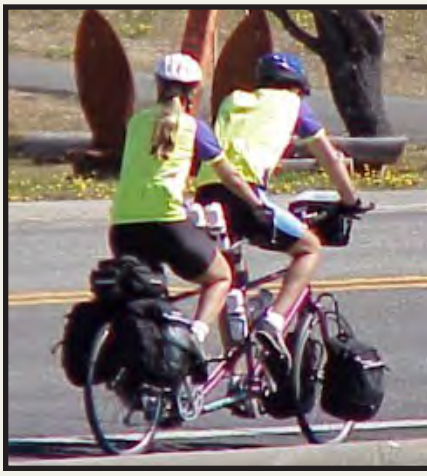
65th Street Station Area Plan

Draft Environmental Impact Report

Prepared for:
City of Sacramento



October 2009

65th Street Station Area Plan
Draft Environmental Impact Report
CITY PROJECT #T15068100 (TH16)

Prepared for:

City of Sacramento

Prepared by:

PBS&J

October 2009

TABLE OF CONTENTS

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

1.0 INTRODUCTION

1.0 INTRODUCTION

PROJECT BACKGROUND

The primary goal of the 65th Street Station Area Plan (proposed project) is the preparation of an overall circulation network for the project area that supports the goals and vision of the previously approved 65th Street/University Transit Village Plan and South 65th Street Area Plan. The proposed project comprehensively addresses how to implement transportation and circulation improvements in the project area. There are two scenarios proposed that include transportation and circulation improvements (Scenarios B and C). Both Scenarios include new streets, street widenings, street extensions, bicycle and pedestrian facilities, and grade separated under crossings. The proposed project is described in detail in Chapter 3, Project Description.

PURPOSE OF THE ENVIRONMENTAL IMPACT REPORT

This Draft Environmental Impact Report (EIR) has been prepared in conformance with the California Environmental Quality Act (CEQA) of 1970 (as amended) to evaluate the environmental impacts associated with development and operation of the proposed transportation and circulation improvements.

CEQA requires that a local agency prepare an EIR on any project it proposes to approve that may have a significant effect on the environment. The purpose of an EIR is not to recommend approval or denial of a project, but to provide decision-makers, public agencies, and the general public with an objective and informational document that fully discloses the potential environmental effects of a proposed project. The EIR process is specifically designed to objectively evaluate and disclose potentially significant direct, indirect, and cumulative impacts of a proposed project; to identify alternatives that reduce or eliminate a project's significant effects; and to identify feasible measures that mitigate significant effects of a project. In addition, CEQA requires that an EIR identify those adverse impacts that remain significant after mitigation.

EIR PROCESS

In accordance with the CEQA Guidelines, a Notice of Preparation (NOP) was released May 16, 2008 for agency and public review. The 30-day NOP comment period closed on June 16, 2008. The NOP was distributed to responsible agencies, interested parties, and landowners within the project area. The purpose of the NOP was to provide notification that an EIR for the project was being prepared and to solicit guidance on the scope and content of the document. A summary of the comments received on the NOP is included in Chapter 2, Summary. A copy of the NOP and comment letters received are included in Appendices A and B, respectively. A public scoping meeting was held on June 2, 2008. Responsible agencies and members of the public

were invited to attend and provide input on the scope of the EIR. At the close of NOP public comment period a total of 14 comment letters (Caltrans, Native American Heritage Commission, Sacramento Metropolitan Air Quality Management District, and 11 private citizens/businesses) were received. Please see Chapter 2 of this Draft EIR for further explanation of the comments received on the NOP and see Appendix B for the comment letters.

This Draft EIR was circulated for public review and comment for a period of 45 days. Upon completion of the public review period, a Final EIR will be prepared that will include written comments on the Draft EIR received during the public review period and the City's responses to those comments. The Final EIR will also include the Mitigation Monitoring Program (MMP). The Final EIR will address any revisions to the Draft EIR made in response to public comments. The Draft EIR and Final EIR together will comprise the EIR for the proposed project.

Before the City of Sacramento can approve the project, it must first certify that the EIR has been completed in compliance with CEQA, that the City Council (decision-making body) has reviewed and considered the information in the EIR, and that the EIR reflects the independent judgment of the City. The City Council would also be required to adopt Findings of Fact for those impacts determined to be significant and unavoidable, and adopt a Statement of Overriding Considerations.

LEAD, RESPONSIBLE, AND TRUSTEE AGENCIES

Lead Agency

The City of Sacramento is the lead agency for preparation of the 65th Street Station Area Plan project environmental analysis. In conformance with sections 15050 and 15367 of the State CEQA Guidelines, the City of Sacramento has been designated the "lead agency" which is defined as the "public agency which has the principal responsibility for carrying out or disapproving a project." The lead agency is also responsible for scoping the analysis, preparing the EIR, and responding to comments received on the Draft EIR. Prior to making a decision to approve a project, the lead agency is required to certify that the EIR has been completed in compliance with CEQA, that the decision-making body reviewed and considered the information in the EIR, and that the EIR reflects the independent judgment of the lead agency.

Responsible Agencies

Responsible agencies are state and local public agencies, other than the lead agency, that have some authority to carry out or approve a project or that are required to approve a portion of the project for which a lead agency is preparing or has prepared an EIR or Initial Study/Negative Declaration. The following agencies are identified as those that would potentially act as responsible agencies for the proposed project:

- California Air Resources Board

- Sacramento Air Quality Management District
- State Water Resources Control Board
- Central Valley Regional Water Quality Control Board
- California Public Utilities Commission
- Army Corps of Engineers
- California State University, Sacramento
- Sacramento Regional Transit
- Union Pacific Railroad

Trustee Agencies

Trustee agencies under CEQA are designated public agencies with legal jurisdiction over natural resources that are held in trust for the people of California and that would be affected by a project, whether or not the agencies have authority to approve or implement the project. The U.S. Army Corps of Engineers (Corps) and the California Department of Transportation (Caltrans) have been identified as a trustee agency with potential jurisdiction over the proposed project.

REQUIRED PERMITS AND APPROVALS

Project approval requires the City of Sacramento to approve the proposed project and to issue required City permits or affirm compliance with other agency requirements. Below are the discretionary actions sought by the City for the 65th Street Station Area Plan that the City of Sacramento will consider during its review. A detailed description of required permits and approvals is included in Chapter 3, Project Description.

- Plan approval
- EIR certification
- Mitigation Monitoring Plan adoption

PUBLIC REVIEW OF DRAFT EIR AND LEAD AGENCY CONTACT

Upon completion of the Draft EIR, the City will provide public notice of the document's availability for public review and invite comment from the general public, agencies, organizations, and other interested parties. Copies of the Draft EIR were available at the following locations:

City of Sacramento, Department of Transportation
New City Hall
915 I Street, 2nd Floor
Sacramento, CA 95814

City of Sacramento, Development Services Department
300 Richards Boulevard, 3rd Floor
Sacramento, CA 95811

Sacramento Public Library
828 I Street
Sacramento, CA 95814

The public review and comment period is 45 days. Comments on the Draft EIR must be submitted in writing to the City. All comments or questions regarding the Draft EIR should be addressed to:

Jennifer Hageman, Senior Planner
City of Sacramento, Development Services Department
300 Richards Boulevard, 3rd Floor
Sacramento, CA 95811
(916) 808-5538

Following the public review period, a Final EIR will be prepared. The Final EIR will respond to written comments received during the public review period. The City will review and consider the Final EIR prior to their decision to approve, revise, or reject the proposed project.

SCOPE OF THIS EIR

This EIR is a "Program EIR," pursuant to section 15168 of the CEQA Guidelines. A Program EIR examines the environmental impacts of a series of projects that can be characterized as one large project or plan, such as the proposed 65th Street Station Area Plan. This type of EIR describes the existing environmental setting in and around the proposed plan; analyzes the potential impacts on that setting due to construction and implementation of the plan; identifies mitigation measures that could avoid or reduce the magnitude of significant impacts; evaluates cumulative impacts that would be caused by implementation of the plan in combination with other future projects or growth that could occur in the region; analyzes growth-inducing impacts; and provides a full evaluation of the alternatives to the proposed plan that could eliminate, reduce, or avoid project-related impacts.

With respect to individual projects that would be carried out as part of plan implementation and subsequent to this EIR, section 15168(c) of the CEQA Guidelines states that subsequent activities should be examined in light of the Program EIR to determine whether additional

environmental documentation must be prepared. If a later activity would have effects that were not examined in the Program EIR, subsequent environmental documentation must be prepared, consistent with sections 15162 through 15164 of the Guidelines. If no new effects would occur and no new mitigation measures would be required, the subsequent activity could rely on the scope of the environmental analysis provided in the Program EIR, and no additional environmental documentation would be required.

The City of Sacramento, as lead agency, identified in the Initial Study for this EIR three technical issue areas that, due to either potentially significant impacts or public interest, required further analysis beyond the IS. These technical issue areas include:

- Air Quality
- Noise
- Transportation and Circulation

The specific topics evaluated are described in each of the technical sections presented in Chapter 4 of this EIR.

HOW TO USE THIS REPORT

This report includes eight principal parts: Summary of Impacts and Mitigation Measures, Project Description, Environmental Analysis (Setting, Impacts, and Mitigation Measures), CEQA Considerations, Alternatives, References, Report Preparation, and Appendices.

Summary of Impacts and Mitigation Measures (Chapter 2) presents an overview of the results and conclusions of the environmental evaluation. This section summarizes comments received during the NOP comment period and identifies impacts of the proposed project and available mitigation measures.

The **Project Description** (Chapter 3) describes the location of the proposed project, existing conditions within the project area, and the nature and location of specific elements of the proposed project, as well as requested project entitlements and/or approvals.

The **Environmental Analysis** (Chapter 4) includes a topic-by-topic analysis of impacts that would or could result from implementation of the proposed project. Topics discussed are those identified in the Initial Study Checklist as requiring further analysis (see Appendix C). The analysis is organized in three topical sections. Each section is organized into two major subsections: Environmental Setting and Regulatory Setting (existing conditions), and Impacts and Mitigation Measures, including cumulative impacts and mitigation measures.

CEQA Considerations (Chapter 5) discusses issues required by CEQA: unavoidable adverse impacts, irreversible environmental changes, growth inducement, and a summary of cumulative impacts.

Alternatives (Chapter 6) includes a description of the project alternatives. An EIR is required by CEQA to provide adequate information for decision makers to make a reasonable choice between alternatives based on the environmental aspects of the proposed project and alternatives. The impacts of the alternatives are qualitatively compared to those of the proposed project. This chapter also identifies the environmentally superior alternative.

The **References** (Chapter 7) used throughout the Draft EIR are included in this chapter.

Report Preparation (Chapter 8) includes a list of preparers of the Draft EIR.

The **Appendices** contain a number of reference items providing support and documentation of the analyses performed for this report.

2.0 SUMMARY OF ENVIRONMENTAL EFFECTS

2.0 SUMMARY OF IMPACTS AND MITIGATION MEASURES

PROJECT UNDER REVIEW

The proposed project considers two transportation network options that include distinct vehicle, bicycle, pedestrian, and transit components, referred to as Scenario B and Scenario C. Scenario A, is based on implementation of previously approved plans and implementation of the mitigation measures adopted as part of the various plans in the immediate vicinity. Under this scenario no additional improvements beyond those set forth in approved plans would be implemented. This scenario will be the "no project" alternative in the CEQA alternatives chapter (Chapter 6, Alternatives).

Scenarios B and C are based on identical land use assumptions within the project area (e.g., Transit Oriented Development, or TOD). Under Scenarios B and C, specific roadway, bicycle, pedestrian, and transit improvements are analyzed. Please refer to Chapter 3, Project Description, for a more detailed description of the project.

The land uses surrounding the project area include the American River and California State University, Sacramento (CSUS or Sacramento State) to the north, Granite Regional Park and commercial offices to the east, heavy commercial/warehouse uses to the south and southeast, and residential development to the west and southwest.

Known Areas of Controversy

Fourteen comment letters were received during the Notice of Preparation (NOP) public comment period (May 16, 2008 through June 16, 2008 – see Appendix B for a copy of all comment letters received). Comments expressed in those letters included:

- A request that the City prepare a Traffic Impact Study (TIS) for the project;
- Notice that an encroachment permit would be required for any work performed in the State's right-of-way, such as along US Highway 50 (US 50);
- Potential for previously undiscovered archeological resources to be present in the project area and the potential of those resources to be damaged during project construction;
- A request that the environmental analysis study construction and operational emissions that could be generated by the project, induced demand created by the project, and any effects that the project may have on climate change;
- Potential for existing buildings and businesses to be removed or adversely affected by the extension of roadways or bike paths in the project area;

- Potential storm drainage impacts created by widening or extending streets, such as Ramona Avenue, in the project area;
- Concerns regarding "punch throughs" of existing levees in the project area and the need for floodgates to be installed on any such "punch through;"
- Increased traffic volumes on nearby residential streets, especially those roadways that were recently improved as part of the recent Neighborhood Traffic Management Plan;
- Traffic flow near the 59th Street Light Rail Station;
- Support for Scenario A, which would only involve the implementation of already approved transportation improvement projects;
- Desire for reduced speed limits (25 mph) in the project area;
- Concerns regarding creating through linkages across the UPRR tracks and additional travel lanes and their corollary effects on surrounding residential neighborhoods, bicyclists, and pedestrians;
- Concern regarding a lack of a dedicated bus lane under Scenario C;
- Request that all bike lanes maintain a minimum six-foot width and that dual crosswalks be installed where feasible;
- Request that bike lanes and sidewalks connect residential neighborhoods to shopping areas and light rail stations;
- Concern regarding increased noise levels and potential effects on surrounding residential neighborhoods; and
- Concern regarding potential effects on wildlife habitat, including wetlands.

Alternatives to the Proposed Project

The EIR analyzes the following project alternatives to the proposed project:

- Scenario A – No Project Alternative. This alternative assumes that vehicle, pedestrian, bicycle, and transit circulation elements would be developed in accordance with previously adopted transportation plans for the area, specifically the 65th Street/ University Transit Village Plan and the South 65th Street Area Plan.
- Scenario D – Fewer Improvements. This alternative assumes that Scenario C improvements would be implemented north of US 50 and Scenario A improvements (already approved) would be implemented south of US 50.

Detailed descriptions and analysis of potential impacts of Scenario A and Scenario D, Fewer Improvements, are discussed in Chapter 6, Alternatives.

SUMMARY OF IMPACTS

Table 2-1 (Summary of Impacts and Mitigation Measures), has been organized to correspond with the environmental issues discussed in Chapter 4. The summary table is arranged in four columns:

1. Environmental impacts ("Impact").
2. Level of significance prior to mitigation ("Significance").
3. Mitigation measures ("Mitigation Measure").
4. 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, existing City General Plan policies, 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 4.0, Introduction to the Analysis.

TABLE 2-1

SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
4.1 Air Quality			
4.1-1 Construction of the proposed project would generate emissions of ozone precursors.	PS (Scenario B)	**Scenario B** 4.1-1 a) The project contractor shall provide a plan, for approval by the SMAQMD, demonstrating that the heavy-duty (> 50 horsepower) off-road vehicles to be used in the construction project, including owned, leased and subcontractor vehicles, would achieve a project wide fleet-average 20% NO_x reduction and 45% particulate reduction compared to the most recent CARB fleet average at time of construction. b) The project contractor shall submit to SMAQMD a comprehensive inventory of all off-road construction equipment, equal to or greater than 50 horsepower, that shall be used an aggregate of 40 or more hours during any phase 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 developer and/or contractor shall provide SMAQMD with the anticipated construction timeline, including start date and name and phone number of the project manager and on-site foreman. Acceptable options for reducing emissions include the use of late-model engines, low-emission diesel products, alternative fuels, particulate matter traps, engine retrofit technology, after-treatment products, and/or such other options as become available.	LS

LS = Less than Significant
SU = Significant and Unavoidable
S = Significant
NA = Not Applicable
PS = Potentially Significant
NI = No Impact

TABLE 2-1

SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		c) The project contractor shall ensure that emissions from all off-road diesel powered equipment used on the project site do not exceed 40% opacity for more than three minutes in any one hour. Any equipment found to exceed 40% opacity (or 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 by contractor personnel certified to perform opacity readings, and a monthly summary of the visual survey results shall be submitted to the SMAQMD throughout the duration of the project, except that the monthly summary shall not be required for any 30-day period in which no construction activity occurs. The monthly summary shall include the quantity and type of vehicles surveyed as well as the dates of each survey. The above shall not supersede other SMAQMD or state rules and regulations. d) Limit vehicle idling time to five minutes or less. e) The City shall pay into the SMAQMD's construction mitigation fund to offset construction-generated emissions of NO_x for construction of any project components or group of components with concurrent construction that exceed daily emission threshold of 85 lbs/day. The project developer shall coordinate with the SMAQMD for payment of fees into the Heavy-Duty Low-Emission Vehicle Program designed to reduce construction related emissions within the region. Fees shall be paid based upon the current SMAQMD Fee of $16,000/ton of NO_x emissions generated. This fee shall be paid prior to the issuance of grading or other permits or at a date acceptable to the SMAQMD. The City shall keep track of actual equipment use and their NO_x emissions on a monthly basis and reported to the SMAQMD. Based on these monthly NO_x emissions reports, mitigation fees can be adjusted accordingly for payment to the SMAQMD.	

LS = Less than Significant
SU = Significant and Unavoidable
S = Significant
NA = Not Applicable
PS = Potentially Significant
NI = No Impact

TABLE 2-1

SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
	PS (Scenario C)	**Scenario C** 4.1-1 a) The project contractor shall provide a plan, for approval by the SMAQMD, demonstrating that the heavy-duty (> 50 horsepower) off-road vehicles to be used in the construction project, including owned, leased and subcontractor vehicles, would achieve a project wide fleet-average 20% NO_x reduction and 45% particulate reduction compared to the most recent CARB fleet average at time of construction. b) The project contractor shall submit to SMAQMD a comprehensive inventory of all off-road construction equipment, equal to or greater than 50 horsepower, that shall be used an aggregate of 40 or more hours during any phase 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 developer and/or contractor shall provide SMAQMD with the anticipated construction timeline, including start date and name and phone number of the project manager and on-site foreman. Acceptable options for reducing emissions include the use of late-model engines, low-emission diesel products, alternative fuels, particulate matter traps, engine retrofit technology, after-treatment products, and/or such other options as become available.	LS

LS = Less than Significant
SU = Significant and Unavoidable
S = Significant
NA = Not Applicable
PS = Potentially Significant
NI = No Impact

TABLE 2-1

SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		c) The project contractor shall ensure that emissions from all off-road diesel powered equipment used on the project site do not exceed 40% opacity for more than three minutes in any one hour. Any equipment found to exceed 40% opacity (or 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 by contractor personnel certified to perform opacity readings, and a monthly summary of the visual survey results shall be submitted to the SMAQMD throughout the duration of the project, except that the monthly summary shall not be required for any 30-day period in which no construction activity occurs. The monthly summary shall include the quantity and type of vehicles surveyed as well as the dates of each survey. The above shall not supersede other SMAQMD or state rules and regulations. d) Limit vehicle idling time to five minutes or less. e) The City shall pay into the SMAQMD's construction mitigation fund to offset construction-generated emissions of NO_x for construction of any project components or group of components with concurrent construction that exceed daily emission threshold of 85 lbs/day. The project developer shall coordinate with the SMAQMD for payment of fees into the Heavy-Duty Low-Emission Vehicle Program designed to reduce construction related emissions within the region. Fees shall be paid based upon the current SMAQMD Fee of $16,000/ton of NO_x emissions generated. This fee shall be paid prior to the issuance of grading or other permits or at a date acceptable to the SMAQMD. The City shall keep track of actual equipment use and their NO_x emissions on a monthly basis and reported to the SMAQMD. Based on these monthly NO_x emissions reports, mitigation fees can be adjusted accordingly for payment to the SMAQMD.	

LS = Less than Significant
SU = Significant and Unavoidable
S = Significant
NA = Not Applicable
PS = Potentially Significant
NI = No Impact

TABLE 2-1

SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
4.1-2 Construction and demolition activities associated with the proposed project would generate emissions of particulate matter.	PS (Scenario B)	**Scenario B** 4.1-2 Future project components shall comply with SMAQMD Rule 403, Fugitive Dust, for demolition and construction phases to reduce emissions of fugitive dust. To ensure compliance with Rule 403, approval to commence project construction shall not be give until the contractor submits a construction dust mitigation plan deemed satisfactory by the City and the SMAQMD. This plan shall specify control measures that shall be implemented to ensure that emissions of fugitive dust from being airborne beyond the property line from which the emission originates, demonstrate the availability of needed equipment and personnel, and identify a responsible individual who, if needed, can authorize the implementation of additional measures. The following measures shall be included, at a minimum, to reduce fugitive dust emissions in compliance with Rule 403: a) All disturbed areas, including storage piles that are not being actively used for construction purposes, shall be watered with sufficient frequency as to maintain soil moistness. b) All on-site unpaved roads and off-site unpaved access roads shall be effectively stabilized of dust emissions using water or a chemical stabilizer or suppressant. c) When materials are transported off-site, they shall be covered, effectively wetted to limit visible dust emissions, or maintained with at least 6 inches of freeboard space from the top of the container. d) All operations shall limit or expeditiously remove the accumulation of project-generated mud or dirt from adjacent public streets at least once every 24 hours when operations are occurring.	LS

LS = Less than Significant
SU = Significant and Unavoidable
S = Significant
NA = Not Applicable
PS = Potentially Significant
NI = No Impact

TABLE 2-1

SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		e) Following the addition of materials to, or the removal of materials from, the surfaces of outdoor storage piles, the storage piles shall be effectively stabilized of fugitive dust emissions using sufficient water or a chemical stabilizer or suppressant. f) On-site vehicle speeds on unpaved roads shall be limited to 15 miles per hour (mph). g) Wheel washers shall be installed for all trucks and equipment exiting from unpaved areas or wheels shall be washed manually to remove accumulated dirt prior to leaving the site. h) Sandbags or other erosion control measures shall be installed to prevent silt runoff to public roadways from adjacent project areas with a slope greater than 1 percent. i) Excavation and grading activities shall be suspended when winds exceed 20 mph. j) The extent of areas simultaneously subject to excavation and grading shall be limited, wherever possible, to the minimum area feasible.	
	PS (Scenario C)	**Scenario C** 4.1-2 Future project components shall comply with SMAQMD Rule 403, Fugitive Dust, for demolition and construction phases to reduce emissions of fugitive dust. To ensure compliance with Rule 403, approval to commence project construction shall not be give until the contractor submits a construction dust mitigation plan deemed satisfactory by the City and the SMAQMD. This plan shall specify control measures that shall be implemented to ensure that emissions of fugitive dust from being airborne beyond the property line from which the emission originates, demonstrate the availability of needed equipment and personnel, and identify a responsible individual who, if needed, can authorize the implementation of	LS

LS = Less than Significant
SU = Significant and Unavoidable
S = Significant
NA = Not Applicable
PS = Potentially Significant
NI = No Impact

TABLE 2-1

SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		additional measures. The following measures shall be included, at a minimum, to reduce fugitive dust emissions in compliance with Rule 403: a) All disturbed areas, including storage piles that are not being actively used for construction purposes, shall be watered with sufficient frequency as to maintain soil moistness. b) All on-site unpaved roads and off-site unpaved access roads shall be effectively stabilized of dust emissions using water or a chemical stabilizer or suppressant. c) When materials are transported off-site, they shall be covered, effectively wetted to limit visible dust emissions, or maintained with at least 6 inches of freeboard space from the top of the container. d) All operations shall limit or expeditiously remove the accumulation of project-generated mud or dirt from adjacent public streets at least once every 24 hours when operations are occurring. e) Following the addition of materials to, or the removal of materials from, the surfaces of outdoor storage piles, the storage piles shall be effectively stabilized of fugitive dust emissions using sufficient water or a chemical stabilizer or suppressant. f) On-site vehicle speeds on unpaved roads shall be limited to 15 miles per hour (mph). g) Wheel washers shall be installed for all trucks and equipment exiting from unpaved areas or wheels shall be washed manually to remove accumulated dirt prior to leaving the site. h) Sandbags or other erosion control measures shall be installed to prevent silt runoff to public roadways from adjacent project areas with a slope greater than 1 percent.	

LS = Less than Significant
SU = Significant and Unavoidable
S = Significant
NA = Not Applicable
PS = Potentially Significant
NI = No Impact

TABLE 2-1

SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		i) Excavation and grading activities shall be suspended when winds exceed 20 mph. j) The extent of areas simultaneously subject to excavation and grading shall be limited, wherever possible, to the minimum area feasible.	
4.1-3 Operation of the proposed project would contribute to emissions of ozone precursors.	LS (Scenario B)	**Scenario B** 4.1-3 None required.	NA
	LS (Scenario C)	**Scenario C** 4.1-3 None required.	NA
4.1-4 Implementation of the proposed project could expose sensitive receptors to increased concentrations of carbon monoxide.	LS (Scenario B)	**Scenario B** 4.1-4 None required.	NA
	LS (Scenario C)	**Scenario C** 4.1-4 None required.	NA
4.1-5 Construction and operation of the proposed project could expose sensitive receptors to increased concentrations of toxic air contaminants from traffic.	LS (Scenario B)	**Scenario B** 4.1-5 None required.	NA
	LS (Scenario C)	**Scenario C** 4.1-5 None required.	NA
4.1-6 Implementation of the proposed project, combined with other development in the air basin, could increase cumulative levels of criteria pollutants.	LS (Scenario B)	**Scenario B** 4.1-6 None required.	NA
	LS (Scenario C)	**Scenario C** 4.1-6 None required.	NA

LS = Less than Significant
SU = Significant and Unavoidable
S = Significant
NA = Not Applicable
PS = Potentially Significant
NI = No Impact

TABLE 2-1

SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
4.1-7 Construction and operation of the proposed project, combined with other development in the project area, could expose sensitive receptors to pollutant concentrations.	LS (Scenario B)	**Scenario B** 4.1-7 None required.	NA
	LS (Scenario C)	**Scenario C** 4.1-7 None required.	NA
4.2 Noise			
4.2-1 Construction and demolition activities associated with the project would temporarily increase noise in the project vicinity.	LS (Scenario B)	**Scenario B** 4.2-1 None required.	NA
	LS (Scenario C)	**Scenario C** 4.2-1 None required.	NA
4.2-2 Construction and demolition activities associated with the proposed project would temporarily increase vibration levels in the project vicinity.	LS (Scenario B)	**Scenario B** 4.2-2 None required.	NA
	LS (Scenario C)	**Scenario C** 4.2-2 None required.	NA
4.2-3 Implementation of the proposed project could permanently expose sensitive receptors to increased traffic noise levels.	LS (Scenario B)	**Scenario B** 4.2-3 None required.	NA
	LS (Scenario C)	**Scenario C** 4.2-3 None required.	NA
4.2-4 Future traffic in the project vicinity, including traffic from planned future development, could permanently expose sensitive receptors to increased cumulative traffic noise levels on local roadways.	S (Scenario B)	**Scenario B** 4.2-4 None available.	SU
	S (Scenario C)	**Scenario C** 4.2-4 None available.	SU

LS = Less than Significant
SU = Significant and Unavoidable
S = Significant
NA = Not Applicable
PS = Potentially Significant
NI = No Impact

TABLE 2-1

SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
4.3 Transportation and Circulation			
4.3-1 Under Existing plus Project conditions, project Scenarios B and C would result in roadway segments within the project area operating at unacceptable LOS conditions.	PS (Scenario B)	**Scenario B** 4.3-1 a) At the time of issuance of building permits,, all future development within the project area shall be required to participate in the 65th Street Station Area Finance plan or whatever financing mechanism is in place to fund, on a fair-share basis, the cost of the City of Sacramento Traffic Operations Center to implement ITS improvements on all major streets including Elvas Avenue, Folsom Boulevard, and 65th Street. b) All future development within the project area shall be required to participate in the 65th Street Station Area Finance plan or whatever financing mechanism is in place to fund, on a fair-share basis, the cost of designated pedestrian and bicycle improvements in the study area.	SU
	PS (Scenario C)	**Scenario C** 4.3-1 a) At the time of issuance of building permits,, all future development within the project area shall be required to participate in the 65th Street Station Area Finance plan or whatever financing mechanism is in place to fund, on a fair-share basis, the cost of the City of Sacramento Traffic Operations Center to implement ITS improvements on all major streets including Elvas Avenue, Folsom Boulevard, and 65th Street. b) All future development within the project area shall be required to participate in the 65th Street Station Area Finance plan or whatever financing mechanism is in place to fund, on a fair-share basis, the cost of designated pedestrian and bicycle improvements in the study area.	SU

LS = Less than Significant
SU = Significant and Unavoidable
S = Significant
NA = Not Applicable
PS = Potentially Significant
NI = No Impact

TABLE 2-1

SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
4.3-2 Under Existing plus Project conditions, project Scenarios B and C would result in intersections within the study area that would operate at an unacceptable LOS.	PS (Scenario B)	**Scenario B** 4.3-2 a) Implement Mitigation Measure 4.3-1(a). b) Implement Mitigation Measure 4.3-1(b).	SU
	PS (Scenario C)	**Scenario C** 4.3-2 a) Implement Mitigation Measure 4.3-1(a). b) Implement Mitigation Measure 4.3-1(b).	SU
4.3-3 Under Existing plus Project conditions, the existing freeway system would be adversely affected under project Scenarios B and C.	S (Scenario B)	**Scenario B** 4.3-3 All future development within the project area shall be required to participate in the 65th Street Station Area Finance plan or whatever financing mechanism is in place to fund, on a fair-share basis, the cost of widening the westbound US 50 off-ramp at 65th Street.	SU
	S (Scenario C)	**Scenario C** 4.3-3 All future development within the project area shall be required to participate in the 65th Street Station Area Finance plan or whatever financing mechanism is in place to fund, on a fair-share basis, the cost of widening the westbound US 50 off-ramp at 65th Street.	SU
4.3-4 Under Existing plus Project conditions, the existing or planned pedestrian system would not be adversely affected under project Scenarios B and C.	LS (Scenario B)	**Scenario B** 4.3-4 None required.	NA
	LS (Scenario C)	**Scenario C** 4.3-4 None required.	NA

LS = Less than Significant
SU = Significant and Unavoidable
S = Significant
NA = Not Applicable
PS = Potentially Significant
NI = No Impact

TABLE 2-1

SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
4.3-5 Under Existing plus Project conditions, the existing or planned bicycle system would not be adversely affected under project Scenarios B and C.	LS (Scenario B)	**Scenario B** 4.3-5 None required.	NA
	LS (Scenario C)	**Scenario C** 4.3-5 None required.	NA
4.3-6 Under Existing plus Project conditions, the existing transit system would be adversely affected under Scenarios B and C.	PS (Scenario B)	**Scenario B** 4.3-6 a) The City of Sacramento, in coordination with Regional Transit shall implement transit signal priority along Folsom Boulevard and/or 65th Street; and/or b) The City of Sacramento shall create flex lanes along Folsom Boulevard that use peak hour parking restrictions to convert on-street parking to peak hour vehicle use.	SU
	PS (Scenario C)	**Scenario C** 4.3-6 a) The City of Sacramento, in coordination with Regional Transit shall implement transit signal priority along Folsom Boulevard and/or 65th Street; and/or b) The City of Sacramento shall create flex lanes along Folsom Boulevard that use peak hour parking restrictions to convert on-street parking to peak hour vehicle use.	SU
4.3-7 Under Existing plus Project conditions, project Scenarios B and C would result in disruptions to the transportation network in the project area, including the possibility of temporary lane closures, street closures, sidewalk closures, and bikeway closures.	PS (Scenario B)	**Scenario B** 4.3-7 Before issuance of construction permits for any transportation improvements or any development projects in the project area, the City/ developers shall prepare a detailed Traffic Management Plan that would be subject to review and approval by the City Department of Transportation, Regional Transit, and local emergency service providers, including the City of Sacramento fire and police departments. The plan shall ensure maintenance of acceptable operating conditions on local roadways and transit routes during all construction activities. At a minimum, the plan shall include:	LS

LS = Less than Significant
SU = Significant and Unavoidable
S = Significant
NA = Not Applicable
PS = Potentially Significant
NI = No Impact

TABLE 2-1

SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		▪ The number of truck trips, time, and day of street closures; ▪ Time of day of arrival and departure of trucks; ▪ Limitations on the size and type of trucks; provision of a staging area with a limitation on the number of trucks that can be waiting; ▪ Provision of a truck circulation pattern; ▪ Provision of an access plan to maintain safe vehicular, pedestrian, and bicycle movements (e.g., steel plates, minimum distances of open trenches, and private vehicle pick up and drop off areas); ▪ Safe and efficient access routes for emergency vehicles; ▪ Efficient and convenient transit routes; ▪ Manual traffic control when necessary; ▪ Proper advance warning and posted signage concerning street closures; ▪ Provisions for pedestrian safety; and ▪ Provisions for temporary bus stops, if necessary. A copy of the construction traffic management plan shall be submitted to local emergency response agencies and these agencies shall be notified at least 14 days before the commencement of construction that would partially or fully obstruct roadways.	
	PS (Scenario C)	**Scenario C** 4.3-7 Before issuance of construction permits for any transportation improvements or any development projects in the project area, the City/ developers shall prepare a detailed Traffic Management Plan that would be subject to review and approval by the City Department of Transportation, Regional Transit, and local emergency service	LS

LS = Less than Significant
SU = Significant and Unavoidable
S = Significant
NA = Not Applicable
PS = Potentially Significant
NI = No Impact

TABLE 2-1

SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		providers, including the City of Sacramento fire and police departments. The plan shall ensure maintenance of acceptable operating conditions on local roadways and transit routes during all construction activities. At a minimum, the plan shall include: ▪ The number of truck trips, time, and day of street closures; ▪ Time of day of arrival and departure of trucks; ▪ Limitations on the size and type of trucks; provision of a staging area with a limitation on the number of trucks that can be waiting; ▪ Provision of a truck circulation pattern; ▪ Provision of an access plan to maintain safe vehicular, pedestrian, and bicycle movements (e.g., steel plates, minimum distances of open trenches, and private vehicle pick up and drop off areas); ▪ Safe and efficient access routes for emergency vehicles; ▪ Efficient and convenient transit routes; ▪ Manual traffic control when necessary; Proper advance warning and posted signage concerning street closures; ▪ Provisions for pedestrian safety; and ▪ Provisions for temporary bus stops, if necessary. A copy of the construction traffic management plan shall be submitted to local emergency response agencies and these agencies shall be notified at least 14 days before the commencement of construction that would partially or fully obstruct roadways.	
4.3-8 Under Cumulative plus Project conditions, project Scenarios B and C would result in roadway segments within the project area operating at unacceptable LOS conditions.	PS (Scenario B)	**Scenario B** 4.3-8 a) Implement Mitigation Measure 4.3-1(a). b) Implement Mitigation Measure 4.3-1(b).	SU

LS = Less than Significant
SU = Significant and Unavoidable
S = Significant
NA = Not Applicable
PS = Potentially Significant
NI = No Impact

TABLE 2-1

SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
	PS (Scenario C)	**Scenario C** 4.3-8 a) Implement Mitigation Measure 4.3-1(a). b) Implement Mitigation Measure 4.3-1(b).	SU
4.3-9 Under Cumulative plus Project conditions, project Scenarios B and C would result in intersections within the study area that would operate at an unacceptable LOS.	PS (Scenario B)	**Scenario B** 4.3-9 a) The 65th Street Station Area Plan Finance Plan shall provide funding to install a traffic signal at the intersection of Q Street and 67th Street, when warranted or with the development of the parcels adjacent to this intersection. b) Implement Mitigation Measure 4.3-1(a). c) Implement Mitigation Measure 4.3-1(b).	LS
	PS (Scenario C)	**Scenario C** 4.3-9 a) The 65th Street Station Area Plan Finance Plan shall provide funding to install a traffic signal at the intersection of Q Street and 67th Street, when warranted or with the development of the parcels adjacent to this intersection. b) Implement Mitigation Measure 4.3-1(a). c) Implement Mitigation Measure 4.3-1(b).	LS
4.3-10 Under Cumulative plus Project conditions, project Scenarios B and C would adversely affect the existing freeway system.	PS (Scenario B)	**Scenario B** 4.3-10 Implement Mitigation Measure 4.3-3.	SU
	PS (Scenario C)	**Scenario C** 4.3-10 Implement Mitigation Measure 4.3-3.	LS

LS = Less than Significant
SU = Significant and Unavoidable
S = Significant
NA = Not Applicable
PS = Potentially Significant
NI = No Impact

TABLE 2-1

SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
4.3-11 Under Cumulative plus Project conditions, the existing transit system would be adversely affected under Scenarios B and C.	PS (Scenario B)	**Scenario B** 4.3-11a) Implement Mitigation Measure 4.3-6. b) The City shall install additional signing and striping as well as enhancements to maximize the efficiency of existing traffic signal pre-emptions on the approaches to the 59th Street and 65th Street at-grade rail crossings. The City shall work with Regional Transit and the California Public Utility Commission (CPUC) to facilitate the implementation of advanced light rail detection at both locations to reduce the amount of time that gates are required to be closed.	LS
	PS (Scenario C)	**Scenario C** 4.3-11a) Implement Mitigation Measure 4.3-6. b) The City shall install additional signing and striping as well as enhancements to maximize the efficiency of existing traffic signal pre-emptions on the approaches to the 59th Street and 65th Street at-grade rail crossings. The City shall work with Regional Transit and the California Public Utility Commission (CPUC) to facilitate the implementation of advanced light rail detection at both locations to reduce the amount of time that gates are required to be closed.	LS
Initial Study			
Item 5: Water			
Would the proposal result in or expose people to potential impacts involving changes in absorption rates, drainage patterns, or the rate and amount of surface/stormwater runoff (e.g. during or after construction; or from material storage areas, vehicle fueling/ maintenance areas, waste handling, hazardous materials handling & storage, delivery areas, etc.)?	PS	**Scenarios B and C** MM-1 Prior to issuance of a grading permit for the realignment of 69th Street to connect Elvas Avenue directly with Redding Avenue with the addition of a signalized intersection at Folsom Boulevard (Scenario B), the developer shall demonstrate to the City of Sacramento Department of Utilities that the runoff generated by the roadway improvement would not exceed the capacity of Sump 113.	LS

LS = Less than Significant
SU = Significant and Unavoidable
S = Significant
NA = Not Applicable
PS = Potentially Significant
NI = No Impact

TABLE 2-1

SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		Improvements to ensure that Sump 113 is adequate could include, but would not be limited to, relocation of Sump 113, construction of Sump 113 that is larger than the existing one, improved wetwell hydraulics, added elbow room for maintenance, improved trash handling, backup pumping capacity, and possibly other "reliability" improvements. The City of Sacramento Department of Utilities would be required to approve of any improvements made to Sump 113.	
Would the proposal result in or expose people to potential impacts involving exposure of people or property to water related hazards such as flooding?	PS	**Scenarios B and C** MM-2 a) Prior to issuance of a grading permit for the new railroad undercrossing, the City of Sacramento Department of Transportation shall prepare a construction flood management plan which details a triggered response should the American River reach the warning stage elevation at American River at the H Street Bridge (40 feet) during construction. As part of the plan, the City shall describe what measures would be taken during construction such that flood protection remains in place. Temporary measures may include, but would not be limited to, construction of a temporary embankment consisting of rock, soil, and plastic sheeting at the undercrossing site. The City of Sacramento Department of Utilities shall approve the construction flood management plan prior to construction. b) As part of the improvements to the levee for the new railroad undercrossing, the City of Sacramento Department of Utilities (DOU) shall ensure that the project area would continue to have the minimum flood protection required by City regulations. The DOU shall require the project to include permanent improvements to ensure that flood protection is achieved which shall include, but not necessarily be limited to, the installation of flood gates on the railroad undercrossing.	LS

LS = Less than Significant
SU = Significant and Unavoidable
S = Significant
NA = Not Applicable
PS = Potentially Significant
NI = No Impact

TABLE 2-1

SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
Would the proposal result in or expose people to potential impacts involving discharge into surface waters or other alteration of surface water quality that substantially impact temperature, dissolved oxygen or turbidity, beneficial uses of receiving waters or areas that provide water quality benefits, or cause harm to the biological integrity of the waters? **Would the proposal result in or expose people to potential impacts involving changes in flow velocity or volume of stormwater runoff that cause environmental harm or significant increases in erosion of the project site or surrounding areas?** **Would the proposal result in or expose people to potential impacts involving changes in currents, or the course or direction of water movements?** **Would the proposal result in or expose people to potential impacts involving change in the quantity of ground waters, either through direct additions or withdrawal, or through interception of an aquifer by cuts or excavations or through substantial loss of groundwater recharge capability?** **Would the proposal result in or expose people to potential impacts involving altered direction or rate of flow of groundwater?** **Would the proposal result in or expose people to potential impacts involving groundwater quality?**	PS	**Scenarios B and C** MM-3 Prior to issuance of a grading permit, the City of Sacramento Department of Transportation shall prepare a water quality mitigation plan for each project component to be reviewed and approved by the City of Sacramento Department of Utilities. This plan shall provide details regarding construction and operational Best Management Practices (BMPs), in compliance with the City's NPDES permit, which reduce urban contaminants in stormwater runoff.	LS

LS = Less than Significant
SU = Significant and Unavoidable
S = Significant
NA = Not Applicable
PS = Potentially Significant
NI = No Impact

TABLE 2-1

SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
Item 8: Biological Resources			
Would the proposal result in impacts to endangered, threatened or rare species or their habitats (including, but not limited to plants, fish, insects, animals and birds)?	PS	**Scenarios B and C** MM-4 The City of Sacramento shall ensure that any ground disturbance (outside of existing rights-of-way) associated with installation or construction of any project component shall comply with the following requirements: a) Prior to the initiation of any ground-disturbing or vegetation-clearing activities or issuance of a grading permit, the City of Sacramento shall retain a qualified botanist to conduct surveys for special-status plant species and their habitat in the area of disturbance. b) The botanist shall conduct surveys for these special-status plant species at the appropriate time of year when the target species would be in flower and therefore clearly identifiable (i.e., blooming periods). Surveys shall be conducted following the California Department of Fish and Game (CDFG) and California Native Plant Society (CNPS) approved protocol for surveying for special-status plant species. c) If no special-status plants or their habitat are found during focused surveys, the botanist shall document the findings in a letter report to the City of Sacramento, and no further mitigation shall be required. d) If special-status plants are found, the following measures shall be implemented:	LS

LS = Less than Significant
SU = Significant and Unavoidable
S = Significant
NA = Not Applicable
PS = Potentially Significant
NI = No Impact

TABLE 2-1

SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		▪ If the populations can be avoided, they shall be clearly marked in the field, using pin flags, by a qualified botanist for avoidance during construction activities. After the area has been marked, orange exclusion fencing shall be installed a minimum of one foot away from the pin-flagged locations. The location of the plant population shall also be recorded on construction plans and specs. ▪ If special-status plant populations cannot be avoided, consultations with CDFG and/or U.S. Fish and Wildlife Service (USFWS) shall be required depending on the listing status of the species present. These consultations shall determine appropriate mitigation measures for any populations that would be affected by implementation of the proposed project. Appropriate measures may include the creation of offsite populations through seed collection or transplanting, preservation and enhancement of existing populations, or restoration or creation of suitable habitat in sufficient quantities to compensate for the impact. The results of the consultation with CDFG and/or the USFWS shall be provided to the City.	
		MM-5 The City of Sacramento shall ensure that any ground disturbance or construction of project improvements comply with the following requirements: a) Prior to issuance of grading permits, the City of Sacramento, in consultation with the USFWS, shall either (1) conduct a protocol-level survey for federally-listed vernal pool crustaceans, or (2) assume presence (without conducting surveys) of federally-listed vernal pool crustaceans in all suitable wetland habitat within 250 feet of construction activities Surveys shall be conducted by qualified biologists in accordance with the most recent USFWS guidelines or protocols to determine the time of year and survey methodology (survey timing for these species is dependent on	

LS = Less than Significant
SU = Significant and Unavoidable
S = Significant
NA = Not Applicable
PS = Potentially Significant
NI = No Impact

TABLE 2-1

SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		yearly rainfall patterns and seasonal occurrences, and is determined on a case-by-case basis). The surveys may be done as part of the Clean Water Act 404 permit process. The results of the survey shall be summarized in a "90-day Report" as required in current USFWS protocols, and submitted to the City and the USFWS. The report(s) shall include at a minimum: ▪ A complete list of species observed in the vernal pools and seasonal wetlands. ▪ A detailed description of methodology, including dates of field visits, the names of survey personnel with resumes and a list of references cited and persons contacted. ▪ Survey results that include at a minimum: - A map showing the location(s) of any federally listed vernal pool crustacean species identified within the project area. - A detailed description of any identified federally-listed vernal pool crustacean populations including information on the density, distribution and habitat quality relative to typical occurrences of the species in question. - A discussion of the importance of the population(s) with consideration of both nearby populations and total species distribution. - An assessment of significance related to project impacts on any federally- listed vernal pool crustacean populations identified in the project area.	

LS = Less than Significant
SU = Significant and Unavoidable

S = Significant
NA = Not Applicable

PS = Potentially Significant
NI = No Impact

TABLE 2-1

SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		b) If surveys within the project area reveal no occurrences of federally-listed vernal pool crustaceans, no further mitigation shall be required. However, if surveys determine that one or more federally-listed vernal pool crustacean species occurs within the project area, or if the City of Sacramento, in consultation with the USFWS, assumes presence of federally-listed vernal pool crustaceans in all affected pools, no net loss of habitat shall be achieved through avoidance, preservation, creation and/or purchase of credits. The selected measures may be part of the Clean Water Act 404 permitting process. ▪ Avoidance Where feasible all wetland features shall be avoided. A USFWS-approved biologist shall monitor construction activities located within 250 feet of any wetland habitat within the project site to be avoided to ensure that no unnecessary take of listed species or destruction of their habitat occurs. The biologist shall have the authority to stop all activities that the biologist deems may result in such a take or destruction until appropriate corrective measures have been completed. The biologist also shall immediately report any unauthorized impacts to the USFWS and the CDFG. ▪ Compensation The following or equally effective compensation measures shall be implemented as determined in consultation with the USFWS: - For every acre of habitat directly or indirectly (habitat within 250 feet of construction activities) affected, at least two vernal pool preservation credits shall be dedicated within a USFWS-approved ecosystem preservation bank.	

LS = Less than Significant
SU = Significant and Unavoidable
S = Significant
NA = Not Applicable
PS = Potentially Significant
NI = No Impact

TABLE 2-1

SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		- For every acre of habitat directly affected, at least one vernal pool creation credit shall be dedicated within a USFWS-approved habitat mitigation bank. ▪ Water quality in the avoided wetlands shall be protected using erosion control techniques, such as silt fencing or straw waddles during construction in the watershed. This shall be completed in accordance with the State Construction Permit, as outlined in the NPDES General Permit No. CAS000002, Waste Discharge Requirements, Order No. 99-08-DWQ.	
		MM-6 The City of Sacramento shall ensure that construction of all project improvements comply with the following requirements: a) Prior to any building demolition, the City of Sacramento shall retain a qualified biologist to conduct a focused survey for bats and potential roosting sites in buildings to be demolished and/or buildings located within 50 feet of construction activities. If no roosting sites or bats are found within the project area, a letter report confirming absence shall be sent to the City of Sacramento and no further mitigation is required. b) If bats are found roosting at the site outside of nursery season (May 1st through October 1st), then they shall be evicted as described under (c) below. If bats are found roosting during the nursery season, then they shall be monitored to determine if the roost site is a maternal roost. This could occur by either visual inspection of the roost bat pups, if possible, or monitoring the roost after the adults leave for the night to listen for bat pups. If the roost is determined to not be a maternal roost, then the bats shall be evicted as described under (c). Because bat pups cannot leave the roost until they are mature enough, eviction of a maternal roost cannot occur during the nursery season. A 250-foot (or as determined in consultation with CDFG) buffer zone	

LS = Less than Significant
SU = Significant and Unavoidable
S = Significant
NA = Not Applicable
PS = Potentially Significant
NI = No Impact

TABLE 2-1

SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		shall be established around the roosting site within which no construction shall occur. This boundary shall be added to the construction plans and specs. Depending on the location, and in order to not adversely affect ongoing residential and commercial activities, the boundary shall be marked using stakes and environmental flagging, or another method determined to be appropriate in consultation with CDFG. c) Eviction of bats shall be conducted using bat exclusion techniques, developed by Bat Conservation International (BCI) and in consultation with CDFG, that allow the bats to exit the roosting site but prevent re-entry to the site. This would include but not be limited to the installation of one way exclusion devices. The devices shall remain in place for seven days and then the exclusion points and any other potential entrances shall be sealed. This work shall be completed by a BCI recommended exclusion professional.	
		MM-7 The City of Sacramento shall ensure that all project improvements comply with the following requirements: a) For construction activities proposed within 500 feet of a potential nesting tree, undeveloped habitat, or under US 50 during the nesting season (February 1 through August 31), the City shall retain a qualified biologist to conduct focused preconstruction surveys for protected birds, including, burrowing owl, Swainson's hawk, white tailed kite and purple martin and other birds protected under the Migratory Bird Treaty Act. Surveys shall occur within 30 days before the onset of construction. A pre-construction survey report shall be submitted to CDFG and the City of Sacramento that includes, at a minimum: (1) a description of the methodology including dates of field visits, the names of survey personnel with resumes, and a list of references cited and	

LS = Less than Significant
SU = Significant and Unavoidable
S = Significant
NA = Not Applicable
PS = Potentially Significant
NI = No Impact

TABLE 2-1

SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		persons contacted; and (2) a map showing the location(s) of any bird nests observed on the project area. If no active nests of MBTA, CDFG, or USFWS covered species are identified then no further mitigation is required. b) Should active nests of protected bird species be identified during the survey conducted in accordance with Mitigation Measure MM-7(a), the City of Sacramento in consultation with the CDFG, shall delay construction in the vicinity of active nest sites during the breeding season (February 1 through August 31) while the nest is occupied with adults and/or young. A qualified biologist shall monitor any occupied nest to determine when the nest is no longer used. If construction cannot be delayed, avoidance shall include the establishment of a non-disturbance buffer zone around the nest site. The size of the buffer zone shall be determined in consultation with the CDFG, but shall be a minimum of 200 feet. The buffer zone shall be delineated by highly visible temporary construction fencing. c) If demolition/construction activities are unavoidable within the buffer zone, the City of Sacramento shall retain a qualified biologist to monitor the nest site to determine if construction activities are disturbing the adult or young birds. If abandonment occurs the biologist shall consult with CDFG or USFWS for the appropriate salvage measures. This could include taking any nestlings to a local wildlife rehabilitation center.	
Would the proposal result in impacts to locally designated species (e.g., heritage or City street trees)?	PS	**Scenarios B and C** MM-8 The City of Sacramento shall ensure that the proposed project complies with the following requirements:	LS

LS = Less than Significant
SU = Significant and Unavoidable
S = Significant
NA = Not Applicable
PS = Potentially Significant
NI = No Impact

TABLE 2-1

SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		a) The City of Sacramento shall have a tree survey or arborist report prepared for any project proposed in the project area that would affect existing trees to determine whether any heritage and/or city street trees would be affected. b) If no heritage and/or City street trees are present, no further mitigation is required. c) If heritage and/or city street trees are present, identified trees shall be preserved by installing temporary fencing 5 feet beyond the drip line of protected trees to minimize disturbance to the trees and their root zones in accordance with the Sacramento City Code, Chapter 12.64 Heritage Trees. Fences shall be maintained until all project activities are complete. No grading, trenching, or movement of heavy equipment shall occur within fenced areas. d) If removal of the heritage and/or city street trees or construction within 5 feet of the drip line cannot be avoided, a permit under Chapter 12.64.050 of the Sacramento City Code shall be obtained by the City of Sacramento prior to construction or ground disturbance. All requirements of the permit shall be implemented.	
Would the proposal result in impacts to wetland habitat (e.g., marsh, riparian and vernal pool)?	PS	MM-9 a) The City of Sacramento shall retain a qualified biologist to conduct a wetland delineation of the project area if wetland areas are present. This delineation shall be submitted to the U.S. Army Corps of Engineers (Corps), and verification received prior to the issuance of any grading permits. b) The City of Sacramento shall, where feasible, preserve the maximum amount of existing wetlands and other waters of the U.S., and establish a minimum 25 to 50 foot buffer around all sides of these features. In addition, the final project design shall not cause significant changes to the pre-project hydrology, water	LS

LS = Less than Significant
SU = Significant and Unavoidable
S = Significant
NA = Not Applicable
PS = Potentially Significant
NI = No Impact

TABLE 2-1

SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		quality or water quantity in any wetland that is to be retained on-site. This shall be accomplished by avoiding or repairing any disturbance to the hydrologic conditions in the watersheds that specifically support these wetlands, as verified through wetland protection plans. c) Where avoidance of existing wetlands and other waters of the U.S. is not feasible, mitigation measures shall be implemented for the project-related loss of any existing wetlands on-site, such that there is no-net-loss of wetland acreage or habitat value. Wetland mitigation shall be developed as a part of the CWA Section 404 permitting process or the report of waste discharged prepared for the SWRCB. The exact mitigation ratio is variable, based on the type and value of the wetlands affected by the project, but agency standards typically require a minimum of 1:1 for preservation and 1:1 for construction of new wetlands. In addition, a wetland mitigation and monitoring plan shall be developed that includes the following: ▪ Descriptions of the wetland types, and their expected functions and values; ▪ Performance standards and monitoring protocol to ensure the success of the mitigation wetlands over a period of five years; ▪ Engineering plans showing the location, size and configuration of wetlands to be created or restored; ▪ An implementation schedule showing that construction of mitigation areas will commence prior to or concurrently with the initiation of construction; and	

LS = Less than Significant
SU = Significant and Unavoidable
S = Significant
NA = Not Applicable
PS = Potentially Significant
NI = No Impact

TABLE 2-1

SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		▪ A description of legal protection measures for the preserved wetlands (i.e., dedication of fee title, conservation easement, and/or an endowment held by an approved conservation organization, government agency or mitigation bank). ▪ The mitigation and monitoring plan shall be approved by the Corps or SWRCB (as appropriate), prior to construction related impacts on any existing wetland.	
Item 10: Hazards			
Would the proposal involve the creation of any health hazard or potential health hazard? **Would the proposal involve exposure of people to existing sources of potential health hazards?**	PS	**Scenarios B and C** MM-10 If discolored soil, storage tanks, or other evidence of potential soil contamination is unearthed during construction-related earthwork, or if noxious odors are encountered during such earthwork, construction activities shall immediately cease at the construction site, and a qualified firm shall be called in by the applicant to collect and analyze soil samples from the construction site. If contaminants are identified in the samples, the applicant shall coordinate with the Sacramento County Hazardous Materials Division, or the appropriate agencies, for direction on appropriate remediation measures and procedures before construction activities are continued.	LS
		MM-11 If construction occurs on the site of the former 14th Avenue Landfill, the developer shall: a) Demonstrate to the satisfaction of the California Regional Water Quality Control Board (CRWQCB) that the existing landfill cover will not allow wastes to be leached into groundwater. b) If it can be demonstrated that the wastes are inert, no cover is needed.	

LS = Less than Significant
SU = Significant and Unavoidable
S = Significant
NA = Not Applicable
PS = Potentially Significant
NI = No Impact

TABLE 2-1

SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		c) If the wastes cannot be demonstrated to be inert, the developer shall demonstrate to the CRWQCB that precipitation will not percolate through wastes and cause a groundwater quality problem. Soil moisture censors, excavation, or coring following rainfall could be used to determine the effectiveness of the existing pavement to prevent percolation. d) The developer shall prepare a drainage map and submit it to the CRWQCB showing that all surface drainage is directed to runoff locations offsite. The map must also show that most of the rainfall leaves the site as runoff. e) Any excess excavated soils must be disposed of at a California Integrated Waste Management Board-approved landfill. f) If landfill waste is encountered during construction, construction work shall stop and the CIWMB Health and Safety Section shall be contacted for the proper course of action. g) If groundwater is encountered during construction, construction work shall stop and the Central Valley Water Quality Control Board shall be contacted for the proper course of action.	
Item 15: Cultural Resources			
Would the proposal disturb paleontological resources? **Would the proposal disturb archaeological resources**	PS	**Scenarios B and C** MM-12a) In the event that any prehistoric subsurface archeological features or deposits, including locally darkened soil ("midden"), that could conceal cultural deposits, animal bone, obsidian and/or mortars are discovered during construction-related earth-moving activities, all work within 100 feet of the resource shall be halted, and the City shall consult with a qualified archeologist to assess the significance of the find. Archeological test excavations shall be conducted by a qualified archeologist to aid in determining the nature and integrity of the find. If the find is determined to be significant by the qualified archeologist,	LS

LS = Less than Significant
SU = Significant and Unavoidable
S = Significant
NA = Not Applicable
PS = Potentially Significant
NI = No Impact

TABLE 2-1

SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		representatives of the City and the qualified archeologist shall coordinate to determine the appropriate course of action. All significant cultural materials recovered shall be subject to scientific analysis and professional museum curation. In addition, a report shall be prepared by the qualified archeologist according to current professional standards. b) If a Native American site is discovered, the evaluation process shall include consultation with the appropriate Native American representatives. If Native American archeological, ethnographic, or spiritual resources are involved, all identification and treatment shall be conducted by qualified archeologists, who are certified by the Society of Professional Archeologists (SOPA) and/or meet the federal standards as stated in the Code of Federal Regulations (36 CFR 61), and Native American representatives, who are approved by the local Native American community as scholars of the cultural traditions. In the event that no such Native American is available, persons who represent tribal governments and/or organizations in the locale in which resources could be affected shall be consulted. If historic archeological sites are involved, all identified treatment is to be carried out by qualified historical archeologists, who shall meet either Register of Professional Archeologists (RPA), or 36 CFR 61 requirements. c) If a human bone or bone of unknown origin is found during construction, all work shall stop within 100 feet the find, and the County Coroner shall be contacted immediately. If the remains are determined to be Native American, the Coroner shall notify the Native American Heritage Commission, who shall notify the person most likely believed to be a descendant. The most likely descendant shall work with the contractor to develop a program	

LS = Less than Significant
SU = Significant and Unavoidable
S = Significant
NA = Not Applicable
PS = Potentially Significant
NI = No Impact

TABLE 2-1

SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		for re-internment of the human remains and any associated artifacts. No additional work is to take place within the immediate vicinity of the find until the identified appropriate actions have taken place.	
Would the proposal affect historical resources?	PS	MM-13 For any roadway widenings or extensions under the 65th Street Station Area Plan that could affect one or more potentially historic buildings, the City shall first have a CRHR eligibility evaluation prepared by a qualified historian. The evaluation shall occur through the preparation of DPR 523 forms for each building, and through standard CEQA evaluation. For buildings determined to be eligible for listing: (1) reuse of these buildings should be considered over demolition; and (2) if demolition cannot be avoided, then the buildings shall be recorded to Historic American Buildings Survey/Historic American Engineering Record (HABS/HAER) standards before their removal. HABS/HAER recordation typically includes the following: ▪ the development of site-specific history and appropriate contextual information regarding the particular resource (in addition to archival research and comparative studies, this task may involve limited oral history collection); ▪ accurate mapping of the resources, scaled to indicate size and proportion of the structures; ▪ photodocumentation of the designated resources, both in still and video formats; and ▪ recordation by measured architectural drawings, in the case of specifically designed structures of high architectural merit; "as-built" plans of existing structures/foundation ruins will involve field measurements, office scaled plan layout, and plot out of final plan.	LS

LS = Less than Significant
SU = Significant and Unavoidable
S = Significant
NA = Not Applicable
PS = Potentially Significant
NI = No Impact

TABLE 2-1

SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		▪ Copies of the HABS/HAER documentation shall be filed with the State Office of Historic Preservation (OHP), Sacramento Archive and Museum Collection Center (SAMCC), and the Sacramento Room at the Central Branch of the Sacramento County Library.	

LS = Less than Significant
SU = Significant and Unavoidable

S = Significant
NA = Not Applicable

PS = Potentially Significant
NI = No Impact

3.0 PROJECT DESCRIPTION

3.0 PROJECT DESCRIPTION

INTRODUCTION

The 65th Street Station Area Plan project (proposed project) is one of the final steps required to plan for mixed-use, pedestrian-oriented neighborhoods in the area of the 65th Street/University Light Rail station. This plan works in parallel with, and complements, previous planning efforts that established new land uses and development intensities in the area, but that cannot achieve their full vision without a supporting framework of infrastructure including streets, sidewalks, and bicycle facilities. In addition, this plan revises the previously planned improvements in the area so that the City can realize the transit village concept for the area envisioned by the 2030 General Plan.

The 65th Street Station Area Plan provides detailed information about the proposed improvements in the project area including plan lines, street cross sections, construction phasing, and project financing.

PROJECT LOCATION

The 1,025-acre project area for the 65thStreet Station Area Plan is located in the eastern part of the city (see Figure 3-1). The proposed project improvements are located along various transportation corridors in the project area. To more easily define the project boundaries, the City designated a larger area as the 65th Street Station Area, the boundaries of which encompass the various transportation corridors. The specific areas that would be improved are described in further detail below, under "Project Description."

The project area is generally bounded by the Union Pacific Railroad (UPRR) right-of-way and Folsom Boulevard to the north, Power Inn Road to the east, 14thAvenue to the south, and 59thStreet to the west. The California State University, Sacramento (CSUS or Sacramento State) campus is north of the project area. Granite Regional Park and commercial office uses are east of the project area, and established residential neighborhoods lie to the south and west. Major regional roadways and national highways bisect the project area including US Highway 50 (US 50); Folsom Boulevard, which becomes part of State Highway 16 east of Power Inn Road; 65th Street; and Power Inn Road/Howe Avenue. Rail lines that bisect the project area include Union Pacific and Sacramento Regional Transit's (RT's) Folsom Corridor light rail line.

PROJECT BACKGROUND

In 2000, Sacramento RT initiated the 'Transit for Livable Communities' (TLC) project to plan for development around light rail stations. The 65th Street Station area was considered to be one of the most promising Transit Oriented Development opportunities on RT's Folsom corridor. This

Source: Microsoft Streets and Trips, 2006.

FIGURE **3-1**

Vicinity Map

was due to the available development opportunities, the strong demand for retail and office in the area, heavy light rail station use by the CSUS community, and convenient roadway and transit access. Three studies followed the TLC project in order to implement the vision of Smart Growth in the neighborhoods served by the 65th Street /University light rail station.

The 2002 65th Street/University Transit Village Plan (TVP) established new land uses intended to increase RT ridership at the station and proposed improved pedestrian/bicycle circulation and access to the station, CSUS, and adjacent neighborhoods. This plan was to serve as a guide to future land use decisions for a 49-acre area generally located within a ¼ mile of the 65th Street/University Light Rail station (see Figure 3-2).

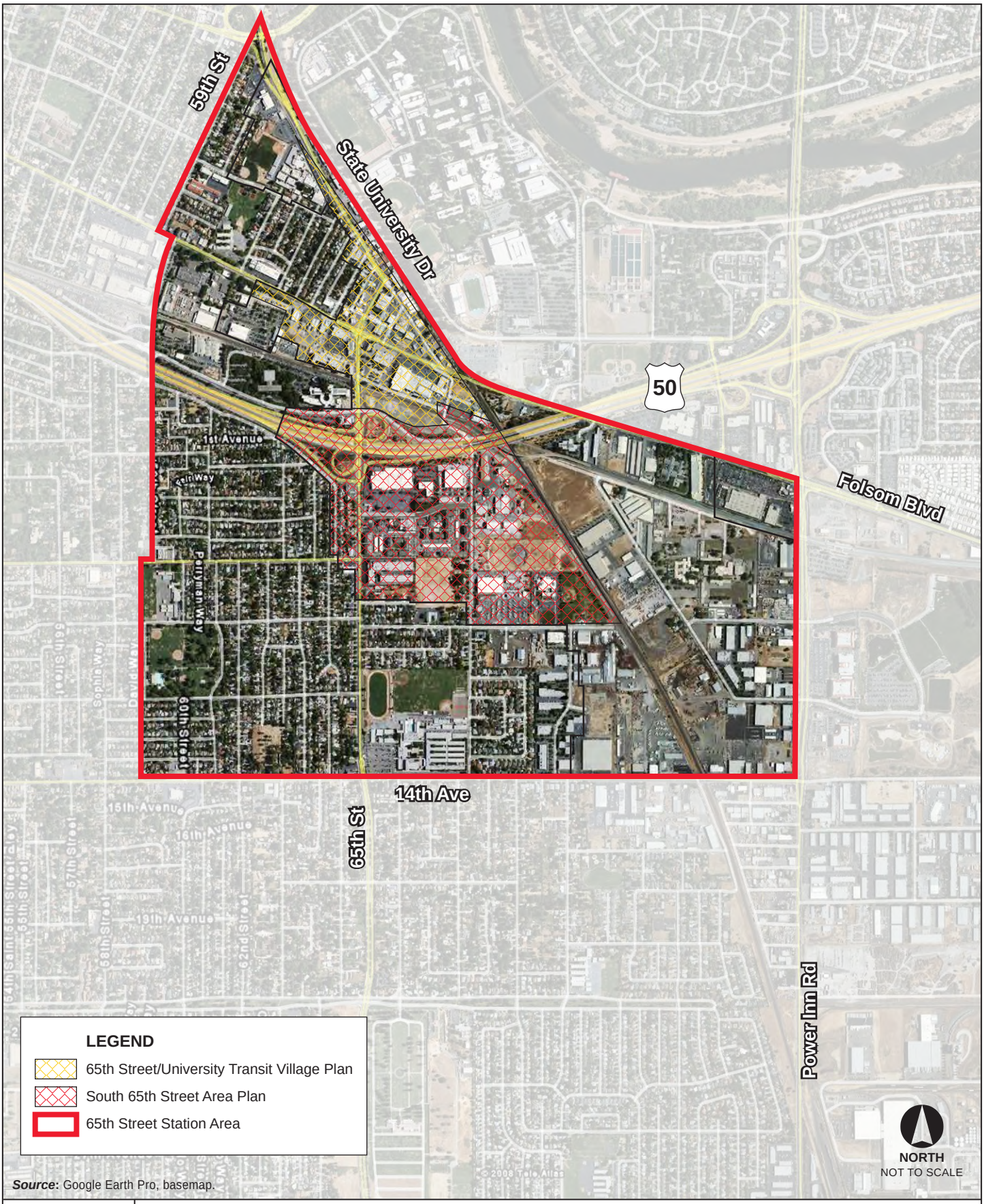
The TVP identified a key group of land parcels termed the "Station Block" near the 65th Street/University Light Rail station as the catalyst for transit-oriented development (see Figure 3-3). In 2005, a study was commissioned, the 65th Street Station Block Development Strategy to explore potential development options and identify specific public actions to facilitate redevelopment of the Station Block area. A major finding of the Strategy was that in order to achieve the stated objectives of the TVP, the City must reevaluate planned transportation projects within the transit village area, including mitigation measures established in previous environmental documents in the project area (the 65th Street/University Transit Village Project EIR and the South 65th Street Area Plan). It was recommended to re-evaluate the adopted mitigation measures to determine whether they would significantly impede the ability to achieve the urban design objectives required for the desired transit village to thrive. The proposed circulation network concepts are responsive to the City's vision of creating a neighborhood/University mixed use district, to create a walkable college district, establish a 65th Street Village main street, connect to existing residential neighborhoods, and enhance pedestrian/bike/transit linkages.

Following completion of the TVP, a companion study – the South 65th Street Area Plan – was prepared for a 140-acre area south of US 50 lying within ½ mile of the 65th Street Station. This plan's vision was to create a walkable, interconnected, mixed-use neighborhood district. Underutilized parcels were set within a street framework of large blocks with minimal pedestrian appeal. The plan established new land uses, pedestrian improvements to existing streets, and the provision of pedestrian-only linkages in the area (see Figure 3-2).

The land uses and densities envisioned in these two plans were incorporated into the City's 2030 General Plan. The General Plan envisions the 65th Street Station area as a pedestrian-friendly, transit-oriented area where people rely less on the automobile and have viable options for using alternative transportation modes such as walking, bicycling, or transit.

Until adoption of the 2030 General Plan,[1] there were other polices that were contrary to this vision and the three projects, as described above, were developed in accordance with those

1 The Sacramento 2030 General Plan was adopted by the Sacramento City Council on March 3, 2009.

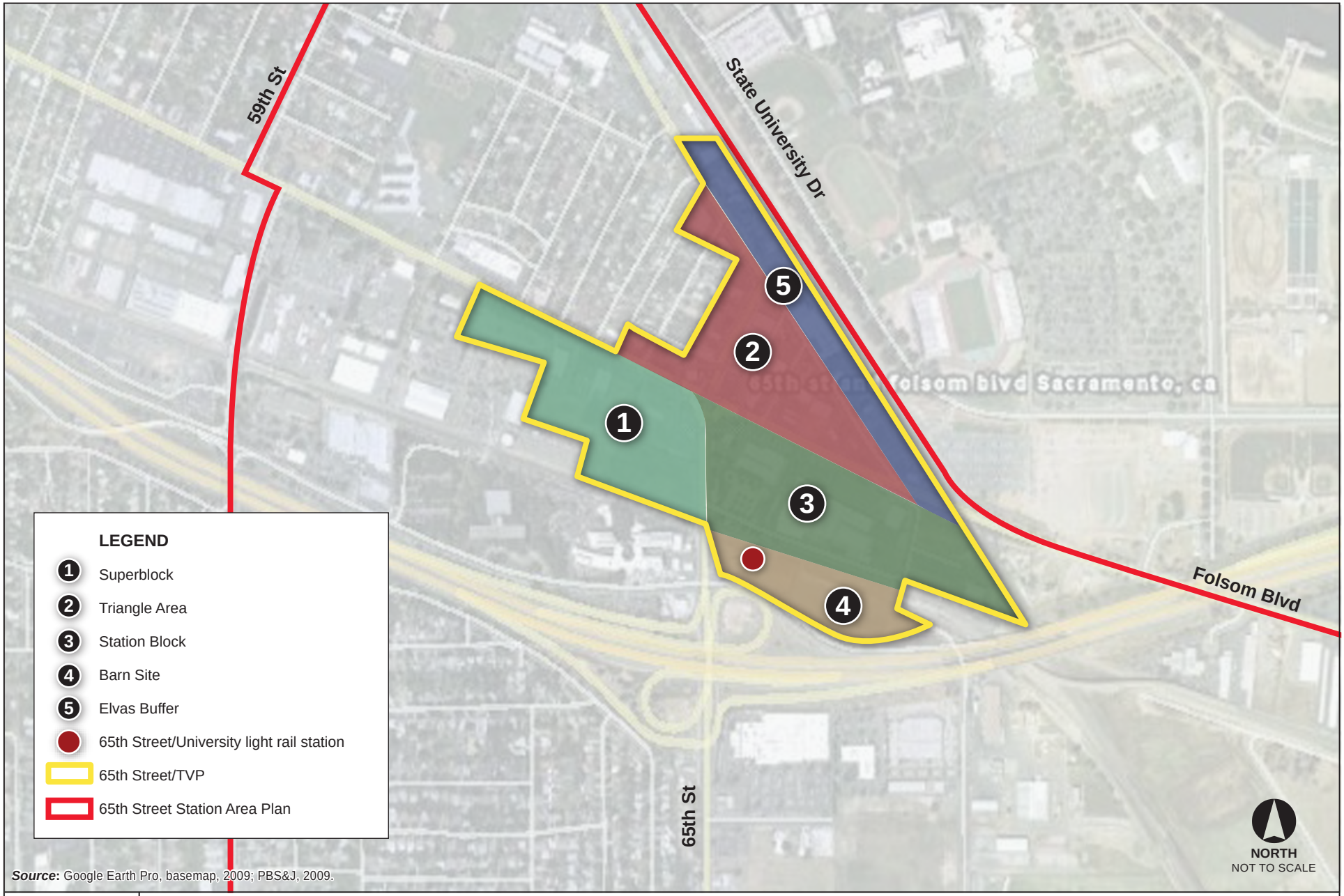


***Source*:** Google Earth Pro, basemap.

FIGURE **3-2**

Transit Village Plans

04207 | JCS | 09



***Source*:** Google Earth Pro, basemap, 2009; PBS&J, 2009.

FIGURE **3-3**

65th Street/University Transit Village Plan (TVP) – Station Block

policies. In particular, the 1988 General Plan did not distinguish adequately between its Smart Growth land use goals and policies and its requirements for traffic flow. Consequently, when the EIR was prepared for the TVP, a number of mitigation measures were required to comply with the General Plan circulation elements that favored efficiency of automobile traffic flow over other modes of transportation. These mitigation measures included numerous intersection widenings to allow for improved turning and through-traffic maneuvers, including the addition of left- and right-turn lanes from Folsom Boulevard to 65th Street, resulting in a seven-lane road in the heart of the Transit Village.

In 1999, the Southeast Area Transportation Study (SEATS) recommended several roadway projects that would reduce congestion at the Power Inn Road and Folsom Boulevard intersection and accommodate long-term traffic increases in the southeast area of Sacramento. Among the proposed projects was a widening of the Folsom Boulevard undercrossing of the UPRR tracks from two lanes to four and the creation of new roadways to more directly connect southeast area traffic to the US 50 interchange at 65th Street.

The projects and improvements approved by the 65th Street/TVP, South 65th Street Area Plan, and SEATS conflicted with the goals of a transit village in the area around the 65th Street/ University station, and with their emphasis on vehicle throughput, were not likely to result in an environment that would support a mixed-use transit village. In essence, there is a policy conflict for the area.

In addition, as evidenced by the recently adopted 2030 General Plan, the momentum of the 65th Street area has shifted to Smart Growth. Existing City policy established the required land uses and densities for transit village development in the area. The missing element is the accessible transportation framework. To that end, the City does not want to implement the outdated, previously adopted approaches to transportation. The proposed 65th Street Station Area Plan is intended to provide a clear implementation strategy to create a transportation framework that allows the transit village to develop and supports the current policies.

The need for the proposed project, the 65th Street Station Area Study, came from discussions associated with the 65th Street Station Block Development Strategy. A goal of the proposed project is to define the roadway network modifications needed to support development of the 65th Street/University Transit station and the South 65th Street Area Plan areas. The proposed project analyzes two circulation alternatives (Scenarios B and C) which, if approved, would lead to amendments to the two plans.

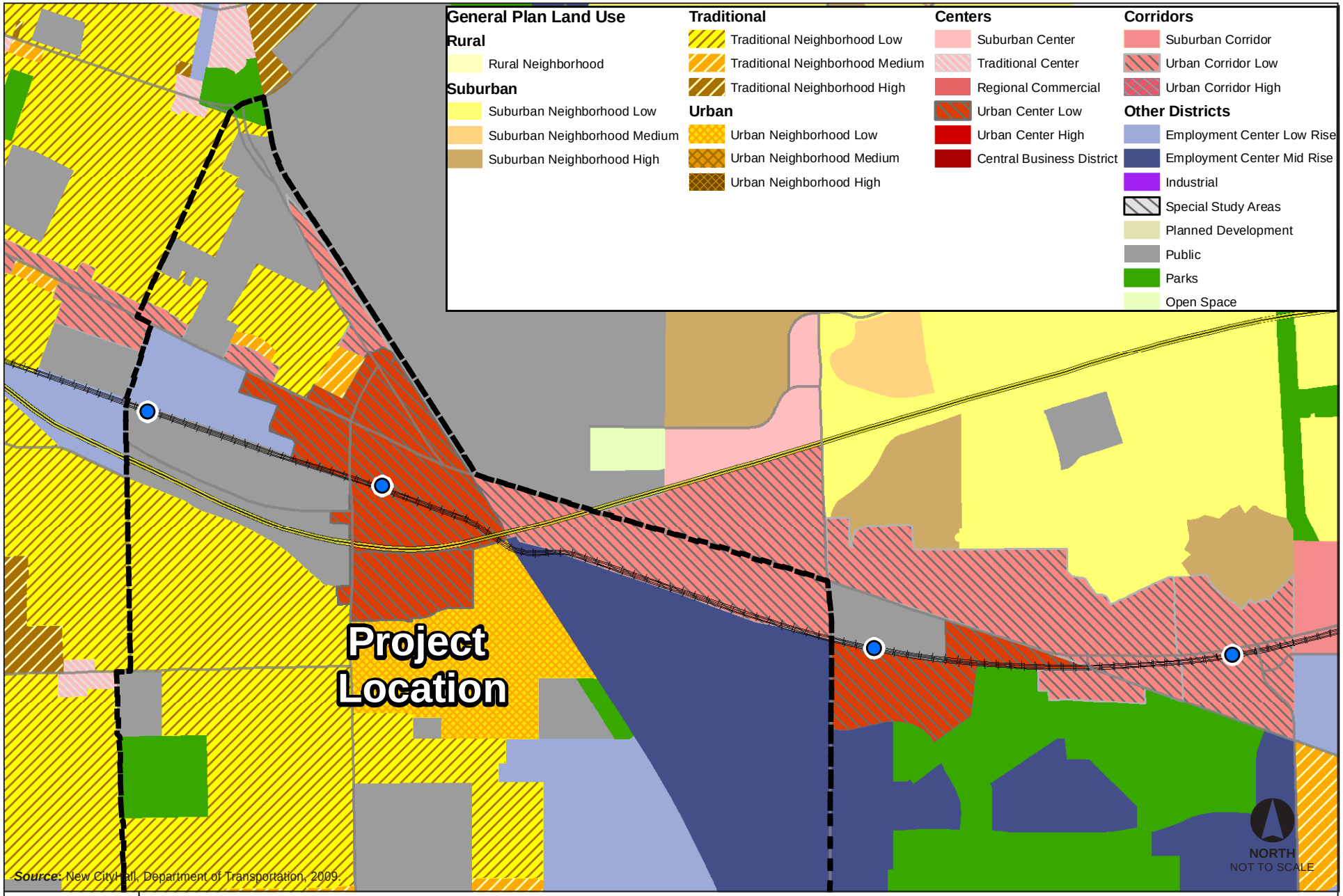
Existing Land Uses

Table 3-1 describes the existing land uses around and within the project area (see Figures 3-4 and 3-5).

TABLE 3-1

SURROUNDING LAND USES FOR SCENARIOS B AND C

	Scenario		Surrounding Land Uses
	B	C	
Roadway improvements would occur at the following locations:			
Ramona Avenue would be extended with two travel lanes from its current terminus at Brighton Avenue westward to cross under the light rail tracks and US 50 immediately east of the UPRR tracks to a new intersection at Folsom Boulevard roughly 350-feet east of the UPRR tracks.	✓	✓	Light rail tracks, heavy rail tracks, US 50, vacant area, commercial building, paved parking lot
Ramona Avenue would be extended with two travel lanes southward from the current elbow roughly 850-feet west of the Ramona and Power Inn Road intersection to a new intersection at 14th Avenue.	✓	✓	Industrial uses, warehouses, paved parking areas
69th Street would be realigned to connect Elvas Avenue directly with Redding Avenue with the addition of a signalized 4-way intersection at Folsom Boulevard.	✓		Commercial shopping center, paved parking lots, vacant lots
San Joaquin Street would be extended eastward from its current terminus west of the UPRR tracks to Ramona Avenue at Cucamonga Avenue with a grade separated crossing of the UPRR tracks. Access control measures would be provided on the westbound leg of the intersection of San Joaquin Street and Redding Avenue to allow pedestrian, bicycle, and emergency vehicle access only.	✓		Industrial uses, warehouses, Tahoe Tallac Park, paved parking areas, vacant lots, light rail tracks
Broadway would be extended with two travel lanes eastward from 65th Street to a new intersection at Redding Avenue.	✓		Industrial printing business, paved parking lot, detention basin, multi-family housing
Broadway would be extended with two lanes eastward from 65th Street through a new grade-separated crossing of the UPRR to a new intersection at Ramona Avenue.		✓	Industrial printing business, paved parking lot, detention basin, multi-family housing, golf driving range, vacant lot, light rail tracks, industrial uses
65th Street would be extended with two travel lanes northward from Elvas Avenue under the UPRR tracks to a new intersection with State University Drive.	✓		Commercial uses, industrial uses, paved parking lots
A new two lane "68th Street" would be constructed parallel to 67th Street and roughly equidistant between 67th and 69th from Elvas Avenue and Q Street and relinquishing Elvas Avenue between 68th Street and Folsom Boulevard.		✓	Commercial uses, paved parking lots
67th Street would be extended from Folsom Boulevard to Elvas Avenue.		✓	Commercial uses, paved parking lots
Folsom Boulevard would be reduced from four lanes to three lanes from 59th Street to 67th Street.		✓	Commercial uses, single family residential, industrial uses, paved parking lots

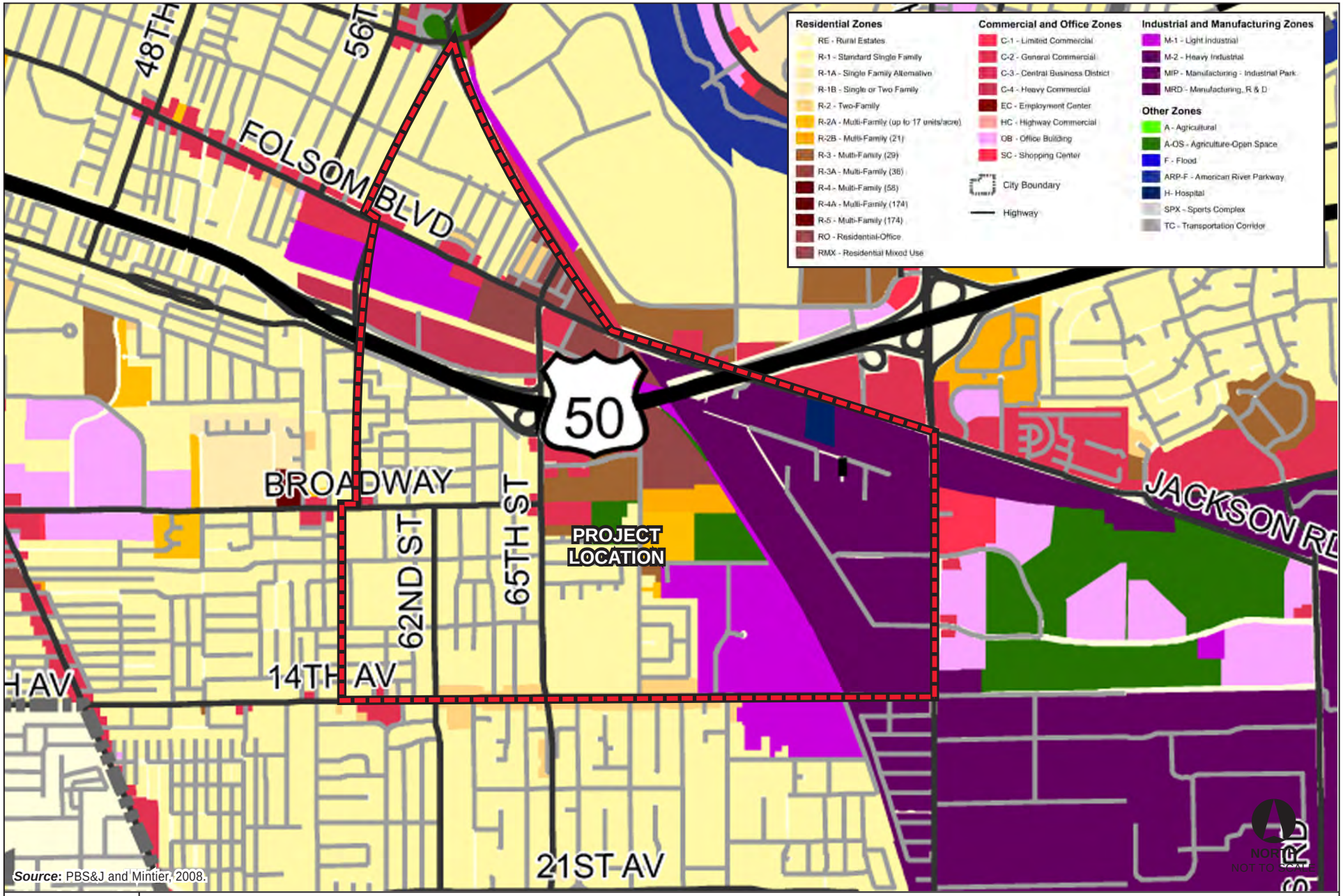


Source: New City Hall, Department of Transportation, 2009.

PBS&J

FIGURE **3-4**

2030 General Plan Land Use Designations



Source: PBS&J and Mintier, 2008.

FIGURE **3-5**

Zoning Designations

Other Projects Within the Proposed Project Area

There are several other projects in the project area that are in various planning stages. These projects are representative of the different types of development that are occurring near the Folsom/65th Street area.

Upper Eastside Lofts

The Upper Eastside Lofts is a residential mixed-use project located adjacent to the F/65 retail center at the corner of Folsom Boulevard and 65th Street (see Figure 3-6). This project is currently under construction.

Target Retail Store

Target Corporation has proposed development of a Target store with four associated retail pads at the corner of 65th Street and 4th Avenue. The project was recently approved and is not yet under construction.

University Village

The Sacramento State University Village project is planned to provide faculty and staff housing in proximity to the Sacramento State campus. The project would be located on the former California Youth Authority site on Ramona Avenue, which has been acquired by Sacramento State for this project. Construction has not yet begun.

Station 65

The proposed Station 65 project is a 4.29 acre site located at the southeast corner of 65th Street and Folsom Boulevard. This mixed-use project proposes a 148 room hotel, 68 residential units, a 618-stall parking garage and approximately 63,600 sf of retail uses and 52,300 square feet (sf) of office uses. This project has been approved by the City but construction has not yet begun.

Existing Transportation and Transit in the Project Area

Roadway Network

The existing roadway network within and around the project area includes a mix of local roads, collectors, and arterials (see Figure 3-7). Roadways within the project area are described below. As stated in further detail in Chapter 4.3, Transportation and Circulation, arterials emphasize high mobility for through traffic, while local roads emphasize property access, and collector streets attempt to achieve a balance between mobility and access.

***Source*:** Google Earth Pro, basemap.

FIGURE **3-6**

Related Projects

***Source*:** City of Sacramento, 2007; Fehr and Peers, 2007.

FIGURE **3-7**

Street Classification and Number of Lanes

US 50 is an eight-lane freeway at the 65th Street interchange with four mixed-flow lanes in both the eastbound and westbound directions. Auxiliary lanes are also provided in both the eastbound and westbound directions between 65th Street and Hornet Drive. In addition, ramp metering is provided at the westbound diagonal on-ramp and loop on-ramp at the 65th Street interchange during peak periods.

65th Street is an arterial roadway that provides two travel lanes in each direction (north-south) with a short section under the US 50 overcrossing that provides three travel lanes in each direction. South of 14th Avenue, it becomes the 65th Street Expressway.

Folsom Boulevard is an arterial roadway that provides two travel lanes in each direction (east-west) within the project area and serves mainly commercial and industrial uses.

59th Street is an arterial roadway that provides one travel lane in each direction (north-south) in the project area and serves as a direct connection to westbound US 50 (with ramp metering) and an eastbound US 50 off-ramp at the S Street/59th Street intersection. It serves mainly residential uses south of S Street and north of Folsom Boulevard. Between S Street and Folsom Boulevard, it serves office, industrial, and some commercial uses including a significant amount of trucks related to the adjacent SMUD corporation yard.

Broadway is an east-west arterial roadway that provides one travel lane in each direction and mainly serves residential uses.

Elvas Avenue is a north-south collector roadway that provides one travel lane in each direction with a center turn lane (i.e., three lane section). It serves a variety of uses including commercial, industrial, and residential, and provides direct access to St. Francis High School.

14th Avenue is an east-west collector roadway that provides one travel lane in each direction and mainly serves residential uses at the west end of the project area and industrial uses at the east end.

S Street is an east-west local roadway that provides one travel lane in each direction. It mainly serves the SMUD campus in this short section.

The project area has the following roadway constraints, as identified in the proposed 65th Street Station Area Plan:

- The two existing railroad corridors and US 50 are significant constraints to the roadway network, severely limiting travel routes in the study area.
- Connections across these barriers are needed to expand the area's accessibility. Specifically, east-west roadway extensions across the UPRR at 4th Avenue, Broadway and/or San Joaquin Street would improve connectivity for vehicles, bicycles, and pedestrians.

- Providing attractive alternative routes through the study area to divert traffic from Folsom Boulevard should also be considered including on-street improvements and measures to reduce speeds and traffic volumes.
- Improvements at key intersections should also be evaluated to enhance traffic operations while maintaining safety and accessibility for all travel modes.
- Under existing conditions, four intersections experience level of service (LOS) F conditions. The additional traffic that would result from approved and planned development in the study area could cause additional intersections to operate at LOS F.
- As a two-lane facility, the existing Folsom Boulevard underpass of the UPRR limits the volume of traffic that travels through the core of the study area. If Folsom Boulevard is not widened to four lanes, volumes on the roadway west of the underpass will increase only slightly as the two-lane section is close to its capacity.
- Consideration to widen the existing Hornet Crossing bicycle/pedestrian tunnel could be given to provide an additional vehicular and/or transit access to CSUS.

Transit Access

Sacramento RT provides public transit service and facilities to the project area, including several bus routes and two light rail stations at 59th Street and 65th Street. Both stations are located on RT's light rail tracks that bisect the project area in the west-east direction just south of Folsom Boulevard. The 65th Street/University light rail station is the fifth busiest transfer station in RT's transit system. Both stations provide bicycle racks for short term bicycle parking and long-term secure bicycle racks. Neither station provides vehicular parking.

Sacramento RT also offers bus service to in the project area and the 65th Street/University light rail station.

The proposed 65th Street Station Area Plan identified the following existing transit constraints in the project area:

- The transit stations and stops are generally not very accessible due to a lack of pedestrian and bicycle facilities. In addition, bus stop locations can be improved by providing bus shelters, lighting, and an aesthetically pleasing design.
- New campus-related housing developments in the study area will significantly increase pedestrian activity and the demand for a shuttle link to the CSUS campus.

Bicycle and Pedestrian Access

There are a number of existing Class II, and Class III bikeways, as well as sidewalks for pedestrian use, within and adjacent to the project area. The proposed 65th Street Station Area

Plan identified the following existing constraints to bicycle travel and pedestrian access in the project area:

- The area lacks connectivity and continuity of bicycle and pedestrian facilities particularly to transit and major destinations. Bicycle facilities in the study area are particularly limited in the north-south direction.
- Accessibility to bicycle and pedestrian facilities in the study area are not ideal and can be improved with more direct connections and enhanced facilities (e.g., wider sidewalks, bicycle lanes/racks), which would complement future commercial districts being considered for the area.
- Roadway and neighborhood connectivity in the area are lacking. Future roadway extensions considered for the area can be designed to accommodate bicycle and pedestrian travel and further increase connectivity.
- The Redding Avenue corridor is currently underserved, but is being enhanced to provide new pedestrian and bicycle facilities.

Throughout the project area, pedestrian facilities are provided and are, for the most part, considered to be in good condition. Quality pedestrian environments exist primarily in the single family neighborhoods in the northwest and southwest sectors of the study area, and in isolated strips such as along the east side of 65th Street between Q Street and Folsom Boulevard where recent improvements have been made. Conversely, portions of Redding Avenue between US 50 and 66th Street, Folsom Boulevard between 67th Street and State University Drive, and San Joaquin Street between Redding Avenue and Business Drive are considered to be areas of deficient pedestrian facilities.

It should be noted that high levels of pedestrian activity currently exist in the areas surrounding the proposed project area's light rail stations between 59th Street to the west, Redding Avenue to the east, Folsom Boulevard to the north, and the light rail tracks to the south.[2] To the south of the 65th Street/University Station is another identified pedestrian area that is bounded by 4th Avenue, Redding Avenue to the east, and 65th Street to the west, where a Target store has been approved just south of US 50 but is not yet under construction.

PROJECT DESCRIPTION

To achieve the project objectives, the proposed project is composed of the following tasks:

- Review the circulation networks and mitigation measures in the adopted 65th Street/ University Transit Village Plan and EIR and the South 65th Street Area Plan and EIR to determine their consistency with pedestrian-friendly transit village criteria.

2 City of Sacramento, Department of Transportation, 65th Street Station Area Study Existing Conditions Memorandum, October 2007, p. 27.

- Recommend revisions to the previously adopted mitigation measures that reduce congestion at the expense of the objectives for the 65th Street Station Area Plan.
- Develop a circulation plan for the area east of the 65th Street/University Transit Village Plan and the South 65th Area Plan area to Power Inn Road and 14th Avenue to accommodate planned land uses and densities.
- Develop an overall circulation plan that integrates and connects the various neighborhoods and destinations throughout the proposed project area, and enhances the movement of people, goods, and services across US 50 and the Union Pacific railroad tracks.
- Develop a planned circulation system and land use program that better encourages pedestrian-friendly, transit-oriented development.
- Develop a program of improvements that articulate the scope and timing of necessary transportation-related improvements for the entire study area.

Scenario A is based on implementation of the improvements and mitigation measures adopted as part of the previously discussed 65th Street/University Transit Village Plan and the South 65th Street Area Plan. Under Scenario A, no additional improvements beyond those set forth in approved plans would be implemented. Scenario A is assumed as the No Project Alternative and is discussed in Chapter 6, Alternatives.

The proposed project analyzed in this EIR considers two transportation network options: (1) Scenario B; and (2) Scenario C that include distinct vehicle, bicycle, pedestrian, and transit components.

Scenarios B and C are based on identical land use assumptions within the project area (e.g., Transit Oriented Development, or TOD), which is assumed in the 2030 General Plan. Under Scenarios B and C, specific roadway, bicycle, pedestrian, and transit improvements distinct from those set forth in Scenario A are analyzed. Differences between the two scenarios include but are not limited to:

- The number of lanes assumed on Folsom Boulevard, particularly for the UPRR undercrossing.
- The location and treatment of vehicle/bicycle/pedestrian connections between Redding Avenue and Ramona Avenue.
- The location and treatment of vehicle/bicycle/pedestrian connections from the northern project area boundary into the CSUS campus.
- Street pattern created in the area bounded by Q Street, 65th Street, Elvas Avenue, and Redding Avenue.

Both Scenarios B and C would require right-of-way acquisition at various locations depending on the improvements. Details of the two scenarios are provided below.

If Scenario B or C is not approved as a part of this project, Scenario A could be implemented because improvements proposed in that scenario have already been approved through previous plans. Scenario A, also known as the "No Project" scenario, describes vehicle, pedestrian, bicycle, and transit circulation assuming the implementation of previously adopted transportation plans for the area. Please see Chapter 6, Alternatives, for a discussion of Scenario A, the No Project Alternative.

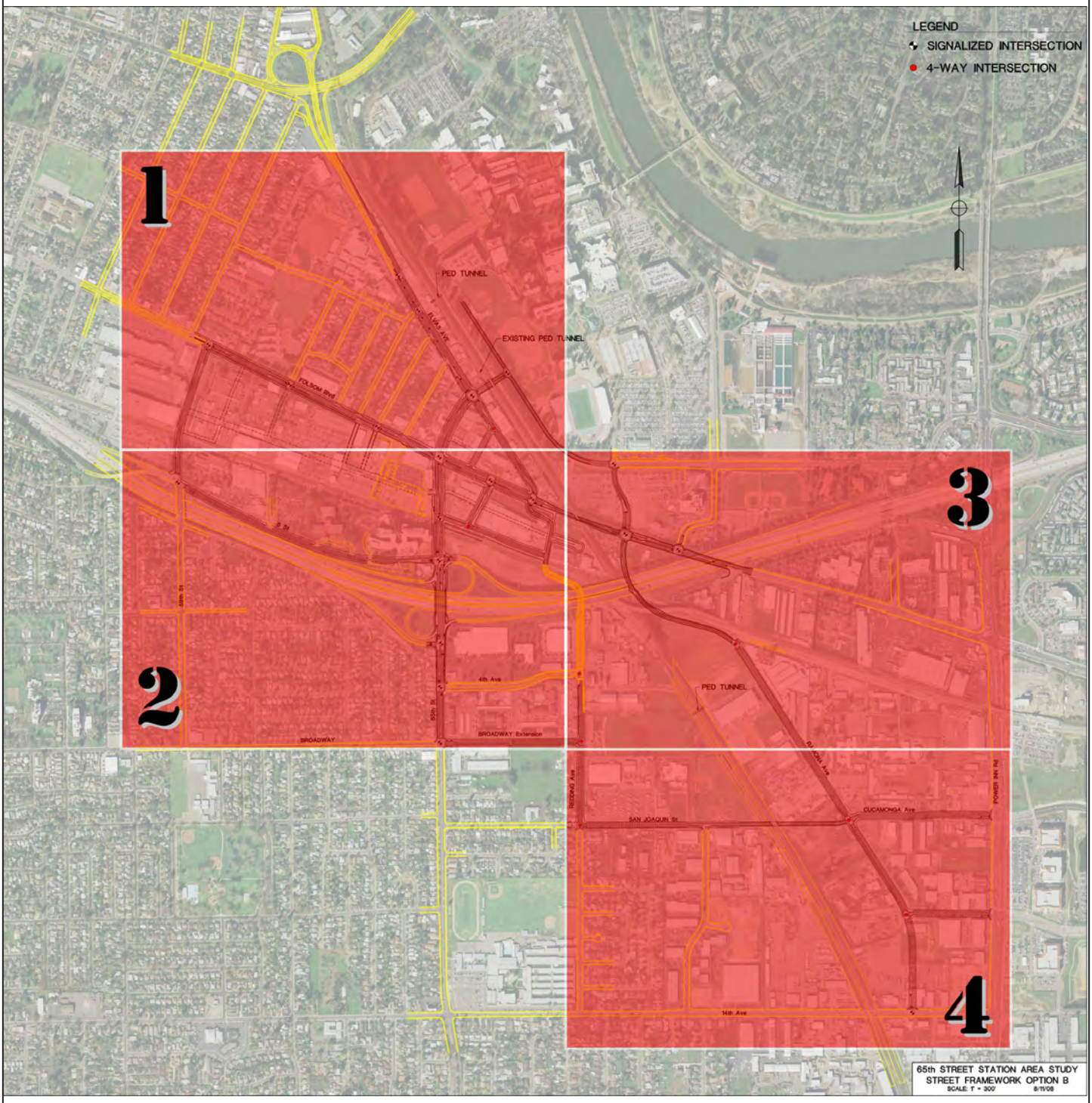
Scenario B

Whereas the currently approved plans rely on capacity increasing measures (i.e., roadway widening) to improve vehicular mobility in the proposed project area, Scenario B is designed to maintain current vehicular capacity on existing streets while enhancing the infrastructure for bicycles and pedestrians in an effort to balance the various transportation options available. The major improvements proposed with this Scenario are extensions of San Joaquin Street, Broadway, and 65th Street, in addition to a realignment of 69th Street. The extension of 65th Street requires construction of a tunnel under the UPRR tracks.

Table 3-2 describes the proposed improvements for Scenario B that are illustrated in Figures 3-8 a-e, Scenario B – Transportation Network. Bicycle, pedestrian and transit improvements are shown on Figure 3-9, Scenario B – Bicycle, Pedestrian, and Transit Network.

Scenario C

Scenario C was designed to maximize access through the transit village area of the proposed project area for pedestrians and bicyclists by incorporating additional roadway connections and reducing travel lanes on key street segments. The major improvements proposed with this Scenario are extensions of Broadway and 67th Street, the creation of a new 68th Street, and the reduction of lanes on Folsom Boulevard from four lanes to three lanes from 59th Street to 67th Street. The extension of Broadway from 65th Street to Ramona Avenue requires construction of a tunnel under the UPRR tracks. Roadway and alternative transportation improvements are illustrated in Figures 3-10 a-e, Scenario C – Transportation Network. Roadway Network. Bicycle, pedestrian and transit improvements are indicated on Figure 3-11, Scenario C – Bicycle, Pedestrian, and Transit Network.



NORTH
NOT TO SCALE

***Source*:** City of Sacramento, 2009.

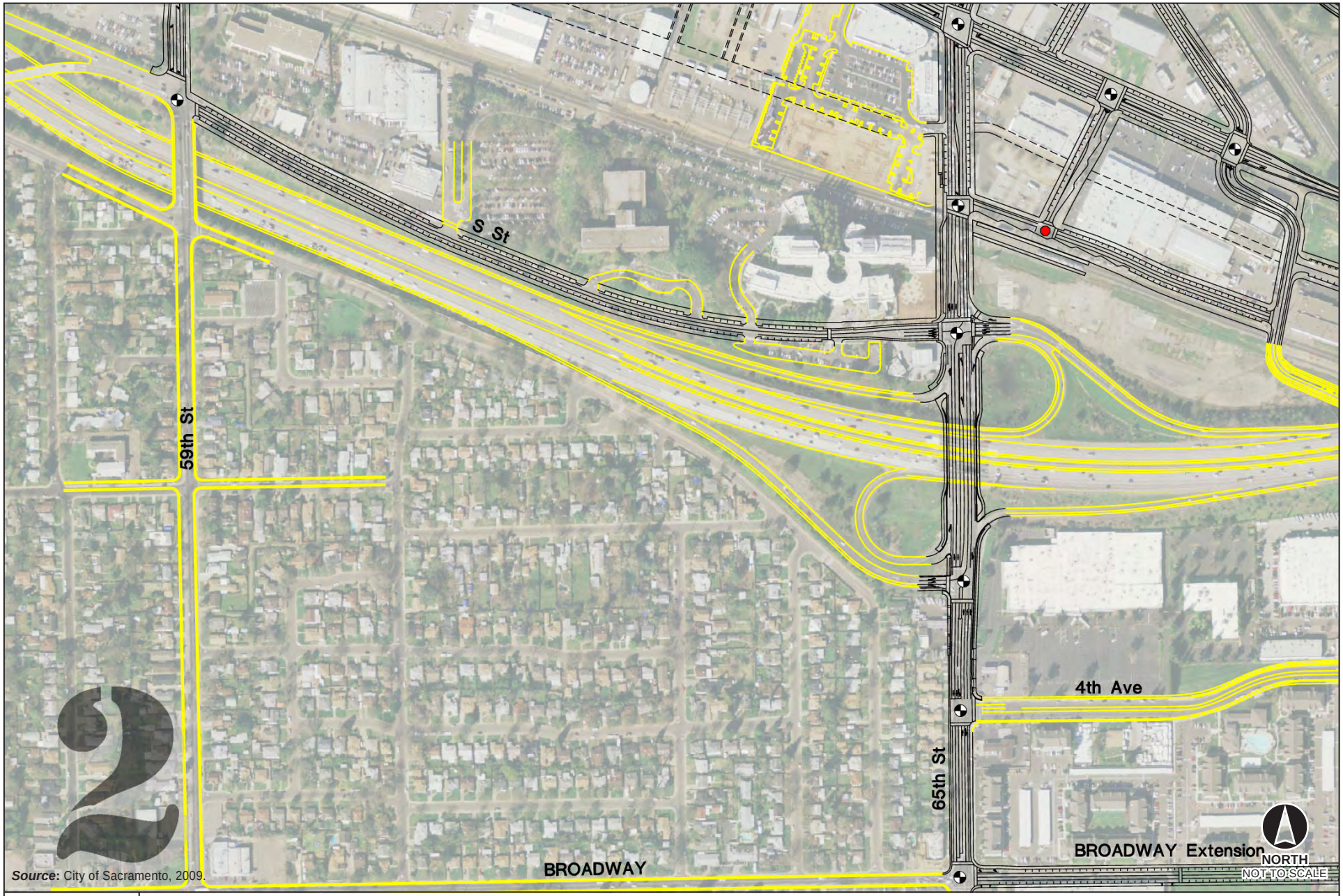
FIGURE **3-8a**

Scenario B Transportation Network – Index Sheet

Source: City of Sacramento, 2009.

FIGURE **3-8b**

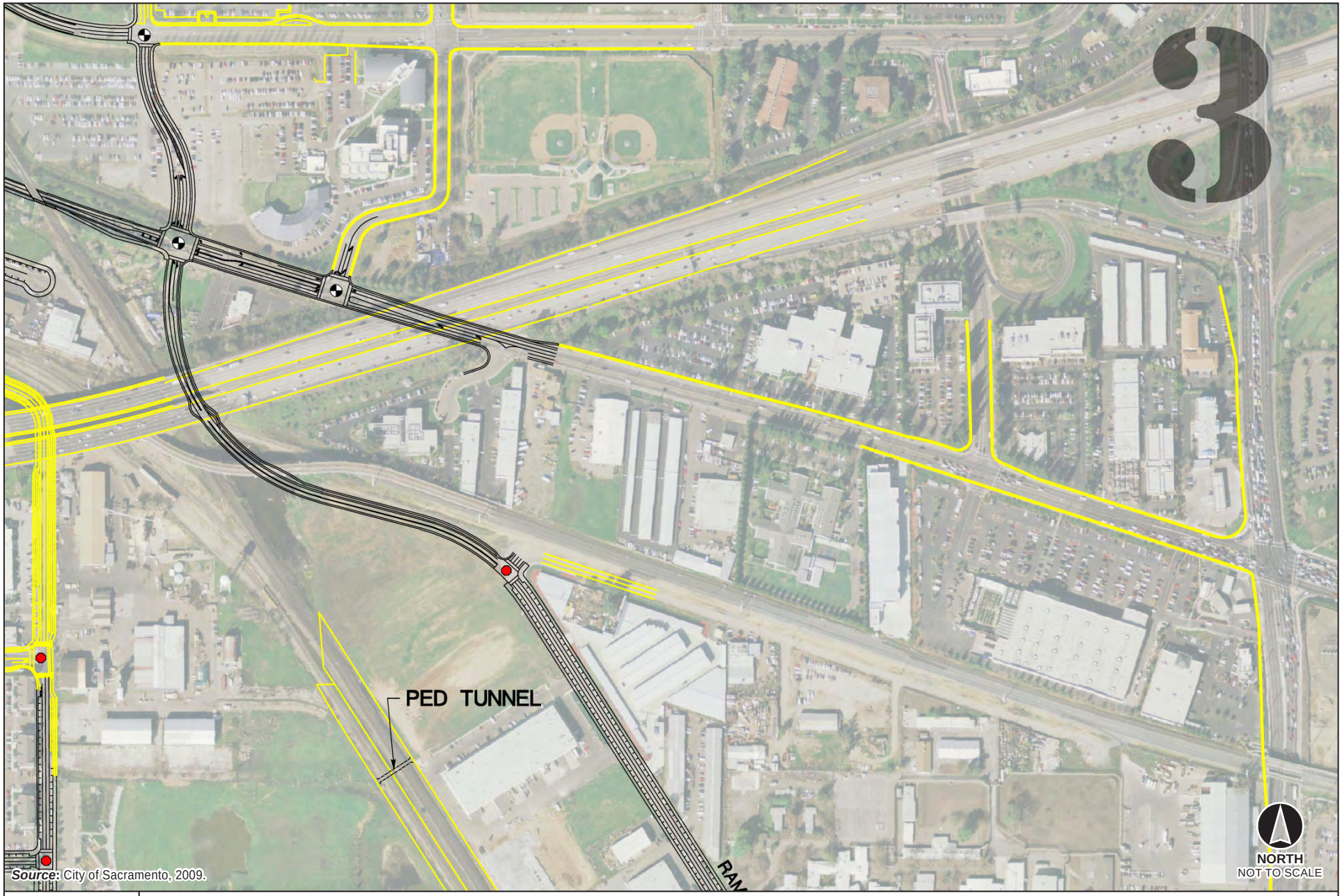
Scenario B Transportation Network – Inset 1



***Source*:** City of Sacramento, 2009.

FIGURE **3-8c**

Scenario B Transportation Network – Inset 2



Source: City of Sacramento, 2009.

FIGURE **3-8d**

Scenario B Transportation Network – Inset 3

***Source*:** City of Sacramento, 2009.

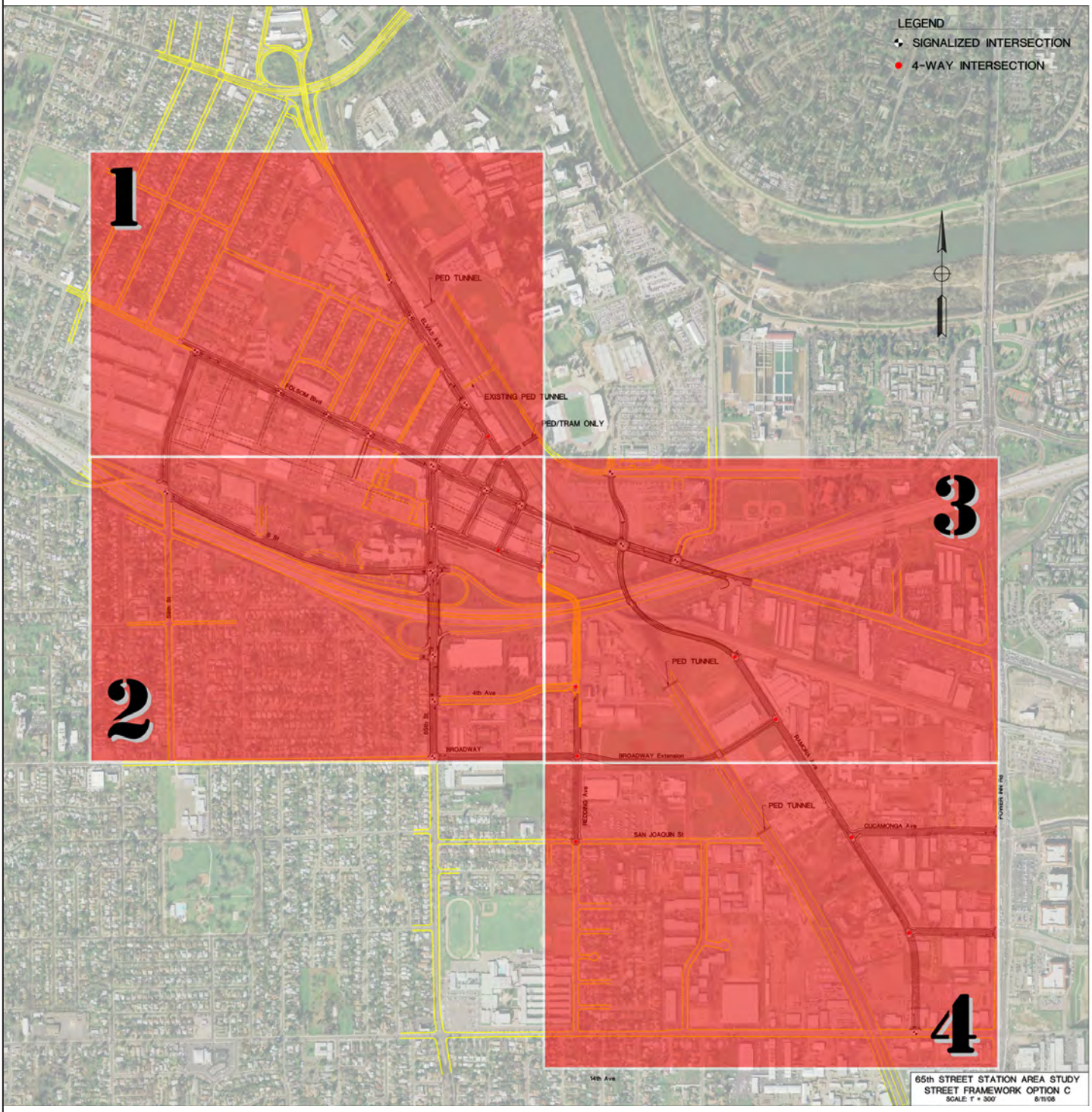
FIGURE **3-8e**

Scenario B Transportation Network – Inset 4

***Source*:** Fehr & Peers, March 2008.

FIGURE **9**

Scenario B – Bicycle, Pedestrian, and Transit Network



NORTH
NOT TO SCALE

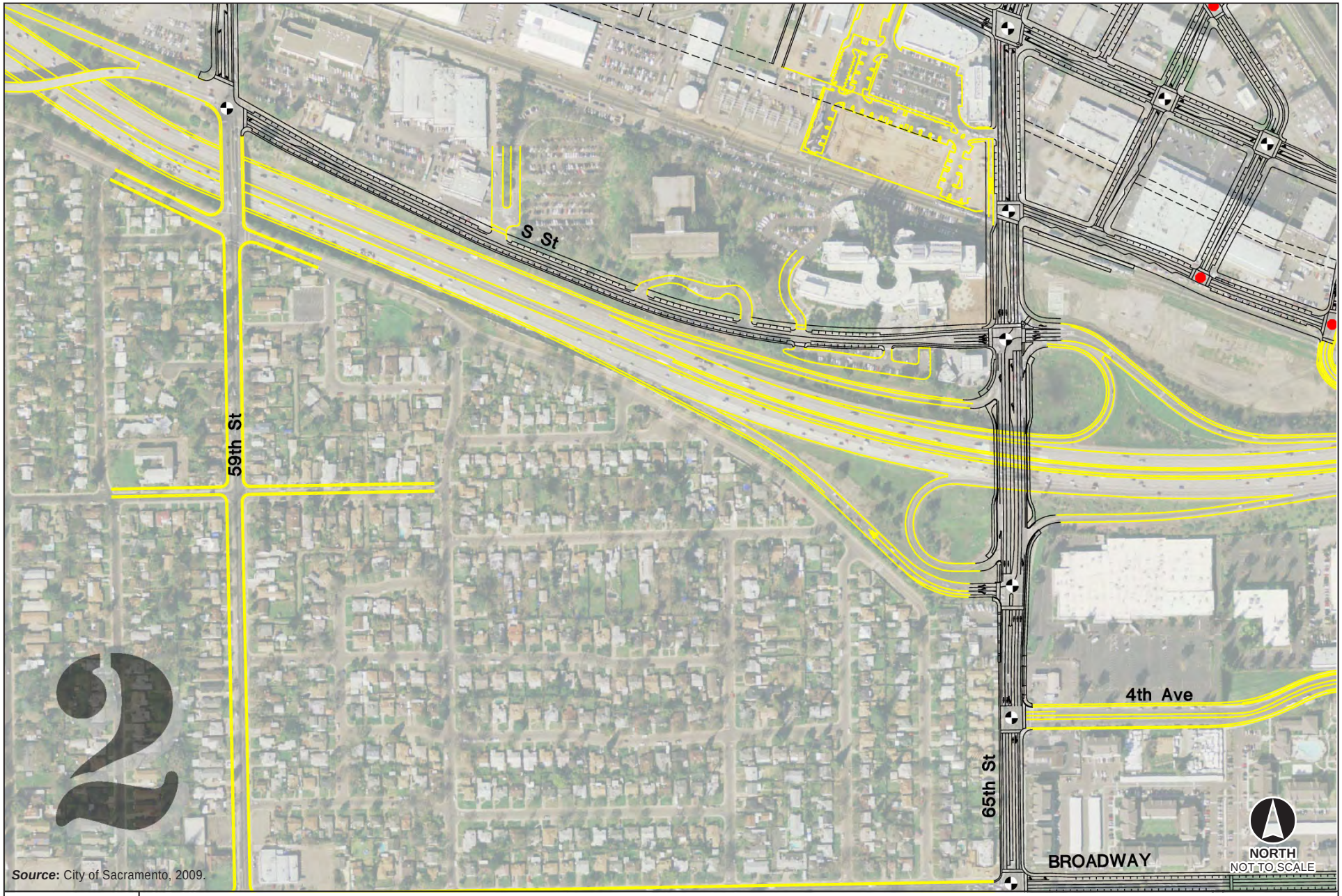
***Source*:** City of Sacramento, 2009.

FIGURE **3-10a**
Scenario C Transportation Network – Index Sheet

***Source*:** City of Sacramento, 2009.

FIGURE **3-10b**

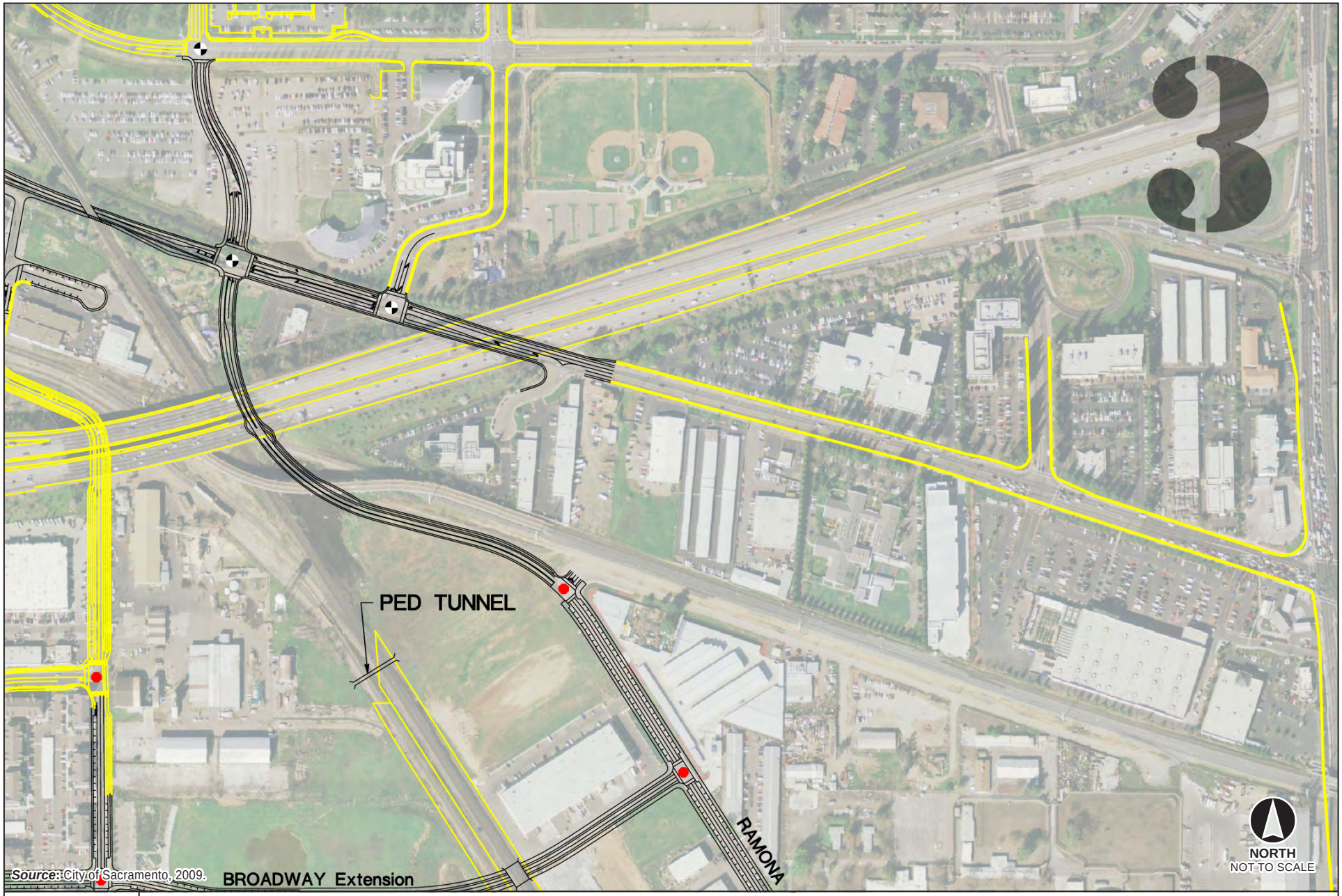
Scenario C Transportation Network – Inset 1



***Source*:** City of Sacramento, 2009.

FIGURE **3-10c**

Scenario C Transportation Network – Inset 2



Source: City of Sacramento, 2009.

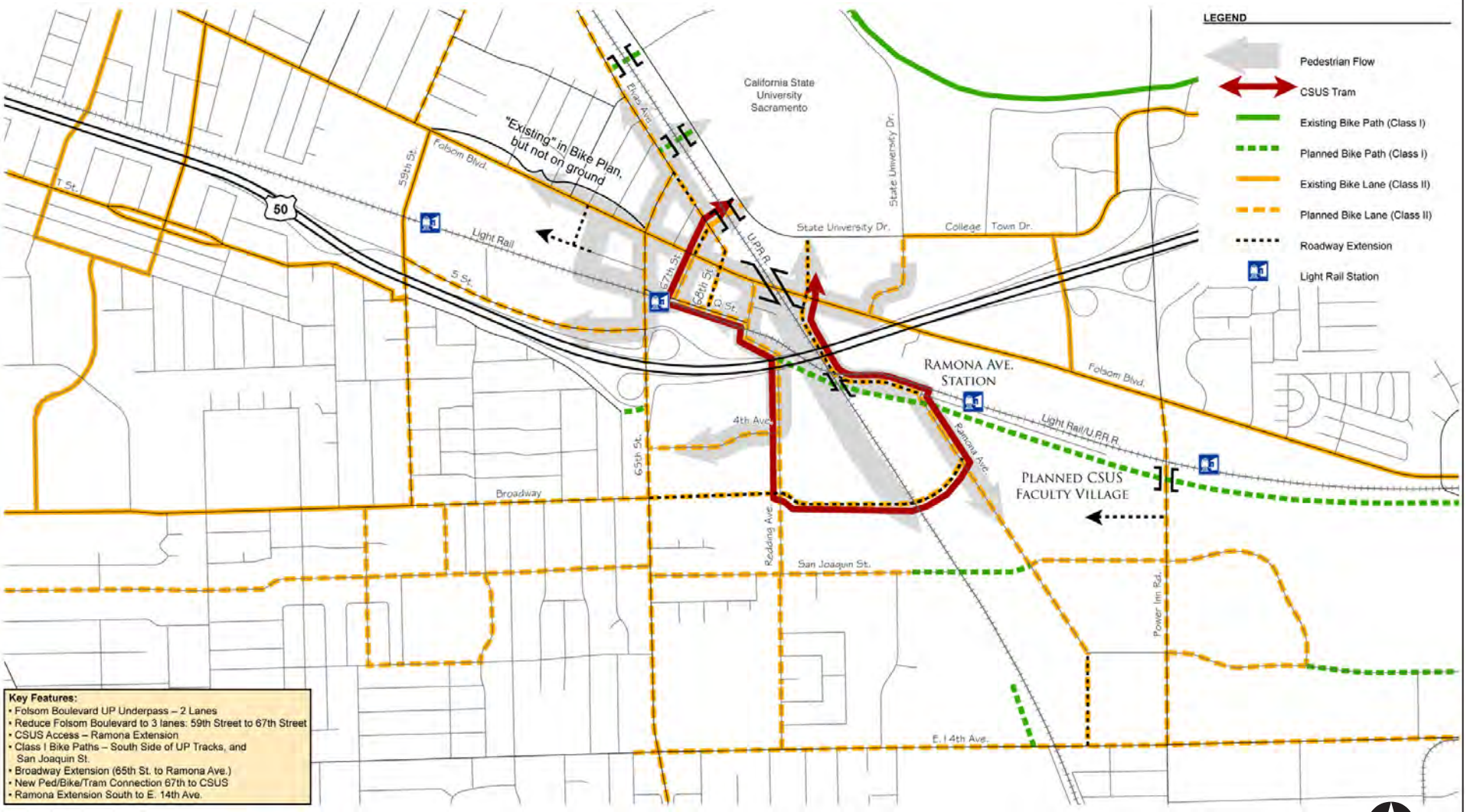
FIGURE **3-10d**

Scenario C Transportation Network – Inset 3

***Source*:** City of Sacramento, 2009.

FIGURE **3-10e**

Scenario C Transportation Network – Inset 4



***Source*:** Fehr & Peers, March 2008.

FIGURE **3-11**

Scenario C – Bicycle, Pedestrian, and Transit Network

Proposed Improvements

Table 3-2 includes a list of the transportation improvements that would be implemented based upon the scenario as indicated by the checkmarks. Note that Scenario A is included here as a comparison of the improvements that were previously approved within the proposed project area. Scenario A improvements are approved and were analyzed and mitigated in previous documents. They can be built at any time without further environmental review. Scenario B and C elements are analyzed in this EIR.

Utilities Improvements

All roadway extensions would include the installation of streetlights (in accordance with City standards). During construction, dry utilities such as electricity, natural gas, telephone, and cable transmission lines could be extended under new roadways and within any acquired right-of-way. In addition, wet utilities such as water supply, sewer, and storm drainage infrastructure would be extended. Please see Table 3-3 for a description of proposed wet utility improvements.

Undercrossings

The extension of 65th Street to CSUS (Scenario B), Broadway to Ramona Avenue (Scenario B), and San Joaquin Street to Ramona Avenue (Scenario C) would require tunneling under the UPRR tracks. These roadway extensions would be designed to go through the railroad embankment/redundant levee without disturbing the railroad tracks on top of the levee. Railroad operations would not be disrupted during construction or operation of the proposed project. Preliminary designs were prepared to verify the feasibility of these undercrossings.[3] Retaining walls and flood gates would be part of the undercrossing design.

On-Street Parking

On-street parking is proposed under both Scenarios B and C. Although on-street parking may appear to promote automobile use within a transit village, it is a critical component in balancing circulation needs and improving the pedestrian environment. Transit villages benefit from on-street parking on as many streets as possible, and are a key component of Scenarios B and C. Please see Table 3-2 for the locations proposed for on-street parking.

3 Mark Thomas and Company prepared preliminary undercrossing designs for the City of Sacramento.

TABLE 3-2

COMPARISON OF SCENARIOS A, B, AND C

(Note: the project elements analyzed in this EIR are highlighted in gray. The elements not highlighted were analyzed in previous environmental documents.)

	Scenario		
	A	B	C
Roadway improvements would occur at the following locations:			
The Folsom Boulevard UPRR undercrossing and approaches would be widened from two lanes to four lanes (two lanes in each direction) thereby providing a continuous four-lane arterial from 59th Street to Power Inn Road.	✓		
Ramona Avenue would be extended with two travel lanes from its current terminus at Brighton Avenue westward to cross under the light rail tracks and US 50 immediately east of the UPRR tracks to a new intersection at Folsom Boulevard roughly 350-feet east of the UPRR tracks.	✓	✓	✓
4th Avenue would be extended eastward with two travel lanes from its current terminus at Redding Avenue with an S-curve in the southeast direction toward a grade-separated crossing of the UPRR to a new intersection at Ramona Avenue.	✓		
Ramona Avenue would be extended with two travel lanes southward from the current elbow roughly 850-feet west of the Ramona and Power Inn Road intersection to a new intersection at 14th Avenue.	✓	✓	✓
69th Street would be realigned to connect Elvas Avenue directly with Redding Avenue with the addition of a signalized 4-way intersection at Folsom Boulevard.		✓	
San Joaquin Street would be extended eastward from its current terminus west of the UPRR tracks to Ramona Avenue at Cucamonga Avenue with a grade separated crossing of the UPRR tracks. Access control measures would be provided on the westbound leg of the intersection of San Joaquin Street and Redding Avenue to allow pedestrian, bicycle, and emergency vehicle access only.		✓	
Broadway would be extended with two travel lanes eastward from 65th Street to a new intersection at Redding Avenue.		✓	
Broadway would be extended with two lanes eastward from 65th Street through a new grade-separated crossing of the UPRR to a new intersection at Ramona Avenue.			✓
65th Street would be extended with two travel lanes northward from Elvas Avenue under the UPRR tracks to a new intersection with State University Drive.		✓	
A new two lane "68th Street" would be constructed parallel to 67th Street and roughly equidistant between 67th and 69th from Elvas Avenue and Q Street and relinquishing Elvas Avenue between 68th Street and Folsom Boulevard.			✓
67th Street would be extended from Folsom Boulevard to Elvas Avenue.			✓
Folsom Boulevard would be reduced from four lanes to three lanes from 59th Street to 67th Street.			✓
Access to CSUS would be provided as follows:			
Access from the project area into CSUS would continue to be provided at the pedestrian/bicycle tunnel at Elvas Avenue (just west of 65th Street), the State University Drive East connection to Folsom Boulevard, and the planned Ramona Avenue extension from Folsom Boulevard to South State University Drive at Stadium Drive.	✓	✓	✓
A new two-lane vehicle/bicycle/pedestrian/Sac State Tram tunnel extension of 65th Street north of Elvas Avenue would be provided to directly connect the 65th Street/University Transit Village to State University Drive on the CSUS campus.		✓	
A new bicycle/pedestrian/tram tunnel extension of 67th Street north of Elvas Avenue would be provided to directly connect the 65th Street/University Transit Village to State University Drive on the CSUS campus.			✓
Class II bicycle lanes would be added on:			
65th Street from 14th Avenue to Folsom Boulevard	✓	✓	✓
Redding Avenue 14th Avenue to Folsom Boulevard	✓	✓	✓
Ramona Avenue 14th Avenue to Folsom Boulevard	✓	✓	✓
59th Street from Broadway to Folsom Boulevard	✓	✓	✓
58th Street north of Folsom Boulevard	✓	✓	✓
4th Avenue between 65th Street and Ramona Avenue	✓		
San Joaquin Street from 65th Street to its eastern terminus	✓		
Elvas Avenue west of 65th Street	✓		

TABLE 3-2

COMPARISON OF SCENARIOS A, B, AND C

(Note: the project elements analyzed in this EIR are highlighted in gray. The elements not highlighted were analyzed in previous environmental documents.)

	Scenario		
	A	B	C
Folsom Boulevard from 59th Street to Power Inn Road	✓	✓	
Power Inn Road from 14th Avenue to Folsom Boulevard		✓	
Elvas Avenue Folsom Boulevard to 59th Street		✓	✓
69th Street/Redding Avenue transition		✓	
4th Avenue from 65th Street to Redding Avenue		✓	✓
Broadway from 59th Street to Redding Avenue		✓	
San Joaquin Street from 65th Street to Power Inn Road		✓	
8th Avenue from 59th Street to 65th Street		✓	
61st Street from 8th Avenue to 11th Avenue		✓	
60th Street from Broadway to 8th Avenue		✓	
11th Avenue from 59th Street to 61st Street		✓	
68th Street connection between Folsom Boulevard and Q Street			✓
Stadium Drive from Folsom Boulevard to State University Drive East	✓	✓	✓
Q Street between 65th Street and Redding Avenue			✓
4th Avenue between 65th Street and Redding Avenue			✓
Broadway from 59th Street to Ramona Avenue			✓
San Joaquin Street from 65th Street to current terminus (just east of Business Drive)			✓
14th Avenue from 65th Street to Power Inn Road		✓	✓
Class I bicycle paths would be:			
Provided along the Regional Transit (RT) Light Rail/UPRR line through the project area.	✓		
Improved along the existing pathway between Kroy Way and 65th Street.	✓	✓	✓
Provided to extend 4th Avenue eastward from Redding Avenue to Ramona Avenue with a new grade separated crossing of the UPRR tracks.		✓	
Provided to extend 69th Street eastward to connect with Folsom Boulevard with a new grade separated crossing of the UPRR tracks.		✓	✓
Provided to connect San Joaquin Street with Ramona Avenue with a new grade separated crossing of the UPRR tracks.			✓
Sidewalks would be enhanced on:			
Folsom Boulevard	✓	✓	✓
Redding Avenue	✓	✓	✓
Q Street	✓	✓	✓
4th Avenue	✓	✓	✓
San Joaquin Street east of Redding Avenue	✓	✓	✓
Elvas Avenue	✓	✓	✓
65th Street	✓	✓	✓
The following intersections would have traffic signals added:			
60th Street/Folsom Boulevard		✓	
61st Street/Folsom Boulevard			✓
63rd Street/Folsom Boulevard	✓		
67th Street/Folsom Boulevard	✓		
68th Street/Folsom Boulevard			✓
Folsom Boulevard/Elvas Avenue/Redding Avenue/69th Street		✓	✓
Stadium Drive/Ramona Avenue Extension/Folsom Boulevard	✓	✓	✓
Ramona Avenue Extension (south)/14th Avenue	✓	✓	✓
On-street parallel parking (both sides of street) would be added on:			
Elvas Avenue from 61st Street to Folsom Boulevard		✓	✓
Folsom Boulevard from 65th Street to Elvas Avenue		✓	
Folsom Boulevard (from 59th Street to Elvas Avenue/68th Street)			✓

TABLE 3-2

COMPARISON OF SCENARIOS A, B, AND C

(Note: the project elements analyzed in this EIR are highlighted in gray. The elements not highlighted were analyzed in previous environmental documents.)

	Scenario		
	A	B	C
Q Street from 67th Street to Redding Avenue		✓	✓
Broadway from 65th Street to Redding Avenue		✓	✓
San Joaquin Street from Redding Avenue to Business Drive		✓	✓
65th Street from Q Street to Elvas Avenue		✓	✓
66th Street from Elvas Avenue to Folsom Boulevard		✓	✓
67th Street from Folsom Boulevard to Q Street – west side of street only		✓	✓
Redding Avenue (from 4th Avenue to San Joaquin Street)		✓	✓
Ramona Avenue (from Brighton Avenue to Power Inn Road "elbow")		✓	✓
New rights-of-way would be required for:			
Ramona Avenue, extended with two travel lanes from its current terminus at Brighton Avenue westward to cross under the light rail tracks and US 50 immediately east of the UPRR tracks to a new intersection at Folsom Boulevard roughly 350 feet east of the UPRR tracks.		✓	✓
Ramona Avenue, extended with two travel lanes southward from the current elbow roughly 850 feet west of the Ramona and Power Inn Road intersection to a new intersection at 14th Avenue.		✓	✓
69th Street, realigned to connect Elvas Avenue directly with Redding Avenue with the addition of a signalized 4-way intersection at Folsom Boulevard.		✓	
San Joaquin Street,[a] extended eastward from its current terminus west of the UPRR tracks to Ramona Avenue at Cucamonga Avenue with a grade separated crossing of the UPRR tracks. Access control measures would be provided on the westbound leg of the intersection of San Joaquin Street and Redding Avenue to allow pedestrian, bicycle, and emergency vehicle access only.		✓	
Broadway, extended with two travel lanes eastward from 65th Street to a new intersection at Redding Avenue.		✓	
Broadway,[1] extended with two lanes eastward from 65th Street through a new grade-separated crossing of the UPRR to a new intersection at Ramona Avenue.			✓
65th Street,[1] extended with two travel lanes northward from Elvas Avenue under the UPRR tracks to a new intersection with State University Drive.		✓	
67th Street, extended from Folsom Boulevard to Elvas Avenue.			✓
New two-lane "68th Street", constructed parallel to 67th Street and roughly equidistant between 67th and 69th from Elvas Avenue and Q Street and relinquishing Elvas Avenue between 68th Street and Folsom Boulevard.			✓

Note:
1. Extensions through the existing levee; an encroachment permit from the reclamation district would be required.
Source: City of Sacramento, Department of Transportation, January 2009.

TABLE 3-3

WET UTILITIES INFRASTRUCTURE IMPROVEMENTS

	Water	Sewer	Storm Drainage
Ramona Avenue would be extended with two travel lanes from its current terminus at Brighton Avenue westward to cross under the light rail tracks and US 50 immediately east of the UPRR tracks to a new intersection at Folsom Boulevard roughly 350-feet east of the UPRR tracks.	**BC**		
Ramona Avenue would be extended with two travel lanes southward from the current elbow roughly 850-feet west of the Ramona and Power Inn Road intersection to a new intersection at 14th Avenue.	**BC**		
69th Street would be realigned to connect Elvas Avenue directly with Redding Avenue with the addition of a signalized 4-way intersection at Folsom Boulevard.	**B**		
San Joaquin Street would be extended eastward from its current terminus west of the UPRR tracks to Ramona Avenue at Cucamonga Avenue with a grade separated crossing of the UPRR tracks. Access control measures would be provided on the westbound leg of the intersection of San Joaquin Street and Redding Avenue to allow pedestrian, bicycle, and emergency vehicle access only.	**B**		
Broadway would be extended with two travel lanes eastward from 65th Street to a new intersection at Redding Avenue.	**BC**		
Broadway would be extended with two lanes eastward from 65th Street through a new grade-separated crossing of the UPRR to a new intersection at Ramona Avenue.	**C**	**C**	
A new two lane "68th Street" would be constructed parallel to 67th Street and roughly equidistant between 67th and 69th from Elvas Avenue and Q Street and relinquishing Elvas Avenue between 68th Street and Folsom Boulevard.	**C**		
67th Street would be extended from Folsom Boulevard to Elvas Avenue.	**C**		
Detention basin west of Ramona Avenue			**BC**
Pipe connecting proposed detention basin to existing drainage pipes in Ramona Avenue			**BC**
New drainage pipes in 14th Avenue from Power Inn Road east for 1,200 feet			**BC**
MH at intersection of Power Inn Road and Ramona Avenue			**BC**
San Joaquin Avenue to Cucamonga Avenue			**B**
Extended Ramona Avenue from Ramona Avenue south for 100 feet			**BC**
Extended Ramona Avenue from 14th Avenue north for 300 feet			**BC**
Extended Broadway from Ramona Avenue west for 100 feet			**C**
From Ramona Avenue/Brighton Avenue intersection north for 800 feet			**BC**
Elvas Avenue from 65th Street to 66th Street			**BC**
Beginning at 65th Street, along the light rail tracks eastward and south on Redding Avenue for 1,870 feet			**BC**
65th Street from 8th Avenue north for 390 feet			**BC**
New street in the Superblock from 65th Street west for 800 feet	**BC**		**BC**
South side of Folsom Boulevard from 61st Street eastward to northeast corner of Folsom Boulevard/65th Street intersection		**BC**	**BC**
New pump station at the southwest corner of Folsom Boulevard/65th Street intersection			**BC**
Extended Broadway from 65th Street east to the UPRR tracks			**C**
New detention basin at the southeast corner of Broadway/65th Street			**C**
New pump station on Folsom Boulevard at the UPRR tracks			**BC**
Folsom Boulevard from UPRR tracks to Ramona Avenue extension			**BC**
North side of Folsom Boulevard from 60th Street to 65th Street			**BC**
New street in the Superblock from 61st Street westward for 800 feet	**BC**		**BC**
New pump station on San Joaquin Street at the UPRR tracks			**B**
New pump station on Broadway at the UPRR tracks			**C**
New detention basin south of Brighton Avenue west of Del Monte Avenue			**BC**
55th Street from Q Street to Folsom Boulevard	**BC**		

TABLE 3-3

WET UTILITIES INFRASTRUCTURE IMPROVEMENTS

	Water	Sewer	Storm Drainage
P Street from 55th Street to 59th Street	**BC**		
59th Street from US 50 to Folsom Boulevard	**BC**		
New street in the Superblock from 59th Street to Redding Avenue	**BC**	**BC**	
Small new street in the Superblock from large new street in Superblock to Folsom Boulevard	**BC**		
60th Street from new street in Superblock to Folsom Boulevard	**BC**		
61st Street from new street in Superblock to Folsom Boulevard	**BC**		
62nd Street from new street in Superblock to Folsom Boulevard	**BC**		
63rd Street from new street in Superblock to Folsom Boulevard	**BC**		
64th Street from 63rd Street/64th Street Alley to Elvas Avenue	**BC**		
65th Street from Elvas Avenue to Elvas Avenue/Folsom Blvd Alley, along Elvas Avenue/Folsom Blvd Alley to 64th Street/65th Street Alley	**BC**		
Folsom Boulevard from 65th Street to Elvas Avenue	**BC**		
Elvas Avenue from 64th Street to Folsom Boulevard	**BC**		
Redding Avenue from Folsom Boulevard to 69th Street	**B**		
Folsom Boulevard from Elvas Avenue, Redding Avenue from Folsom Boulevard to 69th Street	**C**		
Loop starting at intersection of Ramona Avenue/Folsom Boulevard, north to State University Drive/College Town Drive, east to Jed Smith Drive, south to Folsom Boulevard, west to Ramona Avenue	**BC**		
4th Avenue from 65th Street to Redding Avenue	**BC**		
Ramona Avenue from Cucamonga Avenue to the current elbow roughly 850-feet west of the Ramona and Power Inn Road intersection	**BC**		
Public utilities easement from the current elbow roughly 850-feet west of the Ramona and Power Inn Road intersection north for 700 feet	**BC**		
San Joaquin Avenue from Redding Avenue to Business Drive	**C**		
Redding Avenue from 4th Avenue to 14th Avenue		**BC**	
8th Avenue/San Joaquin Avenue from 60th Street to Redding Avenue		**BC**	
14th Avenue from Redding Avenue to UPRR tracks		**BC**	

Notes:
B – refers to Scenario B
C – refers to Scenario C
BC – refers to both Scenarios B and C

Source: City of Sacramento, Department of Utilities, 65th Street Station Area Financing Plan, October 2009.

Enhanced Sidewalks

The Sacramento Pedestrian Master Plan's policies are incorporated into Scenarios B and C to provide sufficient sidewalk space for desirable transit village neighborhoods. Sidewalks would be at least as wide as City standards, if not wider in some areas, and would be landscaped with both trees and sidewalk amenities such as benches. Please see Table 3-2 for the locations proposed for enhanced sidewalks.

Buildings Requiring Demolition

Several buildings would require demolition for implementation of Scenario B or C, as shown in Figures 3-8 a-e and Figures 3-10 a-e. The extension of 65th Street to the CSUS campus under

Scenario B would require the removal of a business along Elvas Avenue. The extension of San Joaquin Street from Redding Avenue to Ramona Avenue under Scenario B (separated-grade roadway) and Scenario C (pedestrian tunnel) would result in the removal of a building immediately east of the UPRR tracks, near the intersection of Ramona Avenue and Cucamonga Avenue. The extension of Broadway from Redding Avenue to Ramona Avenue under Scenario C would require the removal of a business that fronts Redding Avenue. The Broadway undercrossing would also remove a warehouse immediately east of the UPRR tracks along Ramona Avenue. The extension of 67th Street to the CSUS campus for a pedestrian/tram tunnel under Scenario C would remove two buildings along Elvas Avenue. Some buildings shown on the aerial maps have already been removed as a part of other projects under development in the area. Buildings that would be removed as a part of the proposed project are described above.

Construction Staging

Construction staging would occur near the specific roadway improvement under construction. Staging would occur within the existing or proposed road right-of-way or within temporary construction easements.

Relationship of the Proposed Project to Existing Plans

Some of the improvements listed for Scenarios B and C were previously analyzed and approved in either the 65th Street/University Transit Village Plan EIR or the South 65th Street Area Plan EIR. Project elements listed in Table 3-2, which are a component of Scenario A, have already been analyzed under previously approved plans. Therefore, even if these elements are proposed under Scenario B or C, the element has already been approved and could be constructed at any time. Therefore, this project addresses only those improvements that are new to either Scenario B and/or C.

If the 65th Street Station Area Plan is approved and its EIR certified by the Sacramento City Council, two plans would be immediately affected in the 65th Street area: 1) 65th Street Station Area Plan, and 2) 65th Street/University Transit Village Plan. In instances where improvements contained in the two plans may conflict with the improvements listed in the 65th Street Station Area Plan, the 65th Street Station Area Plan would take precedence.

PROJECT OBJECTIVES

The purpose of this project is to provide a circulation framework that supports the established goals and vision for new growth within the 65th Street/University Transit Village Plan area and the South 65th Street Area Plan while accommodating important regional transportation needs. To achieve this goal, the City has identified the following objectives for the proposed project:

- Prepare an overall circulation network for the project area that supports the goals and vision of the 65th Street/University Transit Village Plan and the South 65th Street Area Plan.
- Create a well-connected roadway system that provides balanced access and circulation for vehicle, pedestrian, bicycle, and transit users both within and to those passing through the project area.
- Prepare a Smart Growth-oriented circulation plan that accommodates future growth in the area east of the UPRR tracks and south of Folsom Boulevard.
- Develop an overall circulation plan that integrates and connects the various neighborhoods and destinations throughout and adjacent to the project area.
- Prepare an implementation and phasing strategy for infrastructure improvements, with associated cost estimates that can be used to identify funding mechanisms.

REQUIRED APPROVALS

City of Sacramento

The Sacramento City Council would have to certify the EIR and approve the following entitlements in order to implement the proposed project:

- 65th Street Station Area Plan (Plan) approval
- EIR certification
- Adoption of the mitigation monitoring plan

Other Agencies

The EIR prepared for the project would be used by Responsible Agencies and Trustee Agencies that may have some approval authority over the project. The City would obtain all permits, as required by law. The following agencies, which may be considered Responsible Agencies, have discretionary authority over approval of certain project elements, or alternatively, may serve in a ministerial capacity:

- California Air Resources Board
- California Department of Transportation
- Sacramento Air Quality Management District
- State Water Resources Control Board
- Central Valley Regional Water Quality Control Board
- California Public Utilities Commission
- Army Corps of Engineers

- California State University, Sacramento
- Sacramento Regional Transit
- Union Pacific Railroad
- California State University - Sacramento

Other Ministerial Approvals

The project may require the following additional permits or approvals from the City of Sacramento or other regional agencies: construction permits, encroachment permits, improvement plan approvals, and other actions related to the proposed development of the project.

SCHEDULE

The horizon for implementing the 65th Street Station Area Plan is through year 2035. This is a programmatic EIR, which means that specific information regarding the anticipated construction schedule is unknown at this time. The environmental analysis assumes that only one project element would be under construction at any one time due to the long planning horizon. However, since the timing of construction of each of the roadway components is unknown at this time, there is the potential for multiple projects to occur at any one time. If the construction of more than two projects would affect an impact analysis, the impact analysis discloses this.

4. ENVIRONMENTAL ANALYSIS

4.0 Introduction to the Environmental Analysis

4.0 INTRODUCTION TO THE ANALYSIS

SCOPE OF THE EIR ANALYSIS

The Environmental Analysis chapter of this Draft EIR discusses the environmental and regulatory setting, impacts, and mitigation measures for each of the following technical issue areas (sections 4.1 through 4.3):

4.1 Air Quality

4.2 Noise

4.3 Transportation and Circulation

SECTION FORMAT

Chapter 4 is divided into technical sections (e.g., 4.1 Air Quality) that present for each environmental issue area a description of the project site's existing condition or environmental setting followed by the regulatory setting, standards of significance, and a discussion of the project-specific impacts and mitigation measures as it pertains to a particular issue. A discussion of cumulative project impacts is included at the end of each of the technical sections. The environmental setting provides a point of reference, or a baseline from which to assess the environmental impacts of the proposed project and project alternatives. The impact and mitigation measures portion of each section includes impact statements, which are prefaced by a number in bold-faced type. An explanation of each impact and an analysis of its significance follow each impact statement. All mitigation measures pertinent to each individual impact follow directly after the impact statement. The degree to which the identified mitigation measure(s) would reduce the impact is also described.

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 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, and long-term impacts are addressed, as appropriate, for the environmental issue area being analyzed. This EIR assumes compliance with applicable laws and other regulations.

The standards of significance used for this project were derived from the City of Sacramento's established significance standards and policies set forth in the Sacramento 2030 General Plan. An example of the section format is shown below.

4.X-X Statement of impact for the proposed project in bold type. Unless otherwise noted within the impact statement, the impact analysis following a particular impact statement is applicable to both Scenarios (B and C).

The impact analysis is presented in paragraph form with a significance determination of the project's impact (prior to mitigation) identified. If no mitigation is required, the determination of significance is stated in ***bold, italic type***. If mitigation is required, the determination of significance prior to mitigation is stated in *italic type*.

Mitigation Measure

Description of the level of significance of the impact after mitigation is identified in ***bold, italic type***.

The Scenarios for which the mitigation would apply are included above the mitigation measure in (parentheses).

(Scenarios B, and C)
4.X-X *Statement of what, if any, mitigation measures are required.*

TERMINOLOGY USED IN THE EIR

This Draft EIR uses the following terminology to describe environmental effects of the proposed project:

Standards of Significance: A set of criteria used by the lead agency to determine at what level or "threshold" an impact would be considered significant.

Less-than-Significant Impact: A project impact is considered less than significant if it does not reach, or trip, the standard of significance and would therefore cause no substantial change in the environment (no mitigation required).

Potentially Significant Impact: A potentially significant impact is an environmental effect that may cause a substantial adverse change in the environment; however, additional information is needed regarding the extent of the impact to make the determination of significance. For CEQA purposes, a potentially significant impact is treated as if it were a significant impact.

Significant Impact: A project impact is considered significant if it results in a substantial adverse change in the physical conditions of the environment. Significant impacts are identified by the evaluation of project effects in the context of specified significance criteria. Mitigation

measures and/or project alternatives are identified to reduce these effects to the environment, where feasible.

Significant and Unavoidable Impact: A project impact is considered significant and unavoidable if it would result in a substantial adverse change in the environment that cannot be feasibly avoided or mitigated to a less-than-significant level if the project is implemented. Findings of Overriding Considerations must be adopted by the lead agency if impacts cannot be mitigated.

Cumulative Impacts: According to CEQA, "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 15355). CEQA requires that cumulative impacts be discussed when the "project's incremental effect is cumulatively considerable" (CEQA Guidelines, section 15130 (a)).

Mitigation Measures: The CEQA Guidelines (section 15370) define mitigation as:

a) Avoiding the impact altogether by not taking a certain action or parts of an action;

b) Minimizing impacts by limiting the degree of magnitude of the action and its implementation;

c) Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;

d) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; and

e) Compensating for the impact by replacing or providing substitute resources or environments.

4.1 Air Quality

4.1 AIR QUALITY

INTRODUCTION

This section assesses the potential air quality effects caused by stationary, mobile, and area sources related to construction, demolition, and operation of the proposed project. This section also describes the climate in the project area; existing air quality conditions in the project area for criteria air pollutants and toxic air contaminants; and applicable federal, state, and regional air quality standards.

Comments received in response to the NOP (see Appendix B) include a letter from the Sacramento Metropolitan Air Quality Management District (SMAQMD) requesting that the analysis include a discussion of potential short-term (construction) and long-term (operation) air quality impacts of the project. The SMAQMD recommends the use of their Roadway Emissions Model for construction impacts and application of SMAQMD standard mitigation measures for any potentially significant impacts. All of these issues and concerns have been addressed in this section. The SMAQMD also recommends that a discussion of climate change be included. A discussion of greenhouse gases and climate change is included in the Initial Study (see Appendix C).

As discussed in the Initial Study, issues associated with air movement, moisture, and temperature, and odors were found to be less than significant. Therefore, these issues are not discussed further in this section. A discussion of potential impacts from release of asbestos during demolition of buildings is also discussed in the Initial Study, and is not discussed further in this section.

Sources reviewed for this section include the SMAQMD Guide to Air Quality Assessment in Sacramento County (Guide), the SMAQMD Recommended Protocol for Evaluating the Location of Sensitive Land Uses Adjacent to Major Roadways (Protocol), the City of Sacramento 2030 General Plan, the California Air Resources Board (CARB) website, and the SMAQMD website.

ENVIRONMENTAL SETTING

A region's air quality is influenced by the region's climate, topography, and pollutant sources. The characteristics of the region encompassing the city of Sacramento are such that the area can, at times, have the potential for high concentrations of regional and localized air pollutants.

Climate and Topography

The mountains surrounding the Sacramento Valley Air Basin (SVAB) create a barrier to airflow, which can trap air pollutants in the SVAB when meteorological conditions are right. The highest frequency of air stagnation occurs in the autumn and early winter when large high-pressure cells

lie over the Valley. The lack of surface wind during these periods and the reduced vertical flow caused by less surface heating reduces the influx of outside air and allows air pollutants to become concentrated in a stable volume of air. The surface concentrations of pollutants are highest when these conditions are combined with smoke from agricultural burning or when temperature inversions trap cool air, fog and pollutants near the ground.

The ozone season (May through October) in the SVAB is characterized by stagnant air or light winds with the delta sea breeze arriving in the afternoon out of the southwest. Usually the evening breeze transports the airborne pollutants to the north out of the Valley. During about half of the days from July to September; however, a phenomenon called the "Schultz Eddy" prevents this from occurring. Instead of allowing for the prevailing wind patterns to move north carrying the pollutants out of the Valley, the Schultz Eddy causes the wind pattern to circle back south. Essentially this phenomenon causes the air pollutants to be blown south toward the Sacramento area. This phenomenon's effect exacerbates the pollution levels in the area and increases the likelihood of violating federal or state standards. The Eddy normally dissipates around noon when the delta sea breeze arrives.

Air Quality Background

Air pollutant emissions within the SVAB are generated by stationary and mobile sources. Stationary sources can be divided into two major subcategories: point and area sources. Point sources are usually subject to a permit to operate from the local air district, occur at specific identified locations, and are usually associated with manufacturing and industry. Examples of point sources include refineries, concrete batch plants, and can coating operations. Smaller point sources include automotive refinishers and gasoline stations.

The term "mobile source" refers to emissions from motor vehicles, including tailpipe and evaporative emissions. Mobile sources account for the majority of the air pollutant emissions within the SVAB.

Criteria Air Pollutants

Criteria air pollutants are a group of pollutants for which federal or state regulatory agencies have adopted ambient air quality standards. The criteria air pollutants of concern in the Sacramento area include ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), and particulate matter (PM_{10} and $PM_{2.5}$). Most of the criteria pollutants are directly emitted. Ozone, however, is a secondary pollutant that is formed in the atmosphere by chemical reactions between oxides of nitrogen (NO_x) and 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_x.[1]

1 California Air Resources Board, Sacramento Metropolitan Air Quality Management District, 2006 Estimated Annual Average Emissions Inventory, www.arb.ca.gov/app/emsinv/emssumcat.php, accessed February 17, 2009.

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 "non-attainment" for that pollutant. If there is not enough data available to determine whether the standard is exceeded in an area, the area is designated "unclassified."

Criteria air pollutants essential to air quality planning and regulation in the SVAB are listed in Table 4.1-1, along with applicable state and federal ambient air quality standards and attainment classifications. Relevant criteria pollutants for the Sacramento area and the attainment status for Sacramento County for each of these pollutants are described below.

TABLE 4.1-1

AIR QUALITY STANDARDS ATTAINMENT STATUS CHART FOR SACRAMENTO COUNTY

Pollutant	Primary Standard	Status
Federal Standards		
Ozone (O_3) – 8 hour	0.075 ppm	Serious Nonattainment
Carbon Monoxide (CO) –		
1 hour	35 ppm	Attainment
8 hour	9 ppm	Attainment
Nitrogen Dioxide (NO_2) –		
Annual Arithmetic Mean	0.053 ppm	Attainment
Inhalable Particulate (PM_{10})		
24 Hour	150 µg/m^3	
Annual Arithmetic Mean	50 µg/m^3	Moderate Nonattainment*
Inhalable Particulate ($PM_{2.5}$)		
24 Hour	35 µg/m^3	Attainment
State Standards		
Ozone (O_3) –		
1 hour	0.09 ppm	Serious Nonattainment
8 hour	0.070 ppm	Serious Nonattainment
Carbon Monoxide (CO) –		
1 hour	20 ppm	Attainment
8 hour	9 ppm	Attainment
Nitrogen Dioxide (NO_2) –		
1 hour	0.25 ppm	Attainment
Inhalable Particulate (PM_{10})		
Annual Arithmetic Mean	20 µg/m^3	Nonttainment
24 Hour	50 µg/m^3	Nonttainment
Inhalable Particulate ($PM_{2.5}$)		
Annual Arithmetic Mean	12.0 µg/m^3	Nonattainment

Notes:
ppm = parts per million
µg/m^3 = micrograms per cubic meter
Sacramento County air quality currently meets the Federal PM_{10} standards, but the SMAQMD must request redesignation to attainment and submit a maintenance plan to be formally designated to attainment.
Source: Sacramento Metropolitan Air Quality Management District, Air Quality Standards Attainment Status Chart, <www.airquality.org>, accessed January 28, 2009.

Ozone (O_3) is a gas that is formed when reactive organic gases and nitrogen oxides undergo slow photochemical reactions in the presence of sunlight. The type of ozone referred to in this section is called tropospheric ozone (otherwise known as "bad ozone"), since it lies very close to the earth's surface (in the troposphere). Ozone concentrations are generally highest during the summer months when direct sunlight, light wind, and warm temperature conditions are favorable. The EPA has designated the Sacramento area as a "serious" nonattainment area for the eight-hour standard.[2]

Carbon Monoxide (CO) is a colorless, odorless gas that is formed when carbon in fuel is not burned completely. It is a component of motor vehicle exhaust, which contributes about 56 percent of all CO emissions nationwide. Other non-road engines and vehicles (such as construction equipment and boats) contribute about 22 percent of all CO emissions nationwide. Higher levels of CO generally occur in areas with heavy traffic congestion. In cities, 85 to 95 percent of all CO emissions may come from motor vehicle exhaust. Other sources of CO emissions include industrial processes (such as metals processing and chemical manufacturing), residential wood burning, and natural sources such as forest fires. The highest levels of CO in the outside air typically occur during the colder months of the year when inversion conditions are more frequent. The air pollution becomes trapped near the ground beneath a layer of warm air.

Because CO is emitted directly from internal combustion engines—unlike ozone—and motor vehicles operating at slow speeds are the primary source of CO in the SVAB, the highest ambient CO concentrations are generally found near congested transportation corridors and intersections.

Through control measures adopted by state, local and federal agencies, all areas of the SVAB have attained the state and federal CO standards.[3] However, the potential still exists for incidents of high localized concentrations of CO to occur.

Particulate Matter (PM_{10} and $PM_{2.5}$) consists of extremely small, suspended particles or droplets 10 microns and 2.5 microns or smaller in diameter. There are outdoor and indoor sources of fine particles. Some sources of suspended particulate matter, like pollen and wind blown dust, occur naturally. However, in populated areas, most fine suspended particulate matter is caused by road dust, diesel soot, combustion of fuel, abrasion of tires and brakes, and construction activities. Fine particles can remain suspended in the air and travel long distances. For example, exhaust from a diesel truck in Los Angeles can end up over the Grand Canyon.

2 Sacramento Metropolitan Air Quality Management District, Air Quality Standards Attainment Status Chart for Sacramento County. <www.airquality.org/aqdata/attainmentstat.shtml>, accessed February 9, 2009.

3 Sacramento Metropolitan Air Quality Management District, Air Quality Standards Attainment Status Chart for Sacramento County. <www.airquality.org/aqdata/attainmentstat.shtml>, accessed February 9, 2009.

Monitoring data for Sacramento County shows that air quality in the county currently meets the federal PM_{10} standard. However, the SMAQMD must request re-designation to attainment and submit a PM_{10} maintenance plan to the EPA prior to be formally designated to attainment. Consequently, the EPA has not officially changed the county's designation to attainment for the federal PM_{10} standard. The Sacramento Region is officially in nonattainment status for the more stringent state PM_{10} standards.

Sacramento County is currently in attainment/unclassified for the federal 24-hour $PM_{2.5}$ standard; however, the County is in nonattainment for the state annual mean $PM_{2.5}$ standard.[4]

Nitrogen oxides (NO_x) is the generic term for a group of highly reactive gases, all of which contain nitrogen and oxygen in varying amounts. Many of the nitrogen oxides are colorless and odorless. Of the seven types of nitrogen oxide compounds, NO_2 is the most abundant in the atmosphere. NO_2, along with other particles in the air, can often be seen as a reddish-brown layer over many urban areas. Nitrogen oxides form when fuel is burned at high temperatures, as in a combustion process. The primary human-made sources of NO_x are motor vehicles, electric utilities, and other industrial, commercial, and residential sources that burn fuels. Nitrogen oxides can also be formed naturally. The County is in attainment for NO_2.[5]

Toxic Air Contaminants

In addition to the criteria air pollutants, another group of airborne substances, called Toxic Air Contaminants (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 (i.e., injury or illness). One particular source of TACs is diesel particulate matter (DPM), which CARB has listed as a primary source of TACs from mobile sources. For mobile sources, the SMAQMD *Recommended Protocol for Evaluating the Location of Sensitive Land Uses Adjacent to Major Roadways (Protocol)*[6] provides a methodology for the assessment of potential cancer risk from DPM attributable to siting sensitive land uses adjacent to major roadways.

Sensitive Receptors

Land uses such as primary and secondary schools, hospitals, and convalescent homes are considered to be sensitive receptors to poor air quality because the very young, the old, and the

4 Sacramento Metropolitan Air Quality Management District, Air Quality Standards Attainment Status Chart for Sacramento County. <www.airquality.org/aqdata/attainmentstat.shtml>, accessed February 9, 2009.

5 Sacramento Metropolitan Air Quality Management District, Air Quality Standards Attainment Status Chart for Sacramento County. <www.airquality.org/aqdata/attainmentstat.shtml>, accessed February 9, 2009.

6 Sacramento Metropolitan Air Quality Management District, Recommended Protocol for Evaluating the Location of Sensitive Land Uses Adjacent to Major Roadways, Version 2.1, January 2009. <www.airquality.org/ceqa/SLUMajorRoadway/SLURecommendedProtocol2.1-Jan2009.pdf>.

infirm are more susceptible to respiratory infections and other air quality related health problems than the general public. 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 human respiratory function.

Existing sensitive land uses within the project area consist primarily of residences, including a single-family neighborhood between Elvas Avenue and Folsom Boulevard, single-family neighborhoods south of US 50, to the east and west of 65th Street, and a multi-family residential complex at 65th Street and 4th Avenue.

Regulatory Context

Air quality in Sacramento County is regulated by the U.S. Environmental Protection Agency (EPA), the CARB, and the SMAQMD. These agencies develop rules or regulations to meet the goals or directives imposed on them through legislation. In general, air quality evaluations are based on air quality standards developed by the federal and state government.

Since many air pollution problems are regional in nature, the federal government sometimes designates multi-county areas as "Nonattainment Areas." Because it covers a large area, a nonattainment area can be composed of several different air districts. The "nonattainment area" designation means that these individual local agencies must work together to solve regional air pollution problems. The Sacramento Ozone Nonattainment Area includes all of Sacramento County and parts of Yolo, Solano, Sutter, and Placer counties.

Federal

The federal EPA is the federal agency responsible for setting and enforcing the federal ambient air quality standards for atmospheric pollutants. As part of its enforcement responsibilities, the EPA requires each state with nonattainment areas to prepare and submit a State Implementation Plan (SIP) that demonstrates the means to attain the federal standards. The SIP must integrate federal, state, and local plan components and regulations to identify specific measures to reduce pollution in nonattainment areas, using a combination of performance standards and market-based programs.

Clean Air Act

The Federal CAA, as amended, establishes air quality standards for several pollutants. The Clean Air Act (CAA) requires that regional plans be prepared for non-attainment areas illustrating how the federal air quality standards could be met. The CARB approved the most recent revision of the State Implementation Plan (SIP) prepared by the SMAQMD in 1994, and submitted it to the EPA. The SIP, approved by the EPA in 1996, consists of a list of ROG and NO_x control measures for demonstrating future attainment of ozone standards. The steps to

achieve attainment will continue to require significant emissions reductions in both stationary and mobile sources.

State

The CARB, a part of the California EPA (Cal EPA), is responsible for the coordination and administration of both federal and state air pollution control programs within California. In this capacity, the CARB conducts research, sets state ambient air quality standards, compiles emission inventories, develops suggested control measures, and provides oversight of local programs. It also sets fuel specifications to further reduce vehicular emissions. The CARB also has primary responsibility for the development of California's SIP, for which it works closely with the federal government and the local air districts.

California Clean Air Act

The California Clean Air Act (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 ozone, carbon monoxide, sulfur dioxide, and nitrogen dioxide 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 ozone and carbon monoxide, and although not required, PM_{10}. The CCAA also requires the districts 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.[7]

Local

Sacramento Metropolitan Air Quality Management District

The SMAQMD is the primary agency responsible for planning to meet federal and state ambient air quality standards in Sacramento County and the larger Sacramento Ozone Nonattainment Area. In order to demonstrate the area's ability to eventually meet the federal ozone standards, the SMAQMD, along with the other air districts in the Nonattainment Area, maintain the region's portion of the SIP for ozone. The Nonattainment Area's part of the SIP is a compilation of regulations that govern how the region and state will comply with the federal CAA requirements to attain and maintain the federal ozone standard. The compilation of rules that comprises the Sacramento Nonattainment Area's portion of the SIP is contained in a document called the *Sacramento Area Regional Ozone Attainment Plan*. As of July 1, 2008, the SMAQMD established an updated mitigation fee rate of $16,000 per ton of emissions (+5% in administrative fees) in excess of the SMAQMD NO_x threshold. The mitigation fee is based on

7 Sacramento Metropolitan Air Quality Management District, <www.airquality.org/stateplan>, accessed February 17, 2009.

the Carl Moyer Memorial Air Quality Standards Attainment Program (Carl Moyer Program) cost effectiveness cap. The Carl Moyer Program is a grant program, implemented by a partnership of CARB and local air districts that fund the incremental cost of cleaner-than-required engines, equipment, and other sources of pollution. The Carl Moyer Program grants provide early or extra emission reductions. It can also accelerate the development and commercialization of advanced emission control technology, accelerate the turnover rate of old equipment to newer and cleaner equipment, and help reduce costs to the regulated community. Projects to reduce emissions from on-road heavy-duty vehicles, idle reduction technologies, off-road diesel equipment and transportation, refrigeration units, off road spark-ignition equipment, marine vessels, locomotives, and agricultural engines have been eligible for grants.

For PM_{10}, 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 U.S. EPA.

Local Air District Rules

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

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 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.

City of Sacramento 2030 General Plan

The following goals and policies from the 2030 General Plan are relevant to Air Quality.

ENVIRONMENTAL RESOURES (ER)

Goal ER 6.1 Improved Air Quality. Improve the health and sustainability of the community through improved regional air quality and reduced greenhouse gas emissions that affect climate change.

Policies

ER 6.1.2 Emissions Reduction. The City shall require development projects that exceed the Sacramento Air Quality Management ROG and NO_x operational thresholds to incorporate design or operational features that reduce emissions equal to 15 percent from the level that would be produced by an unmitigated project.

ER 6.1.13 Preference for Reduced Emission Equipment. The City shall give preference to contractors using reduced-emission equipment for City construction projects as well as for City contracts for services (e.g., garbage collection).

IMPACTS AND MITIGATION MEASURES

Methods of Analysis

The air quality analysis focuses on the nature and magnitude of the change in the air quality environment due to construction and operation of the proposed project. Air pollutant emissions would result primarily from construction activities (construction emissions) as the project would not create a new source of vehicle trips (operational emissions). Also, because the project would not include a new source of vehicle trips, a qualitative rather than quantitative analysis of potential operational emissions is provided.

The net increase in emissions generated by construction and operation of the project and the associated cumulative impacts have been estimated and compared to the City's standards of significance. The methodology for estimating emissions, as described in the SMAQMD Guide and other guidance documents, was used in this analysis. Calculation sheets for project emissions are included in Appendix D. Because specific construction information is not known for each project element, further environmental analysis may be required when more detailed information is known.

Construction Emissions

This is a programmatic EIR, which means that information regarding the anticipated construction equipment, length of construction, and time of year is not currently known. Therefore, construction equipment information for the roadway construction portions of the proposed project were based on construction area estimates received from the City of Sacramento Engineering Department and used in the SMAQMD Roadway Construction model (Version 6.3.1), to estimate emissions based on model defaults. Because the standard of significance is based on a daily maximum emission rate and this project would include many smaller components that would be phased out over a long period of time, only those components of the proposed project that would require intensive construction activities, such as for construction of a new roadway or tunnel, were estimated. Estimates for smaller project components, such as for bikeways and pathways were not calculated as part of this analysis, but would contribute to the daily maximum if they overlap with other components. To be conservative, this analysis assumes a worst-case condition where construction of two or more large roadway components would overlap. A quantitative analysis of construction emissions resulting from the proposed project is provided below.

Operational Emissions

Operational emissions refer to the emissions that are generated by the normal day-to-day activity of the project, such as emissions from traffic. Because the proposed project does not include the construction of new land uses and the project would not create a new source of vehicle trips, no calculation of operational emissions are included in this analysis. A qualitative

discussion of the potential for impacts to regional emissions from the proposed project is provided below. This methodology is based on discussions with the SMAQMD during preparation of this document. The SMAQMD confirmed that a quantitative analysis would not be required for this type of project as it would be "unlikely that the project would result in operational emissions that exceed the District's threshold of significance."[8]

Localized CO Concentrations

The CALINE4 dispersion model for predicting CO concentrations is used to estimate pollutant concentrations at sensitive receptors near congested roadways and intersections. For each intersection analyzed, CALINE4 adds roadway-specific CO emissions calculated from peak-hour turning volumes to the existing ambient CO air concentrations. CO concentration levels are highest near crowded or congested intersections where traffic is slow or idling. The proposed project could increase traffic volumes on a localized level on surrounding roadways from redistribution of existing traffic. This could possibly degrade the existing level of service (LOS) and increase CO concentrations at nearby intersections. Normally, barring other environmental considerations, CO concentrations should be carefully analyzed at intersections classified as LOS "D" or worse, which is usually considered to be "unacceptable" for traffic circulation.

The closest monitoring station to the project site is the T Street station located in midtown Sacramento. This station collected CO data for the 8-hour standard up to year 2005, but not the 1-hour standard. Consequently, monitoring data can be used to determine an 8-hour CO background value. To ensure an adequate margin of safety, the highest 8-hour CO reading from the T Street station from the period 2003 to 2005 was used as the eight-hour background concentration.

Toxic Air Contaminants

The methodology contained in SMAQMD's *Recommended Protocol for Evaluating the Location of Sensitive Land Uses Adjacent to Major Roadways* was used to evaluate the potential for health risks from DPM to receptors within the project area as a result of the proposed project.

Standards of Significance

For the purposes of this air quality analysis, a significant impact would occur if:

- *Ozone*: The project increases nitrogen oxide (NO_x) levels above 85 pounds per day for short-term effects (construction). The project increases either ozone precursors, nitrogen oxides (NO_x) or reactive organic gases (ROG), above 65 pounds per day for long-term effects (operation).

8 Hurley, Joseph J., Sacramento Metropolitan Air Quality Management District, personal communication via e-mail with PBS&J, January 12, 2009.

- *Particulate Matter (PM_{10}):* The project emits pollutants at a level equal to, or greater than, five percent of the CAAQS (50 micrograms/cubic meter for 24 hours) if there is an existing or projected violation; however, if a project is below the ROG and NO_x thresholds, it is assumed that the project is below the PM_{10} threshold as well.
- *Carbon Monoxide (CO):* The project results in CO concentrations that exceeds the 1-hour State ambient air quality standard of 20.0 parts per million (ppm) or the 8-hour State ambient standard of 9.0 ppm.
- *Toxic Air Contaminants:* The project would create a significant impact if it creates a risk of 10 in 1 million for cancer.

Impacts and Mitigation Measures

4.1-1 Construction of the proposed project would generate emissions of ozone precursors.

Construction activities associated with the proposed project would emit ozone precursors, ROG and NO_x, associated with construction equipment. The SMAQMD has not developed a threshold of significance for ROG in construction equipment exhaust. However, heavy-duty diesel construction equipment emits substantial amounts of NO_x, and the SMAQMD has developed a threshold of 85 pounds per day for NO_x, from construction activity.

The type of construction equipment required for the project is unknown at this time; therefore, a selection of roadway segments planned for widening and extensions, including roadway widening along Folsom Boulevard and 65th Street, and extension of Broadway, San Joaquin Street, and Ramona Avenue, were considered. These roadway segments were chosen because they represented the largest individual construction areas that could occur under either Scenario B or C of the project. To estimate potential daily emissions from construction at each of these construction areas, construction equipment defaults contained in the SMAQMD Road Construction Emissions model (Version 6.3.1) were used. The Roadway Construction Model estimates potential emissions from roadway construction projects during four separate construction phases: (1) grubbing/land clearing, (2) grading/excavation, (3) drainage/utilities, and (4) paving. Table 4.1-2 shows the potential maximum daily emissions for each roadway segment. Each development scenario (Scenario B or C) would include different improvements, although some of the proposed improvements are common to both scenarios. Therefore, for each of the proposed improvement scenarios, the improvements that would occur under each scenario are listed (see Table 3-2 in Chapter 3, Project Description, for a full listing of improvements by scenario). However, as shown in Table 4.1-2 each scenario would include some roadway widening and roadway extensions. Additional construction equipment in addition to the equipment assumptions in Table 4.1-2 would also be required for construction activities associated with the proposed grade separated crossings and the undercrossing under the railroad tracks. Also each scenario would include relatively minor improvements, such as

construction of a bicycle lanes or pedestrian paths/sidewalks. Emissions would vary depending on the element of construction, and emissions would cease once construction is complete.

TABLE 4.1-2

CONSTRUCTION EMISSIONS IN PEAK POUNDS PER DAY

		Scenario	ROG	NO_x	CO	PM_{10}
Folsom Blvd. widening	59th Street to 65th Street	B (4 lanes)	4.8	38.3	20.4	35.0
Folsom Blvd. widening	59th Street to 65th Street	C (2 to 3 lanes)	4.8	38.1	20.3	29.9
65th Street widening	Broadway to Folsom	B, C	4.8	37.9	20.3	21.4
Broadway Extension	65th Street to Redding	B, C	4.6	37.3	19.6	21.9
Broadway Extension	Redding to Ramona Ave	C	4.7	37.9	20.1	30.5
San Joaquin Extension	Redding to Ramona Ave	B	4.8	37.9	20.3	20.7
Ramona Ave Extension	Brighton to Folsom Blvd.	B, C	4.7	37.5	19.9	15.9
Ramona Ave Extension	San Joaquin to 14th Ave	B, C	4.7	37.7	20.0	25.9
SMAQMD Threshold			N/A	85	N/A	N/A
Exceeds SMAQMD Threshold for any individual phase?				No		

Source: PBS&J, 2008.

Based on the modeling results, NO_x emissions from construction equipment would not exceed the district's threshold of 85 lbs/day for construction on the above roadway segments; however, since the timing of construction of each of the roadway components is unknown at this time, there is the potential for multiple projects to occur at any one time. If more than two projects were constructed simultaneously, the potential exists for the thresholds to be exceeded. Therefore, because construction phases could overlap, there would be a potential for the NO_x threshold to be exceeded, and this would be considered a *potentially significant impact.*

Mitigation Measure

The SMAQMD requires that specific mitigation measures be implemented for all construction projects that exceed thresholds (included below in Mitigation Measure 4.1-1 (a-c)). Previous environmental documents prepared for development within the project area for the 65th Street Transit Village Project and South 65th Street Area Plan Project, included similar mitigation measures to reduce the amount of construction emissions. These measures would continue to apply to the previously-approved components included in the proposed project under Scenarios B and C, and would be expanded to include all proposed components included under Scenarios B and C. Additionally, Mitigation Measure 4.1-1(d) is necessary as it is required by state law. Implementation of Mitigation Measures 4.1-1(a) through (d) would result in a minimum 20 percent reduction of NO_x construction emissions according to the SMAQMD Guide which assigns a point value that ultimately adds up to a percentage. While the proposed project's impact would be substantially reduced through implementation of these measures, the impact during construction could remain significant if construction phases overlap. However, the mitigation fee collected under Mitigation Measure 4.1-1(e) would enable SMAQMD to reduce

emissions from other NO_x sources to offset the project's construction NO_x emissions if they exceed the current threshold, thus offsetting any project emissions that would exceed the SMAQMD construction NO_x thresholds. For these reasons, compliance with Mitigation Measures 4.1-1(a) through (e) would reduce the impact to a ***less-than-significant level*** for Scenarios B and C.

(Scenarios B and C)

4.1-1 a) *The project contractor shall provide a plan, for approval by the SMAQMD, demonstrating that the heavy-duty (> 50 horsepower) off-road vehicles to be used in the construction project, including owned, leased and subcontractor vehicles, would achieve a project wide fleet-average 20% NO_x reduction and 45% particulate reduction compared to the most recent CARB fleet average at time of construction.*

b) *The project contractor shall submit to SMAQMD a comprehensive inventory of all off-road construction equipment, equal to or greater than 50 horsepower, that shall be used an aggregate of 40 or more hours during any phase 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 developer and/or contractor shall provide SMAQMD with the anticipated construction timeline, including start date and name and phone number of the project manager and on-site foreman. Acceptable options for reducing emissions include the use of late-model engines, low-emission diesel products, alternative fuels, particulate matter traps, engine retrofit technology, after-treatment products, and/or such other options as become available.*

c) *The project contractor shall ensure that emissions from all off-road diesel powered equipment used on the project site do not exceed 40% opacity for more than three minutes in any one hour. Any equipment found to exceed 40% opacity (or 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 by contractor personnel certified to perform opacity readings, and a monthly summary of the visual survey results shall be submitted to the SMAQMD throughout the duration of the project, except that the monthly summary shall not be required for any 30-day period in which no construction activity occurs. The monthly summary shall include the quantity and type of vehicles surveyed as well as the dates of each survey. The above shall not supersede other SMAQMD or state rules and regulations.*

d) *Limit vehicle idling time to five minutes or less.*

e) *The City shall pay into the SMAQMD's construction mitigation fund to offset construction-generated emissions of NO_x for construction of any project components or group of components with concurrent construction that exceed daily emission threshold of 85 lbs/day. The project developer shall coordinate with the SMAQMD for payment of fees into the Heavy-Duty Low-Emission Vehicle Program designed to reduce construction related emissions within the region. Fees shall be paid based upon the current SMAQMD Fee of $16,000/ton of NO_x emissions generated. This fee shall be paid prior to the issuance of grading or other permits or at a date acceptable to the SMAQMD. The City shall keep track of actual equipment use and their NO_x emissions on a monthly basis and reported to the SMAQMD. Based on these monthly NO_x emissions reports, mitigation fees can be adjusted accordingly for payment to the SMAQMD.*

4.1-2 Construction and demolition activities associated with the proposed project would generate emissions of particulate matter.

The proposed project would involve modifications and improvements to the roadway, bicycle, pedestrian, and transit network in the project area. Construction activities associated with these improvements, such as grading and paving, would involve the use of heavy equipment such as scrapers, bulldozers, and backhoes. Particulate matter (e.g., fugitive dust, PM_{10}, or $PM_{2.5}$) is generated during this process as the ground is disturbed. The proposed project would also require demolition of some buildings under Scenarios B and C as a result of roadway extensions on 65th Street, San Joaquin Street, Broadway, and 67th Street, as described in Chapter 3, Project Description. Particulate matter would also be generated during demolition activities. The total amount of particulate matter generated is normally determined by the size of the graded area. The larger the area, the more particulate matter is created. Particulate emissions would also occur during most construction phases; however, the maximum amount of PM generated in one day is assumed to occur during grading operations because of the ground disturbance.

PM_{10} emissions were modeled using the SMAQMD's Road Construction Emissions model, and are shown in Table 4.1-2, above. Emissions of particulate matter would reach their highest levels during the grading portions for each component of construction, assumptions for calculation of project components are described above under Methods of Analysis. Based on the modeling emissions associated with construction, emissions could reach a maximum of 35 pounds per day (the majority of emissions being fugitive dust) for construction of each project component. The amount of PM_{10} generated is based on a conservative assumption that the entire area for each roadway segment phase could be graded on any given day, or between about one and four acres depending on the roadway segment. Because there is potential for more than one roadway segment to be under construction at one any given time under all scenarios (B and C), grading activities could generate emissions of PM_{10} above the threshold. This would be considered a *potentially significant impact*.

Mitigation Measure

All construction activities are required to comply with SMAQMD Rule 403 concerning fugitive dust associated with construction activities, regardless of the size or amount of construction. 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. Previous environmental documents prepared for development within the project area, the 65th Street/Transit Village Project and South 65th Street Area Plan Project, included the following mitigation measures, which comply with SMAQMD Rule 403. These measures are expanded to include all components included under Scenarios B and C. Therefore, under all scenarios (B and C) mitigation measures would be implemented to ensure that this impact is reduced to a ***less-than-significant level***.

(Scenarios B and C)

4.1-2 *Future project components shall comply with SMAQMD Rule 403, Fugitive Dust, for demolition and construction phases to reduce emissions of fugitive dust. To ensure compliance with Rule 403, approval to commence project construction shall not be give until the contractor submits a construction dust mitigation plan deemed satisfactory by the City and the SMAQMD. This plan shall specify control measures that shall be implemented to ensure that emissions of fugitive dust from being airborne beyond the property line from which the emission originates, demonstrate the availability of needed equipment and personnel, and identify a responsible individual who, if needed, can authorize the implementation of additional measures. The following measures shall be included, at a minimum, to reduce fugitive dust emissions in compliance with Rule 403:*

a) *All disturbed areas, including storage piles that are not being actively used for construction purposes, shall be watered with sufficient frequency as to maintain soil moistness.*

b) *All on-site unpaved roads and off-site unpaved access roads shall be effectively stabilized of dust emissions using water or a chemical stabilizer or suppressant.*

c) *When materials are transported off-site, they shall be covered, effectively wetted to limit visible dust emissions, or maintained with at least 6 inches of freeboard space from the top of the container.*

d) *All operations shall limit or expeditiously remove the accumulation of project-generated mud or dirt from adjacent public streets at least once every 24 hours when operations are occurring.*

e) *Following the addition of materials to, or the removal of materials from, the surfaces of outdoor storage piles, the storage piles shall be effectively stabilized of fugitive dust emissions using sufficient water or a chemical stabilizer or suppressant.*

f) *On-site vehicle speeds on unpaved roads shall be limited to 15 miles per hour (mph).*

g) *Wheel washers shall be installed for all trucks and equipment exiting from unpaved areas or wheels shall be washed manually to remove accumulated dirt prior to leaving the site.*

h) *Sandbags or other erosion control measures shall be installed to prevent silt runoff to public roadways from adjacent project areas with a slope greater than 1 percent.*

i) *Excavation and grading activities shall be suspended when winds exceed 20 mph.*

j) *The extent of areas simultaneously subject to excavation and grading shall be limited, wherever possible, to the minimum area feasible.*

4.1-3 Operation of the proposed project would contribute to emissions of ozone precursors.

The standards of significance for ozone precursors are 65 pounds per day of ROG and NO_x for long term project operation. PM_{10}, while an issue in Sacramento County, is not typically produced in high amounts by project operation; therefore, the SMAQMD sets no standards for PM_{10} for the long-term operational phase of a project.

Because the proposed project does not involve construction of new land uses, such as retail or residential uses, the proposed project would not introduce a new source of vehicle trips in the project area. However, the widening and extension of roads in the project area could cause existing trips to shorten or lengthen or to redistribute traffic along area roadways. These changing trip lengths would result in minor changes to the regional emissions. The proposed project would also improve access to non-vehicle transportation modes such as bicycle, pedestrian, and transit, such that there may be a reduction of local and regional trips. Because the proposed project would not generate new sources of stationary or mobile sources during operation of the proposed project under both scenarios (B or C), it is unlikely that the potential increase of ROG and NO_x pollutants would exceed the thresholds.[9] Therefore, this would be a ***less-than-significant impact***.

Mitigation Measure

None required.

4.1-4 Implementation of the proposed project could expose sensitive receptors to increased concentrations of carbon monoxide.

While motor vehicles emit ozone precursors ROG and NO_x, they also generate CO, which is a directly emitted pollutant. CO levels are highest at intersections where there is congestion and traffic is slow. The proposed project would make improvements to the roadway networks, under all scenarios (B or C) that could result in an increase in volumes at some of the area

9 Hurley, Joseph J., Sacramento Metropolitan Air Quality Management District, personal communication via e-mail with PBS&J, January 12, 2009.

intersections due to a redistribution of traffic flows as a result of available capacity along a particular roadway segment. To the extent that increases in traffic volumes lower the level of service (LOS), busy intersections could experience higher concentrations of CO. LOS D or worse results in conditions where traffic is no longer "free flow." The traffic section (see Section 4.3, Transportation and Circulation) identifies that 14 of 21 intersections evaluated would result in LOS of D, E, or F under at least one scenario (Scenario B or C) under existing plus project conditions during AM or PM peak hours. CO concentrations were modeled at five of the worst operating intersections in the project area under existing plus project conditions, and under the scenario that results in the worst operating conditions for that intersection, to screen for potential "hot spots", as shown in Table 4.1-3. All other scenarios at those intersections and other roadway intersections under all scenarios, due to lesser congestion and traffic, are expected to generate lower CO concentrations and were therefore not modeled. As shown in the table, the modeling showed that 8-hour CO concentrations would not exceed the State ambient standard of 9.0 ppm under existing plus project conditions for intersections modeled and all other less congested intersections. This would be considered a ***less-than-significant impact*** under both scenarios (B and C).

Mitigation Measure

None required.

TABLE 4.1-3

MAXIMUM EIGHT-HOUR AVERAGE CARBON MONOXIDE CONCENTRATIONS (EXISTING PLUS PROJECT)

Intersection	CO Concentrations in Parts per Million[1,2]		
	25 feet	50 feet	Threshold[1]
Folsom Blvd at 59th Street (Scenario C)	4.4	4.2	9.0
S Street at 59th Street (Scenario B)	4.2	4.1	9.0
65th Street at Broadway (Scenario B)	4.6	4.4	9.0
Folsom Blvd at State University Dr. (Scenario C)	4.5	4.3	9.0
Folsom Blvd at Howe Avenue (Scenario C)	5.4	5.1	9.0

Notes:
1. National 8-hour standard is 9.0 parts per million. State 8-hour standard is 9.0 parts per million.
2. A background 8-hour concentration of 3.64 parts per million, as measured from the T Street station at 1309 T Street, was used in this analysis.
Source: PBS&J, 2009.

4.1-5 Construction and operation of the proposed project could expose sensitive receptors to increased concentrations of toxic air contaminants from traffic.

Toxic air contaminants (TACs) associated with the proposed project could be generated by either stationary sources during construction or by mobile sources that may be redistributed along area roadways as a result of the project. TACs can produce both acute (short-term) and chronic (long-term) adverse health impacts.

Construction of the proposed project would generate TACs through the burning of diesel fuel. Diesel particulate matter has recently been identified as a TAC by the CARB. While there are some components of diesel particulate that could conceivably cause short-term acute impacts, the biggest concerns regarding diesel impacts are the potential chronic impacts that can occur with long-term exposure (usually measured over a lifetime of 70 years). Construction of the proposed project would be short-term, and would not be expected to be continuous, as construction would occur in phases. Construction activities would also occur in many different locations throughout the project area. Because of the short duration of exposure during construction, TAC effects from construction at the closest residences would be small relative to their TAC exposure from existing on-going sources, such as diesel truck traffic on local roads and freeways.

As noted, the proposed project, under any scenario (B or C), would not generate new vehicle trips; however, upon completion of the proposed project, TACs would continue to be generated by existing mobile sources and may be moved closer to or redistributed along area roadways such that there is an increase in TAC exposure to existing residents. The SMAQMD guidelines for identifying significant impacts for mobile-source TACs are primarily from high traffic volume roadways. A high traffic volume roadway is defined as a freeway or urban roadway with greater than 100,000 vehicles/day, or rural roadway with 50,000 vehicles/day. The only roadway that meets this threshold in the project area under existing and future conditions is US 50, which is not proposed for modification under the proposed project. Therefore, although the proposed project could result in a redistribution of vehicles closer to residents and/or result in an increase in traffic volumes on select area roadways, the proposed project's impact under all scenarios (B and C) related to increased TAC exposure to residents would be considered less-than-significant.

Neither project construction nor project operation are expected – separately or in combination – to generate a significant increment to TAC exposure at nearby sensitive sites. Therefore, this impact would be considered ***less than significant*** for both scenarios (B and C).

Mitigation Measure

None required.

Cumulative Impacts and Mitigation Measures

The cumulative context of an air pollutant is dependent on the specific pollutant being considered. Ozone precursors are regional pollutants; therefore, the cumulative context would be existing and future development within the entire SVAB. This means that ozone precursors generated in one location do not necessarily have ozone impacts in that area. Instead, precursors from across the region can combine in the upper atmosphere and be transported by winds to various portions of the air basin. Consequently, all ozone precursors generated throughout the air basin are part of the cumulative context.

For localized pollutants such as PM_{10} and CO, the cumulative context would include existing and proposed future development in the immediate vicinity of the proposed project. The localized nature of PM_{10} means that emissions generated by project-related activity would only affect the area in, and directly around, the site associated with the project component currently under construction. Consequently, only PM_{10} emissions from non-project sources near the project site could conceivably combine with project emitted emissions and create a cumulative impact.

For CO, which is the product of fuel combustion, the cumulative context would be all existing and future traffic on local roads in the vicinity of the project site. The existing and future traffic would include all the development currently contributing to traffic volumes on the local roads analyzed in the traffic study, as well as all reasonable foreseeable future development, including the proposed project, that would contribute to traffic volumes on the local roads analyzed in the traffic study. The traffic is accounted for in the traffic study produced for the proposed project, and CO modeling at intersections uses the cumulative numbers in the traffic study.

4.1-6 Implementation of the proposed project, combined with other development in the air basin, could increase cumulative levels of criteria pollutants.

As discussed above, the air basin is currently in non-attainment for ozone. As future growth occurs in the basin, vehicle use and other activities would increase the amount of ozone precursors generated. Increases in air pollutants would further degrade air quality and make attainment of ozone standards more difficult. Under cumulative conditions, it cannot be assumed that the region would be in attainment for ozone and particulate matter. Therefore, the cumulative impact without the project would be potentially significant. The proposed project would contribute to the cumulative degradation in air quality by generating construction equipment emissions and operation of the proposed project.

On-going construction activities that occur simultaneously with project construction in the larger air basin would contribute emissions of ozone precursors (ROG and NO_x). While those emissions would be temporary, combined they could exceed the thresholds. In addition, emissions of other criteria pollutants, such as PM_{10} and CO which would be generated during project construction activities, could combine with other construction projects in the vicinity of the project resulting in considerable emissions. As specified in Impact 4.1-1, the proposed project would not exceed the screening threshold for NO_x for individual construction projects, but could exceed them if two or more projects are constructed at the same time. However, with implementation of mitigation measures including the payment of fees for emissions greater than the SMAQMD threshold, impacts from these emissions would be reduced to less than significant.

The project proposes to modify the transportation network, and would not create a new source of vehicle trips during operation. However, operation of the proposed project could result in a

modification of local trip lengths in the project vicinity by redistributing traffic along area roadways. The SMAQMD Guide considers projects to be cumulatively significant if the project would require a change in the existing land use designation (e.g., general plan amendment, rezone) and if the projected ozone precursor emissions from the new uses would be greater than the emissions anticipated for an area under the existing land use designation. Because the proposed project would not result in a net increase in emissions greater the SMAQMD thresholds for ROG and NO_x; the project's contribution to this cumulative impact would be less than cumulatively considerable for both scenarios (B and C) and this would be a ***less-than-significant cumulative impact***.

Mitigation Measure

None required.

4.1-7 Construction and operation of the proposed project, combined with other development in the project area, could expose sensitive receptors to pollutant concentrations.

For cumulative impacts, project-related CO and TAC impacts are evaluated in combination with traffic emissions from other existing and future development. The traffic study prepared for the proposed project predicts future (2030) traffic volumes at nearby intersections for cumulative plus project conditions. The traffic study takes into account traffic from other sources that would be in existence in 2030.

The traffic section (see Section 4.3, Transportation and Circulation) identifies that all 21 intersections evaluated would result in LOS of D, E, or F under at least one scenario under cumulative plus project conditions during AM or PM peak hours. CO concentrations were modeled at five of the worst operating intersections in the project area under cumulative plus project conditions, and under the scenario that results in the worst operating conditions for that intersection, to screen for potential hot spots, as shown in Table 4.1-4. As shown in the table, 8-hour CO concentrations would not exceed the threshold under cumulative plus project conditions for intersections modeled and all other less congested intersections. Therefore, the proposed project plus cumulative traffic would not exceed the thresholds for CO under future cumulative conditions under both scenarios (B and C).

Also, Impact 4.1-5 identifies that exposure of residents to TACs would be less than significant as roadway volumes would not exceed the SMAQMD screening threshold of 100,000 vehicles/day for local roadways. Other development in the project area could add traffic to the surrounding roadways, which could contribute to the TAC exposure of residents within the project area. However, under future cumulative conditions under both scenarios (B and C), roadways would continue to be under the SMAQMD threshold for a high volume roadway. This would be a ***less-than-significant cumulative impact***.

TABLE 4.1-4

MAXIMUM EIGHT-HOUR AVERAGE CARBON MONOXIDE CONCENTRATIONS (CUMULATIVE PLUS PROJECT)

Intersection	CO Concentrations in Parts per Million[1,2]		
	25 feet	50 feet	Threshold[1]
Folsom Blvd at 59th Street (Scenario C)	3.9	3.8	9.0
S Street at 65th Street (Scenario C)	3.9	3.8	9.0
65th Street at Broadway (Scenario C)	3.9	3.8	9.0
Folsom Blvd at State University Dr. (Scenario B)	3.9	3.8	9.0
Folsom Blvd at Howe Avenue (Scenario B)	4.1	4.0	9.0

Notes:
1. National 8-hour standard is 9.0 parts per million. State 8-hour standard is 9.0 parts per million.
2. A background 8-hour concentration of 3.64 parts per million, as measured from the T Street station, was used in this analysis.
Source: PBS&J, 2009.

Mitigation Measure

None required.

4.2 Noise

4.2 NOISE

INTRODUCTION

This section of the EIR evaluates the potential for noise and ground-borne vibration impacts resulting from construction and operation of the proposed project. This includes the potential for the project to cause a substantial temporary and/or permanent increase in ambient noise levels in the project area; the exposure of residents in the project area to excessive noise levels; and whether these impacts would exceed standards established in the City of Sacramento 2030 General Plan and Municipal Code.

Several comments were received during circulation of the NOP regarding increased traffic along area streets and widening of roadways adjacent to existing residential uses that could result in increased noise levels (see Appendix B). These concerns are addressed in this section.

Sources reviewed for this section included a field investigation to measure existing noise levels, noise standards in the City of Sacramento 2030 General Plan and Municipal Code, and the Federal Highway Administration (FHWA) Highway Traffic Noise Prediction model. Traffic volumes used in the FHWA model are derived from the project traffic study, included in Section 4.3 (Transportation and Circulation) of this Draft EIR. Noise calculations are included in Appendix E.

ENVIRONMENTAL SETTING

Fundamentals of Environmental Sound and Noise

Sound can be described in terms of amplitude (loudness) and frequency (pitch). The standard unit of sound amplitude measurement is the decibel (dB). The decibel scale is a logarithmic scale that describes the intensity of the pressure vibrations that make up a sound. The pitch of the sound is correlated to the frequency of the sound's pressure vibration. Because humans are not equally sensitive to a given sound level at all frequencies, a special scale has been devised that specifically relates noise to human sensitivity. The A-weighted decibel scale (dBA) does this by placing more importance on frequencies that are more noticeable to the human ear.

Noise is typically defined as unwanted sound. Typically, noise in any environment consists of a base of steady "background" noise made up of many distant and indistinguishable noise sources. Superimposed on this background noise is the sound from individual local sources. These sources can vary from an occasional aircraft or train passing by to virtually continuous noise from traffic on a major highway. Table 4.2-1 lists the A-weighted average sound levels commonly encountered in various environmental situations.

TABLE 4.2-1

NOISE RANGES OF COMMON ACTIVITIES

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

Source: California Department of Transportation, Technical Noise Supplement, A Technical Supplement to the Traffic Noise Analysis Protocol. October 1998, p. 18.

Several rating scales have been developed to analyze the adverse effect of noise on people. Since environmental noise fluctuates over time, these scales consider that the effect of noise upon people is largely dependent upon the volume of the noise, as well as the time of day when the noise occurs. Those that are applicable to this analysis are as follows:

- L_{eq}, the equivalent energy noise level, is the average acoustic energy content of noise for a stated period of time. Thus, the L_{eq} of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure. For evaluating community impacts, this rating scale does not vary, regardless of whether the noise occurs during the day or the night.
- L_{dn}, the Day Night Average Level, is a 24-hour average L_{eq} with a 10 dBA "weighting" added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity in the nighttime.
- L_{min}, the minimum instantaneous noise level experienced during a given period of time.
- L_{max}, the maximum instantaneous noise level experienced during a given period of time.

Noise caused by natural sources and human activities is usually well represented by median noise levels during the day, night, or over a 24-hour period. Environmental noise levels are generally considered low when the L_{eq} is below 60 dBA, moderate in the 60 to 70 dBA range, and high above 70 dBA. Examples of settings with low daytime background noise levels are isolated, natural settings that can provide noise levels as low as 20 dBA and quiet, suburban, residential streets that can provide noise levels around 40 dBA. Noise levels above 45 dBA at night can potentially disrupt sleep. People may consider louder environments adverse, but most people living or working in urban residential or residential-commercial areas (60 to 75 dBA) or dense urban or industrial areas (65 to 80 dBA) accept the higher noise levels commonly associated with these land uses.

Noise levels from a particular source decline as distance to a receptor increases. The weather and even the makeup of intervening terrain can also help intensify or reduce noise levels at any given location. A commonly used rule of thumb for roadway noise is that for every doubling of distance from the source, the noise level is reduced by about 3 dBA at acoustically "hard" locations (i.e., the area between the noise source and the receptor is nearly complete asphalt, concrete, hard-packed soil, or other solid materials) and 4.5 dBA at acoustically "soft" locations (i.e., the area between the source and receptor is normal earth or has vegetation, including trees, shrubs, and grass). Noise from stationary or point sources is reduced by about 6 to 7.5 dBA for every doubling of distance at acoustically hard and soft locations, respectively. Noise levels may also be reduced by intervening structures, such as a row of buildings, a solid wall, or a berm located between the receptor and the noise source. California homes built prior to 1970 generally provide an exterior-to-interior noise level reduction up to about 20 dB with closed windows. Homes built within the last 30 years generally provide an exterior-to-interior reduction up to about 30 dB with closed windows.

Fundamentals of Ground-borne Noise and Vibration

Ground-borne vibration is sound radiated through the ground and is measured in the U.S. as vibration decibels (VdB). In contrast to air-borne noise, ground-borne vibration is not a phenomenon that most people experience every day. The background vibration velocity level in residential areas is usually 50 VdB or lower, well below the threshold of perception for humans, which is around 65 VdB. Most perceptible indoor vibration is caused by sources within buildings such as operation of mechanical equipment, movement of people, or slamming of doors. Typical outdoor sources of perceptible ground-borne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If the roadway is smooth, the vibration from traffic is rarely perceptible. Common vibration sources and the human and structural response to ground-borne vibration are illustrated in Table 4.2-2. The range of interest is from approximately 50 VdB to 100 VdB. Background vibration is usually well below the threshold of human perception and is of concern only when the vibration affects very sensitive

manufacturing or research equipment, such as electron microscopes and high resolution photo lithography equipment.[1]

TABLE 4.2-2

TYPICAL LEVELS OF GROUND-BORNE VIBRATION

Human/Structural Response	Velocity Level	Typical Sources (50 feet from Source)
Threshold, minor cosmetic damage fragile buildings	—100—	Blasting from construction projects
	—95—	Bulldozers and other heavy tracked construction equipment
Difficulty with tasks such as reading a VDT screen	—90—	
	—85—	High Speed Rail, upper range
Residential annoyance infrequent events (e.g. commuter rail)	—80—	Rapid transit, upper range
	—75—	High Speed Rail, typical
Residential annoyance frequent events (e.g. rapid transit)		Bus or truck over bump
	—70—	
Limit for vibration sensitive equipment. Approx. threshold for human perception of vibration	—65—	Bus or truck, typical
	—60—	
	—55—	
	—50—	Typical background vibration

Source: U.S. Department of Transportation, Federal Railroad Administration, High-Speed Ground Transportation Noise and Vibration Impact Assessment. October 2005. pp. 6-6.

Accurate estimates of ground-borne vibration are complicated due to the many factors that influence vibration levels at potential receivers. The main factors that have significant effects on levels of ground-borne vibration are:

Geology: Soil conditions are known to have a strong influence on the levels of ground-borne vibration. Among the most important factors are the stiffness and internal damping of the soil and the depth to bedrock. Experience has shown that vibration propagation is more efficient in clay soils as well as areas with shallow bedrock. The latter condition seems to channel or concentrate the vibration energy close to the surface, resulting in ground-borne vibration problems at large distances from the source. Factors such as layering of the soil and depth to water table can also have significant effects on the propagation of ground-borne vibration.

Receiving Building: Ground-borne vibration problems occur almost exclusively inside buildings. Therefore, the characteristics of the receiving building are a key component in the evaluation of ground-borne vibration. Vibration may be perceptible to people who are outdoors, but it is very rare for outdoor vibration to cause complaints. The vibration levels inside a building depend on the vibration energy that reaches the building foundation, the coupling of the building foundation to the soil, and the propagation of the

1 U.S. Department of Transportation Federal Railroad Administration, *High-Speed Ground Transportation Noise and Vibration Impact Assessment*. October 2005, p. 6-5.

vibration through the building structure. The general guideline is that the more massive a building is, the lower its response to incident vibration energy in the ground.[2]

Existing Conditions

Existing Noise Receptors

Some land uses are more sensitive to noise than others. These sensitive uses are commonly referred to as "sensitive receptors," and normally include residences, hospitals, churches, libraries, schools, and retirement homes. Noise sensitive land uses are typically given special attention because activities at these uses require relatively quiet environments.

Sensitive receptors within the project area primarily consist of residential receptors, including a single-family neighborhood between Elvas Avenue and Folsom Boulevard, single-family neighborhoods south of US Highway 50 (US 50), to the east and west of 65th Street, and a multi-family residential complex at 65th Street and 4th Avenue.

Existing Noise Sources

Noise levels in the project area are generated primarily by transportation-related noise sources. Transportation-related noise sources in the project area include traffic along US 50 and local roadways such as 65th Street, Folsom Boulevard, and Elvas Avenue. Other sources of noise in the project area include noise from light and heavy rail operations, and industrial sources.

Existing Ambient Daytime Noise Levels

The scientific instrument used to measure noise is a sound level meter. Sound level meters can accurately measure environmental noise levels to within about plus or minus 1 dBA.

Existing ambient daytime noise levels were measured at five selected locations in and around the project site on August 27, 2008. These locations are identified in Figure 4.2-1. The noise levels were measured using a Larson-Davis Model 820 precision sound level meter, which satisfies the American National Standards Institute (ANSI) for general environmental noise measurement instrumentation. The average noise levels and sources of noise measured at each location are identified in Table 4.2-3. At each monitoring location, the primary source of noise was the nearest roadway.

2 U.S. Department of Transportation Federal Railroad Administration, *High-Speed Ground Transportation Noise and Vibration Impact Assessment*. October 2005. p. 6-7.

***Source*:** Google Earth Pro, basemap; PBS&J, 2009.

FIGURE **4.2-1**

Noise Monitoring Locations

TABLE 4.2-3

EXISTING DAYTIME NOISE LEVELS AT SELECTED LOCATIONS

Noise Measurement Location	Primary Noise Sources	Noise Level Statistics		
		L_{eq}	L_{min}	L_{max}
#1 – Redding Avenue, south of proposed Broadway extension	Traffic along Redding Avenue	66.2	48.0	85.6
#2 – Adjacent to future Broadway extension	Parking lot traffic, and noise from HVAC systems at adjacent buildings	54.3	51.9	66.8
#3 – 65th Street north of Broadway	Traffic along 65th Street	72.4	52.4	88.9
#4 – Elvas Avenue at 63rd Street	Traffic along Elvas Avenue	66.2	44.5	79.0
#5 – Folsom Boulevard at 63rd Street	Traffic along Folsom Boulevard	67.0	48.9	85.5

Notes: Monitoring was conducted between about 1:30 p.m. and 5:30 p.m. on August 27, 2008.
Source: PBS&J, 2008.

Existing Ground-borne Vibration

Usually, the most likely existing source of ground-borne vibration at a project site is roadway truck and bus traffic. Trucks and buses typically generate ground-borne vibration velocity levels of around 63 VdB, but could reach 72 VdB where trucks and buses pass over bumps in the road. Loaded trucks can create even higher levels of VdB.

Regulatory Context

Local

City of Sacramento 2030 General Plan

The California Government Code[3] requires that a noise element be included in the general plan of each county and city in the state. The purpose of the noise element is to ensure that noise control is incorporated into the planning process. The noise element guides decision makers and city planners to achieve and maintain appropriate noise levels for existing and proposed land uses.

The City of Sacramento 2030 General Plan contains the following goals, policies, and information related to noise that are included in the Environmental Constraints (EC) Element of the General Plan. This element establishes maximum acceptable interior and exterior noise level criteria for new single-family development, multi-family development, schools, and libraries.

Goal EC 3.1 Noise Reduction. Minimize noise impacts on land uses and human activity to ensure the health and safety of the community.

3 California Government Code Section 65300.

Policies

EC 3.1.2 Exterior Incremental Noise Standards. The City shall require mitigation for all development that increases existing noise levels by more than the allowable increment as shown in Table EC 2 (Table 4.2-4, below), to the extent feasible.

TABLE 4.2-4

EXTERIOR INCREMENTAL NOISE IMPACT STANDARDS FOR NOISE-SENSITIVE USES (DBA)

Residences and buildings where people normally sleep[1]		Institutional land uses with primarily daytime and evening uses[2]	
Existing L_{dn}	Allowable Noise Increment	Existing Peak Hour L_{eq}	Allowable Noise Increment
45	8	45	12
50	5	50	9
55	3	55	6
60	2	60	5
65	1	65	3
70	1	70	3
75	0	75	1
80	0	80	0

Notes:
1. This category includes homes, hospitals, and hotels where a nighttime sensitivity to noise is assumed to be of utmost importance.
2. This category includes schools, libraries, theaters, and churches where it is important to avoid interference with such activities as speech, meditation, and concentration on reading material.

Source: Table EC-2 from the City of Sacramento 2030 General Plan; Federal Transit Administration, *Transit Noise Impact and Vibration Assessment*, May 2006.

EC 3.1.7 Construction Noise. The City shall require development projects subject to discretionary approval to assess potential construction noise impacts on nearby sensitive uses and to minimize impacts on these uses to the extent feasible.

EC 3.1.9 Residential Streets. The City shall discourage widening streets or converting streets to one-way in residential areas where the resulting increased traffic volumes would raise ambient noise levels.

Sacramento City Code

The Sacramento Municipal Code contains regulations concerning noise. These noise regulations are found in Title 8 – Health and Safety, Chapter 8.68 – Noise Control. Of the regulations in Chapter 8.68, not all are applicable to the proposed project. Of the applicable regulations, Section 8.68.060 exempts certain activities from Chapter 8.68, including "noise sources due to the erection (including excavation), demolition, alteration or repair of any building or structure" as long as these activities are limited to between the hours of 7 a.m. and 6 p.m. Monday through Saturday, and between the hours of 9 a.m. and 6 p.m. on Sunday. Section 8.68.060 also requires the use of exhaust and intake silencers for internal combustion engines, and provides for construction work to occur outside of the designated hours if the work is of urgent necessity and in the interest of public health and welfare for a period not to exceed three days.

IMPACTS AND MITIGATION MEASURES

Methods of Analysis

Noise Impact Assessment Methodology

The analyses of existing and future noise environments were based on noise level monitoring and noise prediction modeling. Traffic noise levels were modeled using the FHWA's Highway Traffic Noise Prediction model. Noise modeling focuses on the noise resulting from traffic on nearby roadways. Traffic volumes used as data inputs in the FHWA model were provided by the project traffic engineer. Noise modeling results are included in Appendix E.

Construction Noise and Vibration Impact Methodology

Construction noise impacts were evaluated using U.S. EPA reference noise levels for various construction equipment and activities. Construction noise levels were then calculated using equations defined by the Federal Transit Administration's (FTA's) *Transit Noise and Vibration Impact Assessment* (May 2006). Construction vibration impacts were evaluated similarly using FTA methods.

There are several buildings in the project area that are at least 45 years old, including residential, commercial, and industrial buildings.[4] However, none have been designated as protected historic resources on the National Register or State Register. No buildings in the project area are on the City's list of historic buildings. The buildings in the project area that were constructed in the 1950s and 1970s are less likely to be determined significant because of their more recent construction dates and architectural similarity.[5] Therefore, vibration impacts on historic resources will not be discussed.

Standards of Significance

For the purposes of this noise analysis, a significant impact occurs if:

- The project results in exterior noise levels in the project area that are above the upper value of the normally acceptable category for various land uses due to the project's noise level increases;
- Construction noise levels exceed the standards in the City of Sacramento Noise Ordinance;
- Existing and/or planned residential and commercial areas are exposed to vibration-peak-particle velocities greater than 0.5 inches per second due to project construction;

4 City of Sacramento, South 65th Street Area Plan Draft EIR, July 2004, pp. 5.8-6 – 5.8-10.

5 City of Sacramento, South 65th Street Area Plan Draft EIR, July 2004, p. 5.8-7.

- Adjacent 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; or

Impacts and Mitigation Measures

4.2-1 Construction and demolition activities associated with the project would temporarily increase noise in the project vicinity.

Development under the proposed project, including development under Scenarios B and C, would include the use of typical heavy construction earthmoving equipment, including trucks, tractors, excavators, and concrete pumps. During construction activities, noise levels would be elevated during the operation of heavy-duty equipment and various other construction-related activities. Construction noise could affect surrounding uses, specifically the residential neighborhoods located adjacent to the project area. Construction activities would be intermittent throughout the construction period, which would be phased and would cease after each project improvement is completed. Construction phasing is unknown at this time, but would be based on the transportation needs and build-out of the approved land uses within the project area. Project build-out is assumed to be completed by year 2030. The noise levels associated with equipment to be used during the various project construction phases are shown in Table 4.2-5. The closest sensitive receptors to the construction areas would be residences adjacent to proposed roadway, bikeway, and pedestrian improvements.

TABLE 4.2-5

CONSTRUCTION EQUIPMENT NOISE LEVELS

Equipment Type	Typical Sound Level at 50 Feet in dBA L_{eq}
Air Compressors	81
Backhoe	80
Compactor (Roller)	82
Concrete Mixer	85
Concrete Pump	82
Crane, Mobile	83
Excavator	85
Forklift	55
Generator	81
Grader	85
Loader	85
Tractor	84
Truck	80
Welders	74
Welding Machine	74

Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment, May 2006, p. 12-6.

Estimates for noise levels generated by construction equipment are based upon available data presented by the EPA and the FTA's *Transit Noise and Vibration Impact Assessment, Final Report*, May 2006. It should be noted that the formula for determining maximum noise levels for specific construction equipment relies upon a reference distance of 50 feet.

As shown in Table 4.2-5, construction noise levels at 50 feet from the construction area would exceed the exterior noise limits (55 dBA) established by Section 8.68.060 of the City Code during construction activities associated with the proposed project. Noise levels as high as 85 dBA could be experienced by residential areas adjacent to the construction activities. These noise levels would be intermittent. It is anticipated that construction of roadway extensions, new roadways, bike lanes, and sidewalks would involve moving construction equipment, as some roadways and bikeways stretch for up to a mile or more in length. Nonetheless, noise levels at adjacent residential structures could reach as high as 85 dBA when construction is occurring adjacent to the residential structure.

As required by Section 8.68.080(E) of the City Code, construction activities would be limited to between the hours of 7:00 a.m. and 6:00 p.m., Monday through Saturday, and 9:00 a.m. and 6:00 p.m. on Sundays and public holidays, as discussed previously under the Regulatory Setting. Section 8.68.080(E) also requires the use of exhaust and intake silencers for internal combustion engines used during construction to reduce noise levels associated with construction activities.

The City exempts noise associated with construction that occurs between the hours of 7:00 a.m. and 6:00 p.m. Monday through Saturday and between 9:00 a.m. and 6:00 p.m. on Sundays because these hours are outside of the recognized sleep hours for residents and outside of evening and early morning hours and time periods where residents are most sensitive to exterior noise. Therefore, the proposed project would be exempt from complying with the City's noise standards during these hours. Because construction activities would be required to comply with the City's noise ordinance, construction noise impacts on neighboring residential properties and residents under Scenarios B and C would be ***less than significant***.

Mitigation Measure

None required.

4.2-2 Construction and demolition activities associated with the proposed project would temporarily increase vibration levels in the project vicinity.

During construction activities under Scenarios B and C, heavy construction equipment would operate in the proposed construction areas, including in the immediate vicinity of the existing residences along area roadways. Groundborne vibration levels associated with construction equipment that would likely be used at the project site are shown in Table 4.2-6. The most substantial vibration levels typically experienced during construction activities are attributable to

vibratory and impact activities, such as hoe rams and vibratory rollers. As shown in the table, even at a close distance (25 feet), vibration levels from all the equipment shown would be well below the City's threshold for structural damage of 0.5 inches per second. Therefore, this impact under Scenarios B and C is considered ***less than significant***.

Mitigation Measure

None required.

TABLE 4.2-6

VIBRATION SOURCE LEVELS FOR CONSTRUCTION EQUIPMENT

Construction Equipment	PPV at 25 feet (in/sec)	PPV at 50 feet (in/sec)
Vibratory Roller	0.210	0.074
Hoe Ram	0.089	0.031
Large Bulldozer	0.089	0.031
Loaded Trucks	0.076	0.027
Jackhammer	0.035	0.012
Small Bulldozer	0.003	0.001

Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment, May 2006, p. 12-12; PBS&J, 2009.

4.2-3 Implementation of the proposed project could permanently expose sensitive receptors to increased traffic noise levels.

Implementation of the proposed project under both scenarios (B or C) would not develop new land uses, and therefore would also not generate new vehicle trips associated with these land uses. The proposed project would however result in the widening and extension of roadways which would place traffic lanes closer to existing residential uses and potentially result in a redistribution of traffic volumes. Residences or other sensitive receptors located near these affected roadways could be adversely affected by increased vehicular noise levels. The residential uses that are most likely to be affected are residents that are located adjacent to areas where there is no existing roadway, but where a new roadway extension is planned under the proposed project.

As noted under the Standards of Significance, a significant increase in noise would occur if noise levels at an existing residential use are increased to a level above the "normally acceptable" category for residential uses. In addition, the City's General Plan identifies that a significant impact would also occur if the noise level increases associated with the proposed project are greater than the increments shown in Table 4.2-3 according to each location's existing noise level. Table 4.2-7 shows the existing L_{dn} (dBA) at five roadway segments that have residential uses and the potential to be affected by development of specific project components. As shown in this table, noise levels at existing residential uses are already above the normally acceptable limits for residential uses along Redding Avenue, 65th Street, Elvas Avenue, and Folsom Boulevard.

TABLE 4.2-7

EXISTING TRAFFIC NOISE LEVELS WITH AND WITHOUT PROJECT

Receptor	Noise Levels (dBA CNEL)[1, 2]						
	Existing No Project	Existing plus Scenario B (No Project)	Existing plus Scenario C (No Project)	Upper Value for Normally Acceptable Noise Levels[3]	Increase over Existing (Scenario B)	Increase over Existing (Scenario C)	Significance Threshold[4]
#1 – Redding Avenue, south of proposed Broadway extension, future volume increase	**62.5**	**62.4**	**62.0**	**60**	-0.1	-0.5	2
#2 – Adjacent to future Broadway extension, future volume increase	54.3[5]	55.8	56.9	65	1.5	2.6	5
#3 – 65th Street north of Broadway, future volume increase and road widening	**68.6**	**69.2**	**68.4**	**60**	0.6	-0.2	1
#4 – Elvas Avenue at 63rd Street, future volume increase and road widening	**67.1**	**68.0**	**65.6**	**60**	0.9	-1.5	1
#5 – Folsom Boulevard at 63rd Street future volume increase	**68.0**	**68.7**	**68.2**	**60**	0.7	0.2	1

Notes:
1. Noise levels were calculated based on traffic volumes from the transportation analysis for the proposed project.
2. Locations measured for existing noise level locations were used to calibrate the model.
3. Per the City's General Plan, the upper value for normally acceptable noise levels is 60 dBA for single-family residential uses and 65 dBA for multi-family residential uses.
4. This column shows the maximum allowable noise increment as shown in Table EC-2 from the City of Sacramento 2030 General Plan; Federal Transit Administration, Transit Noise Impact and Vibration Assessment, May 2006.
5. Calculated traffic noise levels were below the measured ambient noise level at that location. Background measured noise levels are therefore used in place of the calculated traffic noise levels.

Bold text = Above upper value limit for normally acceptable noise levels or a significant increase.
Source: PBS&J, 2009.

Also shown in the table, the incremental increase in traffic noise levels under the proposed project compared to under existing conditions would be below the City's standards under both scenarios (B and C). This includes the area adjacent to the proposed Broadway extension (under Scenarios B and C), where Broadway would be extended adjacent to an existing multi-family residential complex where no roadway currently exists. The extension of this roadway would result in noise levels of approximately 56 to 57 dBA L_{dn}, but would not result in the exposure of residents to noise levels in excess of the normally acceptable noise levels for multi-family residential uses. In addition, there would be an approximately 1.5 dB increase under Scenario B, and a 2.6 dB increase under Scenario C at the multi-family residential use. However, even with the increase in noise levels under Scenarios B and C, the noise level increases would not exceed the City's incremental standard of significance of 5 dB. The proposed project under both Scenario B or C would not cause a residential use to be exposed to noise levels in excess of the City standards as a result of the project, or result in a significant increase in traffic noise to existing residential uses. Therefore, impacts of the project would be considered ***less than significant.***

Mitigation Measure

None required.

Cumulative Impacts and Mitigation Measures

Noise and vibration associated with project construction is considered a localized source that is not considered additive that, when combined with other construction projects in the immediate vicinity would contribute to the cumulative environment.

Construction noise would be limited to an area relatively close to each individual project element. Construction vibration would be limited to the close proximity to the individual pieces of impact equipment and heavy earth- and material-moving construction equipment. Construction activities from all individual projects that would occur in close proximity to occupied residences would be limited to 7:00 a.m. and 6:00 p.m., Monday through Saturday, and 9:00 a.m. and 6:00 p.m. on Sundays and public holidays in accordance with the City Municipal Code. Therefore, stationary source noise and construction noise/vibration impacts are not addressed in the cumulative discussion below.

The cumulative context for traffic noise associated with the proposed project consists of all existing and future development assumed under the City's 2030 General Plan and associated traffic that could affect the project area or surrounding uses.

4.2-4 Future traffic in the project vicinity, including traffic from planned future development, could permanently expose sensitive receptors to increased cumulative traffic noise levels on local roadways.

For cumulative impacts, project-related traffic noise impacts are evaluated in combination with impacts from other existing and future development. The traffic study prepared for the proposed project predicts future (2030) traffic volumes at nearby intersections under cumulative plus project conditions.

As noted above, a significant increase would occur if noise levels are above the upper value of the normally acceptable noise levels for existing residential uses or if noise level increases are greater than the increments shown in Table 4.2-3. Table 4.2-8 shows the existing L_{dn} (dBA) and cumulative plus project conditions at five roadway segments that have residential uses and the potential for these areas to be affected by development of the proposed project in combination with other future development within the project area in year 2030. As shown in this table, cumulative traffic noise levels at existing residential uses are already above the normally acceptable limits for residential along Redding Avenue, 65th Street, Elvas Avenue, and Folsom Boulevard. As also shown in the table, the cumulative increase in traffic noise levels under the proposed project compared to existing conditions would be below the City's standards, except for receptors located adjacent to Folsom Boulevard near 63rd Street where there would be a cumulative noise increase of approximately 3 dB under Scenario B and approximately 2 dB under Scenario C. These noise level increases are greater than the 1 dB significance threshold identified in Table 4.2-3. Therefore, the project's contribution would be considerable resulting in a ***significant cumulative impact*** under either Scenario B or C.

Mitigation Measure

The increase in exterior noise levels along Folsom Boulevard at 63rd Street and all similarly exposed residences along this roadway would require that their exterior noise levels be reduced; this could be accomplished by either a reduction of traffic volumes or construction of a sound barrier, such as a wall. Because Folsom Boulevard includes both residence and business frontages, it would not be feasible to construct a sound wall along this stretch of roadway. The reduction of traffic volumes would also not be feasible, as shown in Scenario C which includes reducing the number of traffic lanes from four to three lanes. Under this Scenario there would continue to be a significant noise increase along this roadway. Therefore, because no feasible mitigation measures are available to reduce exterior noise levels along these roadways, this would be considered a ***significant and unavoidable cumulative impact*** under Scenarios B and C.

TABLE 4.2-8

CUMULATIVE TRAFFIC NOISE LEVELS WITH AND WITHOUT PROJECT

Receptor	Noise Levels (CNEL)[1, 2]						
	Existing No Project (dB)	Year 2030 Scenario B (No Project) (dB)	Year 2030 Scenario C (No Project) (dB)	Upper Value for Normally Acceptable Noise Levels[3]	Increase over Existing (Scenario B)	Increase over Existing (Scenario C)	Significance Threshold[4]
#1 – Redding Avenue, south of proposed Broadway extension, future volume increase	**62.5**	**63.7**	**64.1**	**60**	1.2	1.6	2
#2 – Adjacent to future Broadway extension, future volume increase	54.3[5]	56.8	58.4	65	2.5	4.1	5
#3 – 65th Street north of Broadway, future volume increase and road widening	**68.6**	**68.8**	**68.8**	**60**	0.2	0.2	1
#4 – Elvas Avenue at 63rd Street, future volume increase and road widening	**67.1**	**66.6**	**66.2**	**60**	-0.5	-0.9	1
#5 – Folsom Boulevard at 63rd Street future volume increase	**68.0**	**70.9**	**69.8**	**60**	**2.9**	**1.8**	**1**

Notes:
1. Noise levels were calculated based on traffic volumes from the transportation analysis for the proposed project.
2. Locations measured for existing noise level locations were used to calibrate the model.
3. Per the City's General Plan, the upper value for normally acceptable noise levels is 60 dBA for single-family residential uses and 65 dBA for multi-family residential uses.
4. This column shows the maximum allowable noise increment as shown in Table EC-2 from the City of Sacramento 2030 General Plan; Federal Transit Administration, Transit Noise Impact and Vibration Assessment, May 2006.
5. Calculated traffic noise levels were below the measured ambient noise level at that location. Background measured noise levels are therefore used in place of the calculated traffic noise levels.

Bold text = Above upper value limit for normally acceptable noise levels or a significant increase.
Source: PBS&J, 2009.

4.3 Transportation and Circulation

4.3 TRANSPORTATION AND CIRCULATION

INTRODUCTION

This section addresses the traffic and circulation impacts of the proposed project, including automobile traffic (changes in traffic generated by the project scenarios and the resulting effects on total vehicle miles traveled (VMT), travel times, daily operations of roadway segments, and peak hour operations of intersections) and other transportation system components (bicycle, pedestrian movement, and transit).

Comments received in response to the NOP (see Appendix B) include a letter from the California Department of Transportation (Caltrans) requesting that the analysis identify locations where project traffic leads to a significant impact at freeway ramps, ramp intersections, and mainline segments. The letter also requests that if mitigation measures are required to reduce the significance of project-related impacts, the City of Sacramento should consult with Caltrans about which mitigation measures are acceptable for the project to complete. Other letters received from businesses and private citizens expressed concerns with the proposed widening of Ramona Avenue, increased traffic volumes on nearby residential streets, and the traffic flow near the 59th Street light rail station.

Documents reviewed for this section include the 65th Street/University Transit Village Plan, South 65th Street Area Plan, the 65th Street Station Block Development Strategy, the Redevelopment Plan for the 65th Street Redevelopment Area, the Granite Regional Park Plan, the California State University, Sacramento (CSUS) Master Plan, and the CSUS Faculty/Staff Housing Village Draft EIR.

The following information was used to prepare the analysis:

- Data from the regional travel model provided by the Sacramento Area Council of Governments (SACOG);
- Land use forecasts from the Draft 2030 General Plan, updated to reflect current plans for the CSU Sacramento campus and the High Technology campus;
- A list of funded and probable transportation projects as provided by City of Sacramento Staff and as listed in the SACOG 2035 Metropolitan Transportation Plan;
- Freeway ramp and intersection traffic count data collected for Fehr & Peers; and
- Freeway traffic count data provided by Caltrans.

ENVIRONMENTAL SETTING

Transit System

Sacramento Regional Transit District (RT) provides public transit service and facilities to the project area, including nine bus routes and light rail transit (LRT) service. Figure 4.3-1 illustrates the existing transit facilities and routes within the project area.

65th Street/University and 59th Street Light Rail Stations

The 65th Street/University and 59th Street light rail stations are approximately ½ mile apart. The 65th Street/University light rail station is located on the RT Gold Line and is the fifth largest transfer station in RT's transit system. The station is located southeast of the 65th Street/ Folsom Boulevard intersection. This station serves many patrons destined for CSUS to the north. Eleven bus routes operate within the project area, with nine serving the 65th Street/ University station. The 65th Street/University station has over 3,200 average daily light rail boardings/departures. Regional Transit is currently conducting a Bus Transfer Reconfiguration Study for the 65th Street/University station to facilitate development of a Transit Oriented Development (TOD) project at this station.

The 59th Street light rail station is located at the western end of the project area, providing access to the Sacramento Municipal and Utilities District (SMUD) campus. The station has a total daily average of approximately 820 boardings/departures and provides bicycle racks that can accommodate 12 short-term parking spaces and 10 long-term secure bicycle lockers that are available for rent from RT. No vehicular parking is available at the station.

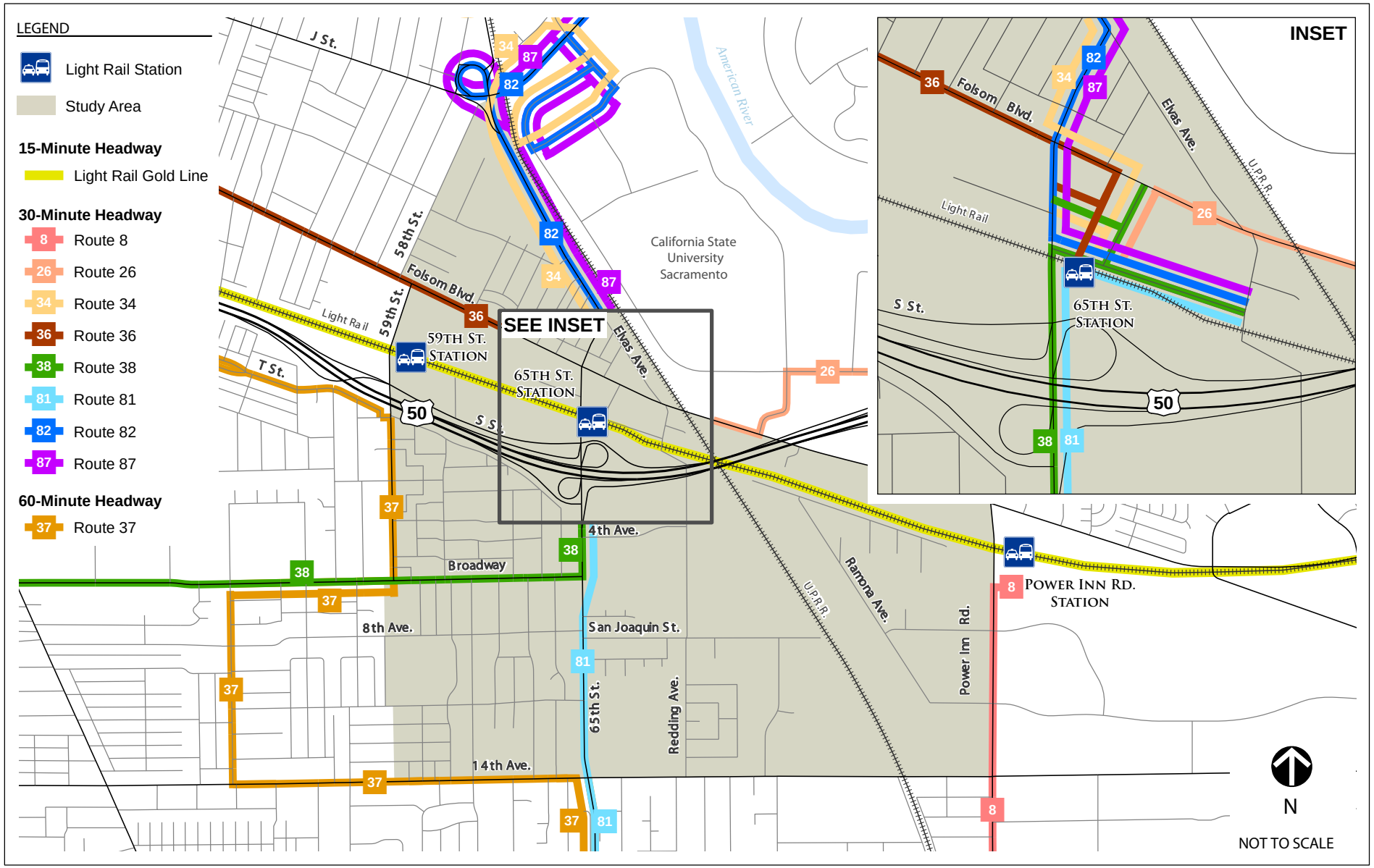
Table 4.3-1 shows the average light rail boardings and departures at the 65th Street/University and 59th Street stations during AM, midday, and PM peak periods between January and March of 2007.

TABLE 4.3-1

AVERAGE LIGHT RAIL BOARDINGS AND DEPARTURES
JANUARY 2007 – MARCH 2007

Station	AM Peak Trips (6:00 AM – 9:00 AM)		Midday Trips (9:00 AM - 3:30 PM)		PM Peak Trips (3:30 PM – 6:00 PM)	
	Boardings	Departures	Boardings	Departures	Boardings	Departures
65th St	293	390	619	619	225	329
59th St	75	46	139	135	55	60

Source: Sacramento Regional Transit, 2007.



FEHR & PEERS
TRANSPORTATION CONSULTANTS

N:\2007Projects\SA_Projects\0101\gis\October2008Draft\fig07_ex_transit.mxd

EXISTING TRANSIT FACILITIES

FIGURE 4.3-1

Bus Network

Regional Transit operates several bus routes within the project area that carry a significant amount of daily passengers compared to routes in many other areas of the region. Many of these routes have over a 90 percent on-time performance rate.

RT Bus Routes 26, 34, 36, 38, 81, 82, and 87 operate at the 65th Street Station. In addition, routes 210 and 211 drop off riders in the afternoon. Table 4.3-2 shows the headways, average daily boardings, and on-time performance on weekdays for each of these transit routes. Currently, several bus routes generate a high number of weekday boardings. Route 81, for example, has the second greatest ridership level in RT's bus system with a farebox recovery rate of 42 percent on weekdays. RT bus stops are provided within the project area as well. Many bus stop facilities within the project area are marked by a posted sign and include a bench located on a four- to five-foot wide sidewalk. Details of the RT routes are described below.

TABLE 4.3-2

WEEKDAY BUS ROUTE INFORMATION JULY 2005 – JUNE 2006

RT Route	Headways (minutes)	Average Daily Boardings	On-time Performance
26	30	1,272	82%
34	30	933	92%
36	30	635	96%
38	30	1,226	96%
81	30	4,231	89%
82	30	631	96%
87	30	1,479	97%

Source: Sacramento Regional Transit, 2007.

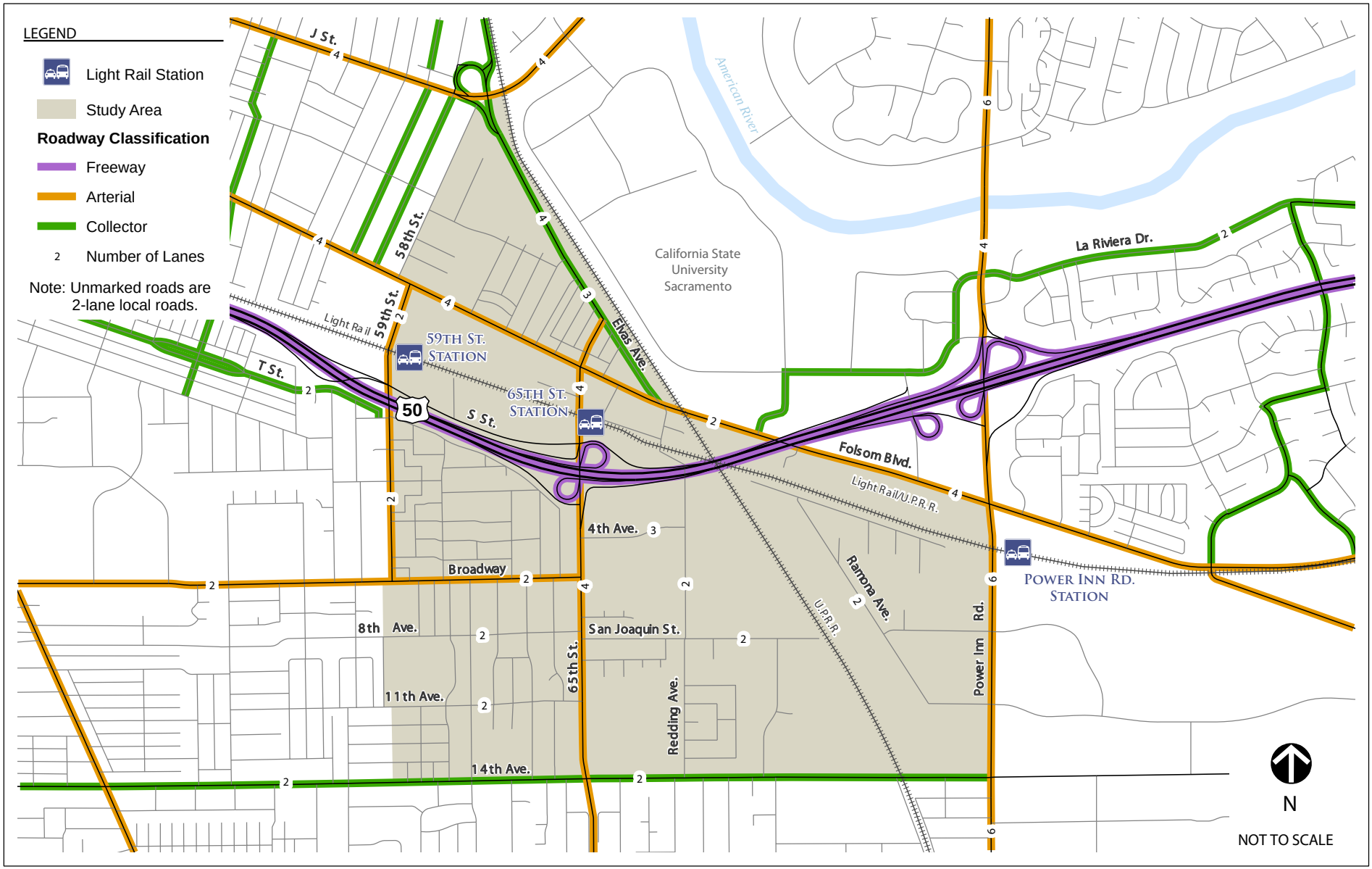
- **Route 26** is a Crosstown Route that provides service between the University/65th Street LRT station in East Sacramento and the Watt/I-80 LRT station. This route operates primarily along Howe Avenue, Fulton Avenue, Auburn Boulevard, and Watt Avenue. Weekday trip headways are 30 minutes and Saturday, Sunday, and holiday trip headways are 60 minutes.
- **Route 34** is a Radial Route that provides service between the 8th Street/O Street LRT station in downtown Sacramento and the University/65th Street LRT station in East Sacramento. This route operates primarily along 7th, 8th, and F streets, McKinley Boulevard, and Elvas Avenue. Weekday headways are 30 minutes except for AM and PM Peak outbound trips that are 15 minutes. Saturday and Sunday/holiday trip headways are 60 minutes.
- **Route 36** is a Radial Route that provides service between 3rd and J Streets in Old Sacramento and the University/65th Street LRT Station in East Sacramento. This route operates primarily along 3rd, 19th, J, and L streets, Capitol Avenue, and Folsom

Boulevard. Weekday trip headways are 30 minutes, and Saturday, Sunday, and holiday trip headways are 60 and 75 minutes.

- **Route 38** is a Radial Route that provides service between 5th Street and Broadway in Land Park and the University/65th Street LRT station in East Sacramento. This route operates primarily along 3rd, 5th, 65th, P, Q, and T streets, Stockton Boulevard, Broadway, and Muir Way. Weekday trip headways are 30 minutes during the AM Peak, midday, and PM Peak and 60 minutes during the post-PM Peak "other" period. Saturday, Sunday, and holiday trip headways are 60 minutes.
- **Route 81** is a Crosstown Route that provides service between the University/65th Street LRT station in East Sacramento, Florin Mall Transit Center in Florin, Florin LRT station in South Sacramento, and the intersection of Florin Road and Riverside Boulevard in the Greenhaven Neighborhood. This route operates primarily along Q and 65th streets, Florin Road, and Indian Lane. Weekday and Saturday trip headways are 15 and 30 minutes. Sunday and holiday headways are 30 minutes.
- **Route 82** is a Crosstown Route that provides service between the University/65th Street LRT station and CSUS Transit Center in East Sacramento, Arden-Arcade, Town & Country Village, and the American River College (ARC) Transit Center. This route operates primarily along 65th Street, Fair Oaks Boulevard, Morse Avenue, Watt Avenue, and Whitney Avenue. Weekday trip headways are 30 minutes and Saturday, Sunday, and holiday headways are 60 minutes.
- **Route 87** is a Crosstown Route that provides service between the Marconi/Arcade LRT Station in Hagginwood, the CSUS Transit Center, and the University/65th Street LRT station in East Sacramento. This route operates primarily along 65th Street, Elvas Avenue, Fair Oaks Boulevard, Howe Avenue, and Marconi Avenue. Weekday trip headways are 30 minutes for the AM Peak, midday, and PM Peak periods and 60 minutes for the post-PM Peak "other" period. Saturday, Sunday, and holiday headways are 60 minutes.

Roadway System

Roadways within a system typically serve either a mobility or a local access function. Higher design/travel speeds and high access control are desirable for mobility while lower speeds and moderate/low control are desirable for local access. The roadway hierarchy in the city of Sacramento and within the project area consists of arterials, collectors, and local roads. Figure 4.3-2 shows the existing street roadway network within the project area, including the street classification and number of lanes on key streets.



FEHR & PEERS
TRANSPORTATION CONSULTANTS

N:\2007Projects\SA_Projects\0101\gis\October2008Draft\fig08_class_num_lanes.mxd

STREET CLASSIFICATION AND NUMBER OF LANES

FIGURE 4.3-2

Roadways – Regional Access

Regional access to the project area for the 65th Street Station Area is provided by US 50, Folsom Boulevard, 65th Street, Elvas Avenue, 59th Street, Broadway, and 14th Avenue. These facilities are described below:

- **US Highway 50** (US 50) is a major regional highway extending from Interstate 80 (I-80) in West Sacramento through the Sacramento metropolitan area into the Sierra Nevada Mountains and the State of Nevada. Within the project area, US 50 is an eight-lane freeway at the 65th Street interchange with four mixed-flow lanes in both the eastbound and westbound directions. Auxiliary lanes are also provided in both the eastbound and westbound directions between 65th Street and Howe Avenue/Hornet Drive. Ramp metering is provided at the westbound slip on-ramp and loop on-ramp at the 65th Street interchange during the AM and PM peak periods.
- **Folsom Boulevard** is an east-west arterial roadway that extends from Alhambra Boulevard in midtown Sacramento, through Sacramento County, the city of Rancho Cordova, and into the city of Folsom. It provides two to four travel lanes in each direction within the project area and serves mainly commercial and industrial uses. It has a posted speed limit of 35 mph and provides access into the CSUS campus via State University East Drive.
- **5th Street** is a north-south arterial roadway that extends from Elvas Avenue in the city of Sacramento to Florin Road in Sacramento County. South of 14th Avenue, it becomes the 65th Street Expressway. It provides two travel lanes in each direction with a short section under the US 50 overcrossing that provides three travel lanes in each direction. Within the project area, it has a posted speed limit of 35 mph north of S Street and 40 mph south of S Street and primarily serves residential and commercial uses. An at-grade crossing with the Gold Line light rail tracks is located between Q Street and S Street.
- **Elvas Avenue** is a north-south collector roadway that extends from Folsom Boulevard to McKinley Boulevard where it becomes C Street in the city of Sacramento. Within the project area, Elvas Avenue provides one travel lane in each direction with a center turn-lane (i.e., three lane section). It has a posted speed limit of 45 mph and serves a variety of uses including commercial, industrial, and residential, and provides direct access to St. Francis High School.
- **59th Street** is a north-south arterial roadway that extends from 14th Avenue to J Street within the project area and provides one travel lane in each direction. It also provides a direct connection to westbound US 50 (with ramp metering) and an eastbound US 50 off-ramp at the S Street/59th Street intersection. It serves mainly residential uses south of S Street and north of Folsom Boulevard. Between S Street and Folsom Boulevard, it

serves office, industrial, and some commercial uses including a significant amount of trucks related to the adjacent SMUD corporate yard.

- **Broadway** is an east-west arterial roadway that extends from I-5 in downtown Sacramento to 65th Street in the city of Sacramento. Within the project area, Broadway provides one travel lane in each direction, has a posted speed limit of 30 mph, and a mainly serves residential uses.
- **14th Avenue** is an east-west collector roadway that extends from east of Power Inn Road to Martin Luther King Boulevard in the city of Sacramento, where it merges with 12th Avenue. 14th Avenue provides one travel lane in each direction and mainly serves residential uses at the west end of the project area and industrial uses at the east end.

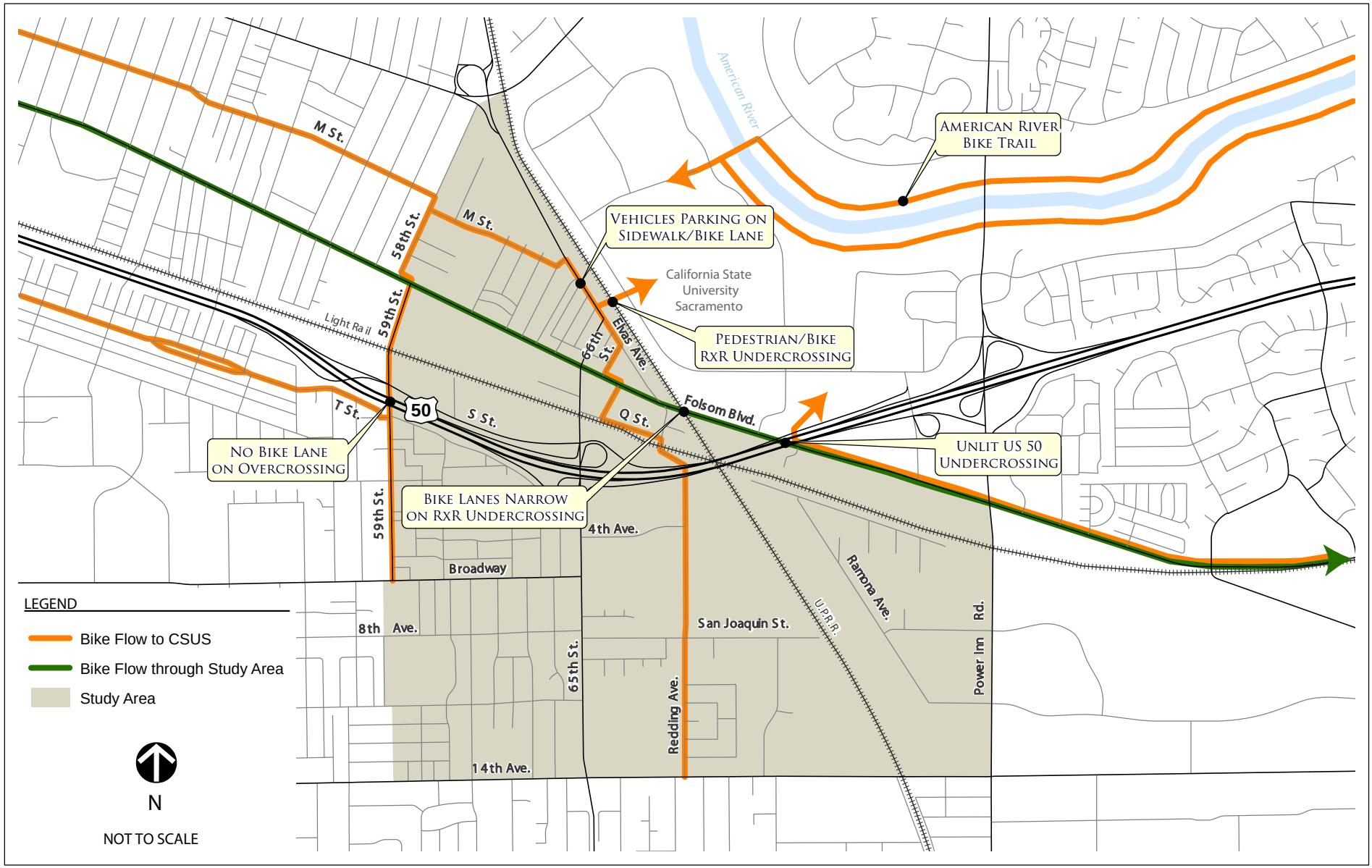
Roadways – Local Access

Local access is provided via a number of two-lane streets in the project area including 4th Avenue, S Street, Q Street, 67th Street, San Joaquin Street, and Redding Avenue. These facilities are described below:

- **4th Avenue** is an east-west road that extends from 65th Street to Redding Avenue. It serves as the primary access for the recently approved Target store.
- **S Street** is an east-west local road that extends from 59th Street to 65th Street. It serves as the primary access for the administrative buildings on the SMUD campus.
- **Q Street** is an east-west road located immediately adjacent to the 65th Street/University light rail station. Q Street runs from 65th Street to Redding Avenue.
- **67th Street** is a north-south private road that runs between Folsom Boulevard and Q Street. On-street parking is available on 67th Street north of the 65th Street/University light rail station.
- **San Joaquin Street** is an east-west road that extends from 65th Street east to the Union Pacific railroad (UPRR). It serves residential, recreational, office, and industrial uses.
- **Redding Avenue** is a north-south road that extends from Folsom Boulevard to East 14th Avenue. Access at its junction with Folsom Boulevard is limited to eastbound right turns only given the proximity to the UPRR undercrossing.

Bicycle and Pedestrian System

The existing bicycle and pedestrian network within the project area is intermittent and lacks an overall consistency with the visions outlined by the City of Sacramento in the *2010 Sacramento City/County Bikeway Master Plan* (1995), *City of Sacramento's Pedestrian Master Plan* (2006), *65th Street/University Transit Village Plan* (2002), and the *South 65th Street Area Plan* (2004). Figures 4.3-3 through 4.3-5 present the existing and planned bicycle facilities, and existing pedestrian facilities, respectively.

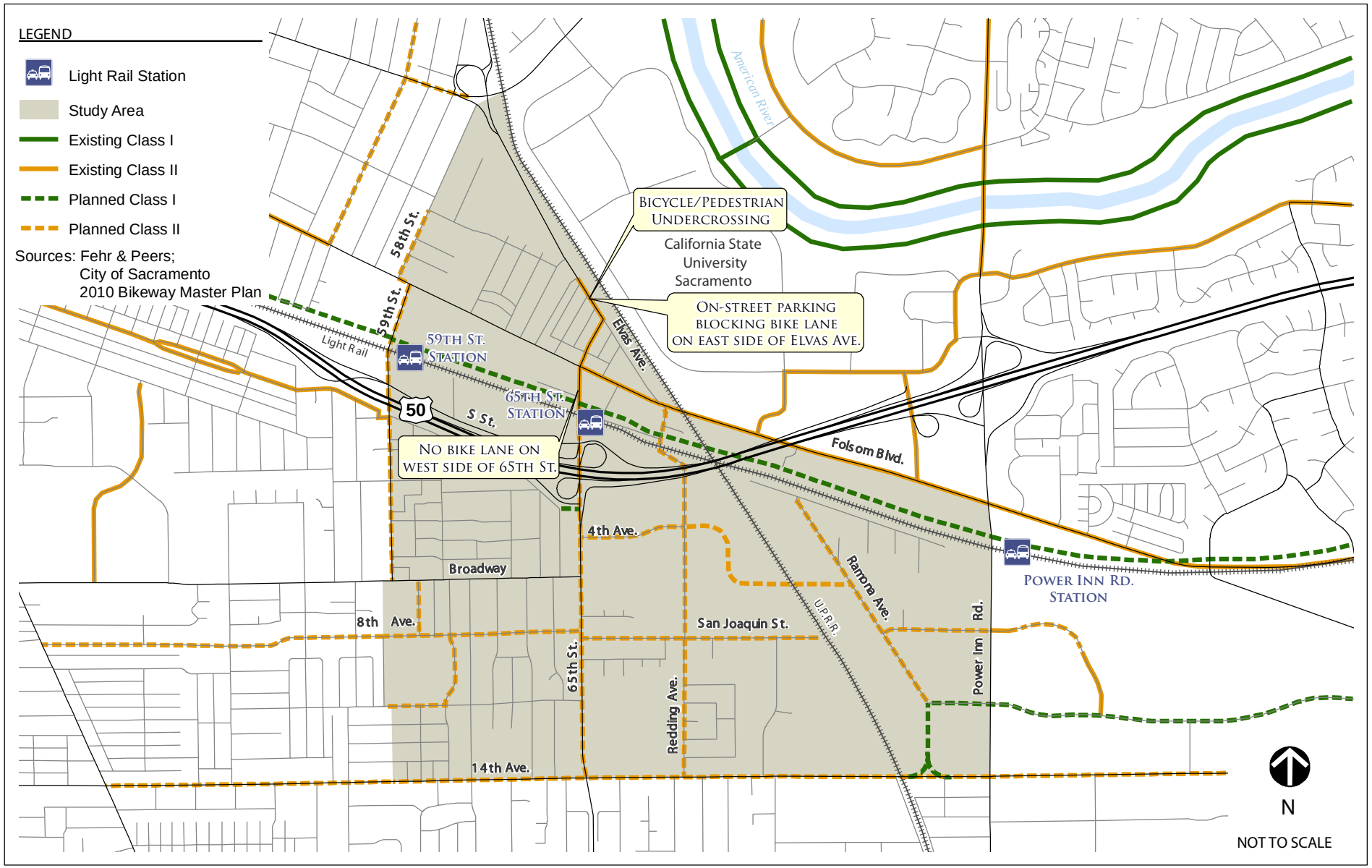


FEHR & PEERS
TRANSPORTATION CONSULTANTS

N:\2007Projects\SA_Projects\0101\gis\October2008Draft\fig09_bikeflow.mxd

EXISTING BICYCLE TRAFFIC FLOW

FIGURE 4.3-3

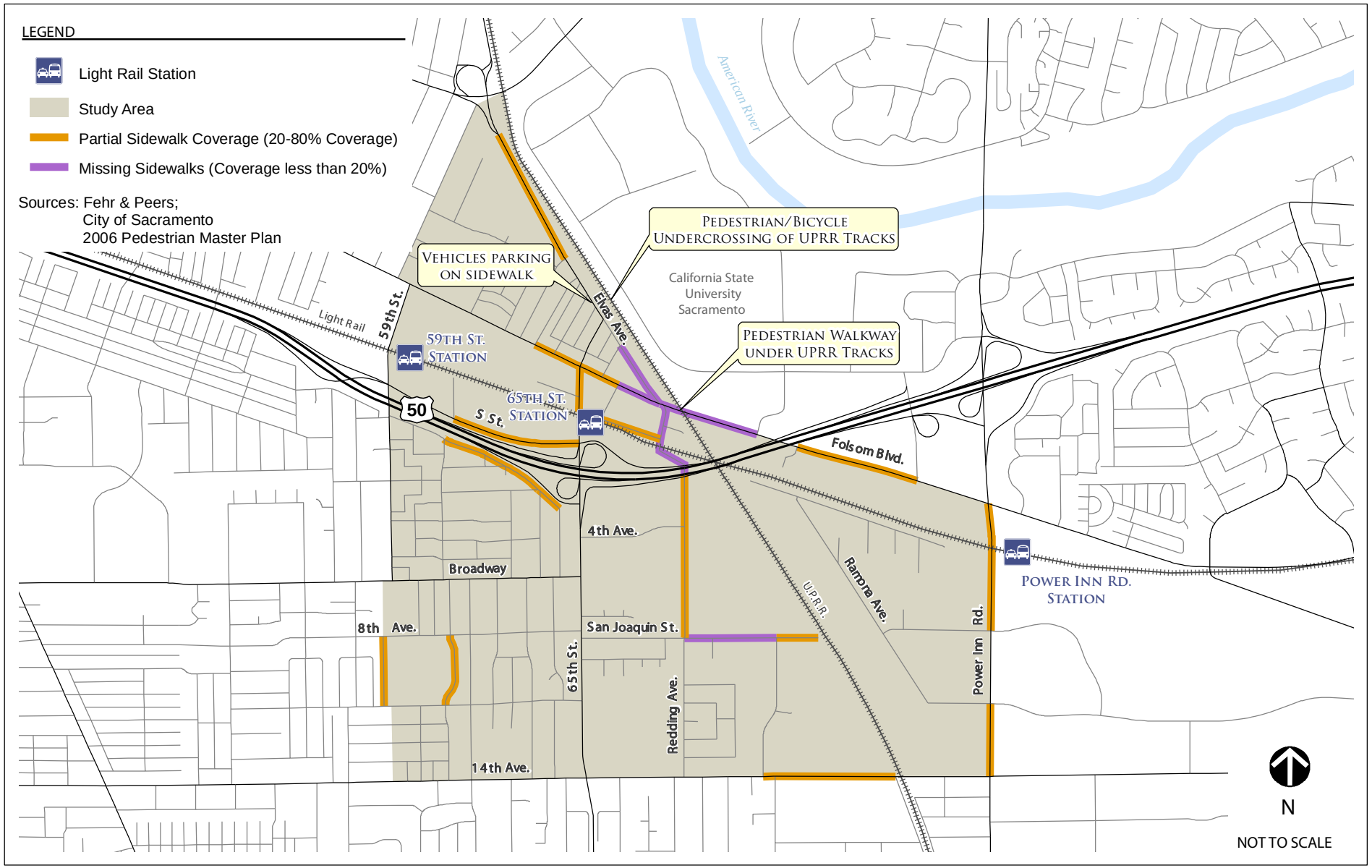


FEHR & PEERS
TRANSPORTATION CONSULTANTS

N:\2007Projects\SA_Projects\0101\gis\October2008Draft\fig10_ex_prop_bikes.mxd

EXISTING AND PLANNED BICYCLE FACILITIES

FIGURE 4.3-4



FEHR & PEERS
TRANSPORTATION CONSULTANTS

N:\2007Projects\SA_Projects\0101\gis\October2008Draft\fig05_ex_sidewalk.mxd

EXISTING SIDEWALK COVERAGE

FIGURE 4.3-5

For bicycles and pedestrians, Folsom Boulevard provides access to the project area from the west and east, while 65th Street provides access from the north and south. Folsom Boulevard west of 65th Street has no striped bike lanes and has sidewalk coverage on both sides of the street until just east of 63rd Street, where the southern sidewalk ends. Folsom Boulevard east of 65th Street has intermittent bike lanes and generally lacks sidewalk coverage, except for the portion between 65th and 66th Street. Bicyclists accessing the transit station from the east must continue along narrow bike lanes on Folsom Boulevard as it crosses under the railroad.

Bike lanes are not provided on 65th Street (south of Q Street) for bicyclists desiring to access the project area from the south. A bike lane is provided between Q Street and Folsom Boulevard, but only on the east side of 65th Street. In general, complete and continuous sidewalks line 65th Street within the project area.

Neither Q Street nor 67th Street has bike lanes within the project area; however, bike lockers are provided along the north side of Q Street at the transit station. Sidewalks are located on both sides of Q Street between 65th Street and 67th Street, but they do not extend east of 67th Street. The only sidewalk on 67th Street is on the east side of the street in front of the transit station.

Field observations found heavy pedestrian activity within the project area with the focus being the 65th Street transit station. Many of the pedestrian trips generated by the light rail trains were to the bus station on the north side of Q Street. While a high-visibility crosswalk is provided at the Q Street/67th Street intersection, the majority of pedestrians were observed crossing mid-block between 65th and 67th streets. The crosswalks at the Q Street/65th Street intersection were also well utilized by transit patrons. Several bicyclists were also observed in the area.

Accident Data

Table 4.3-3 provides a summary of six years of accident data for the three road segments in the project area with at-grade light rail crossings. Accident data was reviewed for the segments of 59th Street, 65th Street, and Redding Avenue from January 2003 through November 2008. It should be noted that the summary is based on a review of accidents that were reported and documented by the City of Sacramento Police Department.

The accident data indicates that there was one collision involving a motor vehicle and a train at the Redding Avenue at-grade crossing in 2008. The accident record for this collision indicates that the motor vehicle crossed into the opposing lane prior to hitting the train. No accidents between motor vehicles and trains were reported at the 65th Street or 59th Street at-grade crossings.

TABLE 4.3-3

ACCIDENT DATA FOR ROAD SEGMENTS AT AT-GRADE LIGHT RAIL CROSSINGS JANUARY 2003 – NOVEMBER 2008

Location	Year	Number Of Accidents				# of Injuries	# of Fatalities
		Total	# involving Bikes	# involving Pedestrians	# involving Trains		
65th St: Q St to S St	2008 (11 mos.)	7	1	0	0	5	0
	2007	9	0	0	0	7	0
	2006	7	0	0	0	1	0
	2005	9	0	0	0	5	0
	2004	7	0	0	0	7	0
	2003	19	0	0	0	13	0
	6-yr Total	**58**	**1**	**0**	**0**	**38**	**0**
	6-yr Avg.	**9.8**	**0.2**	**0.0**	**0.0**	**6.4**	**0.0**
59th St: Folsom Blvd to S St	2008 (11 mos.)	5	1	1	0	6	0
	2007	5	0	0	0	5	0
	2006	6	0	0	0	2	0
	2005	2	1	0	0	3	0
	2004	4	1	0	0	6	0
	2003	5	1	0	0	6	0
	6-yr Total	**27**	**4**	**1**	**0**	**28**	**0**
	6-yr Avg.	**4.6**	**0.7**	**0.2**	**0.0**	**4.7**	**0.0**
Redding Ave: Q St to 4th Ave	2008 (11 mos.)	2	0	0	1	0	0
	2007	0	0	0	0	0	0
	2006	2	0	0	0	0	0
	2005	0	0	0	0	0	0
	2004	1	0	0	0	2	0
	2003	0	0	0	0	0	0
	6-yr Total	**5**	**0**	**0**	**1**	**2**	**0**
	6-yr Avg.	**0.8**	**0.0**	**0.0**	**0.2**	**0.3**	**0.0**

Source: City of Sacramento, 2008.

The accident data also indicates there were five collisions between motor vehicles and bicyclists, and one collision between a motor vehicle and a pedestrian, in the road segments that were evaluated. Four of the five collisions between motor vehicles and bicyclists occurred on 59th Street, while the fifth occurred on 65th Street. The one accident between a motor vehicle and a pedestrian occurred on 65th Street.

Study Locations

To determine the impacts of the two project scenarios on the transportation system, the roadway facilities listed below are analyzed. In addition, project impacts are identified for bicycle, pedestrian, and transit systems that are adjacent to the roadway facilities.

Study Intersections

1. S Street/59th Street
2. Folsom Boulevard/59th Street
3. Elvas Avenue/65th Street
4. Folsom Boulevard/62nd Street
5. Folsom Boulevard/63rd Street
6. Folsom Boulevard/64th Street
7. Folsom Boulevard/65th Street
8. Folsom Boulevard/67th Street
9. Folsom Boulevard/Elvas Avenue
10. Q Street/65th Street
11. Q Street/67th Street
12. Q Street/69th Street
13. S Street/65th Street
14. US 50 EB Ramps/65th Street
15. 65th Street/4th Avenue
16. 4th Avenue/Redding Avenue
17. 65th Street/Broadway
18. Folsom Boulevard/State University Drive East
19. Folsom Boulevard/Hornet Drive
20. Folsom Boulevard/Howe Avenue
21. Folsom Boulevard/Ramona Avenue

Study Roadway Segments

1. Elvas Avenue between J Street and 65th Street
2. Folsom Boulevard between 59th Street and 65th Street
3. Elvas Avenue between 65th Street and Folsom Boulevard
4. 59th Street between Folsom Boulevard and S Street
5. 65th Street between Folsom Boulevard and S Street
6. Folsom Boulevard between 65th Street and Elvas Avenue

7. Folsom Boulevard between Ramona Avenue and State University Drive East
8. Folsom Boulevard between State University Drive East and Hornet Drive
9. Q Street between 65th Street and 67th Street
10. 59th Street between S Street and Broadway
11. 65th Street between US 50 EB Off-ramps and 4th Avenue
12. Broadway between 59th Street and 65th Street
13. Redding Avenue between 4th Avenue and San Joaquin Street
14. 65th Street between San Joaquin Street and East 14th Avenue
15. East 14th Avenue between Redding Avenue and Ramona Avenue
16. Power Inn Road between Ramona Avenue and East 14th Avenue
17. Power Inn Road between Folsom Boulevard and Ramona Avenue
18. Howe Avenue between US 50 EB Off-ramps and Folsom Boulevard

Study Freeway Facilities

- Eastbound and Westbound US 50 mainline segment between 59th Street and 65th Street
- Eastbound and Westbound US 50 weaving areas between 65th Street and Howe Avenue
- Queues at Westbound 65th Street Off-ramp
- Queues at Eastbound 65th Street Off-ramp

Regulatory Context

Existing transportation policies, laws, and regulations that would apply to the two project scenarios are summarized below. This information provides a context for the impact discussion related to the project's consistency with applicable regulatory conditions.

Federal

There are no applicable federal policies, laws or regulations that would apply to the project.

State

The *State Route 50 Transportation Concept Report* identifies the existing Level of Service (LOS) on US 50 in the project area as LOS F. Based on the *Guide for the Preparation of Traffic Impact Studies* (Caltrans, December 2002), if a freeway facility is operating at an unacceptable LOS (e.g., LOS F), then the existing measure of effectiveness should be maintained. Therefore, an impact is defined to occur if the addition of project trips leads to a perceptible decrease in density on freeway mainline or ramp junctions, or a perceptible increase in service volume in a

weaving area. In addition, a project impact is said to occur when the addition of project trips causes a queue at a ramp terminal intersection to extend outside of its storage area and onto the freeway mainline.

Local

The *2030 General Plan* was adopted in March 2009. The General Plan outlines goals and policies that coordinate the transportation and circulation system with planned land uses. The General Plan includes the following overall goals that are relevant to the transportation system for the 65th Street Station Area.

Goal M 1.2 Multimodal System. Provide expanded transportation choices to improve the ability to travel efficiently and safely to destinations throughout the city and region.

Goal M 1.3 Barrier Removal. Improve system connectivity by removing barriers to travel.

Goal M 1.4 Transportation Demand Management. Decrease the dependence on single-occupant use of motor vehicles through Transportation Demand Management.

Goal M 1.5 Emerging Technologies and Services. Use emerging transportation technologies and services to increase transportation system efficiency.

Goal M 2.1 Integrated Pedestrian System. Design a universally-accessible, safe, convenient, and integrated pedestrian system that promotes walking.

Goal M 3.1 Safe, Comprehensive, and Integrated Transit System. Create and maintain a safe, comprehensive, and integrated transit system as an essential component of a vibrant transportation system.

Goal M 4.1 Roadway System. Create a roadway system that will ensure the safe and efficient movement of people, goods, and services that supports livable communities and reduces air pollution and greenhouse gas emissions.

Goal M 4.2 Complete Streets. Provide complete streets that balance the diverse needs of diverse users of the public right-of-way.

Goal M 4.3 Neighborhood Traffic. Enhance the quality of life within existing neighborhoods through the use of neighborhood traffic management techniques, while recognizing the City's desire to provide a grid system that creates a high level of connectivity.

Goal M 4.4 Roadway Functional Classification and Typology. Maintain an interconnected system of streets that allows travel on multiple routes by multiple modes.

Goal M 5.1 Integrated Bicycle System. Create and maintain a safe, comprehensive, and integrated bicycle system and support facilities throughout the city that encourages bicycling that is accessible to all.

Goal M 7.1 Safe Movement of Goods. Provide for the safe and efficient movement of goods to support commerce while maintaining livability in the city and region.

General Plan Policy M 1.2.2 relating to roadway LOS in the 2030 General Plan is summarized and described below:

The City shall allow for flexible LOS standards, which will permit increased densities and mix of uses to increase transit ridership, biking, and walking, which decreases auto travel, thereby reducing air pollution, energy consumption, and greenhouse gas emissions.

- Base Level of Service Standard – LOS A-D conditions are acceptable for all areas outside the Core Area or multi-modal districts.
- Core Area Roadway Level of Service Exemption – LOS F conditions are acceptable for roadway segments in the Core Area (bounded by C Street, the Sacramento River, 30th Street, and X Street), given that any project causing significant impacts to roadway segments in the Core Area provide and/or assist in funding improvements to other parts of the city wide transportation system in order to improve transportation system wider roadway capacity to make interaction improvements, or to enhance non auto travel modes in furtherance of the General Plan goals. Improvements would be required within the project vicinity or within the area affected by the project's vehicular traffic impacts. This exemption does not affect the implementation of previously approved roadway and intersection improvements identified for the Railyards or River District planning areas.
- Roadway Exempt from Level of Service – LOS F conditions are acceptable for designated individual roadway segments (see list on pages 2-164 and 2-165 of General Plan Mobility Element), given that any project causing significant impacts to these roadway segments provide and/or assist in funding improvements to other parts of the city wide transportation system
- Multi-Modal District Roadway Level of Service – LOS A-E conditions are acceptable in multi-modal districts (areas within ½ mile walking distance of light rail stations, and areas designated for urban scale development (Urban Centers, Urban Corridors, and Urban Neighborhoods as designated in the Land Use and Urban Form Diagram)). These areas are characterized by frequent transit service, enhanced pedestrian and bicycle systems, a mix of uses, and higher-density development. LOS F conditions may be acceptable in cases where projects causing roadway segments to operate at LOS F provide and/or assist in funding improvements to other parts of the city wide transportation system

Neighborhood Traffic Management Program

The City of Sacramento has a Neighborhood Traffic Management Program (NTMP) where neighborhoods can petition the City to install traffic calming devices to address residents' concerns about traffic. There are two phases of an NTMP—Phase I involves less restrictive modifications such as the installation of high visibility speed limit sings, striping of bike lanes, and the installation of speed humps. Phase II involves more restrictive measures including half- and full-street closures, diverters, and one-way/two-way street conversions. Phase II modifications are implemented if the Phase I modifications do not adequately address neighborhood concerns.

Existing Freeway, Roadway and Intersection Conditions

This section presents the methodology used to analyze the existing conditions traffic operations at the study facilities identified above. The results of the traffic operations analysis are also presented.

Methods of Analysis

Each roadway facility within the project area was analyzed using the concept of LOS. LOS is a qualitative measure of traffic operating conditions whereby a letter grade, from A (the best) to F (the worst), is assigned. These grades represent the perspective of drivers and are an indication of the comfort and convenience associated with driving. In general, LOS A represents free-flow conditions with no congestion, and LOS F represents severe congestion and delay under stop-and-go conditions.

Traffic operations at the study intersections were analyzed using procedures and methodologies contained in the *Highway Capacity Manual* (HCM), Transportation Research Board, 2000. The HCM methodology determines the LOS at signalized intersections by comparing the average control delay per vehicle at the intersection to the thresholds shown in Table 4.3-4 below. At two-way or side-street stop-controlled intersections, LOS is calculated for each movement rather than for the intersection as a whole. If an approach consists of a single lane from which vehicles can make multiple movements, the LOS is based on the average control delay for all movements from that approach. The LOS reported at side-street stop-controlled intersections is for the maximum control delay experienced on a specific approach for that movement.

TABLE 4.3-4

LEVEL OF SERVICE DEFINITIONS FOR STUDY INTERSECTIONS

Level of Service	Average Control Delay (seconds/vehicle)	
	Signalized	Unsignalized
A	≤ 10.0	≤ 10.0
B	10.1 – 20.0	10.1 – 15.0
C	20.1 – 35.0	15.1 – 25.0
D	35.1 – 55.0	25.1 – 35.0
E	55.1 – 80.0	35.1 – 50.0
F	> 80.0	> 50.0

Notes: The average delay reported for signalized intersections is for all vehicles passing through the intersection, whereas the average delay reported for unsignalized intersections is for the minor street movement with the greatest delay.
Source: Transportation Research Board, *Highway Capacity Manual*,2000.

Table 4.3-4 displays the delay range associated with each LOS category for signalized and unsignalized intersections based on the HCM. Table 4.3-5 compares the daily traffic volume thresholds for roadway segments with each LOS category based on the City of Sacramento's Traffic Impact Analysis Guidelines (1996).

Traffic operations at the study intersections were assessed using the SimTraffic microsimulation software package. Microsimulation differs from more typical macroscopic analysis tools (Synchro, Traffix, and HCS+) in that each vehicle traveling on the roadway network is modeled, as opposed to the general flow rates that are analyzed by the macroscopic tools. Microsimulation is appropriate for congested locations like the project area because it can

TABLE 4.3-5

DAILY VOLUME THRESHOLDS FOR ROADWAY SEGMENTS

Facility Type	Number of Lanes	Daily Volume Threshold (LOS)				
		LOS A	LOS B	LOS C	LOS D	LOS E
Local	2	3,000	3,500	4,000	4,500	5,000
Minor Collector	2	5,250	6,125	7,000	7,875	8,750
Major Collector	2	8,400	9,800	11,200	12,600	14,000
	4	16,800	19,600	22,400	25,200	28,000
Arterial, low access control	2	9,000	10,000	12,000	13,500	15,000
	4	18,000	21,000	24,000	27,000	30,000
	6	27,000	31,500	36,000	40,500	45,000
Arterial, moderate access control	2	10,800	12,600	14,400	16,200	18,000
	4	21,600	25,200	28,800	32,400	36,000
	6	32,400	37,800	43,200	48,600	54,000
Freeway	6	42,000	64,800	92,400	111,600	120,000
	8	56,000	86,400	123,200	148,800	160,000

Facility Type	Stops/Mile	Driveways	Speed
Arterial, low access control	4+	Frequent	25 – 35 MPH
Arterial, moderate access control	2-4	Limited	35 – 45 MPH

Notes:
The rural two lane road and high access control arterial thresholds were omitted since none of the study roadway segments are classified as such.
Source: City of Sacramento Traffic Impact Analysis Guidelines, 1996.

account for the effects of bottlenecks and queue spillback between adjacent intersections. Macroscopic tools treat all intersections as isolated locations that are not impacted by operations at adjacent locations.

The ability of microsimulation to account for bottlenecks and queues gives a more accurate picture of conditions in congested areas, but it can lead to results where the addition of traffic at certain locations leads to better operations at other locations. This occurs when the additional traffic creates or exacerbates a bottleneck, which reduces the amount of traffic that can arrive at downstream intersections. Additionally, microsimulation models have a random component to reflect the variations in driver behavior. This variation can lead to differences between two runs with the same inputs, with the variation generally increasing as congestion increases.

Freeway operations were also analyzed using the procedures and methodologies contained in the HCM. The HCS+ analysis software was used to determine the AM and PM peak hour freeway operations for the mainline segments described above.

Analysis Evaluation Criteria

The new LOS policy in the 2030 General Plan, as described above, is applied to assess intersection and roadway impacts.

Table 4.3-4 shows the LOS definitions for study intersections and Table 4.3-5 shows the LOS thresholds for study roadway segments.

Existing Traffic Operations

Existing Traffic Volumes and Operations

Fehr & Peers conducted daily roadway segment and AM (7:00 – 9:00) and PM (4:00 – 6:00) peak hour intersection turning movement counts in May 2007 while CSUS and the Sacramento City Unified School District were still in full session. Figure 4.3-6 displays the existing average daily traffic (ADT) volumes for various roadway segments.

Roadway Segment Operations

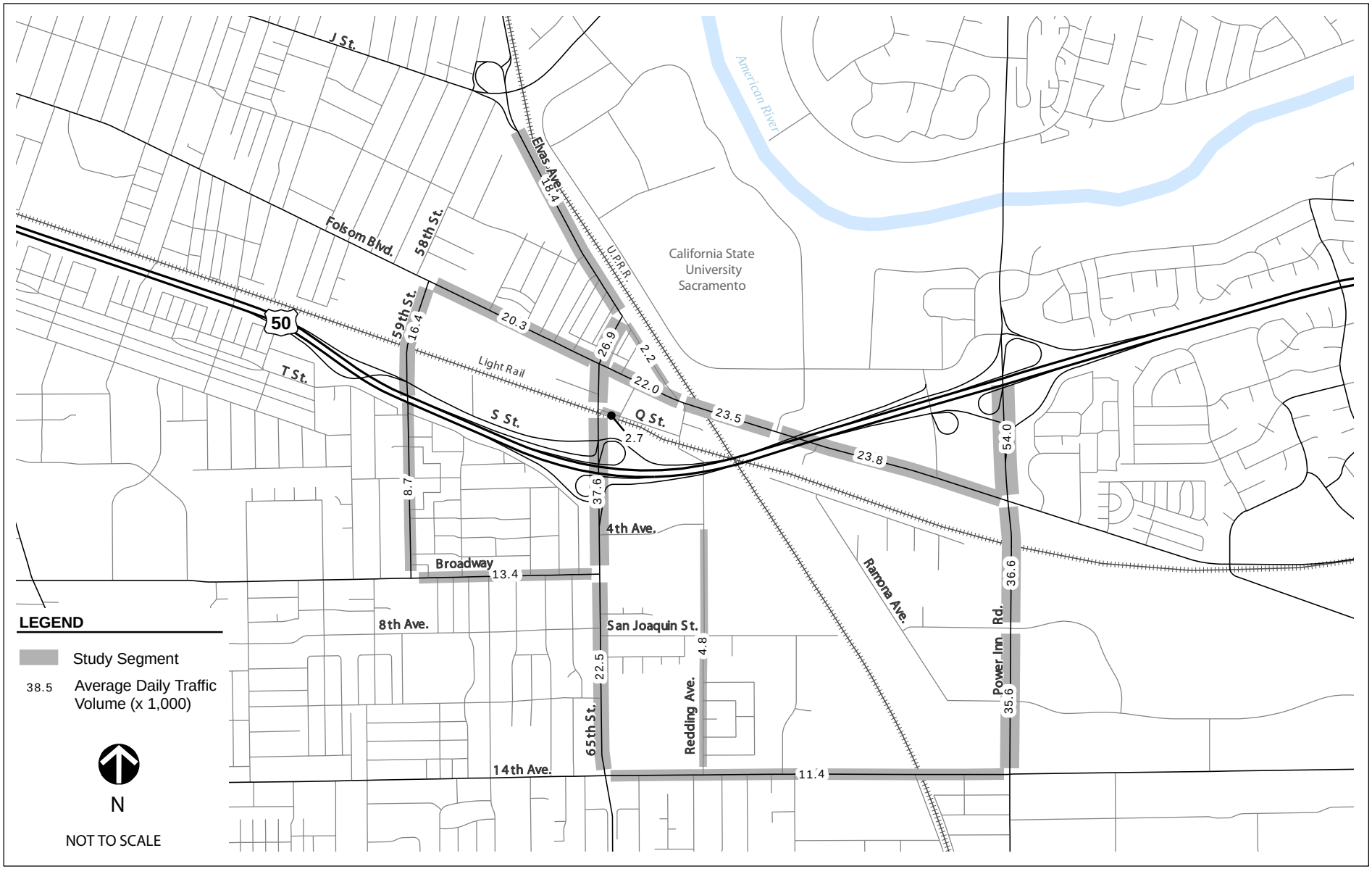
Table 4.3-6 summarizes the existing daily traffic volumes and the corresponding levels of service according to the City's daily volume thresholds shown in Table 4.3-5. The following roadway segments currently operate at LOS F conditions: Elvas Avenue from J Street to 65th Street, 59th Street from Folsom Boulevard to S Street, Folsom Boulevard from Ramona Avenue to State University Drive, and Howe Avenue from US 50 EB Ramps to Folsom Boulevard. The segment of Redding Avenue from 4th Avenue to San Joaquin Street operates at LOS E conditions. The segments of 65th Street from Folsom Boulevard to S Street, 65th Street from US 50 EB Ramps to 4th Avenue, Broadway from 59th Street to 65th Street, and Power Inn Road from Folsom Boulevard to Ramona Avenue operate at LOS D conditions. The remaining roadway segments operate at LOS A-C conditions.

Intersection Operations

Figure 4.3-7 shows the existing AM and PM peak hour intersection turning movement volumes and lane configurations. Table 4.3-7 summarizes the existing peak hour intersection operations at the study intersections.

As shown in Table 4.3-7, the following intersections operate at LOS E or F in the AM and/or PM peak hour:

- S Street/59th Street
- Folsom Boulevard/65th Street
- S Street/US 50 Westbound Off-ramp/65th Street
- 65th Street/Broadway
- Folsom Boulevard/Howe Avenue



FEHR & PEERS
TRANSPORTATION CONSULTANTS

N:\2007Projects\SA_Projects\0101\gis\October2008Draft\fig06_adt_exnp.mxd

AVERAGE DAILY TRAFFIC VOLUMES - EXISTING CONDITIONS

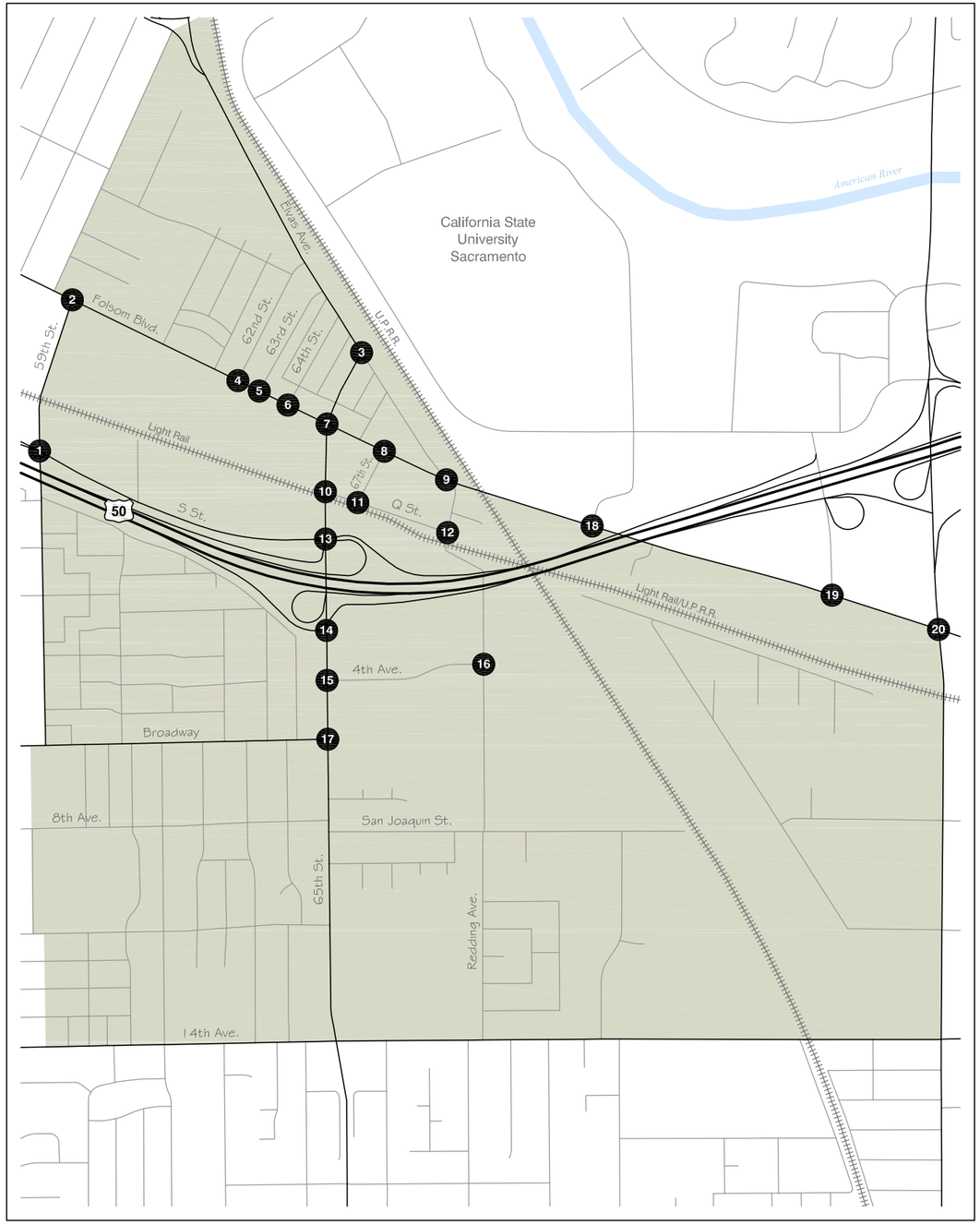
FIGURE 4.3-6

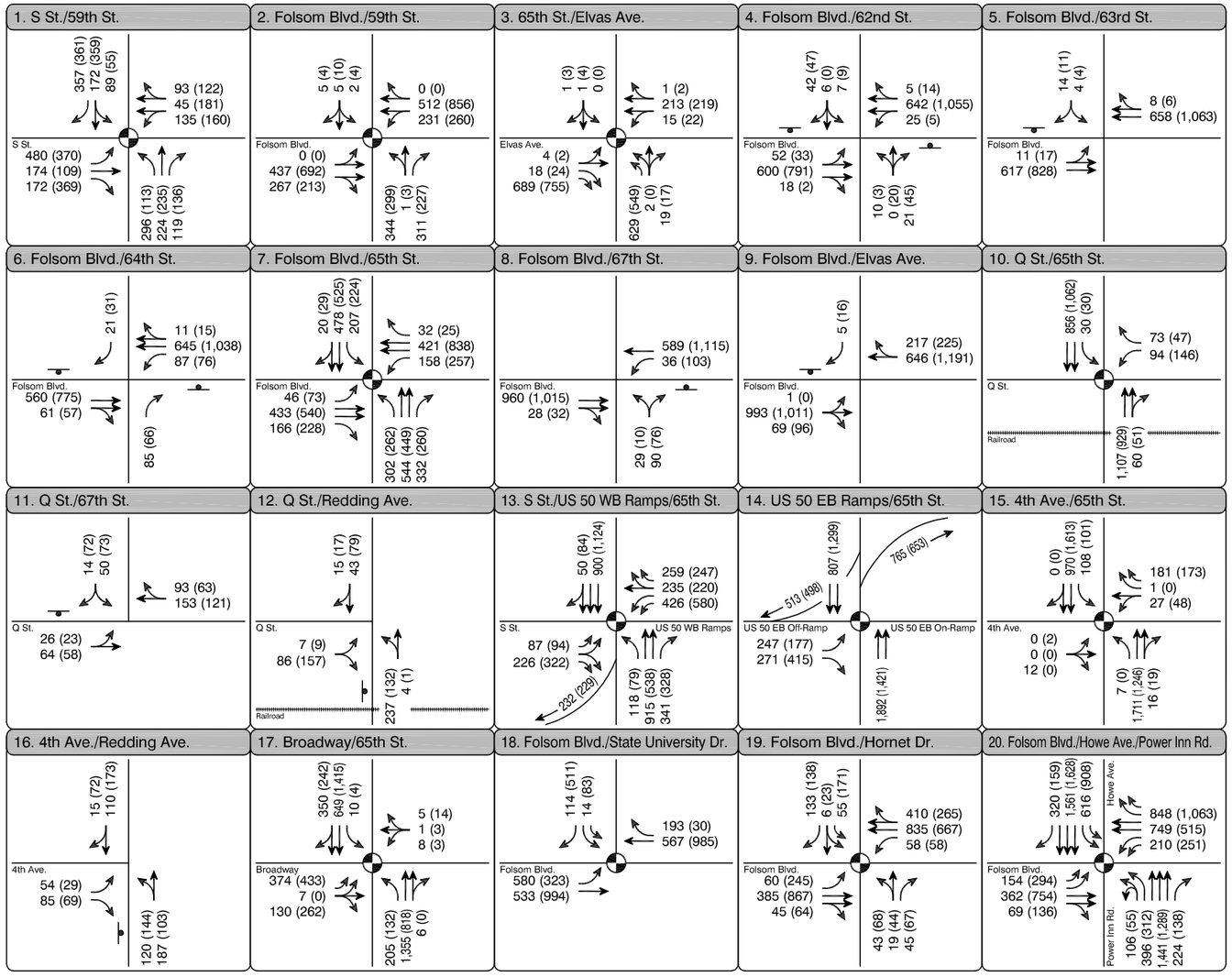
TABLE 4.3-6

AVERAGE DAILY TRAFFIC VOLUMES FOR STUDY ROADWAY SEGMENTS EXISTING CONDITIONS

Roadway Segment	Access Control	Number of Lanes	ADT Volume	LOS
1. Elvas Ave - J St to 65th St	Low	2 (col)	18,400	F
2. Folsom Blvd - 59th St to 65th St	Low	4 (art)	20,300	B
3. Elvas Ave - 65th St to Folsom Blvd	Low	2 (col)	2,200	A
4. 59th St - Folsom Blvd to S St	Low	2 (art)	16,400	F
5. 65th St - Folsom Blvd to S St	Moderate	4 (art)	26,900	D
6. Folsom Blvd - 65th St to Elvas Ave	Low	4 (art)	22,000	B
7. Folsom Blvd - Ramona Ave to State University Dr	Moderate	2 (art)	23,500	F
8. Folsom Blvd - State University Dr to Hornet Dr	Moderate	4 (art)	23,800	B
9. Q St - 65th St to 67th St	Low	2 (local)	2,700	A
10. 59th St - S St to Broadway	Low	2 (art)	8,700	A
11. 65th St - US 50 EB Ramps to 4th Ave	Low	6 (art)	37,600	D
12. Broadway - 59th St to 65th St	Low	2 (art)	13,400	D
13. Redding Ave - 4th Ave to San Joaquin St	Low	2 (local)	4,800	E
14. 65th St - San Joaquin St to East 14th Ave	Moderate	4 (art)	22,500	B
15. East 14th Ave - Redding Ave to Ramona Ave	Moderate	2 (art)	11,400	B
16. Power Inn Road - Ramona Ave to East 14th Ave	Moderate	6 (art)	35,600	C
17. Power Inn Road - Folsom Blvd to Ramona Ave	Moderate	6 (art)	36,300	D
18. Howe Ave - US 50 EB Ramps to Folsom Blvd	Moderate	6 (art)	54,000	F

Source: Fehr & Peers, 2008.





LEGEND

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

N

NOT TO SCALE

FEHR & PEERS
TRANSPORTATION CONSULTANTS

Oct 13, 2008 MJC
N:\2007Projects\SA_Projects\0101\graphics\June2008\10-3-08\fig13_phtv_ex_con.dwg

PEAK HOUR TRAFFIC VOLUMES AND LANE CONFIGURATIONS - EXISTING CONDITIONS

FIGURE 4.3-7

TABLE 4.3-7

INTERSECTION OPERATIONS – EXISTING CONDITIONS

Intersection	Control	AM Peak		PM Peak	
		LOS	Delay[1]	LOS	Delay[1]
1. S St/59th St	Signal	E	71.3	F	>80
2. Folsom Blvd/59th St	Signal	C	22.5	C	29
3. Elvas Ave/65h St	Stop control	B	19.4	B	12.5
4. Folsom Blvd/62nd St	Stop control	A	<10	A	<10
5. Folsom Blvd/63rd St	Stop control	A	<10	A	<10
6. Folsom Blvd/64th St	Stop control	A	<10	A	<10
7. Folsom Blvd/65th St	Signal	D	52	E	59.6
8. Folsom Blvd/67th St	Stop control	A	<10	A	<10
9. Folsom Blvd/Elvas Ave	Stop control	A	<10	B	11.6
10. Q St/65th St	Signal	C	25.4	D	36
11. Q St/67th St	Stop control	A	<10	A	<10
12. Q St/69th St	Stop control	A	<10	A	<10
13. S St/65th St	Signal	D	41.7	E	59.1
14. US 50 EB Ramps/65th St	Signal	B	14.1	C	23.5
15. 65th St/4th Ave	Signal	D	37.4	B	18.9
16. 4th Ave/Redding Ave	Stop control	A	<10	A	<10
17. 65th St/Broadway	Signal	D	48.7	E	57.8
18. Folsom Blvd/State University Dr East	Signal	B	18.7	C	24.2
19. Folsom Blvd/Hornet Dr	Signal	C	22.2	C	34.1
20. Folsom Blvd/Howe Ave	Signal	F	185	F	220

Notes:

1. For signalized intersections, average intersection delay is reported in seconds per vehicle. For side-street stop controlled intersections, the delay and LOS for the most-delayed individual movement is shown in parentheses below the average intersection delay and LOS.

2. Motorists are not likely to regularly experience average delays in excess of 180 seconds, as they will either divert to alternate routes or shift their travel to times outside the peak commute hour.

Source: Fehr & Peers, 2008.

65th Street Light Rail Crossing

As previously described, an at-grade crossing of the Gold Line light rail tracks is located on 65th Street between Q and S streets. Observations of peak period traffic in the project area found that lengthy queues on 65th Street develop when trains approach the crossing. For example, when a westbound train approaches the 65th Street station the crossing arms come down as soon as the train enters the station area and remain down until the train clears 65th Street. This process takes about 60 seconds and includes approximately 30 seconds of boarding time at the station. In the eastbound direction, the crossing arms come down when the train is well west of the station. The arms remain in place until the train clears 65th Street and enters the station; however, the arms are raised when the train is boarding. Because the arms come down when the train is well east of 65th Street, the crossing arms are down for approximately 60 seconds for eastbound trains as well.

During the one minute the crossing arms are down, significant queues (or lines of traffic) begin to form on 65th Street. The 65th Street/Q Street signal is coordinated with the crossing arms and allows for southbound left-turns from 65th Street to Q Street, but this movement is relatively light and the southbound through traffic queue eventually blocks the left-turn pocket. Additionally, the 65th Street/ S Street/Westbound US 50 off-ramp signal is coordinated with the crossing arms to discharge the southbound queue at this intersection such that it clears the track prior to the crossing arms coming down. Queues were observed extending on 65th Street as far as Folsom Boulevard in the north and the EB US 50 off-ramp in the south. These queues lead to additional delay at all of the study intersections along 65th Street, which are reflected in the results presented in Table 4.3-6. After approximately two-to-five minutes, the queues related to the crossing arms dissipate and traffic operations return to normal.

In addition to queues caused by train crossings, there are queues caused by the traffic signals at the 65th Street/Q Street and 65th Street/S Street/Westbound US 50 off-ramp that extend into the light rail crossing area. In the northbound direction, the stop bar for the 65th Street/Q Street intersection is south of the light rail crossing where there is "Wait Here" signing and striping notifying drivers of the advanced location. However, because the light rail tracks are located about 40 feet behind the typical stop bar location, vehicles were occasionally observed waiting north of the tracks during red light phases at the intersection. In the southbound direction, vehicle queues were occasionally observed to spill back from the 65th Street/S Street/ Westbound US 50 off-ramp intersections although drivers kept clear of the light rail tracks. While queuing from the intersections adjacent to the light rail tracks creates conditions where queues do extend onto the tracks, drivers generally kept clear of the tracks. When light rail trains did arrive, the signal preemption systems allowed queues near the crossing to clear.

Freeway Operations

Freeway facility operations were analyzed using the following data:

- AM and PM peak hour on-ramp and off-ramp counts from the 65th Street/US 50 interchange ramp terminal intersections collected in May 2007;
- AM and PM peak hour on-ramp and off-ramp counts from the Howe Avenue/US 50 interchange ramp terminal intersections collected in May 2007; and
- AM and PM peak hour freeway mainline volumes collected throughout 2007 and published in the 2007 Caltrans Transportation System Network (TSN) database.

The AM and PM peak hour freeway operations are presented in Table 4.3-8. As shown in the table the following freeway facilities operate at LOS F in the AM and/or PM peak hour:

- Westbound US 50 from 65th Street to 59th Street;
- Eastbound US 50 weaving area between 65th Street and Howe Avenue; and
- Westbound US 50 weaving area between Howe Avenue/Hornet Drive and 65th Street.

TABLE 4.3-8

FREEWAY OPERATIONS – EXISTING CONDITIONS

Freeway Facility	Type	AM Peak			PM Peak		
		LOS	Density or Service Flow[1]	Volume[2]	LOS	Density or Service Flow[1]	Volume[2]
1. Eastbound US 50 from 59th St to 65th St	Mainline	E	43.2	8,347	E	44.1	8,412
2. Westbound US 50 from 65th St to 59th St	Mainline	**F**	**>45**	**8,812**	E	39.1	7,791
3. Eastbound US 50 Weave between 65th St and Howe Ave	Weave	**F**	**2,128**	**9,107**	**F**	**2,087**	**8,481**
4. Westbound US 50 Weave between Howe Ave and 65th St	Weave	**F**	**1,951**	**9,159**	**F**	**1,928**	**8,481**

Notes:
1. For mainline, ramp merge, and ramp diverge section, density is measured in passenger car equivalents per mile per lane; for weaving sections, service flow in passenger car equivalents per lane per hour is reported.
2. Volume refers to freeway mainline volume or ramp at the study facility (mainline volumes reported for weaving areas).
Source: Fehr & Peers, 2008.

The results presented in Table 4.3-8 match field observations and are consistent with the findings of the *State Route 50 Transportation Concept Report* (Caltrans, 1998).

NEAR-TERM PROJECT CONDITIONS ANALYSIS

An evaluation of "Existing plus Project" conditions is provided to identify the impact of the project scenarios on existing travel conditions in the project area. This section describes the transportation system under existing conditions with each of the scenarios.

No Project Scenario

This section presents the results of the transportation analysis with implementation of previously adopted transportation plan improvements and mitigation measures for the study area.

Intersection Operations

Figure 4.3-8 presents the projected peak hour turning movement volumes and lane configurations for the No Project Scenario, and Table 4.3-9 summarizes the results of the intersection LOS analysis. All intersections, except those listed below, would operate at LOS A–D conditions.

Implementation of the No Project Scenario improvements would result in unacceptable LOS conditions (i.e., LOS F) at one intersection. The intersection is listed below.

- S Street/59th Street operates at LOS F during the AM peak hour

TABLE 4.3-9

INTERSECTION OPERATIONS – EXISTING NO PROJECT SCENARIO CONDITIONS

Intersection	Control	Acceptable LOS	AM Peak		PM Peak	
			LOS	Delay[1]	LOS	Delay[1]
1. S St/59th St	Signal	A-E	F	85	D	55
2. Folsom Blvd/59th St	Signal	A-E (exempt)	D	38	F	88
3. Elvas Ave/65th St	Signal	A-E	B	15	B	16
4. Folsom Blvd/62nd St	Stop	A-E (exempt)	A	2	C	16
5. Folsom Blvd/63rd St	Signal	A-E (exempt)	A	8	C	21
6. Folsom Blvd/64th St	Stop	A-E (exempt)	A	2	A	5
7. Folsom Blvd/65th St	Signal	A-E (exempt)	D	38	D	48
8. Folsom Blvd/67th St	Signal	A-E (exempt)	B	13	C	23
9. Folsom Blvd/Elvas Ave	Stop	A-E (exempt)	A	2	A	4
10. Q St/65th St	Signal	A-E (exempt)	B	17	C	23
11. Q St/67th St	Stop	A-E	A	6	A	6
12. Q St/69th St	Stop	A-E	A	2	A	1.5
13. S St/65th St	Signal	A-E (exempt)	D	41	D	48
14. US 50 EB Ramps/65th St	Signal	A-E (exempt)	B	19	D	46
15. 65th St/4th Ave	Signal	A-E (exempt)	B	15	B	19
16. 4th Ave/Redding Ave	Stop	A-E	A	7	A	7.1
17. 65th St/Broadway	Signal	A-E (exempt)	C	30	E	72
18. Folsom Blvd/State University Dr	Signal	A-E (exempt)	B	17	C	24
19. Folsom Blvd/Hornet Dr	Signal	A-E (exempt)	C	24	C	26
20. Folsom Blvd/Howe Ave	Signal	A-E (exempt)	F	187[2]	F	231
21. Folsom Blvd/Ramona Ave	Signal	A-E (exempt)	C	21	D	46

Notes:

1. For signalized intersections, average intersection delay is reported in seconds per vehicle. For side-street stop controlled intersections, the delay and LOS for the most-delayed individual movement is shown in parentheses below the average intersection delay and LOS.

2. Motorists are not likely to regularly experience average delays in excess of 180 seconds, as they will either divert to alternate routes or shift their travel to times outside the peak commute hour.

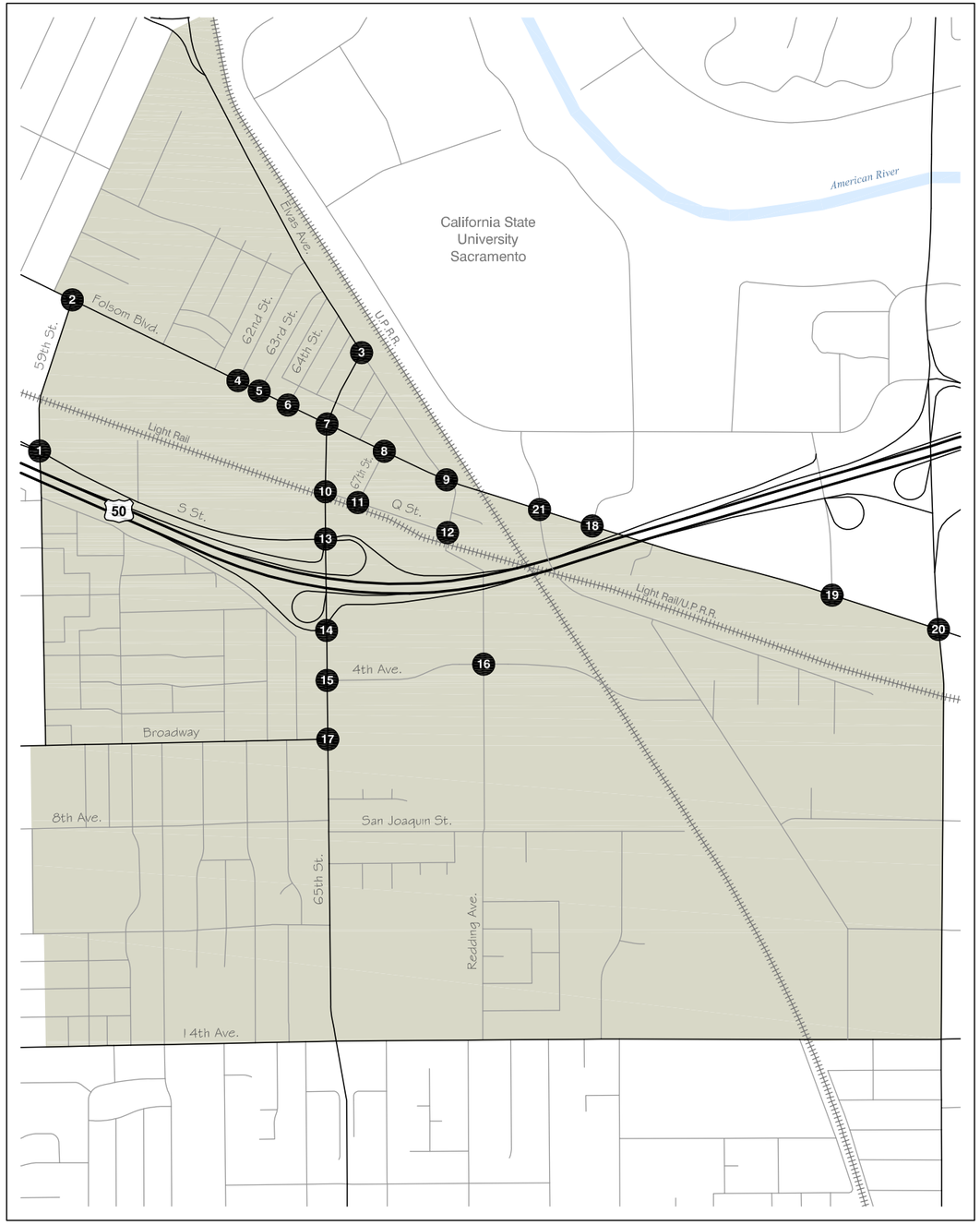
Source: Fehr & Peers, 2008.

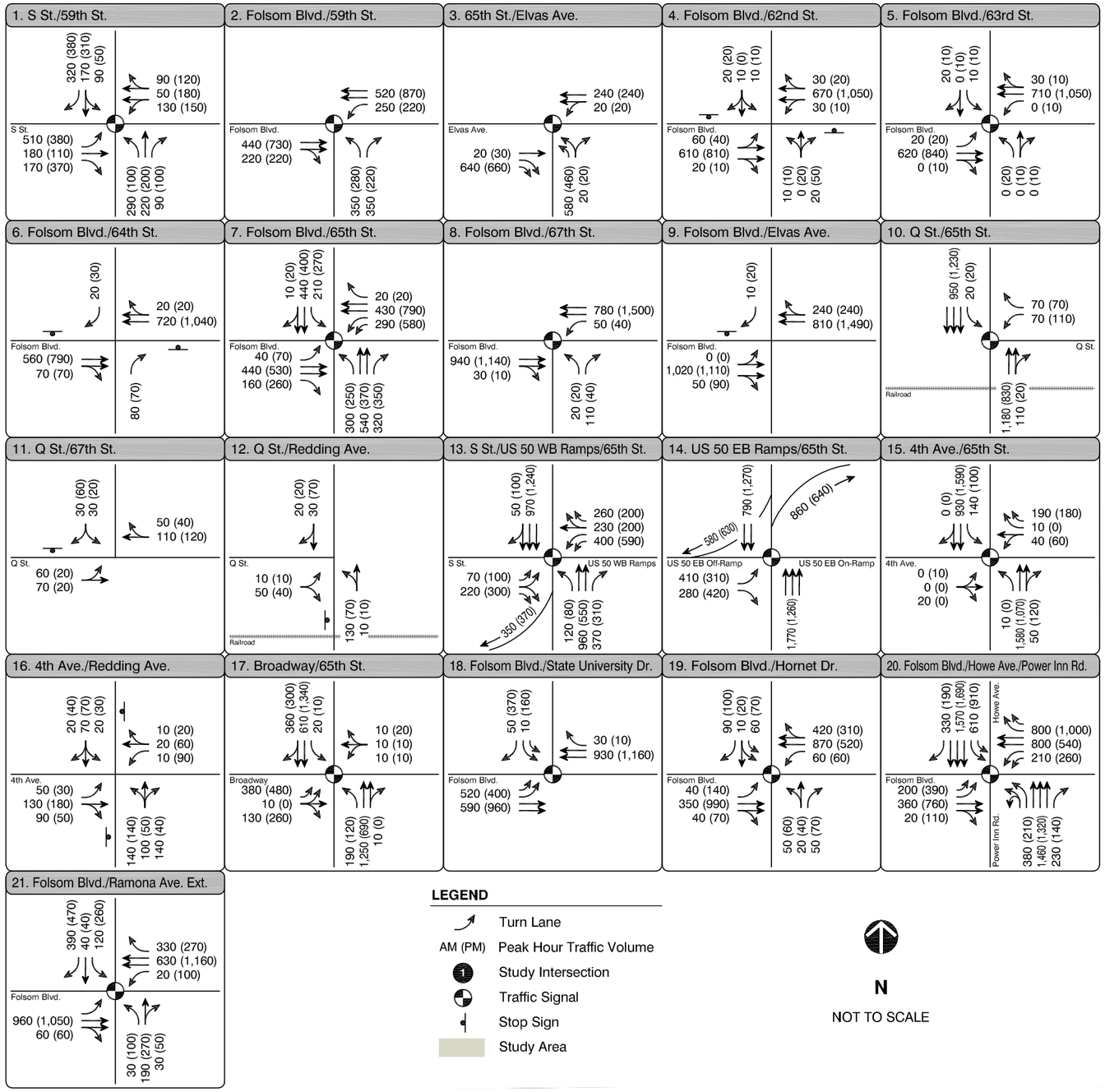
Implementation of the No Project Scenario improvements would result in LOS E or F conditions at three intersections along Folsom Boulevard and 65th Street, which are exempt roadways.

- Folsom Boulevard/59th Street operates at LOS F during the PM peak hour
- Folsom Boulevard/Howe Avenue operates at LOS F during the AM and PM peak hour
- 65th Street/Broadway Street operates at LOS E during the PM peak hour

Roadway Segment Operations

Figure 4.3-9 shows the projected daily roadway segment volumes with the No Project Scenario, and Table 4.3-10 presents the results of the roadway segment LOS analysis. All roadway segments, except those listed below, would operate at LOS A–D conditions.





LEGEND

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

N

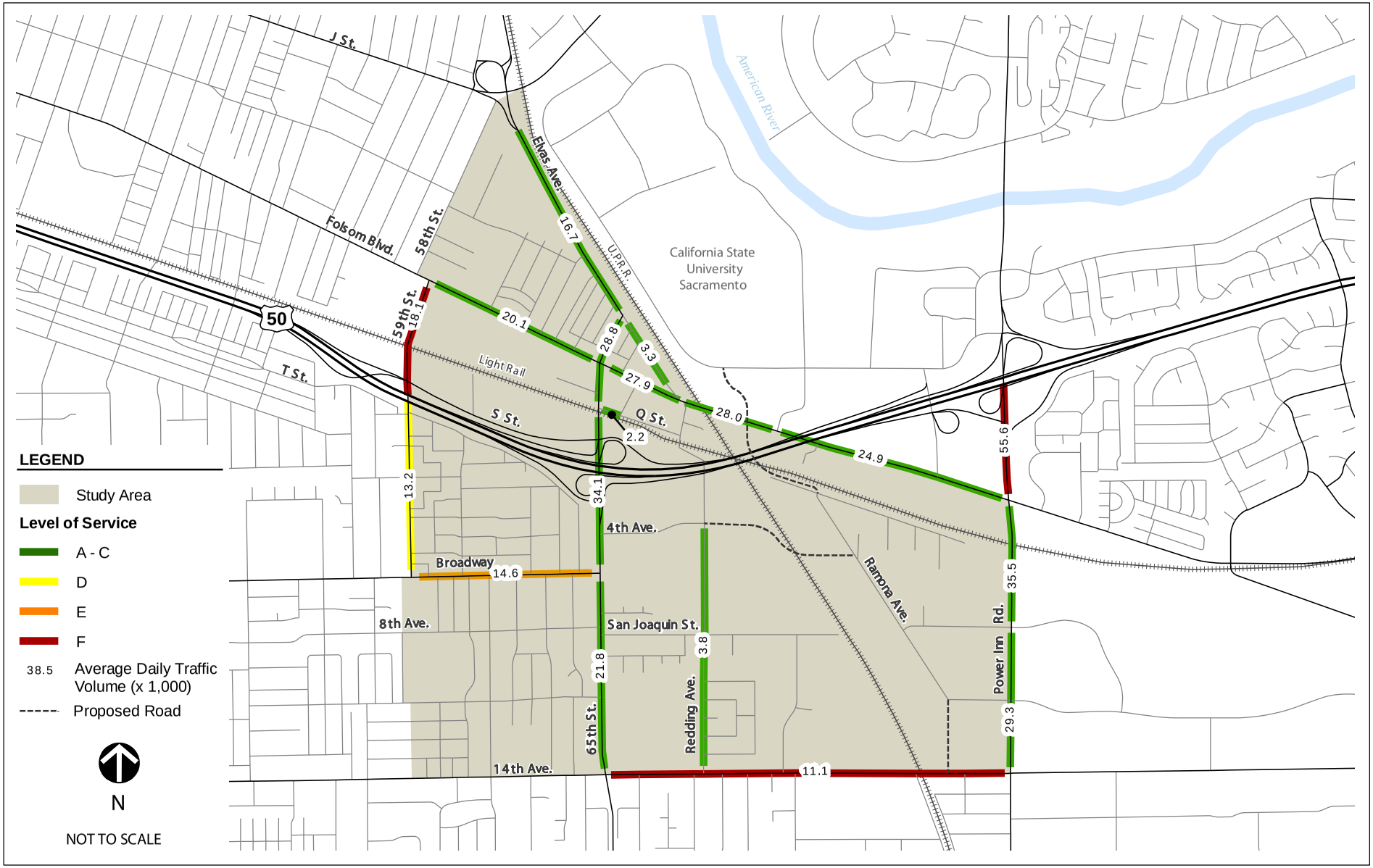
NOT TO SCALE

FEHR & PEERS
TRANSPORTATION CONSULTANTS

Oct 13, 2008 SW
N:\2007Projects\SA_Projects\0101\graphics\June2008\10-3-08\fig14_phtv_expp_A.dwg

PEAK HOUR TRAFFIC VOLUMES AND LANE CONFIGURATIONS - EXISTING PLUS PROJECT CONDITIONS SCENARIO A

FIGURE 4.3-8



FEHR & PEERS
TRANSPORTATION CONSULTANTS

N:\2007Projects\SA_Projects\0101\gis\October2008Draft\fig09_adt_expp_alt_A.mxd

AVERAGE DAILY TRAFFIC VOLUMES AND ROADWAY LEVEL OF SERVICE - EXISTING PLUS PROJECT CONDITIONS SCENARIO A

FIGURE 4.3-9

TABLE 4.3-10

ROADWAY OPERATIONS – EXISTING NO PROJECT SCENARIO CONDITIONS

Roadway Segment	Access Control	Number of Lanes	Acceptable LOS	ADT Volume	V/C	LOS
1. Elvas Ave - J St to 65th St	Low	4 (art)	A-E	16,700	0.56	A
2. Folsom Blvd - 59th St to 65th St	Moderate	4 (art)	A-D (exempt)	20,100	0.56	A
3. Elvas Ave - 65th St to Folsom Blvd	Minor	2 (col)	A-E	3,300	0.22	A
4. 59th St - Folsom Blvd to S St	Low	2 (art)	A-E	18,100	1.21	F
5. 65th St - Folsom Blvd to S St	Moderate	5 (art)	A-E (exempt)	28,800	0.64	B
6. Folsom Blvd - 65th St to Elvas Ave	Moderate	4 (art)	A-E (exempt)	27,900	0.78	C
7. Folsom Blvd - Ramona Ave to State University Dr	Moderate	4 (art)	A-E (exempt)	28,000	0.78	C
8. Folsom Blvd - State University Dr to Hornet Dr	Moderate	4 (art)	A-E (exempt)	24,900	0.69	B
9. Q St - 65th St to 67th St	Minor	2 (col)	A-E	2,200	0.25	A
10. 59th St - S St to Broadway	Low	2 (art)	A-D	13,200	0.88	D
11. 65th St - US 50 EB Ramps to 4th Ave	Moderate	5 (art)	A-E (exempt)	34,100	0.76	C
12. Broadway - 59th St to 65th St	Low	2 (art)	A-D (exempt)	14,600	0.97	E
13. Redding Ave - 4th Ave to San Joaquin St	Minor	2 (col)	A-D	3,800	0.43	A
14. 65th St - San Joaquin St to East 14th Ave	Moderate	4 (art)	A-D (exempt)	21,800	0.61	B
15. East 14th Ave - Redding Ave to Ramona Ave	Minor	2 (col)	A-E	11,100	1.27	F
16. Power Inn Road - Ramona Ave to East 14th Ave	Moderate	6 (art)	A-D	29,300	0.54	A
17. Power Inn Road - Folsom Blvd to Ramona Ave	Moderate	6 (art)	A-E	35,500	0.66	B
18. Howe Ave - US 50 EB Ramps to Folsom Blvd	Moderate	6 (art)	A-E (exempt)	55,600	1.03	F

Notes:
(art) = arterial; (col) = collector – either minor or major as noted.
Source: Fehr & Peers, 2008.

Implementation of the No Project Scenario improvements would result in unacceptable LOS conditions (i.e., LOS F) for two non-exempt roadway segments. The segments are listed below.

- 59th Street: Folsom Boulevard to S Street
- E. 14th Avenue: Redding Avenue to Ramona Avenue

Implementation of the No Project Scenario improvements would result in LOS E or F conditions at two roadway segments along Broadway and Howe Avenue, which are exempt roadways.

- Broadway: 59th Street to 65th Street (LOS E)
- Howe Avenue: US 50 EB Ramps to Folsom Boulevard (LOS F)

Freeway Operations

Table 4.3-11 summarizes the results of the No Project Scenario project freeway operations analysis.

TABLE 4.3-11

FREEWAY OPERATIONS – EXISTING PLUS NO PROJECT SCENARIO CONDITIONS

Freeway Facility	Type	With Scenario A Project					
		AM Peak			PM Peak		
		LOS	MOE[1]	Vol.[2]	LOS	MOE[1]	Vol.[2]
1. Eastbound US 50 from 59th St to 65th St	Mainline	E	43.4	8,320	E	44.5	8,400
2. Westbound US 50 from 65th St to 59th St	Mainline	E	38.0	8,860	E	39.5	7,990
3. Eastbound US 50 Weave between 65th St and Howe Ave	Weave	F	2,060	8,850	F	2,005	8,790
4. Westbound US 50 Weave between Howe Ave and 65th St	Weave	F	1,931	9,070	E	1,851	8,300

Notes:
1. MOE = measure of effectiveness. For mainline, ramp merge, and ramp diverge sections, the MOE is density, measured in passenger car equivalents per mile per lane; for weaving sections, the MOE is service flow, measured in passenger car equivalents per lane.
2. Volume refers to freeway mainline volume or ramp at the study facility (mainline volumes reported for weaving areas).
Bold indicates a project impact.
Source: Fehr & Peers, 2008.

Table 4.3-11 indicates that the mainline segments of US 50 between 59th Street and 65th Street would operate at LOS E conditions during the AM and/or PM peak hour with the No Project Scenario. The westbound mainline weave section on US 50 between 65th Street and Howe Avenue would operate at LOS E conditions during the PM peak hour and LOS F during the AM peak hour. The eastbound mainline weave section on US 50 between 65th Street and Howe Avenue would operate at LOS F conditions during the AM and/or PM peak hour with the No Project Scenario.

US 50 off-ramp queuing was also evaluated under Existing plus No Project Scenario conditions. The results are presented below:

- Westbound 65th Street Off-ramp – Storage length, 1,300 feet; Average maximum queue, 660 feet in AM peak hour, 1,120 feet in PM peak hour; and
- Eastbound 65th Street Off-ramp – Storage length, 1,375 feet; Average maximum queue, 460 feet in AM peak hour, 520 feet in PM peak hour.

The queuing results indicate that adequate queue storage is available at the US 50 off-ramps under the Existing plus No Project Scenario conditions.

Bicycle, Pedestrian, and Transit Operations

Implementation of the No Project Scenario would include improvements to the bicycle and pedestrian systems on many streets in the project area. These improvements include the completion of sidewalks and bike lanes as designated in the City's Bicycle Master Plan. As such, the implementation of the No Project Scenario would not result in significant impacts to the bicycle or pedestrian systems in the project area. Pedestrians and bicyclists would actually experience modest benefits with the implementation of the No Project Scenario improvements.

The addition of roadway and intersection improvements included in the No Project Scenario would result in reduced near-term congestion in the project area. As such, the implementation of the No Project Scenario would not impact transit operations. It is projected that the No Project Scenario would actually result in benefits to transit operations in terms of reduced travel times for bus routes that serve the area.

Existing Conditions Plus Scenario B

This section presents the results of the transportation analysis with implementation of Scenario B.

Intersection Operations

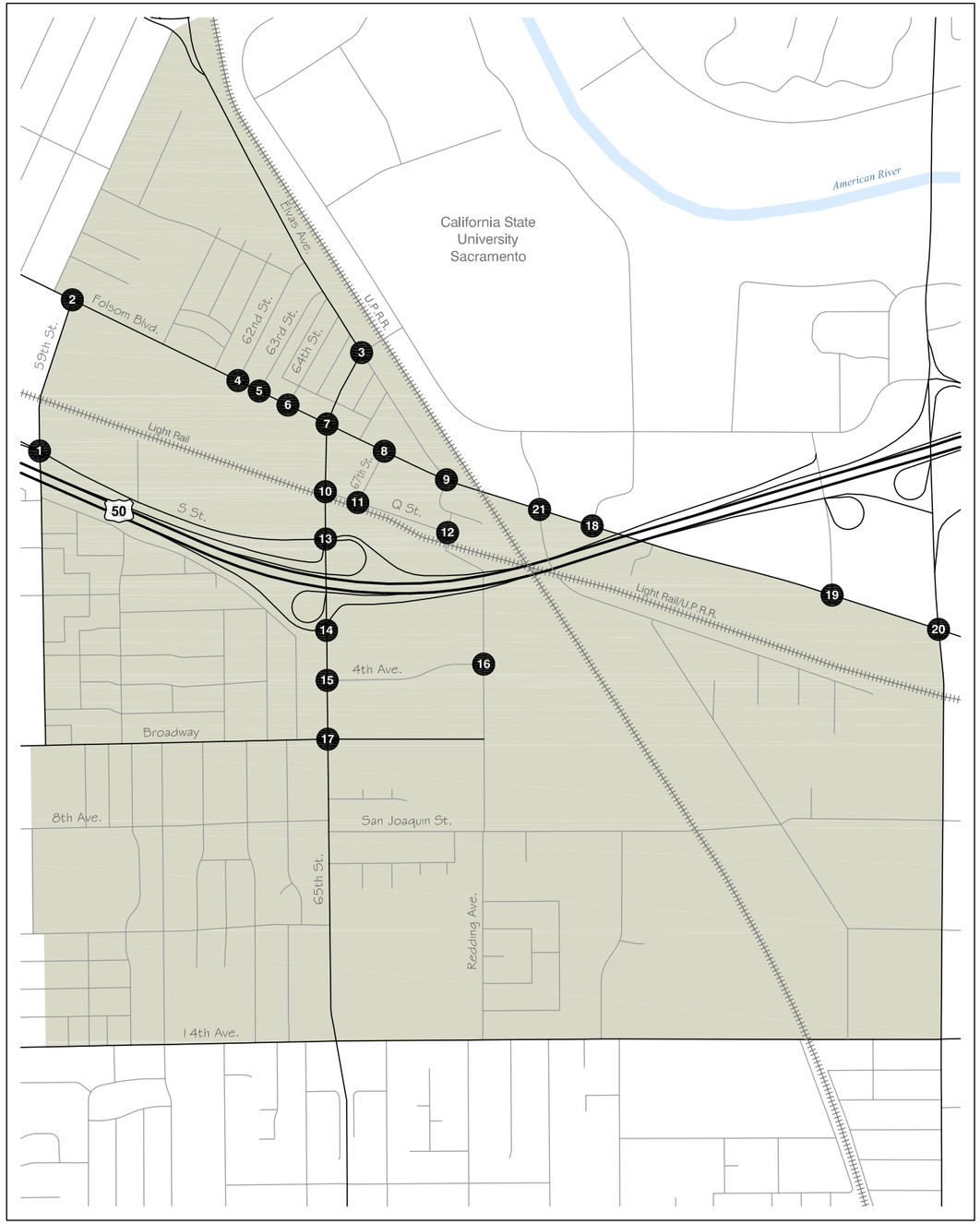
Figure 4.3-10 presents the projected peak hour turning movement volumes and lane configurations with Scenario B, and Table 4.3-12 summarizes the results of the intersection LOS analysis. All intersections, except those listed below, would operate at LOS A–D conditions.

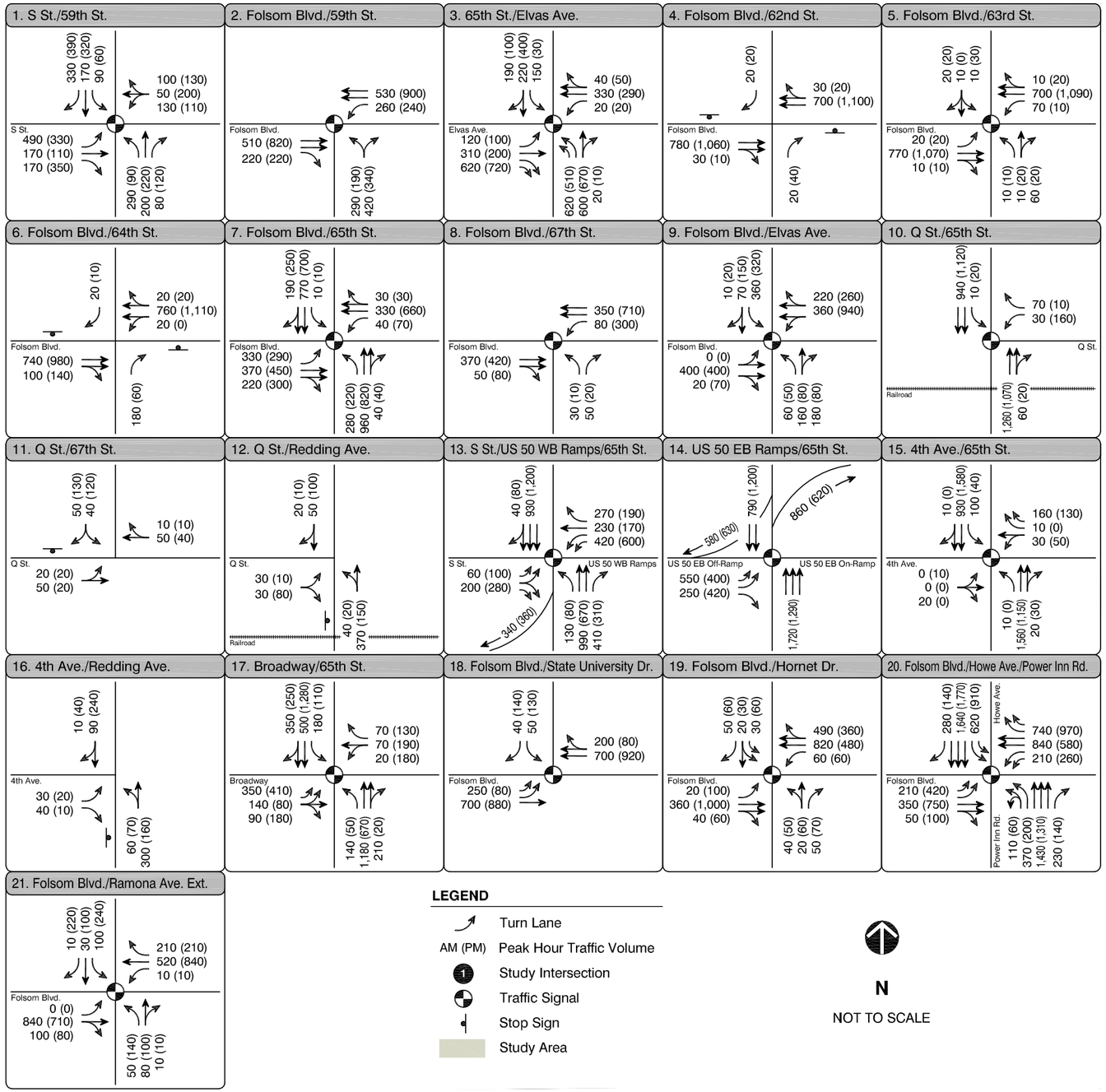
TABLE 4.3-12

INTERSECTION OPERATIONS – EXISTING PLUS SCENARIO "B" CONDITIONS

Intersection	Control	Acceptable LOS	AM Peak		PM Peak	
			LOS	Delay[1]	LOS	Delay[1]
1. S St/59th St	Signal	A-E	E	64	**F**	**87**
2. Folsom Blvd/59th St	Signal	A-E (exempt)	D	49	E	77
3. Elvas Ave/65th St	Signal	A-E	E	65	E	70
4. Folsom Blvd/62nd St	Stop	A-E (exempt)	A	8	A	5
5. Folsom Blvd/63rd St	Signal	A-E (exempt)	D	49	C	26
6. Folsom Blvd/64th St	Stop	A-E (exempt)	**F**	**52**	C	16
7. Folsom Blvd/65th St	Signal	A-E (exempt)	E	69	E	73
8. Folsom Blvd/67th St	Signal	A-E (exempt)	B	13	C	21
9. Folsom Blvd/Elvas Ave	Stop	A-E (exempt)	D	36	D	47
10. Q St/65th St	Signal	A-E (exempt)	C	24	D	44
11. Q St/67th St	Stop	A-E	A	8	C	18
12. Q St/69th St	Stop	A-E	A	2	A	8
13. S St/65th St	Signal	A-E (exempt)	D	44	**F**	**82**
14. US 50 EB Ramps/65th St	Signal	A-E (exempt)	B	17	B	19
15. 65th St/4th Ave	Signal	A-E (exempt)	B	20	B	13
16. 4th Ave/Redding Ave	Stop	A-E	B	11	A	8
17. 65th St/Broadway	Signal	A-E (exempt)	D	54	**F**	**87**
18. Folsom Blvd/State University Dr	Signal	A-E (exempt)	C	30	D	35
19. Folsom Blvd/Hornet Dr	Signal	A-E (exempt)	D	49	C	29
20. Folsom Blvd/Howe Ave	Signal	A-E (exempt)	**F**	**172**	**F**	**216[2]**
21. Folsom Blvd/Ramona Ave	Signal	A-E (exempt)	B	16	D	39

Notes:
1. For signalized intersections, average intersection delay is reported in seconds per vehicle. For side-street stop controlled intersections, the delay and LOS for the most-delayed individual movement is shown in parentheses below the average intersection delay and LOS.
2. Motorists are not likely to regularly experience average delays in excess of 180 seconds, as they will either divert to alternate routes or shift their travel to times outside the peak commute hour.
Source: Fehr & Peers, 2008.





LEGEND

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

N

NOT TO SCALE

FEHR & PEERS
TRANSPORTATION CONSULTANTS

Oct 13, 2008 SW
N:\2007Projects\SA_Projects\0101\graphics\June2008\10-3-08\fig16_phtv_expp_B.dwg

PEAK HOUR TRAFFIC VOLUMES AND LANE CONFIGURATIONS - EXISTING PLUS PROJECT CONDITIONS SCENARIO B

FIGURE 4.3-10

Implementation of Scenario B would result in a significant near-term impact at one intersection, on a non-exempt roadway, during the PM peak hour. This intersection is listed below:

- S Street/59th Street operates at LOS F during the PM peak hour (significant impact)

Implementation of Scenario B would result in unacceptable LOS conditions at four intersections along exempt roadways.

- Folsom Boulevard/64th Street operates at LOS F during the AM peak hour (significant impact)
- S Street/65th Street operates at LOS F during the PM peak hour (significant impact)
- 65th Street/Broadway Street operates at LOS F during the PM peak hour (significant impact)
- Folsom Boulevard/Howe Avenue operates at LOS F during the AM and PM peak hour

Implementation of Scenario B does not create a significant impact at the intersection of Folsom Boulevard/Howe Avenue because the increase in delay at this intersection is less than 5 seconds when compared to the No Project Scenario.

Roadway Segment Operations

Figure 4.3-11 shows the projected daily roadway segment volumes with Scenario B, and Table 4.3-13 presents the results of the roadway segment LOS analysis. All roadway segments, except those listed below, would operate at LOS A-D conditions.

Implementation of Scenario B would result in a significant near-term impact at one non-exempt roadway.

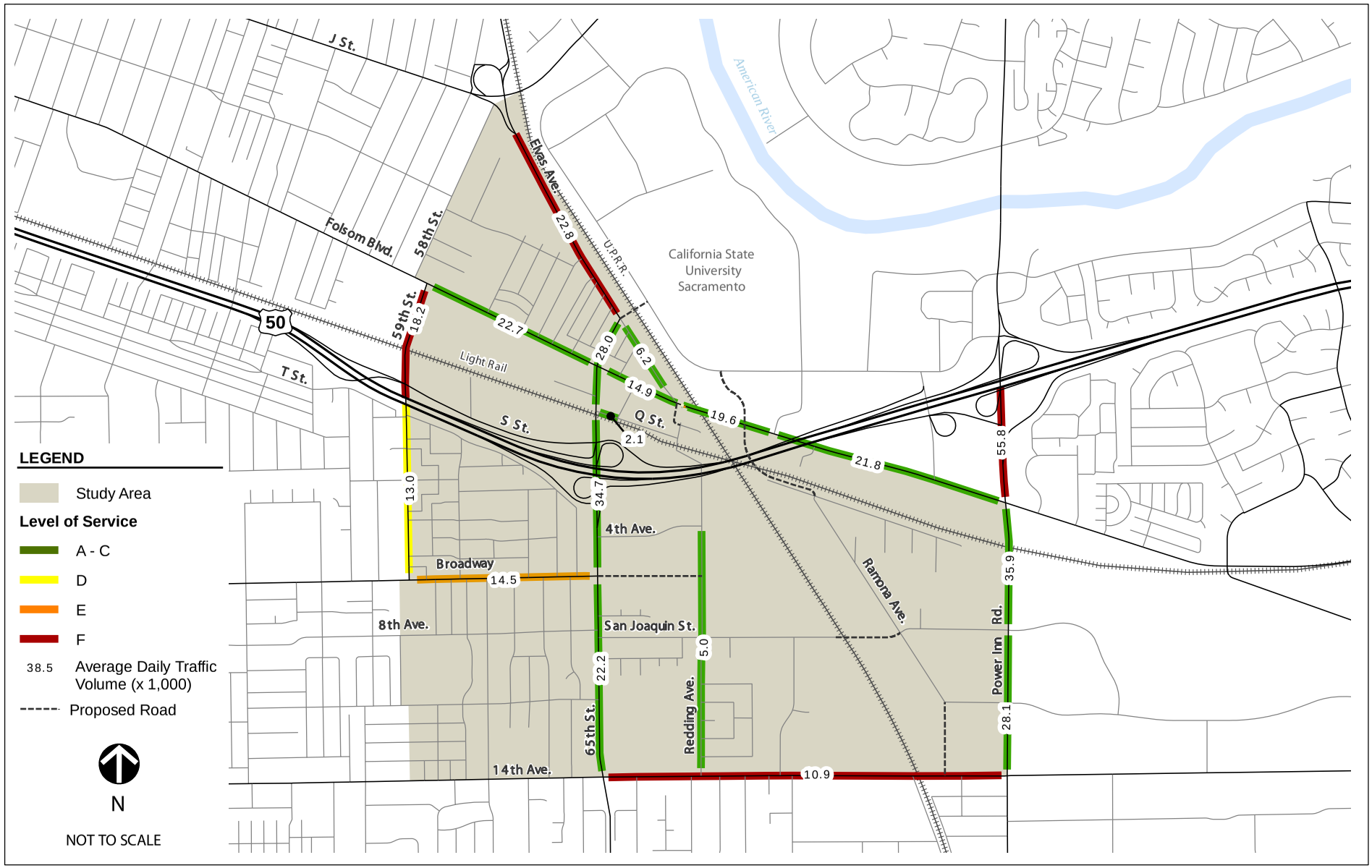
- Elvas Avenue – J Street to 65th Street (LOS F - significant impact)

Implementation of Scenario B would result in unacceptable LOS F conditions, but less-than-significant impacts, at two non-exempt roadway segments. Implementation of Scenario B does not create a significant impact for these road segments because the increase in volume/capacity ratio (v/c) is less than 0.02 when compared to the No Project Scenario.

- 59th Street – Folsom Boulevard to S Street
- East 14th Avenue – Redding Avenue to Ramona Avenue

Implementation of Scenario B would result in a non acceptable LOS conditions at two roadway segments along exempt roadways. Implementation of Scenario B does not create a significant impact for these road segments because the increase in volume/capacity ratio (v/c) is less than 0.02 when compared to the No Project Scenario.

- Broadway – 59th Street to 65th Street (LOS E)



FEHR & PEERS
TRANSPORTATION CONSULTANTS

N:\2007Projects\SA_Projects\0101\gis\October2008Draft\fig11_adt_expp_alt_B.mxd

AVERAGE DAILY TRAFFIC VOLUMES AND ROADWAY LEVEL OF SERVICE - EXISTING PLUS PROJECT CONDITIONS SCENARIO B

FIGURE 4.3-11

TABLE 4.3-13

ROADWAY OPERATIONS – EXISTING PLUS SCENARIO "B" CONDITIONS

Roadway Segment	Access Control	Number of Lanes	Acceptable LOS	Daily (ADT) Volume	V/C	LOS
1. Elvas Ave - J St to 65th St	Low	3 (art)	A-E	22,800	**1.01**	**F**
2. Folsom Blvd - 59th St to 65th St	Moderate	4 (art)	A-D (exempt)	22,700	0.63	B
3. Elvas Ave - 65th St to Folsom Blvd	Minor	2 (col)	A-E	6,200	0.41	A
4. 59th St - Folsom Blvd to S St	Low	2 (art)	A-E	18,200	1.21	F
5. 65th St - Folsom Blvd to S St	Moderate	4 (art)	A-E (exempt)	28,000	0.78	C
6. Folsom Blvd - 65th St to Elvas Ave	Moderate	4 (art)	A-E (exempt)	14,900	0.41	A
7. Folsom Blvd - Ramona Ave to State University Dr	Moderate	3 (art)	A-E (exempt)	19,600	0.73	C
8. Folsom Blvd - State University Dr to Hornet Dr	Moderate	4 (art)	A-E (exempt)	21,800	0.61	B
9. Q St - 65th St to 67th St	Minor	2 (col)	A-E	2,100	0.24	A
10. 59th St - S St to Broadway	Low	2 (art)	A-D	13,000	0.87	D
11. 65th St - US 50 EB Ramps to 4th Ave	Moderate	5 (art)	A-E (exempt)	34,700	0.77	C
12. Broadway - 59th St to 65th St	Low	2 (art)	A-D (exempt)	14,500	0.97	E
13. Redding Ave - 4th Ave to San Joaquin St	Minor	2 (col)	A-D	5,000	0.57	A
14. 65th St - San Joaquin St to East 14th Ave	Moderate	4 (art)	A-D (exempt)	22,200	0.62	B
15. East 14th Ave - Redding Ave to Ramona Ave	Minor	2 (col)	A-E	10,900	1.25	F
16. Power Inn Road - Ramona Ave to East 14th Ave	Moderate	6 (art)	A-D	28,100	0.52	A
17. Power Inn Road - Folsom Blvd to Ramona Ave	Moderate	6 (art)	A-E	35,900	0.66	B
18. Howe Ave - US 50 EB Ramps to Folsom Blvd	Moderate	6 (art)	A-E (exempt)	55,800	1.03	F

Notes:
(art) = arterial; (col) = collector – either minor or major as noted.
Source: Fehr & Peers, 2008.

- Howe Avenue – US 50 EB Ramps to Folsom Boulevard (LOS F)

Freeway Operations

Table 4.3-14 summarizes the results of Scenario B on freeway operations analysis.

Table 4.3-14 indicates that the mainline segments of US 50 between 59th Street and 65th Street would operate at LOS E conditions during the AM and/or PM peak hour with Scenario B. The westbound mainline weave section on US 50 between 65th Street and Howe Avenue would operate at LOS E conditions during the PM peak hour and LOS F during the AM peak hour. The eastbound mainline weave section on US 50 between 65th Street and Howe Avenue would operate at LOS F conditions during the AM and/or PM peak hour with Scenario B.

US 50 off-ramp queuing was also evaluated under Existing plus Scenario B conditions. The results are presented below:

- Westbound 65th Street Off-ramp – Storage length, 1,300 feet; Average maximum queue, 790 feet in AM peak hour, 1,560 feet in PM peak hour; and

TABLE 4.3-14

FREEWAY OPERATIONS – EXISTING PLUS SCENARIO "B" CONDITIONS

Freeway Facility	Type	With Scenario B Project					
		AM Peak			PM Peak		
		LOS	MOE[1]	Vol.[2]	LOS	MOE[1]	Vol.[2]
1. Eastbound US 50 from 59th St to 65th St	Mainline	E	43.7	8,340	E	36.3	8,480
2. Westbound US 50 from 65th St to 59th St	Mainline	E	37.9	8,850	E	39.1	7,950
3. Eastbound US 50 Weave between 65th St and Howe Ave	Weave	**F**	**2,030**	**8,770**	**F**	**2,002**	**8,800**
4. Westbound US 50 Weave between Howe Ave and 65th St	Weave	**F**	**1,950**	**9,090**	E	1,794	8,230

Notes:
1. MOE = measure of effectiveness. For mainline, ramp merge, and ramp diverge sections, the MOE is density, measured in passenger car equivalents per mile per lane; for weaving sections, the MOE is service flow, measured in passenger car equivalents per lane.
2. Volume refers to freeway mainline volume or ramp at the study facility (mainline volumes reported for weaving areas).
Bold indicates a project impact.
Source: Fehr & Peers, 2008.

- Eastbound 65th Street Off-ramp – Storage length, 1,375 feet; Average maximum queue, 250 feet in AM peak hour, 450 feet in PM peak hour.

The queuing results indicate that the queue on the westbound 65th Street off-ramp would extend beyond the ramp gore and into the auxiliary lane that extends between 65th Street and the westbound on-ramp at the adjacent Howe Avenue interchange during the PM peak hour. The eastbound 65th Street off-ramp queue would be accommodated within the ramp storage space under Existing plus Scenario B conditions.

Bicycle, Pedestrian, and Transit Operations

Implementation of Scenario B would include improvements to the bicycle and pedestrian systems on many streets in the project area. These improvements include the completion of sidewalks and bike lanes. As such, the implementation of Scenario B would not result in significant impacts to the bicycle or pedestrian systems within the project area. Pedestrians and bicyclists would actually experience significant benefits with the implementation of Scenario B improvements.

The addition of roadway and intersection improvements included in Scenario B would not result in a significant change in vehicle operations in the project area, given that the existing number of lanes at key roadways and intersections would be maintained. As such, the implementation of Scenario B would not impact transit operations. It is projected that Scenario A would have no affect on transit operations.

Existing With Scenario C

This section presents the results of the transportation analysis with implementation of Scenario C.

Intersection Operations

Figure 4.3-12 presents the projected peak hour turning movement volumes and lane configurations with Scenario C, and Table 4.3-15 summarizes the results of the intersection LOS analysis. All intersections, except those listed below, would operate at LOS A-D conditions.

TABLE 4.3-15

INTERSECTION OPERATIONS – EXISTING PLUS SCENARIO "C" CONDITIONS

Intersection	Control	Acceptable LOS	AM Peak		PM Peak	
			LOS	Delay[1]	LOS	Delay[1]
1. S St/59th St	Signal	A-E	E	58	D	50
2. Folsom Blvd/59th St	Signal	A-E (exempt)	E	63	**F**	**132**
3. Elvas Ave/65th St	Signal	A-E	C	33	C	29
4. Folsom Blvd/62nd St	Stop	A-E (exempt)	C	17	A	9
5. Folsom Blvd/63rd St	Signal	A-E (exempt)	C	33	B	18
6. Folsom Blvd/64th St	Stop	A-E (exempt)	B	14	A	7
7. Folsom Blvd/65th St	Signal	A-E (exempt)	E	60	D	51
8. Folsom Blvd/67th St	Signal	A-E (exempt)	C	30	C	28
9. Folsom Blvd/Elvas Ave	Stop	A-E (exempt)	D	44	E	58
10. Q St/65th St	Signal	A-E (exempt)	C	28	C	21
11. Q St/67th St	Stop	A-E	A	7	A	7
12. Q St/69th St	Stop	A-E	A	6	A	8
13. S St/65th St	Signal	A-E (exempt)	C	34	E	60
14. US 50 EB Ramps/65th St	Signal	A-E (exempt)	B	14	B	20
15. 65th St/4th Ave	Signal	A-E (exempt)	B	18	B	13
16. 4th Ave/Redding Ave	Stop	A-E	A	9	A	8
17. 65th St/Broadway	Signal	A-E (exempt)	E	60	E	79
18. Folsom Blvd/State University Dr	Signal	A-E (exempt)	D	42	**F**	**105**
19. Folsom Blvd/Hornet Dr	Signal	A-E (exempt)	C	23	C	25
20. Folsom Blvd/Howe Ave	Signal	A-E (exempt)	F	118	F	96
21. Folsom Blvd/Ramona Ave	Signal	A-E (exempt)	D	46	E	76

Notes:
1. For signalized intersections, average intersection delay is reported in seconds per vehicle. For side-street stop controlled intersections, the delay and LOS for the most-delayed individual movement is shown in parentheses below the average intersection delay and LOS.
2. Motorists are not likely to regularly experience average delays in excess of 180 seconds, as they will either divert to alternate routes or shift their travel to times outside the peak commute hour.
Source: Fehr & Peers, 2008.

Implementation of Scenario C would result in no significant near-term impacts to intersections located on non-exempt roadways.

Implementation of Scenario C would result in a unacceptable LOS conditions at three intersections along exempt roadways.

- Folsom Boulevard/59th Street operates at LOS F during the PM peak hour (significant impact)

- Folsom Boulevard/State University Drive operates at LOS F during the PM peak hour (significant impact)
- Folsom Boulevard/Howe Avenue operates at LOS F during the AM and PM peak hour

Implementation of Scenario C does not create a significant impact at the intersection of Folsom Boulevard/Howe Avenue because the increase in delay at this intersection is less than 5 seconds when compared to the No Project Scenario.

Roadway Segment Operations

Figure 4.3-13 shows the projected daily roadway segment volumes with Scenario C, and Table 4.3-16 presents the results of the roadway segment LOS analysis. All roadway segments, except those listed below, would operate at acceptable LOS A-D conditions.

TABLE 4.3-16

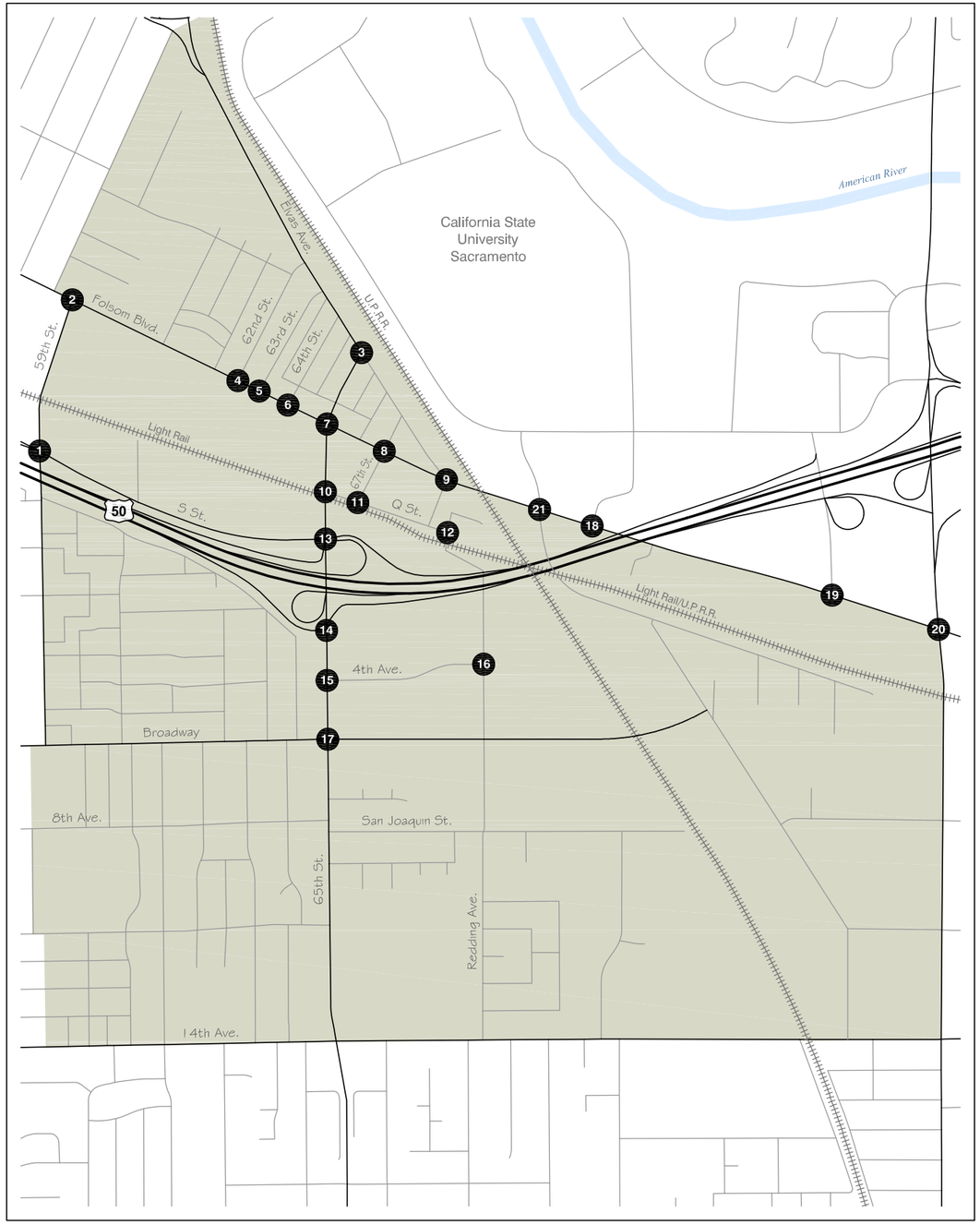
ROADWAY OPERATIONS – EXISTING PLUS SCENARIO "C" CONDITIONS

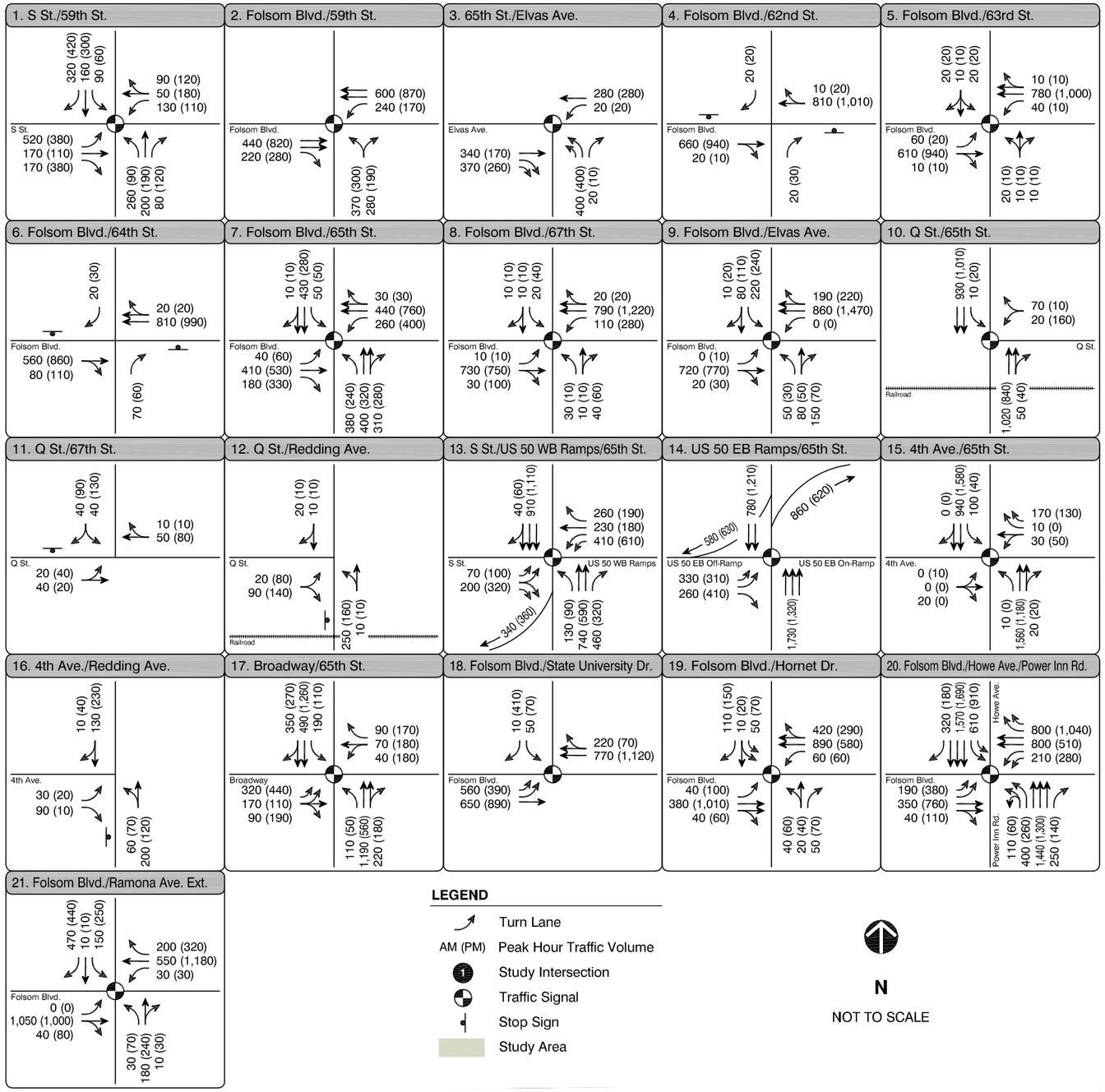
Roadway Segment	Access Control	Number of Lanes	Acceptable LOS	Daily (ADT) Volume	V/C	LOS
1. Elvas Ave - J St to 65th St	Low	2 (art)	A-E	13,400	0.89	D
2. Folsom Blvd - 59th St to 65th St	Moderate	4 (art)	A-D (exempt)	20,200	1.12	D
3. Elvas Ave - 65th St to Folsom Blvd	Minor	2 (col)	A-E	5,000	0.33	A
4. 59th St - Folsom Blvd to S St	Low	2 (art)	A-E	18,500	**1.23**	**F**
5. 65th St - Folsom Blvd to S St	Moderate	4 (art)	A-E (exempt)	24,100	0.67	B
6. Folsom Blvd - 65th St to Elvas Ave	Moderate	4 (art)	A-E (exempt)	24,300	0.90	D
7. Folsom Blvd - Ramona Ave to State University Dr	Moderate	3 (art)	A-E (exempt)	27,200	**1.01**	**F**
8. Folsom Blvd - State University Dr to Hornet Dr	Moderate	4 (art)	A-E (exempt)	23,400	0.65	B
9. Q St - 65th St to 67th St	Minor	2 (col)	A-E	2,300	0.26	A
10. 59th St - S St to Broadway	Low	2 (art)	A-D	12,800	0.85	D
11. 65th St - US 50 EB Ramps to 4th Ave	Moderate	5 (art)	A-E (exempt)	34,100	0.76	C
12. Broadway - 59th St to 65th St	Low	2 (art)	A-D (exempt)	15,500	**1.03**	**F**
13. Redding Ave - 4th Ave to San Joaquin St	Minor	2 (col)	A-D	4,800	0.55	A
14. 65th St - San Joaquin St to East 14th Ave	Moderate	4 (art)	A-D (exempt)	22,400	0.62	B
15. East 14th Ave - Redding Ave to Ramona Ave	Minor	2 (col)	A-E	10,500	1.20	F
16. Power Inn Road - Ramona Ave to East 14th Ave	Moderate	6 (art)	A-D	29,600	0.55	A
17. Power Inn Road - Folsom Blvd to Ramona Ave	Moderate	6 (art)	A-E	35,900	0.66	B
18. Howe Ave - US 50 EB Ramps to Folsom Blvd	Moderate	6 (art)	A-E (exempt)	55,600	1.03	F

Notes:
(art) = arterial; (col) = collector – either minor or major as noted.
Source: Fehr & Peers, 2008.

Implementation of Scenario C would result in a significant near-term impact at one non-exempt roadway.

- 59th Street – Folsom Boulevard to S Street (LOS F conditions - significant impact)



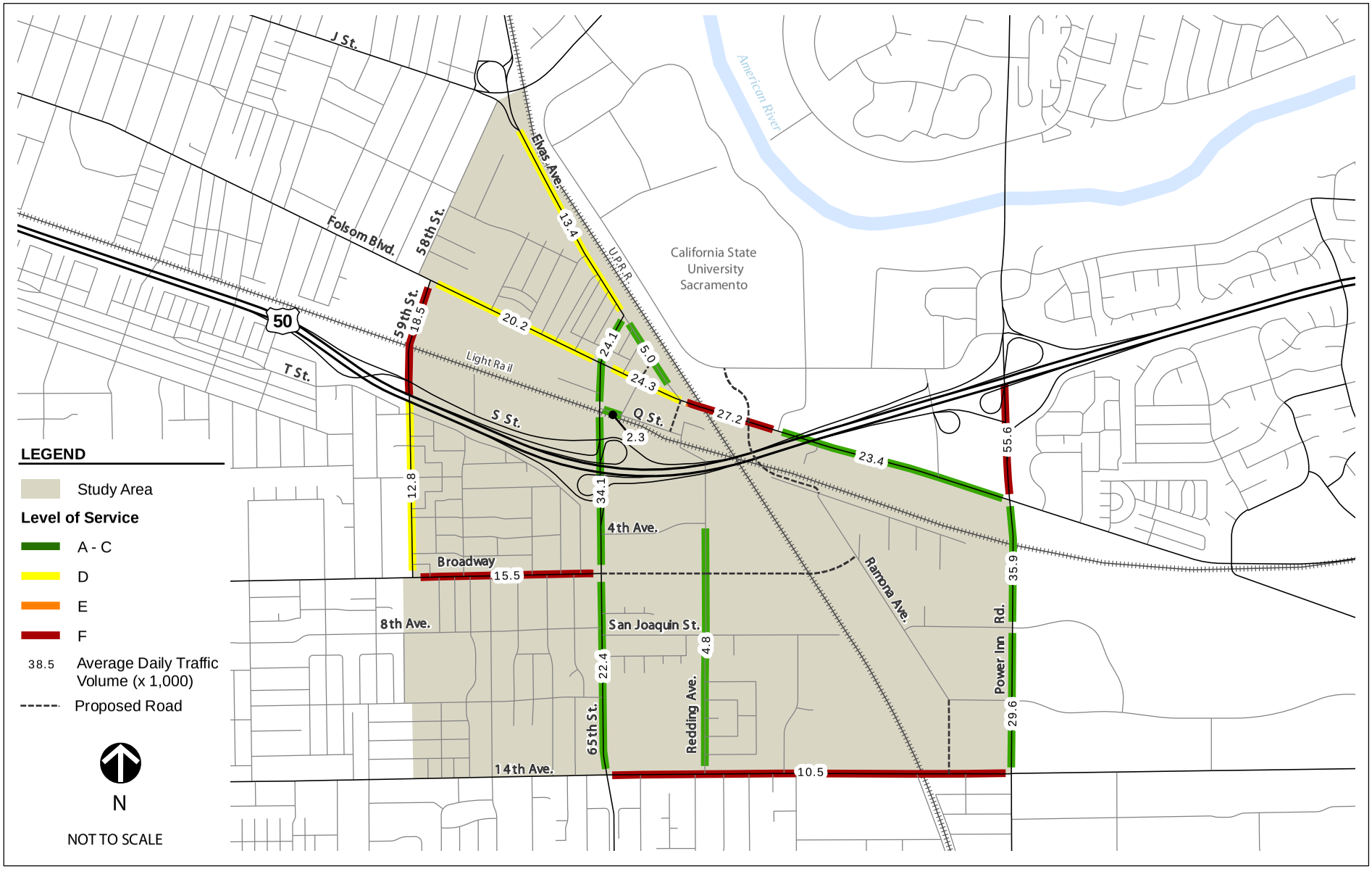


FEHR & PEERS
TRANSPORTATION CONSULTANTS

Oct 13, 2008 SW
N:\2007Projects\SA_Projects\0101\graphics\June2008\10-3-08\fig18_phtv_expp_C.dwg

PEAK HOUR TRAFFIC VOLUMES AND LANE CONFIGURATIONS - EXISTING PLUS PROJECT CONDITIONS SCENARIO C

FIGURE 4.3-12



FEHR & PEERS
TRANSPORTATION CONSULTANTS

N:\2007Projects\SA_Projects\0101\gis\October2008Draft\fig13_adt_expp_alt_C.mxd

AVERAGE DAILY TRAFFIC VOLUMES
AND ROADWAY LEVEL OF SERVICE -
EXISTING PLUS PROJECT CONDITIONS
SCENARIO C

FIGURE 4.3-13

Implementation of Scenario C would result in LOS F conditions, but less-than-significant impacts, at one non-exempt roadway segment. Implementation of Scenario C does not create a significant impact for these road segments because the increase in volume/capacity ratio (v/c) is less than 0.02 when compared to the No Project Scenario.

- East 14th Avenue – Redding Avenue to Ramona Avenue

Implementation of Scenario C would result in a non acceptable LOS conditions at three roadway segments along exempt roadways. Significant impacts would occur at the first two road segments listed below.

- Folsom Boulevard – Ramona Avenue to State University Drive (LOS F – significant impact)
- Broadway – 59th Street to 65th Street (LOS F – significant impact)
- Howe Avenue – US 50 EB Ramps to Folsom Boulevard (LOS F)

Implementation of Scenario C does not create a significant impact for the segment of Howe Avenue because the increase in volume/capacity ratio (v/c) is less than 0.02 when compared to the No Project Scenario.

Freeway Operations

Table 4.3-17 summarizes the results of Scenario C on freeway operations analysis.

TABLE 4.3-17

FREEWAY OPERATIONS – EXISTING PLUS SCENARIO "C" CONDITIONS

		With Scenario C Project					
		AM Peak			PM Peak		
Freeway Facility	**Type**	**LOS**	**MOE[1]**	**Vol.[2]**	**LOS**	**MOE[1]**	**Vol.[2]**
1. Eastbound US 50 from 59th St to 65th St	Mainline	E	43.3	8,310	E	44.3	8,390
2. Westbound US 50 from 65th St to 59th St	Mainline	E	38.1	8,900	E	39.2	7,960
3. Eastbound US 50 Weave between 65th St and Howe Ave	Weave	**F**	**2,079**	**8,940**	**F**	**2,047**	**8,760**
4. Westbound US 50 Weave between Howe Ave and 65th St	Weave	**F**	**1,934**	**9,090**	E	1,836	8,250

Notes:
1. MOE = measure of effectiveness. For mainline, ramp merge, and ramp diverge sections, the MOE is density, measured in passenger car equivalents per mile per lane; for weaving sections, the MOE is service flow, measured in passenger car equivalents per lane.
2. Volume refers to freeway mainline volume or ramp at the study facility (mainline volumes reported for weaving areas).
Bold indicates a project impact
Source: Fehr & Peers, 2008.

Table 4.3-17 indicates that the mainline segments of US 50 between 59th Street and 65th Street would operate at LOS E conditions during the AM and/or PM peak hour with Scenario C. The westbound mainline weave section on US 50 between 65th Street and Howe Avenue would

operate at LOS E conditions during the PM peak hour and LOS F during the AM peak hour. The eastbound mainline weave section on US 50 between 65th Street and Howe Avenue would operate at LOS F conditions during the AM and/or PM peak hour with Scenario C.

US 50 off-ramp queuing was also evaluated under Existing plus Scenario C conditions. The results are presented below:

- Westbound 65th Street Off-ramp – Storage length, 1,300 feet; Average maximum queue, 420 feet in AM peak hour, 1,360 feet in PM peak hour; and
- Eastbound 65th Street Off-ramp – Storage length, 1,375 feet; Average maximum queue, 170 feet in AM peak hour, 280 feet in PM peak hour.

The queuing results indicate that the queue on the westbound 65th Street off-ramp would extend beyond the ramp gore and into the auxiliary lane that extends between 65th Street and the westbound on-ramp at the adjacent Howe Avenue interchange during the PM peak hour. The eastbound 65th Street off-ramp queue would be accommodated within the ramp storage space under the Existing plus Scenario C conditions.

Bicycle, Pedestrian, and Transit Operations

The implementation of Scenario C would include improvements to the bicycle and pedestrian systems on many streets in the project area. These improvements include the completion of sidewalks and bike lanes. As such, the implementation of Scenario C would not result in significant impacts to the bicycle or pedestrian systems in the project area. Pedestrians and bicyclists would actually experience significant benefits with the implementation of Scenario C improvements.

The addition of roadway and intersection improvements included in Scenario C would result in increased near-term congestion in the project area. As such, the implementation of Scenario C would impact transit operations. Based on the near-term traffic conditions, the impact to transit operations due to the increase in travel time would be significant for Scenario C.

CUMULATIVE CONDITIONS ANALYSIS

An evaluation of "Cumulative plus Project" conditions is provided to identify the impact of the two project scenarios on cumulative travel conditions in the project area. This section describes the transportation system under cumulative conditions with each of the project scenarios. The cumulative conditions land use, roadway network, bicycle facilities, pedestrian facilities, and transit system assumptions are described, along with the traffic forecasting methodology and the results of the transportation impact analysis.

Cumulative Analysis Methodology

As discussed earlier, the City of Sacramento recently updated its General Plan. In addition to the changes in the LOS policy, there are also changes to the land use and transportation elements of the document. Specifically, the 2030 General Plan allows for higher land use densities in the 65th Street station project area. The traffic study analyzed cumulative conditions with the two project scenarios assuming the 2030 General Plan land uses in the project area, as well as the circulation system identified for the remainder of the City of Sacramento, as identified in the 2030 General Plan.

Land Uses

Land uses under cumulative conditions are based on information contained in the version of the SACMET regional travel model developed for the 2030 General Plan. The land use assumptions are updated to reflect current plans for the CSU Sacramento campus and the High Technology campus planned for the Ramona area.

Roadway Network

The version of the regional travel model used for the analysis contains circulation improvements identified for the remainder of the city of Sacramento, including the fully funded (Tier 1) projects described in the 2035 SACOG Metropolitan Transportation Plan (MTP). To improve the quality of the traffic forecasts, additional roadway network detail was added to the baseline year (2005) model to reflect the roadway network in the project area and the traffic analysis zones were disaggregated. After these modifications were incorporated, this version of the SACMET model was validated to traffic conditions in the project area.

Typically signal timings are not assumed to change in the future; however, because of extensive roadway projects planned under cumulative conditions, the traffic signals throughout the project area would have to be re-timed to accommodate future changes in the roadway network. Therefore, it was also assumed that the traffic signal timings were optimized throughout the project area.

Traffic Forecasts

To determine future year traffic volumes, the SACMET travel demand forecasting model was run under the following scenarios:

- 2005 base line model conditions
- 2030 (cumulative) No Project Scenario
- 2030 (cumulative) plus Scenario B
- 2030 (cumulative) plus Scenario C

Cumulative year forecasts were developed using an industry standard method to reduce model error known as the "difference method." The difference method works by taking the difference between the 2030 raw model volumes and the 2005 raw model volumes to determine the growth in traffic between base and future year versions of the model. The growth in traffic is then added to existing traffic counts to yield adjusted cumulative conditions traffic forecasts.

Results of Project Area System Analysis

This section provides the results of a comparison of two key area-wide travel performance measures, VMT and corridor travel time, for the three study scenarios.

Project Area Travel

The assessment of area-wide performance measures provide an indication of whether the three project scenarios would result in reduced vehicle travel (i.e., vehicle miles traveled). The following discussion provides a comparison of the scenarios. The VMT data generated by the travel demand model, which includes the sum of all vehicle trips during the AM peak hour and PM peak hour within the project area for cumulative conditions, are shown below in Table 4.3-18.

TABLE 4.3-18

VEHICLE MILES TRAVELED DURING PEAK HOURS FOR CUMULATIVE CONDITIONS

No Project Scenario	Scenario B	Scenario C
327,465	324,816	327,276
Source: Fehr & Peers, 2009.		

Scenarios B and C result in a reduction in total VMT of approximately 0.8 percent and 0.05 percent, respectively, when compared with the No Project Scenario, for all vehicle trips within the project area.

Corridor Travel Times

Figure 4.3-14 shows corridor travel times during the PM peak hour for the following major east-west and north-south routes:

- Folsom Boulevard: 59th Street to Howe Avenue; and
- 65th Street-Elvas Avenue: J Street to E. 14th Avenue.

Travel times along both corridors would be shortest with the No Project Scenario, with 7 to 9 minute total travel times along the east-west Folsom Boulevard corridor and 6 to 13 minute total travel times along the north-south 65th Street-Elvas Avenue corridor.

Scenario B would have the longest travel times of all three scenarios. When compared to the No Project Scenario, Scenario B would have travel times that are approximately 5 minutes longer along Folsom Boulevard in the eastbound direction and approximately 7 minutes longer in the westbound direction. Travel times along the 65th Street-Elvas Avenue corridor would be approximately nine minutes longer for northbound motorists and four minutes longer for southbound motorists.

Scenario C would have travel times that are approximately three minutes longer compared to the No Project Scenario along Folsom Boulevard in the eastbound direction, and five minutes longer in the westbound direction. Travel times along the north-south 65th Street-Elvas Avenue corridor would be four minutes longer for northbound motorists compared to the No Project scenario, but would be approximately 1 minute shorter for southbound motorists.

Effects of Cumulative Congestion Levels on Vehicle Demand Served

Table 4.3-19 compares the percent of the peak hour vehicle travel demand that is able to be served within the hour for the entire project area network. The percent demand served is a measure of the likely extent of peak hour spreading (i.e., LOS F conditions for multiple hours).

TABLE 4.3-19

PERCENT DEMAND SERVED IN PROJECT AREA NETWORK CUMULATIVE CONDITIONS

	No Project Scenario	Scenario B	Scenario C
AM Peak Hour	92%	88%	94%
PM Peak Hour	89%	86%	88%

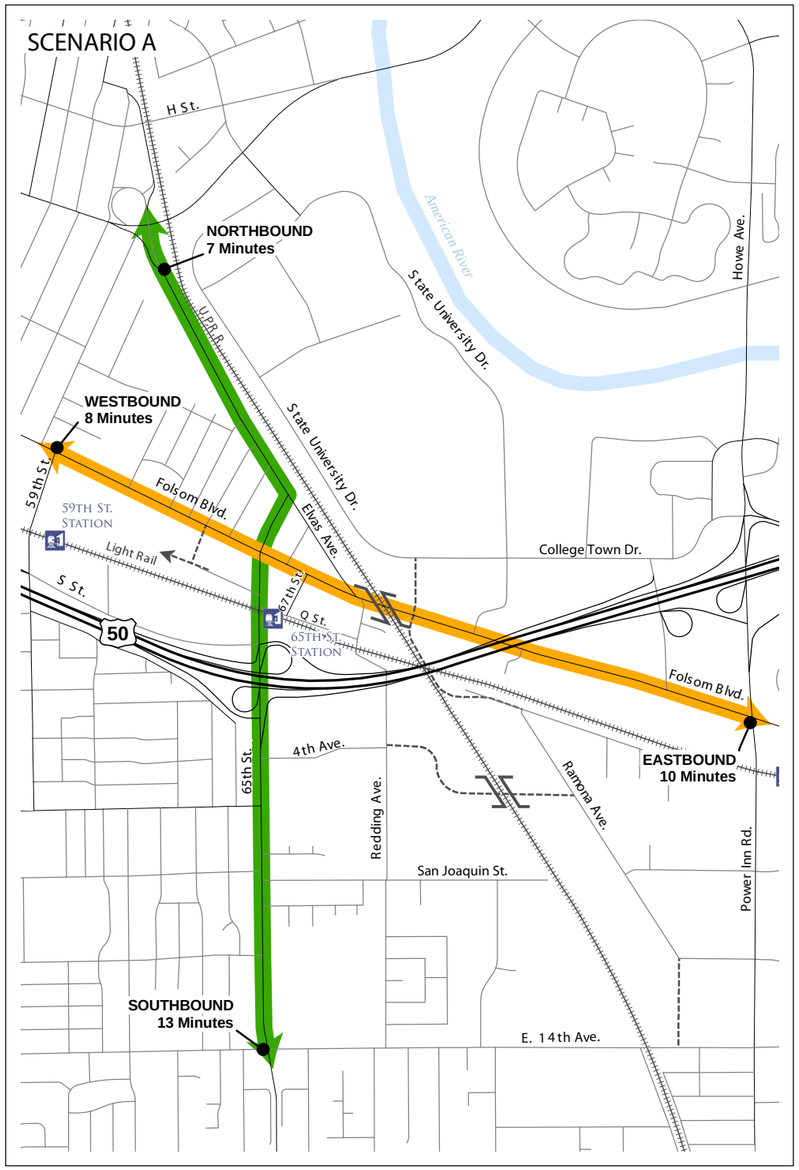
Source: Fehr & Peers, 2009.

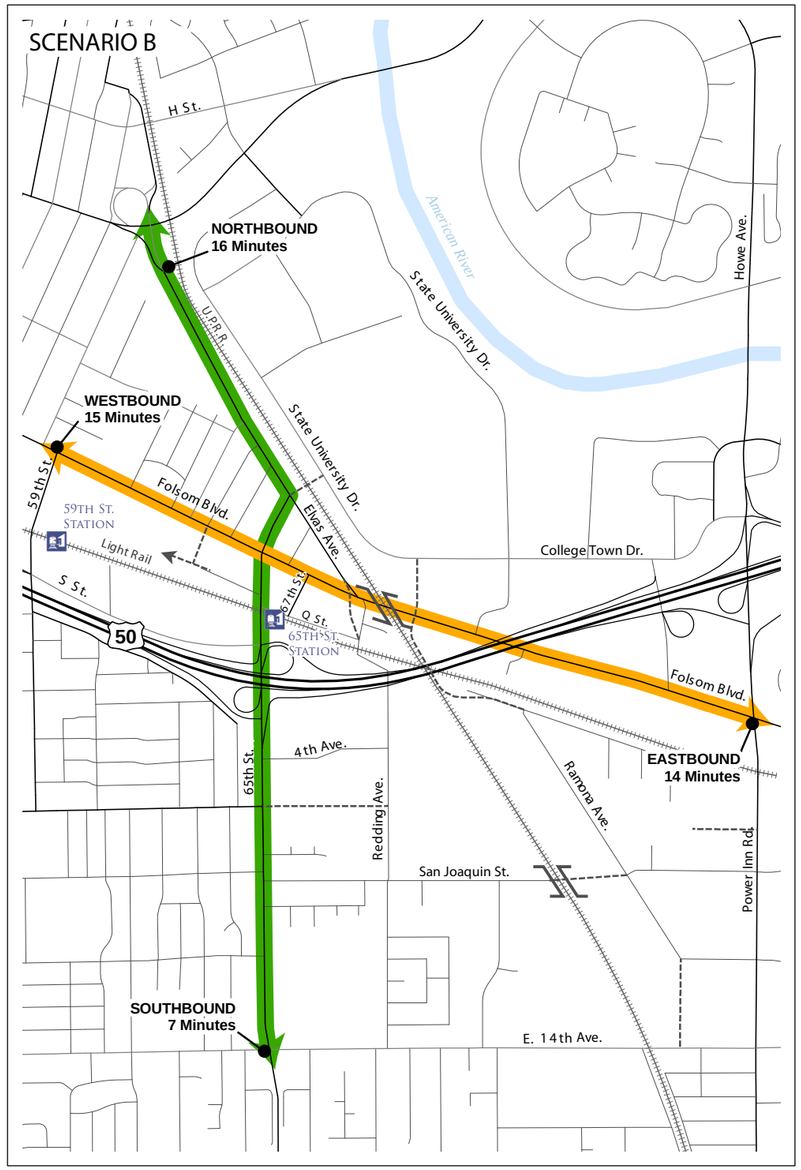
The following conclusions can be reached about the percent demand data.

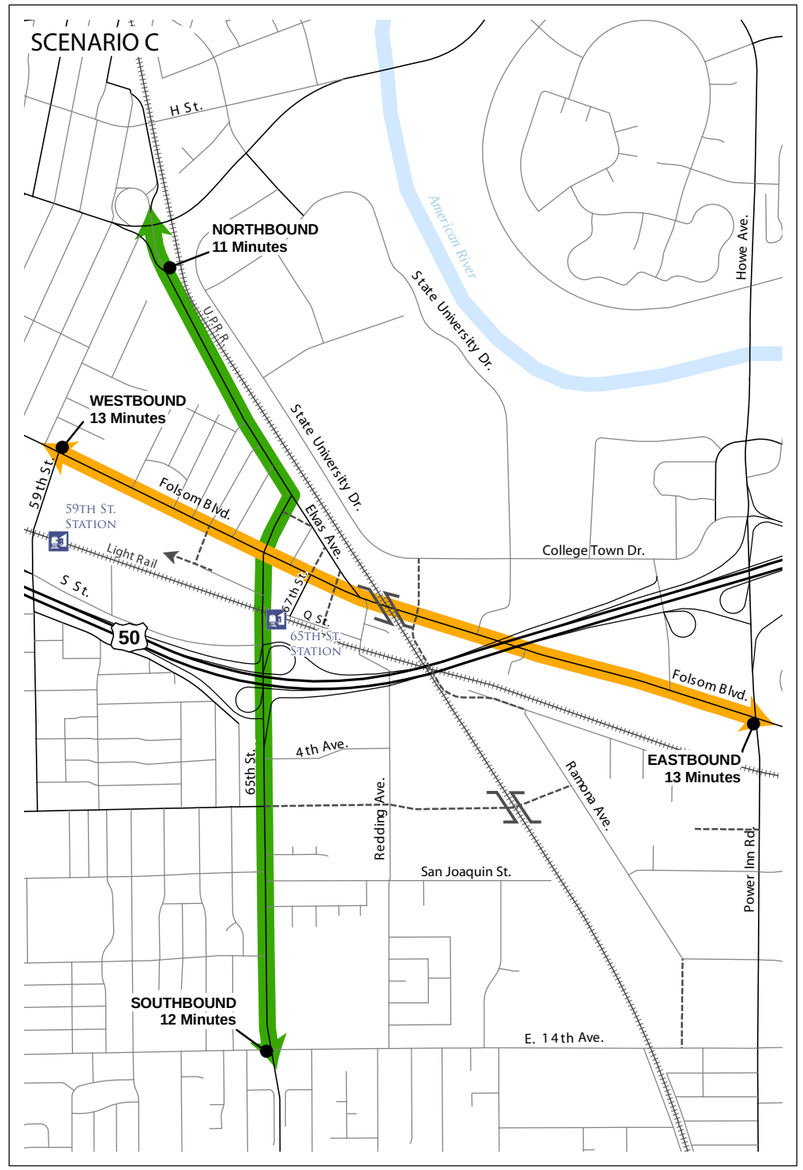
- The highest potential for peak spreading would occur during the PM peak hour, when slightly less than 90 percent of the total demand is served by the project area network.
- There is little difference, on an overall system level, when comparing the percent demand served by the three scenarios. It should be noted, though, that the No Project Scenario is projected to have a slightly higher peak hour demand along the Folsom Boulevard corridor given the planned widening to four lanes throughout the project area.

Comparison of Volumes on Key Routes

Figures 4.3-15 and 4.3-16 compare cumulative PM peak hour volumes for Scenarios B and C to the No Project Scenario. The figures show the absolute difference in volumes as well as the percent increase or decrease.







LEGEND

- Roadway Extension
- Rail
- Light Rail Station

N

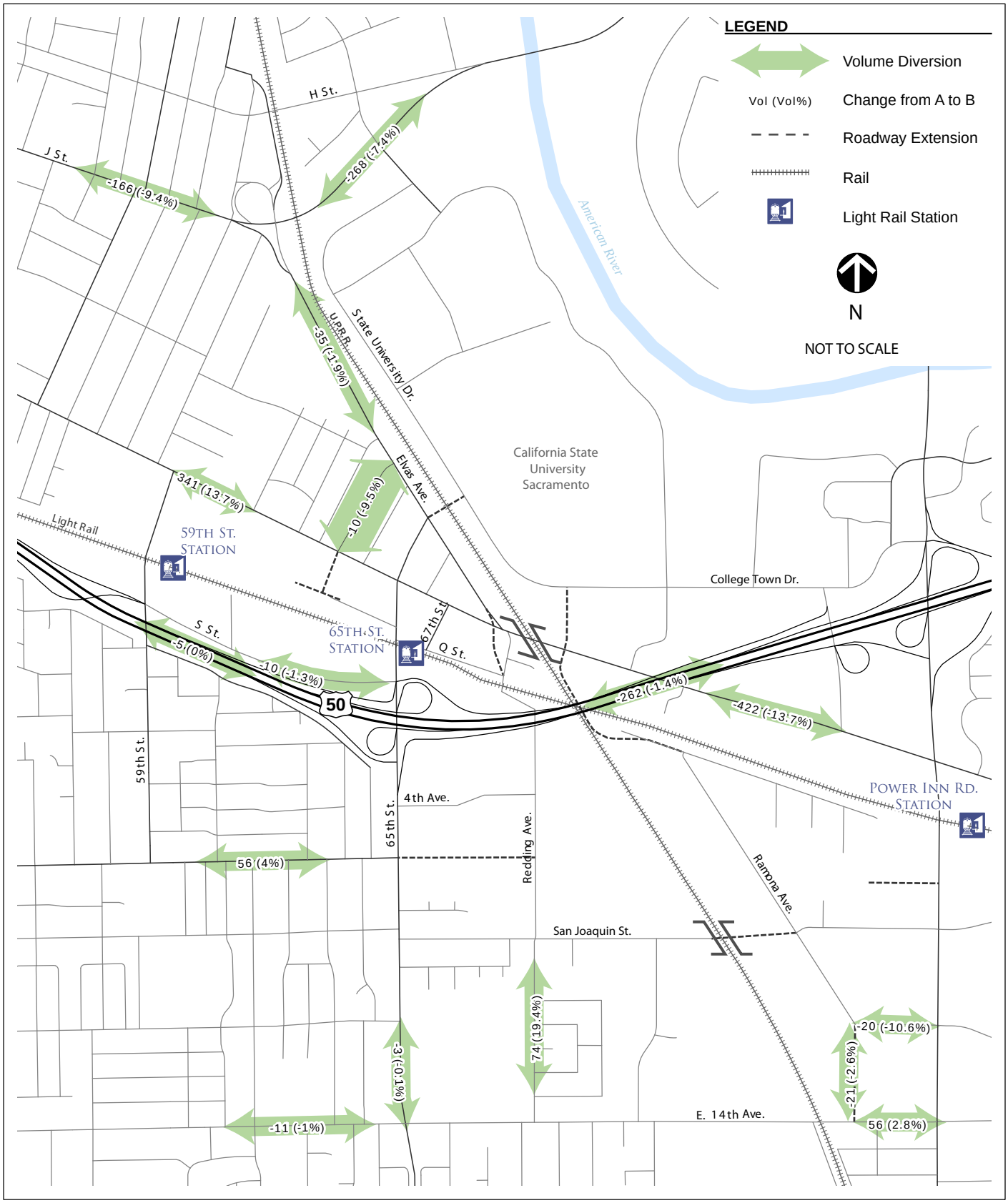
NOT TO SCALE

FEHR & PEERS
TRANSPORTATION CONSULTANTS

N:\2009Projects\SA_Projects\0154_65thSt\Graphics\GIS\MXD\fig20_Travel_Time_PM.mxd

PM PEAK HOUR TRAVEL TIME
CUMULATIVE CONDITIONS

FIGURE 4.3-14

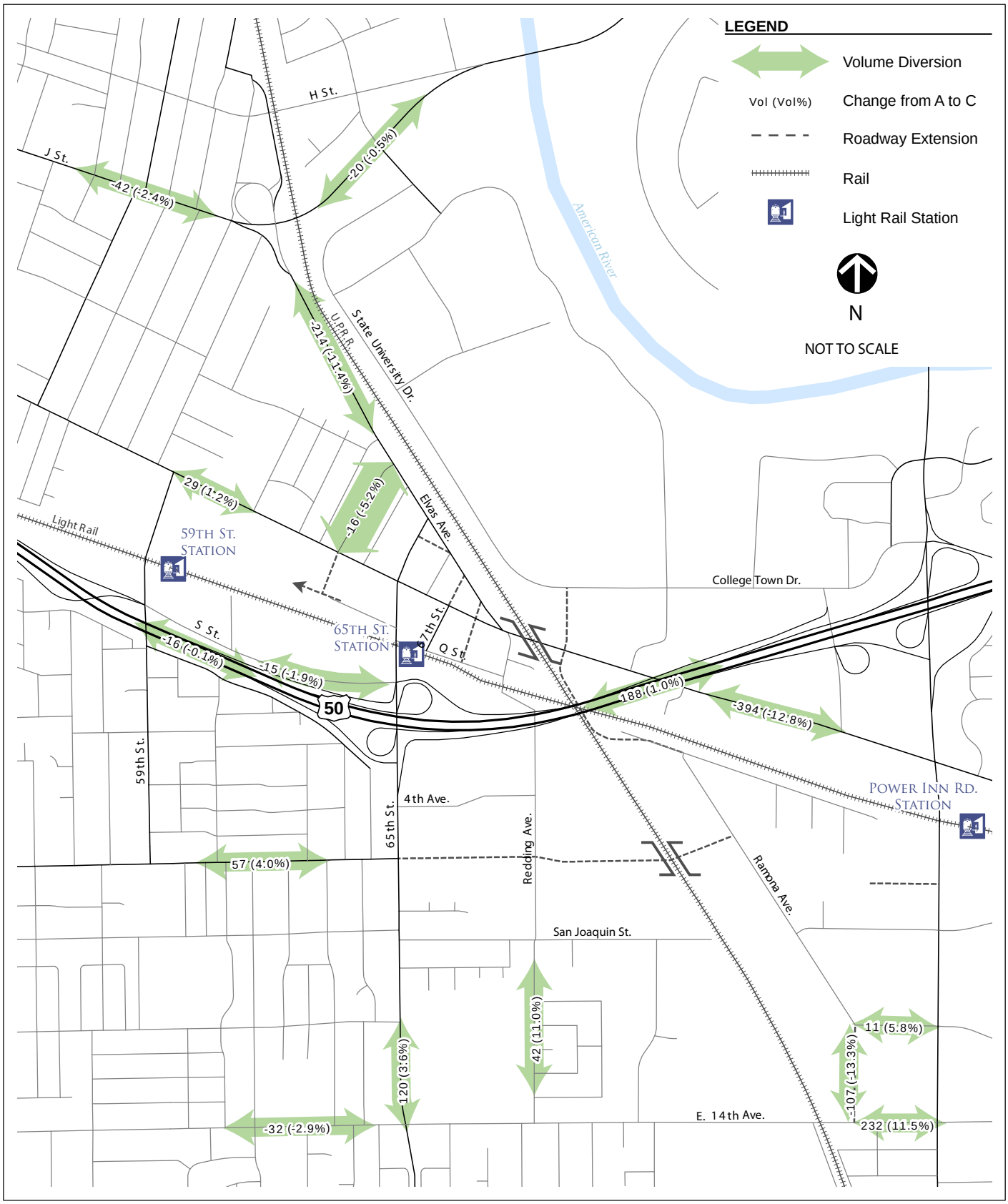


FEHR & PEERS
TRANSPORTATION CONSULTANTS

N:\2009Projects\SA_Projects\0154_65thSt\Graphics\GIS\MXD\fig21_Diversion_AB.mxd

CUMULATIVE CONDITIONS
PM TRAFFIC VOLUME DIVERSION
SCENARIO A TO SCENARIO B

FIGURE 4.3-15



FEHR & PEERS
TRANSPORTATION CONSULTANTS

N:\2009Projects\SA_Projects\0154_65thSt\Graphics\GIS\MXD\fig22_Diversion_AC.mxd

CUMULATIVE CONDITIONS
PM TRAFFIC VOLUME DIVERSION
SCENARIO A TO SCENARIO C

FIGURE 4.3-16

The biggest difference in traffic volumes under Scenario B, when compared to the No Project Scenario, is a reduction in volumes on Folsom Boulevard in the segment between the UPRR undercrossing and University Drive East. The San Joaquin Extension, between Redding Avenue and Ramona Avenue, would carry approximately 630 vehicle trips at the new UPRR undercrossing during the PM peak hour. The new 65th Street Tunnel to the CSUS campus would carry approximately 1,890 vehicle trips at the new UPRR undercrossing. No significant change in traffic volumes is projected for US 50, J Street, or the residential streets that parallel 65th Street between Folsom Boulevard and Elvas Avenue.

The biggest difference in traffic volumes under Scenario C, when compared to the No Project Scenario, is a reduction in volumes on Elvas Avenue in the segment between J Street and Folsom Boulevard as well as on Folsom Boulevard in the segment between the UPRR undercrossing and University Drive East. The Broadway Extension, between 65th Street and Ramona Avenue, would carry approximately 1,040 vehicle trips at the new UPRR undercrossing during the PM peak hour. No significant change in volumes is projected for US 50, J Street, or the residential streets that parallel 65th Street between Folsom Boulevard and Elvas Avenue.

Cumulative No Project Scenario

This section presents the results of the transportation analysis under cumulative conditions with implementation of the No Project Scenario.

Intersection Operations

Figure 4.3-17 presents the projected peak hour turning movement volumes and lane configurations with the Cumulative No Project Scenario, and Table 4.3-20 summarizes the results of the intersection LOS analysis.

Implementation of the No Project Scenario under cumulative conditions would result in unacceptable LOS conditions (i.e., LOS F) at the following intersections. All other intersections, except those listed below, would operate at LOS A-D conditions.

- Q Street/67th Street - operates at LOS F during the PM peak hour
- 4th Avenue /Redding Avenue - operates at LOS F during the AM peak hour

Implementation of the No Project Scenario under cumulative conditions would result in LOS E or F conditions at eight intersections along Folsom Boulevard and 65th Street, which are exempt roadways:

- Folsom Boulevard/59th Street - operates at LOS F during both the AM and PM peak hours
- Folsom Boulevard/65th Street - operates at LOS E during the AM peak and LOS F in the PM peak hour

TABLE 4.3-20

INTERSECTION OPERATIONS – CUMULATIVE NO PROJECT SCENARIO CONDITIONS

Intersection	Control	Acceptable LOS	AM Peak		PM Peak	
			LOS	Delay[1]	LOS	Delay[1]
1. S St/59th St	Signal	A-E	C	31	D	38
2. Folsom Blvd/59th St	Signal	A-E (exempt)	F	92	F	99
3. Elvas Ave/65h St	Signal	A-E	D	38	D	43
4. Folsom Blvd/62nd St	Stop	A-E (exempt)	A	5	A	5
5. Folsom Blvd/63rd St	Signal	A-E (exempt)	B	17	B	13
6. Folsom Blvd/64th St	Stop	A-E (exempt)	A	6	A	9
7. Folsom Blvd/65th St	Signal	A-E (exempt)	E	68	F	84
8. Folsom Blvd/67th St	Signal	A-E (exempt)	C	27	D	51
9. Folsom Blvd/Elvas Ave	Stop	A-E (exempt)	A	4	C	17
10. Q St/65th St	Signal	A-E (exempt)	C	23	C	29
11. Q St/67th St	Stop	A-E	A	7	F	149
12. Q St/69th St	Stop	A-E	A	3	C	23
13. S St/65th St	Signal	A-E (exempt)	D	49	E	55
14. US 50 EB Ramps/65th St	Signal	A-E (exempt)	D	49	C	25
15. 65th St/4th Ave	Signal	A-E (exempt)	E	69	C	32
16. 4th Ave/Redding Ave	Stop	A-E	F	109	D	28
17. 65th St/Broadway	Signal	A-E (exempt)	F	113	F	128
18. Folsom Blvd/State University Dr	Signal	A-E (exempt)	C	25	C	29
19. Folsom Blvd/Hornet Dr	Signal	A-E (exempt)	C	35	E	62
20. Folsom Blvd/Howe Ave	Signal	A-E (exempt)	F	253	F	382
21. Folsom Blvd/Ramona Ave	Signal	A-E (exempt)	E	63	D	48

Notes:

1. For signalized intersections, average intersection delay is reported in seconds per vehicle. For side-street stop controlled intersections, the delay and LOS for the most-delayed individual movement is shown in parentheses below the average intersection delay and LOS.

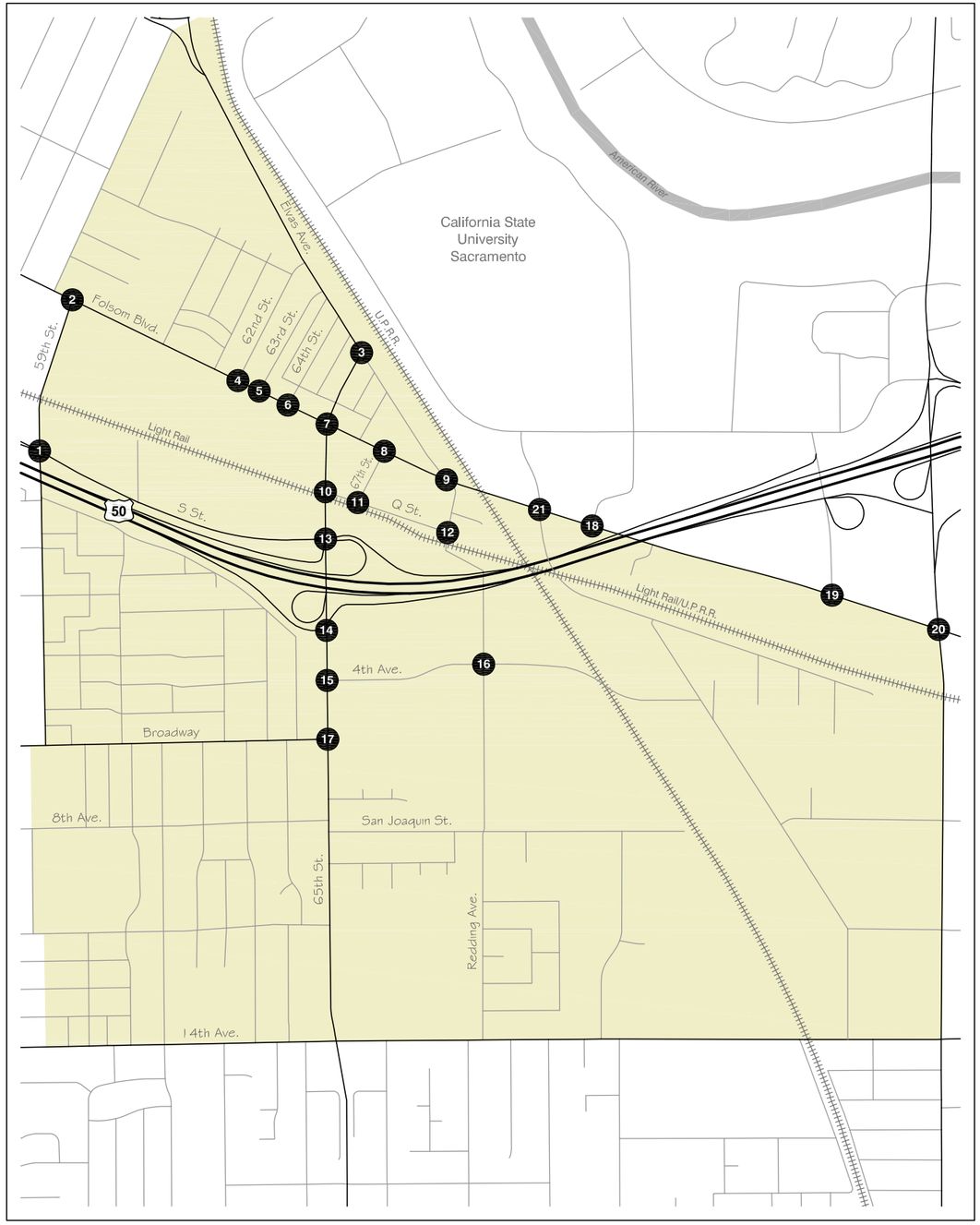
2. Motorists are not likely to regularly experience average delays in excess of 180 seconds, as they will either divert to alternate routes or shift their travel to times outside the peak commute hour.

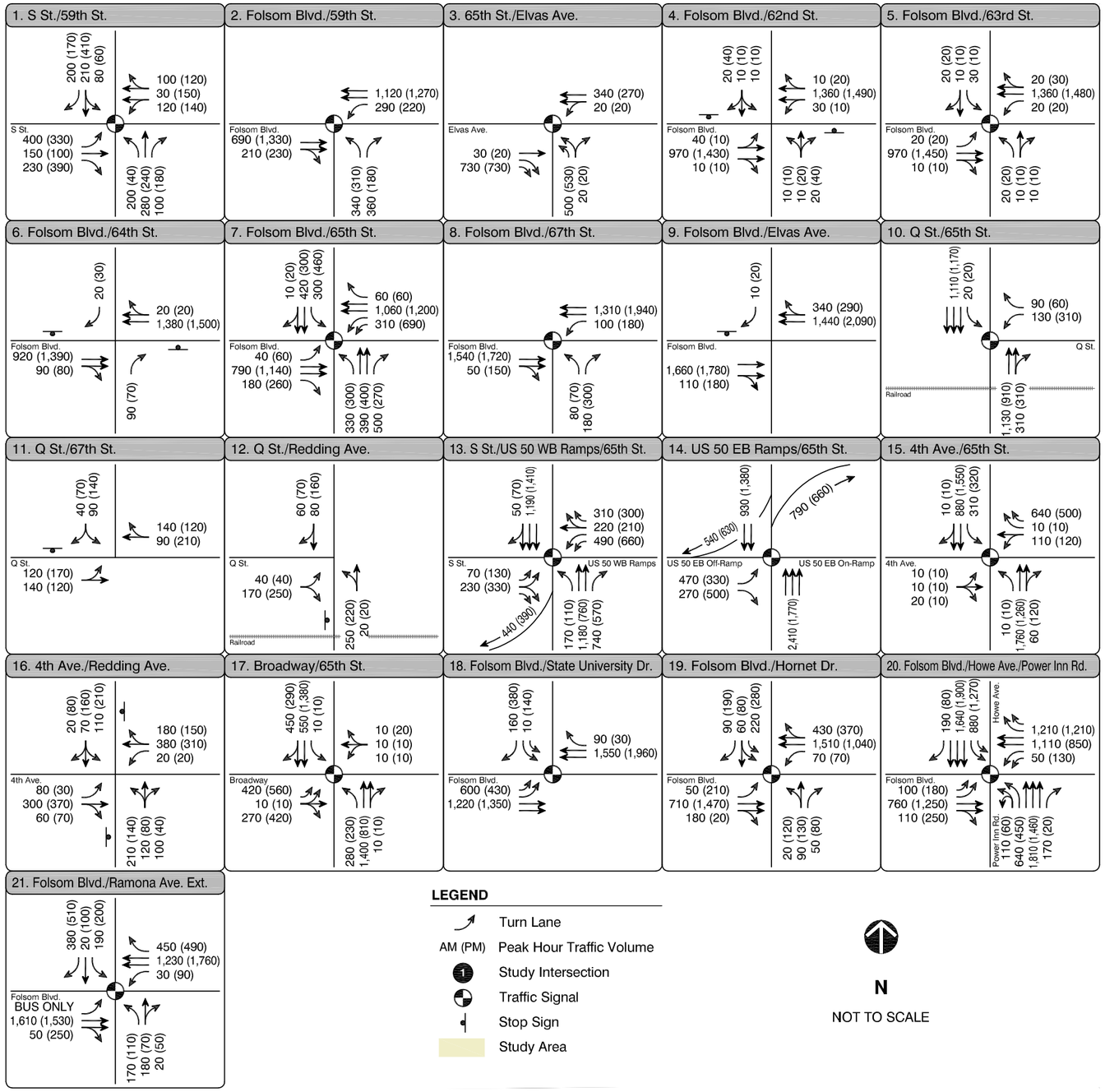
Source: Fehr & Peers, 2009.

- S Street/65th Street - operates at LOS E during the PM peak hour
- 65th Street/4th Avenue - operates at LOS E during the AM peak hour
- 65th Street/Broadway - operates at LOS F during both the AM and PM peak hours
- Folsom Boulevard/Hornet Drive - operates at LOS E during the PM peak hour
- Folsom Boulevard/Howe Avenue - operates at LOS E during the PM peak hour
- Folsom Boulevard/Ramona Avenue - operates at LOS E during the AM peak hour

Roadway Segment Operations

Figure 4.3-18 shows the projected daily roadway segment volumes under cumulative conditions with the No Project Scenario, and Table 4.3-21 presents the results of the roadway segment LOS analysis.





LEGEND

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

N

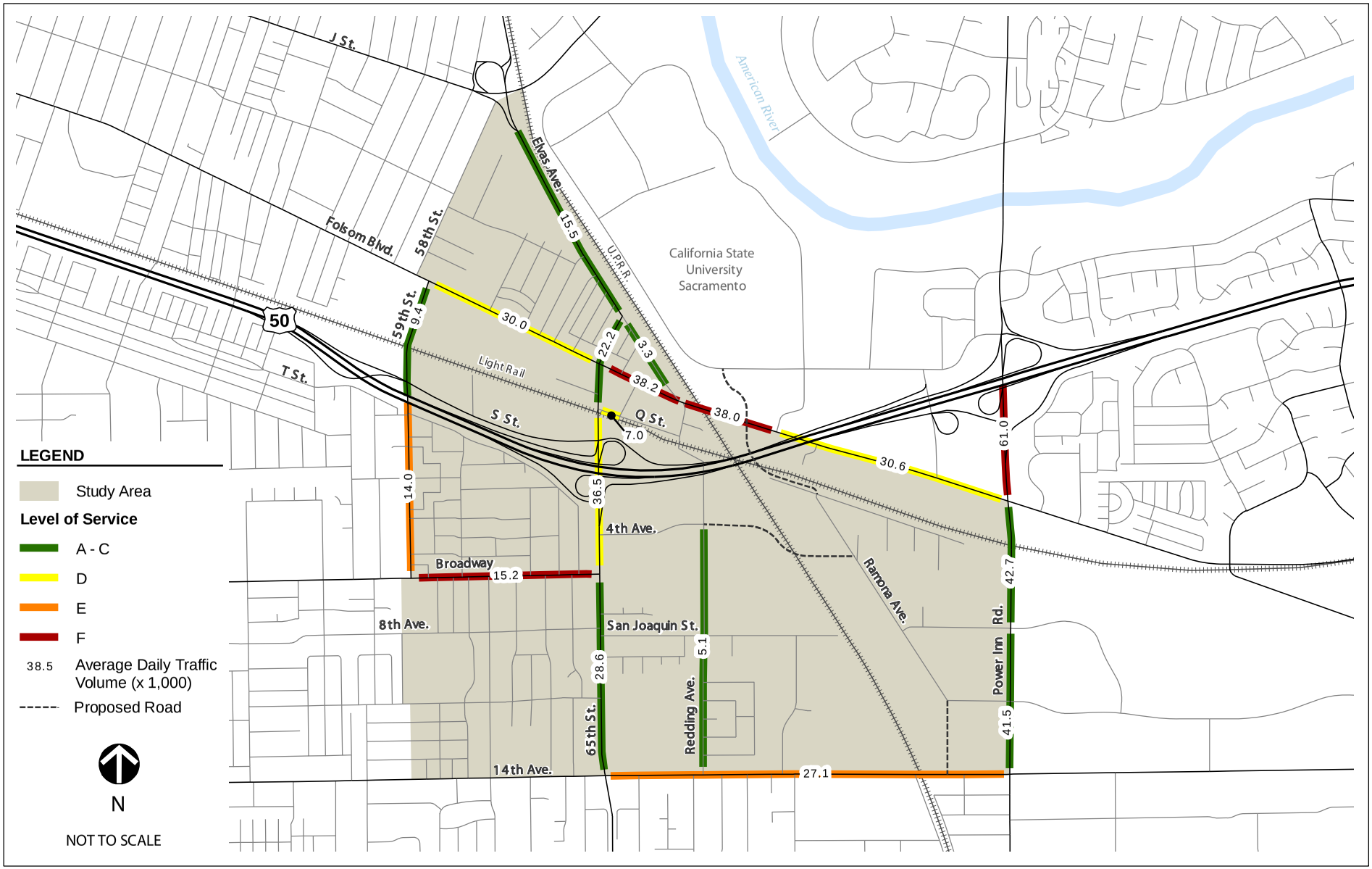
NOT TO SCALE

FEHR & PEERS
TRANSPORTATION CONSULTANTS

Jul 21, 2009 SW
N:\2007Projects\SA_Projects\0101\graphics\July2009Update\fig23_phtv_cpp_A.dwg

65TH STREET STATION AREA STUDY - PEAK HOUR TRAFFIC VOLUMES AND LANE CONFIGURATIONS: CUMULATIVE PLUS ALTERNATIVE A

FIGURE 4.3-17



FEHR & PEERS
TRANSPORTATION CONSULTANTS

N:\2009Projects\SA_Projects\0154_65thSt\Graphics\GIS\MXD\fig24_adt_cumu_alt_A.mxd

AVERAGE DAILY TRAFFIC VOLUMES AND ROADWAY LEVEL OF SERVICE - CUMULATIVE PLUS PROJECT CONDITIONS SCENARIO A

FIGURE 4.3-18

TABLE 4.3-21

DAILY VOLUMES FOR STUDY ROADWAY SEGMENTS – CUMULATIVE NO PROJECT SCENARIO CONDITIONS

Roadway Segment	Access Control	Number of Lanes	Acceptable LOS	ADT Volume	V/C	LOS
1. Elvas Ave - J St to 65th St	Low	4 (art)	A-E	15,500	0.52	A
2. Folsom Blvd - 59th St to 65th St	Moderate	4 (art)	A-D (exempt)	30,000	0.83	D
3. Elvas Ave - 65th St to Folsom Blvd	Minor	2 (col)	A-E	3,300	0.38	A
4. 59th St - Folsom Blvd to S St	Low	2 (art)	A-E	9,400	0.63	B
5. 65th St - Folsom Blvd to S St	Moderate	5 (art)	A-E (exempt)	22,200	0.49	A
6. Folsom Blvd - 65th St to Elvas Ave	Moderate	4 (art)	A-E (exempt)	38,200	1.06	F
7. Folsom Blvd - Ramona Ave to State University Dr	Moderate	4 (art)	A-E (exempt)	41,600	1.16	F
8. Folsom Blvd - State University Dr to Hornet Dr	Moderate	4 (art)	A-E (exempt)	30,600	0.85	D
9. Q St - 65th St to 67th St	Minor	2 (col)	A-E	7,000	0.80	D
10. 59th St - S St to Broadway	Low	2 (art)	A-D	14,000	0.93	E
11. 65th St - US 50 EB Ramps to 4th Ave	Moderate	5 (art)	A-E (exempt)	36,500	0.81	D
12. Broadway - 59th St to 65th St	Low	2 (art)	A-D (exempt)	15,200	1.01	F
13. Redding Ave - 4th Ave to San Joaquin St	Minor	2 (col)	A-D	5,100	0.58	A
14. 65th St - San Joaquin St to East 14th Ave	Moderate	4 (art)	A-D (exempt)	28,600	0.79	C
15. East 14th Ave - Redding Ave to Ramona Ave	Major	4 (col)	A-E	27,100	0.97	E
16. Power Inn Road - Ramona Ave to East 14th Ave	Moderate	6 (art)	A-D	41,500	0.77	C
17. Power Inn Road - Folsom Blvd to Ramona Ave	Moderate	6 (art)	A-E	42,700	0.79	C
18. Howe Ave - US 50 EB Ramps to Folsom Blvd	Moderate	6 (art)	A-E (exempt)	61,000	1.13	F

Notes:
(art) = arterial; (col) = collector – either minor or major as noted.
Source: Fehr & Peers, 2009.

As shown in Table 4.3-21, six of the eighteen roadway segments would operate at LOS E or F conditions with the improvements that would be implemented with the Cumulative No Project Scenario. All roadway segments, except those listed below, would operate at LOS A-D conditions.

Implementation of the Cumulative No Project Scenario improvements would result in unacceptable LOS conditions (i.e., LOS F) for one non-exempt roadway segment.

- 59th Street - S Street to Broadway

Implementation of the No Project Scenario improvements would result in LOS F conditions at the following four exempt roadway segments along Folsom Boulevard, Broadway, and Howe Avenue.

- Folsom Boulevard: 65th Street to Elvas Avenue (LOS F)
- Folsom Boulevard: Ramona Avenue to State University Drive (LOS F)
- Broadway: 59th Street to 65th Street (LOS F)

- Howe Avenue: US 50 EB Ramps to Folsom Boulevard (LOS F)

Freeway Operations

Table 4.3-22 summarizes the results of the No Project Scenario freeway operations analysis under cumulative conditions.

Table 4.3-22 indicates that the mainline segments of US 50 between 59th Street and 65th Street would operate at LOS E conditions during the AM and/or PM peak hour with the Cumulative No Project Scenario. The westbound mainline weave section on US 50 between 65th Street and Howe Avenue would operate at LOS E conditions during the PM peak hour and LOS F during the AM peak hour. The eastbound mainline weave section on US 50 between 65th Street and Howe Avenue would operate at LOS F conditions during the AM and/or PM peak hour with the Cumulative No Project Scenario.

TABLE 4.3-22

FREEWAY OPERATIONS – CUMULATIVE NO PROJECT SCENARIO CONDITIONS

		With Cumulative No Project Scenario					
		AM Peak			PM Peak		
Freeway Facility	Type	LOS[1]	MOE[2]	Vol.[3]	LOS[1]	MOE[2]	Vol.[3]
1. Eastbound US 50 from 59th St to 65th St	Mainline	E	39.9	9,790	E	44.3	10,230
2. Westbound US 50 from 65th St to 59th St	Mainline	E	38.5	10,829	E	38.7	9,770
3. Eastbound US 50 Weave between 65th St and Howe Ave	Weave	F	2,049	10,520	F	2,039	10,760
4. Westbound US 50 Weave between Howe Ave and 65th St	Weave	F	1,929	10,730	E	1,846	10,080

Notes:
1. LOS = level of service
2. MOE = measure of effectiveness. For mainline, ramp merge, and ramp diverge sections, the MOE is density, measured in passenger car equivalents per mile per lane; for weaving sections, the MOE is service flow, measured in passenger car equivalents per lane.
3. Volume refers to freeway mainline volume or ramp at the study facility (mainline volumes reported for weaving areas).
Bold indicates a project impact.
Source: Fehr & Peers, 2008.

US 50 off-ramp queuing was also evaluated under Cumulative No Project Scenario conditions. The results are presented below:

- Westbound 65th Street Off-ramp – Storage length, 1,300 feet; Average maximum queue, 950 feet in AM peak hour, 600 feet in PM peak hour; and
- Eastbound 65th Street Off-ramp – Storage length, 1,375 feet; Average maximum queue, 975 feet in AM peak hour, 600 feet in PM peak hour.

The queuing results indicate that the queues on both the westbound 65th Street off-ramp and the eastbound 65th Street off-ramp would be accommodated within the ramp storage space under Cumulative No Project Scenario conditions.

Transit Operations: At-Grade Rail Crossings

The following section provides an evaluation of whether queues from adjacent signalized intersections would extend across the at-grade rail crossings at 59th Street and 65th Street under cumulative conditions with the implementation of the No Project Scenario improvements. Table 4.3-23 identifies the average maximum queues from the adjacent traffic signals under cumulative conditions.

TABLE 4.3-23

AVERAGE MAXIMUM QUEUES UNDER CUMULATIVE NO PROJECT SCENARIO CONDITIONS

Rail Crossing	Adjacent Intersection	Travel Direction	Storage Length	Maximum Queue (Feet)	
				AM Peak	PM Peak
59th St	Folsom Blvd	NB on 59th	825 feet	**850**	550
	S St	SB on 59th	300 feet	**450**	**575**
65th St	Folsom Blvd	NB on 65th	550 feet	500	525
	S St	SB on 65th	300 feet	300	300

Source: Fehr & Peers, 2009.

As noted in the Table 4.3-23 in bold, queues would extend onto the at-grade crossings and affect the operation of the rail crossing at the following locations under cumulative conditions:

- 59th Street At-Grade Crossing – northbound traffic queuing from the Folsom Boulevard/ 59th Street intersection during the AM peak hour
- 59th Street At-Grade Crossing – southbound traffic queuing from the 59th Street/S Street intersection during both AM and PM peak hours.

Cumulative With Scenario B

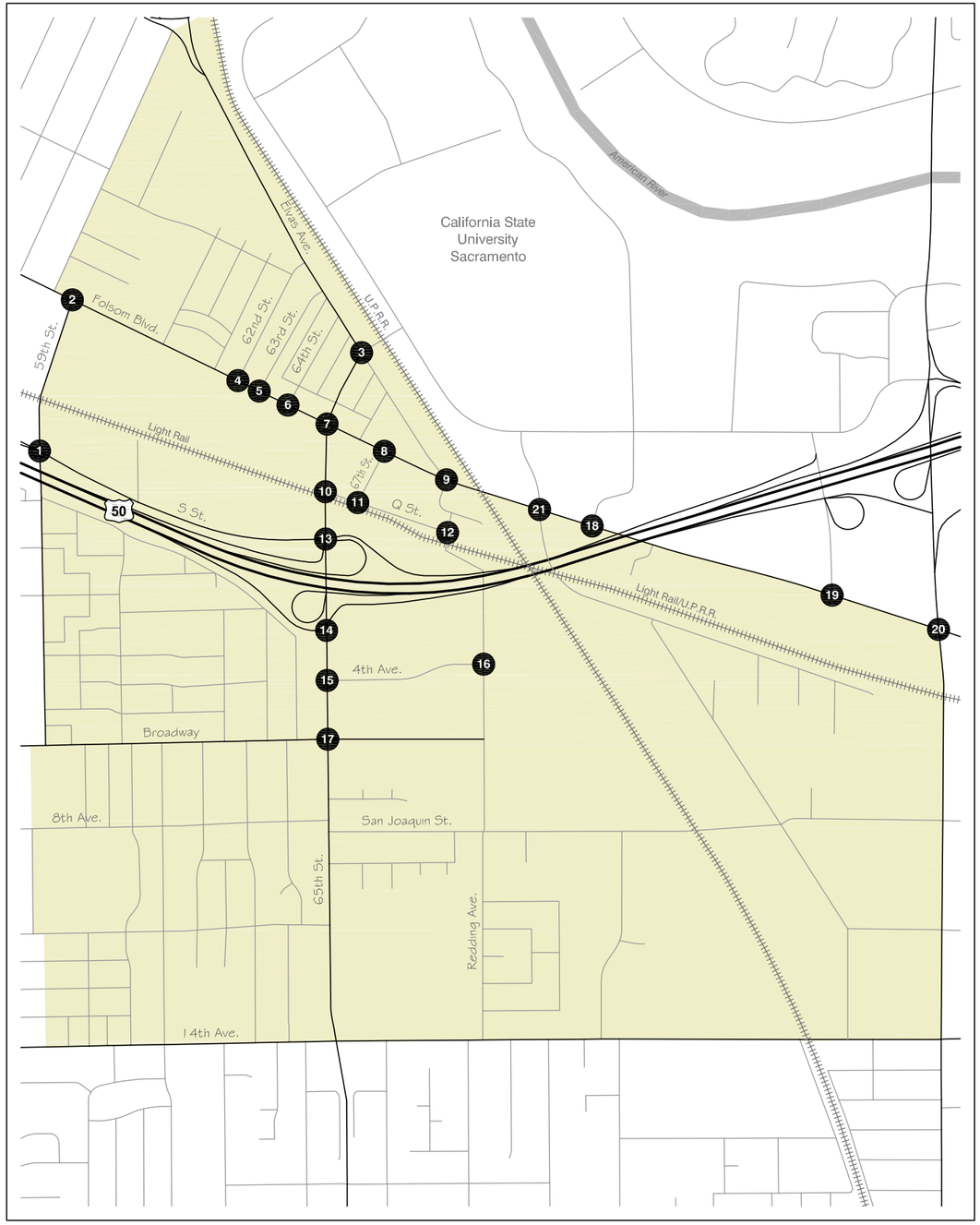
This section presents the results of the transportation analysis under cumulative conditions with implementation of Scenario B.

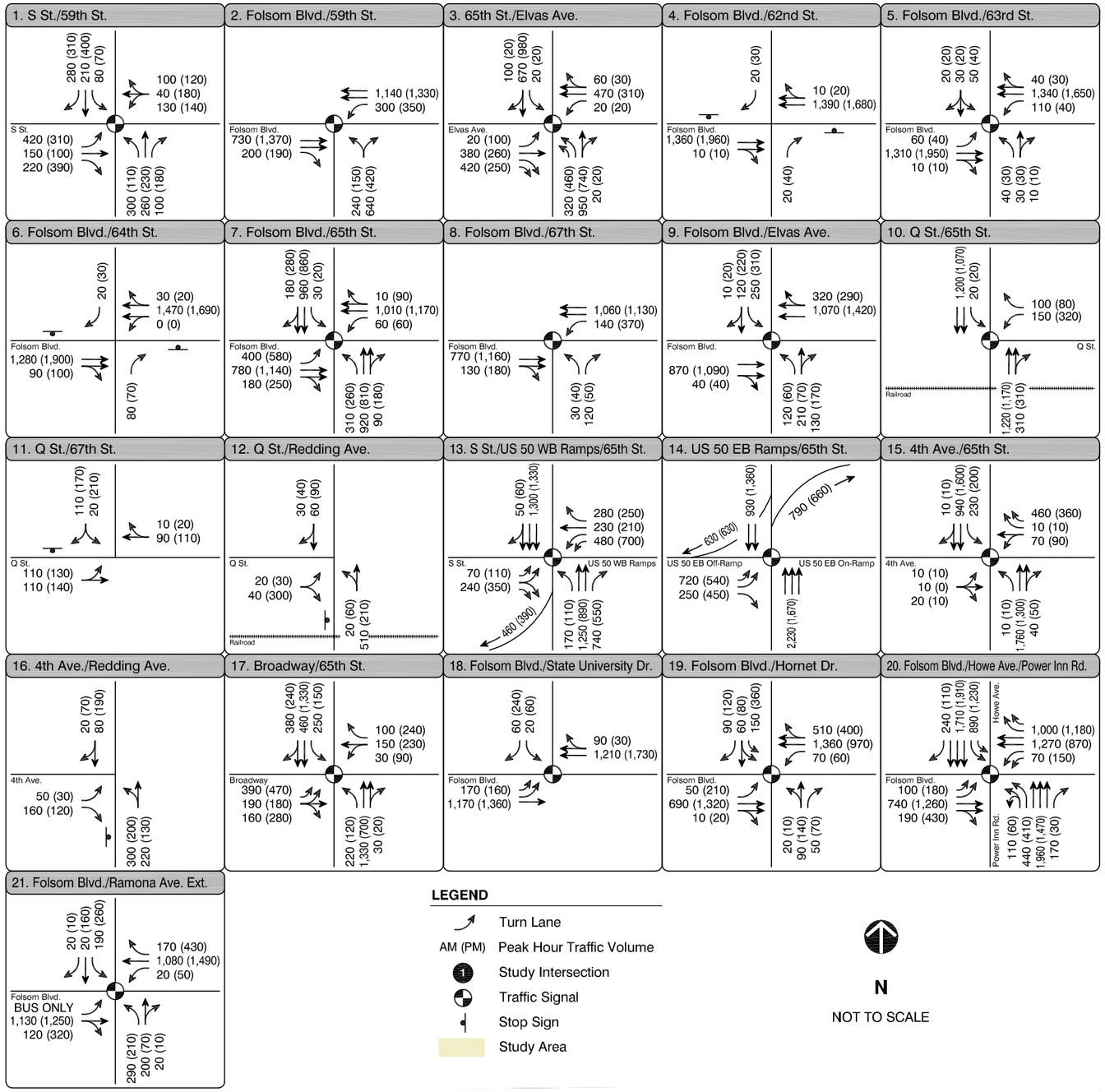
Intersection Operations

Figure 4.3-19 presents the projected peak hour turning movement volumes and lane configurations under cumulative conditions with Scenario B, and Table 4.3-24 summarizes the results of the intersection LOS analysis. All intersections, except those listed below, would operate at LOS A-D conditions.

Implementation of Scenario B would result in a significant impact at the following intersections along non-exempt roadways under cumulative conditions:

- Elvas Avenue/65th Street - operates at LOS F during both the AM and PM peak hours
- Q Street/67th Street - operates at LOS F during both the AM and PM peak hours





LEGEND

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

N

NOT TO SCALE

FEHR & PEERS
TRANSPORTATION CONSULTANTS

Jul 21, 2009 SW
N:\2007Projects\SA_Projects\0101\graphics\July2009Update\fig25_phtv_cpp_B.dwg

65TH STREET STATION AREA STUDY - PEAK HOUR TRAFFIC VOLUMES AND LANE CONFIGURATIONS: CUMULATIVE PLUS ALTERNATIVE B

FIGURE 4.3-19

TABLE 4.3-24

INTERSECTION OPERATIONS – CUMULATIVE PLUS SCENARIO "B" CONDITIONS

Intersection	Control	Acceptable LOS	AM Peak		PM Peak	
			LOS[1]	Delay[2]	LOS[1]	Delay[2]
1. S St/59th St	Signal	A-E	D	41	E	58
2. Folsom Blvd/59th St	Signal	A-E (exempt)	**F**	**99**	**F**	**122**
3. Elvas Ave/65th St	Signal	A-E	**F**	**109**	**F**	**92**
4. Folsom Blvd/62nd St	Stop	A-E (exempt)	B	10	C	18
5. Folsom Blvd/63rd St	Signal	A-E (exempt)	E	60	**F**	**105**
6. Folsom Blvd/64th St	Stop	A-E (exempt)	C	22	D	26
7. Folsom Blvd/65th St	Signal	A-E (exempt)	**F**	**101**	**F**	**92**
8. Folsom Blvd/67th St	Signal	A-E (exempt)	B	19	E	77
9. Folsom Blvd/Elvas Ave	Stop	A-E (exempt)	E	58	**F**	**118**
10. Q St/65th St	Signal	A-E (exempt)	D	54	C	28
11. Q St/67th St	Stop	A-E	**F**	**144**	**F**	**132**
12. Q St/69th St	Stop	A-E	C	20	B	15
13. S St/65th St	Signal	A-E (exempt)	**F**	**129**	E	72
14. US 50 EB Ramps/65th St	Signal	A-E (exempt)	**F**	**83**	C	20
15. 65th St/4th Ave	Signal	A-E (exempt)	**F**	**102**	C	23
16. 4th Ave/Redding Ave	Stop	A-E	B	13	A	8
17. 65th St/Broadway	Signal	A-E (exempt)	**F**	**261**	**F**	**205**
18. Folsom Blvd/State University Dr	Signal	A-E (exempt)	D	45	**F**	**195**
19. Folsom Blvd/Hornet Dr	Signal	A-E (exempt)	D	39	D	43
20. Folsom Blvd/Howe Ave	Signal	A-E (exempt)	F	251	F	326
21. Folsom Blvd/Ramona Ave	Signal	A-E (exempt)	D	50	E	74

Notes:
1. LOS = level of service
2. For signalized intersections, average intersection delay is reported in seconds per vehicle. For side-street stop controlled intersections, the delay and LOS for the most-delayed individual movement is shown in parentheses below the average intersection delay and LOS.
3. Motorists are not likely to regularly experience average delays in excess of 180 seconds, as they will either divert to alternate routes or shift their travel to times outside the peak commute hour.
Source: Fehr & Peers, 2009.

Implementation of Scenario B would result in unacceptable LOS conditions at ten intersections along exempt roadways.

- Folsom Boulevard/59th Street operates at LOS F during both the AM and PM peak hours (significant impact)
- Folsom Boulevard/63rd Street operates at LOS F during the PM peak hour (significant impact)
- Folsom Boulevard/65th Street operates at LOS F during both the AM and PM peak hours (significant impact)
- Folsom Boulevard/Elvas Avenue operates at LOS F during the PM peak hour (significant impact)
- S Street/65th Street operates at LOS F during the AM peak hour (significant impact)

- US 50 EB Ramps/65th Street operates at LOS F during the AM peak hour (significant impact)
- 65th Street/4th Avenue operates at LOS F during the AM peak hour (significant impact)
- 65th Street/Broadway operates at LOS F during both the AM and PM peak hours (significant impact)
- Folsom Boulevard/State University Drive operates at LOS F during PM peak hour (significant impact)
- Folsom Boulevard/Howe Avenue operates at LOS F during both the AM and PM peak hour

Implementation of Scenario B does not create a significant impact at the intersection of Folsom Boulevard/Howe Avenue because the increase in delay at this intersection is less than 5 seconds when compared to the Cumulative No Project Scenario.

Roadway Segment Operations

Figure 4.3-20 shows the projected daily roadway segment volumes under cumulative conditions with Scenario B, and Table 4.3-25 presents the results of the roadway segment LOS analysis.

As shown in Table 4.3-25, eight of the eighteen roadway segments would operate at LOS E or F conditions with the improvements that would be implemented with Scenario B under cumulative conditions.

Implementation of Scenario B would result in a significant cumulative impact at one non-exempt roadway segment.

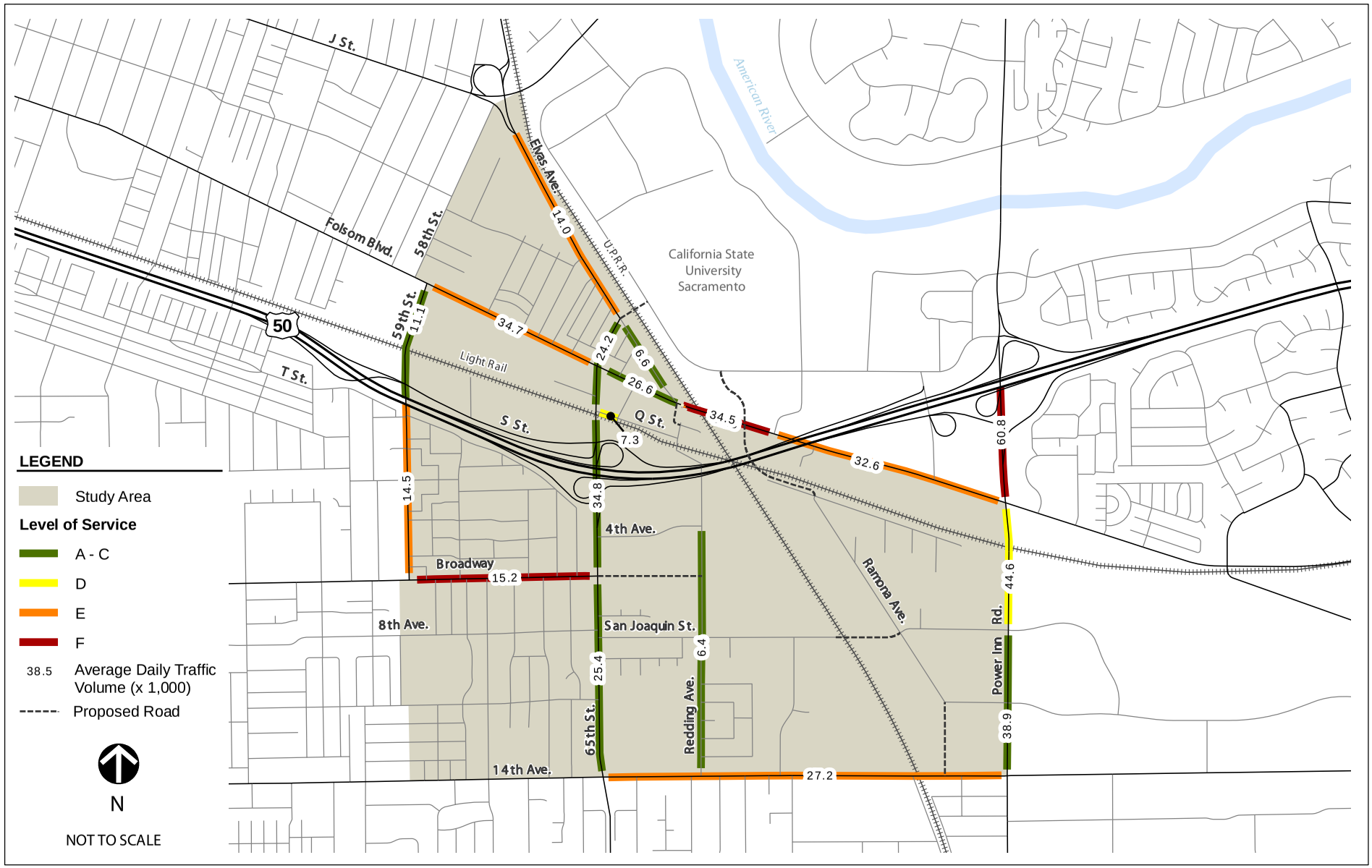
- 59th Street – S Street to Broadway

Implementation of Scenario B would result in a non acceptable LOS conditions and create a significant impact at the following two roadway segments along exempt roadways:

- Folsom Boulevard - 59th Street to 65th Street
- Folsom Boulevard - Ramona Avenue to State University Drive East

Implementation of Scenario B would result in LOS F conditions, but less-than-significant impacts, at two roadway segments, both along exempt roadways. Implementation of Scenario B does not create a significant impact for these road segments because the increase in volume/capacity ratio (v/c) is less than 0.02 when compared to the No Project Scenario.

- Broadway - 59th Street to 65th Street
- Howe Avenue - US 50 EB Ramps to Folsom Boulevard



FEHR & PEERS
TRANSPORTATION CONSULTANTS

N:\2009Projects\SA_Projects\0154_65thSt\Graphics\GIS\MXD\fig26_adt_cumu_alt_B.mxd

AVERAGE DAILY TRAFFIC VOLUMES AND ROADWAY LEVEL OF SERVICE - CUMULATIVE PLUS PROJECT CONDITIONS SCENARIO B

FIGURE 4.3-20

TABLE 4.3-25

DAILY VOLUMES FOR STUDY ROADWAY SEGMENTS – CUMULATIVE PLUS SCENARIO "B" CONDITIONS

Roadway Segment	Access Control	Number of Lanes	Acceptable LOS	ADT Volume	V/C	LOS
1. Elvas Ave - J St to 65th St	Low	3 (art)	A-E	14,000	0.62	E
2. Folsom Blvd - 59th St to 65th St	Moderate	4 (art)	A-D (exempt)	**34,700**	**0.96**	**E**
3. Elvas Ave - 65th St to Folsom Blvd	Minor	2 (col)	A-E	6,600	0.75	C
4. 59th St - Folsom Blvd to S St	Low	2 (art)	A-E	11,100	0.74	C
5. 65th St - Folsom Blvd to S St	Moderate	4 (art)	A-E (exempt)	24,200	0.67	B
6. Folsom Blvd - 65th St to Elvas Ave	Moderate	4 (art)	A-E (exempt)	26,600	0.74	C
7. Folsom Blvd - Ramona Ave to State University Dr	Moderate	3 (art)	A-E (exempt)	**32,800**	**1.21**	**F**
8. Folsom Blvd - State University Dr to Hornet Dr	Moderate	4 (art)	A-E (exempt)	32,600	0.91	E
9. Q St - 65th St to 67th St	Minor	2 (col)	A-E	7,300	0.83	D
10. 59th St - S St to Broadway	Low	2 (art)	A-D	**14,500**	**0.97**	**E**
11. 65th St - US 50 EB Ramps to 4th Ave	Moderate	5 (art)	A-E (exempt)	34,800	0.77	C
12. Broadway - 59th St to 65th St	Low	2 (art)	A-D (exempt)	15,200	1.01	F
13. Redding Ave – 4th Ave to San Joaquin St	Minor	2 (col)	A-D	6,400	0.73	C
14. 65th St - San Joaquin St to East 14th Ave	Moderate	4 (art)	A-D (exempt)	25,400	0.71	C
15. East 14th Ave - Redding Ave to Ramona Ave	Major	4 (col)	A-E	27,200	0.97	E
16. Power Inn Rd - Ramona Ave to East 14th Ave	Moderate	6 (art)	A-D	38,900	0.72	C
17. Power Inn Road - Folsom Blvd to Ramona Ave	Moderate	6 (art)	A-E	44,600	0.83	D
18. Howe Ave - US 50 EB Ramps to Folsom Blvd	Moderate	6 (art)	A-E (exempt)	60,800	1.13	F

Notes:
(art) = arterial; (col) = collector – either minor or major as noted.
Source: Fehr & Peers, 2008.

Freeway Operations

Table 4.3-26 summarizes the results of Scenario B freeway operations analysis under cumulative conditions.

Table 4.3-26 indicates that the mainline segments of US 50 between 59th Street and 65th Street would operate at LOS E conditions during the AM and/or PM peak hour with Scenario B. The westbound mainline weave section on US 50 between 65th Street and Howe Avenue would operate at LOS E conditions during the PM peak hour and LOS F during the AM peak hour. The eastbound mainline weave section on US 50 between 65th Street and Howe Avenue would operate at LOS F conditions during the AM and/or PM peak hour with Scenario B.

US 50 off-ramp queuing was also evaluated under Cumulative plus Scenario B conditions. The results are presented below:

- Westbound 65th Street Off-ramp – Storage length, 1,300 feet; Average maximum queue, 1,225 feet in AM peak hour, 1,525 feet in PM peak hour; and

TABLE 4.3-26

FREEWAY OPERATIONS – CUMULATIVE PLUS SCENARIO "B" CONDITIONS

Freeway Facility	Type	With Scenario A Project					
		AM Peak			PM Peak		
		LOS	MOE[1]	Vol.[2]	LOS	MOE[1]	Vol.[2]
1. Eastbound US 50 from 59th St to 65th St	Mainline	E	39.9	9,790	E	44.8	10,270
2. Westbound US 50 from 65th St to 59th St	Mainline	E	38.5	10,830	E	38.6	9,750
3. Eastbound US 50 Weave between 65th St and Howe Ave	Weave	**F**	**2,029**	**10,410**	**F**	**2,011**	**10,660**
4. Westbound US 50 Weave between Howe Ave and 65th St	Weave	**F**	**1,944**	**10,750**	E	1,836	10,030

Notes:
1. MOE = measure of effectiveness. For mainline, ramp merge, and ramp diverge sections, the MOE is density, measured in passenger car equivalents per mile per lane; for weaving sections, the MOE is service flow, measured in passenger car equivalents per lane.
2. Volume refers to freeway mainline volume or ramp at the study facility (mainline volumes reported for weaving areas).
Bold indicates a project impact.
Source: Fehr & Peers, 2008.

- Eastbound 65th Street Off-ramp – Storage length, 1,375 feet; Average maximum queue, 1,575 feet in AM peak hour, 625 feet in PM peak hour.

The queuing results indicate that the queue on the westbound 65th Street off-ramp would extend beyond the ramp gore and into the auxiliary lane that extends between 65th Street and the westbound on-ramp at the adjacent Howe Avenue interchange during the PM peak hour. The eastbound 65th Street off-ramp queue would extend beyond the ramp gore and into the auxiliary lane that extends between 65th Street and the westbound on-ramp at the adjacent Howe Avenue interchange during the AM peak hour.

Transit Operations: At-Grade Rail Crossings

The following section provides an evaluation of whether queues from adjacent signalized intersections would extend across the at-grade rail crossings at 59th Street and 65th Street with the implementation of Scenario B improvements under cumulative conditions. Table 4.3-27 identifies the average maximum queues from the adjacent traffic signals under cumulative conditions.

TABLE 4.3-27

AVERAGE MAXIMUM QUEUES UNDER CUMULATIVE PLUS SCENARIO "B" CONDITIONS

Rail Crossing	Adjacent Intersection	Travel Direction	Storage Length	Maximum Queue (Feet)	
				AM Peak	PM Peak
59th St	Folsom Blvd	NB on 59th	825 feet	750	375
	S St	SB on 59th	300 feet	225	**475**
65th St	Folsom Blvd	NB on 65th	550 feet	**600**	275
	S St	SB on 65th	300 feet	300	175

Source: Fehr & Peers, 2009.

As noted in Table 4.3-27 above in bold, queues would extend onto the at-grade crossings and affect the rail operation at the following locations under cumulative conditions:

- 59th Street At-Grade Crossing – southbound traffic queuing from the 59th Street/S Street intersection during the PM peak hour
- 65th Street At-Grade Crossing – northbound traffic queuing from the Folsom Boulevard/59th Street intersection during the PM peak hour

Cumulative With Scenario C

This section presents the results of the transportation analysis under cumulative conditions with implementation of Scenario C.

Intersection Operations

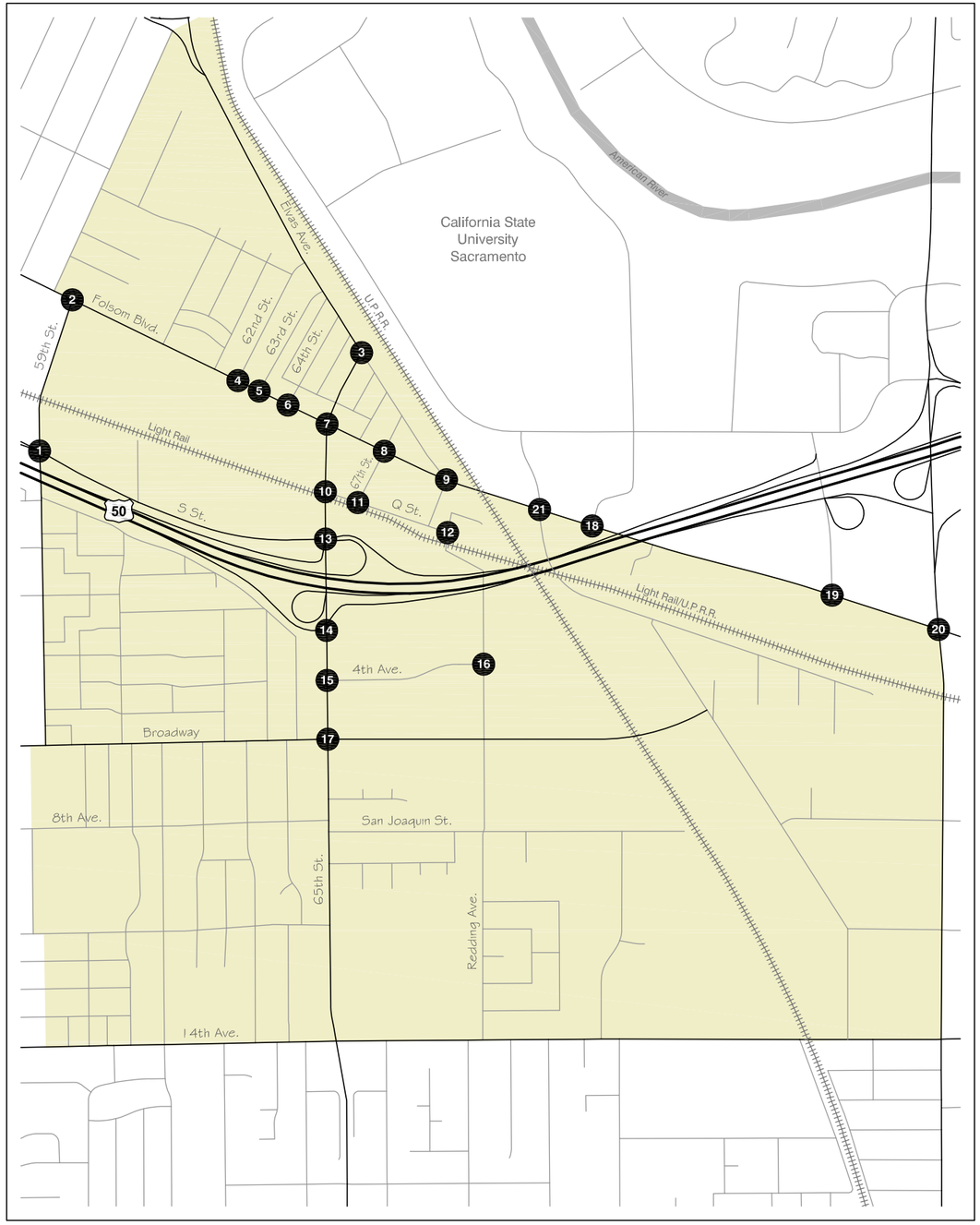
Figure 4.3-21 presents the projected peak hour turning movement volumes and lane configurations with Scenario C, and Table 4.3-28 summarizes the results of the intersection LOS analysis.

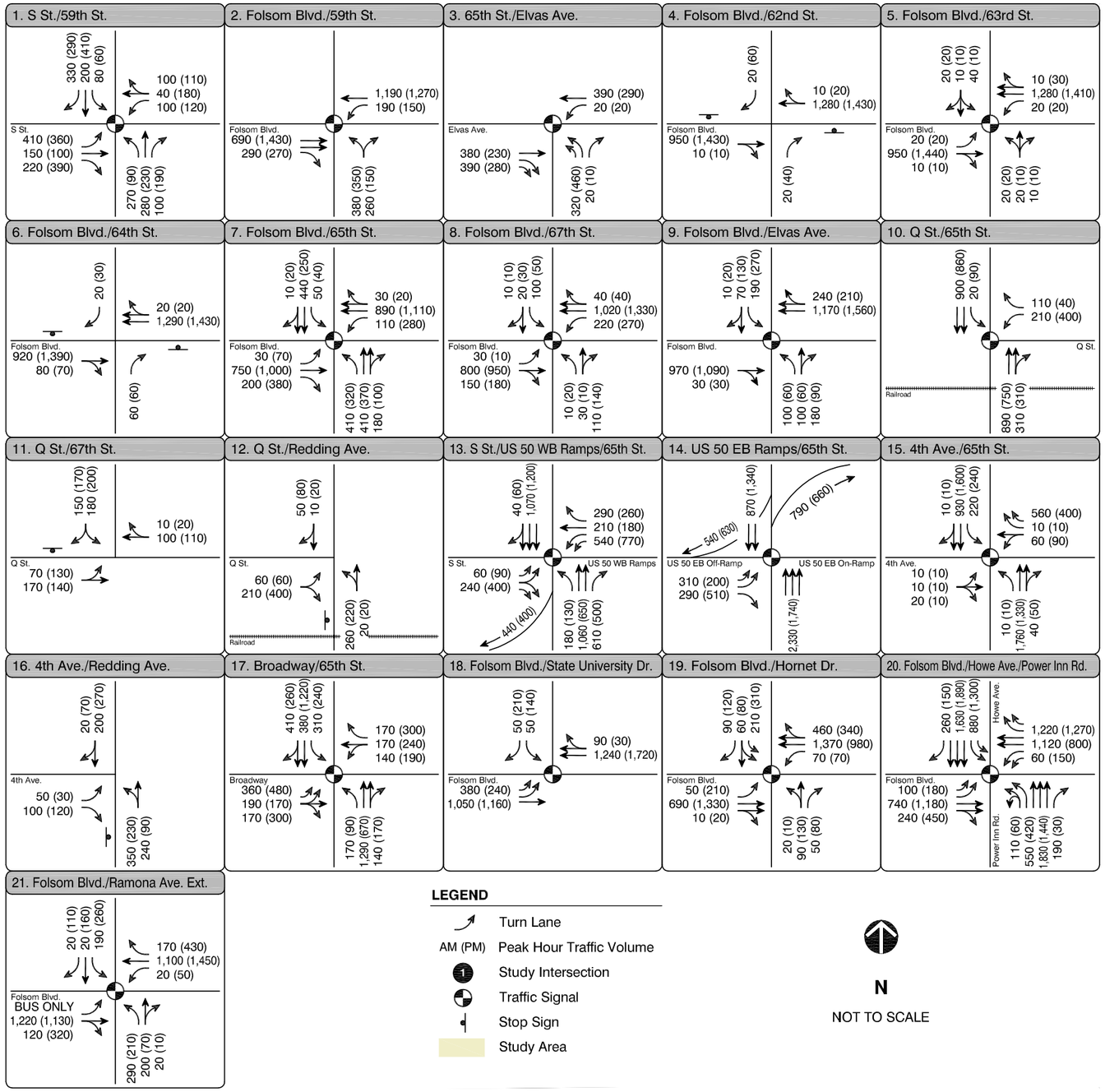
Implementation of Scenario C would result in significant impacts at the following intersections along non-exempt roadways:

- S Street/59th Street - operates at LOS F during the AM peak hour
- Q Street/67th Street – operates at LOS F during both the AM and PM peak hours

Implementation of Scenario C under cumulative conditions would result in a unacceptable LOS conditions at the following five intersections along exempt roadways:

- Folsom Boulevard/59th Street operates at LOS F during both the AM and PM peak hours (significant impact)
- S Street/65th Street operates at LOS F during the PM peak hour (significant impact)
- 65th Street/Broadway operates at LOS F during both the AM and PM peak hours (significant impact)
- Folsom Boulevard/State University Drive East operates at LOS F during the PM peak hour (significant impact)
- Folsom Boulevard/Howe Avenue operates at LOS F during both the AM and PM peak hours





LEGEND

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

N

NOT TO SCALE

FEHR & PEERS
TRANSPORTATION CONSULTANTS

Jul 21, 2009 SW
N:\2007Projects\SA_Projects\0101\graphics\July2009Update\fig27_phtv_cpp_C.dwg

65TH STREET STATION AREA STUDY - PEAK HOUR TRAFFIC VOLUMES AND LANE CONFIGURATIONS: CUMULATIVE PLUS ALTERNATIVE C

FIGURE 4.3-21

TABLE 4.3-28

INTERSECTION OPERATIONS – CUMULATIVE PLUS SCENARIO "C" CONDITIONS

Intersection	Control	Acceptable LOS	AM Peak		PM Peak	
			LOS	Delay[1]	LOS	Delay[1]
1. S St/59th St	Signal	A-E	**F**	**81**	E	58
2. Folsom Blvd/59th St	Signal	A-E (exempt)	**F**	**154**	**F**	**148**
3. Elvas Ave/65th St	Signal	A-E	D	40	E	71
4. Folsom Blvd/62nd St	Stop	A-E (exempt)	C	24	D	30
5. Folsom Blvd/63rd St	Signal	A-E (exempt)	E	61	E	58
6. Folsom Blvd/64th St	Stop	A-E (exempt)	D	28	D	25
7. Folsom Blvd/65th St	Signal	A-E (exempt)	E	55	E	66
8. Folsom Blvd/67th St	Signal	A-E (exempt)	D	35	D	40
9. Folsom Blvd/Elvas Ave	Stop	A-E (exempt)	D	45	E	75
10. Q St/65th St	Signal	A-E (exempt)	C	30	D	44
11. Q St/67th St	Stop	A-E	**F**	**64**	**F**	**78**
12. Q St/69th St	Stop	A-E	A	9	B	11
13. S St/65th St	Signal	A-E (exempt)	D	45	**F**	**86**
14. US 50 EB Ramps/65th St	Signal	A-E (exempt)	B	20	D	51
15. 65th St/4th Ave	Signal	A-E (exempt)	D	41	C	31
16. 4th Ave/Redding Ave	Stop	A-E	A	9	A	9
17. 65th St/Broadway	Signal	A-E (exempt)	**F**	**162**	**F**	**193**
18. Folsom Blvd/State University Dr	Signal	A-E (exempt)	C	21	**F**	**104**
19. Folsom Blvd/Hornet Dr	Signal	A-E (exempt)	C	34	D	52
20. Folsom Blvd/Howe Ave	Signal	A-E (exempt)	**F**	**85**	**F**	**159**
21. Folsom Blvd/Ramona Ave	Signal	A-E (exempt)	D	38	E	80

Notes:

1. For signalized intersections, average intersection delay is reported in seconds per vehicle. For side-street stop controlled intersections, the delay and LOS for the most-delayed individual movement is shown in parentheses below the average intersection delay and LOS.

2. Motorists are not likely to regularly experience average delays in excess of 180 seconds, as they will either divert to alternate routes or shift their travel to times outside the peak commute hour.

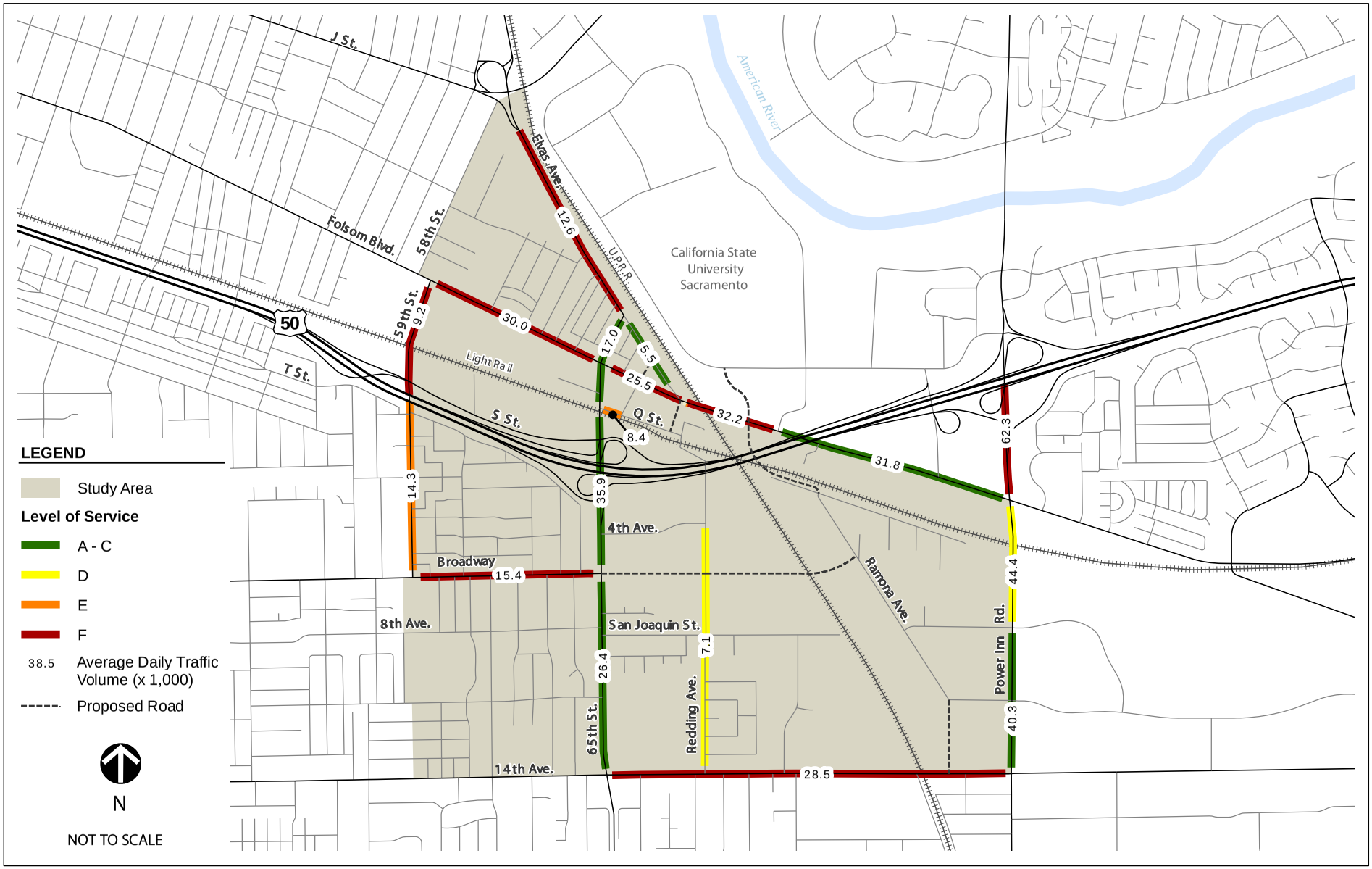
Source: Fehr & Peers, 2009.

Implementation of Scenario C does not create a significant impact at the intersection of Folsom Boulevard/Howe Avenue because the increase in delay at this intersection is less than 5 seconds when compared to the Cumulative No Project Scenario.

Roadway Segment Operations

Figure 4.3-22 shows the projected daily roadway segment volumes with Scenario C, and Table 4.3-29 presents the results of the roadway segment LOS analysis.

As shown in Table 4.3-29, ten of the eighteen roadway segments would operate at LOS E or F conditions with the improvements that would be implemented with Scenario C under cumulative conditions.



FEHR & PEERS
TRANSPORTATION CONSULTANTS

N:\2009Projects\SA_Projects\0154_65thSt\Graphics\GIS\MXD\fig28_adt_cumu_alt_C.mxd

AVERAGE DAILY TRAFFIC VOLUMES AND ROADWAY LEVEL OF SERVICE - CUMULATIVE PLUS PROJECT CONDITIONS SCENARIO C

FIGURE 4.3-22

TABLE 4.3-29

DAILY VOLUMES FOR STUDY ROADWAY SEGMENTS – CUMULATIVE PLUS SCENARIO "C" CONDITIONS

Roadway Segment	Access Control	Number of Lanes	Acceptable LOS	ADT Volume	V/C	LOS
1. Elvas Ave - J St to 65th St	Low	2 (art)	A-E	12,600	0.84	D
2. Folsom Blvd - 59th St to 65th St	Moderate	2 (art)	A-D (exempt)	**30,000**	**1.67**	**F**
3. Elvas Ave - 65th St to Folsom Blvd	Minor	2 (col)	A-E	5,500	0.63	B
4. 59th St - Folsom Blvd to S St	Low	2 (art)	A-E	9,200	0.61	B
5. 65th St - Folsom Blvd to S St	Moderate	4 (art)	A-E (exempt)	17,000	0.47	A
6. Folsom Blvd - 65th St to Elvas Ave	Moderate	3 (art)	A-E (exempt)	25,500	0.94	E
7. Folsom Blvd - Ramona Ave to State University Dr	Moderate	3 (art)	A-E (exempt)	**32,200**	**1.19**	**F**
8. Folsom Blvd - State University Dr to Hornet Dr	Moderate	4 (art)	A-E (exempt)	31,800	0.88	D
9. Q St - 65th St to 67th St	Minor	2 (col)	A-E	8,400	0.96	E
10. 59th St - S St to Broadway	Low	2 (art)	A-D	**14,300**	**0.95**	**E**
11. 65th St - US 50 EB Ramps to 4th Ave	Moderate	5 (art)	A-E (exempt)	35,900	0.80	C
12. Broadway - 59th St to 65th St	Low	2 (art)	A-D (exempt)	**15,400**	**1.03**	**F**
13. Redding Ave - 4th Ave to San Joaquin St	Minor	2 (col)	A-D	7,100	0.81	D
14. 65th St - San Joaquin St to East 14th Ave	Moderate	4 (art)	A-D (exempt)	26,400	0.73	C
15. East 14th Ave - Redding Ave to Ramona Ave	Major	4 (col)	A-E	**28,500**	**1.01**	**F**
16. Power Inn Rd - Ramona Ave to East 14th Ave	Moderate	6 (art)	A-D	40,300	0.75	C
17. Power Inn Rd - Folsom Blvd to Ramona Ave	Moderate	6 (art)	A-E	44,400	0.82	D
18. Howe Ave - US 50 EB Ramps to Folsom Blvd	Moderate	6 (art)	A-E (exempt)	**62,300**	**1.15**	**F**

Notes:
(art) = arterial; (col) = collector – either minor or major as noted.
Source: Fehr & Peers, 2008.

Implementation of Scenario C would result in a significant cumulative impact at two non-exempt roadway segments.

- 59th Street – S Street to Broadway
- East 14th Avenue – Redding Avenue to Ramona Avenue

Implementation of Scenario C would result in LOS conditions exceeding acceptable thresholds and create a significant impact at the following four roadway segments along exempt roadways:

- Folsom Boulevard - 59th Street to 65th Street
- Folsom Boulevard – Ramona Avenue to State University Drive East
- Broadway – 59th Street to 65th Street
- Howe Avenue – US 50 EB Ramps to Folsom Boulevard

Freeway Operations

Table 4.3-30 summarizes the results of Scenario C freeway operations analysis under cumulative conditions.

TABLE 4.3-30

FREEWAY OPERATIONS – CUMULATIVE PLUS SCENARIO "C" CONDITIONS

Freeway Facility	Type	With Scenario C Project					
		AM Peak			PM Peak		
		LOS	MOE[1]	Vol.[2]	LOS	MOE[1]	Vol.[2]
1. Eastbound US 50 from 59th St to 65th St	Mainline	E	39.9	9,790	E	43.9	10,200
2. Westbound US 50 from 65th St to 59th St	Mainline	E	38.6	10,850	E	38.7	9,760
3. Eastbound US 50 Weave between 65th St and Howe Ave	Weave	**F**	**2,007**	**10,390**	**F**	**1,975**	**10,520**
4. Westbound US 50 Weave between Howe Ave and 65th St	Weave	**F**	**1,974**	**10,890**	E	1,848	10,000

Notes:
1. MOE = measure of effectiveness. For mainline, ramp merge, and ramp diverge sections, the MOE is density, measured in passenger car equivalents per mile per lane; for weaving sections, the MOE is service flow, measured in passenger car equivalents per lane.
2. Volume refers to freeway mainline volume or ramp at the study facility (mainline volumes reported for weaving areas).
Bold indicates a project impact.
Source: Fehr & Peers, 2008.

Table 4.3-30 indicates that the mainline segments of US 50 between 59th Street and 65th Street would operate at LOS E conditions during the AM and/or PM peak hour with Scenario C. The westbound mainline weave section on US 50 between 65th Street and Howe Avenue would operate at LOS E conditions during the PM peak hour and LOS F during the AM peak hour. The eastbound mainline weave section on US 50 between 65th Street and Howe Avenue would operate at LOS F conditions during the AM and/or PM peak hour with Scenario C.

US 50 off-ramp queuing was also evaluated under Cumulative plus Scenario C conditions. The results are presented below:

- Westbound 65th Street Off-ramp – Storage length, 1,300 feet; Average maximum queue, 650 feet in AM peak hour, 1,525 feet in PM peak hour; and
- Eastbound 65th Street Off-ramp – Storage length, 1,375 feet; Average maximum queue, 325 feet in AM peak hour, 1,050 feet in PM peak hour.

The queuing results indicate that the queue on the westbound 65th Street off-ramp would extend beyond the ramp gore and into the auxiliary lane that extends between 65th Street and the westbound on-ramp at the adjacent Howe Avenue interchange during the PM peak hour. The eastbound 65th Street off-ramp queue would be accommodated within the ramp storage space under the Cumulative plus Scenario C conditions.

Transit Operations: At-Grade Rail Crossings

The following section provides an evaluation of whether queues from adjacent signalized intersections would extend across the at-grade rail crossings at 59th Street and 65th Street with the implementation of Scenario C improvements under cumulative conditions. Table 4.3-31 identifies the average maximum queues from the adjacent traffic signals under cumulative conditions.

TABLE 4.3-31

AVERAGE MAXIMUM QUEUES UNDER CUMULATIVE PLUS SCENARIO "C" CONDITIONS

Rail Crossing	Adjacent Intersection	Travel Direction	Storage Length	Maximum Queue (Feet)	
				AM Peak	PM Peak
59th St	Folsom Blvd	NB on 59th St	825 feet	**1,300**	**1,250**
	S St	SB on 59th St	300 feet	220	**425**
65th St	Folsom Blvd	NB on 65th St	550 feet	550	**575**
	S St	SB on 65th St	300 feet	**350**	**350**

Source: Fehr & Peers, 2008.

As noted in Table 4.3-31 above in bold, queues would extend onto the at-grade crossings and affect the rail operations at the following locations under cumulative conditions:

- 59th Street At-Grade Crossing – northbound traffic queuing from the Folsom Boulevard/ 59th Street intersection during both AM and PM peak hours;
- 59th Street At-Grade Crossing – southbound traffic queuing from the 59th Street/S Street intersection during the PM peak hour;
- 65th Street At-Grade Crossing – northbound traffic queuing from the Folsom Boulevard/ 65th Street intersection during the PM peak hour
- 65th Street At-Grade Crossing – southbound traffic queuing from the 65th Street/S Street intersection during both AM and PM peak hours.

IMPACTS AND MITIGATION MEASURES

Standards of Significance

For the purpose of this EIR, the standards of significance for Transportation use policies in the 2030 General Plan, Mobility Element and, when appropriate, standards used by regulatory agencies. For traffic flow on the freeway system, Caltrans standards have been used.

Roadway Segments

A significant traffic impact occurs for roadway segments when:

1. The traffic generated by a project degrades peak period LOS from A, B, C or D (without the project) to E or F (with project); or
2. The LOS (without project) is E or F, and project generated traffic increases the Volume-to-Capacity Ratio (V/C ratio) by 0.02 or more.

Intersections

A significant traffic impact occurs for intersections when:

1. The traffic generated by a project degrades peak period LOS from A, B, C or D (without project) to E or F (with project); or
2. The LOS (without project) is E or F, and project generated traffic increases the peak period average vehicle delay by five seconds or more.

Multi-Modal Districts - Level of Service Standard

In Multi-Modal Districts, the City seeks to maintain the following Level of Service standards:

- Maintain operations on all roadways and intersections at LOS A-E at all times, including peak travel times; or
- Unless maintaining LOS E would, in the City's judgment, be infeasible and/or conflict with the achievement of other goals. LOS F conditions may be acceptable, provided that provisions are made to improve the overall system and/or promote non-vehicular transportation and transit as part of a development project or a City-initiated project.

Roadways Exempt from Level of Service Standard

The following roadways are exempt from the above LOS standards:

- 12th/14th Avenue: State Route 99 to 36th Street
- 24th Street: Meadowview Road to Delta Shores Circle
- 65th Street: Folsom Boulevard to 14th Avenue
- Alhambra Boulevard: Folsom Boulevard to P Street
- Arcade Boulevard: Marysville Boulevard to Del Paso Boulevard
- Arden Way: Capital City Freeway to Ethan Way
- Blair Avenue/47th Avenue: S. Land Park Drive to Freeport Boulevard
- Broadway: 15th Street to Franklin Boulevard
- Broadway: 58th to 65th streets
- El Camino Avenue: Stonecreek Drive to Marysville Boulevard

- El Camino Avenue: Capitol City Freeway to Howe Avenue
- Elder Creek Road: 65th Street to Power Inn Road
- Florin Perkins Road: 14th Avenue to Elder Creek Road
- Florin Road: Greenhaven Drive to I-5; 24th Street to Franklin Boulevard
- Folsom Boulevard: 34th Street to Watt Avenue
- Freeport Boulevard: Broadway to Seamas Avenue
- Fruitridge Road: Franklin Boulevard to SR 99
- Garden Highway: Truxel Road to Northgate Boulevard
- Howe Avenue: American River Drive to Folsom Boulevard
- J Street: 43rd Street to 56th Street
- Mack Road: Meadowview Road to Stockton Boulevard
- Martin Luther King Boulevard: Broadway to 12th Avenue
- Marysville Boulevard: I-80 to Arcade Boulevard
- Northgate Boulevard: Del Paso Road to SR 160
- Raley Boulevard: Bell Avenue to I-80
- Roseville Road: Marconi Avenue to I-80
- Royal Oaks Drive: SR 160 to Arden Way
- Truxel Road: I-80 to Gateway Park

If a Traffic Study is prepared and identifies a significant LOS impact to a roadway or intersection that is located within one of the roadway corridors described above, the project would not be required to implement mitigation that would, for example, widen roadways, in order for the City to find project conformance with the General Plan. Instead, General Plan conformance could be found if the project provides improvements to other parts of the city wide transportation system in order to improve transportation-system-wide roadway capacity, to make intersection improvements, or to enhance non-auto travel modes in furtherance of the General Plan goals. The improvements would be required within the project site vicinity or within the area affected by the project's vehicular traffic impacts. With the provision of such other transportation infrastructure improvements, the project would not be required to provide any mitigation for vehicular traffic impacts to the listed road segment in order to conform to the General Plan.

Freeway Facilities

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 level of service to be worse than the freeway's level of service;
- Project traffic increases that cause the freeway level of service to deteriorate beyond level of service threshold defined in the Caltrans Route Concept Report for the facility; or
- The expected ramp queue is greater than the storage capacity.

Transit

Impacts to the transit system are considered significant if the proposed project would:

- Adversely affect public transit operations; or
- Fail to adequately provide for access to public transit.

Bicycle Facilities

Impacts to bicycle facilities are considered significant if the proposed project would:

- Adversely affect bicycle travel, bicycle paths; or
- Fail to adequately provide for access by bicycle.

Pedestrian Circulation

Impacts to pedestrian circulation are considered significant if the proposed project would:

- Adversely affect pedestrian travel, pedestrian paths; or
- Fail to adequately provide for access by pedestrians.

Parking

Impacts to parking are considered significant if the proposed project would eliminate or adversely affect an existing parking facility, interfere with the implementation of a proposed parking facility, or result in an inadequate supply of parking.

Impacts and Mitigation Measures

The following section identifies impacts and mitigation measures for all of the transportation standards of significance described above. The only exception is for the parking thresholds. Because the project alternatives are transportation infrastructure programs for the 65th Street Station Area and assume the land uses identified in the 2030 General Plan for all alternatives, there are no parking impacts and therefore no parking mitigation measures are required.

4.3-1 Under Existing plus Project conditions, project Scenarios B and C would result in roadway segments within the project area operating at unacceptable LOS conditions.

Figures 4.3-11 and 4.3-13 show the average daily traffic volumes and roadway levels of service for the Existing plus Scenarios B and C conditions, respectively. Significant near-term impacts would occur at one roadway segment under Scenario B and three roadway segments under Scenario C.

Scenarios B and C would result in a significant impact to non-exempt roadway segments within the project area.

As indicated above (see Tables 4.3-13 and 4.3-16), the following road segments would not meet the new LOS policy included in the 2030 General Plan. This is considered a ***potentially significant impact*.**

- Elvas Avenue – J Street to 65th Street (Scenario B)
- 59th Street – Folsom Boulevard to S Street (Scenario C)

Scenario C would result in a significant impact at the following roadway segments within the study area, which are exempt from widening in the 2030 General Plan.

The following road segments would not meet the new LOS policy included in the 2030 General Plan. This is considered a ***potentially significant impact*.**

- Folsom Boulevard – Ramona Avenue to State University Drive (Scenario C)
- Broadway – 59th Street to 65th Street (Scenario C)

Mitigation Measure

To mitigate impacts to the roadways described above, all of the impacted roadway segments would have to be widened to provide a continuous four-lane or six-lane section with a median. These improvements are considered infeasible, because it would require increasing the number of travel lanes planned for each street, which would be inconsistent with the City of Sacramento General Plan as well as the goals and objectives of the 65th Station Area Plan to create pedestrian-friendly streets and Smart Growth policies. However, the implementation of Intelligent Transportation System (ITS) improvements (such as advanced signal systems, transit signal priority, traveler information, and parking information systems) as well as pedestrian and bicycle facilities would improve the efficiency of the existing transportation system and reduce future impacts. Mitigation Measures 4.3-1(a) and (b) would require all future development within the plan area to participate in whatever financing mechanism is in place at the time of issuance of building permits to fund, on a fair-share basis, the cost of the City of Sacramento Traffic Operations Center to implement ITS improvements as well as pedestrian and bicycle facilities.

However, these measures would not reduce the significance of the roadway impacts to a less-than-significant level. Therefore, impacts would remain ***significant and unavoidable***.

(Scenarios B and C)

4.3-1 a) *At the time of issuance of building permits, all future development within the project area shall be required to participate in the 65th Street Station Area Finance plan or whatever financing mechanism is in place to fund, on a fair-share basis, the cost of the City of Sacramento Traffic Operations Center to implement ITS improvements on all major streets including Elvas Avenue, Folsom Boulevard, and 65th Street.*

b) *All future development within the project area shall be required to participate in the 65th Street Station Area Finance plan or whatever financing mechanism is in place to fund, on a fair-share basis, the cost of designated pedestrian and bicycle improvements in the study area.*

4.3-2 Under Existing plus Project conditions, project Scenarios B and C would result in intersections within the study area that would operate at an unacceptable LOS.

Figures 4.3-10 and 4.3-12 show the peak hour traffic volumes and lane configurations for the Existing plus Scenarios B and C conditions, respectively. Significant near-term impacts would occur at four intersections under Scenario B and two intersections under Scenario C.

Scenario B would result in a significant impact to one intersection along a non-exempt roadway segment within the project area.

As indicated above (see Table 4.3-16), the following intersection would not meet the new LOS policy included in the 2030 General Plan. This is considered a ***potentially significant impact*.**

- S Street/59th Street (Scenario B)

Scenarios B and C would result in a significant impact at five intersections along roadway segments within the study area, which are exempt from widening in the 2030 General Plan.

The following intersections along exempt road segments would not meet the new LOS policy included in the 2030 General Plan. This is considered a ***potentially significant impact*.**

- Folsom Boulevard/59th Street (Scenario C)
- Folsom Boulevard/64th Street (Scenario B)
- Folsom Boulevard/State University Drive (Scenario C)
- S Street/65th Street (Scenario B)
- 65th Street/Broadway (Scenario B)

Mitigation Measure

To mitigate the impact at these intersections, the major roadways (Folsom Boulevard, 65th Street, 59th Street, and Broadway) would have to be widened to provide additional through travel lanes. This improvement is considered infeasible because it would be inconsistent with the City of Sacramento General Plan as well as the goals and objectives of the 65th Station Area Plan to create pedestrian-friendly streets and Smart Growth policies. However, the implementation of ITS improvements as well as pedestrian and bicycle facilities would improve the efficiency of the existing transportation system and reduce future impacts. Mitigation Measures 4.3-2(a) and 4.3-2(b) would require all future development within the plan area to participate in whatever financing mechanism is in place at the time of issuance of building permits to fund, on a fair-share basis, the cost of the City of Sacramento Traffic Operations Center to implement ITS improvements as well as pedestrian and bicycle facilities. However, these measures would not reduce the significance of the roadway impacts to a less-than-significant level. Therefore, impacts would remain ***significant and unavoidable***.

(Scenarios B and C)

4.3-2 a) *Implement Mitigation Measure 4.3-1(a).*

b) *Implement Mitigation Measure 4.3-1(b).*

4.3-3 Under Existing plus Project conditions, the existing freeway system would be adversely affected under project Scenarios B and C.

As indicated above (see Tables 4.3-14 and 4.3-17), the segment of US 50 from 65th Street to Howe Avenue would operate at LOS F conditions under all scenarios. Since the project does not include a change in land use, it is expected that the overall addition of trips to the freeway system will be small. Although a comparison of all three scenarios to existing conditions indicates that each scenario would result in a less than a two percent increase to freeway facilities, this impact is considered significant according to Caltrans standards. In addition, the ramp queue at the westbound US 50 off-ramp would extend beyond the available storage length under all three conditions. Again, this impact is considered ***significant*** according to Caltrans standards.

Mitigation Measure

The proposed project identified the widening of the westbound US 50 off-ramp as a measure to relieve traffic and increase ramp storage area. While the increase in storage area would reduce the queuing impact to a less-than-significant level; however because the freeway operations in this area are constrained by heavy mainline volumes this measure would not reduce the significance of freeway mainline impacts to a less-than-significant level. Implementation of this mitigation measures shall improve the traffic operation in the westbound off ramp but would not reduce the significance of freeway mainline impact to a less than significant lever; therefore this impact would remain ***significant and unavoidable***.

(Scenarios B and C)

4.3-3 *All future development within the project area shall be required to participate in the 65th Street Station Area Finance plan or whatever financing mechanism is in place to fund, on a fair-share basis, the cost of widening the westbound US 50 off-ramp at 65th Street.*

4.3-4 Under Existing plus Project conditions, the existing or planned pedestrian system would not be adversely affected under project Scenarios B and C.

As shown in Figure 4.3-5, the current pedestrian system in the project area is intermittent and lacks overall connectivity. Folsom Boulevard west of 65th Street has sidewalk coverage on both sides of the street until just east of 63rd Street, where the southern sidewalk ends. Folsom Boulevard east of 65th Street generally lacks sidewalk coverage, except for the portion between 65th and 66th streets. In general, complete and continuous sidewalks line 65th Street within the project area. Sidewalks are located on both sides of Q Street between 65th Street and 67th Street, but they do not extend east of 67th Street. The only sidewalk on 67th Street is on the east side of the street in front of the transit station.

As described previously, project Scenarios B and C would construct varying levels of pedestrian improvements which include, but are not limited to, curb, gutter, sidewalk, and planters (pedestrian improvements) and off-street paths. Development of any of the project scenarios (B or C) would not remove or detract from existing pedestrian facilities; rather, all three scenarios would provide enhanced sidewalks on Folsom Boulevard, Redding Avenue, Q Street, 4th Avenue, San Joaquin Street east of Redding Avenue, Elvas Avenue, and 65th Street. Therefore, the proposed scenarios would not adversely affect any existing or planned pedestrian improvements. This impact is considered ***less than significant***.

Mitigation Measure

None required.

4.3-5 Under Existing plus Project conditions, the existing or planned bicycle system would not be adversely affected under project Scenarios B and C.

Figure 4.3-4 shows the existing and planned (under No Project Scenario) bicycle facilities throughout the project area. As described above, Scenarios B and C would construct Class I and Class II bicycle facilities throughout the project area. The provision of additional bicycle linkages throughout the project area would enhance the overall bicycle system and allow bicyclists to move throughout the project area on dedicated bicycle routes instead of using vehicle lanes or sidewalks. Implementation of Scenarios B or C would not remove any existing bicycle facility or any facility that is planned in the 2010 Sacramento City/County Bikeway Master Plan. Therefore, implementation of Scenarios B or C would not adversely affect bicycle facilities and the impact would be ***less than significant***.

Mitigation Measure

None required.

4.3-6 Under Existing plus Project conditions, the existing transit system would be adversely affected under Scenarios B and C.

Due to the 65th Street light rail station's location, a number of buses use Folsom Boulevard to access the station. Reduction in travel times along Folsom Boulevard could affect transit operations in the project area. Under the No Project scenario, Folsom Boulevard would be widened at the UPRR undercrossing from two lanes to four lanes, providing a continuous four-lane arterial from 59th Street to Power Inn Road. This road widening would provide more lane capacity and would result in the lowest future travel times along Folsom Boulevard. Under Scenario B, roadway and intersection improvements would result in a significant increase in travel time along Folsom Boulevard through the core of the study area. As a result, impacts to the existing transit system under Scenario B would be ***potentially significant*****.**

Under Scenario C, Folsom Boulevard would be reduced from four lanes to two and three lanes between 59th Street and Elvas Avenue. The implementation Scenario C would result in increased delays at the study intersections. The additional intersection delay could result in increased travel times for busses serving the area, particularly if the bus utilizes the segment of Folsom Boulevard between 65th Street and State University Drive East. Increases in travel time could adversely affect transit system operations and the impact would be ***potentially significant*****.**

Mitigation Measure

To fully mitigate the impact described above, the roadways and intersections identified above would have to be widened. This improvement is considered infeasible as it would require increasing the number of travel lanes planned for several of the major roadways in the project area, which would be inconsistent with the City of Sacramento goals and objectives to create pedestrian-friendly streets and Smart Growth policies. The following mitigation measures would reduce the level of impact without requiring significant right-of-way increases. Although implementation of Mitigation Measures 4.3-6(a) or (b) would reduce transit impacts, it would not reduce those impacts to a less-than-significant level. Therefore, the impact would remain ***significant and unavoidable*** under Scenarios B or C.

(Scenarios B and C)

4.3-6 a) *The City of Sacramento, in coordination with Regional Transit shall implement transit signal priority along Folsom Boulevard and/or 65th Street; and/or*

b) *The City of Sacramento shall create flex lanes along Folsom Boulevard that use peak hour parking restrictions to convert on-street parking to peak hour vehicle use.*

4.3-7 Under Existing plus Project conditions, project Scenarios B and C would result in disruptions to the transportation network in the project area, including the possibility of temporary lane closures, street closures, sidewalk closures, and bikeway closures.

Construction activities would include short-term or temporary disruptions to the transportation network in the project area, including the possibility of temporary lane closures, street closures, sidewalk closures, and bikeway closures. Transit access may also be disrupted due to road and lane closures and as bus stops are reconstructed. These activities could result in degraded roadway, intersection, bicycle, pedestrian, and transit conditions. Therefore, the impacts are considered ***potentially significant*.**

Mitigation Measure

Mitigation Measure 4.3-7 would require development of a Construction Traffic and Parking Management Plan for any improvement projects within the project area, subject to the approval of the City Traffic Engineer, would reduce the impact to a ***less-than-significant level***.

(Scenarios B and C)

4.3-7 *Before issuance of construction permits for any transportation improvements or any development projects in the project area, the City/ developers shall prepare a detailed Traffic Management Plan that would be subject to review and approval by the City Department of Transportation, Regional Transit, and local emergency service providers, including the City of Sacramento fire and police departments. The plan shall ensure maintenance of acceptable operating conditions on local roadways and transit routes during all construction activities. At a minimum, the plan shall include:*

- *The number of truck trips, time, and day of street closures;*
- *Time of day of arrival and departure of trucks;*
- *Limitations on the size and type of trucks; provision of a staging area with a limitation on the number of trucks that can be waiting;*
- *Provision of a truck circulation pattern;*
- *Provision of an access plan to maintain safe vehicular, pedestrian, and bicycle movements (e.g., steel plates, minimum distances of open trenches, and private vehicle pick up and drop off areas);*
- *Safe and efficient access routes for emergency vehicles;*
- *Efficient and convenient transit routes;*
- *Manual traffic control when necessary;*
- *Proper advance warning and posted signage concerning street closures;*
- *Provisions for pedestrian safety; and*

- *Provisions for temporary bus stops, if necessary.*

A copy of the construction traffic management plan shall be submitted to local emergency response agencies and these agencies shall be notified at least 14 days before the commencement of construction that would partially or fully obstruct roadways.

Cumulative Impacts and Mitigation Measures

The cumulative conditions analysis assumes that all of the transportation improvements in Scenario B or C would be completely built out by 2030. The analysis also uses a regional travel model that assumes that all fully funded (Tier I) projects within the City of Sacramento as described in the SACOG Metropolitan Transportation Plan (MTP) would be constructed. Traffic signal timings were also assumed to be optimized throughout the project area. Cumulative impacts to roadway segments, intersections, freeways, transit facilities, residential neighborhoods, and at-grade rail crossings are discussed below. The cumulative pedestrian system and bicycle system are not analyzed because under cumulative conditions, no pedestrian or bicycle facilities would be removed as a result of Scenario B or C implementation. Under cumulative conditions, there would be no impact to pedestrian or bicycle systems or facilities.

4.3-8 Under Cumulative plus Project conditions, project Scenarios B and C would result in roadway segments within the project area operating at unacceptable LOS conditions.

Figures 4.3-20 and 4.3-22 show the average daily traffic volumes and roadway level of service for the Cumulative plus Scenarios B and C conditions, respectively. Significant cumulative impacts would occur at three roadway segments under Scenario B and five roadway segments under Scenario C.

Scenarios B and C would result in a significant impact to non-exempt roadway segments within the project area.

As indicated above (see Tables 4.3-25 and 4.3-29), the following road segments would not meet the new LOS policy included in the 2030 General Plan. This is considered a ***potentially significant impact*.**

- 59th Street – S Street to Broadway (Scenarios B and C)
- East 14th Avenue – Redding Avenue to Ramona Avenue (Scenario C)

Scenarios B and C would result in a significant impact at the following roadway segments within the study area, which are exempt from widening in the 2030 General Plan.

The following road segments would not meet the new LOS policy included in the 2030 General Plan. This is considered a ***potentially significant impact*.**

- Folsom Boulevard – 59th Street to 65th Street (Scenarios B and C)
- Folsom Boulevard – Ramona Avenue to State University Drive (Scenarios B and C)
- Broadway – 59th Street to 65th Street (Scenario C)
- Howe Avenue – US 50 EB Ramps to Folsom Boulevard (Scenario C)

Mitigation Measure

To mitigate impacts to the roadways described above, the segments of 59th Street, East 14th Avenue, Folsom Boulevard, and Howe Avenue would have to be widened to provide additional through travel lanes. These improvements are considered infeasible because it would be inconsistent with the City of Sacramento General Plan as well as the goals and objectives of the 65th Station Area Plan to create pedestrian-friendly streets and Smart Growth policies. However, the implementation of ITS improvements (such as advanced signal systems, transit signal priority, traveler information, and parking information systems) as well as pedestrian and bicycle facilities would improve the efficiency of the existing transportation system and reduce future impacts. Mitigation Measures 4.3-8(a) and (b) would require all future development within the project area to pay a fair share contribution to the City of Sacramento Traffic Operations Center to implement ITS improvements on all major streets including Elvas Avenue, Folsom Boulevard, and 65th Street. However, these measures would not reduce the significance of the roadway impacts to a less-than-significant level. Therefore, impacts would remain ***significant and unavoidable***.

(Scenarios B and C)

4.3-8 a) *Implement Mitigation Measure 4.3-1(a).*

b) *Implement Mitigation Measure 4.3-1(b).*

4.3-9 Under Cumulative plus Project conditions, project Scenarios B and C would result in intersections within the study area that would operate at an unacceptable LOS.

Figures 4.3-19 and 4.3-21 show the peak hour traffic volumes and lane configurations for the Cumulative plus Scenarios B and C conditions, respectively. Significant cumulative impacts would occur at 11 intersections under Scenario B and six intersections under Scenario C.

Scenarios B and C would result in a significant impact to the following intersections along a non-exempt roadway segment within the project area.

As indicated above (see Tables 4.3-24 and 4.3-28), the following intersections would not meet the new LOS policy included in the 2030 General Plan. This is considered a ***potentially significant impact*****.**

- S Street/59th Street (Scenario C)

- Elvas Avenue/65th Street (Scenario B)
- Q Street/67th Street (Scenarios B and C)

Scenarios B and C would result in a significant impact at the following intersections along roadway segments within the study area, which are exempt from widening in the 2030 General Plan.

The following intersections along exempt road segments would not meet the new LOS policy included in the 2030 General Plan. This is considered a ***potentially significant impact*.**

- Folsom Boulevard/59th Street (Scenarios B and C)
- Folsom Boulevard/63rd Street (Scenario B)
- Folsom Boulevard/65th Street (Scenario B)
- Folsom Boulevard/Elvas Avenue (Scenario B)
- Folsom Boulevard/State University Drive (Scenarios B and C)
- S Street/65th Street (Scenarios B and C)
- US EB 50 Ramps/65th Street (Scenario B)
- 65th Street/4th Avenue (Scenario B)
- 65th Street/Broadway (Scenarios B and C)

Mitigation Measure

Intersection improvements are available at the following intersections that involve installation of new traffic control devices, modification of existing traffic control devices, or installation of turn lanes. Implementation of this mitigation measure would result in acceptable LOS conditions. Therefore, the impact under Scenarios B and C for the Q Street/67th Street intersection would be ***less than significant*** with mitigation.

Q Street/67th Street

(Scenarios B and C)

4.3-9 a) *The 65th Street Station Area Plan Finance Plan shall provide funding to install a traffic signal at the intersection of Q Street and 67th Street, when warranted or with the development of the parcels adjacent to this intersection.*

To mitigate the impact at the remaining intersections, the major roadways (Folsom Boulevard, 65th Street, and 59th Street) would have to be widened to provide additional through travel lanes. This would include widening the proposed 65th Street tunnel to CSU Sacramento, a component of Scenario B, from 2 to 4 lanes. These improvements are considered infeasible because it would be inconsistent with the City of Sacramento General Plan as well as the goals and

objectives of the 65th Station Area Plan to create pedestrian-friendly streets and Smart Growth policies. However, the implementation of ITS improvements as well as pedestrian and bicycle facilities would improve the efficiency of the existing transportation system and reduce future impacts. Mitigation Measures 4.3-10(b) and (c) would require all future development within the plan area to participate in whatever financing mechanism is in place at the time of issuance of building permits to fund, on a fair-share basis, the cost of the City of Sacramento Traffic Operations Center to implement ITS improvements as well as pedestrian and bicycle facilities. However, this measure would not reduce the significance of the roadway impacts to a less-than-significant level. Therefore, impacts at the remaining intersections would remain ***significant and unavoidable***.

(Scenarios B and C)

4.3-9 b) *Implement Mitigation Measure 4.3-1(a).*

c) *Implement Mitigation Measure 4.3-1(b).*

4.3-10 Under Cumulative plus Project conditions, project Scenarios B and C would adversely affect the existing freeway system.

As indicated above (see Tables 4.3-26 and 4.3-30), US 50 from 65th Street to Howe Avenue would operate at LOS F conditions under both cumulative project scenarios. Although a comparison of the cumulative scenarios to baseline cumulative conditions indicates that each scenario would result in a less than two percent increase to freeway facilities, this impact is considered significant according to Caltrans standards. In addition, the ramp queue at the westbound US 50 off-ramp to extend beyond the available storage length under all three conditions. Again, this impact is considered ***potentially significant*** according to Caltrans standards.

Mitigation Measure

The proposed project identified the widening of the westbound US 50 off-ramp as a measure to relieve traffic and increase ramp storage area. While the increase in storage area would reduce the queuing impact to a less-than-significant level; however because the freeway operations in this area are constrained by heavy mainline volumes this measure would not reduce the significance of freeway mainline impacts to a less-than-significant level; therefore this impact would remain ***significant and unavoidable***.

(Scenarios B and C)

4.3-10 *Implement Mitigation Measure 4.3-3.*

4.3-11 Under Cumulative plus Project conditions, the existing transit system would be adversely affected under Scenarios B and C.

Bus Operations

As described above and shown in Figure 4.3-14, travel times for two major project area corridors would be different for each scenario. Travel times along Folsom Boulevard between 59th Street and Howe Avenue and 65th Street-Elvas Avenue from J Street to East 14th Street were analyzed. The largest impact to the transit system would occur for the scenario that has the longest travel times along these routes. Increased delay and slower travel times would impact busses' abilities to reach existing light rail stations at 59th Street and 65th Street.

Travel times along both corridors would be shortest under cumulative conditions for the No Project Scenario, with 7-8 minute total travel times along the east-west Folsom Boulevard corridor and 7-9 minute total travel times along the north-south 65th Street-Elvas Avenue corridor.

Scenario B would have the longest travel times of all three scenarios under cumulative conditions. Travel times along the north-south 65th Street-Elvas Avenue corridor are approximately 7-16 minutes. Travel times along Folsom Boulevard would be approximately four minutes longer for eastbound motorists (approximately 14 minutes) and seven minutes longer for westbound motorists (approximately 15 minutes).

Scenario C would have travel times that are slightly less than Scenario B, but higher than the No Project scenario under cumulative conditions. When compared with the No Project Scenario, travel times along the north-south 65th Street-Elvas Avenue corridor would be four minutes longer for northbound motorists (approximately 11 minutes) and almost identical for southbound motorists (approximately 12-13 minutes). Travel times along Folsom Boulevard would be approximately three minutes longer for eastbound motorists (approximately 13 minutes) and five minutes longer for westbound motorists (approximately 13 minutes).

Similar to the existing plus project condition, Folsom Boulevard would be widened at the UPRR undercrossing from two lanes to four lanes, providing a continuous four-lane arterial from 59th Street to Power Inn Road under the No Project Scenario. This road widening would provide more lane capacity and would actually improve travel times, compared to existing conditions, along the Folsom Boulevard corridor. Ten intersections would operate at LOS E or F conditions under the No Project Scenario. Under Scenario B, roadway and intersection improvements would result in a significant change in travel time in the project area, given the increased level of travel along 65th Street into the CSU Sacramento campus with the provision of the new tunnel connection. Significant impacts would occur at 11 intersections under Scenario B cumulative conditions. Therefore, cumulative impacts to the existing transit system under Scenario B would be *potentially cumulatively significant*.

Under Scenario C, the addition of roadway and intersection improvements would result in increase long-term congestion in the project area. Significant impacts would occur at 6 intersections under Scenario C cumulative conditions. The implementation of Scenario C would

result in increased delays these intersections, which could result in increased travel times for busses serving the area. Increases in travel time could adversely affect transit system operations and the impact would be ***potentially cumulatively significant*** under Scenario C. Due to Scenario C's lane reduction along Folsom Boulevard, the project's contribution would be cumulatively considerable.

Mitigation Measure

To fully mitigate the impact described above under cumulative plus Scenario B or C conditions, the roadways and intersections identified above would have to be widened. This improvement is considered infeasible as it would require increasing the number of travel lanes planned for several of the major roadways in the project area, which would be inconsistent with the City of Sacramento General Plan as well as the goals and objectives to create pedestrian-friendly streets and Smart Growth policies. There are a series of mitigation measures that could reduce the level of impact without requiring significant right-of-way increases. Although implementation of Mitigation Measure 4.3-11(a) would reduce transit impacts, it would not reduce those impacts to a less-than-significant level. Therefore, the impact would remain ***cumulatively significant and unavoidable*** under Scenarios B and C.

(Scenarios B and C)
4.3-11 a) *Implement Mitigation Measure 4.3-6.*

At-Grade Rail Crossings

As described above and shown in Tables 4.3-27 and 4.3-31, both project scenarios would have queues that extend from adjacent traffic signals to and beyond the at-grade rail crossings at 59th Street and 65th Street under cumulative conditions. This queuing exists under current conditions at both at-grade crossings. The traffic signal at 65th Street/S Street has a special pre-emption phase designed to reduce the impact of this queuing for southbound traffic on 65th Street. However, cumulative queue lengths on southbound 65th Street at S Street would exceed the available storage length by 50 feet during both the AM and PM peak hours under Scenario C. The northbound queue lengths on 65th Street at Folsom Boulevard would exceed the available storage by 50 feet during the AM peak hour under Scenario B and by 25 feet during the AM peak hour under Scenario C.

The 59th Street rail crossing, maximum queue lengths for traffic on southbound 59th Street would exceed the available storage length by 150 feet in the AM peak hour and by 275 feet during the PM peak hour under the no Project Scenario; by 175 feet during the PM peak hour under Scenario B; and by 125 feet during the PM peak hour under Scenario C. In addition, cumulative queue lengths on northbound 59th Street at Folsom Boulevard would exceed the available storage length by 25 feet during the AM peak hour under the No Project Scenario; and by 475 feet during the AM peak hour and 425 feet during the PM peak hour under Scenario C. An evaluation of accident data for the six-year period from January 2003 through November 2008

indicates that no reported accidents between trains and motor vehicles have occurred at these two at-grade crossings. Further, the state motor vehicle code mandates that motorists keep clear of tracks when a queue occurs across an at-grade rail crossing. Because traffic queues at the 59th Street and 65th Street rail crossings would exceed the available storage length and adversely affect the operation of the rail operation the impact would be ***potentially significant*.**

Mitigation Measure

Queue storage lengths would be exceeded at the 59th Street and 65th Street at-grade rail crossings. Implementation of Mitigation Measure 4.3-11(b) would provide additional signing and striping as well as additional advance detection for the adjacent traffic signals on the approaches to the 59th Street and 65th Street at-grade rail crossings. Mitigation Measure 4.3-11(b) would further lessen impacts at the 65th Street at-grade rail crossing and reduce the impact at the 59th Street at-grade rail crossing to a ***less-than-significant level*** with mitigation.

(Scenarios B and C)

4.3-11 b) *The City shall install additional signing and striping as well as enhancements to maximize the efficiency of existing traffic signal pre-emptions on the approaches to the 59th Street and 65th Street at-grade rail crossings. The City shall work with Regional Transit and the California Public Utility Commission (CPUC) to facilitate the implementation of advanced light rail detection at both locations to reduce the amount of time that gates are required to be closed.*

5.0 OTHER CEQA REQUIRED CONSIDERATIONS

5.0 CEQA CONSIDERATIONS

INTRODUCTION

Section 15126 of the California Environmental Quality Act (CEQA) Guidelines requires that all aspects of a project must be considered when evaluating its impact on the environment, including planning, acquisition, development, and operation. As part of this analysis, the EIR must also identify (1) significant environmental effects of the proposed project, (2) significant environmental effects that cannot be avoided if the proposed project is implemented, (3) significant irreversible environmental changes that would result from implementation of the proposed project, and (4) growth-inducing impacts of the proposed project. It should be noted that although growth inducement itself is not considered an environmental effect, it could potentially lead to foreseeable physical environmental effects, which are discussed under Growth Inducing Impacts below.

Significant Environmental Effects

Chapter 2 of this EIR, Summary of Impacts and Mitigation Measures, and Sections 4.1 through 4.3 of this EIR provide a comprehensive identification of the proposed project's environmental effects, 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 4 of this EIR. Project-specific and cumulative impacts that cannot be avoided if the project is approved as proposed include:

Project-Specific Significant and Unavoidable Impacts

4.3 Transportation and Circulation

(Scenarios B and C)

4.3-1 Under Existing plus Project conditions, project Scenarios B and C would result in roadway segments within the project area operating at unacceptable LOS conditions.

(Scenarios B and C)

4.3-2 Under Existing plus Project conditions, project Scenarios B and C would result in intersections within the study area that would operate at an unacceptable LOS.

(Scenarios B and C)

4.3-3 Under Existing plus Project conditions, the existing freeway system would be adversely affected under project Scenarios B and C.

(Scenarios B and C)

4.3-6 Under Existing plus Project conditions, the existing transit system would be adversely affected under Scenarios B and C.

Cumulative Significant and Unavoidable Impacts

4.2 Noise

(Scenarios B and C)

4.2-4 Future traffic in the project vicinity, including traffic from planned future development, could permanently expose sensitive receptors to increased cumulative traffic noise levels on local roadways.

4.3 Transportation and Circulation

(Scenarios B and C)

4.3-8 Under Cumulative plus Project conditions, project Scenarios B and C would result in roadway segments within the project area operating at unacceptable LOS conditions.

(Scenarios B and C)

4.3-9 Under Cumulative plus Project conditions, project Scenarios B and C would result in intersections within the study area that would operate at an unacceptable LOS.

(Scenarios B and C)

4.3-10 Under Cumulative plus Project conditions, project Scenarios B and C would adversely affect the existing freeway system.

(Scenarios B and C)

4.3-11 Under Cumulative plus Project conditions, the existing transit system would be adversely affected under Scenarios B and C.

Significant Irreversible Environmental Effects

Section 15126.2(c) of the CEQA Guidelines requires a discussion of any significant irreversible environmental changes that would be caused by the proposed project. Section 15126.2(c) states:

> Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible, since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also, irreversible damage can result from environmental accidents associated with

the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.

Generally, a project would result in significant irreversible environmental changes if:

- The primary and secondary impacts would generally commit future generations to similar uses;
- The project would involve uses in which irreversible damage could result from any potential environmental accidents associated with the project;
- The project would involve a large commitment of nonrenewable resources;
- The proposed consumption of resources is not justified (e.g., the project involves the wasteful use of energy).

Implementation of the proposed project would result in the long-term commitment of resources as a result of transportation improvements (Scenarios B and C) implemented throughout the project area. The proposed project would likely result in or contribute to the following irreversible environmental changes:

- Conversion of existing undeveloped land to a roadway or pathway, thus precluding other alternate land uses in the future.
- Increased noise levels on certain roadways (but not in excess of existing, adopted thresholds).
- Irreversible commitment of municipal resources to the provision of services and operations of infrastructure for future urban development.
- Increased traffic volumes on existing roadways and the establishment of roads in areas not presently provided with vehicular access.

These irreversible impacts, which are unavoidable consequences of development of the transportation improvements to accommodate existing and projected growth within the project area, are discussed in Sections 4.1 through 4.3 of this Draft EIR and in the Initial Study (Appendix C).

Growth Inducing Impacts

As required by section 15126.2(d) of the CEQA Guidelines, an EIR must discuss ways in which a proposed project could foster economic or population growth or the construction of additional housing, either directly or indirectly, in the surrounding environment. Also, the EIR must discuss the characteristics of the project that could encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. Growth can be induced in a number of ways, such as through the elimination of obstacles to growth, through the stimulation of economic activity within the region, or through the establishment of policies or

other precedents that directly or indirectly encourage additional growth. Although growth inducement itself is not considered an environmental effect, it could potentially lead to environmental effects.

- **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 effects such as the "multiplier effect." A "multiplier" is an economic term used to describe inter-relationships 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.

Elimination of Obstacles to Growth

The proposed transportation improvements (Scenarios B and C) include new streets, street widenings, street extensions, bicycle and pedestrian facilities, and grade separated under crossings. The transportation scenarios include a redesigned transportation network within the project area that would support transit-oriented development centered on the 65th Street/ University light rail station. The transportation scenarios would not generate new vehicular/ transit/bicycle/pedestrian trips, but would rather accommodate an increase in future trips that would be generated by development planned for the area.

The proposed transportation improvements would provide a transportation system that would potentially reduce vehicular trips and increase the number of transit/bicycle/pedestrian trips. Further, because the proposed project would involve the realignment and extension of roadways within an existing heavily developed area, the potential for additional growth is not considered substantial. The contemplated improvements are designed to alleviate existing congestion within the area's existing transportation network, and would not open new or underdeveloped areas of the city to development possibilities that did not previously exist. Therefore, construction and implementation of the proposed transportation scenarios would not eliminate obstacles to growth.

Economic Effects

The project is comprised of various transportation improvements that would not generate new employment opportunities. The only employment opportunities would be limited to employment generated during the construction phases. Construction workers could spend money in the local economy, and the expenditure of that money could indirectly result in additional jobs. Indirect jobs tend to be in relatively close proximity to the places of employment and residences. For example, when a construction worker 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. Because the time period is short-term, it is not anticipated that the construction employees would result in long-term economic effects.

Impacts of Induced Growth

The proposed transportation scenarios would not generate new growth, but would rather accommodate future growth planned within the project area as detailed in the City of Sacramento 2030 General Plan, the 65th Street/University Transit Village Plan, and the South 65th Street Area Plan. Further, the proposed project would occur within an already heavily developed area of the city. The proposed improvements are designed to alleviate existing traffic congestion and improve traffic flow for existing uses. For this reason, the proposed project would not contribute to direct, indirect, and induced growth in the area.

Cumulative Impacts

CEQA requires that an EIR contain an assessment of the cumulative impacts that could be associated with project implementation. This assessment involves examining project-related effects on the environment in the context of similar effects that have been caused by past or existing projects, and the anticipated effects of future projects. Although project-related impacts may be individually less than significant, the cumulative effects of these impacts, in combination with other projects, could be significant under CEQA and must be addressed (CEQA Guidelines, section 15130(a)). Each section of Chapter 4, Environmental Analysis, concludes with a cumulative impact analysis for the issue area addressed in the section.

An EIR must discuss the "cumulative impacts" of a project when its incremental effect will be cumulatively considerable. This means that the incremental effects of an individual project would be considerable when viewed in combination with the effects of past projects, the effects of other current projects, and the effects of probable future projects (CEQA Guidelines, section 15065(c)).

CEQA Guidelines section 15355 defines cumulative impacts as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts." This section states further that "individual effects may be changes resulting from a single project or a number of separate projects." "The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time."

Section 15130(a)(3) states also that an EIR may determine that a project's contribution to a significant cumulative impact will be rendered less than cumulatively considerable, and thus not

significant, if a project is required to implement or fund its fair share of a mitigation measure or measures designed to alleviate the cumulative impact.

Section 15130(b) indicates that the level of detail of the cumulative analysis need not be as great as for the project impact analyses, that it should reflect the severity of the impacts and their likelihood of occurrence, and that it should be focused, practical, and reasonable.

For the purpose of this EIR analysis, the cumulative impacts analysis assumes buildout of the City of Sacramento 2030 General Plan. While the cumulative analysis takes into consideration the impacts of the project in combination with other projects anticipated in the General Plan, the context of the cumulative analysis varies by technical area. For example, the cumulative context for air quality is dependent on the specific pollutant being considered. For ozone precursors, the cumulative context would be all development occurring within the larger Sacramento Valley. The cumulative effects of PM_{10} and CO would be limited to the general vicinity of the project site and would be affected only by other local projects being developed concurrently. The cumulative context for noise considers existing and future noise sources that could affect the project or surrounding uses. Finally, the cumulative context for traffic is based on traffic generated by closely related past, present, and reasonably foreseeable probable future projects. The specific cumulative context of an issue area is defined prior to the cumulative impacts discussion in each technical section of the EIR.

6.0 ALTERNATIVES

6.0 ALTERNATIVES

INTRODUCTION

The purpose of this chapter is to identify and describe alternatives to the proposed project. CEQA requires that an EIR evaluate project alternatives that either reduce or eliminate the significant or potentially significant adverse environmental effects identified associated with the proposed project, while still meeting most if not all of the basic project objectives.

California Environmental Quality Act Requirements

An 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 at 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. The CEQA Guidelines provide the following language 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)).

Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries, and whether the applicant can

reasonably acquire, control, or otherwise have access to the alternative site (CEQA Guidelines, section 15126.6 (f)(1)).

The selection of alternatives to the proposed project takes into account the project objectives provided in Chapter 3 (Project Description) and are listed below.

- Prepare an overall circulation network for the project area that supports the goals and vision of the 65th Street/University Transit Village Plan and the South 65th Street Area Plan.
- Create a well-connected roadway system that provides balanced access and circulation for vehicle, pedestrian, bicycle, and transit users both within and to those passing through the project area.
- Prepare a Smart Growth-oriented circulation plan that accommodates future growth in the area east of the UPRR tracks and south of Folsom Boulevard.
- Develop an overall circulation plan that integrates and connects the various neighborhoods and destinations throughout and adjacent to the project area.
- Prepare an implementation and phasing strategy for infrastructure improvements, with associated cost estimates that can be used to identify funding mechanisms.

Equally important to attaining the project objectives is the reduction of some or all significant impacts, particularly those that could not be mitigated to a level below the threshold of significance. The project-specific and cumulative significant and unavoidable impacts of the proposed project, after mitigation, are listed in Chapter 5, CEQA Considerations.

PROJECT-SPECIFIC SIGNIFICANT AND UNAVOIDABLE IMPACTS

4.3 Transportation and Circulation

(Scenarios B and C)

4.3-1 Under Existing plus Project conditions, project Scenarios B and C would result in roadway segments within the project area operating at unacceptable LOS conditions.

(Scenarios B and C)

4.3-2 Under Existing plus Project conditions, project Scenarios B and C would result in intersections within the study area that would operate at an unacceptable LOS.

(Scenarios B and C)

4.3-3 Under Existing plus Project conditions, the existing freeway system would be adversely affected under project Scenarios B and C.

(Scenarios B and C)

4.3-6 Under Existing plus Project conditions, the existing transit system would be adversely affected under Scenarios B and C.

CUMULATIVE SIGNIFICANT AND UNAVOIDABLE IMPACTS

4.2 Noise

(Scenarios B and C)

4.2-4 Future traffic in the project vicinity, including traffic from planned future development, could permanently expose sensitive receptors to increased cumulative traffic noise levels on local roadways.

4.3 Transportation and Circulation

(Scenarios B and C)

4.3-8 Under Cumulative plus Project conditions, project Scenarios B and C would result in roadway segments within the project area operating at unacceptable LOS conditions.

(Scenarios B and C)

4.3-9 Under Cumulative plus Project conditions, project Scenarios B and C would result in intersections within the study area that would operate at an unacceptable LOS.

(Scenarios B and C)

4.3-10 Under Cumulative plus Project conditions, project Scenarios B and C would adversely affect the existing freeway system.

(Scenarios B and C)

4.3-11 Under Cumulative plus Project conditions, the existing transit system would be adversely affected under Scenarios B and C.

ALTERNATIVES CONSIDERED AND DISMISSED FROM FURTHER CONSIDERATION

The following alternatives were considered, but rejected from further analysis because they were determined to be infeasible or would not reduce or avoid significant impacts identified under the proposed project.

Off-Site Alternative

Section 15126.6(f)(2)(B) of the CEQA Guidelines states that "[i]f the lead agency concludes that no feasible alternative locations exist, it must disclose the reasons for this conclusion, and should include the reasons in the EIR.

The project area is located near two light rail stations and Sacramento State, and contains several separate and distinct residential neighborhoods and a commercial/retail corridor.

Several major roadways traverse the project area including US 50, Folsom Boulevard, and 65th Street. Circulation within the project area is severely constrained by the UPRR tracks, light rail tracks, and a levee. The project area is also the only area where the 65th Street/University Transit Village Plan and South 65th Street Area Plan can be implemented. No other location could accommodate the project and meet the objectives of the project. In this case, no feasible off-site location exists that could accommodate the project or achieve the objectives of the project. As such, the evaluation of an Off-Site Alternative is not further considered in this EIR.

ALTERNATIVES CONSIDERED IN THIS EIR

Although any number of alternatives could be designed that could result in the reduction or elimination of project impacts, two 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 alternatives are described below.

- **Scenario A – No Project Alternative**. This alternative assumes that vehicle, pedestrian, bicycle, and transit circulation elements would be developed in accordance with previously adopted transportation plans for the area, specifically the 65th Street/University Transit Village Plan and the South 65th Street Area Plan.
- **Scenario D – Fewer Improvements Alternative**. This alternative assumes that Scenario C improvements would be implemented north of US 50 and Scenario A improvements (already approved) would be implemented south of US 50.

Under CEQA, the No Project Alternative must consider the effects of forgoing the project. The purpose of analyzing a No Project Alternative is to allow decision-makers to compare the impacts of the proposed project versus no project. The No Project Alternative describes the environmental conditions that would result from the continuation of the existing plan, policy or operation into the future (CEQA Guidelines, section 15126.6 (e) (3 (A)). In this case, the plans currently in place and that would be implemented under Scenario A – No Project would be the 65th Street/University Transit Village Plan and the South 65th Street Area Plan.

Scenario D – Fewer Improvements Alternative is described in more detail below, followed by an assessment of the alternative's impacts relative to the proposed project. Transportation impacts were qualitatively assessed by comparing the traffic report for the proposed project to the assumptions made for the alternative. The alternative's potential for noise impacts was qualitatively analyzed by its relative proximity to noise-sensitive land uses, the nature of the improvements proposed, and their potential for generating motor vehicle trips in comparison with the proposed project. The alternative's potential for air quality impacts was assessed qualitatively by considering the nature of the improvements proposed, as well as assessing air pollutant emissions from both construction and operational mobile sources.

The focus of the alternatives analyses is the difference between the alternatives and the proposed project, with an emphasis on addressing the significant impacts identified under the

proposed project. For each issue area, the analysis indicates which mitigation measures would be required of the alternative and which significant and unavoidable impacts would be avoided or reduced in severity. If necessary, the analysis indicates what additional mitigation measures would be required for the alternative being discussed, and what significant impacts would be less (or more) 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.

Scenario A – No Project

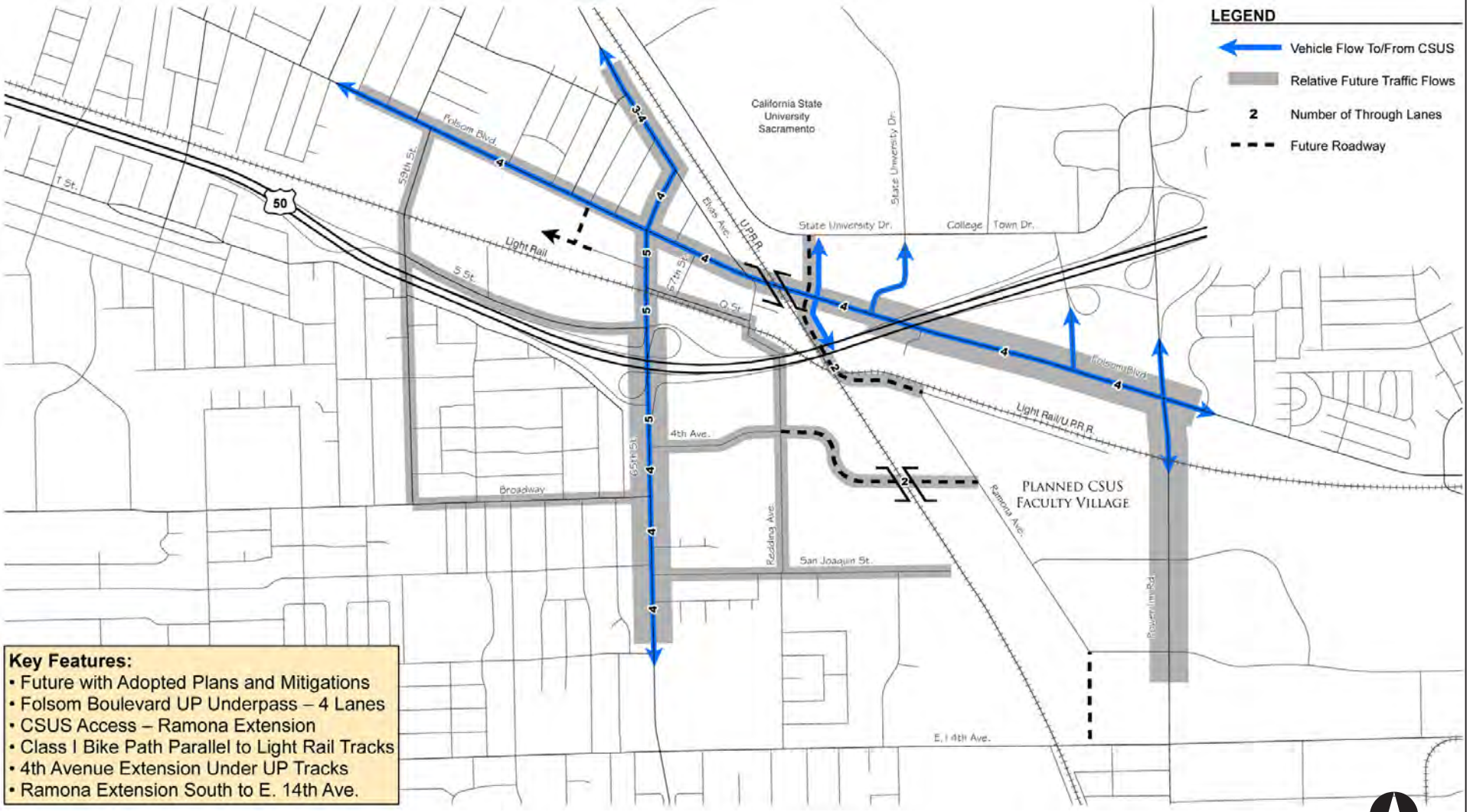
Scenario A or the "No Project" alternative describes vehicle, pedestrian, bicycle, and transit circulation assuming the implementation of previously adopted transportation plans for the area. These adopted plans include the 65th Street/University Transit Village Plan and the South 65th Street Area Plan. The previously approved roadway improvements are illustrated in Figure 6-1, Scenario A – Roadway Network, while bicycle, pedestrian and transit improvements are indicated on Figure 6-2, Scenario A – Bicycle, Pedestrian, and Transit Network. The analysis assumed bicycle and pedestrian improvements in the City's adopted Pedestrian Master Plan and the Bikeway Master Plan.

Scenario A specifically seeks to increase roadway capacity in the project area by increasing roadway widths, adding vehicular traffic lanes, turn pockets, and roadway extensions.

Comparative Environmental Effects

Construction air quality impacts would still occur under the No Project Alternative, but to a lesser degree than under the proposed project. The proposed project would require the extension of roadways, including grade-separated crossings and the demolition of more buildings than under the No Project Alternative; therefore, the No Project Alternative would require fewer construction vehicles and would disturb less soil than the proposed project. Mitigation measures in both the 65th Street Transit Village Plan DEIR and the South 65th Street Station Area Plan DEIR regarding construction vehicle inventory and compliance with SMAQMD Rule 403 would reduce construction air quality impacts to a less-than-significant level. Operational air quality impacts for the No Project Alternative would also be less than under the proposed project because roadway traffic would not be redistributed or located closer to existing sensitive receptors, exposing them to increased levels of carbon monoxide and TACs.

Construction noise levels under the No Project Alternative would be similar to the proposed project because the City's noise ordinance would regulate construction noise levels and allowable construction times. Both the 65th Street Transit Village Project DEIR and the South 65th Street Area Plan DEIR, as well as this 65th Street Station Area DEIR, determined that compliance with the City's noise ordinance would reduce construction noise impacts to a less-than-significant level. Although the traffic volumes for the No Project Alternative would be similar to those under the proposed project (Scenarios B and C) because the proposed project



***Source*:** Fehr & Peers, March 2008.

FIGURE **6-1**

Scenario A – Roadway Network

***Source*:** Fehr & Peers, March 2008.

FIGURE **6-2**

Scenario A – Bicycle, Pedestrian, and Transit Network

would not add vehicles but merely redistribute trips, the No Project Alternative would not extend roadways adjacent to existing residential areas where no roadway currently exists. Therefore, operational noise levels would be less under the No Project Alternative than under the proposed project.

Regarding traffic, Scenario A would have three intersections that would have LOS F: S Street/ 59th Street in the AM peak hour, Folsom Boulevard/59th Street in the PM peak hour and Folsom Boulevard/Howe Avenue in both the AM and PM peak hours. Of these three intersections, only one is not on an exempt roadway: S Street/59th Street. For comparison, Scenario B has one intersection at LOS F on a non-exempt roadway (S Street/59th Street). Scenario C does not have any intersections at LOS F that are on a non-exempt roadway. Therefore, Scenario A would have the same intersection impacts as Scenario B and less impacts than Scenario C.

Under Scenario A, adequate queue storage is available at the US 50 off-ramps. However, under Scenario B, the queue on the westbound 65th Street off-ramp would extend beyond the ramp gore and into the auxiliary lane that extends between 65th Street and the westbound on-ramp at the adjacent Howe Avenue interchange during the PM peak hour. Under Scenario C, the queue on the westbound 65th Street off-ramp would extend beyond the ramp gore and into the auxiliary lane that extends between 65th Street and the westbound on-ramp at the adjacent Howe Avenue interchange during the PM peak hour. Therefore, Scenario A would have less impact on Caltrans facilities than Scenarios B or C.

Although the No Project Alternative and the proposed project (Scenarios B and C) would provide enhanced sidewalks on Folsom Boulevard, Redding Avenue, Q Street, 4th Avenue, San Joaquin Street east of Redding Avenue, Elvas Avenue, and 65th Street, Scenario A would not provide the overall pedestrian connectivity that the proposed project would. Although Scenario A would develop pedestrian linkages in accordance with the City's Master Pedestrian Plan, it would not offer the same amenities as Scenarios B and C such as 15-foot sidewalks, benches, bicycle racks, and trash receptacles at regular intervals.

Both Scenario A and the proposed project (Scenarios B and C) would provide bicycle facilities in accordance with the City's 2010 Sacramento City/County Bikeway Master Plan. Through roadway extensions, however, Scenarios B and C would provide more bicycle linkages than under the No Project Alternative. Scenario A would lack the connections across the UPRR tracks that Scenarios B and C would provide. In addition, Scenarios B and C would provide more bicycle access than Scenario A via Class I and II facilities near the intersection of 65th Street and Folsom Boulevard helping to support the TOD vision for the area.

Under Scenario A, Folsom Boulevard would be widened at the UPRR undercrossing from two lanes to four lanes, providing a continuous four-lane arterial from 59th Street to Power Inn Road. This road widening would provide more lane capacity and would result in the lowest future travel times along Folsom Boulevard.

Circulation for transit would be similar under Scenarios A and B because Folsom Boulevard would be widened at the UPRR undercrossing from two lanes to four lanes, providing a continuous four-lane arterial from 59th Street to Power Inn Road. Under Scenario B, roadway and intersection improvements would result in a significant increase in travel time along Folsom Boulevard through the core of the study area, resulting in worse transit conditions compared to Scenario A. Scenario C would result in increased traffic delays at study intersections which could result in increased travel times for busses serving the area. Due to the lane improvements along Folsom Boulevard and low future travel times along Folsom Boulevard, Scenario A would have the least transit impacts.

Implementation of the Scenario A under cumulative conditions would result in unacceptable LOS conditions (i.e., LOS F) at the following two intersections: Q Street/67th Street (operates at LOS F during the PM peak hour) and 4th Avenue/Redding Avenue (operates at LOS F during the AM peak hour). Implementation of the Cumulative Scenario A improvements would result in unacceptable LOS conditions (i.e., LOS F) for one non-exempt roadway segment: 59th Street - S Street to Broadway. The cumulative impacts of Scenario A have already been analyzed in the South 65th Street Area Plan and the 65th Street/University Transit Village Plan. Scenario B would have cumulative impacts to two non-exempt intersections and one non-exempt roadway segment. Scenario C would have cumulative impacts to two non-exempt intersections and two non-exempt roadway segments.

Proposed Mitigation That Would Not Be Required For This Alternative

None of the mitigation measures described in this EIR would be required because Scenario A has already been approved in the 65th Street/University Transit Village Plan and the South 65th Street Area Plan. Any mitigation measures required as part of those EIRs would already be required and no further mitigation is necessary.

Significant and Unavoidable Impacts That Would Not Occur With This Alternative

The significant and unavoidable impacts associated with the proposed project (Scenarios B and C) would not occur under this alternative. Cumulative traffic noise levels at existing residential uses are already above the normally acceptable limits for residential uses along Redding Avenue, 65th Street, Elvas Avenue, and Folsom Boulevard. Cumulative traffic noise impacts to sensitive receptors adjacent to Folsom Boulevard near 63rd Street would not occur because future noise increment increases resulting from Scenario A would be below the City's threshold. Cumulative traffic noise levels for Scenario A were previously analyzed in the 65th Street/ University Transit Village Plan EIR and the South 65th Street Area Plan EIR.

Development of the improvements associated with Scenario A would not result in the significant and unavoidable transportation impacts associated with the proposed project. These impacts include unacceptable LOS conditions on project roadway segments, unacceptable LOS

conditions at project roadway intersections, impacts to US 50 ramps, and adverse impacts to transit routes especially along Folsom Boulevard.

Any significant and unavoidable impacts that may occur as a result of implementation of Scenario A – No Project Alternative have already been analyzed in the 65th Street/University Transit Village Plan EIR and/or the South 65th Street Area Plan EIR. The City Council previously adopted Statements of Overriding Considerations for the following significant and unavoidable impacts:

65th Street/University Transit Village Plan EIR

- Traffic/Transportation
    - Intersection impacts to:
        - 59th Street/Folsom Boulevard
        - 63rd Street/Folsom Boulevard
        - 65th Street/Folsom Boulevard
        - 65th Street/Westbound US 50 ramps
        - 65th Street/Eastbound US 50 ramps
        - 65th Street/Broadway
        - 65th Street/San Joaquin Street
        - 65th Street/14th Avenue
        - 67th Street/Folsom Boulevard
    - US 50 impacts to U.S. 50 Mainline and Merge/Diverge

South 65th Street Area Plan EIR

- Traffic/Transportation
    - Intersection impacts to:
        - Kroy Way/Broadway
        - 65th Street/U.S. 50 Eastbound Ramps
        - 65th Street/4th Avenue
        - 65th Street/Broadway
        - 65th Street/San Joaquin Street
        - 65th Street/14th Avenue
        - 67th Street/Folsom Boulevard
    - US 50 impacts to U.S. 50 Mainline and Merge/Diverge
    - Segment impacts to the 65th Street Corridor

- Air Quality
    - Construction-related ozone precursors and PM_{10}
    - Operation-related ozone precursors and PM_{10}
    - Construction and operational TAC emissions
- Noise
    - Operational traffic noise increase
    - Increased noise exposure to residential uses

Relationship of the No Project Alternative to the Project Objectives

Under Scenario A – No Project Alternative none of the project objectives would be met. The No Project Alternative would not implement a comprehensive circulation plan for the area that unites the goals and policies in the 65th Street/University Transit Village Plan and the South 65th Street Area Plan. This alternative would not create a balanced access and circulation plan for vehicle, pedestrian, bicycle, and transit users because the alternative focuses primarily on vehicular improvements. Alternative A does not include an overall circulation plan that integrates and connects the various neighborhoods and destinations throughout and adjacent to the project area. Therefore, this alternative would not meet the project objectives.

Scenario D – Fewer Improvements Alternative

Scenario D would implement a portion of Scenario A and a portion of Scenario C. Transportation improvements proposed in Scenario C would be implemented north of US 50, while transportation improvements already approved under Scenario A would be implemented south of US 50. Those specific improvements are shown in Table 6-1.

Comparative Environmental Effects

The Scenario A portions of the Fewer Improvements Alternative (improvements south of US 50) have already been approved under the 65th Street/University Transit Village Plan and the South 65th Street Area Plan and mitigation measures are already in place for those elements. The Fewer Improvements Alternative would have similar construction air quality, noise, and traffic impacts as the proposed project (Scenarios B and C). Construction air quality (ozone precursors and particulate matter) and noise impacts would still occur under Alternative D because construction vehicles would be used, buildings would be demolished, and ground disturbance would occur.

However, traffic operations under the Fewer Improvements Alternative would be better than under the proposed project (Scenarios B or C) for one key intersection. Specifically, intersection operations at the Broadway/65th Street intersection would operate at LOS C during the AM peak hour and LOS E during the PM peak hour under the Fewer Improvements

TABLE 6-1

COMPARISON OF SCENARIOS A, B, AND C AND ALTERNATIVE D

	Scenario			
	A	B	C	D
Roadway improvements would occur at the following locations:				
The Folsom Boulevard UPRR undercrossing and approaches would be widened from two lanes to four lanes (two lanes in each direction) thereby providing a continuous four-lane arterial from 59th Street to Power Inn Road.	✓			
Ramona Avenue would be extended with two travel lanes from its current terminus at Brighton Avenue westward to cross under the light rail tracks and US 50 immediately east of the UPRR tracks to a new intersection at Folsom Boulevard roughly 350-feet east of the UPRR tracks.	✓	✓	✓	✓
4th Avenue would be extended eastward with two travel lanes from its current terminus at Redding Avenue with an S-curve in the southeast direction toward a grade-separated crossing of the UPRR to a new intersection at Ramona Avenue.	✓			✓
Ramona Avenue would be extended with two travel lanes southward from the current elbow roughly 850-feet west of the Ramona and Power Inn Road intersection to a new intersection at 14th Avenue.	✓	✓	✓	✓
69th Street would be realigned to connect Elvas Avenue directly with Redding Avenue with the addition of a signalized 4-way intersection at Folsom Boulevard.		✓		
San Joaquin Street would be extended eastward from its current terminus west of the UPRR tracks to Ramona Avenue at Cucamonga Avenue with a grade separated crossing of the UPRR tracks. Access control measures would be provided on the westbound leg of the intersection of San Joaquin Street and Redding Avenue to allow pedestrian, bicycle, and emergency vehicle access only.		✓		
Broadway would be extended with two travel lanes eastward from 65th Street to a new intersection at Redding Avenue.		✓		
Broadway would be extended with two lanes eastward from 65th Street through a new grade-separated crossing of the UPRR to a new intersection at Ramona Avenue.			✓	
65th Street would be extended with two travel lanes northward from Elvas Avenue under the UPRR tracks to a new intersection with State University Drive.		✓		
A new two lane "68th Street" would be constructed parallel to 67th Street and roughly equidistant between 67th and 69th from Elvas Avenue and Q Street and relinquishing Elvas Avenue between 68th Street and Folsom Boulevard.			✓	✓
67th Street would be extended from Folsom Boulevard to Elvas Avenue.			✓	✓
Folsom Boulevard would be reduced from four lanes to three lanes from 59th Street to 67th Street.			✓	✓
Access to Sacramento State would be provided as follows:				
Access from the project area into Sacramento State would continue to be provided at the pedestrian/bicycle tunnel at Elvas Avenue (just west of 65th Street), the State University Drive East connection to Folsom Boulevard, and the planned Ramona Avenue extension from Folsom Boulevard to South State University Drive at Stadium Drive.	✓	✓	✓	✓
A new two-lane vehicle/bicycle/pedestrian/Sac State Tram tunnel extension of 65th Street north of Elvas Avenue would be provided to directly connect the 65th Street/University Transit Village to State University Drive on the Sac State campus.		✓		
A new bicycle/pedestrian/tram tunnel extension of 67th Street north of Elvas Avenue would be provided to directly connect the 65th Street/University Transit Village to State University Drive on the Sacramento State campus.			✓	✓
Class II bicycle lanes would be added on:				
65th Street from 14th Avenue to Folsom Boulevard	✓	✓	✓	✓
Redding Avenue 14th Avenue to Folsom Boulevard	✓	✓	✓	✓
Ramona Avenue 14th Avenue to Folsom Boulevard	✓	✓	✓	✓
59th Street from Broadway to Folsom Boulevard	✓	✓	✓	✓

TABLE 6-1

COMPARISON OF SCENARIOS A, B, AND C AND ALTERNATIVE D

	Scenario			
	A	B	C	D
58th Street north of Folsom Boulevard	✓	✓	✓	✓
4th Avenue between 65th Street and Ramona Avenue	✓			✓
San Joaquin Street from 65th Street to its eastern terminus	✓			✓
Elvas Avenue west of 65th Street	✓			
Folsom Boulevard from 59th Street to Power Inn Road	✓	✓		
Power Inn Road from 14th Avenue to Folsom Boulevard		✓		
Elvas Avenue Folsom Boulevard to 59th Street		✓	✓	✓
69th Street/Redding Avenue transition		✓		
4th Avenue from 65th Street to Redding Avenue		✓	✓	✓
Broadway from 59th Street to Redding Avenue		✓		
San Joaquin Street from 65th Street to Power Inn Road		✓		
8th Avenue from 59th Street to 65th Street		✓		
61st Street from 8th Avenue to 11th Avenue		✓		
60th Street from Broadway to 8th Avenue		✓		
11th Avenue from 59th Street to 61st Street		✓		
68th Street connection between Folsom Boulevard and Q Street			✓	✓
Stadium Drive from Folsom Boulevard to State University Drive East	✓	✓	✓	✓
4th Avenue between 65th Street and Redding Avenue			✓	
Broadway from 59th Street to Ramona Avenue			✓	
San Joaquin Street from 65th Street to current terminus (just east of Business Drive)			✓	
14th Avenue from 65th Street to Power Inn Road		✓	✓	
Class I bicycle paths would be added:				
Provided along the Regional Transit (RT) Light Rail/UPRR line through the project area.	✓			
Improved along the existing pathway between Kroy Way and 65th Street.	✓	✓	✓	✓
Provided to extend 4th Avenue eastward from Redding Avenue to Ramona Avenue with a new grade separated crossing of the UPRR tracks.		✓		
Provided to extend 69th Street eastward to connect with Folsom Boulevard with a new grade separated crossing of the UPRR tracks.		✓	✓	✓
Provided to connect San Joaquin Street with Ramona Avenue with a new grade separated crossing of the UPRR tracks.			✓	
Sidewalks would be enhanced on:				
Folsom Boulevard	✓	✓	✓	✓
Redding Avenue	✓	✓	✓	✓
Q Street	✓	✓	✓	✓
4th Avenue	✓	✓	✓	✓
San Joaquin Street east of Redding Avenue	✓	✓	✓	✓
Elvas Avenue	✓	✓	✓	✓
65th Street	✓	✓	✓	✓
The following intersections would have traffic signals added:				
60th Street/Folsom Boulevard		✓		
61st Street/Folsom Boulevard			✓	✓
63rd Street/Folsom Boulevard	✓			
67th Street/Folsom Boulevard	✓			
68th Street/Folsom Boulevard			✓	✓

TABLE 6-1

COMPARISON OF SCENARIOS A, B, AND C AND ALTERNATIVE D

	Scenario			
	A	B	C	D
Folsom Boulevard/Elvas Avenue/Redding Avenue/69th Street		✓	✓	✓
Stadium Drive/Ramona Avenue Extension/Folsom Boulevard	✓	✓	✓	✓
Ramona Avenue Extension (south)/14th Avenue	✓	✓	✓	✓
On-street parallel parking (both sides of street) would be added on:				
Elvas Avenue from 61st Street to Folsom Boulevard		✓	✓	✓
Folsom Boulevard from 65th Street to Elvas Avenue		✓		
Folsom Boulevard (from 59th Street to Elvas Avenue/68th Street)			✓	✓
Q Street from 67th Street to Redding Avenue		✓	✓	✓
Broadway from 65th Street to Redding Avenue		✓	✓	
San Joaquin Street from Redding Avenue to Business Drive		✓	✓	
65th Street from Q Street to Elvas Avenue		✓	✓	✓
66th Street from Elvas Avenue to Folsom Boulevard		✓	✓	✓
67th Street from Folsom Boulevard to Q Street – west side of street only		✓	✓	✓
Redding Avenue (from 4th Avenue to San Joaquin Street)		✓	✓	
Ramona Avenue (from Brighton Avenue to Power Inn Road "elbow")		✓	✓	
New rights-of-way would be required for:				
Ramona Avenue, extended with two travel lanes from its current terminus at Brighton Avenue westward to cross under the light rail tracks and US 50 immediately east of the UPRR tracks to a new intersection at Folsom Boulevard roughly 350 feet east of the UPRR tracks		✓	✓	✓
Ramona Avenue, extended with two travel lanes southward from the current elbow roughly 850 feet west of the Ramona and Power Inn Road intersection to a new intersection at 14th Avenue		✓	✓	✓
69th Street, realigned to connect Elvas Avenue directly with Redding Avenue with the addition of a signalized 4-way intersection at Folsom Boulevard		✓		
San Joaquin Street,[a] extended eastward from its current terminus west of the UPRR tracks to Ramona Avenue at Cucamonga Avenue with a grade separated crossing of the UPRR tracks. Access control measures would be provided on the westbound leg of the intersection of San Joaquin Street and Redding Avenue to allow pedestrian, bicycle, and emergency vehicle access only		✓		
Broadway, extended with two travel lanes eastward from 65th Street to a new intersection at Redding Avenue		✓		
Broadway,[a] extended with two lanes eastward from 65th Street through a new grade-separated crossing of the UPRR to a new intersection at Ramona Avenue			✓	✓
65th Street,[a] extended with two travel lanes northward from Elvas Avenue under the UPRR tracks to a new intersection with State University Drive		✓		
67th Street, extended from Folsom Boulevard to Elvas Avenue			✓	
New two-lane "68th Street", constructed parallel to 67th Street and roughly equidistant between 67th and 69th from Elvas Avenue and Q Street and relinquishing Elvas Avenue between 68th Street and Folsom Boulevard			✓	

Note:
a. Extensions through the existing levee; an encroachment permit from the reclamation district would be required.)
Source: City of Sacramento, Department of Transportation, January 2009.

Alternative. Under Scenario B, the intersection would operate at LOS D during the AM peak hour and LOS F during the PM peak hour. Under Scenario C, the intersection would operate at LOS E during both the AM and PM peak hour. Because this is a busy intersection along a key route, 65th Street, improvements to the level of service at this intersection would prevent

significant delays. Although intersection operations would be similar under Alternative D compared to the proposed project, the improved intersection operations at the Broadway/ 65th Street intersection under Alternative D would improve compared to the proposed project.

Proposed Mitigation That Would Not Be Required For This Alternative

All of the air quality and noise mitigation measures required for Scenario C (see sections 4.1 and 4.2) under the proposed project would be required under the Fewer Improvements Alternative. Construction of the Fewer Improvements Alternative would still emit ozone precursors and particulate matter due to the use of construction vehicles and ground disturbance; therefore, proposed Mitigation Measures 4.1-1 (construction plan, equipment inventory, limit construction vehicle idling time, pay into SMAQMD's construction mitigation fund) and 4.1-2 (compliance with SMAQMD Rule 403) would be required under this alternative. Proposed Mitigation Measures 4.1-1 and 4.1-2 are consistent with South 65th Street Area Plan EIR Mitigation Measure 5.2-1 and 65th Street/TVP EIR Mitigation Measure 6.3-1. Proposed Mitigation Measures 4.1-1 and 4.1-2 would apply to improvements north of US 50.

Some of the same transportation mitigation measures that are required for the proposed project would also be required for the Fewer Improvements Alternative, particularly to offset impacts that would occur north of US 50 (Scenario C portion of the alternative). Construction impacts would still occur, thereby necessitating preparation of a Traffic Management Plan, as required under proposed Mitigation Measure 4.3-7. Construction traffic (short-term) impacts are not analyzed in either the South 65th Street Area Plan EIR or the 65th Street/TVP EIR.

Roadway segments and intersections' LOS north of US 50 would be impacted, requiring implementation of proposed Mitigation Measure 4.3-1 (participate in the 65th Street Station Area Finance plan).

Implementation of the Fewer Improvements Alternative would also affect the existing transit system because the travel times, particularly along Folsom Boulevard, would be adversely affected. A slowing of travel times along this important segment could increase the buses' times to reach the 59th Street and 65th Street/University light rail stations. Therefore, proposed Mitigation Measure 4.3-6 (Scenario C) would still be required.

Transportation mitigation measures identified in the South 65th Street Area EIR that affect areas south of US 50 would still be required. However, mitigation measures in the previous studies that affect areas north of US 50 would not be required because proposed Scenario C improvements would be implemented north of US 50 instead and mitigation measures in the 65th Street Station Area EIR would be required instead. Those mitigation measures from the South 65th Street Area EIR that would no longer be implemented (due to their location north of US 50) include Mitigation Measure 5.1-1(b) (65th Street/Folsom Boulevard intersection), 5.1-1(c) (65th Street/U.S. 50 Westbound Ramps intersection), 5.1-1(i) (67th Street/Folsom Boulevard intersection), and 5.1-2 (only Eastbound Ramps).

Significant and Unavoidable Impacts That Would Not Occur With This Alternative

All of the significant and unavoidable impacts identified in this EIR that would occur under the proposed project would also occur under the Fewer Improvements Alternative. All of the significant and unavoidable impacts are listed above.

Relationship of the Fewer Improvements Alternative to the Project Objectives

While the Fewer Improvements Alternative would generally support the goals and vision of the 65th Street/University Transit Village Plan and the South 65th Street Area Plan, this Alternative does not provide a cohesive approach to planning for the area. The Fewer Improvements Alternative includes elements that are a mixture of two different plans (Scenario A and Scenario C) but do not create a cohesive circulation network in the project area. This Alternative creates a circulation framework north of US 50 that supports transit-oriented development by creating smaller, walkable blocks. However, the circulation system in the remainder of the project area, south of US 50, does not provide access and circulation for vehicle, pedestrian, bicycle, and transit users both within and to those passing through the project area. In addition, fewer pedestrian and bicycle improvements would be implemented south of US 50. This Alternative does not implement a Smart Growth-oriented circulation plan that accommodates future growth in the area east of the UPRR tracks and south of Folsom Boulevard because roadway extensions across the UPRR tracks would not be provided. Please see Table 3-1 for a comparison of improvements proposed for Scenario B and how those would differ from Scenarios A and C (the Fewer Improvements Alternative).

Environmentally Superior Alternative

The environmentally superior alternative would be the Scenario A – No Project Alternative because it would have fewer significant impacts than the proposed project. However the Scenario A – No Project Alternative does not achieve many of the project's objectives. CEQA Guidelines Section 15126.6(e)(2) states that when the No Project/No Development Alternative is identified as the environmentally superior alternative, the EIR must also identify an environmentally superior alternative from among the other alternatives. Scenario D – Fewer Improvements Alternative would have similar air quality and noise impacts as the proposed project (Scenarios B and C). However, Scenario D would improve transportation conditions both north of US 50 by implementing Scenario C improvements and south of US 50 by implementing Scenario A improvements. Intersection operations at the Broadway/65th Street intersection would be improved compared to the proposed project. Therefore, Scenario D – Fewer Improvements Alternative would be the environmentally superior alternative. Table 6-2 provides a summary comparison of the severity of impacts for each alternative by topic.

TABLE 6-2

ALTERNATIVE IMPACT DISCUSSION

Issue Area	Scenario B (Proposed Project)	Scenario C (Proposed Project)	Scenario A (No Project)	Scenario D (Fewer Improvements)
Air Quality	SU	SU	SU+	Equal
Noise	SU	SU	SU+	Equal
Transportation and Circulation	SU	SU	SU+	Reduced

Notes:
SU = Significant and Unavoidable – if any impact was identified as significant and unavoidable in the technical analysis.
S = Significant before mitigation – if any impact was identified as significant in the technical analysis.
LS =Less than Significant – if all impacts were identified as less than significant in the technical analysis.
NI = No impact would occur when compared to the proposed project.
Equal = Level of significance is equal to the proposed project.
Greater = Level of significance is greater compared to the proposed project.
Reduced = Level of significance is reduced compared to the proposed project, but not necessarily to a less-than-significant level.
+ = still significant and unavoidable, but worse than the proposed project
- = still significant and unavoidable, but not as bad as the proposed project
Source: PBS&J, 2009.

7.0 REFERENCES

7.0 REFERENCES

4.1 AIR QUALITY

California Air Resources Board, Air Quality Data Statistics, <www.arb.ca.gov/adam/welcome.html>, accessed January 8, 2009.

_____ , Sacramento Metropolitan Air Quality Management District, 2006 Estimated Annual Average Emissions Inventory, <www.arb.ca.gov/app/emsinv/emssumcat.php>, accessed February 17, 2009.

Hurley, Joseph J., Sacramento Metropolitan Air Quality Management District, personal communication, January 12, 2009.

Sacramento Metropolitan Air Quality Management District, Air Quality Standards Attainment Status Chart for Sacramento County. <www.airquality.org/aqdata/attainmentstat.shtml>, accessed February 9, 2009.

_____ , <www.airquality.org/stateplan>, accessed February 17, 2009.

_____ , Guide to Air Quality Assessment in Sacramento County.

_____ , Recommended Protocol for Evaluating the Location of Sensitive Land Uses Adjacent to Major Roadways Version 2.1, January 2009. <www.airquality.org/ceqa/SLUMajor Roadway/SLURecommendedProtocol2.1-Jan2009.pdf>.

4.2 NOISE

California Department of Transportation, Technical Noise Supplement, A Technical Supplement to the Traffic Noise Analysis Protocol. October 1998.

Federal Transit Administration, *Transit Noise and Vibration Impact Assessment*, May 2006.

_____ , Highway Traffic Noise Prediction model.

U.S. Department of Transportation Federal Railroad Administration, *High-Speed Ground Transportation Noise and Vibration Impact Assessment*. October 2005.

4.3 TRANSPORTATION AND CIRCULATION

City of Sacramento, *65th Street/University Transit Village Plan Draft Environmental Impact Report*, December 2001.

_____ , *South 65th Street Area Plan Draft Environmental Impact Report*, July 2004.

_____ , *1996 Traffic Impact Study Guidelines*.

_____ , 65th Street Station Block Development Strategy

Redevelopment Agency of the City of Sacramento, *65th Street Redevelopment Plan Draft Environmental Impact Report*, February 20, 2004.

Granite Regional Park Plan.

California State University, Sacramento (CSUS) Master Plan.

_____ , Faculty/Staff Housing Village Draft EIR.

Sacramento Area Council of Governments, SACOG 2035 Metropolitan Transportation Plan.

Sacramento Regional Transit, 2007.

Transportation Research Board. *Highway Capacity Manual*. 2000.

APPENDIX C – INITIAL STUDY

City of Sacramento, *65th Street/University Transit Village Plan Draft Environmental Impact Report*, December 2001.

_____ , *General Plan Update Technical Background Report*, June 2005.

_____ , *Sacramento 2030 General Plan Master Environmental Impact Report*, Certified March 3, 2009.

_____ , *South 65th Street Area Plan Draft Environmental Impact Report*, July 2004.

Farber, Martin, City of Sacramento, Department of Utilities, written communication, August 17, 2009.

National Register of Historic Places, <www.nps.gov/nr/research/index.htm>, accessed February 20, 2009.

PBS&J, *65th Street Station Area Biological Resources Survey*, March 26, 2009.

Redevelopment Agency of the City of Sacramento, *65th Street Redevelopment Plan Draft Environmental Impact Report*, February 20, 2004.

USFWS, *Programmatic Formal Endangered Species Act Consultation on Issuance of 404 Permits for Projects With Relatively Small Effects on Listed Vernal Pool Crustaceans Within the Jurisdiction of the Sacramento Field Office California*, 1996.

8.0 REPORT PREPARATION

8.0 REPORT PREPARATION

LEAD AGENCY

City of Sacramento
Department of Transportation
New City Hall
915 I Street, 2nd Floor
Sacramento, California 95814
(916) 808-2996

Fedolia "Sparky" Harris, Senior Planner

City of Sacramento
Development Services Department
300 Richards Boulevard, 3rd Floor
Sacramento, California 95811
(916) 808-5538

Jennifer Hageman, Senior Planner

EIR AUTHORS

Consultant

PBS&J
1200 2nd Street
Sacramento, California 95814
(916) 325-4800

Principal-in-Charge	Christine Kronenberg, AICP
Project Manager	Christina Erwin
Air Quality	Natalie Irwin, Chris Mundhenk
Noise	Natalie Irwin, Chris Mundhenk
Transportation and Circulation	Fehr & Peers
Report Production	Kristine Olsen
Report Graphics	James Songco

Transportation Consultant

Fehr & Peers
660 J Street, Suite 390
Sacramento, California 95814

Bob Grandy, Jason Isaac

Design Consultant

BMS Design Group
414 Jackson Street, Suite 404
San Francisco, California 94111

Timothy Hurley, Michael Smiley

Engineering Consultant

Mark Thomas & Company, Inc.
7300 Folsom Blvd., Suite 203
Sacramento, CA 95826

Adrian Engel, Bill Shunk