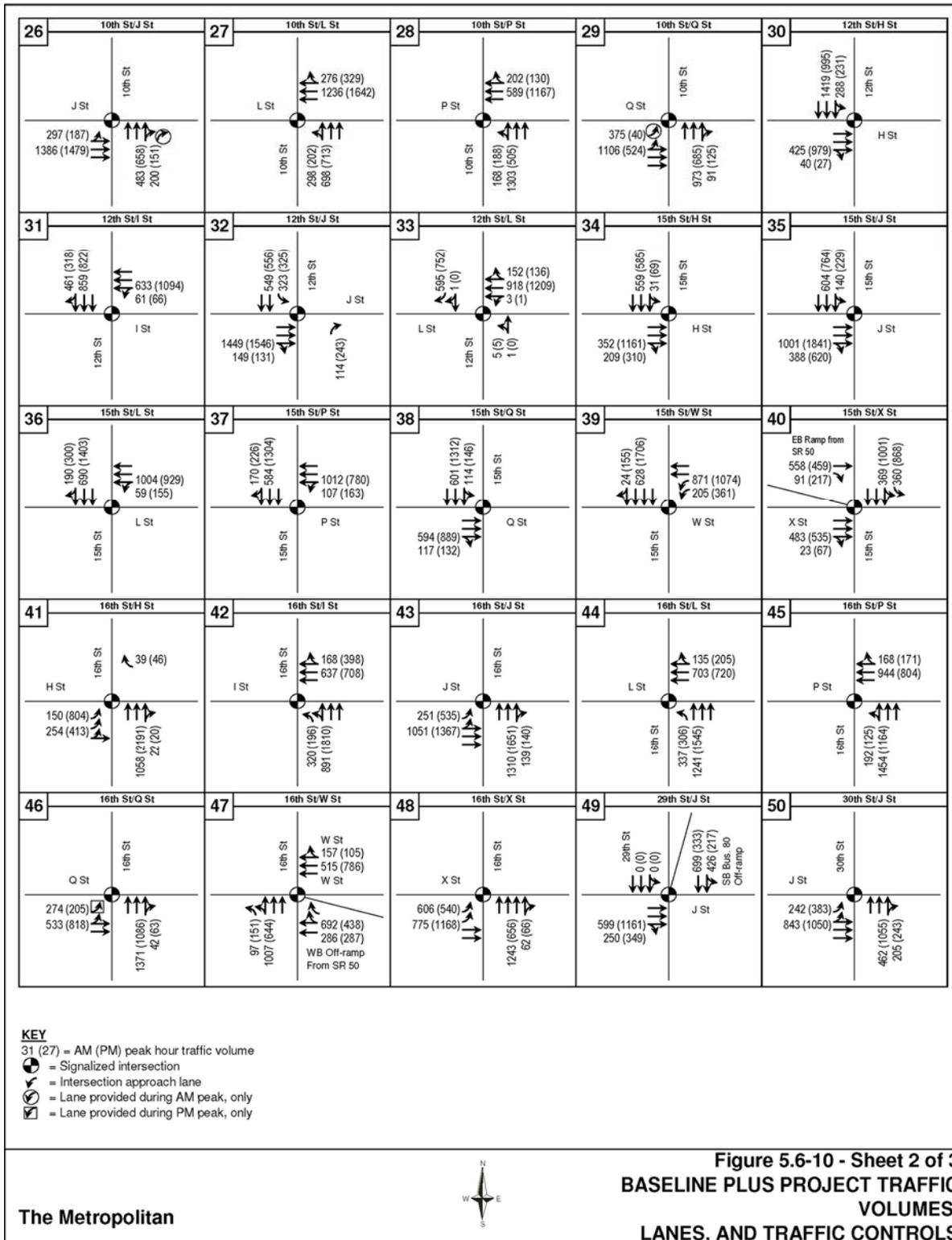
Intersection	A.M. Peak Hour		P.M. Peak Hour	
	LOS	Delay (seconds)	LOS	Delay (seconds)
9 <sup>th</sup> St / I St	B	13.1	C	20.8
9 <sup>th</sup> St / J St	C	21.2	B	18.3
9 <sup>th</sup> St / L St	B	10.5	B	12.0
9 <sup>th</sup> St / P St	A	9.5	B	11.4
9 <sup>th</sup> St / Q St	B	11.5	B	11.6
10 <sup>th</sup> St / I St	B	14.9	C	22.3
10 <sup>th</sup> St / J St	C	22.1	C	22.8
10 <sup>th</sup> St / L St	B	12.8	B	15.0
10 <sup>th</sup> St / P St	B	11.8	A	8.9
10 <sup>th</sup> St / Q St	B	11.0	A	8.8
12 <sup>th</sup> St / H St	B	18.1	B	13.7
12 <sup>th</sup> St / I St	A	6.6	A	7.7
12 <sup>th</sup> St / J St	B	19.7	C	22.7
12 <sup>th</sup> St / L St	B	13.2	B	14.6
15 <sup>th</sup> St / H St	A	9.8	B	11.9
15 <sup>th</sup> St / J St	B	11.6	D	53.0
15 <sup>th</sup> St / L St	B	11.6	B	11.7
15 <sup>th</sup> St / P St	B	11.4	B	11.3
15 <sup>th</sup> St / Q St	B	10.1	B	11.4
15 <sup>th</sup> St / W St	B	12.4	B	14.5
15 <sup>th</sup> St / X St	C	22.5	C	32.7
16 <sup>th</sup> St / H St	B	11.5	C	21.6
16 <sup>th</sup> St / I St	B	10.4	B	11.7
16 <sup>th</sup> St / J St	B	11.7	B	13.6
16 <sup>th</sup> St / L St	B	11.0	B	11.9
16 <sup>th</sup> St / P St	B	11.8	B	11.0
16 <sup>th</sup> St / Q St	B	11.9	B	10.2
16 <sup>th</sup> St / W St	C	24.0	C	24.3
16 <sup>th</sup> St / X St	B	13.8	B	16.4
29 <sup>th</sup> St / J St	C	34.1	C	22.8
30 <sup>th</sup> St / J St	B	12.6	B	14.8
11 <sup>th</sup> St / I St	A	8.5	A	9.3
11 <sup>th</sup> St / J St	A	9.8	B	10.5

Source: DKS Associates, 2006.

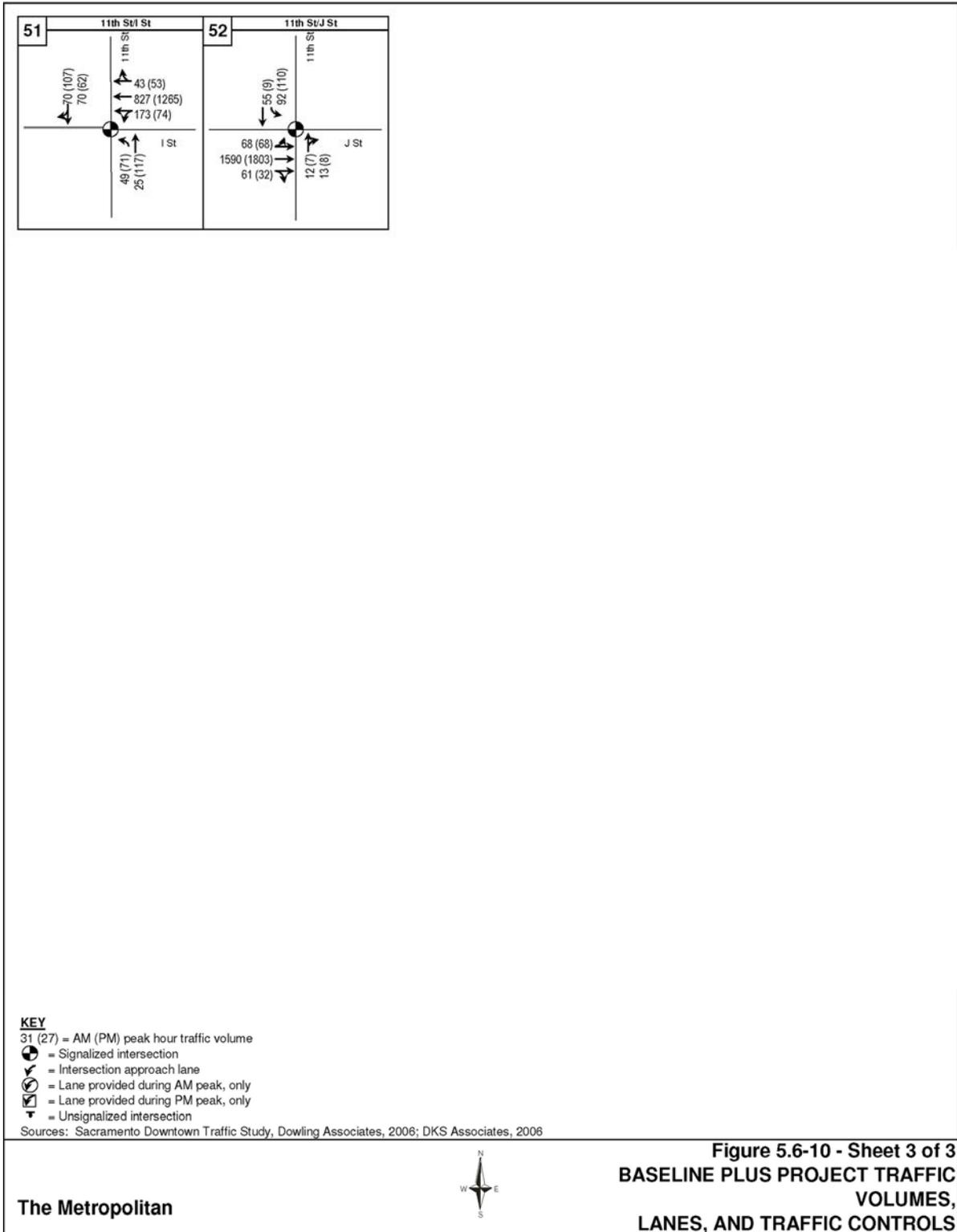


Source: DKS Associates, 2006.

# 5.6 TRANSPORTATION AND CIRCULATION



Source: DKS Associates, 2006.



Source: DKS Associates, 2006.

**Impact 5.6-2 Freeway Mainline: The project would increase traffic volumes on the freeway mainline**

The project would increase traffic volumes on the freeway mainline. **Table 5.6-17** summarizes the resultant conditions. The changes in freeway system operating conditions with the addition of project-generated traffic exceed the standards of significance for impacts to the freeway system, since traffic is added to freeway segments already operating at LOS F. These sections include portions of Northbound I-5 during the p.m. peak hour and portions of Southbound I-5 during the a.m. and p.m. peak hours. No feasible mitigation measures were identified that would reduce the impact of the project on five I-5 freeway mainline segments. Widening the freeway would reduce the impact but was not considered feasible. Therefore, the impacts are considered **significant**.

Mitigation

None available

Significance after Mitigation**Significant and unavoidable**

**TABLE 5.6-17  
BASELINE PLUS PROJECT PEAK HOUR FREEWAY MAINLINE OPERATING CONDITIONS**

Facility / Direction	Location	Volume		Volume / Capacity Ratio		LOS	
		AM	PM	AM	PM	AM	PM
Northbound I-5	South of US 50 on-ramp	3,542	2,969	0.56	0.47	C	F <sup>1</sup>
	North of US 50 on-ramp	7,254	5,362	0.86	0.64	D	F <sup>1</sup>
	South of L Street on-ramp	5,330	4,960	0.85	0.79	D	F <sup>1</sup>
	South of I Street on-ramp	5,522	5,717	0.66	0.68	C	F <sup>1</sup>
	South of Richards Blvd off-ramp	5,899	7,211	0.59	0.72	C	F <sup>1</sup>
Southbound I-5	North of Richards Blvd on-ramp	8,130	6,105	0.97	0.73	E	C
	North of J Street on-ramp	8,606	6,876	1.02	0.82	F	D
	North of I Street on-ramp	6,607	6,281	0.79	0.75	D	F <sup>1</sup>
	North of US 50 off-ramp	5,862	6,049	0.62	0.64	C	F <sup>1</sup>
Eastbound US 50	West of I-5 on-ramp	3,197	1,446	0.38	0.17	B	A
	West of 15 <sup>th</sup> Street off-ramp	8,278	6,441	0.68	0.53	C	C
	West of 10 <sup>th</sup> Street on-ramp	7,629	5,765	0.73	0.55	C	C
	West of 16 <sup>th</sup> Street on-ramp	8,465	6,795	0.70	0.56	C	C
Westbound US 50	East of Hwy 51/US 99 on-ramp	4,068	3,457	0.41	0.35	B	B
	East of 10 <sup>th</sup> Street off-ramp	6,854	6,281	0.65	0.60	C	C
	East of 15 <sup>th</sup> Street on-ramp	5,645	5,857	0.54	0.56	C	C
	East of I-5 off ramp	6,124	6,530	0.49	0.52	B	B

LOS "F" conditions due to queuing from downstream bottleneck.

Source: DKS Associates, 2006.

**Impact 5.6-3 Freeway Interchanges: The project would increase traffic volumes at the freeway interchanges**

The project would increase traffic volumes at freeway interchanges. **Table 5.6-18** summarizes the resultant conditions. The changes in freeway system operating conditions with the addition of project-generated traffic exceed the standards of significance for impacts to the freeway system, since traffic is added to freeway interchanges already operating at LOS F. Impacts occur at the interchange of I-5 and US 50 during the a.m. and p.m. peak hours. No feasible mitigation measures were identified that would reduce the impact of the project on the one freeway interchange. Widening the freeway would reduce the impact but was not considered feasible. Therefore, the impacts are considered **significant**.

**TABLE 5.6-18  
BASELINE PLUS PROJECT PEAK HOUR FREEWAY INTERCHANGE OPERATING CONDITIONS**

Facility / Direction	Location	AM Peak Hour			PM Peak Hour		
		LOS	Density <sup>1</sup> (Flow)	Volume	LOS	Density <sup>1</sup> (Flow)	Volume
Northbound I-5	US 50 on-ramp	F	42.18	3,277	D	29.41	2,021
	P Street to J Street weave	C	24.18	7,492	C	21.21	6,361
	L Street on-ramp	C	(209)	192	C	(826)	757
	I Street on-ramp	B	12.04	377	C	21.34	1,494
	Richards Boulevard off-ramp	B	19.37	659	C	26.75	349
Southbound I-5	Richards Boulevard on-ramp	C	(519)	476	C	(841)	771
	J Street off-ramp	C	20.57	1,999	B	16.43	595
	I Street to Q Street weave	B	19.82	6,920	C	23.84	7,369
	US 50 off-ramp	F	14.01	3,815	F	14.46	4,306
Eastbound US 50	I-5 on-ramp	F	45.58	5,081	F	41.77	4,995
	15 <sup>th</sup> Street off-ramp	D	32.74	649	C	25.32	676
	10 <sup>th</sup> Street on-ramp	B	19.47	836	B	17.70	1,030
	16 <sup>th</sup> Street to Business 80 / SR99 weave	D	32.86	9,164	D	28.35	7,220
Westbound US 50	Business 80 to 16 <sup>th</sup> Street weave	B	17.54	5,346	B	17.44	5,157
	10 <sup>th</sup> Street off-ramp	D	29.86	1,209	C	23.33	424
	15 <sup>th</sup> Street on-ramp	D	28.25	479	D	30.75	673
	I-5 off-ramp	F	(4,292)	3,934	B	(3,713)	3,404
Density in units of passenger vehicles per lane per mile. Units in parentheses indicate ramp flow rate in passenger car equivalents.							

Source: DKS Associates, 2006.

Mitigation

None available

Significance after Mitigation**Significant and unavoidable****Impact 5.6-4 Freeway Ramp Queuing: The project would increase the length of freeway ramp queues**

The project would increase freeway ramp queues. **Table 5.6-19** summarizes the resultant conditions. The changes in freeway system operating conditions with the addition of project-generated traffic does not exceed the standards of significance for impacts to the freeway system. At locations where queue lengths exceed the available storage capacity under the baseline without project scenario, addition of project traffic is not expected to substantially increase queue lengths. At locations where the project traffic does increase queue lengths, adequate storage capacity exists. Freeway ramp queuing impacts are considered **less than significant**.

Mitigation

None required

**TABLE 5.6-19**  
**BASELINE PLUS PROJECT PEAK HOUR FREEWAY RAMP QUEUING**

Location	Storage Capacity (feet)	AM Peak Hour		PM Peak Hour	
		Queue (feet)	Adequate Capacity	Queue (feet)	Adequate Capacity
I-5 NB Q Street off-ramp	3,500	1,000	Yes	250	Yes
I-5 NB J Street off-ramp	1,750	3,975	No	1,050	Yes
I-5 SB J Street off-ramp	3,600	3,800	No	800	Yes
US 50 EB 15 <sup>th</sup> Street off-ramp	1,600	600	Yes	650	Yes
US 50 WB 16 <sup>th</sup> Street off-ramp	1,625	1,175	Yes	1,050	Yes

Source: DKS Associates, 2006.

**Impact 5.6-5 Bikeways: The project would result in the addition of employees, patrons, residents, and visitors to the site, some of whom would travel by bicycle**

The proposed project would result in the addition of employees, patrons, residents, and visitors to the site, some of whom would travel by bicycle. The proposed project would not result in any substantial changes to the existing or future bikeway system. The proposed project is not anticipated to hinder or eliminate an existing designated bikeway, or interfere with implementation of a proposed bikeway. The project is not anticipated to result in unsafe conditions for bicyclists, including unsafe bicycle/pedestrian or bicycle/motor vehicle conflicts. Bicycle impacts are considered **less than significant**.

Mitigation

None required

**Impact 5.6-6 Pedestrian Facilities: The project would result in the addition of employees, patrons, residents, and visitors to the site**

The proposed project would result in the addition of employees, patrons, residents, and visitors to the site. The project is not anticipated to result in unsafe conditions for pedestrians, including unsafe bicycle/pedestrian or pedestrian/motor vehicle conflicts. Pedestrian impacts are considered **less than significant**.

Mitigation

None required

**Impact 5.6-7 Transit Services: The project would increase demand for transit services**

The project would increase demand for transit services. The proposed project would result in the addition of employees, patrons, residents, and visitors to the site, some of whom would travel by transit. Although particular transit vehicles operate at or near capacity during the peak commuter periods, a review of existing transit operations and plans for future transit services indicate that there is ample capacity on the Regional Transit system to support the anticipated increase in trips. The project is estimated to generate 93 daily transit trips, 6 transit trips during the a.m. peak hour, and 9 transit trips during the p.m. peak hour. The impact of the proposed project on the transit system is **less than significant**.

Mitigation

None required

**Impact 5.6-8 Parking: The project would increase demand for parking**

The project is located within the Central Business District (CBD). The parking regulations (Chapter 17.64.060) for the CBD require a minimum of one space per dwelling unit plus one guest space per fifteen units. The ongoing Central City Parking Master Plan has verified the adequacy of the zoning ordinance requirements for residential development in the Central City. No parking is required in the CBD for retail uses. Based upon the development application, the project is required to provide 342 spaces. The project is proposing 514 spaces. The impact of the proposed project on parking is **less than significant**.

Mitigation

None required

**CONSTRUCTION IMPACTS****Impact 5.6-9 Construction: The construction of the project may include the temporary closure of numerous transportation facilities, including portions of City streets, sidewalks, bikeways, on-street parking, off-street parking, and transit facilities**

Construction will include disruptions to the transportation network near the site, including the possibility of temporary lane closures, street closures, sidewalk closures, and bikeway closures. Existing on-street parking will be disrupted during construction, and replacement spaces may not be available. Pedestrian and transit access may be disrupted. Heavy vehicles will access the site and will need to be staged for construction. These activities will result in degraded roadway operations. The addition of construction personnel will result in the temporary need for additional parking. Therefore, the impacts are considered **significant**.

Mitigation Measure

5.6-9 *Prior to the beginning of construction, a construction traffic management plan shall be prepared by the applicant to the satisfaction of the City traffic engineer, Regional Transit, and any other affected agency.*

Significance after Mitigation

Less than significant

**PROJECT LOCAL CIRCULATION IMPACTS**

In addition to the analysis of project impacts in conjunction with the City's standards of significance for CEQA review, an analysis of site access and vehicular circulation was also conducted. This analysis focuses on the project's parking entrances. Queuing analyses were conducted to determine whether typical peak hour operations of these areas would cause queuing onto adjacent sidewalks or onto the City street system.

Access to the parking garage is from the existing alley. One entry lane and one exit lane are proposed for the garage. Detailed information regarding access controls is not available at this time.

The critical time period for entry to the parking garage is during the p.m. peak hour, as it is during this period that the largest volume of entering traffic is anticipated. It is estimated that 114 vehicles will enter the garage during this time period. Assuming one entrance lane and gated entry control, it is expected at a 95 percent probability that a maximum of one vehicle will be at the entry gate. The site plan provides adequate space for such queuing without impacting adjacent sidewalks and roadways.

The critical time period for exiting from the parking garage is during the a.m. peak hour, as it is during this period that the largest volume of exiting traffic is anticipated. It is estimated that 98 vehicles will exit the garage during this period. The current egress design provides one exit lane. On average, one vehicle is expected to be at the single egress point. Based upon a 95 percent probability, an acceptable maximum queue of four vehicles is expected at the exit point.

**CUMULATIVE CONDITIONS**

Four cumulative scenarios involving Near-Term (Year 2013) and Long-Term (Year 2030) conditions have been analyzed in the *Sacramento Downtown Traffic Study* (Dowling, June 7, 2006), which is included as an appendix of this document. The Downtown study included the cumulative impacts of the proposed project as well as several other approved and pending projects as listed below:

- 800 K Street
- 831 L Street
- Westfield Shoppingtown Downtown Plaza Expansion
- 500 Capitol Mall
- Cathedral Square
- Epic Tower (12<sup>th</sup> Street and I Street)
- 701 L Street
- The Library Lofts (8<sup>th</sup> Street and I Street)

All the proposed downtown projects combined have the potential to generate about 28,111 new external trips on an average day. Of the external trips, approximately 2,379 external trips would occur during the weekday morning peak hour and 3,154 external trips during the weekday evening peak hour.

This section summarizes the cumulative impacts and mitigation measures identified in the Downtown Study. The cost of implementing these mitigation measures will be shared among all the projects.

### ***Near-Term (2013) Impacts and Mitigation Measures***

#### ***Impact 5.6-10 Cumulative impacts to study intersection under near term plus project condition***

The proposed Downtown projects would add traffic to study intersections and cause significant impacts for near-term cumulative conditions at the following intersections:

- a) 3<sup>rd</sup> Street / J Street, where the level of service without the proposed projects would be LOS F during the a.m. peak hour and project generated traffic would increase the average vehicle delay by 34.7 seconds. This is considered a ***significant impact***.
- b) 3<sup>rd</sup> Street / L Street, where the level of service without the proposed projects would be LOS E during the p.m. peak hour and project generated traffic would increase the average vehicle delay by 43.9 seconds. This is considered a ***significant impact***.
- c) 3<sup>rd</sup> Street / N Street, where the traffic generated by the project would degrade the level of service from LOS C to LOS D during the a.m. peak hour. This is considered a ***significant impact***.
- d) 3<sup>rd</sup> Street / P Street, where the traffic generated by the project would degrade the level of service from LOS C to LOS D during the p.m. peak hour. This is considered a ***significant impact***.
- e) 5<sup>th</sup> Street / L Street, where the traffic generated by the project would degrade the level of service from LOS C to LOS E during the p.m. peak hour. This is considered a ***significant impact***.
- f) 7<sup>th</sup> Street / L Street, where the traffic generated by the project would degrade the level of service from LOS B to LOS D during the p.m. peak hour. This is considered a ***significant impact***.
- g) 8<sup>th</sup> Street / L Street, where the traffic generated by the project would degrade the level of service from LOS B to LOS D during the p.m. peak hour. This is considered a ***significant impact***.
- h) 9<sup>th</sup> Street / J Street, where the traffic generated by the project would degrade the level of service from LOS B to LOS E during the p.m. peak hour. This is considered a ***significant impact***.
- i) 10<sup>th</sup> Street / J Street, where the traffic generated by the project would degrade the level of service from LOS C to LOS E during the p.m. peak hour. This is considered a ***significant impact***.
- j) 12<sup>th</sup> Street / J Street, where the traffic generated by the project would degrade the level of service from LOS C to LOS E during the p.m. peak hour. This is considered a ***significant impact***.
- k) 15<sup>th</sup> Street / J Street, where the level of service without the proposed projects would be LOS D during the p.m. peak hour and project generated traffic would increase the average vehicle delay by 54.4 seconds. This is considered a ***significant impact***.

- l) 15<sup>th</sup> Street / X Street, where the level of service without the proposed projects would be LOS E during the p.m. peak hour and project generated traffic would increase the average vehicle delay by 21.5 seconds. This is considered a **significant impact**.
- m) 16<sup>th</sup> Street / H Street, where the traffic generated by the project would degrade the level of service from LOS C to LOS D during the p.m. peak hour. This is considered a **significant impact**.

Mitigation

- 5.6-10a *At the 3<sup>rd</sup> Street / J Street intersection, modify the traffic signal phase splits during the a.m. peak period by increasing the phase time for the southbound I-5 off-ramp approach (eastbound) to 40 seconds, maintaining the 50 second phase time for the northbound I-5 off-ramp, and decreasing the north and southbound 3<sup>rd</sup> Street phase time to 10 seconds. This mitigation measure would reduce average vehicle delay by 33 seconds during the a.m. peak hour and would reduce the near-term cumulative impact to a **less-than-significant** level. The applicant of the proposed project shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.*
- 5.6-10b *At the 3<sup>rd</sup> Street / L Street intersection, modify the westbound approach to provide one left-turn lane, two through lanes (to the northbound I-5 on-ramp), and one right-turn lane. This mitigation measure would reduce average vehicle delay by 40 seconds during the p.m. peak hour and maintain LOS C operations during the a.m. peak hour. The mitigation measure would reduce the near-term cumulative impact to a **less-than-significant** level.*
- 5.6-10c *At the 3<sup>rd</sup> Street / N Street intersection, modify the traffic signal phase splits during the a.m. peak period by increasing the southbound 3<sup>rd</sup> Street signal phase time to 34 seconds, decreasing the eastbound N Street approach to 15 seconds, and maintaining the phase time for the eastbound Tower Bridge approach at 21 seconds. This mitigation measure would improve traffic operations to LOS C during the a.m. peak hour and would reduce the near-term cumulative impact to a **less-than-significant** level. The applicant of the proposed project shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.*
- 5.6-10d *At the 3<sup>rd</sup> Street / P Street intersection, modify the traffic signal phase splits during the p.m. peak period by increasing the signal phase time to 32 seconds for the westbound P Street approach and decreasing the southbound 3<sup>rd</sup> Street approach to 18 seconds. This mitigation measure would improve traffic operations to LOS C during the p.m. peak hour and would reduce the near-term cumulative impact to a **less-than-significant** level. The applicant of the proposed project shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.*
- 5.6-10e *At the 5<sup>th</sup> Street / L Street intersection, modify the traffic signal phase splits during the p.m. peak period by increasing the signal phase time to 28 seconds for the westbound L Street approach and decreasing the northbound and southbound 5<sup>th</sup> Street approaches to 42 seconds. This mitigation measure would improve traffic operations to LOS C during the p.m. peak hour and would reduce the near-term cumulative impact to a **less-than-significant** level. The applicant of the proposed project shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.*

- 5.6-10f *At the 7<sup>th</sup> Street / L Street intersection, modify the traffic signal phase splits during the p.m. peak period by increasing the signal phase time to 22 seconds for the westbound L Street approach and decreasing the northbound and southbound 5<sup>th</sup> Street approaches to 28 seconds. This mitigation measure would improve traffic operations to LOS C during the p.m. peak hour and would reduce the near-term cumulative impact to a **less-than-significant** level. The applicant of the proposed project shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.*
- 5.6-10g *At the 8<sup>th</sup> Street / L Street intersection, modify the traffic signal phase splits during the p.m. peak period by increasing the signal phase time to 25 seconds for the westbound L Street approach and decreasing the northbound 8<sup>th</sup> Street signal phase time to 25 seconds. This mitigation measure would improve traffic operations to LOS B during the p.m. peak hour and would reduce the near-term cumulative impact to a **less-than-significant** level. The applicant of the proposed project shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.*
- 5.6-10h *At the 9<sup>th</sup> Street / J Street intersection, modify the traffic signal phase splits during the p.m. peak period by increasing the signal phase time to 28 seconds for the eastbound J Street approach and decreasing the southbound 9<sup>th</sup> Street signal phase time to 22 seconds. This mitigation measure would improve traffic operations to LOS C during the p.m. peak hour and would reduce the near-term cumulative impact to a **less-than-significant** level. The applicant of the proposed project shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.*
- 5.6-10i *At the 10<sup>th</sup> Street / J Street intersection, modify the traffic signal phase splits during the p.m. peak period by increasing the signal phase time to 28 seconds for the eastbound J Street approach and decreasing the northbound 10<sup>th</sup> Street signal phase time to 22 seconds. This mitigation measure would improve traffic operations to LOS C during the p.m. peak hour and would reduce the near-term cumulative impact to a **less-than-significant** level. The applicant of the proposed project shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.*
- 5.6-10j *At the 12<sup>th</sup> Street / J Street intersection, modify the traffic signal phase splits during the p.m. peak period by increasing the signal phase time to 22 seconds for the eastbound J Street approach and decreasing the 12<sup>th</sup> Street signal phase time to 28 seconds. This mitigation measure would improve traffic operations to LOS C during the p.m. peak hour and would reduce the near-term cumulative impact to a **less-than-significant** level. The applicant of the proposed project shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.*
- 5.6-10k *At the 15<sup>th</sup> Street / J Street intersection, modify the traffic signal phase splits during the p.m. peak period by increasing the phase time for the eastbound J Street approach to 30 seconds, and decreasing the southbound 15<sup>th</sup> Street signal phase time to 20 seconds. This mitigation measure would reduce average vehicle delay by 61.4 seconds during the p.m. peak hour and would reduce the near-term cumulative impact to a **less-than-significant** level. The applicant of the proposed project shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.*

5.6-10l *At the 15<sup>th</sup> Street / X Street intersection, modify the traffic signal phase splits during the p.m. peak period by increasing the phase time for the southbound 15<sup>th</sup> Street approach to 28 seconds, decreasing the eastbound U.S. 50 off-ramp phase time to 28 seconds, and maintaining 17 seconds for the X Street approach. This mitigation measure would reduce average vehicle delay by 34.4 seconds during the p.m. peak hour and would reduce the near-term cumulative impact to a **less-than-significant** level. The applicant of the proposed project shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.*

5.6-10m *At the 16<sup>th</sup> Street / H Street intersection, modify the traffic signal phase splits during the p.m. peak period by increasing the phase time for the northbound 15<sup>th</sup> Street approach to 26 seconds, decreasing the phase times for the eastbound H Street left-turning movement and through movements to 18 and 24 seconds, respectively, and maintaining 6 seconds for the westbound H Street right-turning movement. This mitigation measure would improve traffic operations to LOS C during the p.m. peak hour and would reduce the near-term cumulative impact to a **less-than-significant** level. The applicant of the proposed project shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.*

Significance after Mitigation

Less than significant

**Impact 5.6-11 Cumulative impacts to freeway mainline under near term plus project condition**

The proposed Downtown projects would add traffic to freeway mainline segments but would not cause freeway levels of service to deteriorate beyond LOS E. The projects would add traffic to I-5 freeway segments that would operate at LOS F without the projects. This is considered a **significant impact**.

Mitigation

5.6-11 *No feasible mitigation measures were identified that would reduce the impact of the project on I-5 freeway mainline segments. Widening the freeway would reduce the impact but was not considered feasible.*

Significance after Mitigation

**Significant and unavoidable**

**Impact 5.6-12 Cumulative impacts to freeway merge/ diverge/ weave areas under near term plus project condition**

The proposed Downtown projects would add traffic to freeway ramps and weaving areas but would not cause levels of service to deteriorate beyond LOS E on these facilities. The projects would add traffic to I-5 and U.S. 50 freeway ramps that would operate at LOS F without the projects. This is considered a **significant impact**.

Mitigation

5.6-12 *No feasible mitigation measures were identified that would reduce the impact of the project on I-5 and U.S. 50 freeway ramps. Widening the freeway would reduce the impact but was not considered feasible.*

Significance after Mitigation**Significant and unavoidable****Impact 5.6-13 Cumulative impacts to freeway ramp queues under near term plus project condition**

The proposed Downtown projects would add traffic to the northbound I-5 off-ramp to J Street, which currently experiences queues during the a.m. peak hour that extend onto the freeway mainline. In addition, the proposed Downtown projects would cause queues for the southbound I-5 off-ramp to J Street to extend onto the freeway mainline during the a.m. peak hour. This is considered a **significant impact**.

Mitigation

- 5.6-13 Mitigation measure (a) would reduce the queue for the southbound I-5 off-ramp at J Street to 6,125 feet during the a.m. peak hour, but this would not be enough to eliminate the near-term cumulative impact. This mitigation measure would not affect the northbound I-5 off-ramp queue at J Street, and no other feasible mitigation measures were identified that would reduce the impact of the projects at that location. Widening the freeway would reduce the impact but was not considered feasible.

Significance after Mitigation**Significant and unavoidable****Impact 5.6-14 Cumulative impacts to transit system under near term plus project condition**

The proposed Downtown projects would increase demand for transit services. Peak period transit trips generated by the project are estimated to be approximately 259 during the a.m. peak hour, and approximately 288 during the p.m. peak hour. Although particular light rail trains and buses operate at or near capacity during the peak commuter periods, there is ample capacity on the Regional Transit system to support this increase in trips. Additional light rail service to Downtown is anticipated with the South Sacramento Corridor, Folsom Corridor extension, and extension to the Amtrak Station. These light rail projects are scheduled for completion by the opening date of the proposed Downtown projects. Because the existing and future transit system capacity would be sufficient to accommodate the increased transit ridership, the impact would be **less than significant**.

Mitigation

None required

**Impact 5.6-15 Cumulative impacts to bikeway under near term plus project condition**

The proposed Downtown projects would result in the addition of employees, visitors, and other patrons to the site, some who would travel by bicycle. The proposed Downtown projects are not anticipated to hinder or eliminate an existing designated bikeway or interfere with implementation of a proposed bikeway. None of the proposed projects are anticipated to result in unsafe conditions for bicyclists, including unsafe bicycle/pedestrian or bicycle/motor vehicle conflicts. Therefore, bicycle impacts would be **less than significant**.

Mitigation

None required

***Impact 5.6-16 Cumulative impacts to pedestrian circulation under near term plus project condition***

The proposed Downtown projects would result in the addition of employees, visitors, and other patrons to each site. Considerable direct access will be by pedestrian mode. The proposed Downtown projects are not anticipated to result in unsafe conditions for pedestrians, including unsafe bicycle/ pedestrian or pedestrian/motor vehicle conflicts. Therefore, pedestrian impacts are considered ***less than significant***.

***Mitigation***

None required

**LONG-TERM (2030) IMPACTS AND MITIGATION MEASURES**

***Impact 5.6-17 Cumulative impacts to study intersection under long term plus project condition***

The proposed Downtown projects would add traffic to study intersections and cause significant impacts for long-term cumulative conditions at the following intersections:

- a) 3<sup>rd</sup> Street / J Street, where the level of service without the proposed projects would be LOS F during the a.m. peak hour and project generated traffic would increase the average vehicle delay by 34.2 seconds; and where the level of service without the proposed projects would be LOS D during the p.m. peak hour and project generated traffic would increase the average vehicle delay by 6.8 seconds. This is considered a ***significant impact***.
- b) 3<sup>rd</sup> Street / L Street, where the level of service without the proposed projects would be LOS E during the p.m. peak hour and project generated traffic would increase the average vehicle delay by 44.1 seconds. This is considered a ***significant impact***.
- c) 3<sup>rd</sup> Street / N Street, where the traffic generated by the project would degrade the level of service from LOS C to LOS D during the a.m. peak hour. This is considered a ***significant impact***.
- d) 3<sup>rd</sup> Street / P Street, where the traffic generated by the project would degrade the level of service from LOS C to LOS D during the p.m. peak hour. This is considered a ***significant impact***.
- e) 5<sup>th</sup> Street / I Street, where the level of service without the proposed projects would be LOS E during the p.m. peak hour and project generated traffic would increase the average vehicle delay by 6.1 seconds. This is considered a ***significant impact***.
- f) 5<sup>th</sup> Street / L Street, where the traffic generated by the project would degrade the level of service from LOS C to LOS D during the p.m. peak hour. This is considered a ***significant impact***.
- g) 7<sup>th</sup> Street / L Street, where the traffic generated by the project would degrade the level of service from LOS B to LOS D during the p.m. peak hour. This is considered a ***significant impact***.
- h) 8<sup>th</sup> Street / L Street, where the traffic generated by the project would degrade the level of service from LOS B to LOS D during the p.m. peak hour. This is considered a ***significant impact***.
- i) 9<sup>th</sup> Street / J Street, where the traffic generated by the project would degrade the level of service from LOS B to LOS E during the p.m. peak hour. This is considered a ***significant impact***.

- j) 10<sup>th</sup> Street / J Street, where the traffic generated by the project would degrade the level of service from LOS C to LOS E during the p.m. peak hour. This is considered a **significant impact**.
- k) 12<sup>th</sup> Street / J Street, where the traffic generated by the project would degrade the level of service from LOS C to LOS E during the p.m. peak hour. This is considered a **significant impact**.
- l) 15<sup>th</sup> Street / J Street, where the level of service without the proposed projects would be LOS D during the p.m. peak hour and project generated traffic would increase the average vehicle delay by 52.9 seconds. This is considered a **significant impact**.
- m) 15<sup>th</sup> Street / X Street, where the level of service without the proposed projects would be LOS E during the p.m. peak hour and project generated traffic would increase the average vehicle delay by 20.8 seconds. This is considered a **significant impact**.
- n) 16<sup>th</sup> Street / H Street, where the traffic generated by the project would degrade the level of service from LOS C to LOS D during the p.m. peak hour. This is considered a **significant impact**.

#### Mitigation

- 5.6-17a *At the 3<sup>rd</sup> Street / J Street intersection, implement the near-term Mitigation Measure (a) (modification of signal phase splits) and also modify the lanes on the southbound I-5 off-ramp approach (eastbound) to provide one combination left/through lane, one through lane, one combination through/ right lane, and one exclusive right turn lane. This mitigation measure would reduce average vehicle delay during the a.m. peak hour by 32.5 seconds and would improve traffic operations during the p.m. peak hour to LOS C. This mitigation measure would reduce the long-term cumulative impact to a **less-than-significant** level. The applicant of the proposed project shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.*
- 5.6-17b *At the 3<sup>rd</sup> Street / L Street intersection, implement the near-term Mitigation Measure (b) (modification of the westbound approach lanes) and also modify the traffic signal phase splits during the p.m. peak period by increasing the southbound 3<sup>rd</sup> Street approach to 23 seconds, decreasing the westbound L Street signal phase time to 38 seconds, and decreasing the northbound 3<sup>rd</sup> Street left-turning movement to 9 seconds. This mitigation measure would reduce average vehicle delay by 43.5 seconds during the p.m. peak hour and provide LOS C traffic operations during the a.m. peak hour. This mitigation measure would reduce the near-term cumulative impact to a **less-than-significant** level. The applicant of the proposed project shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.*
- 5.6-17c *At the 3<sup>rd</sup> Street / N Street intersection, implement the near-term Mitigation Measure (c) (modification of signal phase splits). This mitigation measure would improve traffic operations to LOS C during the a.m. peak hour and would reduce the long-term cumulative impact to a **less-than-significant** level. The applicant of the proposed project shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.*
- 5.6-17d *At the 3<sup>rd</sup> Street / P Street intersection, implement the near-term Mitigation Measure (d) (modification of signal phase splits). This mitigation measure would improve traffic operations to LOS C during the p.m. peak hour and would reduce*

the long-term cumulative impact to a **less-than-significant** level. The applicant of the proposed project shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.

- 5.6-17e At the 5<sup>th</sup> Street / I Street intersection, modify the traffic signal phase splits during the p.m. peak period by increasing the signal phase time to 30 seconds for the northbound and southbound 5<sup>th</sup> Street approaches and decreasing the westbound I Street approach to 70 seconds. This mitigation measure would improve traffic operations to LOS C during the p.m. peak hour and would reduce the long-term cumulative impact to a **less-than-significant** level. The applicant of the proposed project shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.
- 5.6-17f At the 5<sup>th</sup> Street / L Street intersection, implement the near-term Mitigation Measure (e) (modification of signal phase splits). This mitigation measure would improve traffic operations to LOS C during the p.m. peak hour and would reduce the long-term cumulative impact to a **less-than-significant** level. The applicant of the proposed project shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.
- 5.6-17g At the 7<sup>th</sup> Street / L Street intersection, implement the near-term Mitigation Measure (f) (modification of signal phase splits). This mitigation measure would improve traffic operations to LOS C during the p.m. peak hour and would reduce the long-term cumulative impact to a **less-than-significant** level. The applicant of the proposed project shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.
- 5.6-17h At the 8<sup>th</sup> Street / L Street intersection, implement the near-term Mitigation Measure (g) (modification of signal phase splits). This mitigation measure would improve traffic operations to LOS B during the p.m. peak hour and would reduce the long-term cumulative impact to a **less-than-significant** level. The applicant of the proposed project shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.
- 5.6-17i At the 9<sup>th</sup> Street / J Street intersection, implement the near-term Mitigation Measure (h) (modification of signal phase splits). This mitigation measure would improve traffic operations to LOS C during the p.m. peak hour and would reduce the long-term cumulative impact to a **less-than-significant** level. The applicant of the proposed project shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.
- 5.6-17j At the 10<sup>th</sup> Street / J Street intersection, implement the near-term Mitigation Measure (i) (modification of signal phase splits). This mitigation measure would improve traffic operations to LOS C during the p.m. peak hour and would reduce the long-term cumulative impact to a **less-than-significant** level. The applicant of the proposed project shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.
- 5.6-17k At the 12<sup>th</sup> Street / J Street intersection, modify the traffic signal phase splits during the p.m. peak period by increasing the eastbound J Street approach to 23 seconds and decreasing the southbound 12<sup>th</sup> Street and northbound right-turn movement signal phase time to 27 seconds. This mitigation measure would improve traffic operations to LOS C during the p.m. peak hour and would reduce the long-term cumulative impact to a **less-than-significant** level.

- 5.6-17l *At the 15<sup>th</sup> Street / J Street intersection, implement the near-term Mitigation Measure (k) (modification of signal phase splits). This mitigation measure would reduce average delay by 59.2 seconds during the p.m. peak hour and would reduce the long-term cumulative impact to a **less-than-significant** level. The applicant of the proposed project shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.*
- 5.6-17m *At the 15<sup>th</sup> Street / X Street intersection, implement the near-term Mitigation Measure (l) (modification of signal phase splits). This mitigation measure would reduce average vehicle delay by 32.8 seconds during the p.m. peak hour and would reduce the long-term cumulative impact to a **less-than-significant** level. The applicant of the proposed project shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.*
- 5.6-17n *At the 16<sup>th</sup> Street / H Street intersection, implement the near-term Mitigation Measure (m) (modification of signal phase splits). This mitigation measure would improve traffic operations to LOS C during the p.m. peak hour and would reduce the long-term cumulative impact to a **less-than-significant** level. The applicant of the proposed project shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.*

Significance after Mitigation

Less than significant

**Impact 5.6-18 Cumulative impacts to freeway mainline under long term plus project condition**

The proposed Downtown projects would add traffic to freeway mainline segments but would not cause freeway levels of service to deteriorate beyond LOS E. The projects would add traffic to I-5 freeway segments that would operate at LOS F without the projects. This is considered a **significant impact**.

Mitigation

*No feasible mitigation measures were identified that would reduce the impact of the project on I-5 freeway mainline segments. Widening the freeway would reduce the impact but was not considered feasible.*

Significance after Mitigation

**Significant and unavoidable**

**Impact 5.6-19 Cumulative impacts to freeway merge/ diverge/ weave areas under long term plus project condition**

The proposed Downtown projects would add traffic to freeway ramps and weaving areas but would not cause levels of service to deteriorate beyond LOS E on these facilities. The projects would add traffic to I-5 and U.S. 50 freeway ramps that would operate at LOS F without the projects. This is considered a **significant impact**.

Mitigation

No feasible mitigation measures were identified that would reduce the impact of the project on I-5 and U.S. 50 freeway ramps. Widening the freeway would reduce the impact but was not considered feasible.

Significance after Mitigation

**Significant and unavoidable**

***Impact 5.6-20 Cumulative impacts to freeway ramp queues under long term plus project condition***

The proposed Downtown projects would add traffic to the northbound I-5 off-ramp to J Street during both the a.m. and p.m. peak hours, when the queue would exceed the ramp's storage capacity without the proposed projects. Similarly, the proposed Downtown projects would add traffic to the southbound I-5 off-ramp to J Street during the a.m. peak hour, when the queue would exceed the ramp's storage capacity without the proposed projects. This is considered a **significant impact**.

Mitigation

*5.6-20 The near-term Mitigation Measure (a) would reduce the queue for the northbound I-5 off-ramp queue at J Street during the p.m. peak hour to 1,725 lane feet and would reduce the long-term cumulative impact during this time period to a **less-than-significant** level. This mitigation measure would not significantly affect this northbound I-5 off-ramp queue at J Street during the a.m. peak hour. The mitigation measure would reduce the queue for the southbound I-5 off-ramp at J Street to 6,100 feet during the a.m. peak hour, but this would not be enough reduction to eliminate the long-range cumulative impact. Widening the freeway would reduce the impact but was not considered feasible.*

Significance after Mitigation

**Significant and unavoidable**

## **5.7 URBAN DESIGN AND AESTHETICS**



## 5.7 URBAN DESIGN AND AESTHETICS

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### INTRODUCTION

This sub-chapter provides a description of existing visual conditions in the project vicinity and describes changes to those conditions that would result from construction and the design of the proposed Metropolitan Project. Cumulative effects of the proposed project are evaluated in conjunction with other potential development in the Central City area. Applicable plans and policies include:

- Sacramento Central Business District Urban Design Plan
- City of Sacramento Zoning Ordinance
- Design Review Guidelines Plan
- Capitol View Protection Ordinance
- Downtown Cultural and Entertainment Master Plan

Information to prepare this section was obtained from site visits conducted in May and June, 2006, review of the City of Sacramento General Plan, the Central City Community Plan (CCCP), the Sacramento City Code, and the Sacramento Urban Design Plan, as well as a review of project-specific material provided by the project applicant. **Figure 5.7-1** identifies the locations from which photographs for this section were taken.

No comments regarding aesthetics or urban design were received during circulation of the NOP.

### ENVIRONMENTAL SETTING

#### VISUAL CHARACTERISTICS OF THE PROJECT VICINITY

The project site is located within Sacramento's Central Business District (CBD), which generally extends from 3<sup>rd</sup> to 16<sup>th</sup> and from I to N streets inside the Core Area, which extends from H to R streets and from 16<sup>th</sup> Street to the Sacramento River. The Core Area is the most intensely developed area of the City and serves as the government, civic, office and entertainment center of the Region.

Through historic growth and development and the planned efforts of the City and Redevelopment Agency, the City of Sacramento has promoted the concept of a compact urban core in the Central City. In accordance with policies such as the Urban Design Plan and the CBD Zone, sections of the CBD are the only area in the City with no height limitations, except within the two-block area around Capitol Park subject to the Capitol View Protection Ordinance.

As a consequence, the project vicinity includes a number of high-rise office and hotel towers. Several residential towers, including the twin 53 story Towers mixed-use residential and hotel project, are nearing construction or are proposed and in the planning review process.



Source: Ervin Consulting; 2006

**FIGURE 5.7-1**  
**PHOTOGRAPHIC VIEWS**

These towers include but are not limited to:

- Wells Fargo Center, 5<sup>th</sup> and Capitol Mall - 30 stories, 423 feet
- The US Bank Building, 8<sup>th</sup> and J - 26 stories, 374 feet
- CalEPA Building, 10<sup>th</sup> and I - 25 stories, 372 feet
- The Renaissance Tower, 8<sup>th</sup> and K - 26 stories, 372 feet
- US Courthouse and Federal Building – 18 stories, 350 feet
- Esquire Plaza Office Tower, 13<sup>th</sup> and K - 22 stories, 330 feet
- Sheraton Grand Hotel, 13<sup>th</sup> and J - 26 stories, 280 feet
- 1201 K Street Building, 12<sup>th</sup> and K - 18 stories, 290 feet
- Meridian Plaza, 14<sup>th</sup> and L - 12-stories, 176 feet
- Attorney General Building, 13<sup>th</sup> and I - 17 stories, 256 feet

*Under Construction*

- Towers on Capitol Mall, 3<sup>rd</sup> and Capitol Mall – 53 stories, 615 feet
- 621 Capitol Mall, 6<sup>th</sup> and Capitol Mall – 25 stories, 372 feet

**Freeways**

The Sacramento downtown area is visible from several locations on interstate freeways that transect the City of Sacramento. The existing downtown skyline is visible from northbound and southbound I-5, eastbound and westbound I-80, and westbound I-50. The portions of these interstates that run through the City are not designated as scenic highways.

**Site Characteristics**

The existing site contains five buildings that were constructed between the 1850s and 1960s (**Figure 5.7-2, Viewpoints 1 and 2**). There is some surface parking off the alley behind the Biltmore Hotel and Broiler structures (**Figure 5.7-3, Viewpoint 3**). There are three very small (less than 2-inch diameter) street trees in planters along the J Street sidewalk, and no other vegetation on the site. The City parking garage abuts the alley to the north, and a five-story modern office building abuts the site to the east. Cesar E. Chavez Plaza is located across 10<sup>th</sup> Street to the west, and low-rise retail/commercial structures are located to the south across J Street.

The Plaza Building at 921 10<sup>th</sup> Street, constructed of brick and surfaced with stucco, was built about 1907 and has been substantially altered approximately three times. The six story building no longer resembles its original image or the one created in 1923 by Sacramento architect Arthur Lamb.



Source: Ervin Consulting; 2006

**FIGURE 5.7-2  
VIEWPOINTS 1 AND 2**



Source: Ervin Consulting; 2006

**FIGURE 5.7-3  
VIEWPOINT 3**

The RCA Building at 927 10<sup>th</sup> Street, originally designed by Sacramento architect Harry Devine in 1940, has been substantially altered and its image modified. A reinforced concrete building with a stucco/plaster surface, its image reflects an early interpretation of International style. The current appearance of the building is a modification of its original 1940s design.

The façade of the Biltmore Hotel at 1009 J Street, built in 1882, has been altered and the interior has become substantially deteriorated. The structure is a wood frame and brick building three-stories tall, and contains rooms and apartments clustered around a central, three-story, open stairwell. The upper two-stories of the building are surfaced with painted cement plaster, and the ground floor is surfaced with green ceramic tile. The rear of the building, the north elevation, reveals more of the building's original appearance, with segmented arched windows on the upper two floors, and brick surface. Two covered and balustraded balconies project from the rear at the second-and third-floor levels. A stepped parapet and brick chimney stacks are visible along the edge of the building at the rear and sides. The façade no longer reflects its period of significance or era.

The Broiler at 1013 J Street, a two story brick building with commercial and former restaurant spaces on the ground level and rooms on the second floor, has been modified on both the interior and the exterior. The second floor which once was part of the Biltmore and somewhat resembled it in the interior is substantially deteriorated.

The building at 1021 J Street is less than fifty years old, is not historic, and has no character defining features.

As further discussed in Chapter 5.2 (Cultural Resources), the form and image of the downtown alleys is a critical character-defining feature of downtown Sacramento and its historic districts. Over time, many of the street facades of the downtown buildings have been altered, but often the alley elevation, with its purely utilitarian function, has remained less modified. As a result, some of the more intact nineteenth century building facades remaining in the downtown area are those located in the alleys. These alley facades thus often provide a better image of post Gold Rush Sacramento than downtown street-face facades. The western portion of the alley between I and J streets and 10<sup>th</sup> and 11<sup>th</sup> streets accesses the existing buildings on the project site at 921 10<sup>th</sup> Street, 927 10<sup>th</sup> Street, 1009 J Street, and 1013-15 J Street. This portion of the alley, despite significant alterations, still possesses some elements of character-defining alley features with its rear brick elevations and nineteenth century building scale.

### ***Project Site Vicinity***

Centered by Caesar E. Chavez Plaza, the area surrounding the project site typifies the CBD. Surrounding the park are some of the city's largest office towers. The US Bank Building at 8<sup>th</sup> and J, the Renaissance Tower at 801 K Street, and the CalEPA Building at 10<sup>th</sup> and I streets set the tone for the area around the Plaza, providing stark contrast to the large number of historic structures also in this zone. The Renaissance Tower is a modern, black glass tower with red granite exterior materials, finished in a black glass curtain wall. The US Bank building complex includes the Library Galleria, the Central Library, (including the renovated main library of Sacramento and new library administration building), and a parking garage. The architectural style of these buildings is dated neoclassical, traditional in styling. The structures have punched windows, a granite base, and are finished in a limestone or limestone-like cladding material.

The block immediately to the south of the Plaza contains many historic structures built between 1856 and 1925. It is the center of the Plaza Park Historic District. The Ruhstaller building and retail storefronts are located along J Street. These structures are predominantly low-rise buildings, with a few mid-rise buildings. The California Western Life Insurance Building at 926 J Street (15 stories, 220 feet) is the newest building on the block, built in 1925.

The historic Beaux Arts City Hall graces the area north of the Plaza, with the New City Hall building behind it, and the 25-story CalEPA building directly to the east, just north of the project site. Immediately north of the project site is the City's "waterfall" parking garage, with ground floor retail along 10<sup>th</sup> and I Streets.

Southeast of the project site, the Cathedral of the Blessed Sacrament is located at 11<sup>th</sup> and K streets, in the Cathedral Square Historic District. Directly to the east of the project site, two significant historic structures rise above their surroundings, marking the northern entrance to the City; the Elks Building on 11<sup>th</sup> Street (15 stories, 230 feet) and Masonic Temple at 1123 J Street are examples of the 1920s High Rise Commercial style.

Another key feature of the project vicinity is the K Street Mall, a pedestrian mall from the Westfield Downtown Plaza Shopping Center at 7<sup>th</sup> Street to the Convention Center entrance on 13<sup>th</sup> Street. The K Street Mall contains a mixture of retail and commercial uses and is designated as the City's regional shopping street. It is lined with low-rise buildings, mostly of four stories or less between 7<sup>th</sup> and 12<sup>th</sup> streets, with the exception of the Renaissance Tower.

Light Rail transit runs along K Street from 7<sup>th</sup> and 12<sup>th</sup> streets. Raised rectangular planters, decorative pavers, and outdoor restaurant seating areas are provided in this portion of the Mall.

The State Capitol is located two blocks south on 10<sup>th</sup> Street. Because of its deep setback from 10<sup>th</sup> Street, the Capitol building is not visible looking south from the project site from ground level.

### ***Adjacent Protected View Corridors***

The Sacramento Urban Design Guidelines (Urban Design Framework, Section 2.4.4) sets a policy for the preservation of vistas to protect the uniqueness of Sacramento. The protection of views of landmarks and the spatial continuity of streets is identified as essential. The Guidelines define J Street as Sacramento's Main Street, and 10<sup>th</sup> Street as the Central Core/Civic Spine, designating both as Protected View Corridors. The Plan protects these and other view corridors, including 9<sup>th</sup> and I streets, from development that would in any way block views and vistas (**Figure 5.7-4, Protected View Corridors**).

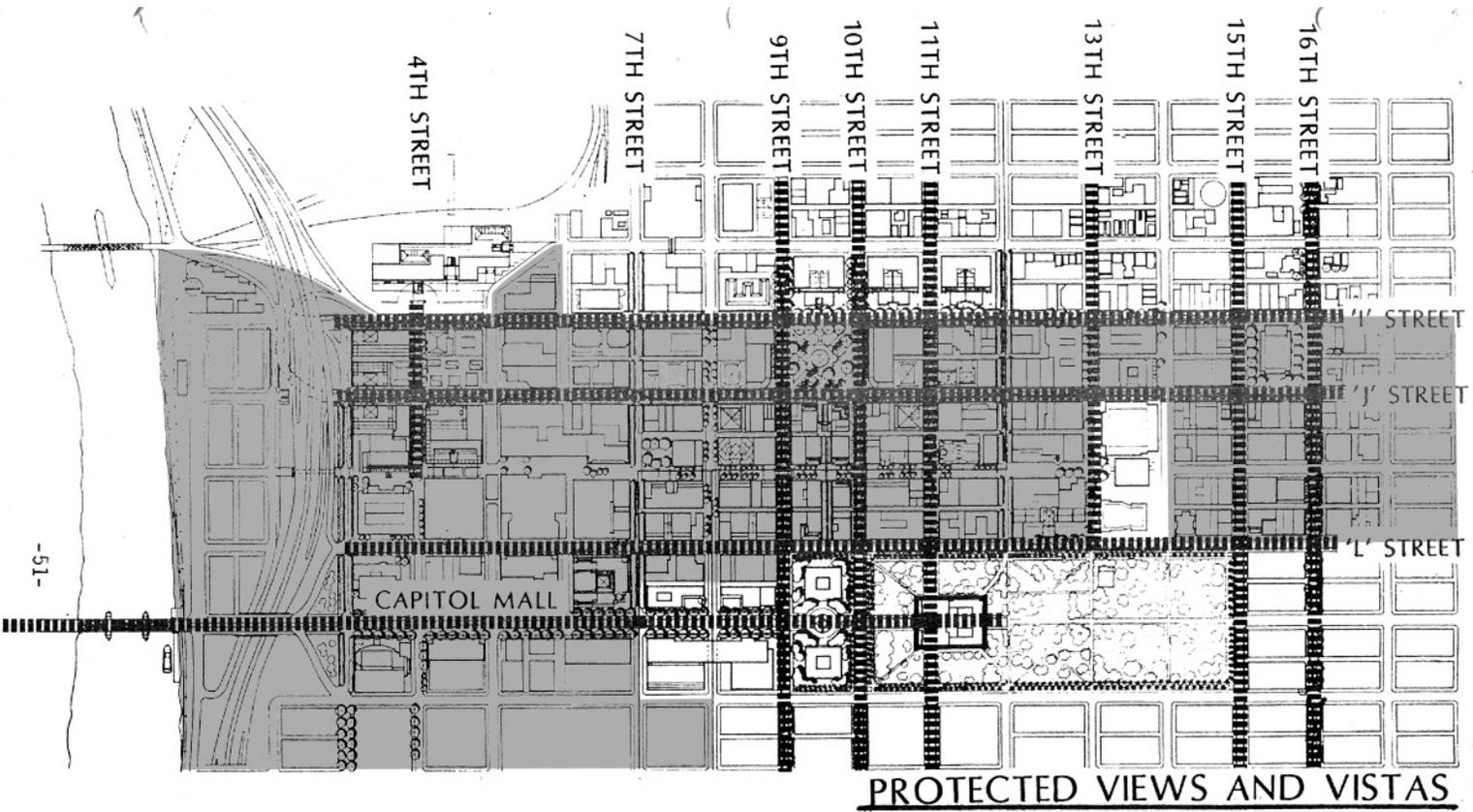
J Street forms a primary entry to the City, with important views from 3<sup>rd</sup> Street through the City to 15<sup>th</sup> Street. Across both 10<sup>th</sup> and J streets, the Plaza Park /CBD Historic District represents a concentration of buildings from the 1910-1930 era that influence their surroundings. Some of the structures date back to the very early commercial development of the City when J Street was one of the major transportation routes to the northern gold fields. Many of the buildings along J Street still retain evidence of the original structures built prior to the raising of the streets in their basements and under the sidewalks.

The Urban Design Plan protects view corridors from development that would in any way block views of landmarks and the spatial continuity of these streets. Important architectural landmarks along J Street near the proposed project site include the historic social club, the Elks Building and Masonic Temple on the north side of J Street between 11<sup>th</sup> and 12<sup>th</sup> streets. These buildings make up a warm colored California Style commercial area, with cast lintels and detailing. The buildings feature high open retail bases with arched retail storefronts. 926 J Street, known also as the California Western Life Insurance building (1925) located diagonally across the 10<sup>th</sup> and J streets intersection, is an example of Period Revival styles in a French Renaissance Revival style.

I Street is also designated as a Protected View Corridor, as a Civic Center Boulevard. City Hall (1911), at 915 I Street, is an example of a Beaux Arts Style building, a classically derived style brought to this country by American students from the Ecole des Beaux Arts in Paris. The Central Library building (1918), at 828 I Street, is an example of the Renaissance Revival style, an aspect of the general revival of classically detailed styles around the turn of the century which followed an earlier revival of Renaissance models in the mid-19th century.

### **VIEW FROM THE PROJECT SITE**

The area surrounding the proposed project site is fully developed. Views from the proposed project site are distinguished by a built-up urban environment.



Source: Central Business District Urban Design Plan

**FIGURE 5.7-4**  
**PROTECTED VIEW CORRIDORS**

The view directly across 10<sup>th</sup> Street is of Cesar E. Chavez Plaza Park, and the US Bank Building and Library Galleria across 9<sup>th</sup> Street. The view from the corner of 10<sup>th</sup> and J streets looking north is of City Hall and the Federal Post Office building, past Plaza Park (**Figure 5.7-5, Viewpoints 4 and 5**). Views of the buildings at ground level are largely hidden by the trees in Plaza Park; views of the buildings would be more pronounced during the winter months when the trees have lost their leaves.

Looking south from the corner of 10<sup>th</sup> and J streets shows views down the 10<sup>th</sup> Street corridor (**Figure 5.7-6, Viewpoints 6 and 7**) along the base of the 926 J Street building. The State Capitol is not visible looking down 10<sup>th</sup> Street from the site, unless from an unobstructed elevated position. Viewpoint 7 looks west down J Street towards the J Street Lofts project under construction.

Immediately south of the project site is a group of low-rise retail commercial buildings along the south side of J Street (**Figure 5.7-7, Viewpoints 8 and 9**). Behind the buildings on Viewpoint 9, the Sheraton Grand Hotel, 1201 K Street and Esquire Plaza Office Tower can be seen.

### **VIEWS ONTO THE PROJECT SITE**

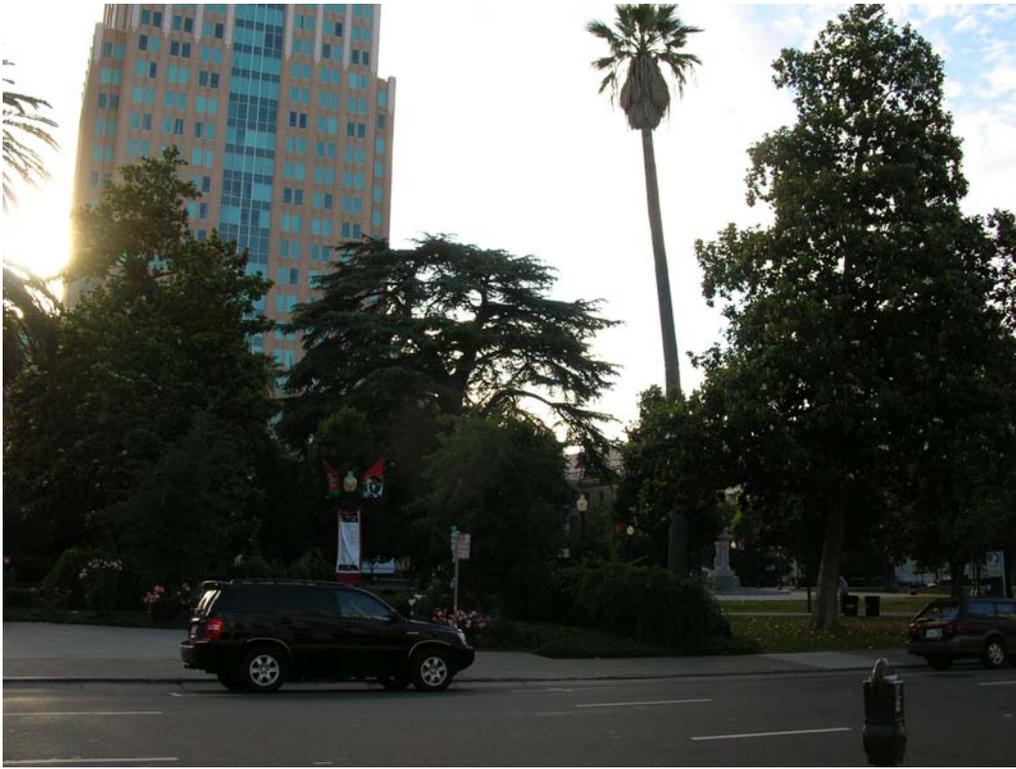
The existing buildings on the proposed project site range from three to six stories with a basement level. There are no trees to obstruct immediate views of the site from J Street or 10<sup>th</sup> Street, but trees from Plaza Park obstruct views of the site from I Street and J Street west of or near 9<sup>th</sup> Street.

Multi-story buildings around the proposed project site are visible from the north- and south-bound lanes of I-5, and from the east- and west-bound lanes of Business 80 to the north. The site is highly visible from the outdoor café on northbound 10<sup>th</sup> Street (**Figure 5.7-8, Viewpoint 10**). The site is shown from the northwest corner of 10<sup>th</sup> and I at City Hall, and at 9<sup>th</sup> and J westbound (**Figure 5.7-9, Viewpoints 11 and 12**).

### **PROJECT COMPONENTS**

The proposed project would build a new 420 foot high, 39-story mixed-use residential tower across from Plaza Park. The building, 389 feet to the roof line with a 31 foot spire, would accommodate 320 residential condominium units with commercial/retail spaces at street level facing both 10<sup>th</sup> and J streets. The highest residential floor level along 10<sup>th</sup> Street would be 354 feet 8 inches, and the top of the terrace level windscreen within the Capitol View Protection Zone would be 345 feet 7 inches.

Residential amenities would include private balconies, a swimming pool, and terrace on the 37<sup>th</sup> floor, fitness and recreation rooms, and landscape and open space terrace areas. The top of the building would be split into three levels, with the pool and penthouses on the lowest. An upstairs terrace for the residential penthouses would be next, and then a room with mechanical systems. The condos would range from 700 to 1,300 square feet (sf), feature ample window space, and include open air balconies on all units. Two-story lofts would be available above the ground-floor stores, and some penthouses could have two floors.



Source: Ervin Consulting; 2006

**FIGURE 5.7-5  
VIEWPOINTS 4 AND 5**



Source: Ervin Consulting; 2006

**FIGURE 5.7-6  
VIEWPOINTS 6 AND 7**



Source: Ervin Consulting; 2006

**FIGURE 5.7-7  
VIEWPOINTS 8 AND 9**



Source: Ervin Consulting; 2006

**FIGURE 5.7-8  
VIEWPOINT 10**



Source: Ervin Consulting; 2006

**FIGURE 5.7-9  
VIEWPOINTS 11 AND 12**

The building's step-like design is intended to reflect the downtown's existing high-rise motif, which consists largely of distinct floors with step backs. A residential entry lobby would be located off 10<sup>th</sup> Street, facing Cesar Chavez Plaza, and would include pre-cast concrete panels and architectural features. The entry corner and retail would include glass facades. The lower floors would wrap a seven-level, 514-space parking garage. Ingress and egress for the parking garage would be off the alley on the northern boundary of the property.

The building provides a five foot setback from the 10<sup>th</sup> Street property line, with an arcade or plaza creating a place for outdoor dining (see previous Figure 2.0-4, Sections). The street wall is 18 feet at the arcade, with two levels of loft units providing a 10 foot ceiling over the arcade, for a maximum 60 feet street wall. The residential tower is set back 25 feet from the property line with a height of 329 feet and a 170 feet diagonal.

On the J Street façade, the building provides a five foot setback from a retail street wall. The street wall is a maximum of 60 feet to the top of the terrace windscreen. The residential tower is set back 25 feet from the property line with a height of 329 feet at the roofline at 10<sup>th</sup> Street, with a architectural structure at 420 feet, then stepping down to 344 feet at the terrace within the Capitol View Protection Zone. The tower is set back 91.5 feet from the eastern property line, over a 79 feet podium.

The majority of the I would be pre-cast concrete panels with clear storefront and windscreen glazing, and green tower and podium glazing. The parking garage would be pre-cast concrete panels with architectural features. No specific building materials or architectural treatment details were provided as of the writing of this EIR.

### ***Visual Simulations***

Massing simulations prepared for the proposed project (**Figure 5.7-10**) show the project as it would appear in the context of the other development in the immediate vicinity.

Photo simulations prepared for the project show how the proposed project would appear in the context of the other development in the area. Views are provided from 10<sup>th</sup> Street across from the State Capitol, looking northbound (**Figure 5.7-11**); from the corner of 11<sup>th</sup> and J looking west toward the US Bank Building and Plaza Park (**Figure 5.7-12**); and looking south down 10<sup>th</sup> Street from the plaza in front of City Hall (**Figure 5.7-13**).

Visual simulations were also prepared for the entries to the City. The proposed project would be most visible from I-5 southbound at Richards Boulevard (**Figure 5.7-14**). Views from 12<sup>th</sup> Street southbound off Business 80 entering the City are obscured by the CalEPA building until about G Street. Views from J Street eastbound are obscured by intervening buildings. Views from Pioneer Bridge entering the City are shown in **Figure 5.7-15**. Views from the W-X Freeway at 16<sup>th</sup> Street are shown in **Figure 5.7-16**.



VIEW FROM SOUTHEAST FACING PODIUM ELEVATION



VIEW FACING 10TH STREET ELEVATION

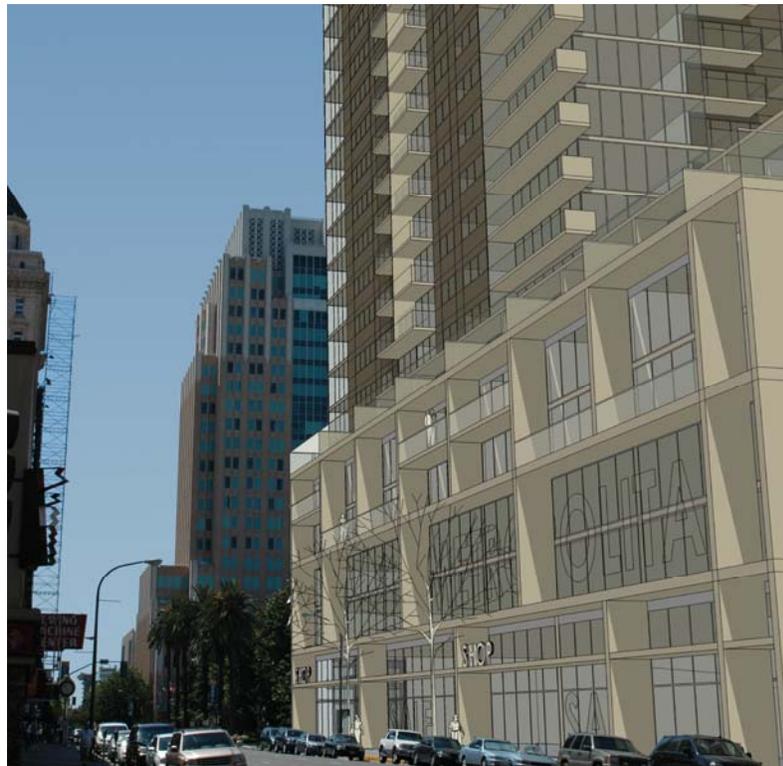
Source: Kwan Hemji, 2006

FIGURE 5.7-10  
MASSING SIMULATION



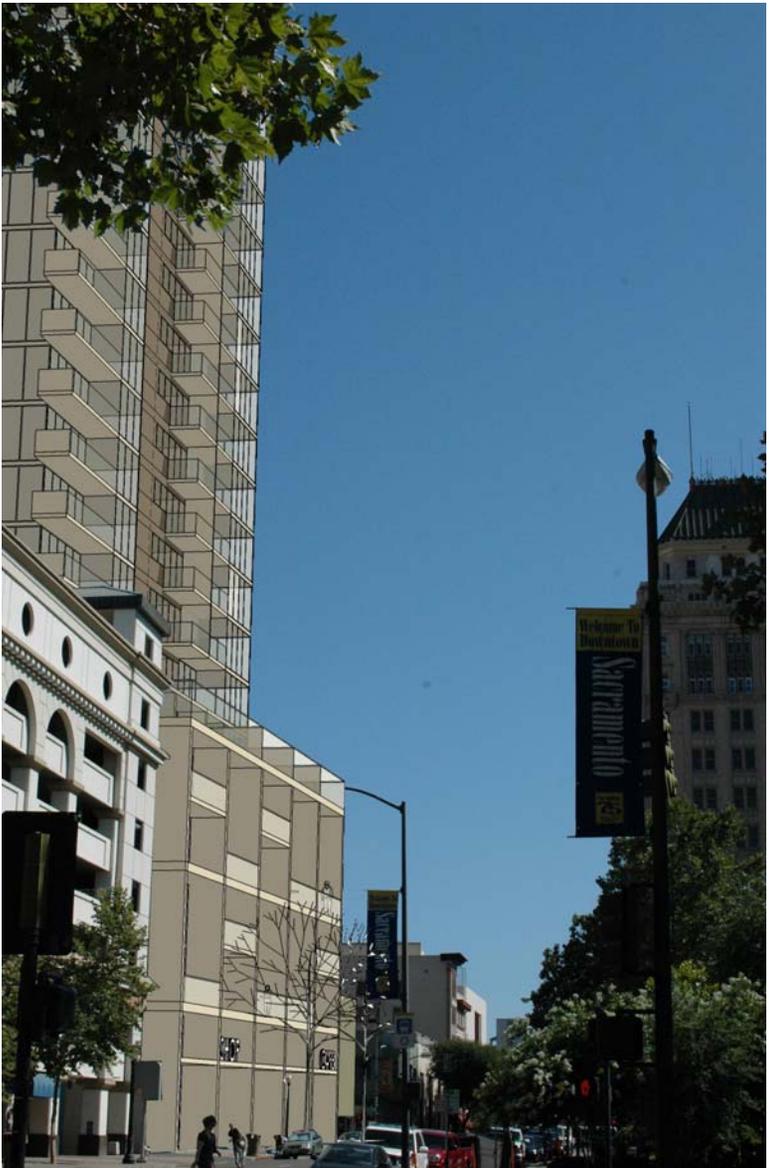
Source: Kwan Henmi; 2006

**FIGURE 5.7-11**  
**PHOTO SIMULATION**  
**10<sup>TH</sup> STREET LOOKING NORTH FROM CAPITOL**



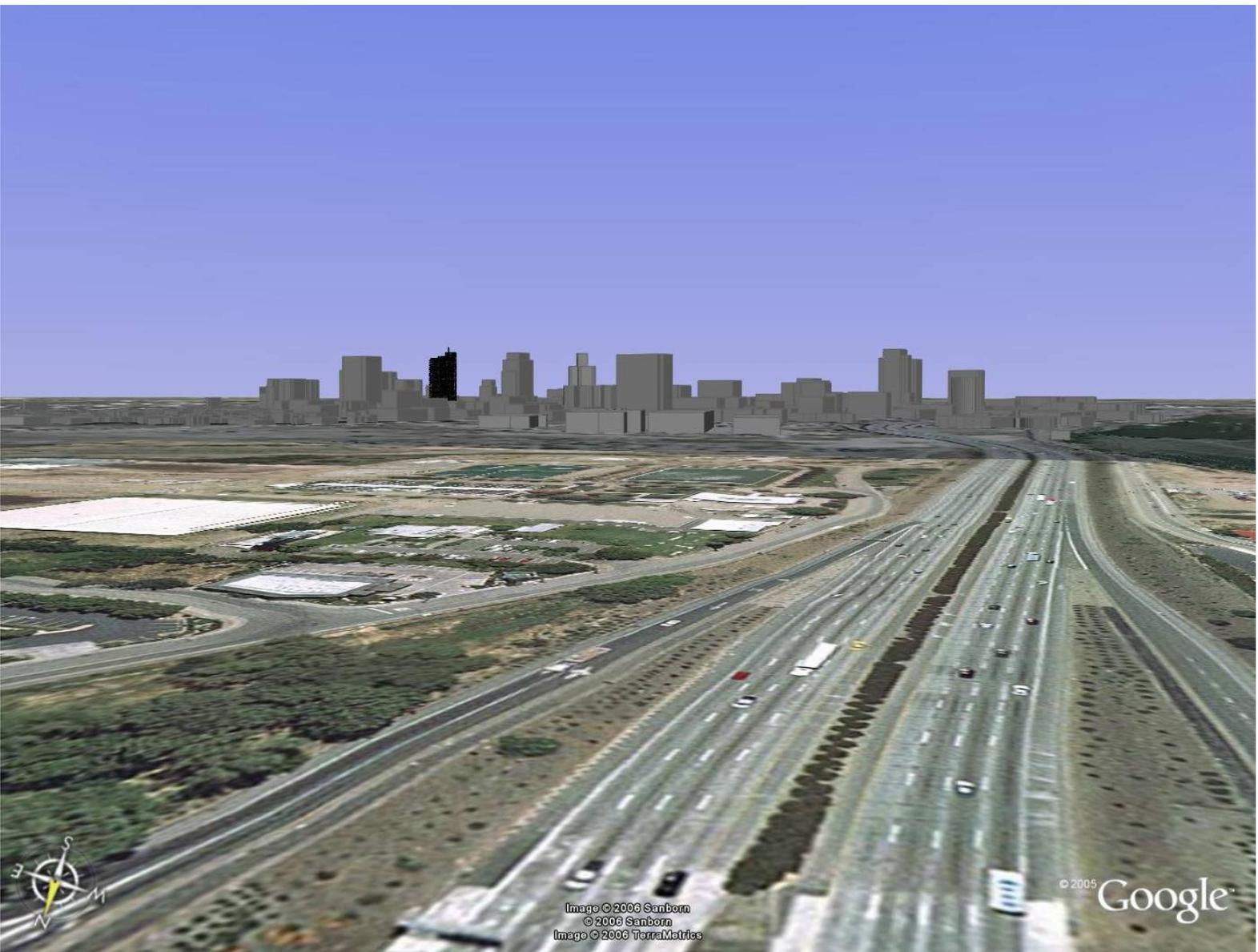
Source: Kwan Henmi; 2006

**FIGURE 5.7-12**  
**PHOTO SIMULATION**  
**J STREET LOOKING WEST FROM 11<sup>TH</sup> ST**



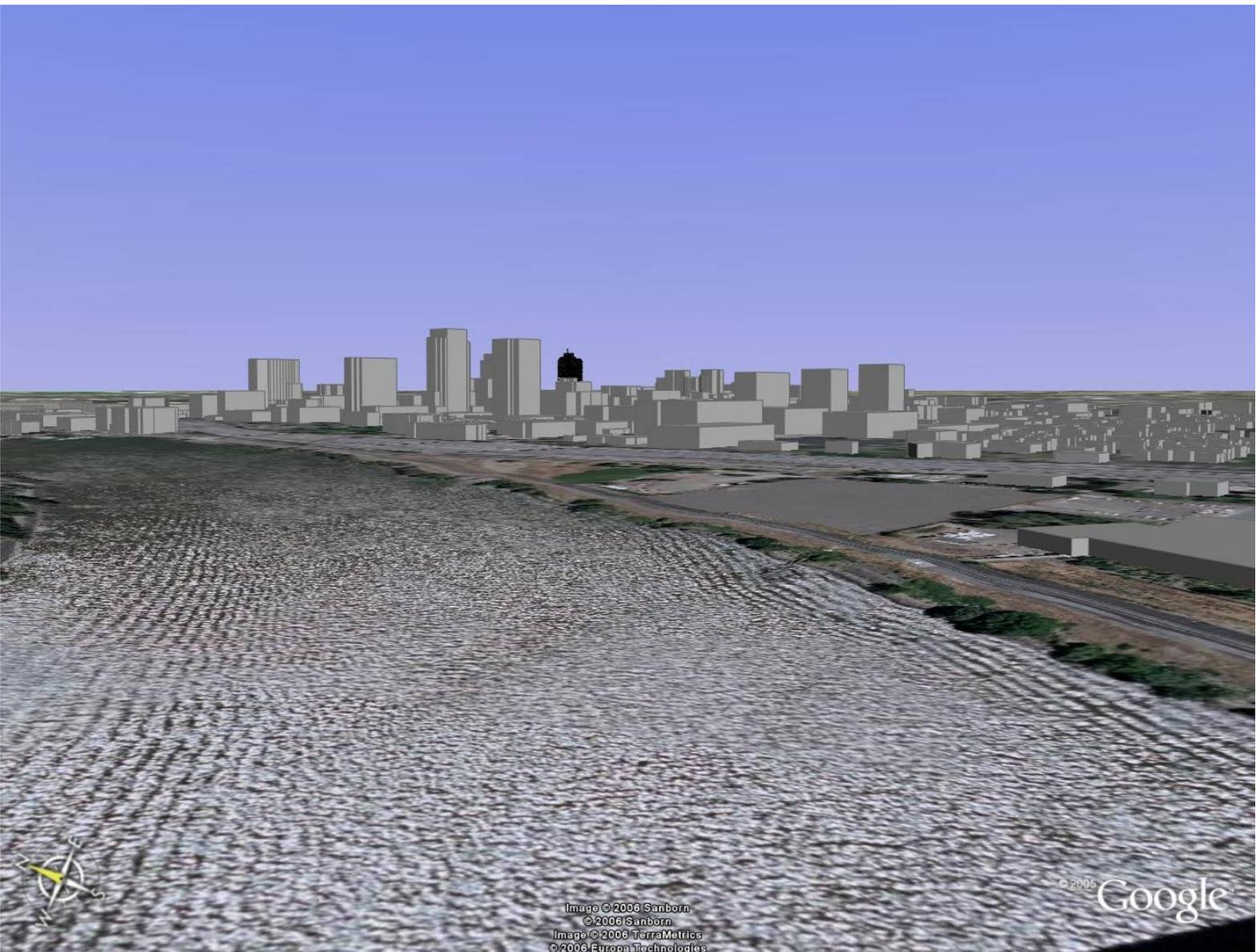
Source: Kwan Henmi; 2006

**FIGURE 5.7-13**  
**PHOTO SIMULATION**  
**10<sup>TH</sup> STREET LOOKING SOUTH FROM CITY HALL**



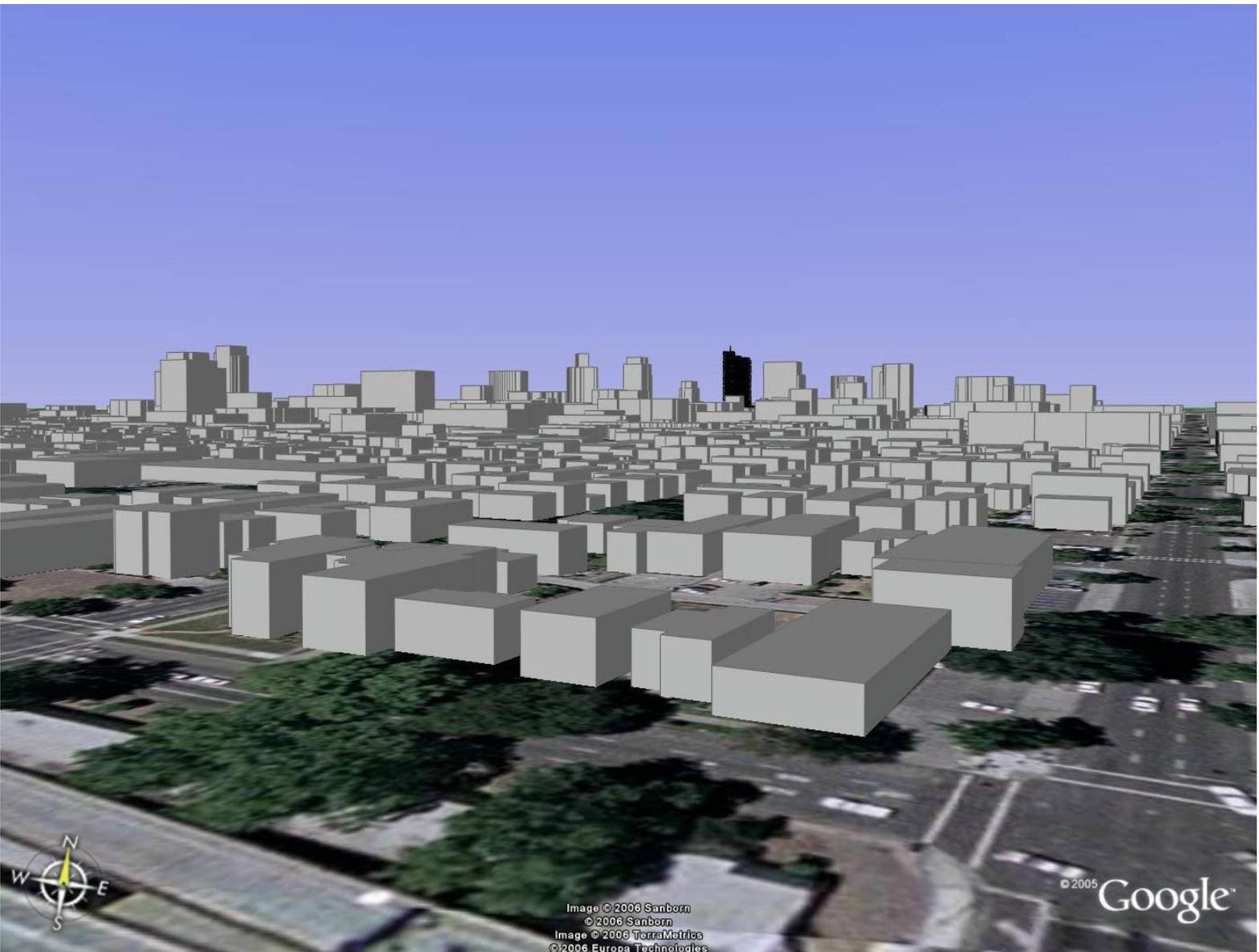
Source: Ervin Consulting; 2006

**FIGURE 5.7-14**  
**SKYLINE SIMULATION**  
**I-5 AT RICHARDS BOULEVARD**



Source: Ervin Consulting; 2006

**FIGURE 5.7-15**  
**SKYLINE SIMULATION**  
**PIONEER BRIDGE**



**FIGURE 5.7-16**  
**SKYLINE SIMULATION**  
**W-X FREEWAY AT 16<sup>TH</sup> STREET**

Source: Ervin Consulting; 2006

## REGULATORY CONTEXT

### FEDERAL

There are no federal regulations regarding aesthetics that are applicable to the proposed project.

### STATE

There are no State regulations regarding aesthetics that are applicable to the proposed project.

### LOCAL

#### ***City of Sacramento Goals and Policies for Urban Design***

The City prepares design guidelines for each design review district to protect and enhance the value and appearance of public and private property. As part of the City's design review program, there are two plans that govern design review in the project vicinity. These include the Central City Neighborhood Design Plan and the CBD Urban Design Plan (**Figure 5.7-17**). The proposed project is subject to the CBD Urban Design Plan. In addition, design issues are considered in the zoning code, the Capitol View Protection Ordinance, and the Cultural and Entertainment District Master Plan.

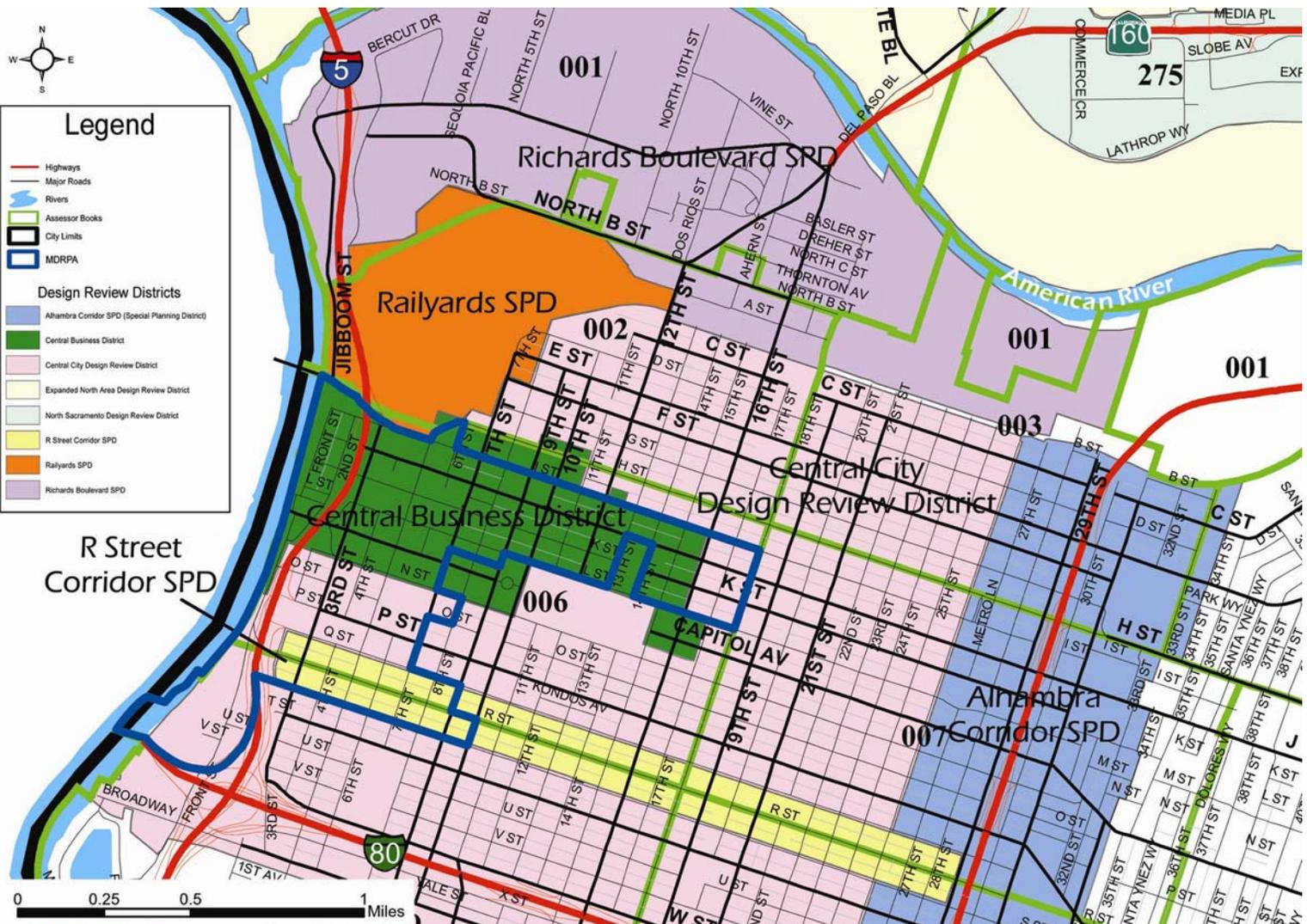
#### ***Sacramento Central Business District Urban Design Plan***

The Sacramento CBD Urban Design Plan (Urban Design Plan) consists of three documents containing plans and policies specifically related to urban design in the downtown area: the CBD Urban Design Framework Plan; the CBD Architectural Design Guidelines; and the CBD Streetscape Guidelines. The Sacramento Planning and Building Division and the Sacramento Housing and Redevelopment Agency (SHRA) intended these documents to be used during the planning and design review process of project approvals to guide downtown development from an architectural and aesthetic standpoint.

Guidelines in the Plan include massing and setback standards, streetscape design criteria, identification of retail and civic uses, and hardscape and landscape standards. The Urban Design Plan applies to the Central Business District–Special Planning District, as defined in the CCCP.

#### ***Central Business District Framework Plan***

The CBD Urban Design Framework Plan (Framework Plan) contains planning, design, and development concepts that provide the planning framework and implementation strategies for the Urban Design Plan. The general goal of the Framework Plan is "...to emphasize and enhance pre-existing relationships by focusing civic, cultural, retail, and commercial development..." within the downtown core (SHRA, 1987). The Framework Plan seeks to reinforce and enhance the traditional hierarchy of streets within downtown Sacramento by recognizing the unique character of each street.



Source: Sacramento Design Review Plan

**FIGURE 5.7-17**  
**DESIGN REVIEW DISTRICTS**

As noted above, the Framework Plan identifies priority streetscapes and Designated Protected View Corridors. The goal includes “protecting views of landmarks and the spatial continuity of streets...” Second level pedestrian bridges over public streets should not be allowed except for special circumstances, and “construction or intrusion of private or public development over public streets and right-of-ways should not be permitted.” The Framework Plan states that landscaping and building massing should enhance views of landmarks. It also provides for mandatory ground floor retail frontage requirements and designates special Storefront Treatment Areas. New developments are required to provide a mix of retail opportunities on the ground floors of buildings to complement office and other uses in downtown Sacramento. Some areas are also specifically designated as within Sidewalk Café Zones (**Figure 5.7-18** Urban Design Framework Plan).

The Framework Plan (Section 2.4.4) designates certain streets as a Special Storefront Treatment Area, requiring specific percentages of retail frontage. The Framework Plan also protects view corridors from development that would in any way block views of landmarks and the spatial continuity of these streets, and designates J Street, 10<sup>th</sup> Street, 9<sup>th</sup> Street, and 11<sup>th</sup> Street within view of the project site as Protected View Corridors.

#### *Central Business District Architectural Design Guidelines*

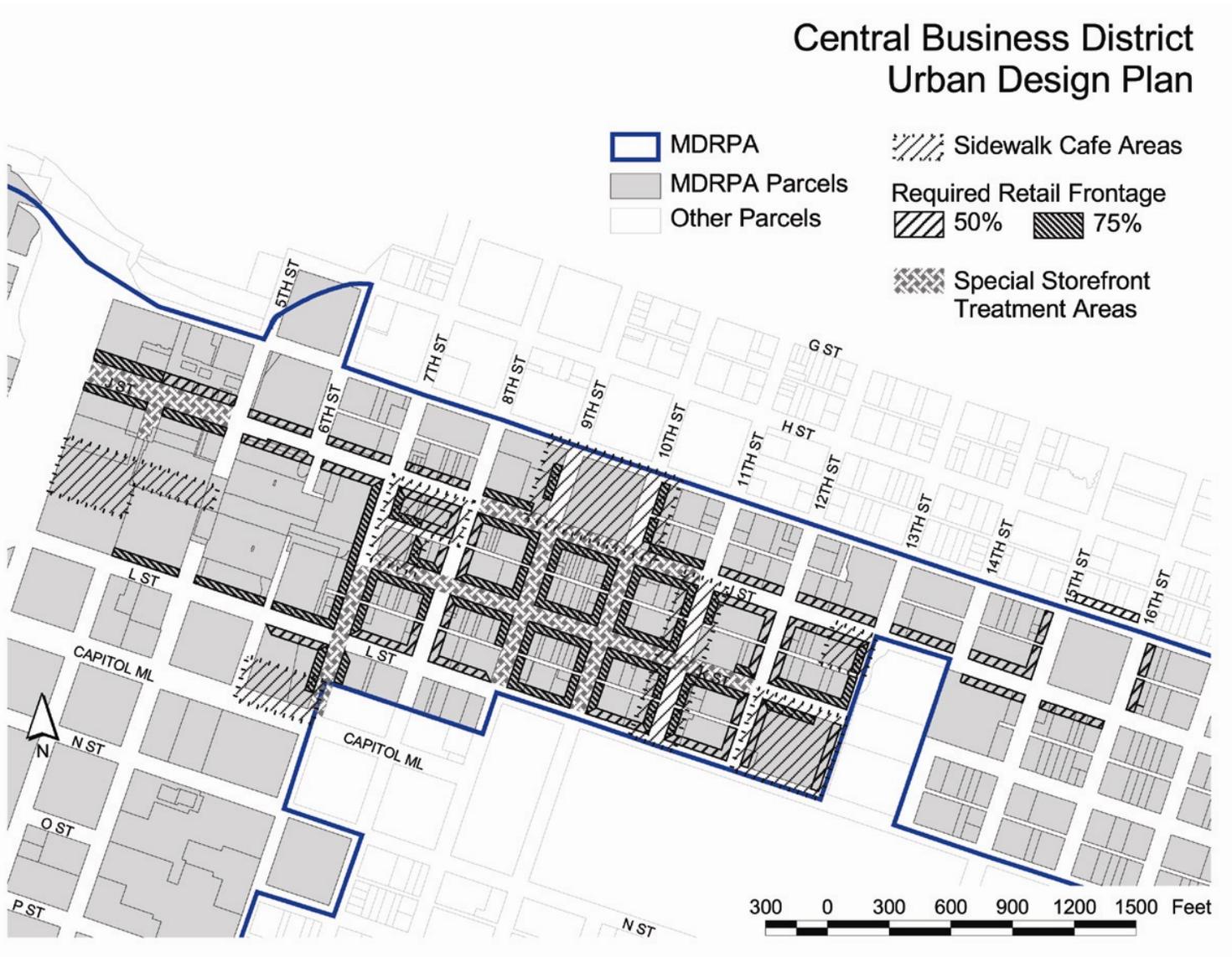
The CBD Architectural Design Guidelines (Architectural Guidelines) provide criteria for architectural review to ensure that development within the CBD contributes to the unique character of the area. Criteria contained in the Architectural Guidelines are based on policies regarding topics such as: building form, color and texture, pedestrian amenities, landscaping, massing, and setbacks. A high priority is given to the restoration and sensitive renovation of historic buildings. New development is intended to complement the architectural character of existing historic buildings through transitional design elements.

Massing districts have been developed to provide general massing requirements for the Downtown C-3 district. These are complimented with policy guidelines to make the guidelines responsive to specific site massing issues.

#### *Central Business District Streetscape Guidelines*

The CBD Streetscape Guidelines (Streetscape Guidelines) have an overall goal of creating an attractive urban setting through private and public improvements, the provision of additional open space, and the enhancement of downtown major gateways and unique features (SHRA, 1987). The first two sections of the Streetscape Guidelines establish the goals and policies of the streetscape program. The Streetscape Guidelines prescribe the specific design guidelines for each street within part of the downtown core, 7<sup>th</sup> to 13<sup>th</sup> and I to L Streets.

Section 4.2.3 identifies guidelines for the areas around Plaza Park; in particular, it specifies that the 10<sup>th</sup> Street frontage of the project site should expand the sidewalk area by removing parking and incorporating trees, flower beds, special paving, vendors, lighting, etc. to enrich the entire square. Hollow sidewalks should be incorporated into new construction as an historic amenity, where possible. J Street, or Main Street, should “encourage a rich variety of store facades, signing and retail activities integrated with existing automobile and bicycle traffic.” Hollow sidewalks should be repaired as a part of tree plantings, with street trees planted 25 feet on center.



Source: Ervin Consulting, 2006

**FIGURE 5.7-18**  
**URBAN DESIGN FRAMEWORK PLAN**

### City of Sacramento Zoning Ordinance

The project site is subject to the development standards set forth in Chapter 17 of the City Code. In addition, Chapter 17.96 CBD Special Planning District includes the Capitol View Protection Requirements.

### *Capitol View Protection Ordinance*

The Capitol View Protection Requirements (Ordinance No. 92-008) establish height restrictions, setback requirements, and parking regulations for certain areas of the CBD located near the State Capitol building and Capitol Park. The State Capitol building and the surrounding grounds of Capitol Park provide the city with a unique cultural and open space resource, thus these regulations are designed to provide visual protection to and from the Capitol building and Capitol Park.

A portion of the project site falls within the area designated for height limits. Building heights are generally limited to 150 feet along L Street, 250 or 300 feet along the south side of K Street, and 400 feet between K and J streets. The quarter block on the north side of J Street facing 11<sup>th</sup> Street is restricted to 350 feet because of the 11<sup>th</sup> Street views to the Capitol Building.

### **SACRAMENTO DOWNTOWN CULTURAL AND ENTERTAINMENT DISTRICT MASTER PLAN**

The project site falls within the boundaries of Downtown Cultural and Entertainment District Master Plan (see previous Figure 4.0-5). A key focus is the physical and psychological linkage between cultural and entertainment activities in the Central City. The Master Plan works within the framework of the Urban Design Plan “to enhance the mix and vitality of activities and their linkages.” The Downtown Cultural and Entertainment District Master Plan seeks to build upon the Urban Design Plan by identifying the means of implementing the cultural and entertainment facilities and activities necessary to achieve the goal of a lively and active downtown.

## **IMPACTS AND MITIGATION MEASURES**

### **METHOD OF ANALYSIS**

An understanding of the project vicinity and a description of the proposed project site was prepared from visits to the site in May and June 2006. The site plan, project sections, and elevations for the proposed project were used to evaluate the potential effects of project development on the visual character of the project site and the nearby area.

The analysis focuses on the manner in which development could change the visual elements or features that exist on the proposed project site. The proposed project was considered for visual compatibility with the surrounding land uses, and for potential architectural impacts to nearby historical buildings and the Plaza Park/CBD Historic District. The proposed project was also assessed for compliance with policies and guidelines contained in the Urban Design Plan and City Code. The positive or negative value attached to changes in visual character is largely subjective. The visual effects of construction activities are not evaluated in this section because they would be intermittent and temporary.

## STANDARDS OF SIGNIFICANCE

A project will normally have a significant impact on visual quality if it will have a substantial, demonstrable negative aesthetic effect. For the purposes of this analysis, the proposed project will be considered to have a significant impact on visual quality if it would:

- Compromise the visual quality of the area;
- Conflict with the design requirements or recommendations of the CBD Urban Design Plan and/or the City Code;
- Result in the exterior degradation of an architecturally or historically significant structure (See Chapter 5.2, Cultural and Historic Resources); or
- Result in severe or frequent glare reflections that could irritate or blind pedestrians or drivers.

### PROJECT-SPECIFIC IMPACTS AND MITIGATION MEASURES

#### ***Impact 5.7-1 Substantial alteration to the existing visual character or quality of the project site and its surroundings***

Implementation of the proposed project would alter the visual characteristics of the project site and vicinity. This would be a ***less-than-significant*** impact.

The project site currently contains five structures ranging in height from three to seven stories. The scale and massing of the proposed project at street level would be consistent with the existing pedestrian experience, and actually enhance the pedestrian level feel through the provision of an arcade and plaza along 10<sup>th</sup> Street, and animated, clear storefronts. The residential tower would step back from 10<sup>th</sup> and J streets at 60 feet, breaking up the existing seven story street wall currently facing Plaza Park.

Views of the project site from I-5, Pioneer Bridge, and the W-X Freeway are easily identifiable due to its location near the US Bank Building, Cal EPA Building, Renaissance Tower, California Western Life Insurance Building, Sheraton Hotel Tower, and Esquire and 1201 K Street office towers. Along with other prominent buildings along I Street, J Street, K Street and Capitol Mall, these structures generally make up downtown Sacramento's visible skyline. The proposed residential tower would be just south of the CalEPA building, and east of the US Bank Building and Renaissance Tower, which are all approximately 375 feet. The proposed project would be 389 feet to the roof line, which would be slightly taller but similar to the three existing high-rises surrounding Cesar Chavez Plaza. The proposed residential tower would generally complement and blend with the high-rise buildings surrounding Plaza Park and in the downtown area that make up the skyline. As such, the proposed project could be perceived as filling-in the skyline of downtown.

The perception of a visual impact is personal and subjective: what one person may perceive as a negative impact another may find visually pleasing. Even those experienced in urban design principles and architecture can have differing opinions on the visual quality of a particular project. Therefore, because of the subjective nature of interpreting visual impacts, this analysis does not rely upon opinion to make a determination as to the significance of impacts. Rather, the analysis relies upon the judgment of the reviewing bodies of the City of Sacramento to apply the City's Design Guidelines. It is assumed that compliance with the Guidelines, as deemed

appropriate by the reviewing bodies, would ensure that a project would be substantially consistent with existing development and the direction of future development within the City and would not result in significant negative aesthetic effects.

The proposed project is consistent with the Capitol View Protection 350 foot height restriction on the eastern portion of the project site. There are no height restrictions on the remainder of the project site. The lack of height limitations in areas of the CBD not immediately adjacent to the Capitol reflects a City policy to encourage high-density, high-rise buildings in the CBD, to create a prominent skyline of taller buildings in Downtown Sacramento. In addition, General Plan Transit Policy 8, amended July 2004, encourages maximizing project densities and intensities within ¼ mile of light rail stations. There are several light rail stations within ¼ mile of the project site along K Street, and light rail is being extended north on 7<sup>th</sup> Street to the Amtrak Depot, so a project of this scale and intensity is encouraged in the CBD.

The City has no adopted standards regarding visual quality, but relies upon review of the project design to ensure that projects are in keeping with the vision of the City. The application presented to the City appears to be consistent with the Plaza Park District Massing Guidelines, including setbacks and step-backs on 10<sup>th</sup> and J streets, street wall height, tower diagonal, and the provision of a 10<sup>th</sup> Street arcade. It also seems to be consistent with the Streetscape Guidelines and the measures to protect the J Street and 10<sup>th</sup> Street Protected View Corridors.

The proposed project design would be subject to review by the City, which could include review by the Design Review and Preservation Board, Planning Commission, and/or the City Council. The reviewing bodies would use the criteria listed in the adopted Urban Design Plan in analyzing the proposed project design. The review of the project design is intended to ensure that the design is of the highest quality, commensurate with a project of this magnitude and visibility, and would not negatively effect the adjacent Plaza Park/CBD Historic District.

Among considerations of these entities would be that the pedestrian levels would be appropriate in scale and detailing to the surrounding area; that the highest quality materials and detailing would be used on all elevations of the building; and that the proposed project would complement existing downtown high-rise development. Review would also consider the details of fenestration, that massing and planar changes of the building would create visual interest, and that the overall project provides a distinctive skyline with appropriate detailing and finish at the building top. Therefore, the construction of a high-rise residential tower adjacent to Cesar E. Chavez Plaza in downtown Sacramento is not inconsistent with the existing City policy. Further, the design review process would ensure that the proposed project would be of high quality design and that it would not substantially alter or degrade the existing character or quality of the area or the project site. Therefore, this would be a less-than-significant impact.

Mitigation

None required

**Impact 5.7-2 Light and glare on roadways and sidewalks**

The proposed project could result in noticeable reflected glare for drivers traveling on certain city streets in mid-afternoon in the spring and in the fall. Late summer afternoon glare also can be seen from portions of westbound Interstate 80 and eastbound Business 80, across the Sacramento River from downtown. This would be a **significant impact**.

The proposed project would not be visible from many locations due to the relatively flat topography of the Central City and selective blockage of sight lines by existing low-rise buildings, high-rise buildings, and street trees. However, any high-rise building within line of sight of freeways can potentially cause significant glare that could impair driver's vision, thus the City normally requires non-reflective surfaces/materials for large projects. Line of sight between the proposed project and I-5 to the west and I-80 to the north would be mostly blocked by intervening high-rise structures.

Before solar noon, glare from sunlight reflected from the east-facing windows may be observable on nearby ground-level areas. Whereas the proposed project abuts another building along the eastern edge to the top of the parking podium, to about 75 feet above street level, glare would not be anticipated to reach ground level from the east façade.

The proposed project is designed with all the windows recessed with balconies and non-glass architectural details, reducing the potential for glare. The tower would be set back from the podium, which may reduce the amount of glare generated by the proposed project. However, because the details of the type of glass material has not been identified, the proposed project could result in a substantial increase in the amount of glare if the surfaces of the towers are highly reflective.

Mitigation

Implementation of the following mitigation measures would ensure that exterior glass surfaces would minimize the amount of glare by requiring that surfaces avoid highly reflective materials.

- 5.7-2 (a) *Prior to the issuance of building permits, construction drawings shall indicate that the configuration of exterior light fixtures emphasize close spacing and lower intensity light that is directed downward in order to minimize glare on adjacent uses.*
- 5.7-2 (b) *Highly reflective mirrored glass walls shall not be used as a primary building material for facades. Instead, Low E glass shall be used in order to reduce the reflective qualities of the building, while maintaining energy efficiency.*

Significance after Mitigation

Less than significant

**CUMULATIVE IMPACTS AND MITIGATION MEASURES**

The cumulative context for the evaluation of cumulative impacts on urban design and aesthetics is the surrounding area within the viewshed of the proposed project site. The cumulative context for light and glare would be other development that could affect the same sites that would be affected by the light or glare generated by the proposed project.

***Impact 5.7-3 Substantial cumulative degradation of the existing visual character or quality of the project site and its surroundings***

The proposed project, in combination with other proposed high rise towers in the Central Business District, would alter the features and scale of J Street and the Downtown skyline. This would be a ***less-than-significant cumulative impact***.

The CBD is characterized by high-rise structures, and there are high rise structures surrounding the project site within three blocks to the north, west, southwest, southeast and east. This part of the City is specifically designated for the most intense development, and there are no height restrictions in the CBD except for those identified in the Capitol View Protection Ordinance. The surrounding area and much of the Central City portion of Sacramento is already built out, and the City has strong redevelopment goals to upgrade vacant and blighted properties in the Central City. Four new high-rise buildings have been approved on Capitol Mall - the 53-story twin residential towers at 3<sup>rd</sup> Street and Capitol Mall, the 35 story Aura at 601 Capitol Mall, and the 25 story 621 Capitol Mall office building. In addition, there are a large number of new high rise development proposals in the vicinity of the proposed project, including a 23-story residential tower at 11<sup>th</sup> and J streets, two 300-foot towers at 800 K and L streets, a 300-foot office tower at 9<sup>th</sup> and L streets, a 32-story residential and hotel tower at 12<sup>th</sup> and I streets, and a 31 story mixed-use tower at 7<sup>th</sup> and L streets.

Future development northwest of the proposed project site includes the redevelopment of the Railyards Specific Plan area and continued redevelopment in the Richards Boulevard Area. Because no specific development plans have been submitted, it is not known at this time what level of development would occur in these locations. Future development in the City of Sacramento CCCP area and the CBD would result in changes to the existing visual character.

However, as stated above, the Sacramento CBD Urban Design Plan provides policy guidance to the City's Design Review and Preservation Board, the Sacramento Housing and Redevelopment Commission, the City Planning Commission, and the City Council. The intent of the Urban Design Guidelines is to insure that new development contributes to the City's vision of the CBD "as a viable living, working, shopping and cultural environment offering a full range of day and night time activities." The vision "amplifies, modifies and adds to the existing fabric." Like the proposed project, all future development would be subject to design review to ensure that projects are in keeping with this vision of the CBD. The design review process, when applied to future development, would ensure that future development would be of high quality design, resulting in a positive contribution to the City's character. The cumulative change in the visual character would be consistent with City goals and objectives and therefore less than significant.

#### Mitigation Measure

None required

#### **Impact 5.7-4 Cumulative light and glare on roadways and sidewalks**

As noted above, the proposed project would be one of numerous planned high-rise developments in the Central City that would introduce new sources of light and glare in the area surrounding the proposed project. This would be a **significant cumulative impact**.

The proposed project, in combination with cumulative high-rise development in the Central City, could create cumulative light or glare that could affect adjacent properties, and increase the noticeable reflected glare for drivers traveling on certain city streets in mid-afternoon in the spring and in the fall. Existing buildings in the Central City area have been designed to minimize light and glare impacts on adjacent properties. Future development in the City of Sacramento CCCP area and the CBD would also be designed to comply with City of Sacramento lighting policies in the Urban Design Plan. Because of the large amount of glass proposed on the facade of the proposed project, the proposed project could result in a

substantial new source of glare. This would be a considerable contribution to increased glare in the downtown area, and this would be a significant cumulative impact.

Mitigation

Implementation of Mitigation Measures 5.7-2 (a) and (b) above would ensure that the proposed project's exterior glass surfaces would minimize the amount of glare by requiring that surfaces materials avoid highly reflective materials, and thus do not contribute to a cumulative increase in light and glare on roadways and sidewalks.

Significance after Mitigation

Less than significant

# **6.0 ALTERNATIVES**

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## 6.0 ALTERNATIVES

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### INTRODUCTION

The purpose of this chapter is to identify and describe the alternatives to the proposed project. Project alternatives are developed to reduce or eliminate the significant or potentially significant adverse environmental effects identified as a result of the proposed project, while still meeting most if not all of the basic project objectives.

### CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) REQUIREMENTS

An Environmental Impact Report (EIR) must evaluate a reasonable range of alternatives to the proposed project, or to the location of the proposed project that could feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives (CEQA Guidelines, section 15126.6). An EIR need not evaluate the environmental effects of alternatives in the same level of detail as the proposed project, but must include enough information to allow meaningful evaluation, analysis, and comparison with the proposed project. CEQA provides the following guidelines for discussing alternatives to a proposed project:

The specific alternative of the “no project” shall also be evaluated along with its impacts....If the environmentally superior alternative is the “no project” alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives (CEQA Guidelines, section 15126.6 subd.(e)(2)).

The discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the proposed objectives, or would be more costly (CEQA Guidelines, section 15126.6 subd.(b)).

If an alternative would cause one or more significant effects in addition to those that would be caused by the project as proposed, the significant effects of the alternative shall be discussed, but in less detail than the significant effects of the project as proposed (CEQA Guidelines, section 15126.6 subd.(d)).

The range of alternatives required in an EIR is governed by a “rule of reason” that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice....The range of feasible alternatives shall be selected and discussed in a manner to foster meaningful public participation and informed decision making....An EIR need not consider an alternative whose effect cannot be reasonably ascertained and whose implementation is remote and speculative (CEQA Guidelines, section 15126.6 subd.(f)).

The requirement that an EIR evaluate alternatives to the proposed project or alternatives that address the location of the proposed project is a broad one; the primary intent of the alternatives analysis is to disclose other ways that the objectives of the project could be attained while reducing the magnitude of, or avoiding, the environmental impacts of the proposed

project. Alternatives that are included and evaluated in the EIR must be feasible alternatives. However, the Public Resources Code and the CEQA Guidelines direct that the EIR need “set forth only those alternatives necessary to permit a reasoned choice.” The CEQA Guidelines provide a definition for “a range of reasonable alternatives” and, thus, limit the number and type of alternatives that need to be evaluated in a given EIR. According to the CEQA Guidelines (Section 15126.6(b)):

The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project. Of those alternatives, the EIR need examine in detail only the ones that the lead agency determines could feasibly attain most of the basic objectives of the project.

First and foremost, alternatives in an EIR must be feasible. In the context of CEQA, feasible is defined as “...capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social and technological factors.”

Further, the following factors may be taken into consideration in the assessment of the feasibility of alternatives: site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries, and the ability of the proponent to attain site control (Section 15126.6(f)(1)). Finally, an EIR is not required to analyze alternatives when the effects of the alternative “cannot be reasonably ascertained and whose implementation is remote and speculative (Section 15126.b(f)(3)).”

### **PROJECT OBJECTIVES**

The selection of alternatives takes into account the project objectives provided in Chapter 2 (Project Description). The project objectives include:

- Create a high-quality development that enhances and defines the Downtown skyline and aids in the revitalization of Downtown by creating a project that is socially and economically vital, helping to re-establish Downtown as a destination.
- Provide high-end restaurant and retail that benefits residents and visitors in the Central Business District (CBD) and contributes to the vitality of the community.
- Create a mixed-use development that provides a combination of residential and retail uses to serve a range of users.
- Promote development of high-density urban housing in the CBD.
- Create a development that is financially feasible without negatively affecting existing City resources, including the City’s Capitol View Corridor.

### **PROJECT-SPECIFIC SIGNIFICANT AND UNAVOIDABLE IMPACTS**

As noted above, CEQA Guidelines §15126.6(a) specifies that an EIR shall describe alternatives that “...would avoid or substantially lessen any of the significant effects of the project.”

The significant and unavoidable environmental impacts of the proposed project, as identified and discussed in Chapter 5, are:

***Project-Specific Significant and Unavoidable Impacts***

- Impact 5.4-1 Short-term construction noise at Sensitive Receptors
- Impact 5.6-2 Freeway Mainline: The project would increase traffic volumes on the freeway mainline
- Impact 5.6-3 Freeway Interchanges: The project would increase traffic volumes at the freeway interchanges

***Cumulative Significant and Unavoidable Impacts***

- Impact 5.2-3 Cumulative loss of cultural resources
- Impact 5.6-11 Cumulative impacts to freeway mainline under near term plus project condition
- Impact 5.6-12 Cumulative impacts to freeway merge/ diverge/ weave areas under near term plus project condition
- Impact 5.6-13 Cumulative impacts to freeway ramp queues under near term plus project condition
- Impact 5.6-18 Cumulative impacts to freeway mainline under long term plus project condition
- Impact 5.6-19 Cumulative impacts to freeway merge/ diverge/ weave areas under long term plus project condition
- Impact 5.6-20 Cumulative impacts to freeway ramp queues under long term plus project condition

## **ALTERNATIVES CONSIDERED AND DISMISSED FROM FURTHER CONSIDERATION**

CEQA Guidelines §15126.6(c) requires an EIR to identify and briefly discuss any alternatives that were considered by the lead agency but were rejected as infeasible during the scoping process. In identifying alternatives, primary consideration was given to alternatives that would reduce significant impacts while still meeting most of the project objectives. Those alternatives that would have impacts identical to or more severe than the proposed project, or that would not meet most of the project objectives, were rejected from further consideration.

The alternatives included in this chapter were derived after the establishment of significance thresholds for those issue areas with significant and unavoidable impacts: operational air emissions, wastewater generation, historic resources, and traffic impacts. Alternatives exceeding the significance thresholds for the aforementioned issue areas would not substantially lessen any significant environmental impacts identified in Chapter 5 of the EIR and were rejected from further analysis. Although any number of alternatives could be designed that could result in the reduction or elimination of project impacts, a total of three representative alternatives, each intended to reduce or eliminate one or more of the significant impacts identified for the proposed project, are evaluated in this Draft EIR.

The following alternatives were previously considered and rejected from further consideration, for the reasons discussed below:

- **Alternative Location**

CEQA requires that an alternative location for a proposed project be analyzed if one is available that could lessen potentially significant impacts of the proposed project. The objective of the project is to redevelop a vacant and deteriorating site consistent with the goals and objectives of the City, providing infill mixed-use development and increased housing in the downtown core. It was determined that development of the proposed project at an alternative site within the CBD would not be likely to eliminate the adverse impacts associated with development on the project site. For example, the traffic generated by the proposed project at the project site would cause significant and unavoidable impacts on freeway ramps. Since development at an alternative site would generate a similar number of daily trips, accessing the CBD on the same congested freeway ramps, traffic generated by development at such a site would also result in an increase in traffic congestion. However, few sites in the region, and even the CBD, have the same proximity to a light rail station and major regional bus routes along J Street. Therefore, development at an alternative site would not eliminate traffic impacts related to the project site, and could result in greater traffic impacts. Implementation of an off-site alternative to the proposed project was determined to be ineffective in mitigating impacts while meeting the project objectives; therefore, no off-site alternative has been considered or evaluated in this EIR.

- **All Office Use**

This alternative would have involved constructing high-rise office on the site, consistent with the existing zoning. There would be ground floor retail but no residential uses. This alternative was determined to be infeasible because office uses generate significantly more vehicle trips than residential, cultural resource impacts would be the same, and it would not meet the basic objectives of the project to provide high-density urban housing in the CBD.

#### ALTERNATIVES CONSIDERED IN THIS EIR

- **No Project/ No Development Alternative**

The No Project/No Development Alternative assumes that the proposed project would not occur and there would be no new development of the site. This alternative assumes the existing buildings on the site would remain in their current vacant condition.

- **No Project/ Existing Zoning Alternative**

The No Project/ Existing Zoning Alternative assumes that three of the existing structures would be retained and rehabilitated, and a new 75,000 sf office building would be constructed in place of the deteriorating Biltmore Hotel and Broiler buildings, consistent with the existing land use designations and zoning on the site, without the need for any special permits.

- **Mixed Use Rehabilitation Alternative**

The Mixed Use Rehabilitation Alternative assumes that all structures on the site would be rehabilitated for residential uses with ground floor retail. Buildings over 50 years old and remaining historical features on the project site (those individually ineligible for listing but of some historic value) would be retained where possible and rehabilitated consistent with the Secretary of the Interior's Standards and Guidelines for the Treatment of Historic Structures.

Each of the alternatives is described in more detail, below, followed by an assessment of the alternative's impacts relative to the proposed project. The focus of this analysis is the difference between the alternative and the proposed project, with an emphasis on addressing the significant impacts identified under the proposed project. The significant and unavoidable impacts for the proposed project include cumulative loss of cultural resources caused by construction on the site, and cumulative traffic impacts in the Central City.

For each issue area, the analysis indicates which mitigation measures would be required for the alternative and which significant and unavoidable impacts would be avoided. In some cases, the analysis may indicate what additional mitigation measures, if any, would be required for the alternative being discussed, and what significant and unavoidable impacts would be more (or less) severe. Unless otherwise indicated, the level of significance and required mitigation would be the same for the alternative as for the proposed project and no further statement of the level of significance is made. **Table 6.0-1** provides a summary comparison of the severity of impacts for each alternative by topic.

**TABLE 6.0-1  
ALTERNATIVE IMPACT COMPARISON**

Issue Area	Proposed Project	No Project/ No Development	No Project/ Existing Zoning	Mixed-Use Rehabilitation
Air Quality	LS	LS	LS	LS
Cultural Resources	SU	LS	Reduced	LS
Hazards and Hazardous Materials	LS	LS	LS	LS
Noise	SU	LS	Reduced	LS
Public Utilities and Services	S	LS	Reduced	Reduced
Transportation and Circulation	SU	LS	Reduced	LS
Urban Design	LS	S	LS	LS

Notes: SU= Significant and Unavoidable LS= Less than Significant Reduced = Level of significance is reduced compared to the proposed project, but not necessarily to a less-than-significant level.

Source: Gail Ervin Consulting, 2006

### ***No Project/No Development Alternative***

Section 15126(d)(2) of the State CEQA Guidelines requires that a No Project Alternative be evaluated in comparison to the proposed project. The No Project Alternative is defined in this section as the continuation of the existing condition of the project site at the time that the environmental analysis is started (CEQA Guidelines, section 15126.6(e)(2)).

The proposed project site would remain vacant with deteriorating buildings. The vacant and deteriorating buildings, particularly the Biltmore Hotel, would probably continue to experience vandalism and use by transients for shelter, as they have been despite enforcement activities, continuing the potential for another fire such as the ones that have destroyed previous buildings on similar sites in the recent past.

Under the No Project Alternative, the existing structures and surface parking on the site would remain and the site would not be redeveloped. The existing general plan and zoning designations would remain in place and, while no activity would occur on the project site, surrounding uses would continue to develop over time according to existing adopted plans. Existing traffic and circulation patterns would continue, increasing and changing over time only in association with other growth in the area. The potential for project-related cumulative air emissions would not occur. Construction would not occur; thus noise and vibration impacts would not occur. Increased demands on the combined sewer systems would not be generated, and there would be no new shadow impacts to Cesar E. Chavez Plaza. Because the existing buildings would not be removed, there would be no change in the visual character of the area, and the remnant of the 19<sup>th</sup> Century alley would remain.

However, if the existing structures were to remain without further activity, they would ultimately deteriorate to a ruin. Hazardous conditions related to transients breaking into the boarded buildings would continue. This alternative would not meet the primary objectives of the City or the developer for the project site or City goals for redevelopment, downtown housing, and economic development. The site would remain vacant and blighted, and urban design requirements would not be met.

*Mitigation That Would No Longer Be Required*

None of the mitigation measures identified in this EIR would be required under the No Project/No Development Alternative.

*Significant and Unavoidable Impacts That Would No Longer Occur*

None of the significant and unavoidable impacts identified in this EIR would occur under the No Project/No Development Alternative.

*Relationship of the No Project/No Development Alternative to the Project Objectives*

The No Project/No Development Alternative would not achieve any of the project objectives. The No Project/No Development Alternative would not provide a development project that would define the Downtown skyline or aid in the revitalization of the Downtown. The existing buildings lack the size, scale, and mix of uses to provide the residential and retail uses provided under the proposed project. The No Project/No Development Alternative would not add housing to Downtown and, therefore, would fail to meet the objectives of the proposed project.

***No Project/Existing Zoning Alternative***

Under the No Project/Existing Zoning Alternative, it is assumed that the site would be redeveloped consistent with the existing land use designations and zoning of the site. A special permit is required to construct condominiums in the C-3 zone or construct a building exceeding 75,000 square feet; therefore this alternative assumes a project where no special permits would be needed.

Under this alternative, the two buildings at 921 and 927 10<sup>th</sup> Street facing Cesar E. Chavez Plaza and the building at 1023 J Street would remain and be rehabilitated for office uses. The oldest and most deteriorated structures, the Biltmore Hotel and Broiler building, would be demolished and a 6 story, 75,000 square foot office building with basement parking would be constructed. For the purposes of this EIR, the No Project/Redevelopment Alternative does not

analyze a particular development, but identifies thresholds under which an office alternative would have reduced impacts compared to the proposed project.

No ground floor retail would be provided on the 10<sup>th</sup> and J streets frontages, which would be inconsistent with City goals for these Protected View corridors. Office uses would total less than 200,000 gross square feet (gsf), thus freeway impacts would be less than the proposed project. Demolition and new construction of a 75,000 sf building and rehabilitation of the remaining buildings would have a less than significant impact associated with construction generated and operational particulate matter and generation of ozone precursors (reactive organic gases - ROG, and oxides of nitrogen - NO<sub>x</sub>).

A significant short-term impact was identified for construction noise. Because any development alternative would require substantial site preparation and construction activities, there is no development alternative that could reduce this impact. However, pile driving may not be necessary for the new construction, and construction duration would be shorter, thereby reducing construction noise impacts. This alternative, like any alternative that would excavate the site to prepare for construction, could contribute to the cumulative loss of historic archeological resources, although for a smaller area than the proposed project.

Office uses and the less intense development would have a smaller impact on the combined sewer system (CSS). Office uses on the site would increase the equivalent single family dwelling unit (ESD) sanitary sewer flows by less than 40 ESD.

#### Mitigation That Would No Longer Be Required

Most of the mitigation measures identified in Chapter 5 would still be required to eliminate significant impacts. Mitigation measures for construction noise would still be required. Mitigation measures for hazards and hazardous materials, and demolition and construction dust, would still be required for the rehabilitation and demolition. The applicant would still be required to participate in fair share mitigation of cumulative freeway impacts and possibly CSS mitigations. All other impacts would be less than significant.

#### Significant and Unavoidable Impacts That Would No Longer Occur

Under the No Project/Existing Zoning Alternative, a significant and unavoidable cumulative impact to cultural resources would still occur with the excavation of part of the site for new development.

#### Relationship of the No Project/Existing Zoning Alternative to the Project Objectives

The No Project/Existing Zoning Alternative could meet some City objectives by redevelopment of a vacant site. However, by converting the project to a low-rise office development, the No Project/Existing Zoning Alternative would fail to provide high-end residential and retail opportunities provided by the proposed project, and would not create a high-quality development that enhances and defines the Downtown skyline. The lack of urban downtown housing opportunities associated with this alternative would fail to meet the project objective to create a mixed-use development that provides a combination of uses, as well as failing to meet City and Regional Goals for development of mixed-uses in the CBD.

Additional office uses downtown would not contribute to establishing the Downtown as a destination. Therefore, the No Project/Existing Zoning Alternative would fail to meet all of the objectives of the proposed project.

### ***Mixed-Use Rehabilitation Alternative***

Under the Mixed-Use Rehabilitation Alternative, it is assumed that all structures on the site would be rehabilitated for residential uses with ground floor retail. For the purposes of this EIR, the Mixed-Use Rehabilitation Alternative does not analyze a particular development, but identifies thresholds under which a rehabilitation alternative would have reduced impacts compared to the proposed project.

This alternative would result in the preservation of any remaining historic fabric on the site, including remnants of the Biltmore Hotel, the 19<sup>th</sup> Century alley, and historic hollow sidewalks along 10<sup>th</sup> and J streets. Ground floor retail would be provided along both the 10<sup>th</sup> and J streets frontages, consistent with City goals for these pedestrian corridors. Residential uses would total approximately 70,000 gsf or about 70 dwelling units, with approximately 35,000 gsf of retail, replacing previous uses on the site. Thus traffic impacts would be less significant. Soft demolition and rehabilitation would have a less than significant impact associated with construction generated and operational particulate matter and generation of ozone precursors (ROG and NOx).

Without pile driving, construction noise would be less than significant for this commercial area. This alternative would not require excavation on the site to prepare for construction, thus there would be no cumulative loss of historic archeological resources. Mitigation measures for hazards and hazardous materials would still be required for the rehabilitation.

The reduced intensity residential and retail uses would have a reduced impact on the CSS. However, assuming a maximum of 70 dwelling units, 35,000 sf of retail, and restaurant uses, such uses on the site could increase the ESD sanitary sewer flows by over 40 ESD, which would require participation in the CSS mitigation program.

### **Mitigation That Would No Longer Be Required**

Mitigation measures identified in Chapter 5 for cultural resources, air quality, traffic, noise, fire services, and urban design would no longer be required to eliminate significant impacts.

### **Significant and Unavoidable Impacts That Would No Longer Occur**

Under the Mixed-Use Rehabilitation Alternative, no significant and unavoidable impacts were identified.

### **Relationship of the Mixed-Use Rehabilitation Alternative to the Project Objectives**

The Mixed-Use Rehabilitation Alternative could meet some City policy objectives by redevelopment of a vacant site and restoration of existing structures with some historic fabric. By rehabilitating the project to a low-rise residential development with ground floor retail, the Mixed-Use Rehabilitation Alternative could provide a small amount (approximately 50-70 units) of the high-end residential and retail opportunities provided by the proposed project. However, the alternative would not create a "high-quality development that enhances and defines the Downtown skyline." The development of urban downtown housing opportunities associated with this alternative could meet the project objective to create a mixed-use development that provides a combination of uses, and meet City and Regional Goals for development of mixed-uses in the CBD.

The small scale rehabilitation project would not contribute to establishing the Downtown as a destination. Therefore, the Mixed-Use Rehabilitation Alternative would be less effective than the proposed project in meeting all of the project objectives.

***Environmentally Superior Alternative***

The environmentally superior alternative is the Mixed-Use Rehabilitation Alternative, due to the limited environmental impacts associated with this alternative. This alternative would meet some of the project objectives and some City goals for historic preservation, housing, and streetscape enhancements, although it would likely require redevelopment assistance to make the project financially feasible. The smaller size of the project would generate less traffic, resulting in smaller air quality and noise effects. The smaller sized project would also have less impact on the City's CSS, although this impact would still be significant. There would be no change in the building massing and height, thus no shadow effects on Cesar Chavez Plaza. All significant and unavoidable impacts of the proposed project on cultural resources, freeways and construction noise would be avoided with this alternative.



# **7.0 CEQA CONSIDERATIONS**

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# **7.0 CEQA CONSIDERATIONS**

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## **INTRODUCTION**

The California Environmental Quality Act (CEQA) requires that each Environmental Impact Report (EIR) fully discuss the significant environmental effects of a proposed project, including (1) impacts that could not be eliminated or reduced to an insignificant level by mitigation measures, as part of the project, or other mitigation measures that could be implemented, (2) the significant cumulative impacts associated with development and operation of the proposed project, and (3) the growth-inducing impacts of the proposed project. This chapter summarizes the significant and unavoidable impacts and cumulative impacts identified throughout Chapter 5 (Environmental Analysis) of this EIR, and discusses the potential growth-inducing impacts that could result from implementation of the Metropolitan Project (proposed project).

Whereas the proposed project would not require the adoption, amendment, or enactment of a plan, policy, or ordinance of a public agency, per CEQA Guidelines Section 15127 there is no requirement for a discussion of the relationship between short-term uses and long-term productivity in this EIR.

## **SIGNIFICANT ENVIRONMENTAL EFFECTS**

Chapter 3 (Summary of Impacts and Mitigation Measures) and Chapter 5 (Environmental Analysis) of this EIR provide a comprehensive identification of the environmental effects of the proposed project, including the level of significance both before and after mitigation.

## **CUMULATIVE EFFECTS**

According to CEQA Guidelines Section 15355, “Cumulative impacts refer to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.” CEQA Guidelines Section 15130(a) requires that cumulative impacts be discussed when the project’s incremental effect is cumulatively considerable, as defined in Section 15065(c). “Cumulatively considerable” means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects. This section identifies those significant cumulative impacts associated with development and operation of the proposed project. Section 15130 of the CEQA Guidelines states that “the discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided for the effects attributable to the project alone.”

## **CUMULATIVE ENVIRONMENT**

CEQA Guidelines provide that a lead agency may describe the cumulative environment by either a listing of pending, proposed, or reasonably anticipated projects, or a summary of projections contained in an adopted general plan or a related planning document that describes area-wide or regional cumulative conditions.

For the purposes of this EIR, cumulative baseline for traffic, air quality and noise is based on Sacramento Area Council of Governments (SACOG) SACMET Model information, as updated through the Downtown Cumulative Traffic Study (March 2006). This information is developed based on an estimate of full buildout of the Sacramento region under adopted plans. Future land use is based upon the latest SACOG Year 2025 projections, developed in conjunction with area municipalities and adopted by SACOG in 2001. While the land use data is based on a long-range cumulative build-out date of 2025, this assumes that all parcels are developed to the maximum allowed intensity by that date, which may or may not occur.

Some cumulative impacts have an impact area that is smaller than the region as a whole. For example, local circulation impacts would be limited to the portion of the City of Sacramento (Central City) that is served by the existing street system. Other cumulative impacts have been previously analyzed and anticipated by the Merged Downtown Redevelopment Plan EIR prepared for the Redevelopment Agency, and the EIR prepared for the City of Sacramento General Plan Update (both available at the City of Sacramento Planning and Building Department, 915 I Street, New City Hall, 3rd Floor, Sacramento). Cumulative growth impacts on public services, for example, have generally been anticipated and are therefore not discussed further in this EIR (Appendix B, Initial Study).

Chapter 3 (Summary of Impacts and Mitigation Measures) and Chapter 5 (Environmental Analysis) of this EIR provide a comprehensive identification of the cumulative environmental effects of the proposed project, including the level of significance both before and after mitigation.

## **SIGNIFICANT AND UNAVOIDABLE IMPACTS**

Section 15126.2(b) of the CEQA Guidelines requires that an EIR describe any significant impacts that cannot be avoided, even with the implementation of feasible mitigation measures. The environmental effects of the proposed project on various aspects of the environment are discussed in detail in Chapter 5 (Environmental Analysis) of this EIR. This section lists impacts that could not be eliminated or reduced to an insignificant level by mitigation measures, as part of the project or alternatives, or other mitigation measures that could be implemented. The final determination of significant impacts will be made by the City of Sacramento as part of their certification action.

### **PROJECT-SPECIFIC SIGNIFICANT AND UNAVOIDABLE IMPACTS**

Project-specific impacts that cannot be avoided if the project is approved as proposed include:

- Impact 5.4-1 Short-term construction noise at sensitive receptors
- Impact 5.6-2 Freeway Mainline: The project would increase traffic volumes on the freeway mainline
- Impact 5.6-3 Freeway Interchanges: The project would increase traffic volumes at the freeway interchanges

### **CUMULATIVE SIGNIFICANT AND UNAVOIDABLE IMPACTS**

The following are the significant and unavoidable cumulative impacts that will result from the proposed project plus long-range cumulative development, after applying mitigation. The impacts are numbered according to the respective chapter in which the issue area is discussed.

- Impact 5.2-3 Cumulative loss of cultural resources
- Impact 5.6-11 Cumulative Impacts to freeway mainline under near term plus project condition
- Impact 5.6-12 Cumulative Impacts to freeway merge/ diverge/ weave areas under near term plus project condition
- Impact 5.6-13 Cumulative Impacts to freeway ramp queues under near term plus project condition
- Impact 5.6-18 Cumulative Impacts to freeway mainline under long term plus project condition
- Impact 5.6-19 Cumulative Impacts to freeway merge/ diverge/ weave areas under long term plus project condition
- Impact 5.6-20 Cumulative Impacts to freeway ramp queues under long term plus project condition

### **GROWTH INDUCING IMPACTS**

Section 15126.2(g) of the CEQA Guidelines requires that the EIR discuss the growth-inducing impacts of the proposed project. Specifically, CEQA states that the EIR shall: "Discuss 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 that would remove obstacles to population growth (a major expansion of a wastewater 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 pressures that are more intense than what is currently planned for in general and community plans. An example of this would be the redesignation of property planned for agricultural uses to urban uses. The growth inducement that may result, in this example, would be the development of services and facilities that may encourage the transition of additional land in the vicinity to more intense urban uses. Another example would be the extension of urban services to a site, which may encourage conversion of non-urban lands to urban lands. Neither of these examples applies to the proposed project.

In general, a project may foster spatial, economic, or population growth in a geographic area if the project removes an impediment to growth (e.g., the establishment of an essential public service, the provision of the new access to an area; a change in zoning or general plan amendment approval); or economic expansion or growth occurs in an area in response to the

project (e.g., changes in revenue base, employment expansion, etc). These circumstances are further described below:

- ***Elimination of Obstacles to Growth***

This refers to the extent to which a proposed project removes infrastructure limitations or provides infrastructure capacity, or removes regulatory constraints that could result in growth unforeseen at the time of project approval.

- ***Economic Effects***

This refers to the extent to which a proposed project could cause increased activity in the local or regional economy. Economic effects can include such effects as the Multiplier Effect. A multiplier is an economic term used to describe interrelationships among various sectors of the economy. The multiplier effect provides a quantitative description of the direct employment effect of a project, as well as indirect and induced employment growth. The multiplier effect acknowledges that the on-site employment and population growth of each project is not the complete picture of growth caused by the project.

### **ELIMINATION OF OBSTACLES TO GROWTH**

The elimination of physical obstacles to growth is considered a growth-inducing effect. The proposed project would be developed in a built-out, highly urbanized area in Downtown Sacramento. The project site is surrounded by existing, mixed-use urban development, and the proposed project would be infill development on a site already served by existing urban infrastructure. It would neither require extension or expansion of services to an area where none is provided nor involve substantial improvements to existing facilities.

The current capacity of most services is sufficient to accommodate the proposed project, with the exception of the City's Combined Sewer System (CSS). Although the proposed project would contribute to the impact on this century-old system, the project itself does not create the need for an improved system. Rather, the CSS is outdated and requires upgrading, and there is an adopted plan for completing the upgrades to meet demand in the CSS service area. Remedy of the CSS impacts is considered an improved technology/rehabilitation effort, not a growth-inducing activity. The ultimate planned expansion of the Regional Wastewater Treatment Plant (RWTP) is also expected to be able to accommodate the increased sewer flows. Impact fees have been established by the Sacramento Regional County Sanitation District (SRCSD) in anticipation of new facilities needed to meet the cumulative demand of growth in the City and County of Sacramento, as identified in the Sacramento Regional Wastewater Treatment Plant Master Plan.

### **ECONOMIC EFFECTS**

The proposed project would provide some employment in the proposed ground floor retail and through service jobs for the residential units. Some additional local employment would also be generated through what is commonly referred to as the multiplier effect. The multiplier effect tends to be greater in regions with larger diverse economies due to a decrease in the requirement to import goods and services from outside the region.

Two different types of additional employment are tracked through the multiplier effect: indirect and induced. Indirect employment includes those additional jobs that are generated through the expenditure patterns of direct employment associated with the project. For example, workers in

the retail portion of the proposed project, and service workers in the residential portion would spend money in the local economy, and the expenditure of that money would result in additional jobs. Indirect jobs tend to be in relatively close proximity to the places of employment and residence.

Induced employment follows the economic effect of employment beyond the expenditures of the employees within the proposed project area to include jobs created by the stream of goods and services necessary to support businesses and services within the proposed project. For example, when an employee from the project goes out to lunch, the person who serves the project employee lunch holds a job that was indirectly caused by the proposed project. When the server then goes out and spends money in the economy, the jobs generated by this third-tier effect are considered induced employment.

The multiplier effect also considers the secondary effect of employee expenditures. Thus, it includes the economic effect of the dollars spent by those employees who support the employees of the project.

Increased future employment generated by resident and employee spending ultimately results in physical development of space to accommodate those employees. It is the characteristics of this physical space and its specific location that will determine the type and magnitude of environmental impacts of this additional economic activity. Although the economic effect can be predicted, the actual environmental implications of this type of economic growth are too speculative to predict or evaluate, since they can be spread throughout the Sacramento metropolitan region and beyond.

It should be noted that, while the proposed project would contribute to direct, indirect, and induced growth in the area, enhancing the vitality of the Central Business District (CBD) is a goal of the City's General Plan, the Central City Community Plan, and the zoning (C-3-SPD) for the site. The proposed housing and retail is intended to meet an existing demand and the City goals for economic development.

### ***Impacts of Induced Growth***

While growth in the CBD of the City is an intended consequence of the proposed project, growth induced directly and indirectly by the proposed project could also affect the greater Sacramento area. Typical impacts associated with induced growth in the area could include: traffic congestion; air quality deterioration; loss of agricultural land and open space; loss of habitat and wildlife; impacts on utilities and services, such as fire and police protection, water, recycled water, wastewater, solid waste, energy, and natural gas; and increased demand for housing. However, due to the nature of the proposed project, which provides high density infill housing downtown near jobs and transit, the project is anticipated to have a beneficial regional effect by reducing the demand for housing and services at the urban fringes, and thereby reducing traffic congestion, air quality impacts, public infrastructure requirements, water demand and loss of agriculture to meet anticipated population increases in the City and region.



# **8.0 REFERENCES**

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## 8.0 REFERENCES

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### BIBLIOGRAPHY

- Brienes, West & Shulz, Overview of Cultural Resources in the Central Business District, Sacramento, California. On file, North Central Information Center, California State University, Sacramento, 1981.
- California Air Resources Board, "Air Quality Data Statistics." [Online] [January 8, 2006]. <http://www.arb.ca.gov/adam/welcome.html>.
- California Air Resources Board, Air Pollution Data, <[www.arb.ca.gov](http://www.arb.ca.gov)> (June 1, 2006).
- California Air Resources Board, April 2005. "Air Quality and Land Use Handbook: A Community Health Perspective."
- California Air Resources Board. "Area Designations (Activities and Maps)." [Online] [March 30, 2005]. <http://www.arb.ca.gov/desig/desig.htm>
- California Department of Parks and Recreation, California Inventory of Historic Resources, California Department of Parks and Recreation, Sacramento, 1976.
- California Department of Parks and Recreation, California Points of Historical Interest. California Department of Parks and Recreation, Sacramento, 1992.
- California Department of Parks and Recreation, California Register of Historical Resources. California Department of Parks and Recreation, Sacramento, 2005.
- California Department of Parks and Recreation, Directory of Properties in the Historic Property Data File for Sacramento County. California Department of Parks and Recreation, Sacramento, 2005.
- California Department of Toxic Substance Control, EnviroStor Database, <http://www.envirostor.dtsc.ca.gov/public/>, June 2006.
- California Department of Toxic Substance Control, Hazardous Waste and Substances Site List - Site Cleanup (Cortese List), [http://www.dtsc.ca.gov/SiteCleanup/Cortese\\_List.cfm](http://www.dtsc.ca.gov/SiteCleanup/Cortese_List.cfm), June 2006..
- California Department of Transportation, California Department of Transportation Bridge Inventory. California Department of Transportation, Sacramento, 2005.
- California State Water Resources Control Board, GeoTracker, <http://geotracker.swrcb.ca.gov/>, June 2006
- City of Sacramento Combined Sewer System Rehabilitation and Improvement Plan Draft Environmental Report, November 1996.
- City of Sacramento, City of Sacramento Historic Resources. Preservation Office, Planning and Building Department, 2005.
- City of Sacramento, Department of Utilities. Order No. 96-090, NPDES No. CA0079111, Waste Discharge Requirements for City of Sacramento and Sacramento Regional County Sanitation District Combined Wastewater Collection and Treatment System, Sacramento County. Sacramento, CA. March 1996.
- City of Sacramento, Department of Utilities. Sacramento Combined Sewer System, Project Overview. Sacramento, CA. April 26, 1996.
- City of Sacramento, Official Listing of Structures and Preservation Areas, March 2005.
- City of Sacramento. 2007-2011 Capital Improvement Program, Utilities Program Overview. Sacramento, CA.
- City of Sacramento. Department of Utilities. Operational Statistics, Fiscal Year 2006/2007.

## 8.0 REFERENCES

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- City of Sacramento. General Plan Update Technical Background Report. 2005.
- County- Site #SA-005-08. On file, North Central Information Center, California State University, California.
- Cultural Resources Unlimited, Pacific Bell Mobile Services: 1001 K Street, Sacramento, Sacramento, 1998.
- Department of Utilities, Annual Report, Operational Statistics Fiscal Year 2004/2005.
- Department of Utilities, Memorandum, Combined Sewer System Development Fee, March 1, 2004.
- Environmental Protection Agency. "Region 9: Air Programs, Air Quality Maps." [http://www.epa.gov/region9/air/maps/maps\\_top.html](http://www.epa.gov/region9/air/maps/maps_top.html), accessed December 17, 2004.
- Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual, April 1995.
- GeoTracker Database, Environmental Equalizers Inc., 2006.
- Heizer, R., Site Record for CA-SAC-36. On file, North Central Information Center, California State University, Sacramento, 1934.
- Heizer, R., Site Record for CA-SAC-38. On file, North Central Information Center, California State University, Sacramento, 1934.
- Hider, J. and S. Mikesell, Cultural Resources Evaluation: Plaza Park, Sacramento. On file, North Central Information Center, California State University, Sacramento, 1991.
- Holman & Associates, Archaeological Consultants, Archaeological Field Inspection of the Proposed Sacramento Community Center Expansion Areas A, B, and C, Sacramento, Sacramento County, California, 1987.
- Jones & Stokes Associates, Inc., Cultural Resources Inventory and Monitoring Report for XO California, Inc's Sacramento Area Fiber-Optic Builds, Sacramento and Yolo Counties, California. On file, North Central Information Center, California State University, Sacramento, 2001.
- Lagomarsino, B., Early Attempts to Save the Site of Sacramento By Raising its Business District. Thesis on file, California State University, Sacramento, 1969.
- McGowan, J. A., J. Dominguez, E. Pitti, S. Searcy and C. St. Louis, Report on the Historical Development of City of Sacramento Block Bound by: I and J, 10<sup>th</sup> and 11<sup>th</sup> Streets (1850-1920). On file, SAMCC, 1978.
- National Park Service, National Register of Historic Places – Listed Properties and Determined Eligible Properties. Computer Listings 1966 through 2000. National Park Service, 1988.
- Nelson, W., Data Recovery Excavations for the Philadelphia House Hotel (CA-SAC-692H), Sacramento, California. On file, Tremaine & Associates, Dixon, California, 2005.
- Praetzellis, M. and A. Praetzellis, Archaeological and Historical Studies at the San Fong Chong Laundry, 814 I Street, Sacramento, California. On file, North Central Information Center, California State University, Sacramento, 1990.
- Praetzellis, M. and A. Praetzellis, Archaeological Resources at 8<sup>th</sup> and J Streets, Sacramento, California. On file, North Central Information Center, California State University, Sacramento, 1993.
- Praetzellis, M. and A. Praetzellis, Archaeological Studies of the Newman's Hen House, 123 K Street, Sacramento, California. Anthropological Studies Center, Sonoma State University, Rohnert Park, California, 1992.

- Praetzellis, M. and A. Praetzellis, *Beneath Mrs. Hudson's House: Archaeological and Historical Studies of 1408 J Street, Sacramento, California*. Anthropological Studies Center, Sonoma State University, Rohnert Park, California, 1992.
- Praetzellis, M. and A. Praetzellis, *Historical Archaeology of an Overseas Chinese Community in Sacramento, California*. On file, North Central Information Center, California State University, Sacramento, 1997.
- Praetzellis, M. and A. Praetzellis, *Junk! Archaeology of the Pioneer Junk Store, 1877-1908*. Anthropological Studies Center, Sonoma State University, Rohnert Park, California, 1990.
- Praetzellis, M., A. Praetzellis and M. R. Brown III, *Historical Archaeology at the Golden Eagle Site (CA-SAC-394-H)*. On file, North Central Information Center, California State University, Sacramento, 1980.
- Praetzellis, M., A. Praetzellis, D. Bieling and A. Medin, *Archaeological Research Design and Identification and Testing Strategies for Two Federal Courthouse Sites, and for the 5<sup>th</sup> and H Streets Extension, Sacramento, California*. On file, North Central Information Center, California State University, Sacramento, 1993.
- Redevelopment Agency of the City of Sacramento, Economic Development Department, Downtown Development Group, Merged Downtown Redevelopment Plan Amendment Environmental Impact Report, Draft EIR is dated November 5, 2004 and Final EIR is dated February 3, 2005.
- Sacramento Area Regional 2002 Milestone Report, May 2003.  
<http://www.airquality.org/cleanairplan/cleanairplan94.shtml>
- Sacramento City Assessor's Map, Block KL8/9. On file at the Sacramento Archives and Museum Collection Center, Sacramento, California, 1850.
- Sacramento City Assessor's Map, Block KL8/9. On file at the Sacramento Archives and Museum Collection Center, Sacramento, California, 1860.
- Sacramento City Assessor's Map, Block KL8/9. On file at the Sacramento Archives and Museum Collection Center, Sacramento, California, 1870-1871.
- Sacramento City Assessor's Map, Block KL8/9. On file at the Sacramento Archives and Museum Collection Center, Sacramento, California, 1879-1880.
- Sacramento City Assessor's Map, Block KL8/9. On file at the Sacramento Archives and Museum Collection Center, Sacramento, California, 1890.
- Sacramento City Assessor's Map, Block KL8/9. On file at the Sacramento Archives and Museum Collection Center, Sacramento, California, 1900.
- Sacramento City Assessor's Map, Block KL8/9. On file at the Sacramento Archives and Museum Collection Center, Sacramento, California, 1910.
- Sacramento City Assessor's Map, Block KL8/9. On file at the Sacramento Archives and Museum Collection Center, Sacramento, California, 1920.
- Sacramento City/County Assessors Records 1850-1925
- Sacramento Department of Public Works, *Timeline of City of Sacramento's Department of Public Works*. On file at the Sacramento Archives and Museum Collection Center, 2003.
- Sacramento Design Review and Preservation Board. *Design Review Guidelines Plan*, adopted July 29, 1990.
- Sacramento Fire Department 2003 Annual Report and the Draft 1993 Master Plan for the Sacramento City Fire Department

## 8.0 REFERENCES

---

- Sacramento Fire Department, Fiscal Year 2006/2007 Proposed Budget
- Sacramento General Plan Update, Environmental Impact Report, Draft EIR is dated March 2, 1987 and Final EIR is dated September 30, 1987.
- Sacramento General Plan Update, Technical Background Report, June 2005.
- Sacramento General Plan, updated and adopted January 1988; as revised by Council in 2000 and 2003.
- Sacramento Housing and Redevelopment Agency and City of Sacramento Department of Planning and Development, Recommended Housing Strategy for the Central City, May 1991.
- Sacramento Housing and Redevelopment Agency and Sacramento Department of City Planning, Sacramento Urban Design Plan, February 18, 1987.
- Sacramento Housing and Redevelopment Agency, Sacramento Urban Design Plan, Central Business District Urban Design Framework Plan, adopted February 18, 1987.
- Sacramento Metropolitan Air Quality Management District, Guide to Air Quality Assessment in Sacramento County, July 2004.
- Sacramento Regional County Sanitation District, Sacramento Regional Wastewater Treatment Plant 2020 Master Plan, < <http://www.srscsd.com/srwtp-2020mp.html> > (May 29, 2006).
- Sacramento Regional Nonattainment Area 8-Hour Ozone Rate-of-Progress Plan, February 2006
- Sacramento Regional Wastewater Treatment Plant 2020 Master Plan. County of Sacramento, CA. Adopted June 23, 2004.
- Sacramento Survey of Non-Residential Buildings, 1980, Historic Environment Consultants
- Sacramento Survey Update, 2001, Historic Environment Consultants
- Sacramento Union: January 1, 1883; June 22, 1906, pp. 1, 4; April 29, 1907, p. 10; May 9, 1907, p. 11.
- Sanborn Map Company, Sacramento, California. Microfilm. On file, California State Library, 1895, 1915-1952.
- Severson, Thor, Sacramento, An Illustrated History: 1839 to 1874, California Historical Society, San Francisco, CA, 1975 edition.
- SkyscraperPage.com, <<http://skyscraperpage.com/cities/?cityID=116>> (May 29, 2006).
- South Plume Phase B Remedial Investigation Data Summary Report. Volume I. SPTCo Sacramento Rail Yard, Sacramento, California. September 1993.
- State Triennial Report, <[www.airquality.org/stateplan](http://www.airquality.org/stateplan)> approved April 28, 2005, accessed June 6, 2006.
- Strasser, S., Waste and Want: a Social History of Trash. Henry Holt and Company, New York, n.d..
- Thompson, Thomas and West, Albert A., History of Sacramento County, Howell-North edition, Berkeley, CA, 1960, p. 153
- Transportation Related Earthborne Vibrations, Caltrans Technical Advisory, TAV-02-01-R9601, February 2, 2002.
- U.S. Geological Survey, Sacramento East 7.5' Series Topographic Quadrangle. 1:24,000, 1992.
- Urban Water Management Plan, 2000.
- US Department of Housing and Urban Development, Noise Assessment Guidelines. 1983.
- Vibration Study for the Esquire Plaza Office/IMAX Theater. 1997.

Willis, William L., A History of Sacramento County, Historic Records Co., Los Angeles, CA, 1913.

Zoning Code, current through Ordinance 2005-097 and the February 2006 code supplement, <http://www.qcode.us/codes/sacramento/>.

## **CALIF. STATE LIBRARY PHOTO COLLECTION**

Casselear and Bainbridge, Lithograph of the 1850 Sacramento Flood. California Historical Society, San Francisco, California, n.d.

Davis, Winfield, An Illustrated History of Sacramento County, Lewis Publishing Co., Chicago, IL, 1890.

Elliott, W.W., Sacramento Around 1890, Panoramic View. Daily Record Union, Sacramento. On file, California State Library, 1890.

McGowan, Joseph, History of the Sacramento Valley, Lewis Historic Publishing Co., New York, 1961.

Mellon, Steve, Sacramento Then and Now, Scripps Howard Publishers, Inc., Gibsonia, PA, 1994.

Mimms, Julie E. and Mevin M., Sacramento a Pictorial History of California's Capital, The Conning Co., Virginia Beach, VA, 1981.

Neasham, V. Aubrey, and Henley, James E., City of the Plain, Sacramento Pioneer Foundation, Sacramento, CA, 1969.

Official Map of Sacramento, 1854

Sacramento Archive and Museum Collection Center, Photo Collection

Sacramento Bee: December 29, 1882, December 15, 1923.

Sacramento City Directories 1851-1982

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Bertrand, Anthony, Senior Civil Engineer. City of Sacramento Department of Utilities. E-mail communication, May 31, 2006.

Borkenhagen, Jeanne, Associate Air Quality Analyst/Planner. Sacramento Metropolitan Air Quality District. E-mail communication, June 9, 2006.

Deering, Roberta, Preservation Director, City of Sacramento Development Services Department, personal communication, May 8, 2006

Sentianan, Bernard, Environmental Equalizers Inc., personal communication, June 1, 2006.

Yee, Kim, City of Sacramento Utilities Department, personal communication, May 30, 2006.



# **9.0 REPORT PREPARATION**

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## 9.0 REPORT PREPARATION

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# **10.0** ACRONYMS AND ABBREVIATIONS

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## **10.0 ACRONYMS AND ABBREVIATIONS**

Acronym/Abbreviation	Description
$\mu\text{g}/\text{m}^3$	micrograms per cubic meter
1D	one-dimensional
2D	two-dimensional
AADT	Annual Average Daily Traffic is the total volume for the year divided by 365 days
AAQS	ambient air quality (concentration) standards
ACM	asbestos containing materials
ADEIR	Administrative Draft Environmental Impact Report
ADT	Average Daily Traffic averaged over a period of less than a year
AFB	Air Force Base
APCD	Air Pollution Control District
APN	Assessor's Parcel Number
AQMD	Air Quality Management District
ASTM	American Society of Testing and Materials
bgs	below ground surface
BMP	Best Management Practice
BPA	Base Plus Approved Development
CAA	Clean Air Act
CAAA	CAA Amendments
CAAQS	California Ambient Air Quality Standards
CADA	Capitol Area Development Authority
CalEPA	California Environmental Protection Agency
CalOSHA	California Occupational Safety and Health Administration
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CBD	Central Business District
CCAA	California Clean Air Act
CCR	California Code of Regulations
CDF	California Department of Forestry and Fire Protection
CDFG	California Department of Fish and Game
CDMG	California Department of Mines and Geology
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980

## 10.0 ACRONYMS AND ABBREVIATIONS

Acronym/Abbreviation	Description
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
cfs	Cubic feet per second
CIP	Capital Improvement Program
CNDDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level. The average equivalent sound level during a 24-hour day, obtained after addition of approximately 5 decibels to sound levels in the evening from 7:00 p.m. to 10:00 p.m. and 10 decibels to sound levels in the night before 7:00 a.m. and after 10:00 p.m. to account for people's increased sensitivity to nighttime noise.
CNG	Compressed natural gas
CNPS	California Native Plant Society
CO	carbon monoxide
CRL	California Redevelopment Law
CRWQCB	California Regional Water Quality Control Board
CSO	combined sewer overflow
CSS	Combined Sewer System
CTR	California Toxics Rule
CWA	Clean Water Act
DBA	A-Weighted Decibels
DBH	Diameter at Breast Height
Decibel, dB	A unit for describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure, which is 20 micropascals (20 micronewtons per square meter).
DEIR or Draft EIR	Draft Environmental Impact Report
DFG	Department of Fish and Game
DHS	California Department of Health Services
DOT	U.S. Department of Transportation
DU	Dwelling Unit
DWR	Department of Water Resources
DWSC	Deep Water Ship Channel
EA	Environmental Assessment
EIR	Environmental Impact Report
EPA	U.S. Environmental Protection Agency
ESA	National Endangered Species Act
ESD	Equivalent Single-family Dwelling Unit
ESU	Evolutionary Significant Unit

Acronym/Abbreviation	Description
FAR	Floor Area Ratio
FCAA	Federal Clean Air Act
Fed/OSHA	Federal Occupational Safety and Health Administration
FEIR or Final EIR	Final Environmental Impact Report
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FMP	Floodway Management Plan
FONSI	Finding of No Significant Impact
Forum	Sacramento River Corridor Floodway Planning Forum
GPA	General Plan Amendment
gsf	gross square feet
HABS	Historic American Building Survey
HCP	Yolo County Habitat Conservation Plan
HS	hydrogen sulfide
HSWA	Hazardous and Solid Waste Act
HUD	US Department of Housing and Urban Development
HVAC	heating, ventilation, and air conditioning
HWCL	Hazardous Waste Control Law
HWMP	Hazardous Waste Management Program
L <sub>50</sub>	The A-weighted noise level that is equaled or exceeded 50 percent of the stated time period.
LADSCBF	Layout and Design of Small Craft Berthing Facilities
L <sub>dn</sub>	Day-Night Average Sound Level. The average equivalent sound level during a 24-hour day, obtained after addition of ten decibels to sound levels in the night after 10:00 p.m. and before 7:00 a.m.
L <sub>eq</sub>	Equivalent Sound Level. The sound level containing the same total energy as a time varying signal over a given sample period. Leq is typically computed over 1-hour, 8-hour, and 24-hour sample periods.
L <sub>max</sub>	The A-weighted maximum noise level for a given period of time.
LOS	Level of Service
LSAA	Lake or Streambed Alteration Agreement
LUFT	leaking underground fuel tanks
MCL	Maximum Contaminant Level
MEIR or Master EIR	Master Environmental Impact Report
mgd	million gallons per day
MOU	Memorandum of Understanding
mph	miles per hour
MSD	Marine Sanitary Device

## 10.0 ACRONYMS AND ABBREVIATIONS

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Acronym/Abbreviation	Description
MSL	mean sea level
MTP	SACOG Metropolitan Transportation Plan
MVEB	Motor Vehicle Emissions Budget
N.F.P.A	National Fire Prevention Association
NAAQS	National Ambient Air Quality Standards
NCIC	North Central Information Center, Sacramento State University
NDDDB	Natural Diversity Data Base
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NIH	National Institutes of Health
NO <sub>2</sub>	nitrogen dioxide
NOAA Fisheries	National Marine Fisheries Service
NOIRROF	Notice of Intent to Request the Release of Funds
NOP	Notice of Preparation
NO <sub>x</sub>	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NPL	National Priority List
NRC	Nuclear Regulatory Commission
NTR	National Toxics Rule
NWP	Nationwide Permit Program
O <sub>3</sub>	Ozone
OES	California Office of Emergency Services
OSHA	US Occupational Safety and Health Administration
PAHs	polycyclic aromatic hydrocarbons
Pb	lead
PEIS	Programmatic Environmental Impact Statement
PG&E	Pacific Gas and Electric Company
PM <sub>10</sub>	suspended particulate matter under 10 microns
PM <sub>2.5</sub>	suspended particulate matter under 2.5 microns
ppd	Pounds per day
ppm	parts per million
PPMRP	Pollution Prevention and Monitoring and Reporting Plan
PS	Public Safety
RACT	reasonably available control technology
RCRA	Resource Conservation and Recovery Act of 1976
RCRA COR	Resource Conservation and Recovery Act Corrective Actions

Acronym/Abbreviation	Description
RCRA-G	Resource Conservation and Recovery Act Generators
RD	Reclamation District
Reclamation Board	California State Reclamation Board
RM	River Mile
ROG	reactive organic gases
RT	Regional Transit
RT	Sacramento Regional Transit
RWQCB	Regional Water Quality Control Board
SAAQS	State Ambient Air Quality Standards
SACMET	SACOG projections for MTP model
SACOG	Sacramento Area Council of Governments
SAFCA	Sacramento Area Flood Control Agency
SDWA	Safe Drinking Water Act
sf	square foot
SFNA	Sacramento Federal Non-attainment Area
SFP	Southport Framework Plan
SGPU EIR	Sacramento General Plan Update Environmental Impact Report
SHPO	State Historic Preservation Office
SIP	State Implementation Plan
SMAQMD	Sacramento Municipal Air Quality Management District
SO <sub>2</sub>	sulfur dioxide
SO <sub>4</sub>	Sulfates
Sound Level	The sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the response of the human ear and gives good correlation with subjective reactions to noise.
SPA	Special Planning Area
SPD	Special Planning District
SRA	Shaded riverine aquatic habitat
SRCSD	Sacramento Regional County Sanitation District
SRMP	Sacramento Riverfront Master Plan
SRWTP	Sacramento Regional Wastewater Treatment Plant
SVAB	Sacramento Valley Air Basin
SVOCs	semi-volatile organic compounds
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board

## 10.0 ACRONYMS AND ABBREVIATIONS

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Acronym/Abbreviation	Description
TAC	toxic air contaminants
TMDL	total maximum daily load
TPH	Total Petroleum Hydrocarbons
UDP	urban design plan
USACE	United States Army Corps of Engineers
USFWS	United States Fish and Wildlife Service
UST	underground storage tank
v/c	volume to capacity ratio
VELB	Valley Elderberry Long-horn Beetle
VOC	volatile organic compound