

State Route 4 Crosstown Freeway Ramp Extension Project

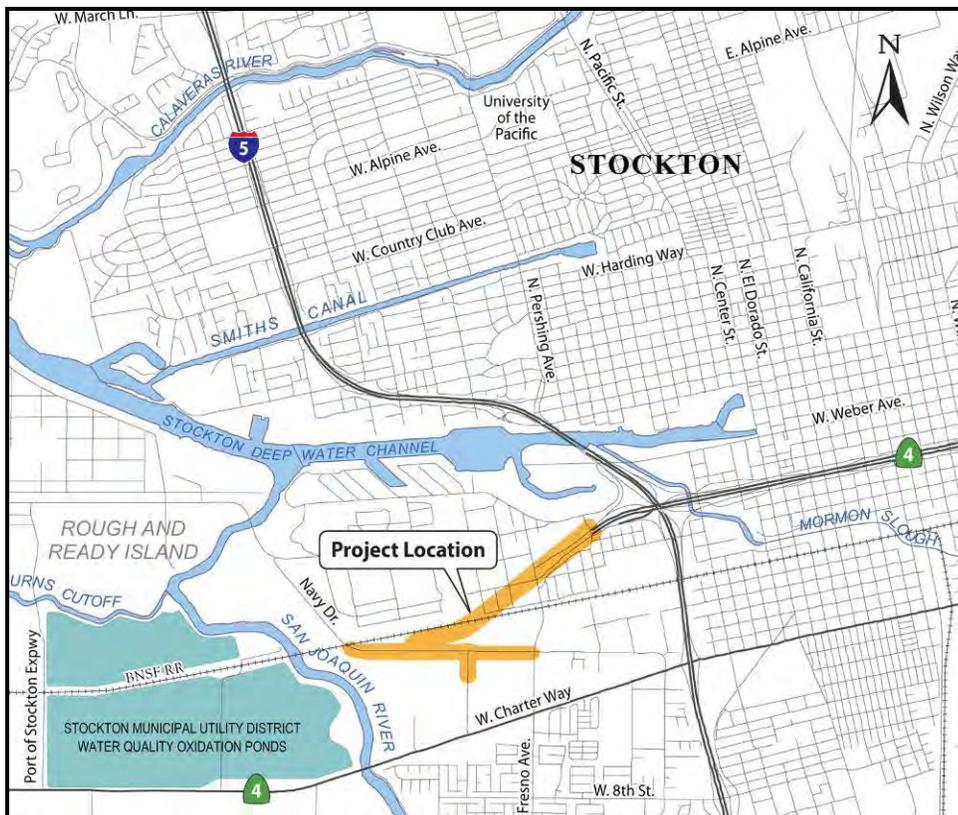
San Joaquin County and City of Stockton

10-SJ-4-PM 14.4/14.8 and T14.6/R15.7

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Draft Environmental Impact Report



Prepared by the
State of California Department of Transportation

February 2010



General Information About This Document

What's in this document?

The California Department of Transportation (Caltrans) has prepared this Environmental Impact Report, which examines the potential environmental impacts of alternatives being considered for the proposed project in San Joaquin County, California. The document describes why the project is being proposed, alternatives for the project, the existing environment that could be affected by the project, potential impacts from each of the alternatives, and the proposed avoidance, minimization, and/or mitigation measures.

What should you do?

- Please read the report. Additional copies of this document as well as of the technical studies we relied on when preparing it are available for review at the following agency office locations:

Caltrans District 10
1976 East Charter Way/
East Martin Luther King Jr. Drive
Stockton, CA 95205

San Joaquin Council of Governments
555 East Weber Street
Stockton, CA 95202

These reports are also available for review at the following library:

Cesar Chavez Central Library
605 N El Dorado Street
Stockton, CA 95202

- Attend the public hearing on February 18, 2010 at:
George Washington Elementary School Cafeteria
1735 West Sonora Street
Stockton, CA 95203
5:00-9:00 p.m.
- We welcome your comments. If you have any concerns regarding the proposed project, please attend the public hearing, or send your written comments to Caltrans by the deadline. Submit comments via U.S. mail to Caltrans at the following address:
Gail Miller, Acting Office Chief
Central Region
California Department of Transportation
2015 E. Shields Avenue
Fresno, CA 93726
Submit comments via email to: gail_miller@dot.ca.gov.
- Submit comments by the deadline: March 22, 2010.

What happens next?

After comments are received from the public and reviewing agencies, Caltrans may 1) give environmental approval to the proposed project, 2) do additional environmental studies, or 3) abandon the project. If the project is given environmental approval and funding is appropriated, Caltrans could design and construct the project.

For individuals with sensory disabilities, this document is available in Braille, in large print, on audiocassette, or on computer disk. To obtain a copy in one of these alternate formats, please contact Caltrans District 10 Public Affairs Office at (209) 948-7977 or use California Relay Service: 1 (800) 735-2929 (TTY), 1 (800) 735-2929 (Voice) or 711.

Extend Ramps on State Route 4 West (Crosstown Freeway) westward to Navy Drive with improvements from the Garfield Street Overhead (R15.7) to Navy Drive (T14.6) and restripe lanes on West Charter Way between Army Court (PM14.4) and Tillie Lewis Drive (PM14.8)

DRAFT ENVIRONMENTAL IMPACT REPORT

Submitted Pursuant to: (State) Division 13, California Public Resources Code

THE STATE OF CALIFORNIA
Department of Transportation
San Joaquin Council of Governments

2/1/2010
Date of Approval



Ross A. Chittenden
District Director
District 10
California Department of Transportation

Summary

Overview of Project Area

The project is located in the City of Stockton (City) and in the unincorporated area of San Joaquin County (County). The project area contains the Boggs Tract neighborhood, an area of low-density residential land uses and community facilities such as a school, churches, and a community center/park; industrial uses along Navy Drive; and commercial properties along Fresno Avenue.

Purpose and Need

The purpose of the project is to:

- Improve the connection between Interstate 5/Crosstown Freeway, the Port of Stockton, and adjacent industrial uses
- Reduce industrial truck traffic through the residential Boggs Tract neighborhood
- Improve local air quality

Currently, the connection between Interstate 5 and the Port of Stockton is inadequate. The project would improve the connection between Interstate 5, the port, and adjacent industrial uses. Additionally the project would reduce truck traffic from the port and adjacent industrial areas traveling through the Boggs Tract neighborhood. The new freeway ramps would provide access from Navy Drive to a proposed new elevated structure over the Burlington Northern Santa Fe Railway corridor and the Boggs Tract neighborhood, enabling the existing ramps at Fresno Avenue to be removed.

Proposed Project

The California Department of Transportation, in cooperation with the San Joaquin Council of Governments, proposes to extend the ramps that currently terminate at Fresno Avenue to Navy Drive by constructing about a mile of elevated structure spanning the Boggs Tract neighborhood and the Burlington Northern Santa Fe Railway corridor. Elevated viaduct structures, ranging in height from 24 to 55 feet from ground level, would be supported by embankments from north of Navy Drive to just south of the Burlington Northern Santa Fe Railway corridor. An elevated viaduct structure supported by concrete columns is proposed to span the railway corridor starting on the south side of the Burlington Northern Santa Fe Railway corridor and ending just west of Del Norte Street. For the section of proposed roadway the spans Boggs Tract (from just west of Del Norte Street to just east of Fresno Avenue) two structural alternatives are being proposed. These structural options are identified as

Summary

Alternatives 3A and 3B in this document. **Alternative 3A** proposes twin viaducts supported by columns while **Alternative 3B** proposes an elevated structure atop an earthen embankment supported by two retaining walls. Finally, on the east end of the project, the roadway would be supported by earthen embankments with grade to match existing State Route 4 at the Garfield Street Overhead.

Navy Drive would also be slightly realigned and widened between Fresno Avenue and the Burlington Northern Santa Fe Railway underpass.

Project Impacts

The following table summarizes the results from the environmental studies and shows the potential environmental impacts for each alternative.

Summary of Major Potential Impacts from Alternatives

Potential Impact	Alternative 3A (Twin Viaducts)	Alternative 3B (Embankment Supported by Retaining Walls)	No-Build Alternative
Land Use			
Existing and Future Land Uses	Conversion of 0.2 acre of commercial, 14.8 acres of industrial, 7.7 acres of residential, and 0.6 acre of vacant land to proposed freeway extension	Same as Alternative 3A	No impact to land uses
Consistency with the Local Plans	Consistent with the City of Stockton, San Joaquin County (except County's affordable housing policy, which calls for preservation of existing rental housing, as project would eliminate at least two to three units of affordable/low-income housing constructed under County's Gift America Program for down payment assistance), and San Joaquin Council of Governments' planning documents	Same as Alternative 3A	Inconsistent with City General Plan and San Joaquin Council of Governments Regional Transportation Plan
Parks and Recreation	Access to Boggs Tract Community Center and Park maintained during construction. Increase in long-term noise levels. Improved air quality.	Same as Alternative 3A	No impacts
Growth	Project is not expected to be growth inducing since it fills a gap in existing infrastructure, does not provide new access to undeveloped areas, and accommodates Port growth that would occur even without project	Same as Alternative 3A	No impacts
Community Character and Cohesion	Construction of a physical barrier (viaduct structure on columns) dividing the Boggs Tract neighborhood into north and south sections. Fence to be placed below structure. Partial views between north and south sections of the neighborhood available. Pedestrian crossing provided at Fresno Avenue, South Los Angeles Avenue, and South Ventura Street.	Construction of a physical barrier (elevated structure on a solid wall) dividing the Boggs Tract neighborhood into north and south sections. No views from one section of the neighborhood to the other except at Fresno Avenue, South Los Angeles Avenue, and South Ventura Street where through vehicle and pedestrian crossing would be provided. Impact on community cohesion likely greater under this alternative.	No impacts

Summary

Potential Impact	Alternative 3A (Twin Viaducts)	Alternative 3B (Embankment Supported by Retaining Walls)	No-Build Alternative
Relocations			
Business displacements	Six businesses would have to be relocated (convenience store, two auto salvage businesses, truck washing and bulk sugar transportation businesses, and machine equipment and parts). Adequate relocation properties are expected to be available.	Same as Alternative 3A	No impacts
Housing displacements	Residents of 36 single-family units (18 owner-occupied and 18 tenant-occupied) and one duplex with two residential units (owner-occupied) would need to be relocated. Adequate relocation properties are expected to be available.	Same as Alternative 3A	No impacts
Schools/ Emergency Services/ Utilities	<p>Safe access to Washington Elementary School would be maintained during construction</p> <p>Major impacts to emergency response times are not expected since alternative routes available after project completion; traffic management plan would be implemented during construction to avoid delays</p> <p>Relocation of water, sewer, electrical lines and petroleum pipes, if required, would be coordinated with affected utilities</p>	Same as Alternative 3A	No impacts
Traffic and Transportation/ Pedestrian and Bicycle Facilities	<p>Improved future operations at the following intersections: Fresno Avenue/West Charter Way, Fresno Avenue/West Washington Street, eastbound ramps at Crosstown Freeway/El Dorado Street, West Charter Way/Port of Stockton Expressway, and West Charter Way/Roberts Road;</p> <p>Potential for traffic, pedestrian, and bicyclist delays during construction</p> <p>Shoulders to be provided on improved roadways for bicycle and pedestrian travel</p>	Same as Alternative 3A	In future, intersections in project area would operate unacceptably; access to Port of Stockton would continue through the Boggs Tract neighborhood

Summary

Potential Impact	Alternative 3A (Twin Viaducts)	Alternative 3B (Embankment Supported by Retaining Walls)	No-Build Alternative
Visual/Aesthetics	<p>Elevated structure would dramatically change views for Boggs Tract residents and would take the place of existing homes and landscaping. Views possible under the viaduct.</p> <p>During three-year construction period, residents would be disrupted by views of the demolition of homes and the presence of construction equipment and activities. Nighttime construction may be occasionally required resulting in the use of high-wattage lighting.</p> <p>Minor light and glare impacts from greater reflective surface (introduced with the elevated structure), new signals at Navy Drive/Tillie Lewis Drive and proposed Crosstown Freeway ramps/Navy Drive, and new lighting standards on the Crosstown Freeway ramp extension</p>	<p>Elevated structure would dramatically change views for Boggs Tract residents and would take the place of existing homes and landscaping. Proposed retaining wall structure would prevent views from one side of the neighborhood to the other.</p> <p>During three-year construction period, residents would be disrupted by views of the demolition of homes and the presence of construction equipment and activities. Nighttime construction may be occasionally required resulting in the use of high-wattage lighting.</p> <p>Minor light and glare impacts from greater reflective surface (introduced with the elevated structure), new signals at Navy Drive/Tillie Lewis Drive and proposed Crosstown Freeway ramps/Navy Drive, and new lighting standards on the Crosstown Freeway ramp extension</p>	No impacts
Cultural Resources	<p>No archaeological sites or properties or buildings that meet the criteria for the California or National Registers of Historic Places found in the study area. Potential for discovery of unknown resources during construction.</p> <p>Excavation required for project construction ranges from two feet (for general grading of the construction) to 150 feet (for pile driving for the viaduct columns) in depth. Because of this, there is potential for historical subsurface deposits to be encountered during ground disturbing activities.</p>	Same as Alternative 3B	No impact

Summary

Potential Impact	Alternative 3A (Twin Viaducts)	Alternative 3B (Embankment Supported by Retaining Walls)	No-Build Alternative
Hydrology	Addition of approximately three acres of paved area would increase runoff. Project drainage system and detention basin would be designed to accommodate increased runoff and limit peak storm water runoff to downstream systems	Same as Alternative 3A	No impact
Water Quality and Storm Water Runoff	Addition of approximately three acres of paved area would increase runoff; best management practices would be implemented per water quality permit to maintain water quality	Same as Alternative 3A	No impact
Geology/Soils/ Seismic/Topography	Standard design and construction methods and geotechnical report recommendations would be implemented to address geotechnical and geologic considerations including erosion, low liquefaction potential, and ability to drive piles for proposed viaduct columns	Same as Alternative 3A	No impact
Paleontology	Sensitive geologic units known to contain vertebrate fossils that could be affected during construction are located under eastern portion of alignment	Same as Alternative 3A	No impact
Hazardous Waste/ Materials	Potential exposure of project construction workers to impacts from aeriaily deposited lead from tailpipe emissions, asbestos-containing materials, lead-based paint, and previous and existing land uses that used hazardous materials	Same as Alternative 3A	No impact

Summary

Potential Impact	Alternative 3A (Twin Viaducts)	Alternative 3B (Embankment Supported by Retaining Walls)	No-Build Alternative
Air Quality	<p>Included in “conforming” plan based on federal air quality requirements.</p> <p>Carbon monoxide and particulate matter emissions would not exceed federal or state standards.</p> <p>Project is expected to decrease nearly all mobile source air toxics.</p> <p>San Joaquin Valley Air Pollution Control District operational standards would not be exceeded.</p> <p>San Joaquin Valley Air Pollution Control District construction standards would be exceeded and would require mitigation.</p>	Same as Alternative 3A	Higher vehicle miles travelled in the Boggs Tract neighborhood (Table 2.2.6-4) as compared to conditions if the project were constructed. Since emissions are directly related to vehicle miles travelled, higher emissions in the Boggs Tract neighborhood are expected
Noise	<p>42 residences exposed to at least a 12-decibel [dB] increase over existing noise levels; noise wall would not be feasible since it would not provide at least 5 dB of noise reduction</p> <p>Nighttime construction may be required</p> <p>Vibration impacts from pile driving needed for construction of elevated structure columns may exceed recommended thresholds for ground vibration.</p>	Same as Alternative 3A	No impact
Animal Species	Compliance with California Department of Fish and Game requirements to avoid impacts to white-tailed kite and burrowing owls	Same as Alternative 3A	No impact
Threatened and Endangered Species	Unlikely that habitat for vernal pool fairy shrimp, a federally-protected species, occurs in the project area; direct impacts to three elderberry shrubs, habitat for a federally-protected beetle, would be avoided by placing fencing around the shrubs; compliance with California Department of Fish and Game requirements to avoid impacts to Swainson’s hawk	Same as Alternative 3A	No impact

Summary

The following environmental issues were considered, but no significant adverse impacts were identified, and therefore, they are not evaluated in this document: farmlands/timberlands, wetlands, natural communities, and plant species.

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List of Abbreviated Terms

AB 32	Assembly Bill 32
CAFE	Corporate Average Fuel Economy
Caltrans	California Department Transportation
CARB	California Air Resources Board
CH ₄	methane
City	City of Stockton
CO	carbon monoxide
CO ₂	carbon dioxide
County	San Joaquin County
Crosstown Freeway	State Route 4 West
dB	Decibel
dBA	A-Weighted Decibel
DDT	dichlorodiphenyltrichloroethane
EPA	U.S. Environmental Protection Agency
GHG	greenhouse gas
HFCs	hydrofluorocarbons
IPCC	Intergovernmental Panel on Climate Change
L _{eq}	Equivalent Sound Level
mpg	miles per gallon
N ₂ O	nitrous oxide
NO ₂	nitrogen dioxide
NO _x	nitrogen oxides
O ₃	ozone
Pb	lead
PCB	polychlorinated biphenyls
PFCs	perfluorocarbons
PM	particulate matter
PM10	particulate matter 10 microns or less in diameter
PM2.5	particulate matter 2.5 microns or less in diameter
Port	Port of Stockton
ppm	parts per million
ROG	reactive organic gases
SF ₆	sulfur hexafluoride
SO ₂	sulfur dioxide
SO _x	sulfur oxides
UC Davis	University of California, Davis

Chapter 1 Proposed Project

1.1 Introduction

The California Department of Transportation (Caltrans) proposes to relocate the on- and off-ramps of State Route 4 West (Crosstown Freeway) from their current location at Fresno Avenue southwest to Navy Drive. The total length of the project would be a little more than a mile. Figure 1-1 shows the project location in the City of Stockton and in the unincorporated area of San Joaquin County. Figure 1-2 shows the immediate vicinity of the project.

The project would improve the connection between Interstate 5, the Port of Stockton (Port), and adjacent industrial areas, as well as reducing truck traffic traveling to and from these areas through the Boggs Tract neighborhood. The new freeway ramps would provide access from Navy Drive to a proposed new elevated structure over the Burlington Northern Santa Fe Railway corridor and Boggs Tract neighborhood. The existing ramps at Fresno Avenue would be removed. Navy Drive would also be slightly realigned.

Two project alternatives are evaluated in this report: Alternatives 3A and 3B. For Alternative 3A, the project cost is estimated at about \$120 million, which includes \$19.9 million for right-of-way and utility relocation and \$100.1 million for construction. For Alternative 3B, the project cost is estimated at about \$126 million, which includes \$19.9 million for right-of-way and \$106.1 million for construction. The project would be funded using the Proposition 1B Trade Corridor Improvement Fund, Measure K (one-half cent sales tax in San Joaquin County), Regional Transportation Impact Fees, and other local funds.

The San Joaquin County Council of Governments' 2007 Regional Transportation Plan's (May 2007) short-range plan (2007–2019) shows the extension of the Crosstown Freeway to the west as a future five-lane facility. It is also shown as a Tier 1 project. Tier 1 projects are those that the region intends to build with identified revenue sources.

1.2 Purpose and Need

1.2.1 Purpose

The purpose of the project is to:

- Improve the connection between Interstate 5/Crosstown Freeway, the Port, and adjacent industrial uses
- Reduce the amount of industrial truck traffic through the residential Boggs Tract neighborhood
- Improve local air quality

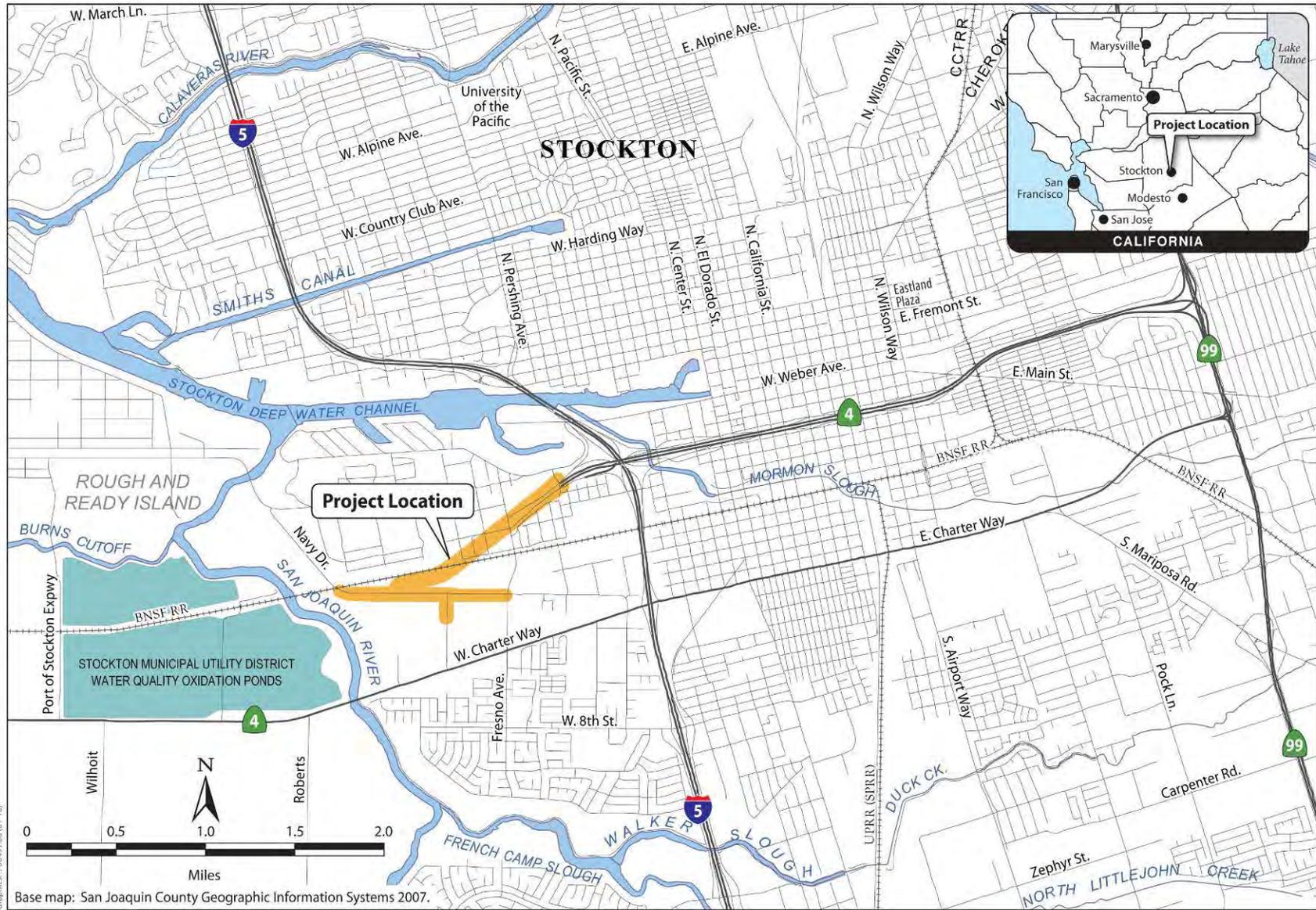


Figure 1-1 Project Location

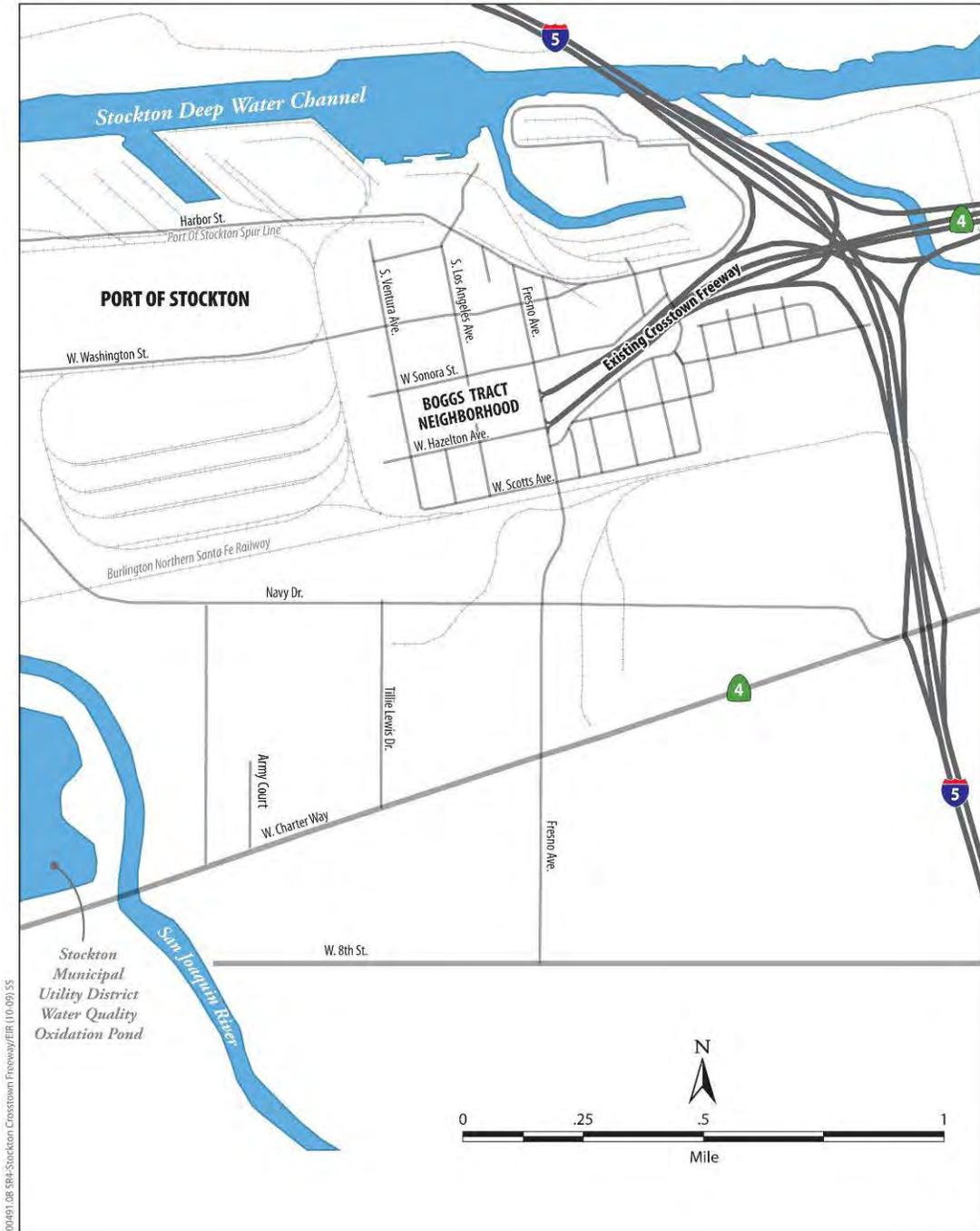


Figure 1-2 Project Vicinity

1.2.2 Need

1.2.3 Improved Connectivity

Currently, the connection between Interstate 5 and the Port is inadequate. The existing Crosstown Freeway connection at Fresno Avenue was presented to the City of Stockton in the mid-1960s as a short-term solution that would become unnecessary when the Crosstown Freeway was connected directly to West Charter Way. This connection has never been built.

Since the construction of the existing Crosstown Freeway, the Port has experienced significant growth, and is now the third largest inland port on the West Coast. Growth of the Port has created increased truck traffic through the area. Approximately 6,650 vehicle trips (of which 4,400 are truck trips) per day (or more than five vehicles [of which three are trucks] each minute of every day) come through the Boggs Tract neighborhood, a residential subdivision, on their way to and from the Port and adjacent industries, using local streets that were designed to carry residential traffic. There are plans to deepen the channel that serves the Port in order to accommodate larger vessels and increased movement of goods, which would result in greater truck traffic to the area. In addition, the Port proposes to create a 1,400-acre West Complex development on what was formerly known as Rough and Ready Island, a move that is expected to increase traffic volumes in the area to approximately 54,000 vehicular trips per day by 2035 worsening the poor connection between Interstate 5 and the Port. Approximately 19,000 of these vehicle trips (of which approximately nearly 12,600 would be truck trips) (or nearly fourteen vehicles [of which eight are trucks] per minute during all 24 hours of each day) would be expected to travel along West Washington Street through the residential streets of Boggs Tract.

The intersection at the terminus of the Crosstown Freeway at Fresno Avenue currently operates unacceptably and experiences severe delays during the afternoon peak hour due to Port and industrial traffic accessing the freeway. During the morning peak hour, this intersection operates with very short delays. This intersection is expected to substantially degrade during the morning peak hour by 2035 without the project as the Port grows. In 2035, the afternoon peak hour is expected to continue to experience severe delays.

Currently, traffic between the Port and Interstate 5 typically travels by one of two routes. The first is by way of Fresno Avenue south to West Charter Way and the Port of Stockton Expressway (the “southern route”); traffic passes through four signalized intersections (approximately 4.4 miles). This route does not have the capacity to accommodate existing demand, so it is often congested. Vehicles experience delays at the signalized intersections.

Alternatively, due to the congestion on West Charter Way, many trucks headed to the Port travel north on Fresno Avenue to West Washington Street (the “northern route”), which takes them about 2.3 miles through the Boggs Tract residential neighborhood. This route passes through two signalized intersections in Boggs Tract. Vehicles along this route also experience delays during afternoon peak traffic hour at some intersections and they pass through a long-established residential neighborhood, in direct proximity to schools, parks and a community center.

After completion of the project, Port and industrial traffic would be carried directly to Navy Drive without using the surface streets of the Boggs Tract neighborhood. Trucks would have a more direct and shorter route (approximately 1.8 miles). Traffic would be able to avoid traveling on residential streets in Boggs Tract, and could take Navy Drive directly to Washington Street well west of the boundary of the neighborhood.

1.2.4 Reduced Traffic Impacts in Boggs Tract

As noted earlier, every day an estimated 4,400 trucks bound for the Port and adjacent warehouse and industrial facilities use the residential streets in the Boggs Tract neighborhood, primarily Fresno Avenue and West Washington Street. This traffic causes noise, air quality, visual, traffic and pedestrian safety, and congestion impacts for the residents. These impacts would worsen as traffic through the neighborhood increases with development of the Port’s West Complex expansion project, adjacent industrial uses, and the region in general. Total daily vehicular traffic through the Boggs Tract neighborhood is predicted to reach 19,000 by 2035.

Without the project, traffic flow through Boggs Tract would significantly worsen as the Port grows and industrial and related development in the area increases. The project would improve the traffic impacts and travel time by carrying traffic along the Crosstown Freeway ramp extension clear to Navy Drive.

1.2.5 Improved Localized Air Quality

Areas that have experienced persistent air quality problems are designated by the U.S. Environmental Protection Agency as “nonattainment” areas (meaning that the area does not meet the federal air quality standard for a specific pollutant). Areas that have been recently redesignated to “attainment” are called “maintenance” areas. The project area is located in area that has been classified as an extreme nonattainment area for the federal 1-hour ozone standard, serious nonattainment area for the federal 8-hour ozone standard, moderate maintenance area for the federal carbon monoxide standard, serious maintenance area for the federal PM₁₀ standard, and nonattainment for the federal PM_{2.5} standard.

1.3 Project Alternatives

1.3.1 Design Features of the Build Alternative

The proposed project (Figure 1-3) would construct about a mile of elevated structure spanning the Boggs Tract neighborhood and the Burlington Northern Santa Fe Railway corridor. The elevated structure, ranging in height from 24 to 55 feet from ground level, would be supported by embankments from north of Navy Drive to just south of the Burlington Northern Santa Fe Railway corridor. Elevated viaduct structures supported by concrete columns are proposed to span the railway corridor starting on the south side of the Burlington Northern Santa Fe Railway corridor and ending just west of Del Norte Street. For the section of proposed roadway that spans Boggs Tract (from just west of Del Norte Street to just east of Fresno Avenue), two structural alternatives are being proposed. These structural options are identified as Alternatives 3A and 3B in this document. **Alternative 3A** proposes twin viaducts supported by columns while **Alternative 3B** proposes an elevated structure atop an earthen embankment supported by two retaining walls. Finally, on the west end of the project, the roadway would be supported by earthen embankments with grade to match existing State Route 4 at the Garfield Street Overhead. See Figure 1-4.

Navy Drive would also be slightly realigned and widened between Fresno Avenue and the Burlington Northern Santa Fe Railway underpass.

Vehicular and pedestrian access beneath the elevated structure would be provided at Fresno Avenue, South Los Angeles Avenue, South Ventura Street, and West Scotts Avenue. Cul-de-sacs would be constructed on Del Norte Street between West Hazelton Avenue and West Scotts Avenue and on West Hazelton Avenue between

South Los Angeles Avenue and Fresno Avenue, preventing through-access under the proposed elevated structure.

While mass transportation alternatives were not considered because the primary purpose of the project was to separate truck movements from neighborhood streets, both alternatives have been designed to accommodate the planned expansion of the Burlington Northern Santa Fe railway. The planned expansion is the installation of a second rail line to the Port of Stockton for the purposes of goods movement. In addition to goods movement, both alternatives would facilitate the continued access of line 76 of the San Joaquin Regional Transit District passenger bus service to Boggs Tract.

Both build alternatives have transportation system management elements included in their design. Each contains emergency management system and traffic management system elements on the eastbound and westbound ramps.

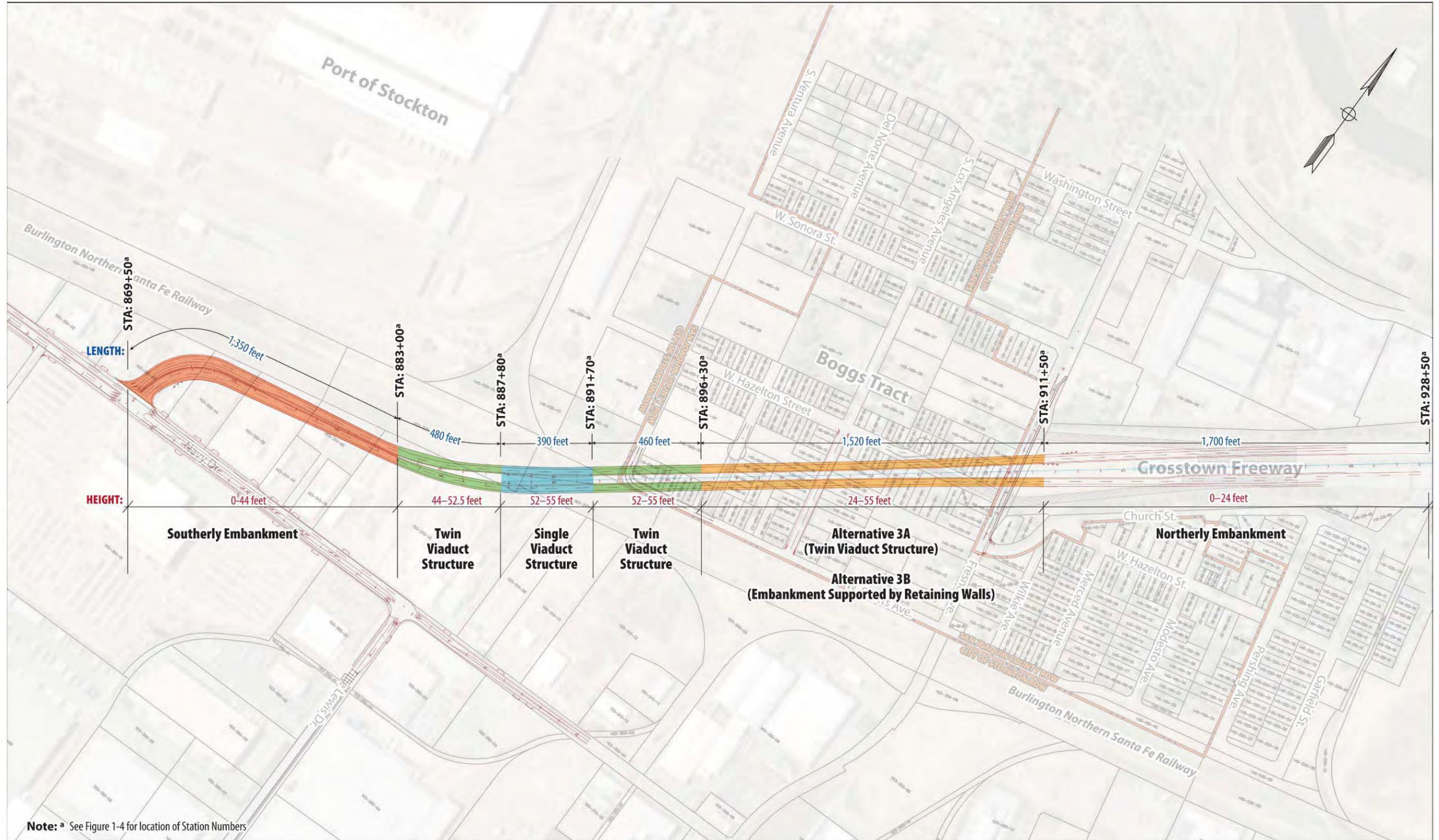


Figure 1-4 Schematic of Proposed Elevated Structure and Embankments

1.3.2 Navy Drive

Navy Drive would be slightly realigned between Fresno Avenue and the Burlington Northern Santa Fe Railway underpass. Westbound Navy Drive would gradually widen to three lanes (one through lane and two right turn lanes) as it approaches the new intersection with the Crosstown Freeway, and then it would narrow to one lane at the existing Burlington Northern Santa Fe Railway underpass; the underpass would not be modified. Eastbound Navy Drive would gradually widen to four lanes (one through lane and three left turn lanes) as it approaches the new intersection with the Crosstown Freeway, two lanes (one through lane and one right turn lane) as it approaches Tillie Lewis Drive, and one lane as it approaches Fresno Avenue. Along Navy Drive, where the project conforms to the existing pavement just east of the Burlington Northern Santa Fe underpass to just west of the Fresno Avenue intersection, existing shoulders along both sides of Navy Drive would be replaced with new five-foot shoulders that could accommodate either a Class II or Class III bicycle lane.

The existing T-intersection of Navy Drive/Tillie Lewis Drive would be slightly realigned and traffic signal lights added. The project would introduce a new signalized T-intersection where the Crosstown Freeway ramp extension connects with Navy Drive. The new intersection would connect the eastbound on-ramp and westbound off-ramp with Navy Drive.

A new traffic signal is also proposed at the intersection of Tillie Lewis Drive/West Charter Way intersection. Other than the restriping and traffic signal improvements, no other modifications are proposed for this intersection.

Standard landscaping would be provided based on the visual impact recommendations made in this document.

1.3.3 Unique Features of the Build Alternative Through Boggs Tract (Elevated Structure from West of Del Norte Street to East of Fresno Avenue)

Two structural options have been identified for the elevated structure from just west of Del Norte Street to just east of Fresno Avenue. The remaining portions of the Crosstown Freeway ramp extension west of Del Norte Street and east of Fresno Avenue are identical under both options. These two options are called Alternatives 3A and 3B, and are described below. See also Figure 1-4.

Alternative 3A proposes two viaducts from just west of Del Norte Street to just east of Fresno Avenue. Alternative 3A's twin viaducts are each 42 feet wide, supported by concrete columns, and separated by approximately 33 feet. The twin viaducts would vary in height from approximately 24 to 55 feet above the existing ground, with their highest point just west of Del Norte Street and descending towards Fresno Avenue. A chain-link fence below the viaducts would prevent people from traveling or congregating underneath them. The proposed chain link fence would be flanked by a 15-foot-wide landscaped strip under this alternative for a total landscaped area of nearly three acres. No landscaping is proposed beneath the viaduct structure. There would be a maintenance road between the viaduct structures that would provide access to the landscaping areas on either side.

Alternative 3B proposes an elevated structure supported by a retained earth system. The embankment, supported by two retaining walls on the north and south faces of the elevated structure, would be about 117 feet wide and from 24 to 55 feet above the existing ground, with its highest point just west of Del Norte Street and descending in height towards Fresno Avenue. A chain-link fence below the elevated structure would prevent pedestrian access to it. Adjacent to the fence would be a 5-foot-wide landscaping strip and a 10-foot-wide maintenance road. Landscaping is also proposed along the retaining wall embankment areas between the retaining wall and maintenance road. The total landscaped area under this alternative would be about three and a half acres.

1.3.4 No-Build Alternative

Under the No-Build Alternative, the ramps that currently end at Fresno Avenue would not be extended to the west, and the proposed improvements would not be made between Fresno Avenue and Navy Drive. Traffic moving between Interstate 5 and the Port would continue to travel through the Boggs Tract neighborhood on Fresno Avenue between West Washington Street and the existing Crosstown Freeway ramps and on West Washington Street west of Fresno Avenue. With the planned increase to Port channel capacity and the development of the Port's West Complex, along with expected regional growth, traffic through Boggs Tract would increase.

Under this alternative, traffic operations at the Fresno Avenue/West Hazelton Avenue, Fresno Avenue/West Charter Way, and Fresno Avenue/West Washington Street would all operate at level of service F in 2035 without the project.

The No-Build Alternative would be inconsistent with transportation improvements shown in the San Joaquin Council of Governments' Regional Transportation Plan, the City's 2035 General Plan, and Caltrans' State Route 4 Transportation Concept Report and would not be consistent with the project purpose and need.

1.3.5 Alternatives Considered but Eliminated from Further Discussion

Three other alternatives that met the need and purpose of the project were studied but rejected. The California Environmental Quality Act requires an alternative to meet most or all of the project objectives, be potentially feasible, and substantially reduce one or more of the project's significant environmental impacts. Although Alternatives 1, 2 and 4 meet the project's need and purpose, they have been eliminated from further evaluation and discussion since they have greater impacts than Alternative 3 related to prohibitive construction costs; adverse social, economic, and environmental impacts; and operational and safety problem, as described below.

1.3.6 Alternative 1

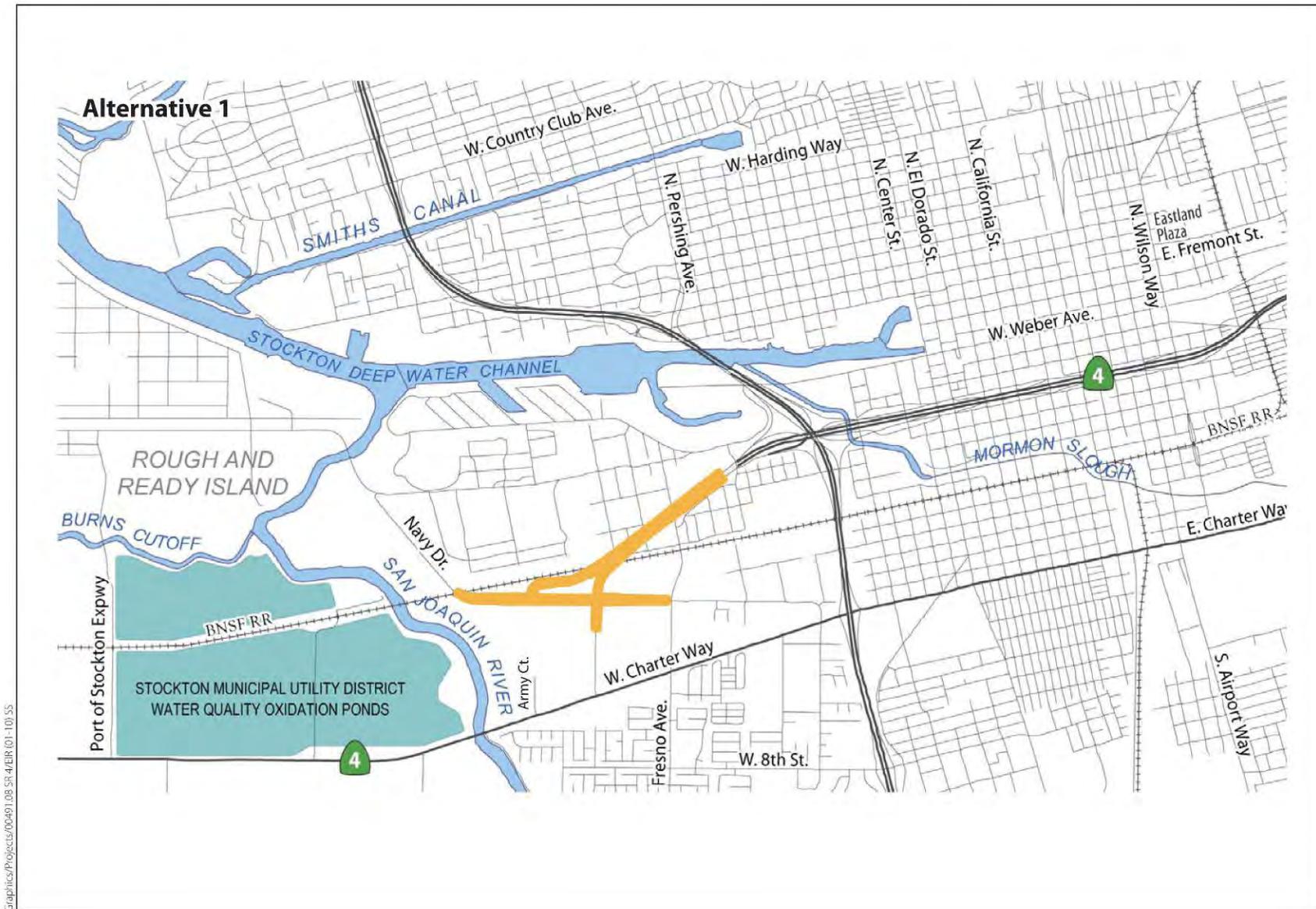
Whereas Alternative 3 (project) consolidates the eastbound on-ramp and westbound off-ramp connection with Navy Drive, these two ramps would be about 1,500 feet apart under Alternative 1, with the on-ramp located farther to the east and aligned with the existing Tillie Lewis Drive/Navy Drive intersection (Figure 1-5). The westbound off-ramp in Alternative 1 shares a similar alignment and gradual profile grade to those in Alternative 3, whereas the eastbound on-ramp proposes a shorter alignment and steeper profile grade as the ramp ascends northerly from Navy Drive across the Burlington Northern Santa Fe Railway. Also similar to Alternative 3, the existing Crosstown Freeway on- and off-ramps at Fresno Avenue would be removed. Under Alternative 1, the proposed eastbound on-ramp would result in substantial right-of-way impacts to industrial properties on the north side of Navy Drive between the new eastbound on-ramp and westbound off-ramp with Navy Drive.

1.3.7 Alternative 2

Alternative 2 is identical to Alternative 1 except for the location and profile grade of the eastbound on-ramp (Figure 1-6). Instead of aligning with the existing intersection of Tillie Lewis Drive, the eastbound on-ramp is shifted easterly along Navy Drive about 450 feet. South of Navy Drive, Tillie Lewis Drive is shifted and realigned with the eastbound on-ramp. Due to the reduced distance between the eastbound on-ramp intersection at Navy Drive/Tillie Lewis Drive and the Burlington Northern Santa Fe

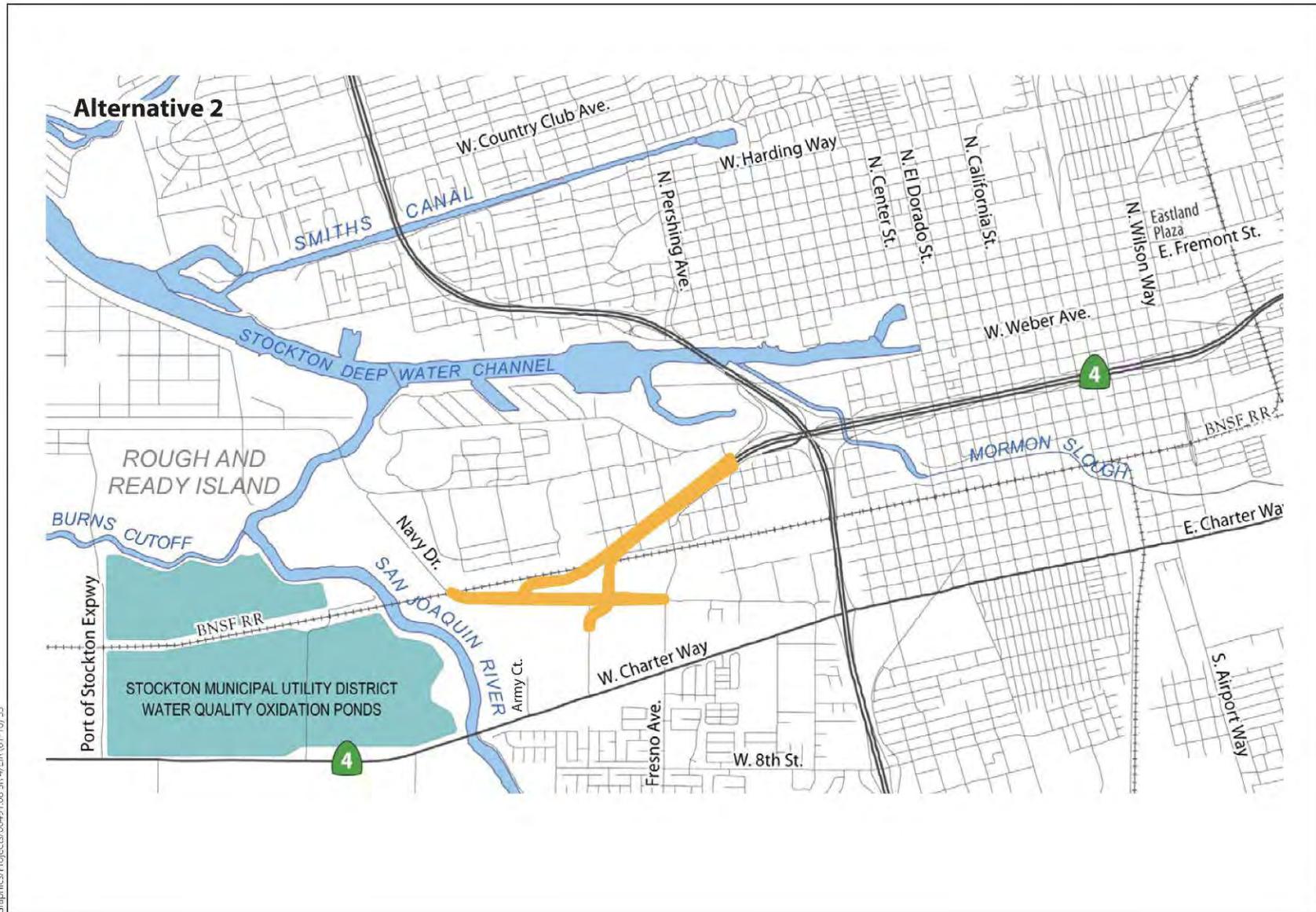
Railway, Alternative 2 proposes a steeper profile grade than Alternative 1. Similar to Alternative 3, the existing Crosstown Freeway on- and off-ramps at Fresno Avenue would be removed.

Alternative 2 assumed that a design exception would be required from Caltrans to enable the industrial parcels between the new eastbound on-ramp and westbound off-ramp to remain. A design exception would be needed since Caltrans prohibits access control to properties located between state highway ramps. To enable access to these industrial parcels, this alternative provided a separate frontage road at the rear of the industrial businesses located between the ramp intersections north of Navy Drive. The frontage road was situated parallel to the Burlington Northern Santa Fe corridor, beneath the eastbound on-ramp, and around to the south connecting with Navy Drive, approximately 575 feet east of eastbound Crosstown Freeway/Navy Drive intersection. This alternative was dropped from consideration due to the safety and constructability issues related to the frontage road.



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Figure 1-5 Alternative 1: Considered, but Eliminated from Further Discussion



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Figure 1-6 Alternative 2: Considered, but Eliminated from Further Discussion

1.3.8 Alternative 4—Improve Existing Alignment

Alternative 4 (Figure 1-7) involves widening two-lane West Charter Way from the Port of Stockton Expressway to the I-5/West Charter Way interchange to at least four lanes, including replacing the bridge over the San Joaquin River. The existing Crosstown Freeway on- and off-ramps at Fresno Avenue would also be removed. An elevated structure would not be constructed through the Boggs Tract neighborhood.

In the future 2035 no-build conditions, the Interstate 5/West Charter Way interchange ramp intersections in both the northbound and southbound directions are expected to operate unacceptably and have severe delays. Widening West Charter Way from two to four lanes would exacerbate the poor operational conditions of this interchange. Therefore, this alternative would likely require that the interchange be modified or replaced. However, due to the limited distance (spacing) between the Crosstown Freeway and West Charter Way interchanges along Interstate 5 (and the resulting inadequate space for vehicles merging and changing lanes), this improvement would not be feasible since it does not meet Caltrans' standard freeway-to-freeway connection requirements for safety reasons. The distance between the two interchanges would be 0.8 mile instead of the standard 2.0 miles, providing an unsafe distance for motorists merging and changing lanes. The widening of West Charter Way under this alternative would also have right-of-way and relocation impacts on existing land uses along this roadway. It would also result in impacts to biological resources associated with the San Joaquin River.

This alternative has been rejected since it does not meet Caltrans' design requirements, would result in environmental impacts for land uses on West Charter Way and on the San Joaquin River, and is not consistent with the existing State Route 4 Freeway Agreement.

1.3.9 Alternative 5 (Alternative 2 in Caltrans' Project Study Report)

Alternative 5 (identified as Alternative 2 in Caltrans' Project Study Report) would extend the Crosstown Freeway ramps from where they currently end at Fresno Avenue to Navy Drive along the north side of the Burlington Northern Santa Fe railroad corridor (Figure 1-7). The alignment of Alternative 5 in the Boggs Tract neighborhood matches the horizontal and vertical profile of Alternatives 3A and 3B from Fresno Avenue to South Los Angeles Avenue. However, this alternative then

continues westerly and parallels the Burlington Northern Santa Fe corridor, crossing over Port of Stockton land, before reaching Navy Drive just north of the Burlington Northern Santa Fe underpass. Navy Drive would be widened from two to six lanes under this alternative. This alignment is over 65 percent longer than Alternatives 3A and 3B.

The number of residents in the Boggs Tract neighborhood affected by full or partial acquisitions would be roughly comparable to Alternatives 3A and 3B.

This alternative would require substantial right-of-way from the former United States Army Reservation lands (now owned by the Port of Stockton) that historically and currently supports railroad-related activities. This site contains a train tank cleaning facility and debris piles from scrap iron and steel recycling activities. Near Navy Drive, this alternative would affect an area containing a transformer, as well as two 30-foot tall storage tanks used by the adjacent fuel refinery plant. Soils along this alignment may contain heavy metals because slag ballast, total petroleum hydrocarbons such as motor oil, diesel and polynuclear aromatic hydrocarbons, or polychlorinated biphenyls may have accumulated there. The alternative would also cross over a phytoremediation area west of South Ventura Avenue on the Koppel Stockton Terminal site; this area is undergoing remediation due to presence of nitrates and ammonia in the ground water.

The Central California Traction Company, which operates the Port of Stockton's spur tracks, is currently expanding storage track capacity, an operation that would also be affected by this alternative. Currently, 15,000 track-feet of storage are being added to three spur tracks, and new storage lines are also planned by 2013. Due to its alignment, Alternative 5 would necessitate relocation of these storage and spur track facilities.

This alternative has been rejected due to hazardous materials impacts, required relocations of railroad-related facilities, its longer alignment, and construction costs.

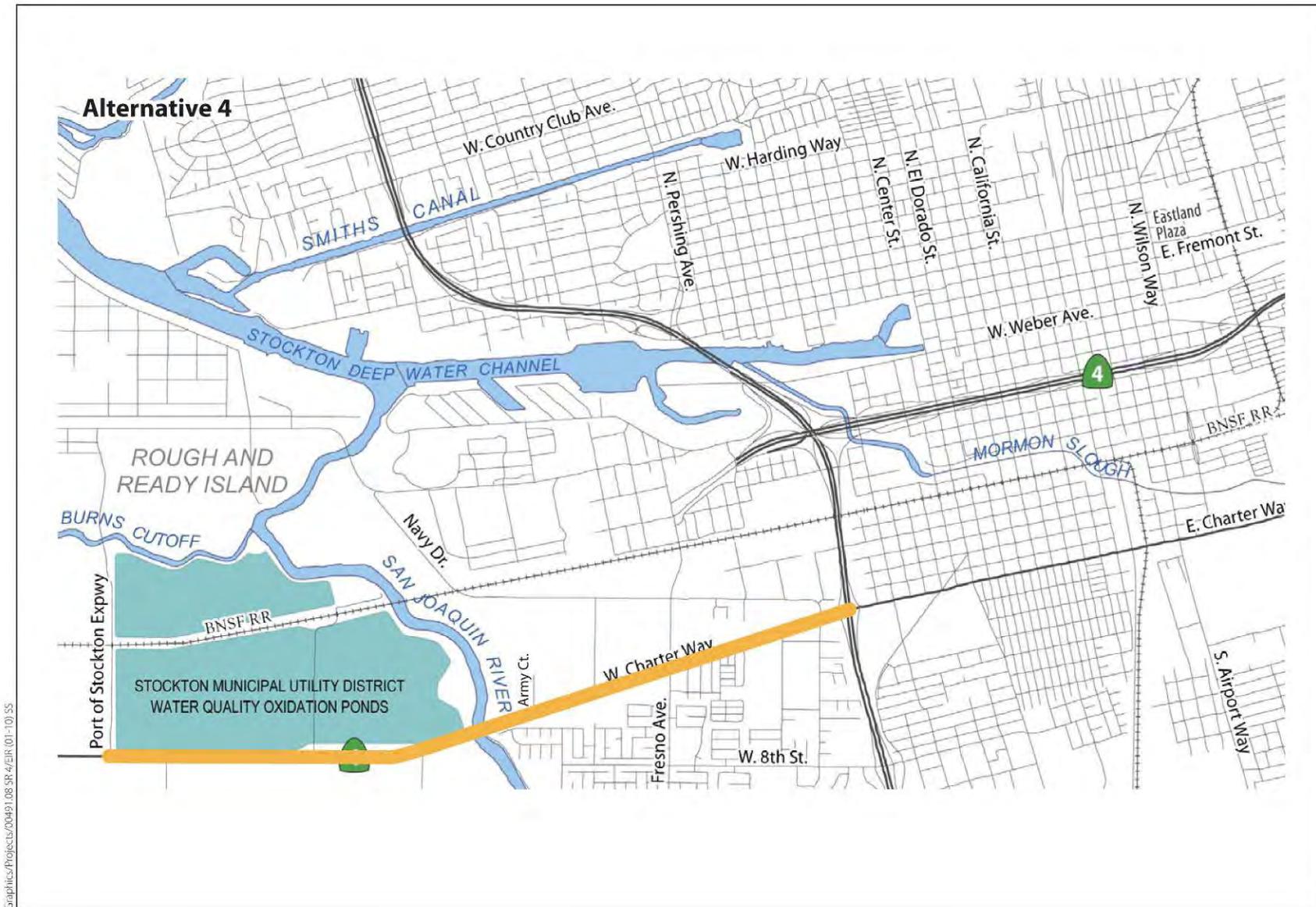
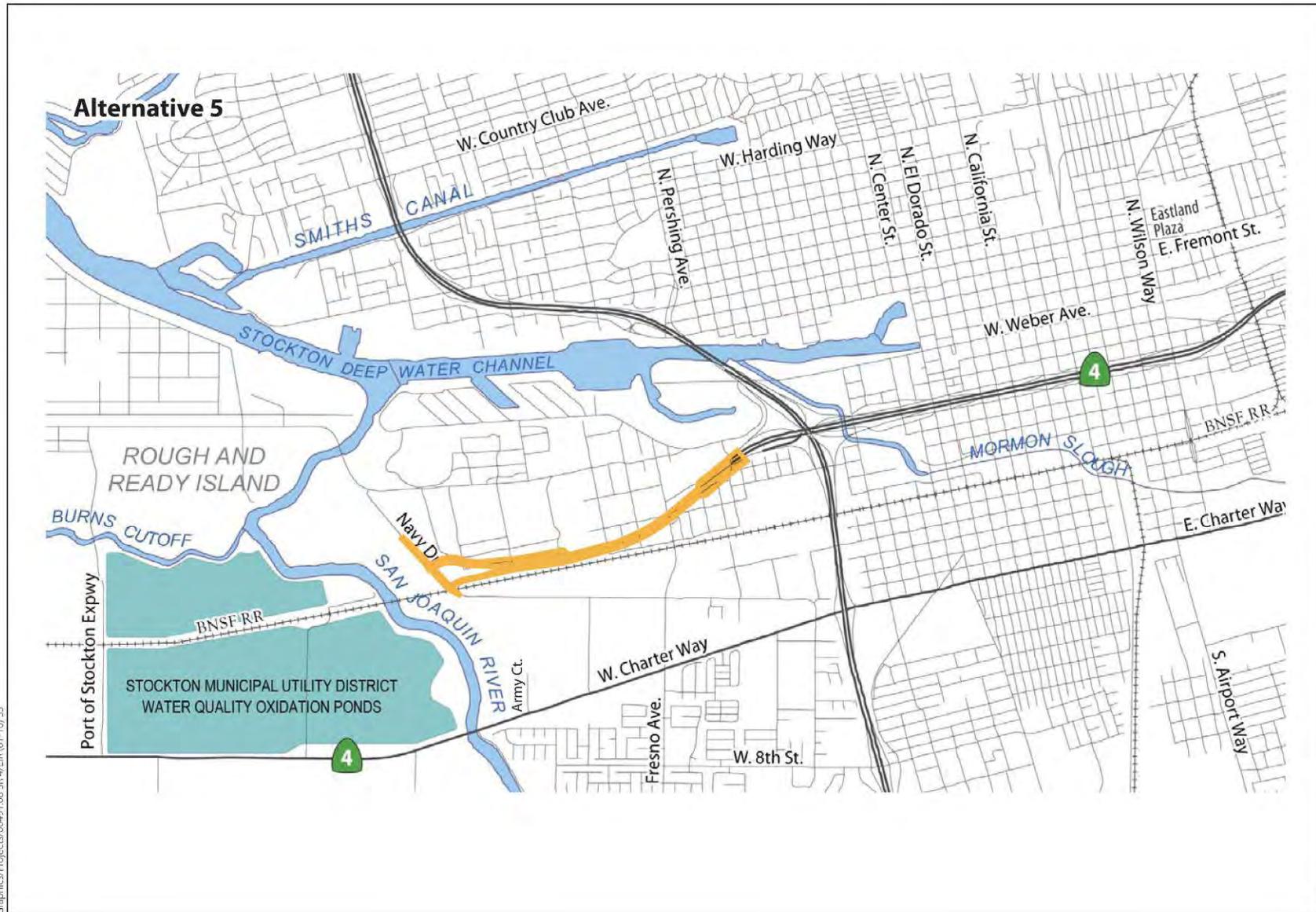


Figure 1-7 Alternative 4: Considered, but Eliminated from Further Discussion



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Figure 1-8 Alternative 5: Considered, but Eliminated from Further Discussion

1.3.10 Comparison of Alternatives

After the public circulation period of this draft Environmental Impact Report, all comments will be considered, and Caltrans will select a preferred alternative (Alternative 3A or 3B or No-Build Alternative) based on a number of factors including ability of the alternative to meet the project purpose and need; environmental impacts, project costs, and after considering input from the public, community groups, and other project stakeholders; A final Environmental Impact Report will be prepared that includes copies of all comments received from agencies and the public, written responses to the comments, and any revisions to the draft Environmental Impact Report made in response to the comments. Prior to giving final project approval, Caltrans will certify that the project complies with the California Environmental Quality Act, prepare findings for all significant impacts identified, and prepare a statement of overriding considerations for impacts that cannot be mitigated below a level of significance. Caltrans also will certify that the findings and the statement of overriding considerations have been considered prior to project approval. Caltrans then will file a notice of determination with the State Clearinghouse that will identify the action taken by Caltrans on the project and on this Environmental Impact Report.

1.4 Permits and Approvals Needed

The following permit would be required for project construction:

Agency	Permit	Status
Central Valley Regional Water Quality Control Board	National Pollutant Discharge Elimination System permit	To be obtained during the final design phase of the project

Chapter 2 Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures

This chapter explains the impacts that the project would have on the human, physical, and biological environments in the project area. It describes the existing environment that could be affected by the project, potential impacts from each of the alternatives, and proposed avoidance, minimization, and/or mitigation measures. Any indirect impacts are included in the general impacts analysis and discussions that follow.

As part of the scoping and environmental analysis conducted for the project, the following environmental issues were considered, but no significant adverse impacts were identified. Consequently, there is no further discussion regarding these issues in this document.

- **Farmlands/Timberlands**—The project is located in an urban area. There is no farmland or timberland in the project area (field visit February 5, 2009).
- **Energy**—When balancing energy used during construction and operation against energy saved by relieving congestion and other transportation efficiencies, the project would not have energy impacts.
- **Natural Communities**—The project area does not support any vegetation communities of special concern (Natural Environment Study, 2009).
- **Wetlands**—The project area does not contain any federally- or state-protected wetlands (Natural Environment Study, 2009).
- **Plant Species**—The project area does not support any special-status plant species (Natural Environment Study, 2009).

The significance conclusions for the impacts identified below are contained in Chapter 3 of this report. Mitigation measures that are needed to reduce significant impacts to a less-than-significant level are listed in **bulleted text** in the “Avoidance, Minimization, and Mitigation Measures” section of this chapter. This section also describes minimization measures that are included as part of the project; these

measures do not appear as bulleted text. The mitigation measures are also summarized in Chapter 3 of this report.

For regulatory settings of each section found in this chapter, please refer to Appendix E (Regulatory Settings).

2.1 Human Environment

2.1.1 Land Use

This section is based on the project Community Impact Assessment report prepared in November 2009.

2.1.1.1 Existing and Future Land Uses

Affected Environment

Existing development in the project area consists of low-density single-family housing to the north, with some multifamily housing, low-intensity commercial and large industrial uses to the south. Industrial and residential land uses dominate the area. The project crosses the boundary line between the City of Stockton and unincorporated county (Figure 1-3). The City of Stockton and San Joaquin County general plans identify the majority of land immediately adjacent to the project as residential or industrial land, with a few public facility land uses. Along the periphery of the project area, land is designated as industrial, while some periphery areas south of West Charter Way and north of the Stockton Deep Water Ship Channel are designated as residential (Figure 2.1.1-1).

The map of Stockton's zoning districts indicates that the project crosses three zoning designations: Low-Density Residential in the Boggs Tract neighborhood, General Industrial south of the Burlington Northern Santa Fe Railway, and Light Industrial along a strip on the north side of West Charter Way. These zoning designations are consistent with the existing land uses along the project alignment, as shown in Figure 2.1.1-1. Within the study area, parcels outside the city limits are zoned primarily Low-Density Residential. One county parcel in the northern portion of the study area is zoned for Warehouse Industrial, and one in the center of the study area is zoned for Public Facility.

Most of the parcels that are designated for residential uses in the study area contain residential units, with the exception of a few vacant parcels and two residentially zoned parcels that are used for the Sonora Market and Liquor store at the corner of Fresno Avenue and West Hazelton Avenue and a small restaurant at Fresno Avenue and West Washington Street.

According to the general plans, much of the development in Stockton and the surrounding county is driven by the continuing demand for residential land. The number of requests to change existing agricultural and industrial land designations to residential through general plan map revisions and rezoning is increasing. The limited supply of vacant land zoned for residential uses would require the City to focus on urban infill development to accommodate growth along major transportation corridors. Land under the County's jurisdiction would be designated for higher-density development along primary roads and highways, and there would be considerable pressure to convert agricultural land to residential.

Table 2.1.1-1 summarizes planning areas and planned development within a one-mile radius of the project site (Figure 2.1.1-2). The major planned development in the study area is related to the expansion of the Port. Eventual construction of the Port's proposed 1,459-acre West Complex development on what was formerly known as Rough and Ready Island is expected to increase truck volumes to and from the Port and adjacent industrial uses to approximately 54,000 vehicles per day by the year 2035, with 19,000 of them (or nearly 14 vehicles per minute around the clock) traveling through Boggs Tract.

Table 2.1.1-1 Planning Areas and Planned Development in the Immediate Project Vicinity (one mile radius of Crosstown Freeway Ramp Extension project)

Project Name	Jurisdiction	Proposed Use	Status
Southpointe Redevelopment Project ¹	City of Stockton Redevelopment Agency	152 two- and three-story residential condominiums located on the north side of West Weber Avenue, one half mile west of North Center Street	Pending; Draft EIR released in July 2007
Moss Garden ²	City of Stockton	359 residential units	Approximately one-third of the project is completed
West Complex Development	Port of Stockton	Redevelopment of 1,459 acres on Rough and Ready Island as commercial port and industrial park	Pending; Environmental Impact Report certified in July 2004
Stockton Waterfront Redevelopment Plan	City of Stockton Redevelopment Agency	Redevelopment plan for merged project area combining redevelopment project areas (Rough and Ready Island, Port Industrial, and West End)	Plan adopted in June 2009

Source:

¹ Stockton Waterfront Redevelopment Project Amendment Draft EIR

² Residential Development Summary available at:
<http://www.stocktongov.com/CD/pages/ResidentialDevelopments.cfm>

³ Port of Stockton

⁴ City of Stockton Redevelopment Division website. Available at:
<http://www.stocktongov.com/Redevelopment/pages/WestEndRDA.cfm>

A portion of the project area between West Scotts Avenue and Navy Drive is within the Port Industrial project area of the City of Stockton Waterfront Redevelopment Plan Amendment (see Table 2.1.1-1 and Figure 2.1.1-2). The Port Industrial area includes a “catalyst site” located north of Harbor Street (outside the Crosstown Freeway ramp extension project area) where specific strategies would be implemented to improve housing and economic development. Within this catalyst site, the plan shows development of 347 residential units and approximately 69,000 square feet of commercial land uses. The remaining land area in the Port Industrial project area would not experience any residential growth but is planned for development of 132,000 square feet of commercial land uses and 1,059,000 square feet of industrial land uses (see section 2.1.1.2, “Consistency with State, Regional, and Local Plans”).

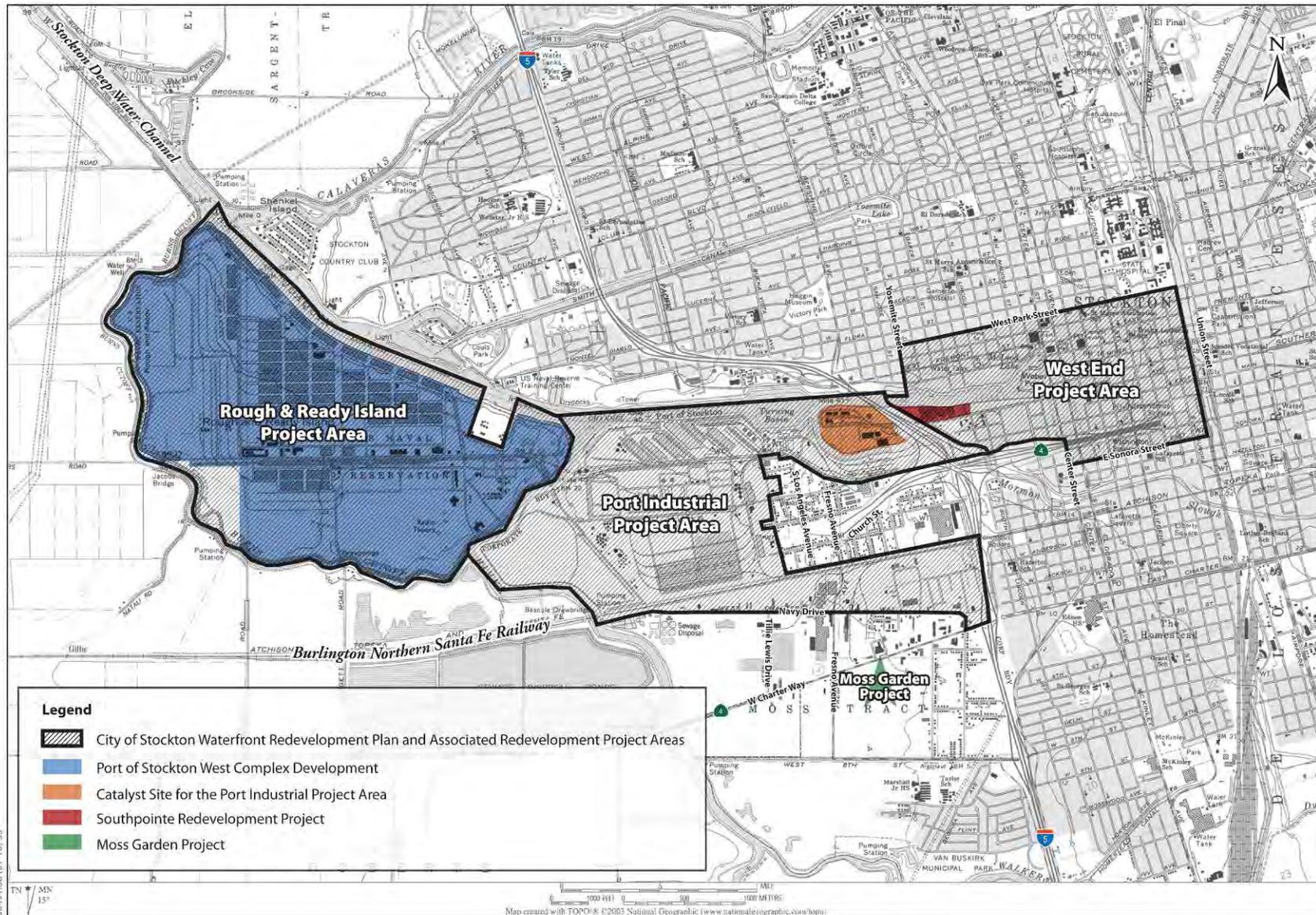


Figure 2.1.1-2 Planning Areas and Planned Development

Environmental Consequences

With implementation of the project under either Alternative 3A or 3B, the land use changes associated with acquiring property would be identical. The total area to be converted is provided in Table 2.1.1-2.

Table 2.1.1-2 Total Area Converted under the Project (Alternatives 3A and 3B)

Land Use Converted to Transportation Use	Acres
Commercial	0.2
Industrial	14.6
Residential	7.7
Vacant	0.6
Total	23.1

No-Build Alternative

Land uses would not be converted to a transportation facility under this alternative.

Avoidance, Minimization, and/or Mitigation Measures

Since the proposed conversion of land uses would affect community character, required relocations, and visual impacts, see the avoidance, minimization, and/or mitigation measures under the following sections: 2.1.3.1, “Community Character and Cohesion,” 2.1.3.3, “Relocations,” and 2.1.6, “Visual/Aesthetics.” Avoidance, minimization, and/or mitigation measures related to community outreach, provision of relocation benefits, available replacement properties, aesthetic wall treatments, and landscaping are proposed.

2.1.1.2 Consistency with State, Regional, and Local Plans

This section is based on the project Community Impact Assessment report prepared in November 2009.

Affected Environment

The study area is located both within San Joaquin County and the City of Stockton. These jurisdictions develop and manage the application of land use policy in the area through the use of general plans and subsequent zoning. The regional planning agency that has jurisdiction over the project area is the San Joaquin Council of Governments, a joint-powers authority, that includes the County and the Cities of Stockton, Lodi, Manteca, Tracy, Ripon, Escalon, and Lathrop. The San Joaquin

Council of Governments serves as the regional transportation planning agency and a technical and informational resource for these jurisdictions.

State

State Implementation Plan for Air Quality

The project complies with the State Implementation Plan for air quality. It is listed in the San Joaquin Council of Governments' 2007 Regional Transportation Plan as ID SJ07-1036, approved by the San Joaquin Council of Governments on May 24, 2007.

Regional

San Joaquin Council of Governments Regional Transportation Plan

The project is consistent with the San Joaquin Council of Governments' 2007 Regional Transportation Plan which shows the extension of the Crosstown Freeway to the west of its current terminus as a future five-lane facility. There are no plans to extend the Crosstown Freeway to West Charter Way in the current financially constrained portion of the plan.

Measure K

Measure K, approved in 1990, is the 1/2-cent sales tax dedicated to transportation projects in San Joaquin County. As the Local Transportation Authority for San Joaquin County, the San Joaquin Council of Governments is authorized by California State law to collect the 1/2-cent sales tax and to use the money to fund a specific list of transportation projects and programs as outlined in the Measure K Expenditure Plan. The project will be funded in part using Measure K funds.

Local

San Joaquin County General Plan

The project is not included in the current San Joaquin County General Plan 2010 (1992). The County is in the process of updating its general plan and is expecting to adopt an updated plan in summer 2011. The updated general plan will use the San Joaquin Council of Governments' Regional Transportation Plan as the basis for its circulation element, and therefore will include the Crosstown Freeway ramp extension project. The plan will include the connection of the Crosstown Freeway with West Charter Way and this project does not preclude any alternatives for that connection. It should be noted that there have been several changes to the land use in the area since the Route Adoption that includes the Stockton Municipal Utility

District oxidation ponds and the expansion of the Port of Stockton and adjacent industrial uses.

City of Stockton General Plan

The project is consistent with the City of Stockton's General Plan 2035 (2007) that shows the Crosstown Freeway as extending through the Boggs Tract neighborhood and connecting to Interstate 5 via West Charter Way.

City of Stockton Waterfront Redevelopment Plan Amendment

The Waterfront Redevelopment Plan Amendment (Figure 2.1.1-2) merged three City redevelopment project areas: West End (the downtown area), Rough and Ready Island, and the Port Industrial Development Project area (1,185 acres on the south side of the Stockton Deepwater Channel). A portion of the Crosstown Freeway ramp extension project area between West Scotts Avenue and Navy Drive is within the Port Industrial project area. The redevelopment plan does not specifically identify the Crosstown Freeway ramp extension (Most of the project area is located outside of the redevelopment plan area.)

Environmental Consequences

The project is consistent with the State Implementation Plan, Caltrans' State Route 4 Transportation Concept Report, San Joaquin County Council of Governments' 2007 Regional Transportation Plan, and Measure K since the project is included in these plans. The project also promotes San Joaquin Council of Governments' goal to improve goods movement through supporting strategies to reduce impacts on residential areas. The project reduces impacts on the Boggs Tract neighborhood by reducing truck traffic and improving localized air quality.

The project is consistent with Stockton's 2035 general plan land use map that identifies the Crosstown Freeway route as a freeway, extending through Boggs Tract and connecting to Interstate 5 via West Charter Way. The project is also consistent with relevant goals and policies identified in the general plan, particularly Streets and Highways Policy TC 2.19 and Water Transportation Policy TC-8.2. Policy TC 2.19 calls for truck routes to be established in existing and new development areas as needed to efficiently serve truck traffic and to minimize impacts on neighborhoods. The project would reduce truck traffic in the Boggs Tract neighborhood. Policy TC-8.2 states that the City shall work to improve access to the Port while minimizing adverse effects from Port-related traffic on surrounding neighborhoods. The project

implements this policy by improving the connection to the Port and by reducing truck traffic in the Boggs Tract neighborhood.

The current County General Plan identifies several improvements for the Crosstown Freeway although it does not include the proposed project. The general plan update will include the project. The project is consistent with the infrastructure and service, residential development, housing and neighborhood, and transportation goals and policies from the County's 1992 general plan. The project promotes County Housing and Neighborhood Preservation Policy 2 (calling for the County to work toward preventing undesirable traffic concentrations to preserve residential neighborhoods) and Transportation Policy 7 (requiring the County to minimize social and economic disruptions to communities from the transportation system) by diverting truck traffic from the Boggs Tract neighborhood. One of the County's affordable housing policies calls for the preservation of existing rental housing. The project would eliminate at least two or three units of affordable/low-income housing in Boggs Tract constructed under the Gift America Program for down payment assistance that is administered by the San Joaquin County Community Development Department. Although it is unlikely that adequate low-income relocation resources are available within Boggs Tract, adequate replacement resources are available within the study area. See section 2.1.3.3, "Relocation."

No-Build Alternative

This alternative would not be consistent with the City of Stockton general plan and San Joaquin Council of Governments' Regional Transportation as both of these plans show the extension of the Crosstown Freeway ramp, as proposed by the project.

Avoidance, Minimization, and/or Mitigation Measures

None would be required.

2.1.1.3 Parks and Recreation

This section is based on the project Community Impact Assessment report prepared in November 2009.

Affected Environment

The Boggs Tract Community Center and Park, located on South Los Angeles Avenue between West Sonora Street and West Hazelton Street, adjacent to the project alignment, provides Boggs Tract residents with access to a park and serves as a major community gathering space (Figure 2.1.1-3). The Community Center offers a park that is approximately a half of a block square with sports fields and shaded areas for

the community to use free of charge. Boggs Tract Community Center offers youth activities as well as senior and family services. Several programs, such as food distributions, health services, information and referral for social services, and summer youth enrichment programs, are housed in the community center.

Environmental Consequences

Construction of the elevated structure in the Boggs Tract neighborhood is projected to require approximately three years. During this period, construction vehicles and equipment would be accessing the project site in the Boggs Tract neighborhood. Resident access to the Boggs Tract Community Center and Park would be maintained during construction.

Users of the Boggs Tract Community Center and Park would be likely to experience long-term noise impacts following construction. It is estimated that 2035 noise levels would increase from 55 dBA without the project to 64 dBA with the project at the community center and park (see receptor #26 in Figure 2.2.7-1 in section 2.2.7, “Noise”).

Emissions of traffic-related air pollutants in the vicinity of the community center and park are projected to decrease in 2035 with construction of the project due to the diversion of traffic from local roadways to the project alignment. Figure 2.1.5-4 in section 2.1.5, “Traffic and Transportation/Pedestrian and Bicycle Facilities,” shows existing and future average daily traffic volumes with and without the project on those roadways that would experience reduced traffic volumes with the project. Due to reduced traffic volumes on these local roadways, reductions in emissions are expected in 2035 with the project as compared to 2035 emissions without the project. These reductions are explained in more detail in section 2.2.6, “Air Quality,” of this report.

No-Build Alternative

The Boggs Tract Community Center and Park and would not be affected by construction noise related to the project under this alternative. Emissions of reactive organic gases, nitrogen oxides, carbon monoxide, PM₁₀, PM_{2.5}, carbon dioxide, and mobile source air toxics would not be reduced in the Boggs Tract neighborhood since existing Port and industrial traffic would not be diverted from local residential roads.

Avoidance, Minimization, and/or Mitigation Measures

- Caltrans and/or the construction contractor would implement a traffic management plan that would identify signs to be provided and the locations of potential temporary detours, if needed, to ensure that local access to the Boggs Tract Community Center and Park is available during construction of the project.
- For construction-related air quality impacts, Caltrans would require the construction contractor to prepare and submit a dust control plan to the San Joaquin Valley Air Pollution Control District for approval at least 30 days prior to any earthmoving construction activities. The plan would include dust control measures in compliance with district regulations.
- Caltrans and/or the contractors would also ensure that sound-control devices on construction equipment are effective and would implement additional control measures, as needed so that noise from construction activities between the hours of 9:00 p.m. and 6:00 a.m. does not exceed 86 dBA at a distance of 50 feet from the nearest residence.



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Figure 2.1.1-3 Community Facilities in the Study Area

2.1.2 Growth

This section is based on the project Community Impact Assessment report prepared in November 2009.

Affected Environment

The projected short- and long-term growth trends for San Joaquin County, as illustrated in the San Joaquin Council of Governments' 2007 Regional Transportation Plan, show that the region would continue to experience rapid growth. The population in the County is projected to increase by 67 percent between 2006 and 2030.

As noted earlier, portions of the study area are located within the Port Industrial project area of the City's Waterfront Redevelopment Plan Area, which is planned for the development of 347 residential units, 201,000 square feet of commercial land uses, and 1,059,000 square feet of industrial land uses.

The 1,459-acre West Complex development is also proposed for construction on what was formerly known as Rough and Ready Island. The West Complex development, putting into service seven berths that had been previously inactive and developing 1,459 acres of land, is expected to increase truck volumes to and from the Port and adjacent industrial uses to approximately 54,000 vehicles per day by the year 2035 (with 19,000 of those vehicles traveling through Boggs Tract).

Traffic associated with Port expansion and growth of adjacent industrial uses would increase traffic between the Port and Interstate 5 even without construction of the Crosstown Freeway Ramp Extension. Without construction of the project, Port and industrial traffic would continue to use the two primary travel routes that are currently used: by way of Fresno Avenue south to West Charter Way and the Port of Stockton Expressway and by way of Fresno Avenue north to West Washington Street.

Environmental Consequences

Improvements provided by the project (under either Alternative 3A or 3B) are not expected to induce growth within or outside of the project area for the following reasons:

- The project is necessary to accommodate growth that has already occurred and that would occur with further development of the Port complex. This growth would occur even without implementation of the project.

- The project fills in a gap in the existing transportation infrastructure. It does not introduce a new transportation facility or provide new access to undeveloped areas. Thus, the project is not expected to hasten or shift planned or unplanned growth.
- The improved capacity provided by project would be limited to Navy Drive between Fresno Avenue and the Burlington Northern Santa Fe underpass. The project would not increase capacity of State Route 4.

Avoidance, Minimization, and/or Mitigation Measures

None would be required.

2.1.3 Community Impacts

Demographic information presented in this section is based on data from the 2000 U.S. Census. The “study area” referenced in this section is composed of the two block groups within Census Tract 0008.00 (Figure 2.1.3-1). The discussions in this section are based on the project Community Impact Assessment report prepared in November 2009.

2.1.3.1 Community Character and Cohesion

Affected Environment

Most of the residents in the study area live in Boggs Tract, which is identified in the County general plan as a distinct neighborhood having discrete residential areas; commercial areas; public facilities, including a school, a public park, and a community center; and other community features.

The Boggs Tract neighborhood contains local amenities such as the Boggs Tract Community Center and Park, Washington Elementary School, and three community churches (Figure 2.1.1-3) that contribute to a cohesive community. The neighborhood is isolated from other communities because of the industrial and commercial land uses that surround it, as well as existing transportation facilities and other human-made barriers. These barriers include the Burlington Northern Santa Fe railroad tracks on the south, the Interstate 5/Crosstown Freeway interchange on the east, and the Stockton Deep Water Ship Channel on the north. As noted above, the Crosstown Freeway was extended into the neighborhood in the 1960’s.

The study area has a predominantly minority and low-income population. Based on census information of the study area (Block Groups 1 and 2), 92 percent of the

population in the study area is minority (Table 2.1.3-1) and 27 percent is low-income (Table 2.1.3-2). The study area has a Hispanic population which, at 68.3 percent, is proportionally more than double that of the City and County (see Table 2.1.3-1). The study area also has a significant black or African-American population (17.8 percent), which is somewhat higher than the City's (10.8 percent) and almost three times the County's (6.4 percent) (Table 2.1.3-1). Overall, about 92 percent of the study area is composed of ethnic minorities, as compared with approximately 68% in the City and 53% in the County.

Table 2.1.3-1 Ethnicity Breakdown

Study Area	White (total [%])	Black or African-American (total [%])	American Indian and Alaska Native (total [%])	Asian (total [%])	Native Hawaiian and Other Pacific Islander (total [%])	Other Race (total [%])	Two or More Races (total [%])	Hispanic or Latino (total [%])	Total Population (100%)
Study Area (Census Tract 0008.00)	118 [7.7]	272 [17.8]	14 [0.9]	47 [3.1]	1 [0.1]	5 [0.3]	26 [1.7]	1,042 [68.3]	1,525
Block Group 1	46 [6.7]	133 [19.4]	8 [1.2]	40 [5.8]	1 [0.1]	5 [0.7]	10 [1.5]	443 [64.6]	686
Block Group 2	72 [8.6]	139 [16.6]	6 [0.7]	7 [0.8]	0 [0.0]	0 [0.0]	16 [1.9]	599 [71.4]	839
City of Stockton	78,539 [32.2]	26,359 [10.8]	1,337 [0.5]	47,093 [19.3]	810 [0.3]	496 [0.2]	9,920 [4.1]	79,217 [32.5]	243,771
San Joaquin County	267,002 [47.4]	36,139 [6.4]	3,531 [0.6]	62,126 [11.0]	1,624 [0.3]	1,225 [0.2]	19,878 [3.5]	172,073 [30.5]	563,598

Source: U.S. Census Bureau 2000a.

Table 2.1.3-2 shows the number of households, average size of the household, total number of families, and median household income in the study area compared with the City's and County's. The household income statistics show that 32 percent of households in Block Group 1 and 22 percent in Block Group 2 live below the poverty level. This compares to less than 20 percent in the City and less than 15 percent in the County.

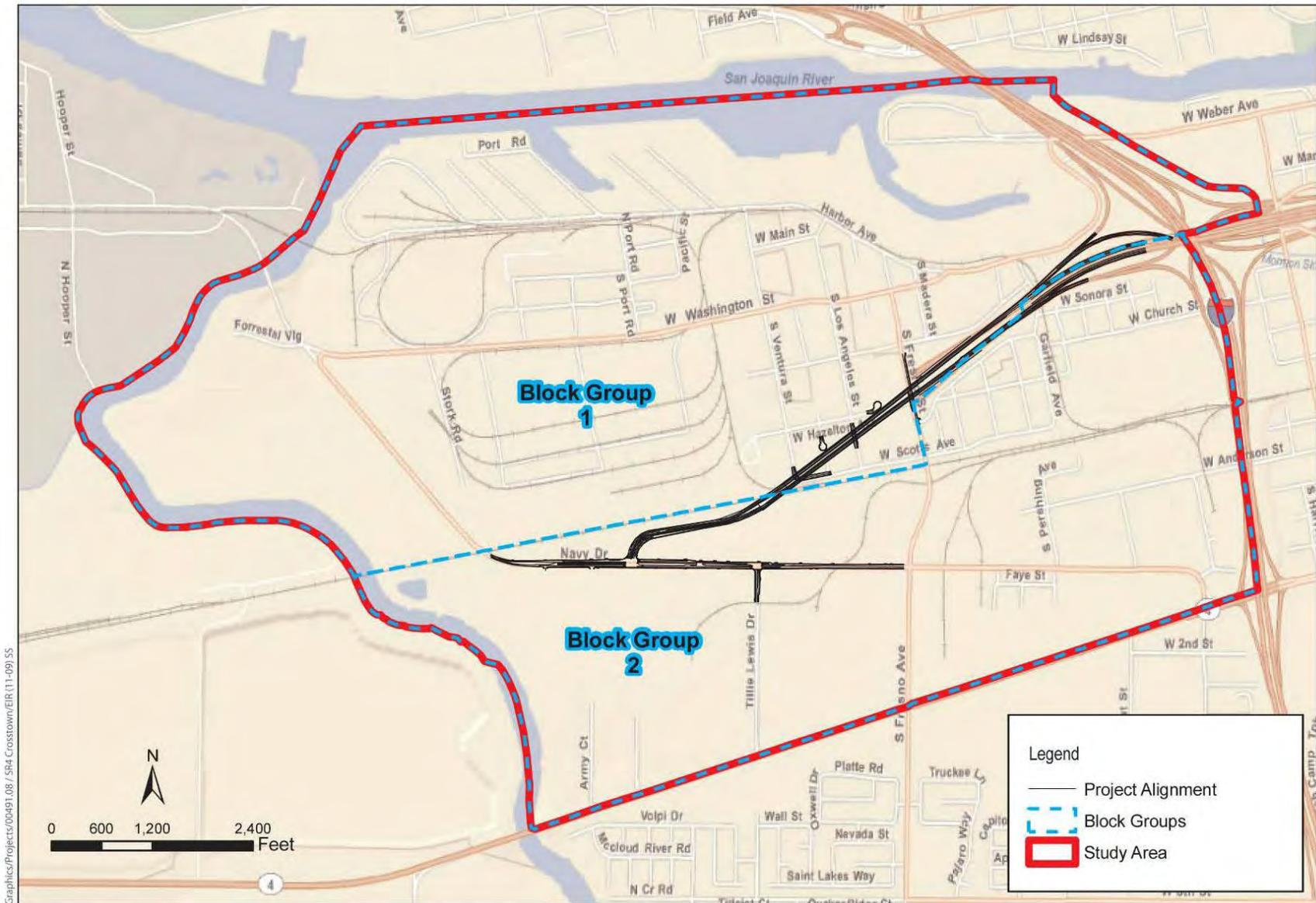
Table 2.1.3-2 Number, Size, and Income of Households

Geographic Area	Number of Households^a	Average Household Size	Total Number of Families^b	Percent of Family Households	Median Household Income	Percent of Households below Poverty Level
Study Area (Census Tract 0008.00)	405	3.5	298	74%	\$22,348	27%
Census Tract 0008.00, Block Group 1	204	3.4	141	69%	\$20,938	32%
Census Tract 0008.00, Block Group 2	201	3.7	157	78%	\$26,083	22%
City of Stockton	78,556	3.1	56,186	72%	\$35,453	19.5%
San Joaquin County	181,629	3.1	134,708	74%	\$41,282	14.5%

Source: U.S. Census Bureau 2000a.

^a The U.S. Census Bureau defines a household as a group of people, related or otherwise, living together in a dwelling unit.

^b The U.S. Census Bureau defines a family as a group of two or more people who reside together and who are related by birth, marriage, or adoption.



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Figure 2.1.3-1 Crosstown Freeway Ramp Extension Project Study Area: Census Tract and Block Groups

Environmental Consequences

The project would result in the construction of an elevated freeway structure through the neighborhood. The end of the existing Crosstown Freeway is in the middle of the neighborhood; the construction of that stub started dividing the neighborhood. Fresno Avenue also acts as a barrier in the neighborhood to some degree due to the high volume of traffic it currently carries.

Further extension of the freeway in the neighborhood would necessitate building an elevated structure in the neighborhood. With the elevated structure traversing the neighborhood, residents may have a reduced sense of belonging to their neighborhood.

Construction activities associated with the project would result in the potential for temporary and localized disruptions to the residents of Boggs Tract. These impacts could include potential limited or restricted access to homes during construction, increased noise and vibration, visual impacts, lights and glare, and increased dust during construction. Refer to section 2.2.7, “Noise;” section 2.1.6, “Visual/Aesthetics;” and section 2.2.6, “Air Quality,” of this report for detailed discussions of construction and operation impacts noise, visual, and air quality impacts related to the project. See section 2.1.5, “Traffic and Transportation/Pedestrian and Bicycle,” for a discussion of local circulation and access to properties during construction.

Long-term local circulation for both motorized and non-motorized vehicles and pedestrians would also be altered as a result of the project. Cul-de-sacs would be constructed on Del Norte Street between West Hazelton Avenue and West Scotts Avenue and on West Hazelton Avenue between South Los Angeles Avenue and Fresno Avenue, preventing access from one side of the proposed elevated structure to the other. At-grade through-access under the elevated structure would be provided along South Ventura Avenue, South Los Angeles Avenue, Fresno Avenue, and West Scotts Avenue. As shown in Figure 2.1.5-4 in section 2.1.5, “Traffic and Transportation/Pedestrian and Bicycle Facilities”, average daily traffic on Fresno Avenue and West Washington Street would decrease by 36 to 53 percent in 2035 with project construction since Port and industrial traffic would be diverted to the new Crosstown Freeway ramp extension. These reductions do not reflect that 100 percent of Port and industrial traffic would be diverted to the new freeway extension; some of

this traffic would remain on Fresno Avenue and West Washington Streets in the Boggs Tract neighborhood.

Although there would be no sidewalks along South Ventura Street or West Scotts Avenue, as is currently the case, the roadway shoulders at these locations would be widened to five feet to provide safer pedestrian travel. Due to higher pedestrian use, new sidewalks would be added along South Los Angeles Avenue from West Hazelton Street to just south of the proposed Caltrans right-of-way. New sidewalks would also be provided along portions of the east and west sides of Fresno Avenue to connect the existing segments of sidewalks.

The proposed elevated structure would be a new 44- to 55-foot-high physical barrier in Boggs Tract that would further divide the neighborhood west of Fresno Avenue into north and south sections. The structure may act to separate residences on one side of the structure from community focal points located on the other side of the structure and that are within walking distance of the residents. For example, Washington Elementary School, located north of the proposed extension, would be separated from residences located south of the proposed extension, as would the Boggs Tract Community Center (also located north of the proposed extension), and churches (located both north and south of the proposed extension). As noted above, pedestrians could cross from one side of the elevated structure to the other at Fresno Avenue, South Ventura Street, and South Los Angeles Street.

Alternative 3B proposes an elevated structure on a wall that would fully block north/south views within the Boggs Tract neighborhood from South Ventura Avenue to Fresno Avenue (except for the opening over South Los Angeles Street); a fence along the wall would prevent access to the wall, discouraging graffiti, among other nuisances.

Under Alternative 3A, a fence would provide a physical barrier below the viaduct structure, but would allow residents of Boggs Tract to enjoy partial views of the neighborhood. The design of Alternative 3A provides greater potential than Alternative 3B for implementing mitigation strategies that reduce physical disruptions to community cohesion.

The project would also result in the acquisition of the neighborhood's only convenience store, Sonora Market and Liquor, (located at 545 South Fresno Avenue). The next nearest convenience store is located at Fresno Avenue and Charter Way, around 0.6 mile from Boggs Tract (as measured from the intersection of Fresno

Avenue/West Scotts Avenue or the southernmost portion of the neighborhood). Although Boggs Tract residents can currently walk to the convenience store located in the neighborhood, some would choose to drive to the store at Fresno Avenue and West Charter Way because of the greater distance.

Cumulative Impacts

The Boggs Tract residential neighborhood was primarily developed before 1940. During postwar development, the community was populated by working-class families. In the 1950s, increased traffic required that roadway improvements be constructed in Stockton. In the 1960s, Interstate 5 had been constructed near the Boggs Tract neighborhood, and the extension of the Crosstown Freeway was completed during this period. By 1964, cut off from the rest of the City of Stockton by construction of the Crosstown Freeway and industrial development to the south, Boggs Tract was suffering from blight.

Since the construction of the existing Crosstown Freeway, the Port has experienced significant growth, and is now the third largest inland port on the West Coast. Growth of the Port has created increased truck traffic through the area. Approximately 6,650 vehicle trips (of which 4,400 are truck trips) per day (or more than five vehicles [of which three are trucks] each minute of every day) come through the Boggs Tract neighborhood, a residential subdivision, on their way to and from the Port and adjacent industries, using local streets that were designed to carry residential traffic. There are plans to deepen the channel that serves the Port in order to accommodate larger vessels and increased movement of goods, which would result in greater truck traffic to the area.

The proposed project would remove much of the existing and future truck traffic from the neighborhood streets. This would be a beneficial impact that would mitigate the cumulative impact of truck traffic on neighborhood streets. See section 2.1.5 for additional discussion. The area surrounding Boggs Tract is slated for additional industrial development, which would reinforce its status as a residential island in the midst of existing and planned industrial uses. See section 2.1.1 for additional discussion.

No-Build Alternative

The community of Boggs Tract would not be divided under this alternative as no elevated freeway structure would be constructed. Access within the neighborhood would not be altered.

Avoidance, Minimization, and/or Mitigation Measures

A public outreach program, on-going since 2007, is in effect to ensure that input on the project from residents, businesses, community groups and stakeholders, and partnering municipalities and agencies are addressed to the extent feasible.

Opportunities for public involvement in the project have been well publicized through community-based networks; written communication pieces, such as postcards and fact sheets; and web postings. Project information meetings were held for community organizations, public agencies and private entities, and businesses and residents that could be affected by the project. A public information meeting/open house on the project was also held in Boggs Tract in October 2009. Participants were encouraged to register their comments on comment cards, by talking with participating staff, and/or with a bilingual stenographer who attended the meeting. At the public meeting, residents voiced their concerns about safe access to Washington Elementary School during construction of the project, attracting the homeless who might seek refuge underneath the elevated structure, noise from traffic on the elevated structure, and the loss of homes. Some who commented at the public meeting expressed support for the project. In response to the input received from the public outreach program, the design of the project has been refined. For example, new sidewalks have been added to the project design along South Los Angeles Avenue from West Hazelton Street to just south of the proposed Caltrans right-of-way for improved pedestrian access. New sidewalk segments have also been added along portions of the east and west sides of Fresno Avenue to connect the existing segments of sidewalks on Fresno Avenue, thereby improving connectivity.

As part of the project, the roadway shoulders along South Ventura Street and West Scotts Avenue would be widened to five feet to provide safer pedestrian access under the proposed elevated structure where there is very little pedestrian activity and mostly motorized traffic.

2.1.3.2 Environmental Justice

Because the build alternatives affect a predominately low-income minority community, environmental justice concerns were taken into account in the CEQA significance findings for sections 2.1.3.1, “Community Character and Cohesion” (including cumulative impacts); 2.1.6, “Visual”; 2.2.7, “Noise”; 2.1.5, “Traffic and Transportation/Pedestrian and Bicycle Facilities”; and 2.2.6, “Air Quality.” Impact analysis can be found in the cumulative section of 2.1.3.1, “Community Character and Cohesion”; 2.1.6, “Visual”; and 2.2.7, “Noise.”

2.1.3.3 Relocations and Property Acquisitions

This section is based on the project Community Impact Assessment report prepared in November 2009.

Affected Environment

Boggs Tract can be characterized as a low-rise community (one- or two-story buildings) with single-family and duplex units. It is dominated by low-density, single-family housing, surrounded by large-scale industrial uses. The Boggs Tract neighborhood predates the existing Crosstown Freeway terminus and much of the industrial development that surrounds it. This neighborhood grew up alongside the Interstate 5 corridor and the Port.

Environmental Consequences

Table 2.1.3-3 shows the type and number of units housing people who would need to be relocated as a result of the project (relocations associated with Alternatives 3A and 3B are identical). Under the project, 36 single-family units and one duplex with two residential units would be acquired. No relocations would be required for partial acquisitions on two additional residential parcels with homes (see Figure 2.1.3-2). The conditions of the homes that would be affected range from poor to good.

Table 2.1.3-3 Residential Relocations Associated with the Project (Alternatives 3A and 3B)

Residential	Number of Units
Owner-occupied single-family residences	18 ^a
Tenant-occupied single-family residences	18
Owner-occupied multiple-unit residences	2 (duplex)
Tenant-occupied multiple-unit residences	0
Owner-occupied mobile homes	0
Tenant-occupied mobile homes	0
Total residential units	38
Total persons^b	118^b

^a For two single-family residences out of the 18 owner-occupied single-family residences, information is not available as to whether they are owner- or tenant-occupied. For the purposes of this analysis, they are assumed to be owner-occupied units.

^b According to the 2000 Census, the average number of persons per household in San Joaquin County is 3.1 persons. The total number of persons was calculated accordingly.

Under the project, the following six nonresidential parcels would also be fully acquired:

- Sonora Market and Liquor, 545 South Fresno Avenue, Stockton, CA 95203
- Mel's Auto Dismantlers, an auto salvage business, 2219 Navy Drive, Stockton, CA 95203

- Debcos Auto Wrecking, an auto salvage business, 2345 and 2341 Navy Drive, Stockton, CA 95203
- Stockton Sanitary Wash Racks and Vernon Transportation Company, truck washing and bulk sugar transportation businesses that are part of the same parent company located at the same address, 2313 Navy Dr Stockton CA 95203
- C.R. International, a machine equipment and parts business, 2403 Navy Drive, Stockton, CA 95203

The bulk sugar transportation business transports liquid and dry bulk sugar from manufacturers to bottling companies. This business has a facility onsite that cleans the trucks and that discharges directly to the City of Stockton's sewer system. The business requires a City sewer discharge permit and a State of California permit.

The project would also require 10 partial acquisitions of industrial parcels that would result in the loss of approximately 35 parking spaces and storage space for auto salvage businesses. However, based on preliminary engineering drawings, it is expected that the loss of parking at these businesses would not require that these businesses be relocated.

No-Build Alternative

The No-Build Alternative would not result in residential or business displacements.

Avoidance, Minimization, and/or Mitigation Measures

Adequate replacement residential properties are expected to be available on the market for the residents of the 20 owner-occupied and 18 renter-occupied units that would be need to be relocated. The residential replacement area, located in the same zip code as the project area, includes neighborhoods within and surrounding the project area and can be characterized as having similar or better street usage, accessibility, composition, utilities, landscaping, and proximity to transportation, schools, shopping, health facilities, and religious centers. Based on communication with realtors and data from real estate listing web sites, 85 single-family residences were for sale in zip code 95203, with prices ranging from \$38,000 to \$325,000, and three multifamily units and two single-family units were available for rent. However, conversations with local realtors suggest that there are more rentals available than the rental listing resources indicate. The 95203 zip code has a higher proportion of renters (54.3 percent) than homeowners (45.7 percent) suggesting that the majority of the housing available in the 95203 zip code is rental housing. In addition, Stockton has 83 residential units available for rent, ranging from \$445 to \$1,750 per month.

Residents whose properties would be acquired would receive relocation benefits. The Caltrans Relocation Assistance Program is based on the federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (as amended) and Title 49 Code of Federal Regulations Part 24. The purpose of the Relocation Assistance Program is to ensure that persons displaced as a result of a transportation project are treated fairly, consistently, and equitably so that such persons would not suffer disproportionate effects as a result of projects designed for the benefits of the public as a whole. Caltrans would assist people being displaced from their homes to obtain comparable decent, safe, and sanitary replacement housing by providing current and continuing information on sales price and rental rates of available housing.

Residential replacement dwellings would be in equal or better neighborhoods, at prices within the financial means of the individuals and families displaced, and reasonably accessible to their places of employment. Before any displacement occurs, affected individuals would be offered comparable replacement dwellings that are open to all persons regardless of race, color, religion, sex, or national origin, and are consistent with the requirements of Title VIII of the Civil Rights Act of 1968. This assistance would also include supplying information concerning federal- and state-assisted housing programs, and any other known services being offered by public and

private agencies in the area. Specific policies regarding relocation benefits are described in Appendix C.

Adequate replacement business properties are also expected to be available on the market for sale and rent. Approximately 122 industrial properties are for sale or lease in Stockton. Of these properties, approximately 17 have adequate acreage for relocating the two auto salvage businesses, bulk sugar transportation/truck washing, and machine equipments and parts businesses. Ten of the available properties are located within designated industrial parks. Two of these properties are located within 0.5 mile of the project site, and all but one of the 17 properties are located within 5 miles of the project site.

The feasibility of relocating the auto salvage businesses depends upon the availability of large industrial lots and the relative proximity of the relocation property to residents and other sensitive receptors. New neighbors would likely be opposed to the noise, dust, and unsightliness associated with this type of business.

Based on input from the City of Stockton Municipal Utilities Department, possible relocation sites for the bulk sugar transportation/truck washing business include Arch Road near Airport Way, Navy Road east of Fresno Avenue, and a number of areas in the South Stockton Industrial Area. All these sites would be able to accommodate the sewer discharge for this business. Relocation assistance personnel would need to assess the feasibility of any industrial relocation properties on a case-by-case basis.

There are approximately four retail properties available in the relocation area, two of which appear to be compatible with the convenience store being relocated. There are 23 available retail properties in Stockton, the closest of which is located approximately 1.9 miles east of the displacement area. There would be adequate relocation properties available for retail business relocation.

All affected businesses would receive relocation benefits and could benefit by relocating within the Port-Downtown Redevelopment Area, Stockton/San Joaquin County Enterprise Zone, or South Stockton Redevelopment Project Area where City, County, and state assistance (in the form of tax savings) is available to support reconstruction and rehabilitation of designated areas.

Those whose businesses are being displaced would receive information on comparable properties for lease or purchase. Specific policies regarding relocation benefits are described in Appendix C.

2.1.4 Emergency Services/Utilities/Schools

This section is based on the project Community Impact Assessment report prepared in November 2009.

2.1.4.1 Emergency Services

Affected Environment

Police protection and traffic enforcement in the study area are provided by the San Joaquin County Sheriff's Department, the Stockton Police Department, and the California Highway Patrol. Within the city limits, law enforcement is provided by the Stockton's police department. The San Joaquin County Sheriff's Department, out of French Camp (approximately 5 miles south of Stockton and the study area), provides law enforcement to unincorporated areas in and around Stockton. The department has a mutual aid agreement to provide law enforcement services based on the location of the nearest patrol unit.

The Stockton Fire Department serves both Stockton and the surrounding unincorporated area, with 12 locations throughout the city. With 263 firefighters, the department provides a firefighter-to-population served ratio of 1:1,198. Average response time for a standard structure fire is three to four minutes. In 1992, the City agreed to provide contractual services to Boggs Tract. Two stations (Station 1, at 1818 South Fresno Avenue; and Station 2, at 110 West Sonora Street) are located within a one mile radius of the project. Station 1 is part of Battalion 1 and is the primary service provider for the Boggs Tract Fire District.

A private ambulance service provider, American Medical Response, is located at 400 Fresno Avenue. This company provides emergency and non-emergency medical transport throughout San Joaquin County.

Environmental Consequences

The project would improve emergency vehicles' travel times through the project area by reducing the amount of Port-related truck traffic on local streets in the long-term. Based on discussions with the fire department, the project would not make access to Boggs Tract more difficult for Station 1 because its trucks come from the south and use Fresno Avenue. Station 2, the secondary responder for the neighborhood is located east of Interstate 5 and south of State Route 4. Engines from Station 2 would enter Boggs Tract via Church Street, which parallels the Crosstown Freeway to the south, rather than by the Fresno Avenue off-ramp from the Crosstown Freeway.

During construction, response times for Station 2 may be lengthened by construction-related delays, but the effect is expected to be minor.

No-Build Alternative

With expansion of the Port and increased congestion on local roads, emergency response times could be expected to increase in the future.

Avoidance, Minimization, and/or Mitigation Measures

Caltrans and/or the construction contractor would implement a traffic management plan that would identify signage to be used and the locations of potential temporary detours, if needed, to ensure that emergency service vehicle access is available during construction of the project. The plan would specify time frames for temporary detours if they are needed. The plan would also specify the process for notifying emergency services of the construction period and any required detours.

2.1.4.2 Utilities

This section is based on the project Community Impact Assessment report prepared in November 2009.

Affected Environment

Corridors in the project area that have underground and overhead utility lines include along Navy Drive, Fresno Avenue, and the Burlington Northern Santa Fe Railway. Major lines include those operated by the City of Stockton-Municipal Utilities District, Cal Water, Pacific Gas and Electric, AT&T, Kinder Morgan (petroleum pipe lines).

Environmental Consequences

The relocation of any utilities that must be moved would be coordinated with the affected utility. In many instances, existing utilities are already in place within Caltrans' proposed access-controlled right-of-way, and would not have to be moved. Since the proposed extension would be elevated, utility conflicts would primarily occur with subsurface utilities and the locations of proposed structural or footing locations for walls, embankments and column foundations. Conflicts would also occur on a more limited basis between overhead utilities and the location of the proposed elevated structure and widening improvements along local City and County streets.

No-Build Alternative

The No-Build Alternative would not affect utilities.

Avoidance, Minimization, and/or Mitigation Measures

No mitigation is required.

2.1.4.3 Schools

This section is based on the project Community Impact Assessment report prepared in November 2009.

Affected Environment

Public education is overseen by the Stockton Unified School District which serves a large urban community in the heart of California's Central Valley. The district operates 52 schools serving more than 38,000 students.

Two schools are located within a one mile radius of the project alignment. Washington Elementary School (1735 West Sonora Street) is in Boggs Tract and Hazelton Elementary School is southwest of the Interstate 5/Crosstown Freeway interchange. Edison High School, located approximately 1.3 miles from the project site, also serves students from Boggs Tract. See Figure 1-2.

Students who live in the Boggs Tract neighborhood who walk to Washington Elementary School use South Los Angeles Avenue and West Sonora Street to get to school. Buses run from Boggs Tract to Edison High School and a number of K–8 magnet schools. The main pickup point in Boggs Tract is at Washington Elementary School. Southbound buses use Fresno Avenue, and eastbound buses take the Crosstown Freeway via Fresno Avenue to Interstate 5.

Environmental Consequences

Safe access to Washington Elementary School would be maintained during project construction. The project, once completed, would not affect enrollment at Washington Elementary School. Construction vehicles and equipment would not use Fresno Avenue north of West Sonora Street or West Sonora Street for access to the project construction site.

No-Build Alternative

No impacts on schools would occur under this alternative.

Avoidance, Minimization, and/or Mitigation Measures

No mitigation is required.

2.1.5 Traffic and Transportation/Pedestrian and Bicycle Facilities

This section is based on the project Traffic Operations Report prepared in July 2009.

Affected Environment

Key Roadways

The study area that was evaluated for traffic impacts included Interstate 5 between Pershing Avenue on the north and West 8th Street on the south and the Crosstown Freeway between Fresno Avenue on the west and Stanislaus Street on the east (Figure 2.1.5-1). The major merge and diverge areas east of the Crosstown Freeway and State Route 99 interchanges were also evaluated.

Key roadways and interchanges in the study area include the following:

- **Crosstown Freeway:** This freeway provides a 3.4-mile freeway connection between Interstate 5 and State Route 99. It provides the major access to downtown Stockton as well as the Port of Stockton and Rough and Ready Island. The existing facility is a six-lane freeway with three general purpose lanes in each direction.
- **Interstate 5/Crosstown Freeway interchange:** Three legs of the freeway-to-freeway interchange were completed during the 1970s, with the western leg ending the Crosstown Freeway at Fresno Avenue. The western leg is designated as a current National Highway System Truck Route.
- **Interstate 5/West Charter Way interchange:** This interchange is approximately one mile south of the Interstate 5/Crosstown Freeway interchange.
- **West Charter Way:** This roadway is designated as State Route 4 west of Interstate 5. Charter Way is an east-west road beginning approximately 0.6 mile east of Interstate 5 at South El Dorado Street and ends approximately 1.9 miles west of Interstate 5 at Roberts Road where it becomes Marengo Road.
- **Navy Drive:** This street is a two-lane east-west roadway that runs through the industrial area south of the Port. Navy Drive connects Interstate 5 with the Port of Stockton and is one of the main access roads into the Port. Navy Drive begins 0.1 mile west of the Interstate 5/West Charter Way interchange, travels west, curves north and crosses the Burlington Northern Santa Fe Railway tracks, then travels northwest and crosses the San Joaquin River on the Navy Drive Bridge to the Port of Stockton's West Complex.



Figure 2.1.5-1 Traffic Study Area and Study Intersections

- **Fresno Avenue:** This roadway is two lanes running north-south that begins at south of West Charter Way at West 8th Street and ends at Harbor Street.
- **Tillie Lewis Drive:** This roadway is two lanes running north-south that connects West Charter Way to Navy Drive.
- **Port of Stockton Expressway:** This roadway (formerly known as Daggett Road) is two lanes running north-south that serves as a direct connector between West Charter Way and the Port's West Complex. It begins at West Charter Way, runs north along the western boundary of the Stockton Municipal Utility District's oxidation ponds, crosses over the Burns cut-off and enters the West Complex.

Existing Level of Service

To measure and describe the operational status of the local roadway network, transportation engineers and planners commonly use a grading system called level of service. Level of service is a description of a roadway segment's operation ranging from level of service A (indicating free-flow traffic conditions with little or no delay) to level of service F (representing overcrowded conditions where traffic flows exceed design capacity, resulting in long queues and delays). Figure 2.1.5-2 describes levels of service A–F in more detail for intersections with and without traffic signal lights.

Table 2.1.5-1 identifies existing levels of service and delays experienced by vehicles at key intersections in the traffic study area. These intersections are identified in Figure 2.1.5-1. The intersections with bolded levels of service in Table 2.1.5-1 indicate that the level of service is unacceptable (level of service E or F). Figure 2.1.5-3 shows existing volumes at key intersections in the immediate project area.

Bus Service and Bicycle/Pedestrian Facilities

Line 76 of the San Joaquin Regional Transit District serves the project area. This route connects Eastland Plaza at the corner of North Wilson Way and East Fremont Street and downtown Stockton with the Boggs Tract neighborhood. In the project area, the route exits the Crosstown Freeway at Fresno Avenue, serves the Boggs Tract neighborhood, and then travels east along West Church Street. This route has a stop in the Boggs Tract neighborhood at the South Los Angeles Avenue/Sonora Avenue intersection.

There are no existing or planned bicycle facilities in the project area. The bicycle route closest to the project area runs along El Dorado Street in the downtown area.

Pedestrian facilities are largely absent in the project area. In general, Boggs Tract does not have sidewalks, separated paths, or covered areas/transit stops. Where sidewalks are provided, they are generally on both sides of the street but with little or no setback from the curb. Most businesses in the project area are region-serving industries or businesses located in an industrial park, which are two business types that are not generally designed to be supportive of pedestrian activity.

Environmental Consequences

Roadway Level of Service

Table 2.1.5-1 shows expected 2015 levels of service and delays at key intersections without construction of the project and with the project. Table 2.1.5-1 also presents this same information for 2035.

The following study intersections that would operate at unacceptable levels in 2015 without the project would experience improved operations with the project in 2015. These improvements would occur since vehicular and truck traffic that is now traveling on local roadways would be diverted to the proposed freeway extension:

- West Charter Way/Army Court improves from level of service F in 2015 without the project to level of service B in 2015 with the project (morning peak hour)
- West Charter Way/Tillie Lewis Drive improves from level of service F to level of service D (morning peak hour)
- Fresno Avenue/West Charter Way improves from level of service F to level of service D (morning peak hour)
- Fresno Avenue/Navy Drive improves from level of service F to level of service E (morning peak hour).
- The Crosstown Freeway/Fresno Avenue off-ramp intersection and the Crosstown Freeway/Fresno Avenue/West Hazelton Avenue intersection that currently operate at level of service F would be eliminated with the project. The new Crosstown Freeway ramp terminal intersections at Navy Drive would operate at level of service A (morning peak hour) or B (evening peak hour) in 2015 and level of service D during the morning and evening peak hours in 2035.

LEVELS OF SERVICE

for Intersections with Traffic Signals

Level of Service	Delay per Vehicle (seconds)
A	≤ 10
B	11-20
C	21-35
D	36-55
E	56-80
F	>80

Factors Affecting LOS of Signalized Intersections

Traffic Signal Conditions:

- Signal Coordination
- Cycle Length
- Protected left turn
- Timing
- Pre-timed or traffic activated signal
- Etc.

Geometric Conditions:

- Left- and right-turn lanes
- Number of lanes
- Etc.

Traffic Conditions:

- Percent of truck traffic
- Number of pedestrians
- Etc.

Source: 2000 HCM, Exhibit 16-2, Level of Service Criteria for Signalized Intersections

LEVELS OF SERVICE

for Unsignalized Intersections

Level of Service	Flow Conditions	Delay per Vehicle (seconds)	Technical Descriptions
A		<10	Highest quality of service. Free traffic flow with few restrictions on maneuverability or speed. Very short delay
B		10-15	Stable traffic flow. Speed becoming slightly restricted. Low restriction on maneuverability. No delays
C		15-25	Stable traffic flow, but less freedom to select speed, change lanes or pass. Minimal delays
D		25-35	Traffic flow becoming unstable. Speeds subject to sudden change. Passing is difficult. Minimal delays
E		35-50	Unstable traffic flow. Speeds change quickly and maneuverability is low. Significant delays
F		>50	Heavily congested traffic. Demand exceeds capacity and speeds vary greatly. Considerable delays

Source: 2000 HCM, Exhibit 20-2, LOS Criteria for Two-Lane Highways in Class 1

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Figure 2.1.5-2 Levels of Service

Table 2.1.5-1 Existing, 2015, and 2035 Intersection Analyses

Intersection	Traffic Control	Peak Hour	Delay (seconds/vehicle)/Level of Service				
			Existing Intersection Analysis	2015 Intersection Analysis		2035 Intersection Analysis	
				No Build	Project	No Build	Project
1. Crosstown Freeway/Fresno Avenue	Side-street stop	Morning	6/A	>50 (>50)/F (F)	–	>50 (>50)/F (F)	–
		Evening	>80/F	>50 (>50)/F (F)	–	>50 (>50)/F (F)	–
2. Crosstown Freeway/Fresno Avenue/West Hazelton Avenue	Signal	Morning	10/B	15/B	–	20/C	–
		Evening	20/B	>80/F	–	>80/F	–
3. West Charter Way/Army Court	Side-street stop	Morning	4/A	35 (>50)/E (F)	5 (11)/A (B)	>50 (>50)/F (F)	>50 (>50)/F (F)
		Evening	7/A	>50 (>50)/F (F)	>50 (>50)/F (F)	>50 (>50)/F (F)	>50 (>50)/F (F)
4. West Charter Way/Tillie Lewis Drive	Side-street stop	Morning	2/A	>50 (>50)/F (F)	8 (26)/A (D)	>50 (>50)/F (F)	>50 (>50)/F (F)
		Evening	9/ A	>50 (>50)/F (F)	>50 (>50)/F (F)	>50 (>50)/F (F)	>50 (>50)/F (F)
5. Fresno Avenue/West Charter Way	Signal	Morning	30/C	>80/F	37/D	>80/F	57/E
		Evening	>80/F	>80/F	>80/F	>80/F	>80/F
6. West Charter Way/Navy Drive	Signal	Morning	18/B	>80/F	>80/F	>80/F	>80/F
		Evening	22/C	>80/F	>80/F	>80/F	>80/F
7. West Charter Way/Interstate 5 Southbound Ramps	Signal	Morning	44/D	>80/F	>80/F	>80/F	>80/F
		Evening	23/C	33/C	33/C	>80/F	>80/F
8. West Charter Way/Interstate 5 Northbound Ramps	Signal	Morning	17/B	23/C	24/C	>80/F	>80/F
		Evening	27/C	48/D	42/D	>80/F	>80/F
9. Fresno Avenue/Navy Drive	Signal	Morning	11/B	20/B	15/B	>80/F	>80/F
		Evening	20/C	>80/F	73/E	>80/F	>80/F
10. Fresno Avenue/West Washington Street	Signal	Morning	12/B	21/C	15/B	>80/F	26/C
		Evening	16/B	32/C	15/B	>80/F	>80/F
11. Fremont Street/Interstate 5 Southbound Ramps	Side-street stop	Morning	7/A	37 (>50)/E (F)	45 (>50)/E (F)	>50 (>50)/F (F)	>50 (>50)/F (F)
		Evening	3/A	5 (14)/A (B)	5 (12)/A (B)	>50 (>50)/F (F)	>50 (>50)/F (F)
12. Pershing Avenue/Interstate 5 Northbound Ramps	Side-street stop	Morning	7/A	13 (31)/B (D)	11 (>50)/B (F)	>50 (>50)/F (F)	>50 (>50)/F (F)
		Evening	8/A	17 (33)/C (D)	17 (32)/C (D)	>50 (>50)/F (F)	>50 (>50)/F (F)
13. Center Street/Crosstown Freeway Westbound Ramps	Signal	Morning	34/C	27/C	29/C	>80/F	>80/F
		Evening	21/C	19/B	23/C	>80/F	>80/F
14. El Dorado Street/Crosstown Freeway Westbound Ramps	Signal	Morning	21/C	13/B	11/B	>80/F	70/E
		Evening	18/B	20/C	18/B	37/D	28/C
15. El Dorado Street/Crosstown Freeway Eastbound Ramps	Signal	Morning	24/C	22/C	22/C	>80/F	>80/F
		Evening	43/D	46/D	37/D	>80/F	>80/F
16. Center Street/Crosstown Freeway Eastbound Ramps	Signal	Morning	12/B	12/B	14/B	>80/F	>80/F
		Evening	27/C	27/C	28/C	>80/F	>80/F
17. West Charter Way/Port of Stockton Expressway	Signal	Morning	4/A	8/A	8/A	74/E	10/A
		Evening	4/A	9/A	8/A	>80/F	>80/F

Chapter 2 • Affected Environment, Environmental Impacts, and Avoidance, Minimization, and/or Mitigation Measures

Intersection	Traffic Control	Peak Hour	Delay (seconds/vehicle)/Level of Service				
			Existing Intersection Analysis	2015 Intersection Analysis		2035 Intersection Analysis	
				No Build	Project	No Build	Project
18. West Charter Way/Roberts Road	Side-street stop	Morning	3/A	5 (9) A/A	5 (9) A/A	>50 (>50)/F (F)	10 (26)/B (D)
		Evening	4/A	>50 (>50)/F (F)	>50 (>50)/F (F)	>50 (>50)/F (F)	>50 (>50)/F (F)
19. Proposed Crosstown Freeway Ramps/Navy Drive	Signal	Morning	–	–	10/A	–	46/D
		Evening	–	–	17/B	–	36/D
20. Proposed Navy Drive/Tillie Lewis Drive	Signal	Morning	–	–	11/B	–	13/B
		Evening	–	–	11/B	–	25/C

Note: **Bold** indicates unacceptable level of service.

Worst movement delay and LOS reported in parenthesis () for intersections not controlled by signal lights.

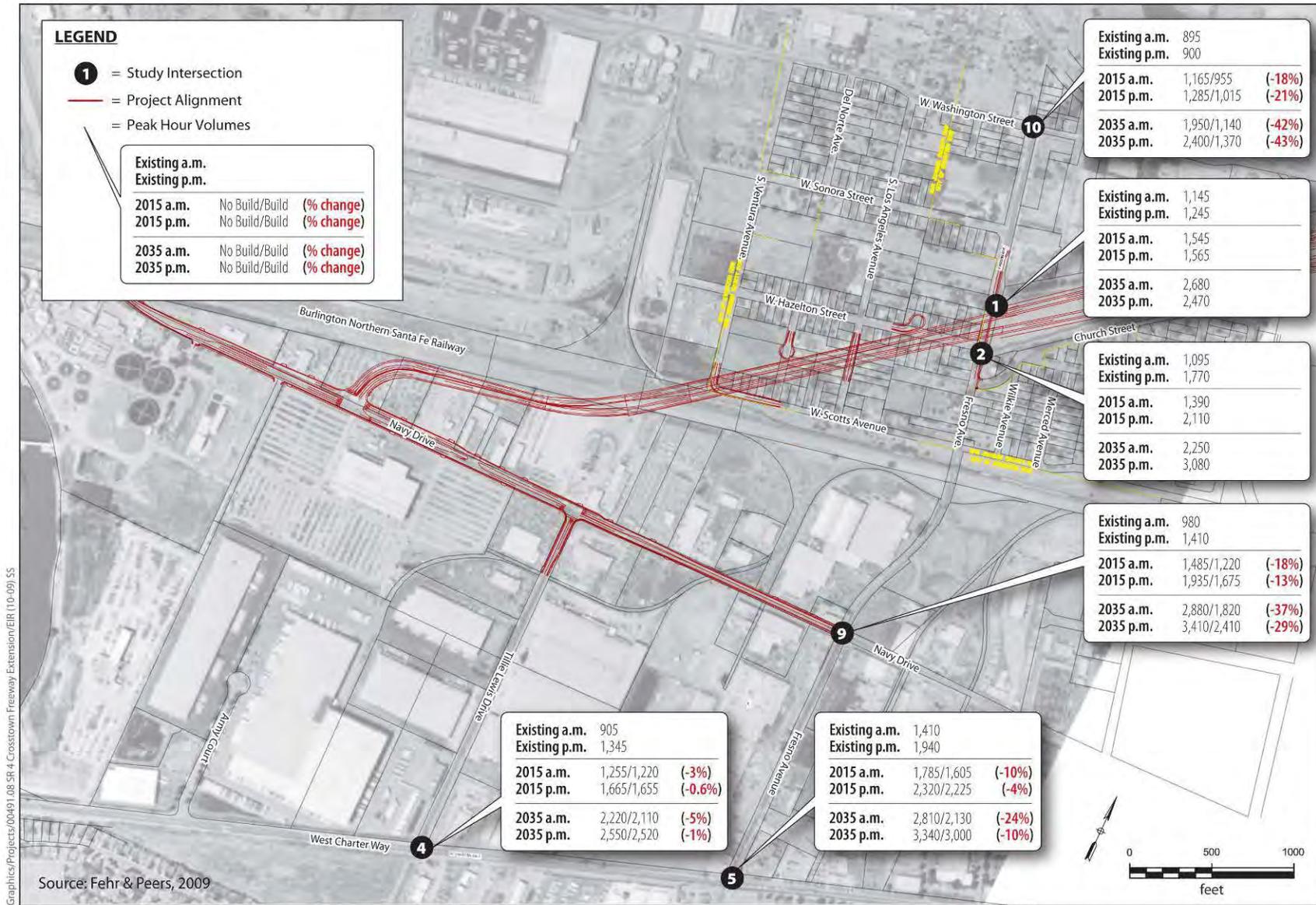


Figure 2.1.5-3 Selected Study Intersection Peak Hour Volumes

As shown in Table 2.1.5-1, all of the study intersections other than at West Charter Way/Port of Stockton Expressway are anticipated to operate at level of service E or F during the morning and/or evening peak hour in 2035 without construction of the project. The following study intersections that are expected to operate unacceptably in 2035 without the project would improve with the project:

- Fresno Avenue/West Charter Way improves from level of service F in 2035 without the project to level of service E with the project (morning peak hour)
- Fresno Avenue/West Washington Street improves from level of service F to level of service C (morning peak hour)
- Crosstown Freeway/El Dorado Street eastbound ramps improves from level of service F to level of service E (morning peak hour)
- West Charter Way/Port of Stockton Expressway improves from level of service E to level of service A (morning peak hour)
- West Charter Way/Roberts Road improves from level of service F to level of service D (morning, peak hour)
- The Crosstown Freeway/Fresno Avenue off-ramp intersection and the Crosstown Freeway/Fresno Avenue/West Hazelton Avenue intersection that currently operate at level of service F would be eliminated with the project. The new Crosstown Freeway ramp terminal intersections at Navy Drive would operate at level of service D or better during the morning and evening peak hour.

Figure 2.1.5-3 shows traffic volumes in 2015 without and with the project at key intersections in the immediate project area. This figure also shows volumes in 2035. This figure shows that approximately 3,300 vehicles in the morning peak hour and 4,070 vehicles in the evening peak hour coming from or going to the Crosstown Freeway through the Boggs Tract neighborhood would shift to Navy Drive to access the Crosstown Freeway after the project is constructed. With this shift, the project would improve access between Interstate 5/Crosstown Freeway and the Port and adjacent industrial uses.

The project would substantially reduce the number of vehicles traveling through Boggs Tract on neighborhood streets. Figure 2.1.5-4 shows that the project improvements would result in reduced traffic along the following streets in Boggs Tract and adjacent areas as compared to expected conditions without the project. Project conditions are identified for 2015 (year in which the project will be open to

traffic) and 2035 (design year of the project). However, as shown in Figure 2.1.5-4, some vehicular and truck traffic would remain on local roads in Boggs Tract:

2015 Conditions with the Project

- West Washington Street west of Fresno Avenue: 27 percent (2,650) fewer daily trips
- Fresno Avenue between West Washington Street and the existing Crosstown Freeway off-ramps: 20 percent (2,650) fewer daily trips
- Fresno Avenue between existing Crosstown Freeway off-ramps and Navy Drive: 2 percent (230) fewer daily trips
- Fresno Avenue between Navy Drive and West Charter Way: 37 percent (3,670) fewer daily trips

2035 Conditions with the Project

- West Washington Street west of Fresno Avenue: 53 percent (10,000) fewer daily trips
- Fresno Avenue between West Washington Street and the existing Crosstown Freeway off-ramps: 50 percent (10,200) fewer daily trips
- Fresno Avenue between existing Crosstown Freeway off-ramps and Navy Drive: 36 percent (5,600) fewer daily trips
- Fresno Avenue between Navy Drive and West Charter Way: 41 percent (4,900) fewer daily trips

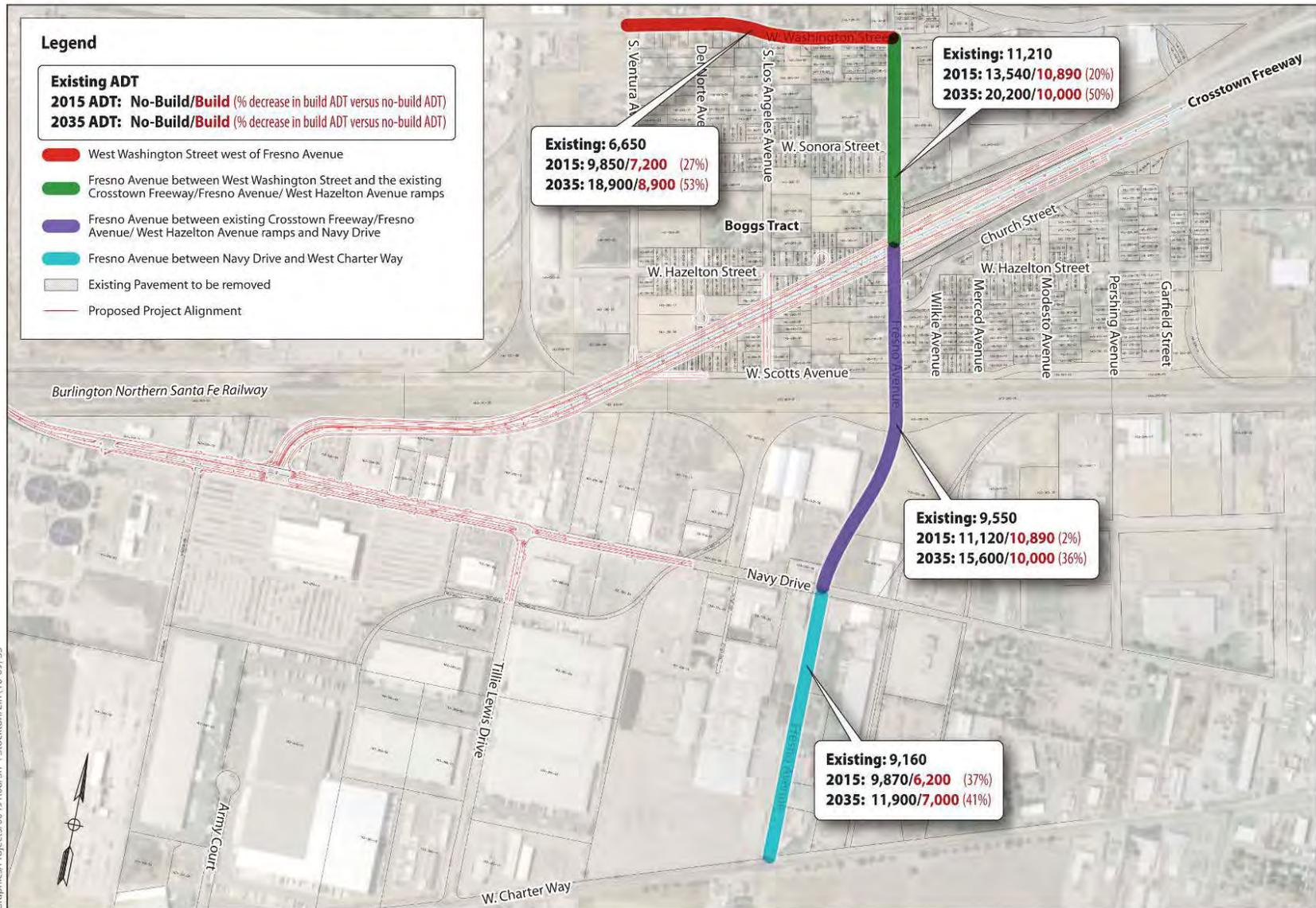


Figure 2.1.5-4 Existing and Projected With and Without Project Average Daily Traffic Volumes In and Adjacent to the Boggs Tract Neighborhood

The traffic analysis also concluded the following:

- The project would reduce the vehicle-hours of delay that would otherwise occur in the system. Vehicle hours of delay would be reduced by 38 percent in the 2035 morning peak hour and by 45 percent in the 2035 evening peak hour.
- The West Charter Way/Tillie Lewis Drive intersection would need to have a traffic signal installed and the two-way left-turn lane would need to be re-striped to provide an extended, dedicated eastbound left-turn lane.
- The project would not substantially change traffic operations in 2035 on Interstate 5, as compared to conditions that would occur in 2035 without the project. The following mainline segments and ramp junctions are anticipated to operate at level of service E under no build conditions in 2035: northbound Interstate 5 between Eighth and West Charter Way, northbound Interstate 5 between West Charter Way and State Route 4, northbound Interstate 5 between State Route 4 and Pershing Avenue, northbound Interstate 5 between Pershing Avenue and Monte Diablo Avenue, southbound Interstate 5 between Fremont Street and State Route 4, southbound Interstate 5 between State Route 4 and West Charter Way, southbound Interstate 5 between West Charter Way and Eighth Street, southbound Interstate 5 between El Dorado Street and Stanislaus Street, northbound Interstate 5 on-ramp at Pershing Avenue, and southbound Interstate 5 off-ramp at Fremont Street. The project would neither improve nor degrade these mainline operations.

Construction Impacts

The project is proposed for construction over a three-year period including one year for construction of the elevated structure over the Burlington Northern Santa Fe Railway right-of-way. Project construction activities would typically be limited to daytime hours, although there may be occasions where construction activity would need to occur at night. Areas where nighttime construction work may be required include within the Burlington Northern Santa Fe Railway and the Central California Traction Company railway rights-of-way when and where the railroad companies cannot accommodate daytime construction activities. Nighttime closure of local roads such as Fresno Avenue, South Los Angeles Avenue, West Scotts Avenue, and South Ventura Avenue may also be required for the installation and removal of falsework for the proposed elevated structures that span these roads.

Traffic access would be maintained during work along West Charter Way and Tillie Lewis Drive with temporary restriping of lanes, traffic barriers, and/or traffic cones. This work would include adding traffic signals to this intersection and restriping West Charter Way between Army Court and Tillie Lewis Drive. During construction of the project, motorists, bicyclists, and pedestrians may experience delays and be required to take alternative routes to their destinations.

Bus Service and Bicycle/Pedestrian Facilities

With project construction, the San Joaquin Regional Transit District's bus line 76 would need to be rerouted since this bus line currently enters Boggs Tract via the Crosstown Freeway on-and off-ramps at Fresno Avenue. Bus line 76 currently leaves Boggs Tract by traveling northbound on Fresno Avenue to eastbound on West Church Street. According to Transit District staff, this route would be rerouted so that access to and from the Boggs Tract neighborhood would be from West Church Street to Fresno Avenue.

The project would improve the safety of bicycle and pedestrian travel as described in the "Avoidance, Minimization, and Mitigation Measure" section below.

No-Build Alternative

Under the No-Build Alternative, all study intersections would operate at level of service E or worse F. Truck traffic would continue to travel between Interstate 5 and the Port through the Boggs Tract neighborhood on Fresno Avenue between West Washington Street and the existing Crosstown Freeway/West Hazelton Avenue ramps and on West Washington Street west of Fresno Avenue. Construction-related traffic impacts would not occur.

Avoidance, Minimization, and/or Mitigation Measures

Roadway Level of Service

None would be required.

Construction Impacts

Access to residences and businesses located adjacent to the proposed construction area would be maintained during construction. Access to and from the construction area would be conducted from the existing Caltrans right-of-way, local streets, intersections, and/or acquired right-of-way. If it were to become necessary to limit or restrict access to these properties, it would be for limited durations, and detours would be made available with appropriate signage.

To minimize disruption to the traveling public, construction is proposed to occur in three stages. Stage 1 would consist of construction of the proposed freeway extension from Navy Drive to Fresno Avenue, including the elevated structure over the railroad right-of-way. The Crosstown Freeway and both lanes on the on- and off-ramps to Fresno Avenue would remain operational during this stage. Closures of local streets in the Boggs Tract neighborhood may be required for short periods of time during off-peak hours during this stage. If temporary, short-term closures are required, residents and emergency services would be notified two weeks in advance of the closures.

Stage 2 would consist of construction of the inside lanes (in both directions) of the proposed freeway extension from Fresno Avenue to the project's end at the Garfield Street Overhead. The Crosstown Freeway and one lane of the on- and off-ramps to Fresno Avenue would remain operational during this stage. Closures of these ramps may be required for short periods of time. Closures of local streets in the Boggs Tract neighborhood may also be required for short periods of time during this stage. If temporary, short-term closures are required, residents and emergency services would be notified two weeks in advance of the closures.

Stage 3 would include construction of the outside lanes of the proposed freeway extension from Fresno Avenue to the project's end at the Garfield Street Overhead. The existing Crosstown Freeway on-and off-ramps at Fresno Avenue would be removed. Traffic would be diverted to the new extension completed during Stages 1 and 2 with a minimum of one lane in each direction open to traffic. The proposed ramps at the Crosstown Freeway/Navy Drive would also be open during this stage.

Caltrans and/or the construction contractor would implement a traffic management plan that would identify necessary signs to be used and the locations of potential temporary detours, if needed, to ensure that local access to residences and businesses and bus and emergency service vehicle access is available during construction of the project. The plan would specify time frames for temporary detours if they are needed. The plan would also specify the process for notifying residents, businesses, San Joaquin Regional Transit District, emergency services, and the traveling public of the construction period and any required detours.

Bus Service and Bicycle/Pedestrian Facilities

With project construction, the San Joaquin Regional Transit District's bus line 76 would be rerouted so that access to and from the Boggs Tract neighborhood would be

from West Church Street to Fresno Avenue. The Transit District would notify the public of any bus stop relocations.

With construction of the project and widening of Navy Drive, both sides of Navy Drive between the Burlington Northern Santa Fe underpass and Fresno Avenue, the shoulders on both sides of Navy Drive would be replaced with new 5-foot shoulders that could accommodate either a Class II or Class III bicycle lane.

Where pedestrian traffic is relatively light and currently must use the roadway shoulder, the project would widen and improve the shoulders including along South Ventura Street and West Scotts Avenue to provide safer pedestrian access under the proposed elevated structure. New sidewalks would be constructed along South Los Angeles Avenue from West Hazelton Street to just south of the proposed Caltrans right-of-way. New sidewalks would also be built along portions of the east and west sides of Fresno Avenue to connect the existing segments of sidewalks.

2.1.6 Visual/Aesthetics

This section is based on the project Visual Resources Technical Report prepared in November 2009.

Affected Environment

The project vicinity is bounded on the north and west by the Port and its associated offloading facilities that are located along the Stockton Deepwater Ship Channel. The site is bounded on the east by Interstate 5, which runs generally north-south. The river meanders up from the south, helping to define the western boundary of the vicinity. Beyond the river, there is an abrupt change in land use from residential and industrial to agricultural. The Stockton Municipal Utility District Water Quality Oxidation Ponds are also located just west of the river.

Most views in the vicinity are limited to the foreground buildings, infrastructure, vegetation, and utilities. Middleground views exist from elevated roadways through breaks in development. Views to the background are present on the western edge of the vicinity, over agricultural fields, and extend for many miles. Background views also exist from Interstate 5, which is an elevated roadway.

The visual quality of the project vicinity is moderately low in vividness, intactness, and unity because of the predominant presence of the Burlington Northern Santa Fe Railway line, industrial uses south of the Burlington Northern Santa Fe Railway, and

Crosstown Freeway structure, and lack of landscaping to soften the area's stark visual appearance; disjointed development patterns and transitions between residential and industrial land uses; and visual obstructions caused by buildings, infrastructure, vegetation, and utilities.

Three landscape units are visually distinctive in the project area: (1) Crosstown Freeway Terminus, (2) Boggs Tract, and (3) Industry/Warehouse and Railroad. These units are shown in Figure 2.1.6-1. Photographs were taken of typical views in each of the landscape units and are shown in Figures 2.1.6-2 through 2.1.6-4.

Landscape Unit 1 encompasses the terminus of the Crosstown Freeway. This portion of the freeway is elevated, sloping down to the west where it terminates into the Boggs Tract neighborhood at Fresno Avenue. The two lanes traveling in each direction are separated by a mixed median planting of bottlebrush, oleander, and evergreen trees. The side slopes of the freeway are also planted with deciduous and evergreen plants. Signs directing drivers to freeway exits and Interstate 5 (Figure 2.1.6-2, Photo 1) hang overhead.

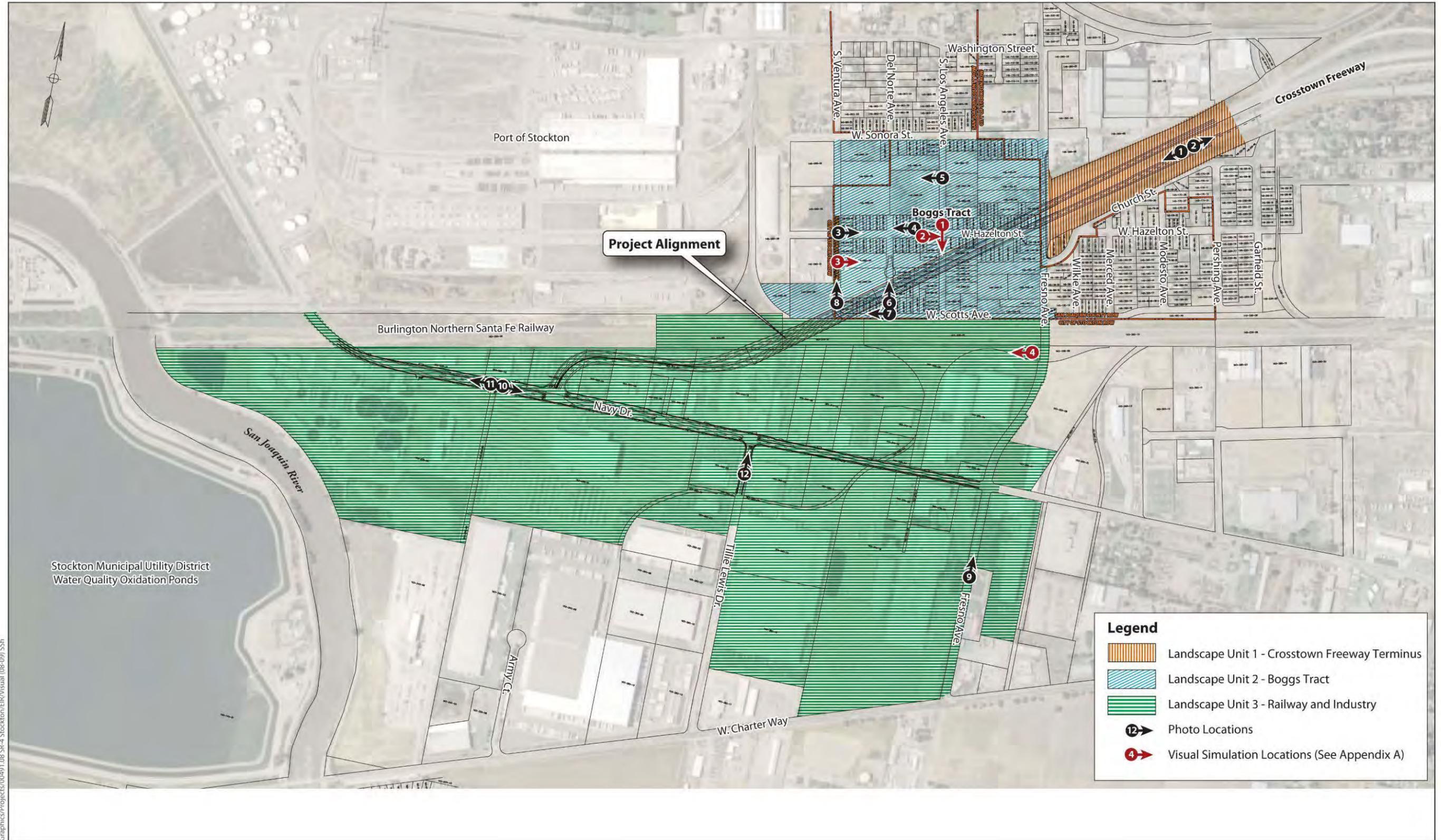
Landscape Unit 2 is the residential community of Boggs Tract. Homes in this community are mostly single story dwellings, many with fences and lawns (Figure 2.1.6-3a, Photos 3 and 4). Utility lines are visible along the roadsides, as is a water tower on the northeast corner of Fresno Avenue/West Church Street. Railroad spurs operated by the Central California Traction Company run along the western boundary of Boggs Tract and cross the neighborhood between West Sonora Street and West Hazelton Avenue east to Fresno Avenue. Homes are located mostly along West Sonora Street, West Hazelton Avenue, and West Scotts Avenue, east of South Ventura Street, and along South Los Angeles Avenue. There are a number of vacant lots interspersed with homes in the community. The Mount Zion Missionary Baptist Church, Washington Elementary School, and Boggs Tract Park and Community Center are important community gathering points within the community (Figure 2.1.6-3b, Photo 5).

Viewer groups in the project area include residents, those using community areas, those working in the industrial areas, and roadway users. Residents in Landscape Unit 2 are accustomed to the traffic associated with accessing the Port and Landscape Units 1 and 3. The majority of residences are accustomed to a neighborhood atmosphere; extreme focus is not placed on Crosstown Freeway or the main thoroughfares being used by Port traffic. Viewer sensitivity is expected to be high for

residents. Community areas such as Mount Zion Missionary Baptist Church, Washington Elementary School, and Boggs Tract Park and Community Center are used by residents of Landscape Unit 2 and by neighboring areas north of West Sonora Street and east of Fresno Avenue. These viewers are likely to spend more time outside at community events and watching children. Viewers using community areas would have high sensitivity to visual changes in the community.

Viewers within industrial areas include employees of the facilities located in Landscape Unit 3. They are likely to be highly occupied with their work activities and tasks at hand. All of these viewers are likely accustomed to the traffic and activities associated with industry. This viewer group is considered to have low sensitivity to changes in views. Roadway users include travelers on the Crosstown Freeway and local roadways within Landscape Units 2 and 3. Viewers who frequently travel the Crosstown Freeway and local roadways generally possess lower visual sensitivity to their surroundings. The passing landscape becomes familiar to these viewers, and their attention is not focused on the surrounding environment but on the surrounding traffic, road signs, and their immediate surroundings within the automobile.

Landscape Unit 3 is comprised of the Burlington Northern Santa Fe Railway and the berm to the north and the industrial and warehouse facilities to the south that are bordered by West Charter Way. Fresno Avenue travels north from West Charter Way and crosses the tracks into Boggs Tract; however, warehouse buildings, infrastructure, utilities, and the curve of the roadway prevent views to Boggs Tract (Figure 2.1.6-4a, Photo 9). Navy Drive in the project area is highly industrialized with gravel shoulders, utilities, security fencing, and industrial buildings.



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Figure 2.1.6-1 Landscape Units, Key Viewpoints, and Visual Simulation Locations Crosstown Freeway Ramp Extension Project



Photo 1: Looking east from eastbound Crosstown Freeway. This photo depicts the vegetated median and side slopes and overhead directional signage.



Photo 2: Looking west from eastbound Crosstown Freeway. This photo depicts the vegetated median and side slopes and roadway sloping down to meet grade with the terminus in Boggs Tract.

Graphics/Projects/000491_08/204_Crosstown Freeway Extension/ER/Visual [10-09] SS

Figure 2.1.6-2 Landscape Unit 1 (Crosstown Freeway Terminus)



Photo 3: Looking east from the South Ventura Avenue and West Hazelton Street intersection. This photo depicts the one-story residences, landscaping vegetation, fencing, and utility lines.



Photo 4: Looking west on West Hazelton Street toward the church and residences. This photo depicts the one-story residences, landscaping vegetation, fencing, and utility lines.

Graphics/Projects/00-091.DB/CSH Crossstown Freeway Extension/EIR/Visual (10-09) SS

Figure 2.1.6-3a Landscape Unit 2 (Boggs Tract)



Photo 5: Looking west on South Los Angeles Avenue toward Boggs Tract Park. This photo shows the children's play area and sports fields.



Photo 6: Looking north from the West Scotts Avenue and Del Norte Avenue intersection. This photo depicts views that are limited to the foreground by residences, infrastructure, utilities, and landscape vegetation.

Graphics/Projects/00491108/SRM/Crosstown Freeway Extension/EIR/Visual I/D-09) SS

Figure 2.1.6-3b Landscape Unit 2 (Boggs Tract)



Photo 7: Looking west on West Scotts Avenue. This photo shows how the BNSF Railway, residences, and landscape vegetation limit views to the foreground.



Photo 8: Looking north South Ventura Avenue. This photo depicts the shipping facilities to the west, a vacant parcel to the east, and how views are limited to the foreground by residences, infrastructure, utilities, and landscape vegetation.

Graphics/Projects/00491/DB/SR4 Crosstown Freeway Extension/EIR/Visual ID-099 SS

Figure 2.1.6-3c Landscape Unit 2 (Boggs Tract)



Photo 9: Looking north from Fresno Avenue. This photo depicts the industrial visual character and how views are limited to the foreground by buildings, fencing, infrastructure, utilities, and the curvature in the roadway.



Photo 10: Looking east on Navy Drive toward the proposed terminus of the Crosstown Freeway. This photo depicts the industrialized character of the roadway surface, gravel shoulders, utilities, security fencing, and structures making up foreground and middleground views.

Graphics/Projects/00091 DB/SRA Crosstown Freeway Extension/EIR/Visual (10-09) SS

Figure 2.1.6-4a Landscape Unit 3 (Railway and Industry)



Photo 11: Looking west on Navy Drive. This photo shows the area where the proposed roadway widening would transition back down to two lanes.



Photo 12: Looking north from Tillie Lewis Drive to its intersection with Navy Drive. This photo shows the intersection proposed for signalization.

Graphics/Projects/00491_DB/SR4_Crosstown_Freeway_Extension/VEIB/Visual (10-09) SS

Figure 2.1.6-4b Landscape Unit 3 (Railway and Industry)

Environmental Consequences

Long-Term Visual Changes

Impacts on visual character and quality were evaluated in this assessment based on a commonly used methodology that assesses the following aspects of a view or landscape:

- **Vividness**—The visual power or “memorability” of a landscape (that is how well the landscape can be remembered)
- **Intactness**—The visual integrity of the natural and artificial landscape (that is the degree to which the landscape is not disrupted by conflicting elements)
- **Unity**—The compositional harmony of the landscape (that is the degree to which the components of the view contribute to a unified view)

Construction of the proposed elevated structure would introduce a new raised visual mass in an area where none presently exists. Residents in Boggs Tract would have the most exposure to this change in views. Visual changes would also be highly visible in the industrial area; however, the industrial businesses are less sensitive than the residents to changes in views. Some of the commercial buildings on industrial lots on Navy Drive would be demolished during construction so that there would be direct views to the structure from Navy Drive. In Boggs Tract, the columns of the structure would take replace views of homes and residential landscaping. The elevated structure would physically and visually bisect the Boggs Tract community into north and south neighborhoods.

The visual simulations in Figures 2.1.6-5 through 2.1.6-8 include views of what Alternatives 3A and 3B are expected to look like. These simulations present the landscaping that is proposed as described in Chapter 1 of this report.

Alternative 3A

The viaducts proposed under this alternative allow views under the structure (see Figures 2.1.6-5a, 2.1.6-6a, 2.1.6-7a, and 2.1.6-8a). It provides less of a visual and physical separation between the north and south portions of the Boggs Tract community than does Alternative 3B. Consequently, the visual impacts of this alternative are expected to be less than under Alternative 3B. Shade plantings are not proposed underneath the viaduct structure since it is Caltrans' policy not to plant under structures for maintenance reasons.

Alternative 3B

The retaining wall structure proposed under this alternative would introduce a physical barrier that would prevent views beyond the structure (see Figures 2.1.6-5b, 2.1.6-6b, 2.1.6-7b, and 2.1.6-8b) (including views of the existing Burlington Northern Santa Fe Railway tracks and berm that would be blocked for residences located north of the project). The large solid wall proposed under this alternative would block views for residents. It also provides a greater visual and physical separation between the north and south portions of the Boggs Tract community. Because of these reasons, Alternative 3B is expected to have greater visual impacts than Alternative 3A.

Light and Glare

The project would introduce a large surface area that is much lighter in color and would result in increased reflective glare from sunlight during the day and from artificial light sources at night, as compared to what presently exists. The project would also require that existing vegetation be removed along the entire Caltrans right-of-way within the project area increasing the impact of visible glare. In addition, glare reflecting off truck windshields would now be visible along the alignment of the proposed elevated structure. The elevated structure would also introduce a new source of shade underneath the viaduct deck.

New lighting would be introduced at the intersection of Navy and Tillie Lewis Drives and at the ramp intersection with Navy Drive (since these locations would have traffic signals). New lighting would also be introduced south of the railway where the freeway extension curves to the west. The amount of light that would come from the traffic signals would be negligible. Street lighting that currently exists on Navy Drive would be retained but in slightly different locations on Navy Drive.

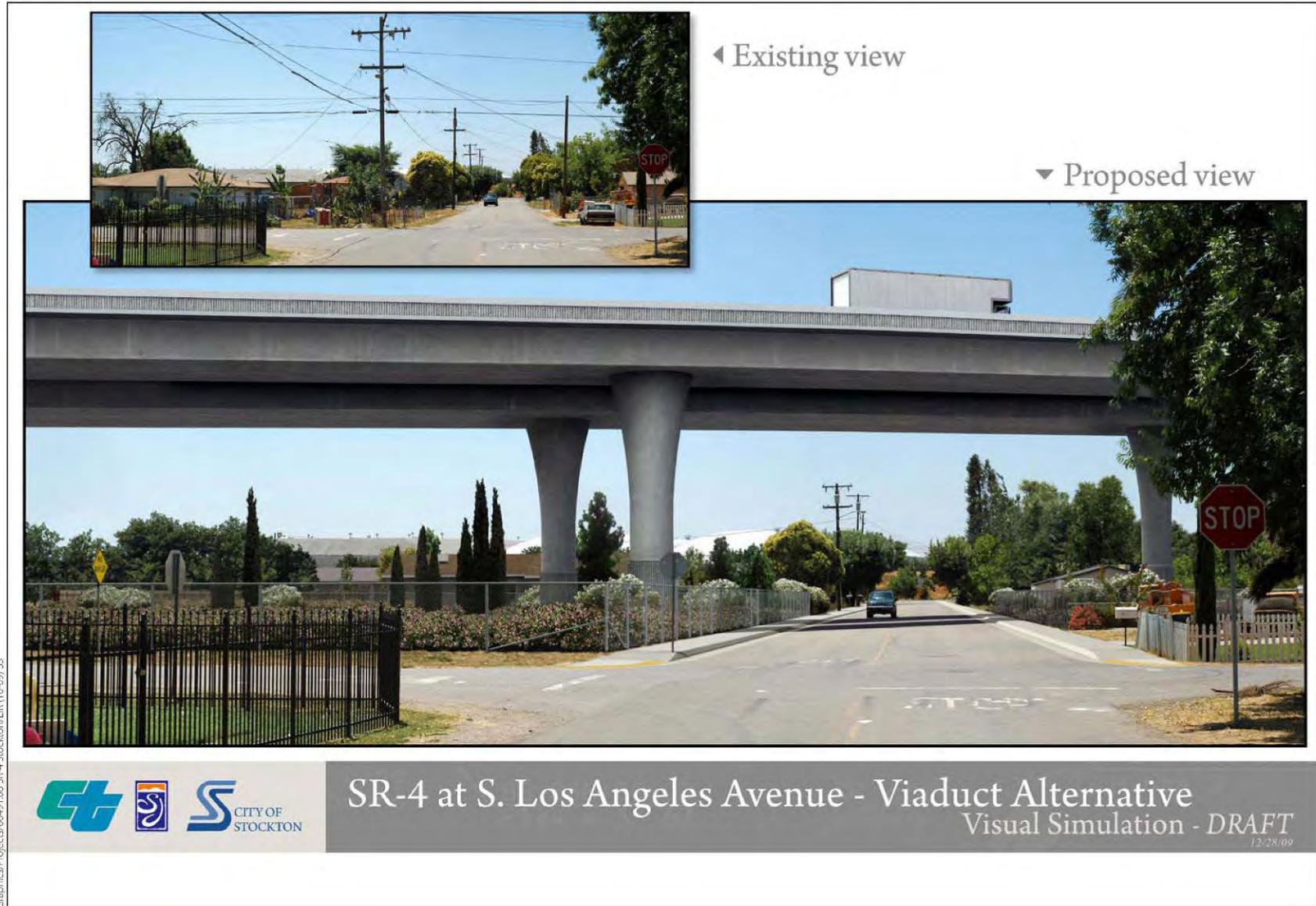


Figure 2.1.6-5a Visual Simulation 1: Viaduct Alternative 3A



Figure 2.1.6-5b Visual Simulation 1: MSE Wall Alternative 3B



Figure 2.1.6-6a Visual Simulation 2: Viaduct Alternative 3A



Figure 2.1.6-6b Visual Simulation 2: MSE Wall Alternative 3B



Figure 2.1.6-7a Visual Simulation 3: Viaduct Alternative 3A

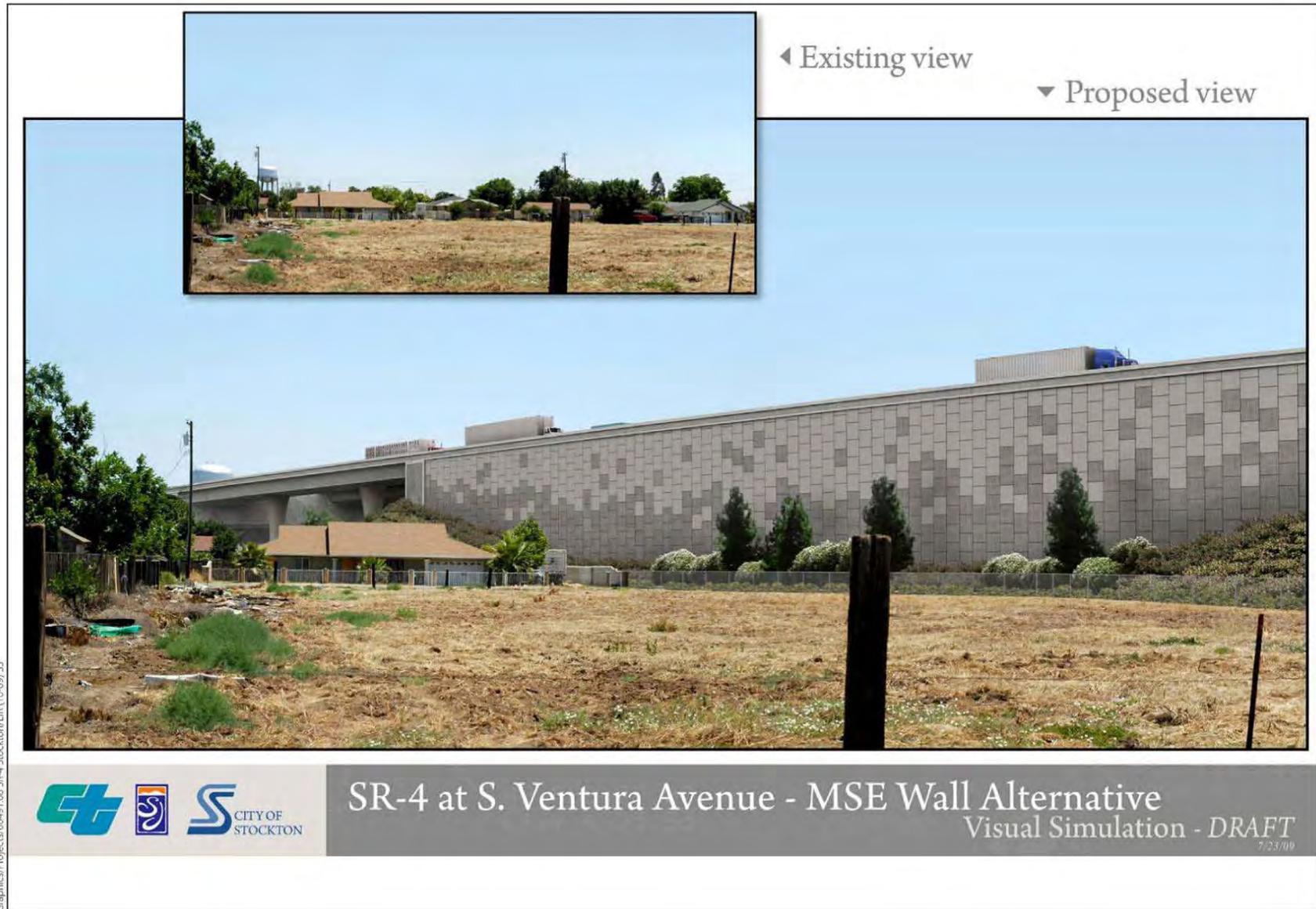


Figure 2.1.6-7b Visual Simulation 3: MSE Wall Alternative 3B



Figure 2.1.6-8a Visual Simulation 4: Viaduct Alternative 3A



Figure 2.1.6-8b Visual Simulation 4: MSE Wall Alternative 3B

Construction Impacts

Construction of the project would create temporary changes in views in the project area. Construction in the Boggs Tract neighborhood related to the elevated structure would be in progress for about three years. Residents and travelers on the roadways would see heavy equipment and associated vehicles, including dozers, graders, scrapers, pile drivers, and trucks in the construction area. Construction zone signs would also be visible. Forty residential units and six businesses would be displaced.

Project construction activities would typically take place during daytime hours; although there may be times when construction activity would extend into the night. Areas where nighttime construction work, including pile driving, may be required would include within the Burlington Northern Santa Fe Railway and the Central California Traction Company railway right-of-ways where the railroad companies cannot accommodate daytime construction work windows. Nighttime closure of Fresno Avenue, South Los Angeles Avenue, West Scotts Avenue, South Ventura Avenue, and possibly other local streets may be required for the installation and removal of falsework for the proposed elevated structures that span these roads.

If nighttime construction is required, high-wattage lighting would illuminate the construction activities.

Cumulative Impacts

Clearing, excavating, and grading associated with construction of the project could result in adverse short-term changes to views. Planned development and other transportation projects could also alter the existing visual character of the area in the long-term and affect the area's visual character, including the open space to the west and existing residential areas in Stockton and the surrounding county. The recommended mitigation for the project would reduce the project's incremental impact to visual resources to less than cumulatively considerable.

No-Build Alternative

There would be no changes to current views under this alternative.

Avoidance, Minimization, and/or Mitigation Measures

Long-Term Visual Changes

If Alternative 3B (retaining wall) is selected, a roughened wall surface would be used to soften the massiveness of the wall face, providing texture and reducing the amount

of smooth surface that can reflect light. The shade of the wall would be carefully considered. The use of earth-toned colors for the wall surface would help the wall blend with the planted vegetation. Adding a design motif that mimics the appearance of natural materials would make the wall more visually pleasing than a plain surface. A plantable wall surface, such as a retaining wall structure that allows interstices for planting, would be considered for use.

Landscaping would be added within the proposed Caltrans right-of-way primarily between Fresno Avenue and South Ventura Avenue in Boggs Tract. Seventy-five percent of the species planted would be native to the project area and California. Native perennial hydroseed mix would be applied at all locations planned for plantings that have exposed soils and steep slopes. Native species are drought-tolerant, create a space that is attractive, and attract more wildlife than traditional landscape plant species. Landscaping would be planted within the first two years after completion of construction, and an irrigation and maintenance program implemented. The proposed elevated structure would be flanked on both sides by landscaping protected by a six-foot-high chain link fence. The side slopes of the embankments proposed at either end of the elevated structure would also be landscaped, as well as the area within the proposed Caltrans right-of-way at the southeast corner of South Los Angeles Avenue and West Hazelton Avenue.

Light and Glare

- The construction contractor would install street lights with the lowest height and the lowest wattage allowed under current Caltrans and City requirements; lights would be screened and directed away from residential areas to the greatest extent practicable; and the number of lights installed would be minimized. The need for safety lighting near underpasses and in the newly created cul-de-sacs in Landscape Unit 2 would also be evaluated.
- For the proposed retaining walls, the construction contractor would use low-sheen and non-reflective surface materials to reduce glare. The use of smooth surfaces and glossy paint would be avoided. Use of similar building materials and colors to those found in established communities would also be considered to help blend the proposed wall with its local surroundings.

Construction Impacts

- To the maximum extent feasible, the construction contractor would not schedule construction activities near residences on weekends after 6:00 p.m. or on

weekdays so that the work does not continue past daylight hours (which vary according to season). This would reduce the inconvenience caused by construction activities, because most of them would happen during business hours, when most residents are likely at work. The practice would also minimize the need for nighttime lighting. If nighttime construction is required, lighting sources would be screened and directed away from residential areas as much as possible, and the number of nighttime lights would be minimized.

- The construction contractor would install fencing (such as chain link with slats or fencing made of windscreen material) or other structures to obstruct undesirable views of construction activities from residences adjacent to the construction site. The fencing would be a minimum of six feet high and would help to maintain the privacy of residents and block views of the construction area.

2.1.7 Cultural Resources

This section is based on the project Historical Resources Compliance Report prepared in November 2009.

Affected Environment

A record search of the study area and a one mile radius around the study area was conducted at the Central California Information Center of the California Historical Resources Information System, located at California State University, Stanislaus. The search checked listings for the National Register of Historic Places, the California Register of Historic Places, the Historical Resources Inventory database, Historic Spots in California, and historical maps.

The record search identified no resources in the study area that are listed in the National Register of Historic Places or the California Register of Historic Places, or that have been evaluated for eligibility.

Figure 2.1.7-1 shows the project area that was studied for archaeological resources. (This includes any area that would be disturbed during construction including not only the project footprint but also staging areas. The primary staging areas are expected to be located within the footprint of the elevated structure and the area between the twin viaducts. Construction material and equipment would not be stored on the railroad right-of-way or on local streets.) A field survey was conducted within all portions of the study area that are unpaved, particularly along the railroad right-of-way. No archaeological resources were found during the survey.

Figure 2.1.7-1 also shows the area that was studied for architectural resources including mostly residential buildings with some industrial and commercial buildings. This area includes the existing road right-of-way and those parcels from which new right-of-way would be acquired for the project. The study area extended beyond the current and proposed right-of-way where it was deemed project activities had the potential to indirectly affect existing built features.

None of the evaluated properties meets the criteria for listing in the National Register of Historic Places nor are they historical resources for the purposes of CEQA. The properties were also evaluated in accordance with State CEQA Guidelines Section 15064.5(a)(2–3). There does not appear to be a potential for a historic district or a landscape that might include any of the study area properties as contributing elements.

Environmental Consequences

Under Alternatives 3A and 3B, excavation required for project construction ranges from two feet (for general grading of the site) to 150 feet (for pile driving for the viaduct columns) in depth. Because of this, there would be potential for historical subsurface deposits to be encountered during ground disturbing activities.

Clearing, excavating and grading associated with construction could result in adverse cumulative impacts on unknown cultural resources. The recommended mitigation for the project would reduce the project's incremental impact to cultural resources to a less than cumulatively considerable level.

No-Build Alternative

No impacts to unknown cultural resources would occur. There are no known cultural resources in the project area.



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Figure 2.1.7-1 Archaeological and Architectural Study Areas

Avoidance, Minimization, and/or Mitigation Measures

A qualified archaeologist would prepare an archaeological research design/treatment plan to identify any potentially important historical deposits prior to project construction. This plan would incorporate the results of archival research, identify areas with the greatest sensitivity, detail field methods, explain the criteria for evaluation, and specify laboratory methods. The field methods section of the plan would follow Caltrans' compressed approach wherein identification, evaluation, and mitigation tasks are conducted in a single field phase directed by a research design/treatment plan. Under this approach, archaeological features are evaluated for eligibility for listing in the California Register of Historic Places as they are discovered. Features that do not meet the criteria set out in the research design are deemed ineligible and further investigation of them is abandoned. Those features that do meet the criteria are treated as potentially eligible and fully excavated. Further examination of eligibility can occur later in the laboratory. The compressed approach is expedient, which is necessary to prevent illicit artifact collectors from pillaging and destroying archaeological resources.

If cultural materials are discovered during construction, all earth-moving activity within and around the immediate vicinity of the discovery would be diverted until a qualified archaeologist could assess the nature and significance of the find.

If human remains are discovered, State Health and Safety Code Section 7050.5 states that further disturbances and activities would cease in any area or nearby area suspected to overlie remains, and the County Coroner contacted. Pursuant to Public Resources Code Section 5097.98, if the remains were thought to be Native American, the coroner would notify the Native American Heritage Commission, which would then notify the Most Likely Descendent. At this time, the person who discovered the remains would contact Caltrans District 10 Environmental Branch in Stockton so that they may work with the Most Likely Descendent on the respectful treatment and disposition of the remains. Further provisions of Public Resources Code 5097.98 are to be followed as applicable.

2.2 Physical Environment

2.2.1 Hydrology and Floodplain

This section is based on the project Water Quality and Hydrology Report prepared in September 2009 and the project's Draft Preliminary Drainage Report prepared in October 2009.

Affected Environment

The project area does not contain any bodies of water. The San Joaquin River is about a mile west of the project area. Most of the project area is in Zone X of the Federal Emergency Management Agency's Flood Insurance Rate Map, while the Boggs Tract neighborhood is in Zone B. Both zones are considered moderate flood hazard areas. Zone B is located between the limits of the base flood (1 percent annual chance of flood) and areas with a 0.2 percent annual chance of flood (500-year flood zone). Zone X represents the 500-year flood zone. See Figure 2.2.1-1 for the Flood Rate Insurance Maps for the project area.

The San Joaquin Valley Groundwater Basin, Eastern San Joaquin subbasin underlies the project area. The Eastern San Joaquin subbasin's total surface area is approximately 1,105 square miles. Recharge of the groundwater basin occurs primarily through streambed runoff.

The conceptual hydrology and hydraulics pre-design report prepared for the project divides the drainage area affected by the project into a northern and southern region. The northern region includes Boggs Tract and is bounded by the Burlington Northern Santa Fe Railway on the south, Port of Stockton/Central California Traction Company on the west, Harbor Avenue to the north, and Pershing Avenue to the east. The southern drainage region includes the area south of the railroad to West Charter Way between the Stockton Municipal Utility District Water Quality Oxidation Pond on the west and Interstate 5 on the east.

Chapter 2 • Affected Environment, Environmental Impacts, and Avoidance, Minimization, and/or Mitigation Measures

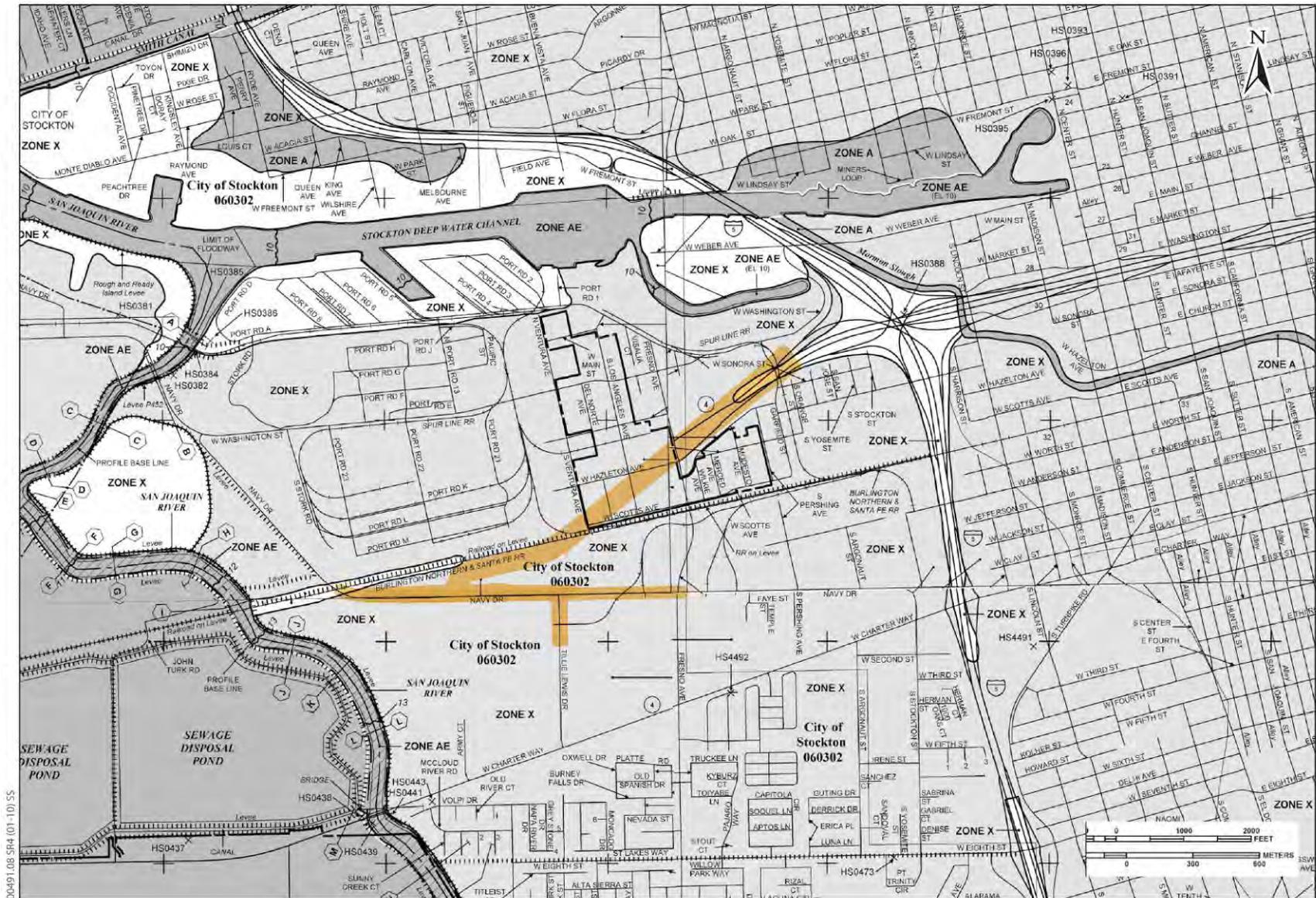


Figure 2.2.1-1 Flood Rate Insurance Map for Project Area

Drainage facilities in the project area include roadside ditches, underground pipes, detention ponds, pump stations, and outfalls that eventually flow to the San Joaquin River. Points of drainage discharge for the area north of the Burlington Northern Santa Fe Railway include the Boggs Tract Interim Drainage Pond and Emergency Storm Discharge Line located north of the project alignment, Mormon Slough Outfall located northeast of the project, San Joaquin Outfall, and the Port of Stockton evaporation pond. Points of drainage discharge for the area south of the railway include the San Joaquin River outfall/West Charter Way pump station located on West Charter Way southwest of the proposed alignment.

Environmental Consequences

The project has the potential to affect hydrology through its increase in the amount of impervious surface associated with the freeway extension, changes to the existing drainage pattern, and the removal of existing roadside ditches. Under both Alternatives 3A and 3B, based on the project storm water data report, the amount of impervious area is expected to increase by about 3.3 acres to a total of roughly 10 acres. This increase in impervious surface area could result in greater peak drainage flows and runoff volumes. Drainage from the project in the northern region would be channeled to the natural low points and then collected and conveyed to the existing pump station at Fresno Avenue and West Scotts Avenue. Collection and conveyance in the northern region would be achieved by gutters, ditches, inlets, and storm drain pipes. Drainage from the southern region would be channeled to the natural low points and then collected and conveyed to existing roadside ditches and storm drain pipes into the San Joaquin River pump station. Collection and conveyance in the southern region would be achieved by gutters, ditches, inlets, pump (lift) station, and storm drain pipes. Additional flows generated from impervious areas associated with the extension of the Crosstown Freeway would be conveyed to two detention basins that are being evaluated as part of the project design to limit peak storm water runoff to downstream systems: one near Fresno Avenue south of the Crosstown Freeway, and the second basin west of the proposed ramp termini at Navy Drive.

The project would not have impacts to the 100-year floodplain since the project area is not located in a 100-year floodplain.

No-Build Alternative

The No-Build Alternative would not result in any drainage impacts. Therefore, avoidance and minimization would not be required.

Avoidance, Minimization, and/or Mitigation Measures

The project would include construction of all improvements that are identified in the Preliminary Drainage Report for the Crosstown Freeway project. These improvements would be described in detail in the drainage plan to be approved prior to start of construction, including new drainage inlets, gutters, roadside ditches, pump (lift) stations, storm drain pipes, and detention basins.

2.2.2 Water Quality and Storm Water Runoff

This section is based on the project Water Quality and Hydrology Report prepared in September 2009 and Storm Water Data Report prepared in August 2009.

Affected Environment

The project area is located within the San Joaquin hydrologic region and within the eastern portion of the San Joaquin Delta watershed. The San Joaquin Valley Groundwater Basin, Eastern San Joaquin subbasin underlies the project area.

The subbasin's total surface area is approximately 707,000 acres.

The Central Valley Regional Water Quality Control Board has set water quality objectives for surface waters in its region. Specific objectives for concentrations of chemical constituents are identified for bodies of water based on the surface water's designated "beneficial uses" that are established to preserve existing and potential future uses of the water bodies. These objectives, consisting of both narrative and numerical goals are listed in the region's basin plan.

Beneficial uses of the San Joaquin River include:

- Municipal and domestic water supply
- Irrigation
- Stock watering
- Process watering
- Recreation
- Freshwater habitat
- Migration
- Spawning
- Wildlife habitat

The Clean Water Act Section 303(d) lists the San Joaquin River from the Merced River to the Delta Boundary is listed as being impaired for dichlorodiphenyltrichloroethane (DDT), Group A pesticides, mercury, toxaphene, and unknown toxicity. The Stockton Deep Water Ship Channel is listed as being impaired for chlorpyrifos, DDT, diazinon, dioxin, exotic species, furan compounds, Group A pesticides, mercury, pathogens, polychlorinated biphenyls (PCB), and unknown toxicity.

Environmental Consequences

The project (under both Alternatives 3A and 3B) is expected to increase the existing 6.6 acres of impervious areas along the project alignment by about 3.3 acres. This increase in impervious material would generate an increase in concentrated runoff that would be dispersed along the project alignment. Increases in the total runoff volume could speed up soil erosion and increase the amount of pollutants in waterways. The amount of lubricants, sloughing of tire and brake material, and other contaminants associated with motorized vehicles would be similar to existing conditions and would not be expected to have a considerable detrimental effect on the local water quality.

No-Build Alternative

The No-Build Alternative would not result in any water quality impacts. Therefore, avoidance and minimization would not be required.

Avoidance, Minimization, and/or Mitigation Measures

The construction of physical features such as biofiltration swales would be incorporated into the project. The following best management practices would be considered for the project to minimize water quality impacts:

- Adding biofiltration swales
- Using sediment barriers or silt fences to intercept and slow sediment-laden runoff
- Managing waste (concrete and other hazardous materials) to prevent its release into stormwater,
- Handling, storing, and using construction materials in ways that prevent their release into storm water
- Scheduling construction work to coordinate with the installation of erosion and sediment control practices
- Cleaning construction vehicles and equipment and following appropriate fueling and maintenance procedures to reduce discharge of pollutants
- Preserving existing vegetation

- Implementing practices such as locating designated equipment wash areas away from exposed areas
- Implementing temporary concentrated flow conveyance controls such as drainage swales and outlet protection and energy dissipater devices

All construction would conform to the National Pollutant Discharge Elimination System General Construction Permit requirements to maintain water quality within the project area and vicinity; these requirements include storm water and non-storm water quality protection measures for all construction activities within Caltrans right-of-way. A Storm Water Pollution Prevention Plan would also be prepared and implemented to ensure that water quality is not adversely affected during construction.

2.2.3 Geology/Soils/Seismic/Topography

This section is based on the project Preliminary Geotechnical Report prepared in November 2009.

Affected Environment

The project site is located in the northern portion of the San Joaquin Basin/San Joaquin Valley and the central portion of the Great Valley Geomorphic Province of California. The Great Valley (more commonly known as the Central Valley) is formed between the uplands of the California Coast Ranges to the west and the Sierra Nevada to the east. The San Joaquin Valley is a flat basin bounded by the Sierra Nevada to the east, the Coast Ranges to the west and the Sacramento-San Joaquin Delta to the north. The elevation of the land-surface of the San Joaquin Valley is only slightly above sea level. The subsoils at the project site consist of mainly alluvial floodplain deposits. The project site is underlain with stiff silt/clay layered with dense sands and occasional pockets of looser sands.

No active faults pass directly through the project site. Earthquake faults in the vicinity of the project site have a low potential for surface rupture.

There are a couple of faults in the vicinity of the project site with a moderate to high potential for surface rupture. Maximum credible earthquake magnitude (which represents the largest earthquakes that could occur on the given fault based on current understanding) for the nearby faults is in the range of 7 to 7.25.

Environmental Consequences

Since no active faults pass through the project site, the potential for fault rupture is low. Based on available geological and seismic data available for the project site, the site has a low to moderate potential to experience strong ground shaking.

The liquefaction potential along the project is low to moderate. Liquefaction is a phenomenon in which saturated soils are subject to a temporary but essentially total loss of shear strength under the stresses associated with earthquake shaking. When liquefaction occurs, the strength of the soil decreases and the soil deposit's ability to support foundations of buildings and bridges is reduced.

No-Build Alternative

The No-Build Alternative would not result in any geologic or seismic impacts. Therefore, avoidance and minimization would not be required.

Avoidance, Minimization, and/or Mitigation Measures

As part of final design, a geotechnical investigation would be conducted to evaluate engineering properties of the subsurface soil materials for recommendation of geotechnical parameters, address geotechnical hazards associated with different design elements such as slope stability and settlement, and hazards associated with potential fault rupture/creep, and strong ground motion. This geotechnical report would specify the requirements for foundation design. Recommendations included in this report would be implemented during project construction.

2.2.4 Paleontology

This section is based on the project Paleontological Identification Report, prepared in November 2009.

Affected Environment

The project area is located in the southern portion of California's Great Valley geomorphic province. The Great Valley, more commonly called the Central Valley, is a nearly flat alluvial plain that lies between the Sierra Nevada on the east and the Coast Ranges on the west. The Great Valley is floored by a thick sequence of sedimentary deposits that range in age from Jurassic through Quaternary.

The project site is located on alluvial and floodplain deposits of Holocene age and on slightly older alluvium of the Calaveras River system. Due to previous roadwork, areas of artificial fill may overlie native sediments along parts of the project

alignment, but the location, extent, and depth of fill are unknown. Based on regional geologic relationships described in the project's paleontological identification report, alluvial/fluviol sediments of the Modesto Formation are believed to be present at an unknown depth in the subsurface.

In San Joaquin County and throughout California, continental sedimentary deposits of Pleistocene age contain a wealth of important fossil remains, and Pleistocene continental strata are typically considered highly sensitive for paleontological resources. The alluvium of the Calaveras River and vicinity and the Modesto Formation are considered highly sensitive for paleontological resources because of their potential to contain vertebrate fossils.

The Holocene alluvial-floodplain deposits are not known to contain fossil resources and are not considered paleontologically sensitive.

Environmental Consequences

Construction of the proposed elevated structure foundations would require disturbing the existing ground during construction, as described below. Since the project site is situated on geologic units of Pleistocene age that are known to contain vertebrate fossils, vertebrate fossil resources could be present in the project footprint, and excavation and grading could disturb or damage these resources.

- **Roadway and Grading Work**—2 to 5 feet of excavation is anticipated for general grading work and when removing and replacing existing and proposed pavement structural sections along Navy Drive and the cul-de-sacs and roadways adjacent to or crossing beneath the elevated structures in the Boggs Tract neighborhood.
- **Drainage and Sewer Work**—Excavation associated with drainage facilities and sewer facilities would be expected to be at least 3 feet and no more than 12 feet deep. Detention ponds that would be three feet to six feet deep, would be built near Fresno Avenue south of the Crosstown Freeway and west of the proposed ramp termini at Navy Drive, and connected to the drainage facilities.
- **Viaduct Columns and Footings**—For the twin viaduct structure under both Alternatives 3A (from just east of Fresno Avenue to the southern embankment) and 3B (from just west of Del Norte Avenue to the southern embankment), large-diameter columns and footings would be used to support the elevated Crosstown Freeway. Foundations required to support embankments would be about 7 feet to

10 feet deep, whereas the piles necessary to support the foundations of viaduct columns, must be from 50 to 150 feet deep.

Complete avoidance of paleontologically sensitive units is probably not possible, particularly in the eastern portions of the project alignment where geologic mapping shows the alluvium of the Calaveras River and vicinity exposed at the surface.

Clearing, excavation, and grading associated with construction of the project could result in adverse cumulative impacts on known paleontological resources. The recommended mitigation for the project would reduce the project's incremental impact to paleontological resources to a less than cumulatively considerable level.

No-Build Alternative

No impacts to paleontological resources would occur under the No-Build Alternative.

Avoidance, Minimization, and/or Mitigation Measures

- A qualified paleontologist would prepare a Paleontological Evaluation Report during final design of the project, and the recommendations contained in this report would be implemented as part of project construction. Information would be gathered to gain a better understanding of the extent and depth of units that are not paleontologically sensitive to focus paleontological resources mitigation on the areas where it is needed. Mitigation would entail a combination of the following measures; specifics of these measures be developed during the Paleontological Evaluation Report process.
 - Retain a qualified principal paleontologist to be present at pregrading meetings to consult with grading and excavation contractors.
 - Conduct reconnaissance field surveys to identify the existing level of disturbance within the project footprint; assess surface exposures; and evaluate potential for surface recovery of fossils. If necessary, conduct preconstruction salvage or protection of exposed materials, or both.
 - Train construction workers so they can recognize fossil materials unearthed during construction.
 - Provide a qualified paleontologist to monitor excavation during key portions of the project.
 - Require that construction crews stop work if fossil materials are encountered.
 - Recover any significant fossils found during construction.
 - Clean, repair, sort, and catalog fossil remains collected during the monitoring and salvage portion of the mitigation program.

- Deposit prepared fossils, along with copies of all pertinent field notes, photos, and maps, in a scientific institution with paleontological collections.
- Complete a final report that summarizes the monitoring effort and results.

2.2.5 Hazardous Waste or Materials

This section is based on the project Initial Site Assessment Update, prepared in September 2009.

Affected Environment

Based on a site visit in August and September 2009; review of historical aerial photographs to determine previous land uses at the project site; and an environmental database search of available federal, state, and local agency records for incidents involving hazardous materials, the report entitled “Initial Site Assessment Update”, dated November 2, 2009, indicates the following:

- The following properties proposed for full or partial acquisition or easements and the identified adjacent facilities require further evaluation to determine potential impacts related to the exposure of construction workers to hazardous materials, as summarized below:
 - Debco Towing and Auto Wrecking (2345 and 2341 Navy Drive proposed for full acquisition): High risk of contamination from petroleum hydrocarbons, volatile organic compounds, metals, and other automotive fluids to soil and groundwater which are likely to have occurred during business operations over the years. Soil and groundwater sampling would be conducted to evaluate soil reuse and disposal options.
 - Vernon Transport (2313 Navy Drive proposed for full acquisition): High risk of impact from aboveground storage tank and past removal of an underground storage tank used by this bulk liquid sugar hauling and tanker cleaning facility. Soil and groundwater sampling would be conducted to evaluate soil reuse and disposal options.
 - Pacific States Petroleum (2225 Navy Drive proposed for partial acquisition): High risk of impact from this active mobile refueling facility and tractor trailer maintenance facility. Soil and groundwater sampling would be conducted to evaluate soil reuse and disposal options and management of water generated by de-watering activities.
 - Mel’s Auto Dismantling (2219 Navy Drive proposed for full acquisition): High risk of impact from this active automobile dismantler facility and releases of petroleum hydrocarbons from historical automobile dismantling

activities. Soil and groundwater sampling would be conducted to evaluate soil reuse and disposal options and management of water generated by de-watering activities.

- Unnamed facility at 2211 Navy Drive proposed for partial acquisition: Moderate risk of impact from this property that appears to be a shipping/receiving facility. Two aboveground storage tanks of unknown contents are located on-site. Soil and groundwater sampling would be conducted to evaluate soil reuse and disposal options and management of water generated by de-watering activities.
- LKQ (2041 Navy Drive proposed for partial acquisition): High risk of impact from this active automobile dismantler facility. Formerly occupied by Mel Bokides Petroleum and Pacific Ready Mix facilities. Underground storage tanks are on-site. Petroleum hydrocarbon-impacted soils and leaking underground storage tanks were previously removed from site. Soil and groundwater sampling would be conducted to evaluate soil reuse and disposal options and management of water generated by de-watering activities.
- Jaguar Heaven (1433 Tillie Lewis Drive proposed for partial acquisition): High risk of impact from this active automobile dismantler facility. Business operations over the years may have resulted in release of petroleum hydrocarbons, volatile organic compounds, metals, and automotive fluids. Soil and groundwater sampling would be conducted to evaluate soil reuse and disposal options.
- Laidlaw (1444 Tillie Lewis Drive proposed for partial acquisition and an easement for a proposed pump lift station): Moderate risk of impact based on the used machinery and machine parts observed on the property and reporting of an underground storage tank. Soil sampling would be conducted to evaluate soil reuse or disposal options due to potential impacts on soils from historical operations.
- Vacant facility at 2150 West Charter Way that may be used for a construction easement: Moderate risk of impact due to reports of two diesel underground storage tanks. Soil sampling would be conducted to evaluate soil reuse or disposal options due to potential impacts on soils from historical operations.
- Koppel Stockton Terminal (2025 West Hazelton Avenue proposed for partial acquisition and a construction easement): High risk of impact due to groundwater contaminated by nitrates and ammonium salts. Soil and groundwater sampling would be conducted to determine whether and how soil

- may be reused, or if not, how it should be disposed of, as well as the necessary management of water generated by de-watering activities.
- C.R. International (2403 Navy Drive proposed for full acquisition): Moderate risk of impact from a leaking underground storage tank. Soil sampling would be conducted to evaluate soil reuse and disposal options.
 - Kinder Morgan Energy petroleum pipeline (Navy Drive east of Fresno Avenue): Moderate risk of impact related to potential petroleum hydrocarbon releases that are likely to have occurred during business operations over the years. Soil and groundwater sampling would be conducted to evaluate soil reuse and disposal.
 - McCormick & Baxter (located adjacent to the project area at 1214 West Washington Street): Moderate risk of impact from this former wood preservative facility. Soil, sediment, and groundwater have reportedly been affected by exposure to creosote, pentachlorophenyl, petroleum hydrocarbons and metals. If construction activities proposed near the facility would include excavation deeper than the level of the groundwater, groundwater sampling would be conducted to determine how to safely dispose of water generated by de-watering activities.
 - E&L Auto Shop (located adjacent to the project area at 623 South Fresno Avenue): Moderate risk of impact from this automobile repair business. If construction activities proposed near the facility would include excavation deeper than the level of the groundwater, groundwater sampling would be conducted to determine how to safely dispose of water generated by de-watering activities.
 - Electrical substation and unnamed facility located adjacent and north of Navy Drive at the western end of the project alignment (proposed for partial acquisition): Moderate risk of impact related to one fluid-cooled pad-mounted transformer located in this area with possible polychlorinated biphenyl impacts to soils. Soil sampling would be conducted adjacent to the facility to evaluate soil reuse or disposal options.
 - First Student (located adjacent to the project area at 2005 Navy Drive): Moderate risk of impact from this bus yard. Underground storage tank listed as closed at this site. Groundwater sampling would be conducted adjacent to this property in areas proposed for construction work extending below the depth of groundwater to evaluate management of water generated by de-watering activities.

- Aerially deposited lead may be present in shallow soil within the unpaved shoulders and median of the existing Crosstown right-of-way and along unpaved surface street shoulders within the project area.
- Five of the facilities have documented groundwater contamination associated with underground storage tanks fuel releases and prior facility operations that have the potential to have affected groundwater in the vicinity of the project.
- Some properties proposed for full or partial acquisitions have a history of agricultural uses; some are still being used by agriculture. Residual agricultural chemicals may be present in their soils.
- It is possible that accidental releases from the two properties owned by Burlington Northern Santa Fe operations may have affected soils within the railroad right-of-way and presents a high risk to the project.
- Structures present on the properties proposed for full acquisition may be contaminated with asbestos-containing material and lead-containing paint.
- It is possible that closed underground storage tanks exist at and near the properties proposed for full and partial acquisition.

Environmental Consequences

Construction of the project has the potential to expose construction workers to hazardous materials and wastes.

Cumulative Impacts

Future extension of the Crosstown Freeway has the potential to impact industrial properties which could result in future hazardous waste impacts.

No-Build Alternative

Implementation of the No-Build Alternative would not result in project impacts related to hazardous materials.

Avoidance, Minimization, and/or Mitigation Measures

- Prior to approval of the final environmental document, investigations would be conducted to identify specific avoidance and minimization measures in conformance with the standards of the American Society for Testing and Materials. Recommended mitigation measures would be implemented prior to construction. This study would also include an estimate of mitigation/remediation costs. This assessment would contain the following:

- Aerially deposited lead study to determine lead levels in project excavation areas
- Asbestos-containing material and lead-containing paint survey at buildings proposed for demolition and the design of measures to comply with San Joaquin Valley Air Pollution Control District requirements related to asbestos.
- Soil sampling where soil excavation is proposed next to identified potential contaminated properties to evaluate the management and disposal of contaminated soil and groundwater and construction worker health and safety requirements.
- During design of the roadway, the construction contractors would avoid identified sites with hazardous material or waste contamination, where possible. If the roadway would enter areas of known contamination, remediation would be conducted. If underground storage tanks, septic systems, or domestic/agricultural/oil wells are found during construction, these facilities would be removed or abandoned in accordance with all state and San Joaquin County requirements.
- Caltrans and/or the construction contractor would prepare a Site Management Program/Contingency Plan before construction to address known and potential hazardous material issues, including but not limited to measures to address management of contaminated soil and groundwater; a site-specific health and safety plan, including measures to protect construction workers and general public; and procedures to protect workers and the general public in the event that unknown contamination or buried hazards are encountered.

2.2.6 Air Quality

This section is based on the project Air Quality Report, prepared in October 2009.

Affected Environment

Areas are classified as either “attainment” or “nonattainment” with respect to state and federal ambient air quality standards for criteria air pollutants. Monitored air pollutant concentrations are compared to state and federal standards to make these classifications. If a pollutant concentration is lower than or meets the state or federal standard over a designated period of time, the area is classified as being in attainment of the standard for that pollutant. If a pollutant violates the standard, the area is considered a nonattainment area for that pollutant. Areas that were previously designated as nonattainment but have recently met the standard are called

“maintenance” areas. If data are insufficient to determine whether a pollutant is violating the standard, the area is designated unclassified. This typically occurs in non-urbanized areas where levels of the pollutant are not a concern.

Regional-level air quality conformity (“conformity”) is concerned with how well the region is meeting the standards set for ozone precursors. California is in attainment for the other criteria pollutants. Regional Transportation Plans are developed, and include all of the transportation projects planned for a region over a period of years, usually at least 20. Based on the projects included in the Regional Transportation Plan, an air quality model is run to determine whether those projects would conform to emission budgets or other tests showing that attainment requirements of the federal Clean Air Act are met.

Conformity for localized pollutants (for example, carbon monoxide, PM₁₀, and PM_{2.5}) requires hot-spot analysis. In general, projects must not cause the standard for the localized pollutant to be violated, and in nonattainment areas, the project must not cause any increase in the number and severity of violations.

Table 2.2.6-1 shows federal and state air quality standards for each regional and localized pollutant and the attainment status for each pollutant in San Joaquin County in which the project is located. San Joaquin County is a non-attainment area for ozone: it is classified as an extreme nonattainment area for the federal one-hour standard, a serious nonattainment area for the federal eight-hour standard, and a severe nonattainment area for the state one-hour standard. For the federal carbon monoxide standard, the Stockton Urbanized Area is classified as a moderate maintenance area, and the rest of San Joaquin County is classified as an unclassified/attainment area, while the entire county is classified as in attainment for the state standard. San Joaquin County is classified as a serious maintenance area for the federal PM₁₀ standard, a nonattainment area for the federal PM_{2.5} standard, and a nonattainment area for both state PM₁₀ and PM_{2.5} standards.

In addition to the criteria air pollutants, the federal government also regulates mobile source air toxics. Mobile source air toxics are compounds emitted from highway vehicles and non-road equipment. Some toxic compounds are present in fuel and are emitted to the air when it evaporates or passes unburned through an engine. Other toxics are emitted from the incomplete combustion of fuels or as secondary combustion products. Metal air toxics also result from engine wear or from impurities in oil or gasoline.

The project area's climate, inland Mediterranean, is characterized by warm, dry summers and cool winters. Summer high temperatures often exceed 100°F, averaging in the low 90s in the northern valley and high 90s in the south. Although marine air generally flows into the San Joaquin Valley Air Basin from the Sacramento–San Joaquin River Delta, the surrounding mountain ranges restrict air movement through and out of the valley. Wind speed and direction influence the dispersion and transportation of air pollutants; the more wind flow, the less accumulation of these pollutants. The vertical dispersion of air pollutants in the basin is limited by the presence of persistent temperature inversion (warm air over cool air). Because of differences in air density, the air above and below the inversion does not mix. Precipitation and fog also tend to reduce or limit pollutant concentrations. Annual precipitation in the valley decreases from north to south, with about 20 inches in the north, 10 inches in the middle, and less than 6 inches in the southern part of the valley.

Sensitive receptors in the project area include residences and schools.

Table 2.2.6-1 Air Quality Standards and Status

Pollutant	Symbol	Average Time	Standard (parts per million [ppm])		Standard (micrograms per cubic meter)		Violation Criteria		Attainment Status of San Joaquin County		Health and Atmospheric Effects	Typical Sources	
			California	National	California	National	California	National	California	National			
Ozone	O ₃	1 hour	0.09	NA	180	NA	If exceeded	NA	Severe nonattainment	Extreme nonattainment	High concentrations irritate lungs. Long-term exposure may cause lung tissue damage. Long-term exposure damages plant materials and reduces crop productivity. Precursor organic compounds include a number of known toxic air contaminants.	Low-altitude ozone is almost entirely formed from reactive organic gases (ROG) and nitrogen oxides (NO _x) in the presence of sunlight and heat. Major sources include motor vehicles and other mobile sources, solvent evaporation, and industrial and other combustion processes. Biologically produced ROG may also contribute.	
		8 hours	0.070	0.075	137	147	If exceeded	If fourth highest 8-hour concentration in a year, averaged over 3 years, is exceeded at each monitor within an area	Not yet classified	Serious nonattainment			
Carbon monoxide (Lake Tahoe only)	CO	8 hours	9.0	9	10,000	10,000	If exceeded	If exceeded on more than 1 day per year	Attainment	Moderate (≤ 12.7 ppm) maintenance area for Stockton	Asphyxiant. CO interferes with the transfer of oxygen to the blood and deprives sensitive tissues of oxygen.	Combustion sources, especially gasoline-powered engines and motor vehicles. CO is the traditional signature pollutant for on-road mobile sources at the local and neighborhood scale.	
		1 hour	20	35	23,000	40,000	If exceeded	If exceeded on more than 1 day per year	Attainment	Moderate (≤ 12.7 ppm) maintenance area for Stockton			
		8 hours	6	NA	7,000	NA	If equaled or exceeded	NA	NA	NA			
Nitrogen dioxide	NO ₂	Annual arithmetic mean	0.030	0.053	57	100	If exceeded	If exceeded on more than 1 day per year	NA	Unclassified/attainment	Irritating to eyes and respiratory tract. Colors atmosphere reddish-brown. Contributes to acid rain.	Motor vehicles and other mobile sources; refineries; industrial operations.	
		1 hour	0.18	NA	339	NA	If exceeded	NA	Attainment	NA			
Sulfur dioxide	SO ₂	Annual arithmetic mean	NA	0.030	NA	80	NA	If exceeded	If exceeded	NA	Unclassified/attainment	Irritates respiratory tract; injures lung tissue. Can yellow plant leaves. Destructive to marble, iron, steel. Contributes to acid rain. Limits visibility.	Fuel combustion (especially coal and high-sulfur oil), chemical plants, sulfur recovery plants, metal processing.
		24 hours	0.04	0.14	105	365	If exceeded	If exceeded on more than 1 day per year	Attainment	Unclassified/attainment			
		1 hour	0.25	NA	655	NA	If exceeded	NA	Attainment	NA			
Inhalable particulate matter	PM ₁₀	Annual arithmetic mean	NA	NA	20	NA	If exceeded	If exceeded at each monitor within area	NA	Serious maintenance	Irritates eyes and respiratory tract. Decreases lung capacity. Associated with increased cancer and mortality. Contributes to haze and reduced visibility. Includes some toxic air contaminants. Many aerosol and solid compounds are part of PM ₁₀ .	Dust- and fume-producing industrial and agricultural operations; combustion smoke; atmospheric chemical reactions; construction and other dust-producing activities; unpaved road dust and re-entrained paved road dust; natural sources (wind-blown dust, ocean spray).	
		24 hours	NA	NA	50	150	If exceeded	If exceeded on more than 1 day per year	Nonattainment	Serious maintenance			
	PM _{2.5}	Annual arithmetic mean	NA	NA	12	15	If exceeded	If 3-year average from single or multiple community-oriented monitors is exceeded	Nonattainment	Nonattainment	Increases respiratory disease, lung damage, cancer, and premature death. Reduces visibility and produces surface soiling. Most diesel exhaust particulate matter – considered a toxic air contaminant – is in the PM _{2.5} size range. Many aerosol and solid compounds are part of PM _{2.5} .	Combustion including motor vehicles, other mobile sources, and industrial activities; residential and agricultural burning; also formed through atmospheric chemical (including photochemical) reactions involving other pollutants including NO _x , sulfur oxides (SO _x), ammonia, and ROG.	
		24 hours	NA	NA	NA	35	NA	If 3-year average of 98th percentile at each population-oriented monitor within an area is exceeded	NA	Nonattainment			
Lead particles	Pb	Calendar quarter	NA	NA	NA	1.5	NA	If exceeded no more than 1 day per year	NA	No classification	Disturbs gastrointestinal system. Causes anemia, kidney disease, and neuromuscular and neurological dysfunction. Also considered a toxic air contaminant.	Primary: lead-based industrial process like battery production and smelters. Past: lead paint, leaded gasoline. Moderate to high levels of aerially deposited lead from gasoline may still be present in soils along major roads, and can be a problem if large amounts of soil are disturbed.	
		30-day average	NA	NA	1.5	NA	If equaled or exceeded	NA	Attainment	NA			
		Rolling 3-month average	NA	NA	NA	0.15	If equaled or exceeded	Averaged over a rolling 3-month period	Attainment	NA			

Source: California Air Resources Board 2008a.

Notes: All standards are based on measurements at 25°C and 1 atmosphere pressure. National standards shown are the primary (health effects) standards. NA = not applicable.

Environmental Consequences

Impacts under Alternatives 3A and 3B would be identical.

Regional Conformity

The project is included in the San Joaquin Council of Governments' 2007 Regional Transportation Plan as ID SJ07-1036. Air quality modeling conducted by the San Joaquin Council of Governments shows that emissions associated with the Regional Transportation Plan are within the allowable emission budgets for ozone precursors. Consequently, the project is considered a conforming transportation project for this regional nonattainment pollutant.

Carbon Monoxide Hot Spot Analysis

Existing (2008), 2015 (the year in which project construction is expected to be completed), and 2035 (the year for which the project was designed to handle traffic) project conditions were modeled to evaluate carbon monoxide concentrations relative to the federal and state air quality standards at the following intersections: Navy Drive/West Charter Way, Interstate 5 southbound ramps/West Charter Way, Interstate 5 northbound ramps/West Charter Way, El Dorado Street/Lafayette Street, and Center Street/Washington Street. The following locations in the Boggs Tract neighborhood were also modeled: Crosstown Freeway/Fresno Avenue offramp, Crosstown Freeway/Fresno Avenue/West Hazelton Avenue onramp, and Fresno Avenue/West Washington Street. The carbon monoxide model indicates that carbon monoxide concentrations are not predicted to exceed the one- or eight- hour federal and state standards for this pollutant (see Table 2.2.6-2).

Particulate Matter Hot Spot Analysis

The project doesn't meet Environmental Protection Agency criteria for detailed particulate matter emissions analysis because diesel truck traffic volumes in the project area are not expected to increase by more than 5 percent between 2035 build and no-build conditions.

Table 2.2.6-2 Modeled Carbon Monoxide Levels Measured at Receptors in the Vicinity of the Project Area for 2015 and 2035 With-Project Conditions

Intersection	Receptor ^a	2015 With-Project		2035 With-Project	
		1-Hour Carbon Monoxide ^c	8-Hour Carbon Monoxide ^d	1-Hour Carbon Monoxide ^c	8-Hour Carbon Monoxide ^d
Navy Drive/West Charter Way	1	4.0	3.3	3.2	2.8
	2	3.8	3.2	3.0	2.7
	3	3.8	3.2	3.0	2.7
	4	3.8	3.2	3.0	2.7
Interstate 5 southbound ramps/West Charter Way	5	3.9	3.2	3.1	2.8
	6	4.1	3.4	3.2	2.8
	7	4.1	3.4	3.2	2.8
	8	3.9	3.2	3.1	2.8
Interstate 5 northbound ramps/West Charter Way	9	3.8	3.2	2.9	2.6
	10	3.9	3.2	3.0	2.7
	11	3.8	3.2	2.9	2.6
	12	3.7	3.1	2.9	2.6
El Dorado Street/Lafayette Street	13	4.2	3.4	3.0	2.7
	14	4.0	3.3	3.0	2.7
	15	4.5	3.6	3.1	2.8
	16	4.0	3.3	3.0	2.7
Center Street/Washington Street	17	4.0	3.3	2.8	2.6
	18	3.8	3.2	3.0	2.7
	19	3.8	3.2	3.0	2.7
	20	3.8	3.2	2.8	2.6
Fresno Avenue/ West Hazelton Avenue ^e	25	2.5	2.4	2.3	2.3
	26	2.5	2.4	2.3	2.3
	27	2.5	2.4	2.3	2.3
	28	2.5	2.4	2.3	2.3
Fresno Avenue/ West Avenue/ Washington Street ^e	29	2.9	2.6	2.3	2.3
	30	2.7	2.5	2.3	2.3
	31	2.8	2.6	2.4	2.3
	32	2.7	2.5	2.3	2.3

^a Receptors 1 through 20 are located 100 feet from the center of each intersection diagonal, 71 feet from the roadway centerline, and at the boundary of the mixing zone.

^b Background concentrations of 2.01 parts per million and 2.09 parts per million were added to the modeling 1-hour and 8-hour results, respectively.

^c The federal and state 1-hour standards are 35 and 20 parts per million, respectively.

^d The federal and state 8-hour standards are 9 and 9.0 parts per million, respectively.

^e Denotes intersections within the Boggs Tract neighborhood

Mobile Source Air Toxics

Mobile source air toxics were also evaluated for the project. The modeling for these pollutants indicates that the project would cause reductions in acetaldehyde and formaldehyde emissions in 2015; reductions in acetaldehyde, formaldehyde, and 1, 3-butadiene emissions in 2035; and negligible increases in diesel particulate matter in 2015 and 2035. Within the Boggs Tract neighborhood, the project would result in declines in diesel particulate matter, acetaldehyde, formaldehyde, and benzene emissions in 2015; and decreases in acetaldehyde, 1, 3-butadiene, benzene, formaldehyde, and diesel particulate matter emissions in 2035.

Compliance with San Joaquin Valley Air Pollution Control District Thresholds

Vehicular emissions in tons per year were also evaluated based on estimated vehicle miles traveled data for the immediate project vicinity (Table 2.2.6-3) and within Boggs Tract. Both tables show that even though vehicle miles travelled increases over time, emissions decrease. This decrease is related to lower vehicular emission rates that are anticipated in future years due to continuing improvements in engine technology and the retirement of older, higher-emitting vehicles. These tables also show project-level emissions that were obtained by comparing future with-project emissions and future no-project emissions. These tables show that project-level emissions would not exceed the San Joaquin Valley Air Pollution Control District thresholds of 10 tons per year or PM₁₀ thresholds of 15 tons per year for both 2015 and 2035 conditions.

Localized Air Quality Benefits of the Project

The project is expected to reduce the emissions of air pollutants in the Boggs Tract neighborhood as Port and industrial traffic use the Crosstown Freeway ramp extension in preference to local roads in the neighborhood. Emissions were estimated along Fresno Avenue north of the Crosstown Freeway and along West Washington Street east of Fresno Avenue based on the expected reductions in vehicle miles traveled along these roadways (Table 2.2.6-4).

With construction of the project, emissions are expected to decrease in 2015 and 2035, as shown below. The percent reductions are based on comparing emissions that would occur if the project were to be constructed with emissions that would occur if the project were not constructed:

- Reactive organic gases: 52 percent reduction in 2015 and 32 percent reduction in 2035;

- Nitric oxides: 53 percent reduction in 2015 and in 2035
- Carbon monoxide: 53 percent reduction in 2015 and in 2035
- PM₁₀: 52 percent reduction in 2015 and in 2035
- PM_{2.5}: 52 percent reduction in 2015 and in 2035
- Carbon dioxide: 53 percent reduction in 2015 and in 2035

Table 2.2.6-3 Summary of Operational Emissions in the Immediate Project Vicinity (tons per year)

Scenario	Yearly vehicle miles travelled	ROG	NO _x	CO	PM ₁₀	PM _{2.5}	CO ₂ ^a
Existing 2008	284,548.00	34.92	230.92	472.44	7.89	7.23	143.28
2015 no-project	340,396.00	30.70	147.14	310.31	7.07	6.49	184.58
2015 with-project	349,740.00	30.67	150.27	316.57	7.15	6.57	188.08
2035 no-project	499,964.00	30.67	64.28	202.89	6.51	6.57	310.85
2035 with-project	536,003.00	26.68	67.28	213.22	6.65	5.98	323.70
Comparison of Project to No-Build							
2015 with-project minus 2015 no-project	9,344.00	-0.03	3.13	6.27	0.08	0.08	3.50
2035 with-project minus 2035 no-project	36,039.00	-3.99	3.00	10.33	0.14	-0.59	12.85
San Joaquin Valley Air Pollution Control District thresholds	NA	10	10	NA	15	NA	38,000

Note: ROG = reactive organic gases.
 NO_x = nitrogen oxides.
 CO = carbon monoxide.
 PM10 = particulate matter 10 microns or less in diameter.
 PM2.5 = particulate matter 2.5 microns or less in diameter.
 CO₂ = carbon dioxide.
 NA = not applicable.

^a CO₂ is presented in metric tons per year.

**Table 2.2.6-4 Summary of Operational Emissions in the Boggs Tract
Neighborhood (tons per year)**

Scenario	Yearly vehicle miles travelled	ROG	NO _x	CO	PM ₁₀	PM _{2.5}	CO ₂ ^a
Existing 2008	13,770.00	1.83	10.28	22.80	0.35	0.32	6.84
2015 no-project	17,270.00	1.25	6.64	15.17	0.27	0.25	8.41
2015 with-project	8,200.00	0.59	3.15	7.20	0.13	0.12	4.00
2035 no-project	27,220.00	0.59	2.87	9.46	0.23	0.12	13.29
2035 with-project	12,860.00	0.40	1.36	4.47	0.11	0.21	6.28
Comparison of Project to No-Project							
2015 with-project minus 2015 no-project	-9,070.00	-0.65	-3.49	-7.97	-0.14	-0.13	-4.42
2035 with-project minus 2035 no-project	-14,360.00	-0.19	-1.51	-4.99	-0.12	0.09	-7.01
San Joaquin Valley Air Pollution Control District thresholds	NA	10	10	NA	15	NA	38,000

Note: ROG = reactive organic gases.
NO_x = nitrogen oxides.
CO = carbon monoxide.
PM₁₀ = particulate matter 10 microns or less in diameter.
PM_{2.5} = particulate matter 2.5 microns or less in diameter.
CO₂ = carbon dioxide.
NA = not applicable.

^a CO₂ is presented in metric tons per year.

No-Build Alternative

Modeled carbon monoxide concentrations associated with the No-Build Alternative in 2015 and 2035 indicated that no state or federal standards would be violated. The No-Build Alternative would result in higher vehicle miles traveled in the Boggs Tract neighborhood (Table 2.2.6-3) as compared to conditions if the project were constructed. Since PM₁₀/PM_{2.5}, mobile source air toxics, and operational emissions are directly related to vehicle miles traveled, the No-Build Alternative would have higher emissions in the Boggs Tract neighborhood than if the project were constructed. In the immediate project vicinity, vehicle miles traveled would be lower under the No-Build Alternative; therefore, emissions would be generally lower under the No-Build Alternative.

Construction Impacts

Temporary emissions related to project construction were estimated. Temporary emissions would result from land clearing, grading and excavation, drainage/utilities/subgrade construction, and paving activities and construction worker commuting patterns. The Sacramento Metropolitan Air Quality Management District's Road Construction Emissions Model (Version 6.3.1) was used to estimate construction-related ozone precursors, carbon monoxide, PM₁₀, PM_{2.5}, and carbon dioxide emissions from construction activities based on 36 months of construction,

230 days of construction activity per year, and 500 cubic yards per day of imported/exported soil to the project site. These predicted emissions were compared with San Joaquin Valley Air Pollution Control District thresholds for construction emissions, as shown in Table 2.2.6-5.

Table 2.2.6-5 shows that estimated emissions for some pollutants are expected to exceed San Joaquin Valley Air Pollution Control District thresholds including for PM₁₀ and nitrogen oxides.

Table 2.2.6-5 Construction Emission Estimates by Phase (tons per year)

Construction Phase	ROG	NO _x	CO	Total PM ₁₀	Exhaust PM ₁₀	Fugitive Dust PM ₁₀	Total PM _{2.5}	Exhaust PM _{2.5}	Fugitive Dust PM _{2.5}	CO ₂ ^a
Grubbing/land clearing	0.4	2.9	1.5	3.7	0.1	3.6	0.9	0.1	0.7	246.4
Grading/excavation	2.6	19.8	18.8	17.0	0.9	16.0	4.2	0.8	3.3	2,021.1
Drainage/utilities/subgrade	0.7	4.4	2.5	11.0	0.3	10.7	2.5	0.2	2.2	392.3
Paving	0.4	2.0	1.3	0.2	0.2	–	0.2	0.2	–	178.1
Total	4.1	29.1	24.2	31.8	1.5	30.3	7.7	1.4	6.3	2,837.9
SJVAPCD Thresholds (tons/year)	10	10	NA	15	NA	NA	NA	NA	NA	38,000

Notes: Emissions calculations based on Road Construction Emissions Model (Version 6.3.1).

ROG = reactive organic gases.

NO_x = nitrogen oxides.

CO = carbon monoxide.

PM₁₀ = particulate matter 10 microns or less in diameter.

PM_{2.5} = particulate matter 2.5 microns or less in diameter.

CO₂ = carbon dioxide.

NA = not applicable.

^a CO₂ is presented in metric tons per year.

Cumulative Impacts

The impact analysis described above is a cumulative analysis since future traffic conditions are evaluated based on anticipated future growth in 2015 and 2035, as projected by the adopted City and County general plans. Other roadway and project-related construction planned in the project vicinity would result in cumulative impacts on particulate matter. The proposed project would not result in a cumulatively considerable impact on construction-related particulate matter as the project would include implementation of mitigation measures to reduce the project's incremental contribution to less than cumulatively considerable.

Avoidance, Minimization, and/or Mitigation Measures

Regional Conformity

No mitigation is required.

Conformance with Carbon Monoxide and Particulate Matter Standards

No mitigation is required.

Mobile Source Air Toxics

No mitigation is required.

Emissions as Compared to San Joaquin Valley Air Pollution Control District

No mitigation is required.

Construction Impacts

To control the generation of construction-related PM₁₀ emissions, the construction contractor would follow Caltrans' Standard Specification Section 7-1.01F, Standard Specification Section 10, and Standard Specification Section 18. Section 7-1.01F specifically requires that the construction contractor comply with all applicable laws and regulations related to air quality, including air pollution control district and air quality management district regulations and local ordinances. Section 10 defines dust control measures that would need to be implemented, as described below:

- Water would be applied to the site and equipment as frequently as necessary to control dust emissions.
- Soil binder would be spread on any unpaved roads used for construction.
- Trucks would be washed off as they leave the project site.
- Construction equipment and vehicles would be properly tuned and maintained.
- Construction equipment and materials storage sites would be located as far away from residential and park uses as practical.
- To the extent feasible, environmentally sensitive areas would be established for sensitive air receptors within which construction activities involving extended idling of diesel equipment would be prohibited.
- Gravel pads would be used at project access points to minimize dust and mud deposits on roads.
- Transported loads of soils and wet materials would be covered prior to transport.
- Dust and mud deposited on paved public roads as a result of construction activity and traffic would be removed to decrease air-borne particulate matter.

- To the extent feasible, construction traffic would be routed and scheduled to reduce air quality impacts caused by idling vehicles along local roads during peak travel times.
- Mulch or plant vegetation would be installed as soon as is practical after grading.

Caltrans would also require the construction contractor to prepare and submit a dust control plan to the San Joaquin Valley Air Pollution Control District for approval at least 30 days prior to any earthmoving or construction activities. The plan would comply with San Joaquin Valley Air Pollution Control District Regulation VIII and would include dust control measures for the following:

- Structural demolition
- Pre-construction activities
- Operations at the construction site during construction.
- Temporary stabilization of areas that remain unused for 7 or more days
- Unpaved access and haul roads, traffic and equipment storage areas
- Wind events
- Outdoor storage of bulk materials
- On-site transporting of bulk materials
- Off-site transporting of bulk materials
- Outdoor transport using a chute or conveyor

The construction contractor would be required to implement measures to reduce construction-related exhaust emissions. Such measures could include maintaining properly tuned engines; minimizing the idling time of diesel powered construction equipment to two minutes; using alternative-fuel-powered construction equipment (for example, compressed natural gas, biodiesel, or electric); using add-on mitigation devices such as diesel oxidation catalysts or particulate filters; using equipment that meets the California Air Resources Board's most recent certification standard for off-road heavy-duty diesel engines; and limiting operating hours for heavy-duty equipment.

Optional minimization measures to further reduce air quality impacts include the following:

- Caltrans may enter into an agreement with the San Joaquin Valley Air Pollution Control District and conduct an air impact assessment per San Joaquin Valley Air Pollution Control District's indirect source review.

- Caltrans may enter into an air quality mitigation agreement with the San Joaquin Valley Air Pollution Control District to reduce project emissions below the San Joaquin Valley Air Pollution Control District's threshold levels. With this contract, the San Joaquin Council of Governments would be entering into a voluntary agreement to reduce project emissions through the payment of fees (on a per-ton basis) to the San Joaquin Valley Air Pollution Control District.

2.2.7 Noise and Vibration

This section is based on the project Noise Study Report prepared in August 2009.

California Environmental Quality Act

The California Environmental Quality Act requires a comparison of baseline to build conditions to assess whether a proposed project would have a noise impact. If a proposed project is determined to have a significant noise impact under the California Environmental Quality Act, the act dictates that mitigation measures be incorporated into the project unless such measures are not feasible

23 Code of Federal Regulations 772

For state highway projects, the Federal-Aid Highway Act of 1970 and the associated implementing regulations (23 Code of Federal Regulations 772) govern the analysis and abatement of traffic noise impacts. The regulations require that potential noise impacts be identified during the planning and design of a highway project. The regulations contain noise abatement criteria that are used to determine when a noise impact would occur.

The noise abatement criteria differ depending on the type of land use under analysis. For example, the criterion for residences (67 dB) is lower than the criterion for commercial areas (72 dB). Table 2.2.7-1 lists the noise abatement criteria for use in 23 Code of Federal Regulations 772 analyses.

The regulations state that a traffic noise impact occurs if there is a substantial increase in noise in the design year, as compared to existing noise levels.

Caltrans Traffic Noise Analysis Protocol

The Caltrans Traffic Noise Analysis Protocol defines Caltrans policy for implementing 23 Code of Federal Regulations 772 in California. The protocol defines a substantial noise increase as a 12-dB increase between existing conditions and the design year for the project (2035).

Table 2.2.7-1 Activity Categories and Noise Abatement Criteria

Activity Category	Noise Abatement Criteria, A-weighted Noise Level, $L_{eq}(h)$	Description of Activities
A	57 Exterior	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose
B	67 Exterior	Picnic areas, recreation areas, playgrounds, active sport areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals
C	72 Exterior	Developed lands, properties, or activities not included in Categories A or B above
D	–	Undeveloped lands
E	52 Interior	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums

Source: Caltrans Traffic Noise Analysis Manual, 1998.

Note: A-weighted decibels are adjusted to approximate the way humans perceive sound. $L_{eq}(h)$ is the steady A-weighted level that is equivalent to the same amount of energy as that contained in the actual time-varying levels over one hour.

Caltrans Standard Specifications

Amendments to the Caltrans Standards Specifications were issued on July 31, 2009.

Section 14-8.02, “Noise Control”, states:

- Do not exceed 86 dBA 50 feet from the job site activities from 9 p.m. to 6 a.m.
- Equip internal combustion engines with manufacturer-recommended mufflers.
- Do not operate any internal combustion engine missing the appropriate muffler on the job site.

Affected Environment

Terminology

The following terms are used in this discussion:

- **Sound:** A vibratory disturbance created by a vibrating object that when transmitted by pressure waves through air is capable of being detected by the human ear.
- **Noise:** Sound that is loud, unpleasant, unexpected, or otherwise undesirable.
- **Decibel (dB):** A measure of sound.
- **A-Weighted Decibel (dBA):** A weighted sound level in dB that approximates the frequency response of the human ear.

- **Equivalent Sound Level (L_{eq}):** The equivalent steady state sound level that in a stated period of time contains the same acoustical energy. The 1-hour L_{eq} sound level is used by Caltrans to determine traffic noise impacts.

In typical noisy environments, changes in noise of 1 to 2 dB are generally not detectable. People begin to detect sound level increases of 3 dB in typical noisy environments. A 5-dB increase is perceived as a distinctly noticeable increase, and a 10-dB increase is perceived as a doubling of loudness. Therefore, a doubling of sound energy (such as doubling the volume of traffic on a highway) that would result in a 3-dB increase in sound would be barely detectable by the average human ear.

Noise Environment

The noise study area was divided into four subareas by the existing north-south alignment of Fresno Avenue, and the future alignment of the project. Existing conditions within each of these subareas is described below.

- **Northwest Area:** The northwest part of the noise study area is located to the west of Fresno Avenue and north of the project alignment. This area consists primarily of residential uses (Activity Category B per Table 2.2.7-1. The Boggs Tract Community Center, George Washington Elementary School, and private residential yards include areas of frequent outdoor recreational use (Activity Category B). Places of worship that do not include areas for outdoor activities also exist in this area.
- **Northeast Area:** The northeast part of the noise study area is located to the east of Fresno Avenue and north of the project alignment. This area consists primarily of industrial and commercial buildings (Activity Category C). An emergency response center (Activity Category C) is located adjacent to the existing alignment of the Crosstown Freeway. No sound barrier or topography that acts as a noise barrier currently exists between the highway and the adjoining uses. No outdoor areas in this portion of the study area are considered to be areas of frequent human use.
- **Southwest Area:** The southwest part of the noise study area is located to the west of Fresno Avenue and south of the project alignment. Activity Category C land uses in this area are primarily industrial.
- **Southeast Area:** The southeast part of the noise study area is located to the east of Fresno Avenue and south of the project alignment. Land uses in this area consist of single-family and multifamily residences (Activity Category B).

Outdoor areas considered to be areas of frequent human use include private yards associated with residences. This area also contains industrial land.

Table 2.2.7-2 shows existing noise levels in the noise study area based on noise modeling results.

Environmental Consequences

Projected Future Traffic Noise Levels

Table 2.2.7-2 also shows anticipated future noise levels with and without the project (see Figure 2.2.7-1 for the location of sensitive noise receptors, such as residences and the Boggs Tract Community Center and Park, identified in Table 2.2.7-2.).

Predicted future noise levels with the project are compared with existing conditions to determine the significance of traffic noise impacts under the California Environmental Quality Act. For this project, Caltrans considers traffic noise impacts to be significant if future noise levels increase by 12 dB or more over existing noise conditions. However, Table 2.2.7-2 also shows Future No-Build noise levels (i.e., noise levels that are expected in the future if the project is not constructed) so that one can understand the direct effect of the project.

Predicted traffic noise levels under Alternative 3A are within 0.5 dB of predicted traffic noise levels under Alternative 3B. Therefore, Table 2.2.7-2 considers both build alternatives together since impact conclusions for each are the same. This table shows that a total of 42 residences in Boggs Tract are predicted to be exposed to significant noise impacts (i.e., a 12-dB increase over existing noise levels).

The construction of a soundwall on the proposed elevated structure was evaluated. According to Caltrans' requirements, a soundwall is considered feasible if it reduces noise levels by a minimum of 5 dB at the affected residences. A 14-foot-high wall is the maximum height allowed by Caltrans standards for a soundwall built on an elevated structure. At residences predicted to be exposed to significant noise impacts, such a soundwall would provide up to 4 dB of noise reduction. The height of the elevated structure that breaks the line of sight between the traffic and the residences acts to limit noise reduction from a soundwall built on it. This soundwall is not feasible because it would not provide at least 5 dB of noise reduction at residences predicted to be exposed to significant noise impacts.

Table 2.2.7-2 Predicted Future Noise Levels and Impacts

Identifier	Receivers		Existing Noise Level (dBA L _{eq})	Predicted Noise Level Without Project, No Barrier (dBA L _{eq})	Predicted Noise Level With Project, No Barrier (dBA L _{eq})	Future With-Project Increase Over Existing, No Barrier (dB)	Substantial Increase (CEQA Significant Impact)	Count of Dwelling Units Exposed to Significant Impacts	Predicted Noise Level with Abatement (14-Foot Sound Wall) (dBA)	Is Abatement Feasible (Yes/No)
	Street	Location Relative to Project ^a								
R-01	West Hazelton Avenue	NW	57	60	71	14	Yes	1	67	No
R-02	West Hazelton Avenue	NW	56	59	71	15	Yes	1	67	No
R-03	West Hazelton Avenue	NW	56	58	70	14	Yes	1	66	No
R-04	West Hazelton Avenue	NW	56	58	70	14	Yes	1	66	No
R-05	South Los Angeles Avenue	NW	55	58	68	13	Yes	1	64	No
R-06	South Los Angeles Avenue	NW	55	57	66	11	No		62	No
R-07	South Los Angeles Avenue	NW	55	58	66	11	No		62	No
R-08	West Sonora Street	NW	55	59	64	9	No		59	No
R-09	West Sonora Street	NW	57	61	65	8	No		60	No
R-10	West Sonora Street	NW	61	64	66	5	No		62	No
R-11	Del Norte Street	NW	50	52	70	20	Yes	1	67	No
R-12	South Los Angeles Avenue	NW	52	55	70	18	Yes	2	67	No
R-13	West Hazelton Avenue	NW	51	54	70	19	Yes	2	67	No
R-14	West Hazelton Avenue	NW	50	53	69	19	Yes	3	65	No
R-15	West Hazelton Avenue	NW	49	51	68	19	Yes	2	64	No
R-16	West Hazelton Avenue	NW	49	51	67	18	Yes	2	63	No
R-17	West Hazelton Avenue	NW	48	50	66	18	Yes	3	62	No
R-18	West Hazelton Avenue	NW	55	57	67	12	Yes	2	64	No
R-19	West Hazelton Avenue	NW	53	55	66	13	Yes	2	62	No
R-20	West Hazelton Avenue	NW	53	55	65	12	Yes	2	62	No
R-21	West Hazelton Avenue	NW	53	54	64	11	No		61	No
R-22	West Hazelton Avenue	NW	53	54	64	11	No		60	No
R-23	West Hazelton Avenue	NW	52	53	63	11	No		60	No
R-24	South Los Angeles Avenue	NW	54	56	66	12	Yes	1	62	No
R-25	South Los Angeles Avenue	NW	54	56	65	11	No		62	No
R-26	South Los Angeles Avenue	NW	52	55	64	12	Yes	4 ^b	60	No
R-27	West Hazelton Avenue	NW	50	52	62	12	Yes	1	58	No
R-28	West Scotts Avenue	SW	51	53	65	14	Yes	1	63	No
R-29	West Scotts Avenue	SW	51	54	67	16	Yes	1	64	No
R-30	South Los Angeles Avenue	SW	51	54	67	16	Yes	3	64	No
R-31	West Scotts Avenue	SW	53	55	67	14	Yes	1	63	No
R-32	South Los Angeles Avenue	SW	53	55	68	15	Yes	1	65	No
R-33	South Los Angeles Avenue	SW	53	55	67	14	Yes	1	64	No
R-34	South Los Angeles Avenue	SW	54	56	66	12	Yes	1	63	No

Chapter 2 • Affected Environment, Environmental Impacts, and Avoidance, Minimization, and/or Mitigation Measures

Receivers			Existing Noise Level (dBA L _{eq})	Predicted Noise Level Without Project, No Barrier (dBA L _{eq})	Predicted Noise Level With Project, No Barrier (dBA L _{eq})	Future With-Project Increase Over Existing, No Barrier (dB)	Substantial Increase (CEQA Significant Impact)	Count of Dwelling Units Exposed to Significant Impacts	Predicted Noise Level with Abatement (14-Foot Sound Wall) (dBA)	Is Abatement Feasible (Yes/No)
Identifier	Street	Location Relative to Project ^a								
R-35	West Scotts Avenue	SW	54	56	66	12	Yes	1	63	No
R-36	West Scotts Avenue	SW	55	57	66	11	No		62	No
R-37	Fresno Avenue	SW	67	70	70	3	No		68	No
R-38	Fresno Avenue	SW	65	68	69	4	No		67	No
R-39	Fresno Avenue	SW	61	65	67	6	No		64	No
R-40	Wilkie Avenue	SE	62	65	65	3	No		62	No
R-41	Wilkie Avenue	SE	60	63	63	3	No		60	No
R-42	Wilkie Avenue	SE	66	69	66	0	No		63	No
R-43	Wilkie Avenue	SE	62	65	65	3	No		61	No
R-44	West Hazelton Avenue	SE	62	65	64	2	No		60	No
R-45	West Hazelton Avenue	SE	65	68	66	1	No		62	No
R-46	West Church Street	SE	63	66	66	3	No		60	No
R-47	West Church Street	SE	63	66	66	3	No		59	No
R-48	South Modesto Avenue	SE	61	64	65	4	No		59	No
R-49	West Hazelton Avenue	SE	61	63	64	3	No		60	No
R-50	West Church Street	SE	63	65	66	3	No		58	No
R-51	South Pershing Avenue	SE	62	65	65	3	No		58	No
R-52	South Pershing Avenue	SE	60	63	63	3	No		56	No
R-53	West Church Street	SE	62	64	65	3	No		57	No
R-54	West Church Street	SE	61	64	64	3	No		57	No
R-55	West Church Street	SE	63	66	67	4	No		58	No
R-56	Fresno Avenue	NW	65	68	65	0	No		62	No
R-57	Fresno Avenue/Washington Street	NE	67	70	67	0	No		64	No
R-58	Washington Street	NW	65	68	65	0	No		62	No
R-59	Washington Street	NW	65	68	66	1	No		64	No
Total dwelling units exposed to significant impacts								42		

Gray shading = CEQA significant impact.

NA = Not applicable

^a NW = north of Crosstown Freeway west of Fresno Avenue.

SW = south of Crosstown Freeway west of Fresno Avenue.

SE = south of Crosstown Freeway east of Fresno Avenue.

^b Dwelling units represent the Boggs Tract Community Center: 400 square feet of frontage multiplied by one dwelling unit per 100 square feet of frontage per the Protocol equals four dwelling units.

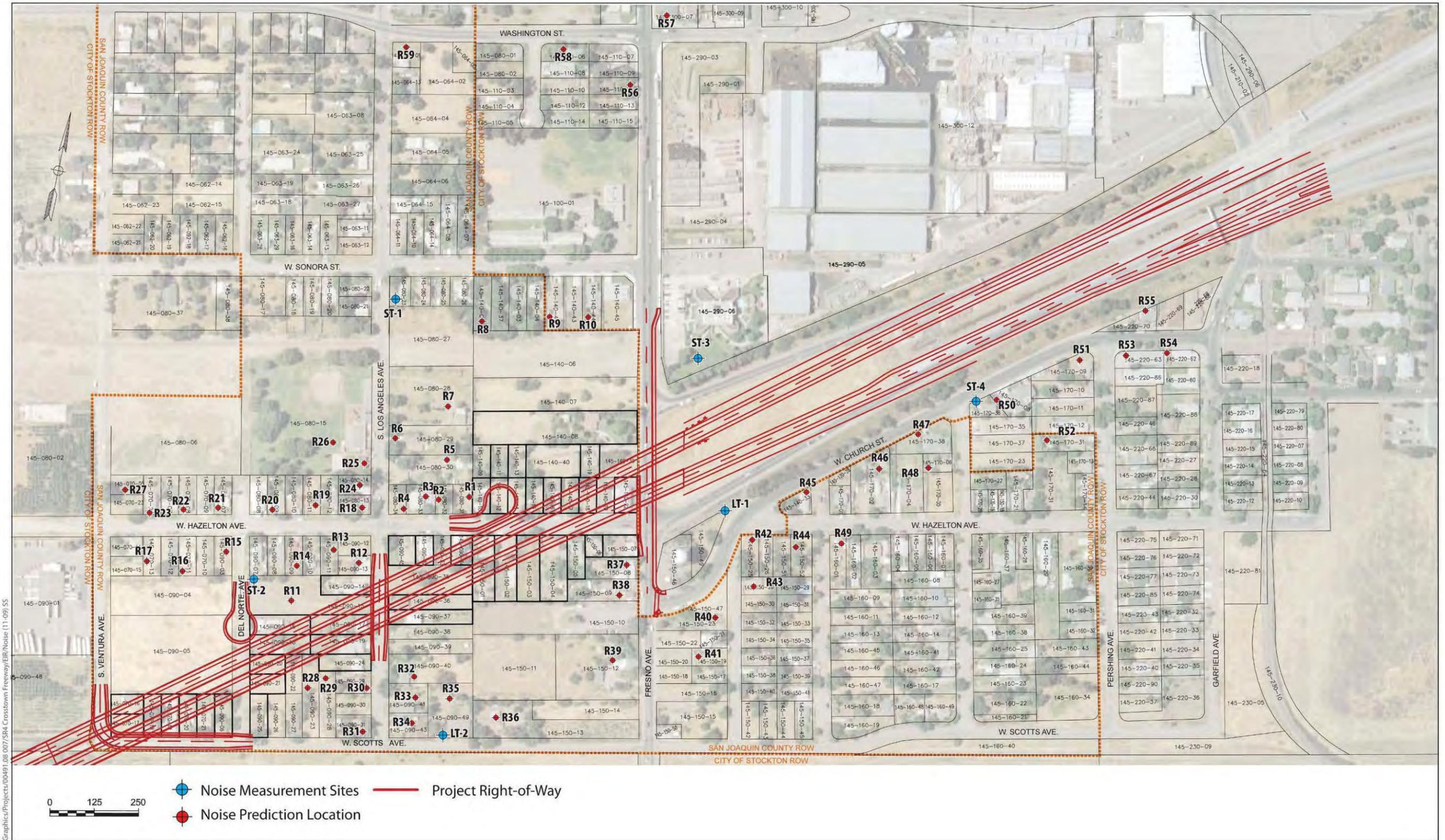


Figure 2.2.7-1 Noise Monitoring and Noise Modeling Positions

Construction Impacts

Noise from construction activities may occasionally dominate the noise environment in the immediate area of construction. Project construction activities would typically be limited to daytime hours, although there may be occasions where construction activity would need to occur at night. Areas where nighttime construction work may be required, including pile driving, are within the Burlington Northern Santa Fe Railway and the Central California Traction Company railway rights-of-way when and where the railroad companies cannot accommodate daytime construction activities; pile driving at night would be limited to this area. Nighttime closure of local roads such as Fresno Avenue, South Los Angeles Avenue, West Scotts Avenue, and South Ventura Avenue may also be required for the installation and removal of falsework for the proposed elevated structures that span these roads.

Section 14-8.02 of Caltrans Standard Special Provisions requires that noise from construction activities be limited to 86 dBA 50 feet from the job site between the hours of 9 p.m. to 6 a.m. For the purposes of assessing the significance of construction noise impacts under CEQA, construction noise is considered to be significant if it would exceed 86 dBA between the hours of 9 p.m. and 6 a.m. at a residential dwelling.

Table 2.2.7-3 summarizes typical noise levels at 50 feet for equipment that is likely to be used on this project. Residences would be located as close as about 30 feet to the proposed construction activities. Table 2.2.7-3 shows that nighttime construction sound levels at 30 feet (such as activities that involve a grader, bulldozer, or compactor) could exceed 86 dBA. The results in Table 2.2.7-3 also indicate that noise from nighttime pile driving could exceed 86 dBA within about 300 feet of the pile driving. However, the nearest residences to the Burlington Northern Railroad right-of-way, where nighttime pile driving may occur, are at least 350 feet away, so it is not expected that noise from pile driving would not exceed 86 dBA at any residences.

Table 2.2.7-3 Typical Construction Equipment Noise Emission Levels

Equipment	Typical Noise Level 50 feet from Source (dBA-L _{max})	Typical Noise Level 30 feet from Source (dBA-L _{max})
Backhoe	78	82
Compactor	83	87
Bulldozer	82	86
Paver	77	81
Dump Truck	76	80
Roller	80	84
Impact Pile Driver	101	105
Grader	85	89
Concrete Mixer Truck	79	83

Source: Federal Highway Administration 2006.

Impact pile driving would be required during construction of the columns that would support the elevated structures. The Federal Transit Administration, a recognized authority on ground vibration, recommends that typical timber and masonry buildings not be exposed to vibration loads above 0.2 inches per second. The impact pile driving proposed for this project has potential to exceed those limits due to the amplitude of the equipment and the fact that residences will be within 30 to 100 feet of the activities. Typical impact pile driving produces peak particle velocity ground vibration of 0.644 inches per second 25 feet from the source of vibration, with potential for peak particle velocity as high as 1.518 inches per second at 25 feet.

Cumulative Impacts

The impact analysis described above is a cumulative analysis since future traffic conditions are evaluated based on anticipated future growth in 2015 and 2035, as projected by the adopted City and County general plans. Other roadway and project-related construction planned in the project vicinity would result in cumulative impacts related to construction noise and increases in future traffic noise in the project vicinity. The proposed project would not result in a cumulatively considerable impact on construction-related noise since the project would include implementation of mitigation measures to reduce the project’s incremental contribution. Since the project’s incremental contribution to long-term traffic noise cannot be mitigated, the project’s impact would be cumulatively considerable.

No-Build Alternative

The No-Build Alternative would not result in any noise impacts. Therefore, avoidance and minimization would not be required.

Avoidance, Minimization, and/or Abatement Measures

- Caltrans and/or the contractor would ensure that sound-control devices are effective and would implement additional noise control measures, as needed so that noise from construction activity between the hours of 9:00 p.m. and 6:00 a.m. does not exceed 86 dBA at a distance of 50 feet from the nearest residence. Measures that can be used to limit noise include moving construction equipment so that it is farther away from residences, turning off idling equipment, rescheduling construction activities, notifying residents in advance of construction work, installing sound barriers around noise-generating construction equipment, pre-drilling of pile foundation holes, use of alternative pile driving methods (such as vibratory driving instead of impact driving), and use of industry standard technology to shroud or muffle equipment and pile-driving operations.
- Caltrans and/or the construction contractor would implement following measures to avoid vibration impacts from impact pile driving:
 - Conduct a pre-construction survey of residences located within 150 feet of pile driving to document the existing condition of the structures noting existing cracking and foundation settlement.
 - Implement measures to limit ground vibration to 0.2 inches per second at nearby structures. These measures may include but are not limited to:
 - Use an alternative pile driving method that produces less vibration than impact driving such as a vibratory pile driver
 - Use pre-drilling or cast-in-place methods to reduce or eliminate impact driving
 - Use of a larger number of smaller piles.

If it is not feasible from an engineering perspective to limit vibration to 0.2 inches per second at nearby structures, Caltrans would conduct a post-construction survey to identify damage that is directly attributable to pile driving. Caltrans would then repair any damage that is directly attributable to pile driving.

2.3 Biological Environment

2.3.1 Animal Species

This section discusses potential impacts and permit requirements associated with wildlife not listed or proposed for listing under the state or federal Endangered Species Act. Species listed or proposed for listing as threatened or endangered are

discussed later in Section 2.3.3. All other special-status animal species are discussed here, including California Department of Fish and Game fully protected species and species of special concern. This section is based on the project Natural Environment Study prepared in September 2009.

Figure 2.3.1-1a through 2.3.1-1d show all areas that would be disturbed during construction of the project including the project footprint and areas needed for construction access and placement of equipment and vehicles (staging areas). The primary staging areas are expected to be located within the footprint of the elevated structure.

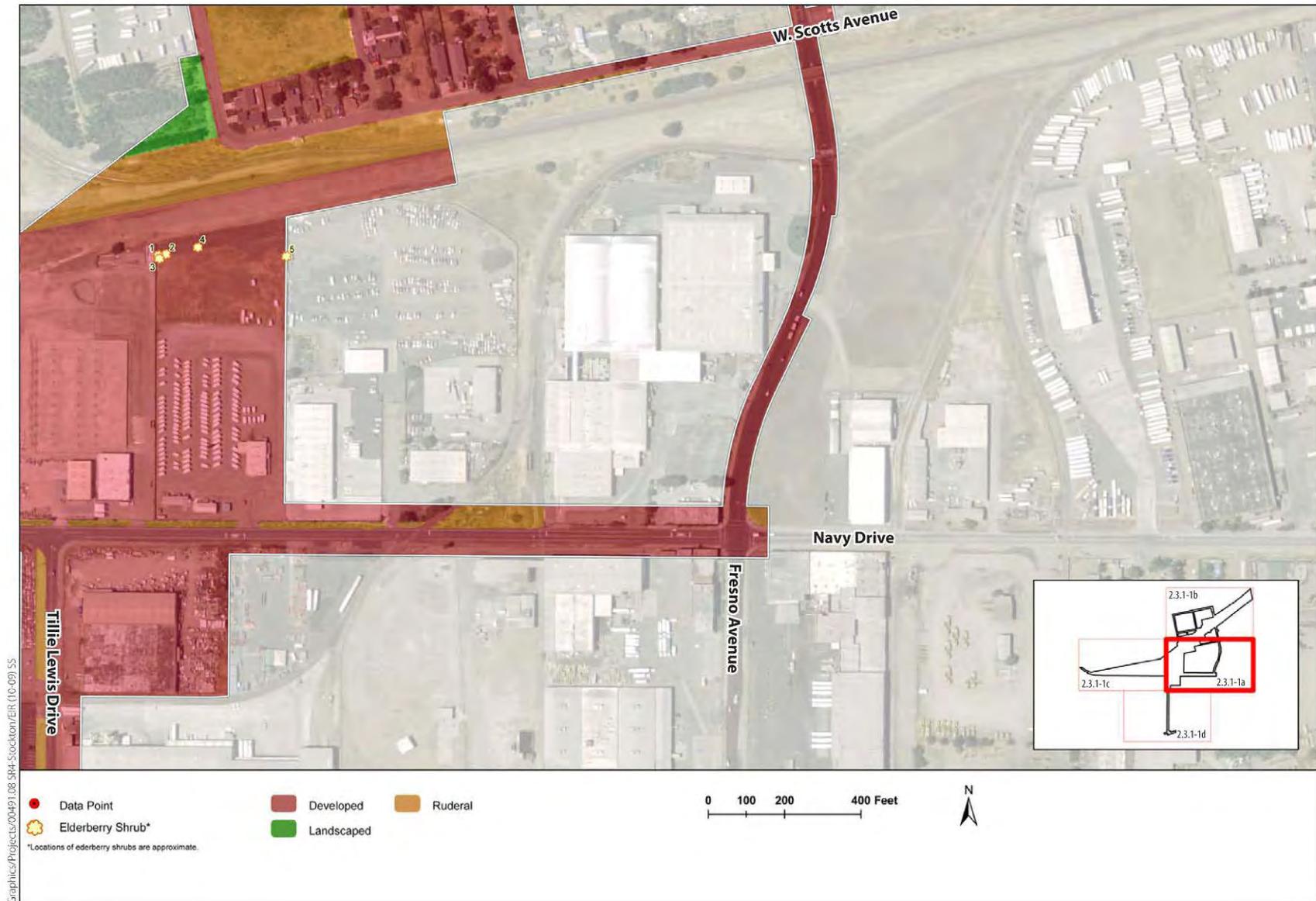


Figure 2.3.1-1a Biological Resources in the Crosstown Freeway Ramp Extension Project Impact Area

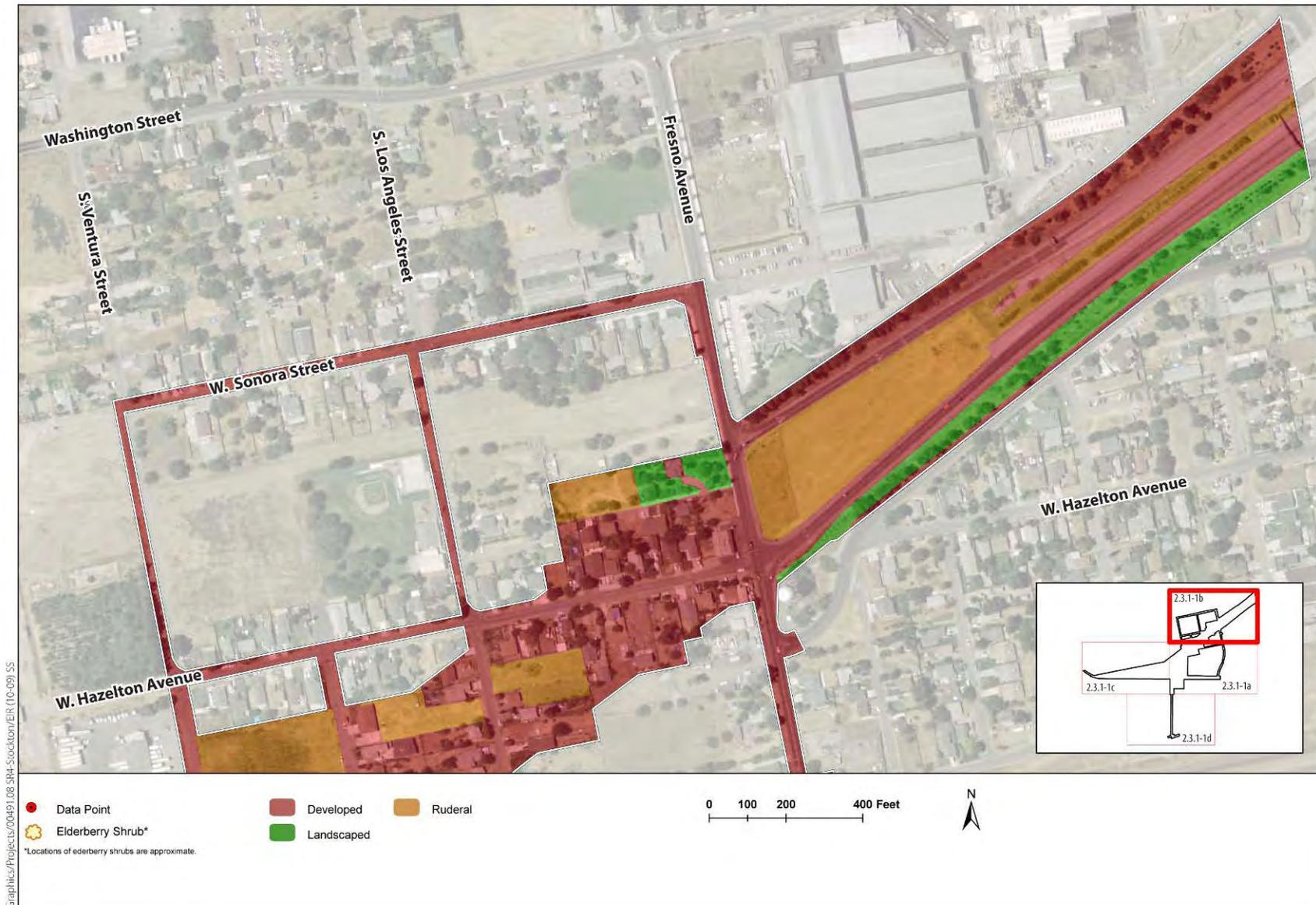


Figure 2.3.1-1b Biological Resources in the Crosstown Freeway Ramp Extension Project Impact Area

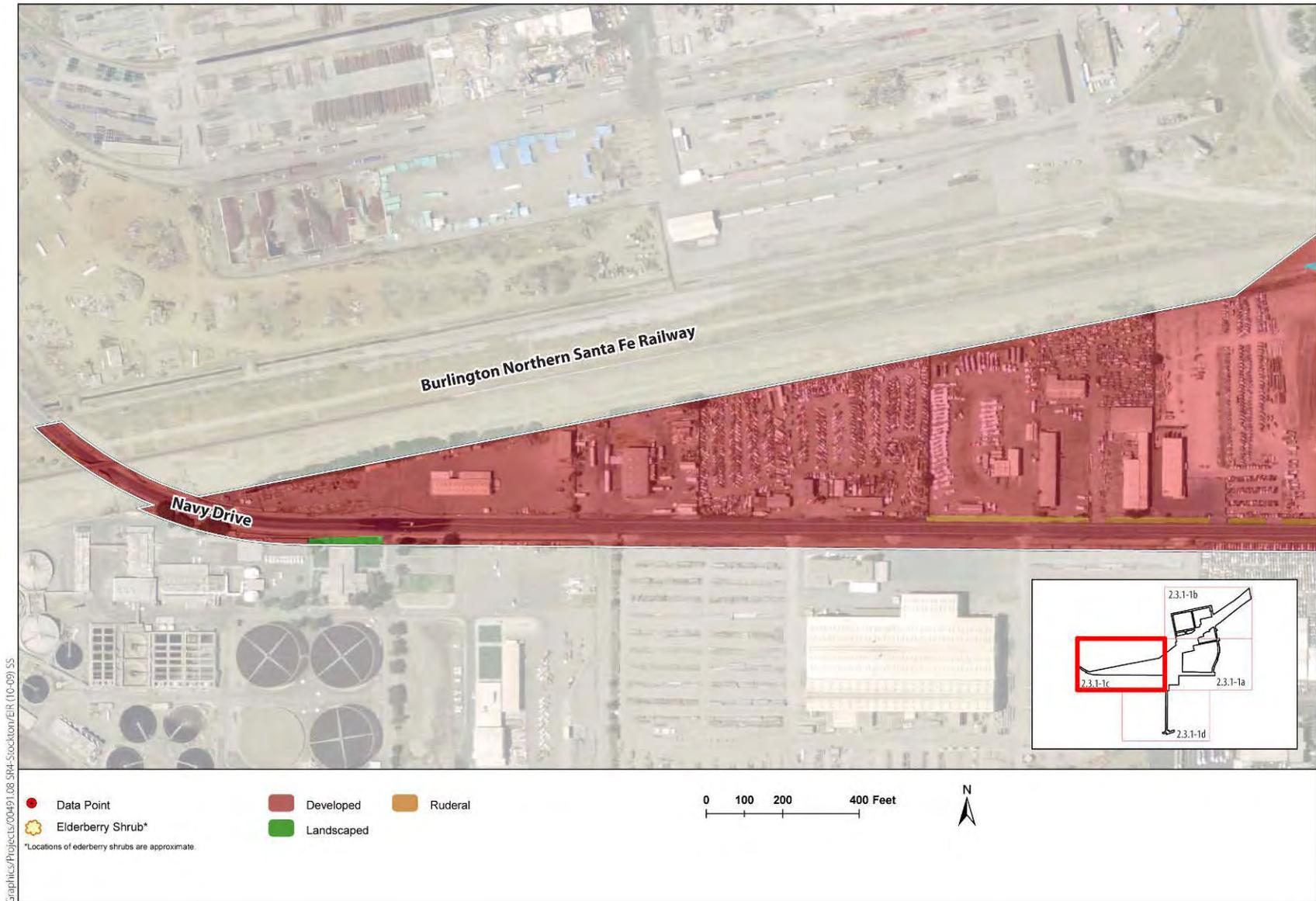


Figure 2.3.1-1c Biological Resources in the Crosstown Freeway Ramp Extension Project Impact Area



Figure 2.3.1-1d Biological Resources in the Crosstown Freeway Ramp Extension Project Impact Area

Affected Environment

Two special-status species not listed under the California Endangered Species Act or Federal Endangered Species Act could occur in the project area: white-tailed kite (*Elanus leucurus*) and western burrowing owl (*Athene cunicularia hypugea*). Table 2.3.2-1 identifies their legal status, describes their general habitat, and summarizes the survey results related to these species.

Table 2.3.1-1 Non-Threatened/Endangered Animal Species That Could Occur in the Project Area

Common Name Scientific Name	Legal Status (Federal/State)	General Habitat Description	Habitat Present/Absent	Rationale
White-tailed kite <i>Elanus leucurus</i>	-/FP	Lowland areas west of Sierra Nevada from the head of the Sacramento Valley south, including coastal valleys and foothills to western San Diego County at the Mexico border; low foothills or valley areas with valley or live oaks, riparian areas, and marshes near open grasslands for foraging.	Present	Suitable nest trees in and adjacent to project area but unlikely to nest in the project area due to amount of development present; could perch or forage in the project area.
Western burrowing owl <i>Athene cunicularia hypugea</i>	-/SSC	Lowlands throughout California, including the Central Valley, northeastern plateau, southeastern deserts, and coastal areas; rare along south coast; level, open, dry, heavily grazed or low stature grassland or desert vegetation with available burrows.	Present	Ruderal grassland in project area provides low quality nesting and foraging habitat.

^a Status explanations:

Federal

- = no listing.

State

FP = fully protected under the California Fish and Game Code.

SSC = species of special concern in California.

White-tailed kite occurs in coastal and valley lowlands in California and generally inhabits low-elevation grassland, savannah, oak woodland, wetland, agricultural, and riparian habitats. The breeding season lasts from February through October and peaks between May and August. White-tailed kites forage in undisturbed, open grassland, meadows, farmland, and emergent wetlands.

Burrowing owls prefer open grasslands and shrublands with perches and burrows. They usually live and nest in the old burrows of California ground squirrels or other small mammals but also can nest in piles of wood or other debris. Burrows can be found on the sides of hills, along roadside embankments, on levees, along irrigation

canals, near fence lines, and on or near other raised areas of land. The breeding season for burrowing owls extends from March through August.

According to the California Department of Fish and Game's California Natural Diversity Database, there is one record for a white-tailed kite nest and 17 records for occurrences of burrowing owls within five miles of the project area. Suitable nest trees for the white-tailed kite are located in and adjacent to the project area. It is unlikely that the white-tailed kite would nest in these areas because they are so developed, but they could occasionally perch or forage in the project vicinity. The ruderal grassland in the project area provides suitable breeding, wintering, and foraging habitat for the burrowing owl.

Environmental Consequences

Because there is a low likelihood that white-tailed kite nest in or adjacent to the project area, the potential for noise and disturbances from project construction to disrupt a breeding pair during the breeding season (generally between March 1 and September 1) is low. Such disturbances could result in the loss of reproductive potential at active nests, the incidental loss of fertile eggs or nestlings, or lead to nest abandonment. These same impacts, as well as permanent or temporary loss of foraging or burrow habitat, could also affect nesting burrowing owls.

Cumulative Impacts

If burrowing owls or white-tailed kite occur in the project construction area, disturbance to them could contribute to cumulative effects on these species. The project would also contribute to cumulative effects on burrowing owl and white-tailed kite if other development in the region caused disturbance to these species or their habitat. Removing suitable breeding and foraging habitat reduces the amount of habitat available and could force these species into smaller areas. If burrowing owls or white-tailed kite are found during preconstruction surveys, avoidance, minimization, and compensatory mitigation measures described below would be taken to minimize the project's contribution to less than a cumulatively considerable level.

No-Build Alternative

No impacts to animal species would occur under the No-Build Alternative.

Avoidance, Minimization, and/or Mitigation Measures

- Caltrans or its contractors would conduct environmental awareness training for construction crews for both species before construction begins.
- For the white-tailed kite, Caltrans or its contractors would conduct construction prior to the migratory bird nesting season (March 1 through September 1). Beginning construction before the breeding season will establish a level of noise within or near the project area that will dissuade noise-sensitive raptors and other birds from attempting to nest. If this is not possible, Caltrans or its contractors would conduct a preconstruction survey to determine whether active nests are present within or adjacent to the project area. If an active raptor nest is found, California Department of Fish and Game would be contacted to determine the need for a no-disturbance buffer or the need to monitor the nest.
- Caltrans or its contractors would conduct preconstruction surveys for active burrowing owl burrows according to California Department of Fish and Game guidelines. The preconstruction surveys would include a wintering season survey (between December 1 and January 31) and a breeding season survey (between April 15 and July 15) to be conducted during the same year that construction begins, if feasible). It is recommended that the construction area and a 500-foot buffer zone around the construction area (where possible) be surveyed. If no burrowing owls or sign are detected, no further mitigation is required. If burrowing owls or their sign are found, Caltrans or its contractors would implement the following mitigation measures.
- Burrowing owls and their occupied burrows would not be disturbed during the breeding season (February 1–August 31). A 250-foot buffer, within which no new activity would be permissible, would be maintained between Project activities and nesting owls. The nesting owls would be monitored periodically by a qualified biologist to ensure that nesting activities are not being disrupted. This protected area would remain in effect until August 31, or at the discretion of the California Department of Fish and Game, and would be based upon monitoring evidence, until the young owls are foraging independently. If accidental take (disturbance, injury, or death of owls) occurs, the California Department of Fish and Game would be notified immediately.
- When destruction of occupied burrows is unavoidable during the nonbreeding season (September 1–January 31), eviction of owls may be permitted pending an evaluation of eviction plans and receipt of formal written approval from the

California Department of Fish and Game authorizing the eviction. The guidelines require that one-way doors be installed at least 48 hours before construction activities. Prior to the installation of one-way doors, unsuitable burrows would be enhanced (enlarged or cleared of debris) or new burrows created (by installing artificial burrows) at a ratio of 2:1 on protected lands approved by the California Department of Fish and Game. Newly created burrows would follow guidelines established by the California Department of Fish and Game. At least 1 week would be necessary to complete passive relocation and allow owls to acclimate to alternate burrows.

- If impacts to burrowing owl cannot be avoided, the loss of burrowing, foraging and burrow habitat would be compensated for in accordance with the California Department of Fish and Game Guidelines (acquire and permanently protect a minimum of 6.5 acres of existing breeding and foraging habitat for each pair of owls affected).

2.3.2 Threatened and Endangered Species

This section is based on the project Natural Environment Study prepared in September 2009.

Affected Environment

Based on information from the California Department of Fish and Game's California Natural Diversity Database (2009), a list of threatened and endangered species provided by the U.S. Fish and Wildlife Service, and general biological surveys of the project area, three threatened and endangered species were identified with potential to occur in the project area. These species are identified in Table 2.3.2-1 and include vernal pool fairy shrimp (*Branchinecta lynchi*), valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*), and Swainson's hawk (*Buteo swainsoni*). The table identifies their legal status, describes their general habitat, and summarizes the survey results related to these species.

Vernal pool fairy shrimp is federally listed as threatened. The species is found from Shasta County in the north throughout the Central Valley to Tulare County and west to the central Coast Ranges. This species inhabits rain-filled, ephemeral pools (vernal pools) and shallow depressions where water is prevented from dissipating into the earth by the presence of an impervious subsurface layer such as claypan, hardpan, or volcanic stratum. Based on the biological database search of known vernal pool fairy shrimp populations, background research, and general biological surveys of the

project area, it was determined that the suitability of the project site for vernal pool fairy shrimp was low for the following reasons:

- Residential, industrial, railway, and roadways surround the project site effectively isolating it from known shrimp populations and reducing the probability that the site would be “seeded” with shrimp cysts via hydrologic flow or other modes of transport.
- The soils of the adjacent properties have been disturbed over the years, and that disturbance continues into the present. The project site does not exhibit qualities associated with “typical” or “native” vernal pool habitat.
- No pools with standing water (one inch for two weeks) were observed within the project site.
- There are no records of this species being sighted within 10 miles of the project.

Valley elderberry longhorn beetle is federally listed as threatened. Its range extends throughout the Central Valley and associated foothills from the northern border of Shasta County to the southern portion of Kern County. From west to east, its range extends from the watershed of the Central Valley on the west to approximately 3,000 feet above sea level in the Sierra Nevada foothills. This species is closely associated with elderberry shrubs, a host for beetle larvae. Elderberry shrubs are found in riparian forests and adjacent uplands in the Central Valley and foothills. A total of five elderberry shrubs are located within the project area, as shown in Figure 2.3.1-1a. No elderberry shrubs were observed in vegetated areas along the railroad within 100 feet of the project area. During a survey for valley elderberry longhorn beetle conducted in February 2009, a total of 16 stems with diameters measuring greater than 1.0 inch at ground level were counted among the five shrubs. No exit holes, which indicate larval burrowing into the stem, were observed on any of the stems.

Swainson’s hawks, state-listed as threatened, forage in grasslands, grazed pastures, alfalfa and other hay crops, and certain grain and row croplands. Vineyards, orchards, rice, and cotton crops are generally unsuitable for foraging because of the density of the vegetation. Swainson’s hawks usually nest in large, mature trees. Most nest sites (87 percent) in the Central Valley are found in waterside habitats primarily because trees are more available there. Swainson’s hawks also nest in mature roadside trees and in isolated trees in agricultural fields or pastures. The breeding season is from March through August. Based on information from the California Natural Diversity Database (2009), there are more than 40 records of Swainson’s hawk nests within five

miles of the project area. The closest occurrence is approximately one mile from the project area. The project area and adjacent areas contain suitable nesting trees for Swainson’s hawk and a small amount of low-quality foraging habitat.

Table 2.3.2-1 Federal and State-Listed Wildlife Species with Potential to Occur in the Project Area

Common Name Scientific Name	Legal Status (Federal/ State)	General Habitat Description	Habitat Present/ Absent	Rationale
Vernal pool fairy shrimp <i>Branchinecta lynchi</i>	T/-	Found in Central Valley, central and south Coast Ranges from Tehama County to Santa Barbara County; isolated populations also in Riverside County; common in vernal pools; also found in sandstone rock outcrop pools	Absent	Caltrans determined that due to the high levels of past and present physical disturbance in this area, the high amount of development in the surrounding area, and the lack of known occurrences within 10 miles of the project area, the likelihood that vernal pool fairy shrimp occurs in the project area seasonally ponded depression is low.
Valley elderberry longhorn beetle <i>Desmocerus californicus dimorphus</i>	T/-	Stream side habitats below 3,000 feet throughout the Central Valley; occur in riparian and oak savanna habitats with elderberry shrubs; elderberries are the host plant	Present	Elderberry shrubs are present in the project area
Swainson’s hawk <i>Buteo swainsoni</i>	-/T	Lower Sacramento and San Joaquin Valleys, the Klamath Basin, and Butte Valley; highest nesting densities occur near Davis and Woodland, Yolo County; nests in oaks or cottonwoods in or near riparian habitats; forages in grasslands, irrigated pastures, and grain fields	Present	Suitable nest trees are present in and adjacent to the project area; could nest, forage, or perch in project area

^a Status explanations:

Federal

E = listed as endangered under the federal Endangered Species Act.

T = listed as threatened under the federal Endangered Species Act.

- = no listing.

State

T = listed as threatened under the California Endangered Species Act.

- = no listing.

Environmental Consequences

Direct impacts to valley elderberry longhorn beetle would be avoided since the area containing elderberry shrubs numbers 1, 2, and 3 (Figure 2.3.1-1a), located within 100 feet of the construction limits, would be fenced and shown as environmentally

sensitive areas in the project construction plans. This designation would prevent construction activities from taking place in this area. Dust-related impacts during project construction would be mitigated with the measure identified below.

Project construction could result in the possible loss of nesting Swainson's hawk. If construction occurs adjacent to an active nest tree, this disturbance could cause the death of young or loss of reproductive potential at active nests. In addition, noise and other construction disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings or otherwise lead to nest abandonment.

Cumulative Impacts

Because the project would avoid and minimize potential impacts on valley elderberry longhorn beetle and Swainson's hawk, it would not contribute to cumulative effects on these species.

No-Build Alternative

No impacts to threatened and endangered species would occur under the No-Build Alternative.

Avoidance, Minimization, and/or Mitigation Measures

- Caltrans and/or the contractor would ensure that dust is controlled during construction by periodically watering down construction areas within 100 feet of the elderberry shrubs to prevent dirt from becoming airborne and accumulating on these shrubs.
- Caltrans or its contractors would conduct environmental awareness training for the valley elderberry longhorn beetle and the Swainson's hawk to construction crews before project implementation.
- Caltrans or its contractors would conduct construction prior to the migratory bird nesting season (March 1 through September 1). If this is not possible, Caltrans or its contractors would conduct a preconstruction survey to determine whether active nests are present within or adjacent to the project area. If an active raptor nest is found, California Department of Fish and Game would be contacted to determine the need for a no-disturbance buffer or the need to monitor the nest.

2.4 Climate Change under the California Environmental Quality Act

Regulatory Setting

While climate change has been a concern since at least 1988, as evidenced by the establishment of the United Nations and World Meteorological Organization's Intergovernmental Panel on Climate Change, the efforts devoted to greenhouse gas emissions reduction and climate change research and policy have increased dramatically in recent years. These efforts are primarily concerned with the emissions of greenhouse gas related to human activity that include carbon dioxide (CO₂), methane, nitrous oxide, tetrafluoromethane, hexafluoroethane, sulfur hexafluoride, HFC-23 (fluoroform), HFC-134a (s, s, s, 2 –tetrafluoroethane), and HFC-152a (difluoroethane).

In 2002, with the passage of Assembly Bill 1493 (AB 1493), California launched an innovative and pro-active approach to dealing with greenhouse gas emissions and climate change at the state level. Assembly Bill 1493 requires the California Air Resources Board (the air board) to develop and implement regulations to reduce automobile and light truck greenhouse gas emissions. These stricter emissions standards were designed to apply to automobiles and light trucks beginning with the 2009-model year; however, in order to enact the standards California needed a waiver from the U.S. Environmental Protection Agency (EPA). The waiver was denied by Environmental Protection Agency in December 2007. See *California v. Environmental Protection Agency*, 9th Cir. Jul. 25, 2008, No. 08-70011. However, on January 26, 2009, it was announced that Environmental Protection Agency will reconsider their decision regarding the denial of California's waiver. On May 18, 2009, President Obama announced the enactment of a 35.5 mpg fuel economy standard for automobiles and light duty trucks which will take effect in 2012. On June 30, 2009 Environmental Protection Agency granted California the waiver. California is expected to enforce its standards for 2009 to 2011 and then look to the federal government to implement equivalent standards for 2012 to 2016. The granting of the waiver will also allow California to implement even stronger standards in the future. The state is expected to start developing new standards for the post-2016 model years later this year.

On June 1, 2005, Governor Arnold Schwarzenegger signed Executive Order S-3-05. The goal of this Executive Order is to reduce California's greenhouse gas emissions to: 1) 2000 levels by 2010, 2) 1990 levels by the 2020 and 3) 80 percent below the

1990 levels by the year 2050. In 2006, this goal was further reinforced with the passage of Assembly Bill 32 (AB 32), the Global Warming Solutions Act of 2006. AB 32 sets the same overall greenhouse gas emissions reduction goals while further mandating that the air board create a plan that includes market mechanisms, and implement rules to achieve “real, quantifiable, cost-effective reductions of greenhouse gases.” Executive Order S-20-06 further directs state agencies to begin implementing AB 32, including the recommendations made by the state’s Climate Action Team.

With Executive Order S-01-07, Governor Schwarzenegger set forth the low carbon fuel standard for California. Under this executive order, the carbon intensity of California’s transportation fuels is to be reduced by at least 10 percent by 2020.

Climate change and greenhouse gas reduction is also a concern at the federal level; however, at this time, no legislation or regulations have been enacted specifically addressing greenhouse gas emissions reductions and climate change. California, in conjunction with several environmental organizations and several other states, sued to force the Environmental Protection Agency to regulate greenhouse gas as a pollutant under the Clean Air Act (*Massachusetts vs. Environmental Protection Agency et al.*, 549 U.S. 497 (2007)). The court ruled that greenhouse gas does fit within the Clean Air Act’s definition of a pollutant, and that the Environmental Protection Agency does have the authority to regulate greenhouse gas. Despite the Supreme Court ruling, there are no promulgated federal regulations to date limiting greenhouse gas emissions.

On December 7, 2009, the Environmental Protection Agency Administrator signed two distinct findings regarding greenhouse gases under section 202(a) of the Clean Air Act:

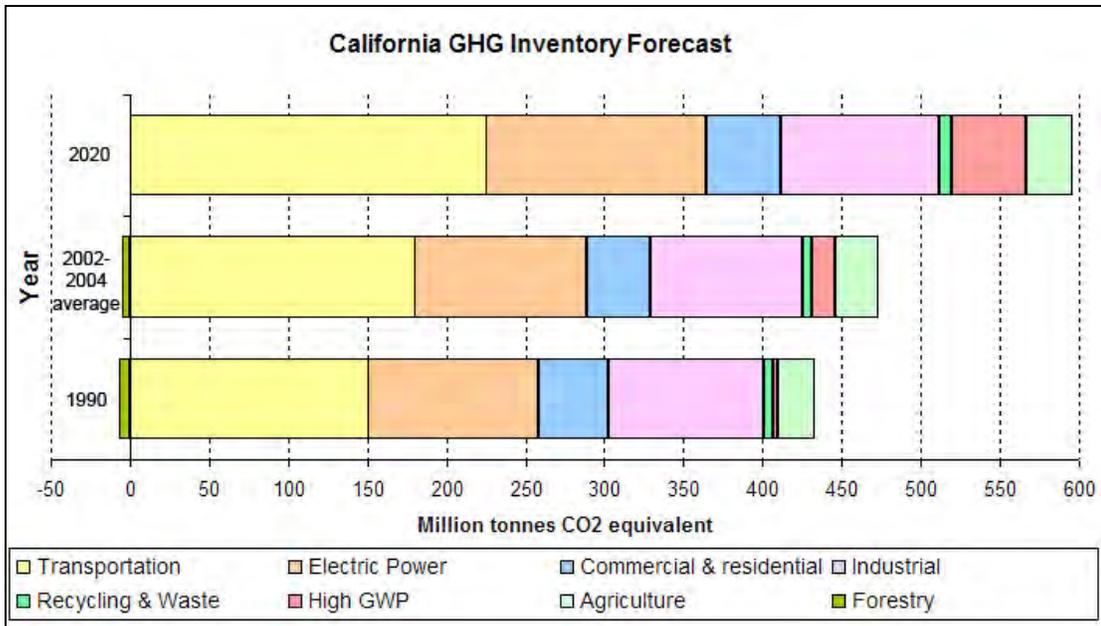
- **Endangerment Finding:** The Administrator finds that the current and projected concentrations of the six key well-mixed greenhouse gases--carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆)--in the atmosphere threaten the public health and welfare of current and future generations.
- **Cause or Contribute Finding:** The Administrator finds that the combined emissions of these well-mixed greenhouse gases from new motor vehicles and new motor vehicle engines contribute to the greenhouse gas pollution which threatens public health and welfare.

These findings do not themselves impose any requirements on industry or other entities. However, this action is a prerequisite to finalizing the Environmental Protection Agency's proposed greenhouse gas emission standards for light-duty vehicles, which were jointly proposed by Environmental Protection Agency and the Department of Transportation's National Highway Safety Administration on September 15, 2009.¹

According to Recommendations by the Association of Environmental Professionals on How to Analyze GHG Emissions and Global Climate change in CEQA Documents (March 5, 2007), an individual project does not generate enough greenhouse gas emissions to significantly influence global climate change. Rather, global climate change is a cumulative impact. This means that a project may participate in a potential impact through its incremental contribution combined with the contributions of all other sources of greenhouse gas. In assessing cumulative impacts, it must be determined if a project's incremental effect is "cumulatively considerable." See CEQA Guidelines sections 15064(i)(1) and 15130. To make this determination the incremental impacts of the project must be compared with the effects of past, current, and probable future projects. To gather sufficient information on a global scale of all past, current, and future projects in order to make this determination is a difficult if not impossible task.

As part of its supporting documentation for the Draft Scoping Plan, the air board recently released an updated version of the greenhouse gas inventory for California (June 26, 2008). Figure 2.4-1 contains a graph from that update that shows the total greenhouse gas emissions for California for 1990, 2002-2004 average, and 2020 projected if no action is taken.

¹ <http://www.epa.gov/climatechange/endangerment.html>



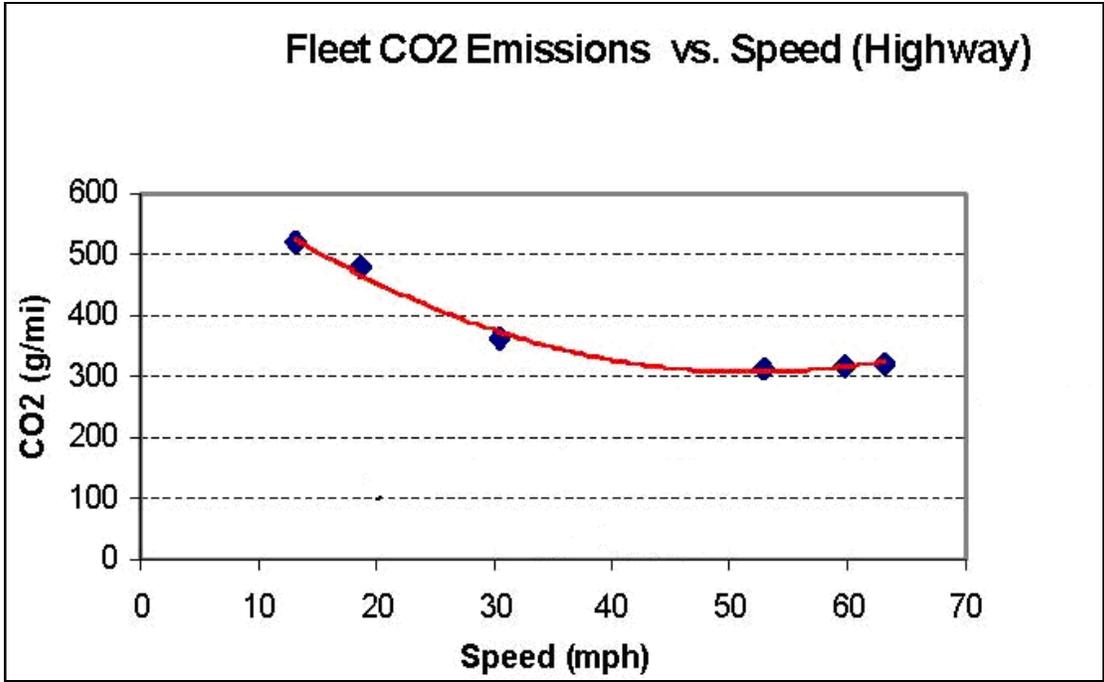
Taken from : <http://www.arb.ca.gov/cc/inventory/data/forecast.htm>

Figure 2.4-1 California Greenhouse Gas Inventory

Caltrans and its parent agency, the Business, Transportation, and Housing Agency, have taken an active role in addressing greenhouse gas emission reduction and climate change. Recognizing that 98 percent of California’s greenhouse gas emissions are from the burning of fossil fuels and 40 percent of all human made greenhouse gas emissions are from transportation (see Climate Action Program at Caltrans [December 2006]), Caltrans has created and is implementing the Climate Action Program at Caltrans that was published in December 2006. This document can be found at: <http://www.dot.ca.gov/docs/ClimateReport.pdf>

Project Analysis

One of the main strategies in the Caltrans’ Climate Action Program to reduce greenhouse gas emissions is to make California’s transportation system more efficient. The highest levels of carbon dioxide from mobile sources, such as automobiles, occur at stop-and-go speeds (0-25 miles per hour) and speeds over 55 mph; the most severe emissions occur from 0-25 miles per hour (see Figure 2.4-2). To the extent that a project relieves congestion by enhancing operations and improving travel times in high congestion travel corridors greenhouse gas emissions, particularly CO₂, may be reduced.



Source: Center for Clean Air Policy—[http://www.ccap.org/Presentations/Winkelman%20TRB%202004%20\(1-13-04\).pdf](http://www.ccap.org/Presentations/Winkelman%20TRB%202004%20(1-13-04).pdf)

Figure 2.4-2 California Greenhouse Gas Inventory

The quantification of carbon dioxide emissions was conducted using Caltrans’ CT-EMFAC emission model and traffic data provided by the project traffic engineers, Fehr & Peers. Yearly emissions of carbon dioxide associated with implementation of the project are presented in Tables 2.4-1 and 2.4-2. Table 2.4-1 provides data for the project vicinity which was bound by and included I-5 to the east, Stockton Expressway to the west, Charter Way to the south, and Washington Street to the North. Table 2.4-2 presents a more focused look at the immediate project area (Boggs Tract Neighborhood) and includes the area from Fresno Avenue between the Crosstown Freeway and Washington Street and Washington Street west of Fresno Avenue.

Table 2.4-1 Summary of Operational Emissions in the Immediate Project Vicinity (metric tons per year)

Scenario	Yearly vehicle miles traveled	CO ₂ ^a
Existing 2008	284,548.00	143.28
2015 no-Project	340,396.00	184.58
2015 with-Project	349,740.00	188.08
2035 no-Project	499,964.00	310.85
2035 with-Project	536,003.00	323.70
2015 with-project minus 2015 no-Project	9,344.00	3.50
2035 with-Project minus 2035 no-Project	36,039.00	12.85
SJVAPCD thresholds (included for informational purposes only)	NA	38,000

Table 2.4-2 Summary of Operational Emissions in the Boggs Tract Neighborhood (metric tons per year)

Scenario	Yearly vehicle miles traveled	CO ₂ ^a
Existing 2008	13,770.00	6.84
2015 no-Project	17,270.00	8.41
2015 with-Project	8,200.00	4.00
2035 no-Project	27,220.00	13.29
2035 with-Project	12,860.00	6.28
2015 with-project minus 2015 no-Project	-9,070.00	-4.42
2035 with-Project minus 2035 no-Project	-14,360.00	-7.01
SJVAPCD thresholds (included for informational purposes only)	NA	38,000

As shown in Table 2.4-1, small increases in CO₂ emissions are predicted in the 2015 and 2035 with-project scenarios versus the no-project scenarios. In 2015, the with-project conditions results in an increase of 3.50 metric tons per year when compared with the 2015 no-project conditions; in 2035, an increase of 12.85 metric tons per year of CO₂ emissions is predicted for the with-project condition compared with the no-project condition. CO₂ emissions for both the future with-project and future no-project are predicted to be higher than the existing 2008 emissions levels. The increases in CO₂ are largely driven by increases in vehicle miles traveled that are predicted to occur even without the project; for example, in 2035, vehicle miles traveled in the no-project condition is still 499,964.00 miles and rises to 536,003.00 miles in the with- project condition.

Focusing in on the Boggs Tract neighborhood, in both the 2015 and 2035 scenarios, both vehicle miles traveled and CO₂ emissions are predicted to decrease in the with-project condition when compared to the no- project condition. For example, a

decrease of 7.01 metric tons per year is predicted in the with- project condition for 2035.

Limitations and Uncertainties with Modeling

EMFAC

Although EMFAC can calculate CO₂ emissions from mobile sources, the model does have limitations when it comes to accurately reflecting CO₂ emissions. According to the National Cooperative Highway Research Program report, *Development of a Comprehensive Modal Emission Model* (April 2008), studies have revealed that brief but rapid accelerations can contribute significantly to a vehicle's carbon monoxide and hydrocarbon emissions during a typical urban trip. Current emission-factor models are insensitive to the distribution of such modal events (i.e., cruise, acceleration, deceleration, and idle) in the operation of a vehicle and instead estimate emissions by average trip speed. This limitation creates an uncertainty in the model's results when compared to the estimated emissions of the various alternatives with baseline in an attempt to determine impacts. Although work by the Environmental Protection Agency and the air board is underway on modal-emission models, neither agency has yet approved a modal emissions model that can be used to conduct this more accurate modeling. In addition, EMFAC does not include speed corrections for most vehicle classes for CO₂; for most vehicle classes, emission factors are held constant, which means that EMFAC is not sensitive to the decreased emissions associated with improved traffic flows for most vehicle classes. Therefore, unless a project involves a large number of heavy-duty vehicles, the difference in modeled CO₂ emissions due to speed change will be slight.

It is interesting to note that the air board is currently not using EMFAC to create its inventory of greenhouse gas emissions, and is unclear why the air board has made this decision. Its Web site only states:

“REVISION: Both the EMFAC and OFFROAD Models develop CO₂ and CH₄ [methane] emission estimates; however, they are not currently used as the basis for [the air board's] official greenhouse gas inventory which is based on fuel usage information. However, CARB is working towards reconciling the emission estimates from the fuel usage approach and the models.”

Other Variables

With the current science, project-level analysis of greenhouse gas emissions is limited. Although a greenhouse gas analysis is included for this project, there are numerous key greenhouse gas variables that are likely to change dramatically during the design life of the proposed project and would thus dramatically change the projected CO₂ emissions.

First, vehicle fuel economy is increasing. The Environmental Protection Agency’s annual report, “Light-Duty Automotive Technology and Fuel Economy Trends: 1975 through 2008 (<http://www.epa.gov/oms/fetrends.htm>),” which provides data on the fuel economy and technology characteristics of new light-duty vehicles, including cars, minivans, sports utility vehicles, and pickup trucks, confirms that average fuel economy has improved each year beginning in 2005 and is now the highest since 1993. Most of the increase since 2004 is due to higher fuel economy for light trucks, following a long-term trend of slightly declining overall fuel economy that peaked in 1987. These vehicles also have a slightly lower market share, peaking at 52 percent in 2004, with projections at 48 percent in 2008. Table 2.4-3 shows the alternatives for vehicle fuel economy increases currently being studied by the National Highway Traffic Safety Administration in its Draft Environmental Impact Statement for New Corporate Average Fuel Economy (CAFE) Standards (June 2008).

Table 2.4-3 Model Year 2015 Required Miles Per Gallon (mpg) by Alternative

No Action		25% Below Optimized	Optimized (Preferred)	25% Above Optimized	50% Above Optimized	Total Costs Equal Total Benefits	Technology Exhaustion
Cars	27.5	33.9	35.7	37.5	39.5	43.3	52.6
Trucks	23.5	27.5	28.6	29.8	30.9	33.1	34.7

Source: National Highway Traffic Administration, 2008.

Second, near-zero carbon vehicles will come into the market during the design life of this project. According to a March 2008 report released by University of California, Davis (UC Davis), Institute of Transportation Studies:

“Large advancements have occurred in fuel cell vehicle and hydrogen infrastructure technology over the past 15 years. Fuel cell technology has progressed substantially resulting in power density, efficiency,

range, cost, and durability all improving each year. In another sign of progress, automotive developers are now demonstrating over 100 fuel cell vehicles (FCVs) in California – several in the hands of the general public – with configurations designed to be attractive to buyers. Cold-weather operation and vehicle range challenges are close to being solved, although vehicle cost and durability improvements are required before a commercial vehicle can be successful without incentives. The pace of development is on track to approach pre-commercialization within the next decade.

“A number of the United States Department of Energy (DOE) 2010 milestones for FCV development and commercialization are expected to be met by 2010. Accounting for a five to six year production development cycle, the scenarios developed by the U.S. DOE suggest that 10,000s of vehicles per year from 2015 to 2017 would be possible in a federal demonstration program, assuming large cost share grants by the government and industry are available to reduce the cost of production vehicles.”²

Third, and as previously stated, California has recently adopted a low-carbon transportation fuel standard. The air board is scheduled to present draft regulations for low-carbon fuels in late 2008, with implementation of the standard to begin in 2010.

Fourth, driver behavior has been changing as the U.S. economy and oil prices have changed. In its January 2008 report, “Effects of Gasoline Prices on Driving Behavior and Vehicle Market,”³ the Congressional Budget Office found the following results based on data collected from California: (1) freeway motorists have adjusted to higher gas prices by making fewer trips and driving more slowly; (2) the market share of sports utility vehicles is declining; and (3) the average prices for larger, less-fuel-efficient models have declined over the past five years as average prices for the most-fuel-efficient automobiles have risen, showing an increase in demand for the more fuel efficient vehicles.

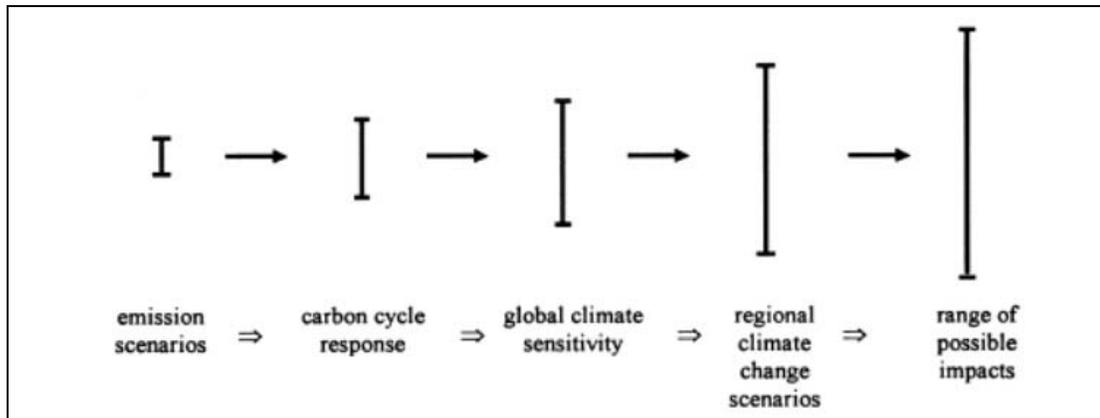
² Cunningham, Joshua, Sig Cronich, Michael A. Nicholas. March 2008. Why Hydrogen and Fuel Cells are Needed to Support California Climate Policy, UC Davis, Institute of Transportation Studies, pp. 9–10.

³ <http://www.cbo.gov/ftpdocs/88xx/doc8893/01-14-GasolinePrices.pdf>.

Limitations and Uncertainties with Impact Assessment

Figure 2.4-3⁴ is taken from the National Highway Traffic Safety Administration Draft Environmental Impact Statement for New CAFÉ Standards and illustrates how the range of uncertainties in assessing greenhouse gas impacts grows with each step of the analysis:

“Cascade of uncertainties typical in impact assessments showing the “uncertainty explosion” as these ranges are multiplied to encompass a comprehensive range of future consequences, including physical, economic, social, and political impacts and policy responses.”



Source: National Highway Traffic Safety Administration, 2008.

Figure 2.4-3 Cascade of Uncertainties

Much of the uncertainty in assessing an individual project’s impact on climate change surrounds the global nature of the climate change. Even assuming that the target of meeting the 1990 levels of emissions is met, there is no regulatory or other framework in place that would allow for a ready assessment of what the modeled 7.4 ton increase in CO₂ emissions would mean for climate change given the overall California greenhouse gas emissions inventory of approximately 430 million tons of CO₂ equivalent. This uncertainty only increases when viewed globally. The IPCC (Bailey: Spell out) has created multiple scenarios to project potential future global greenhouse gas emissions as well as to evaluate potential changes in global temperature, other climate changes, and their effect on human and natural systems. These scenarios vary in terms of the type of economic development, the amount of overall growth, and the steps taken to reduce greenhouse gas emissions. Non-

⁴ National Highway Traffic Safety Administration Draft EIS for New CAFE Standards (June 2008, pp. 3-48 and 3-49.)

mitigation IPCC scenarios project an increase in global greenhouse gas emissions by 9.7 up to 36.7 billion metric tons of CO₂ from 2000 to 2030, which represents an increase of between 25 and 90 percent.⁵

The assessment is further complicated by the fact that changes in greenhouse gas emissions can be difficult to attribute to a particular project because the projects often cause shifts in the locale for some types of greenhouse gas emissions, rather than causing “new” greenhouse gas emissions. The extent to which the modeled 11.4–20.9-ton increase in CO₂ emissions represents a net global increase, reduction, or no change, is uncertain, and there are no models approved by regulatory agencies that operate at the global or even statewide scale.

The complexities and uncertainties associated with project level impact analysis are further borne out in the recently released Draft Environmental Impact Statement completed by the National Highway Traffic Safety Administration CAFE standards (June 2008). As the text quoted below shows, even when dealing with greenhouse gas emission scenarios on a national scale for the entire passenger car and light truck fleet, the numerical differences among alternatives is very small and well within the error of sensitivity of the model.

“In analyzing across the CAFE 30 alternatives, the mean change in the global mean surface temperature, as a ratio of the increase in warming between the B1 (low) to A1B (medium) scenarios, ranges from 0.5 percent to 1.1 percent. The resulting change in sea level rise (compared to the No Action Alternative) ranges, across the alternatives, from 0.04 centimeter to 0.07 centimeter. In summary, the impacts of the Model Year 2011-2015 CAFE alternatives on global mean surface temperature, sea level rise, and precipitation are relatively small in the context of the expected changes associated with the emission trajectories. This is due primarily to the global and multi-sectoral nature of the climate problem. Emissions of CO₂, the primary gas driving the climate effects, from the United States automobile and light truck fleet represented about 2.5 percent of total global emissions of all greenhouse gases in the year 2000 (EPA, 2008; CAIT, 2008). While a significant source, this is a still small percentage of global emissions, and the relative contribution of CO₂ emissions from the

⁵ Intergovernmental Panel on Climate Change (IPCC). February 2007. Climate Change 2007: The Physical Science Basis: Summary for Policy Makers. <http://www.ipcc.ch/SPM2feb07.pdf>.

United States light vehicle fleet is expected to decline in the future, due primarily to rapid growth of emissions from developing economies (which are due in part to growth in global transportation sector emissions).⁶

Construction Emissions

Greenhouse gas emissions for transportation projects can be divided into those produced during construction and those produced during operations.

Construction greenhouse gas emissions include emissions produced as a result of material processing, emissions produced by onsite construction equipment (Table 2.4-4), and emissions arising from traffic delays due to construction. These emissions would be produced at different levels throughout the construction phase; their frequency and occurrence can be reduced through innovations in plans and specifications and by implementing better traffic management during construction phases. In addition, with innovations such as longer pavement life, improved traffic management, and better materials, the greenhouse gas emissions produced during construction can be mitigated to some degree by longer intervals between maintenance and rehabilitation events.

⁶ NHTSA Draft EIS for New CAFE Standards, June 2008, pp.3-77 to 3-78.

Table 2.4-4 Construction Emission Estimates by Phase (tons per year)

Construction Phase	ROG	NO _x	CO	Total PM ₁₀	Exhaust PM ₁₀	Fugitive Dust PM ₁₀	Total PM _{2.5}	Exhaust PM _{2.5}	Fugitive Dust PM _{2.5}	CO ₂ ^a
Grubbing/land clearing	0.4	2.9	1.5	3.7	0.1	3.6	0.9	0.1	0.7	246.4
Grading/excavation	2.6	19.8	18.8	17.0	0.9	16.0	4.2	0.8	3.3	2,021.1
Drainage/utilities/subgrade	0.7	4.4	2.5	11.0	0.3	10.7	2.5	0.2	2.2	392.3
Paving	0.4	2.0	1.3	0.2	0.2	–	0.2	0.2	–	178.1
Total	4.1	29.1	24.2	31.8	1.5	30.3	7.7	1.4	6.3	2,837.9
San Joaquin Valley Air Pollution Control District Thresholds (tons/year) [included for informational purposes only]	10	10	NA	15	NA	NA	NA	NA	NA	38,000

Notes: Emissions calculations based on Road Construction Emissions Model (Version 6.3.1).

ROG = reactive organic gases.

NO_x = nitrogen oxides.

CO = carbon monoxide.

PM₁₀ = particulate matter 10 microns or less in diameter.

PM_{2.5} = particulate matter 2.5 microns or less in diameter.

CO₂ = carbon dioxide.

NA = not applicable.

^a CO₂ is presented in metric tons per year.

CEQA Conclusion

As discussed above, the proposed project is predicted to result in small increases in both operational and construction-related CO₂ emissions. However, as also discussed above, it is Caltrans determination that in the absence of further regulatory or scientific information related to greenhouse gas emissions and CEQA significance, it is too speculative to make a determination regarding the project’s direct impact and its contribution on the cumulative scale to climate change. However, Caltrans is firmly committed to implementing measures to help reduce the potential effects of the project. These measures are outlined in the following sections

AB 32 Compliance

Caltrans continues to be actively involved on the Governor’s Climate Action Team as the air board works to implement the Governor’s Executive Orders and help achieve the targets set forth in AB 32. Many of the strategies Caltrans is using to help meet the targets in AB 32 come from the California Strategic Growth Plan, which is updated each year. Governor Arnold Schwarzenegger’s Strategic Growth Plan calls for a \$238.6 billion infrastructure improvement program to fortify the state’s transportation system, education, housing, and waterways, including \$100.7 billion in

transportation funding through 2016.⁷ As shown on the figure below, the Strategic Growth Plan targets a significant decrease in traffic congestion below today's level and a corresponding reduction in greenhouse gas emissions. The Strategic Growth Plan proposes to do this while accommodating growth in population and the economy. A suite of investment options has been created that combined together yield the promised reduction in congestion. The Strategic Growth Plan relies on a complete systems approach of a variety of strategies: system monitoring and evaluation, maintenance and preservation, smart land use and demand management, and operational improvements.

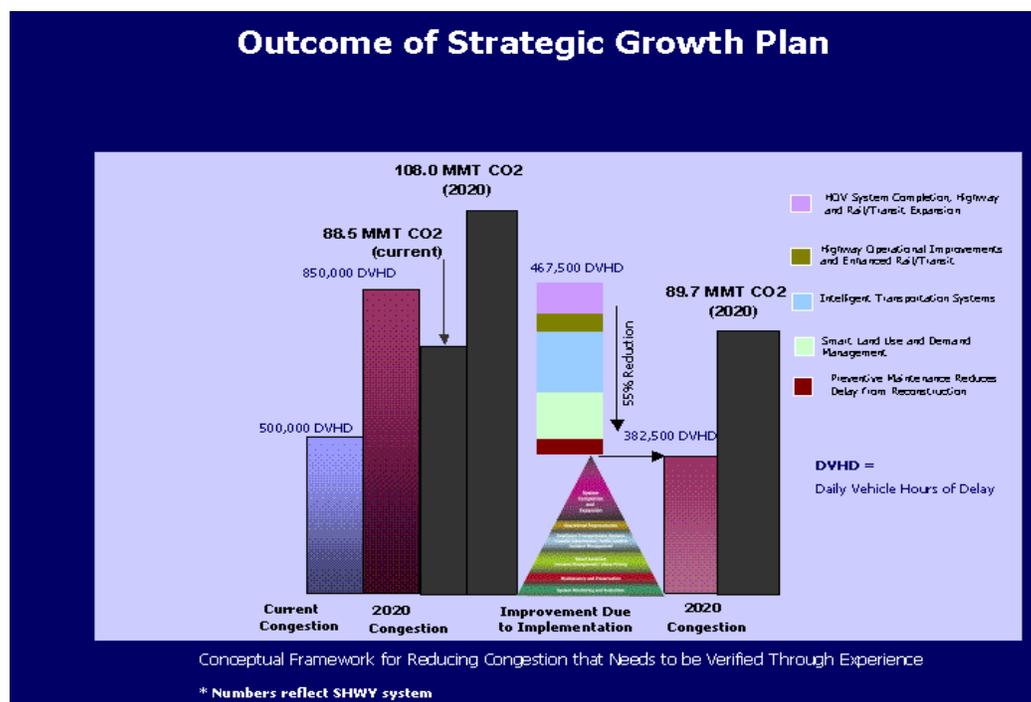


Figure 2.4-5 Outcome of Strategic Growth Plan

As part of the Climate Action Program at Caltrans (December 2006, <http://www.dot.ca.gov/docs/ClimateReport.pdf>), Caltrans is supporting efforts to reduce vehicle miles traveled by planning and implementing smart land use strategies: job/housing proximity, developing transit-oriented communities, and high density housing along transit corridors. Caltrans is working closely with local jurisdictions on planning activities; however, Caltrans does not have local land use planning authority. Caltrans is also supporting efforts to improve the energy

⁷ Governor's Strategic Growth Plan, Fig. 1 (<http://gov.ca.gov/pdf/gov/CSGP.pdf>)

efficiency of the transportation sector by increasing vehicle fuel economy in new cars, light and heavy-duty trucks; Caltrans is doing this by supporting on-going research efforts at universities, by supporting legislative efforts to increase fuel economy, and by its participation on the Climate Action Team. It is important to note, however, that the control of the fuel economy standards is held by Environmental Protection Agency and the air board. Lastly, the use of alternative fuels is also being considered; Caltrans is participating in funding for alternative fuel research at the UC Davis.

Table 2.4-5 summarizes Caltrans' and statewide efforts for implementation in order to reduce greenhouse gas emissions. For more detailed information about each strategy, please see Climate Action Program at Caltrans (December 2006); it is available at <http://www.dot.ca.gov/docs/ClimateReport.pdf>.

Table 2.4-5 Caltrans Climate Change Strategies

Strategy	Program	Partnership		Method/Process	Estimated CO ₂ Savings (MMT)	
		Lead	Agency		2010	2020
Smart land use	Intergovernmental Review (IGR)	Caltrans	Local governments	Review and seek to mitigate development proposals	Not estimated	Not estimated
	Planning grants	Caltrans	Local and regional agencies and other stakeholders	Competitive selection process	Not estimated	Not estimated
	Regional plans and blueprint planning	Regional agencies	Caltrans	Regional plans and application process	0.975	7.8
Operational improvements and Intelligent Transportation Systems (ITS) deployment	Strategic Growth Plan	Caltrans	Regions	State ITS; congestion management plan	0.007	2.17
Mainstream energy and greenhouse gas emissions into plans and projects	Office of Policy Analysis & Research; Division of Environmental Analysis	Interdepartmental effort		Policy establishment, guidelines, technical assistance	Not estimated	Not estimated
Educational and information program	Office of Policy Analysis & Research	Interdepartmental, California Environmental Protection Agency, California Air Resources Board, California Energy Commission		Analytical report, data collection, publication, workshops, outreach	Not estimated	Not estimated
Fleet greening and fuel diversification	Division of Equipment	Department of General Services		Fleet replacement B20 B100	0.0045	0.0065 0.45 0.0225
Non-vehicular conservation measures	Energy Conservation Program	Green Action Team		Energy conservation opportunities	0.117	.34
Portland Cement	Office of Rigid Pavement	Cement and construction industries		2.5 percent limestone cement mix 25 percent fly ash cement mix > 50 percent fly ash/slag mix	1.2 0.36	3.6
Goods movement	Office of Goods Movement	California EPA, ARB, Business, Transportation and Housing Agency, Metropolitan Planning Organizations		Goods movement action plan	Not estimated	Not estimated
Total					2.72	18.67

Source: California Department of Transportation and Business, Transportation, and Housing Agency 2006.

Note: CO₂ = carbon dioxide.

To the extent that it is applicable or feasible for the project, the following measures can also help to reduce the greenhouse gas emissions and potential climate change impacts from projects:

1. Caltrans and the California Highway Patrol are working with regional agencies to implement Intelligent Transportation Systems to help manage the efficiency of the existing highway system. Intelligent Transportation Systems is commonly used to refer to tools such as electronics, communications, or information processing used singly or in combination to improve the efficiency or safety of a surface transportation system.
2. Use of reclaimed water—currently 30 percent of the electricity used in California is used for the treatment and delivery of water. Use of reclaimed water helps conserve this energy, which reduces greenhouse gas emissions from electricity production.
3. Landscaping—reduces surface warming and through photosynthesis decreases carbon dioxide.
4. Portland cement—use of lighter color surfaces such as Portland cement helps to reduce the albedo effect (measure of how much light a surface reflects) and cool the surface; in addition, Caltrans has been a leader in the effort to add fly ash to Portland cement mixes. Adding fly ash reduces the greenhouse gas emissions associated with cement production—it also can make the pavement stronger.
5. Lighting—Use of energy efficient lighting, such as light-emitting diode traffic signals
6. Idling restrictions—for trucks and equipment

Adaptation Strategies

“Adaptation strategies” refer to how Caltrans and others can plan for the effects of climate change on the state’s transportation infrastructure and strengthen or protect the facilities from damage. Climate change is expected to produce increased variability in precipitation, rising temperatures, rising sea levels, storm surges and intensity, and the frequency and intensity of wildfires. These changes may affect the transportation infrastructure in various ways, such as damaging roadbeds by longer periods of intense heat; increasing storm damage from flooding and erosion; and inundation from rising sea levels. These effects would vary by location and may, in the most extreme cases, require that a facility be relocated or redesigned. There may also be economic and strategic ramifications as a result of these types of impacts to the transportation infrastructure.

Climate change adaptation must also involve the natural environment as well. Efforts are underway on a statewide-level to develop strategies to cope with impacts to habitat and biodiversity through planning and conservation. The results of these

efforts will help California agencies plan and implement mitigation strategies for programs and projects.

On November 14, 2008, Governor Schwarzenegger signed Executive Order S-13-08 which directed a number of state agencies to address California's vulnerability to sea level rise caused by climate change.

The California Resources Agency (now the Natural Resources Agency, (Resources Agency)), through the interagency Climate Action Team, was directed to coordinate with local, regional, state and federal public and private entities to develop a state Climate Adaptation Strategy. The Climate Adaptation Strategy will summarize the best known science on climate change impacts to California, assess California's vulnerability to the identified impacts and then outline solutions that can be implemented within and across state agencies to promote resiliency.

As part of its development of the Climate Adaptation Strategy, Resources Agency was directed to request the National Academy of Science to prepare a *Sea Level Rise Assessment Report* by December 2010 to advise how California should plan for future sea level rise. The report is to include:

- relative sea level rise projections for California, taking into account coastal erosion rates, tidal impacts, El Niño and La Niña events, storm surge and land subsidence rates;
- the range of uncertainty in selected sea level rise projections;
- a synthesis of existing information on projected sea level rise impacts to state infrastructure (such as roads, public facilities and beaches), natural areas, and coastal and marine ecosystems;
- a discussion of future research needs regarding sea level rise for California.

Furthermore Executive Order S-13-08 directed the Business, Transportation, and Housing Agency to prepare a report to assess vulnerability of transportation systems to sea level affecting safety, maintenance and operational improvements of the system and economy of the state. Caltrans continues to work on assessing the transportation system vulnerability to climate change, including the effect of sea level rise.

Prior to the release of the final Sea Level Rise Assessment Report, all state agencies that are planning to construct projects in areas vulnerable to future sea level rise were directed to consider a range of sea level rise scenarios for the years 2050 and 2100 in

order to assess project vulnerability and, to the extent feasible, reduce expected risks and increase resiliency to sea level rise. However, all projects that have filed a Notice of Preparation, and/or are programmed for construction funding the next five years (through 2013), or are routine maintenance projects as of the date of Executive Order S-13-08 may, but are not required to, consider these planning guidelines. Sea level rise estimates should also be used in conjunction with information regarding local uplift and subsidence, coastal erosion rates, predicted higher high water levels, storm surge and storm wave data (Executive Order S-13-08 allows some exceptions to this planning requirement).

Climate change adaptation for transportation infrastructure involves long-term planning and risk management to address vulnerabilities in the transportation system from increased precipitation and flooding; the increased frequency and intensity of storms and wildfires; rising temperatures; and rising sea levels. Caltrans is an active participant in the efforts being conducted as part of Governor's Schwarzenegger's Executive Order on Sea Level Rise and is mobilizing to be able to respond to the National Academy of Science report on *Sea Level Rise Assessment* which is due to be released by December 2010.

On August 3, 2009, Natural Resources Agency in cooperation and partnership with multiple state agencies, released the 2009 California Climate Adaptation Strategy Discussion Draft, which summarizes the best known science on climate change impacts in seven specific sectors and provides recommendations on how to manage against those threats. The release of the draft document set in motion a 45-day public comment period.

Led by the California Natural Resources Agency, numerous other state agencies were involved in the creation of discussion draft, including Environmental Protection; Business, Transportation and Housing; Health and Human Services; and the Department of Agriculture. The discussion draft focuses on sectors that include: Public Health; Biodiversity and Habitat; Ocean and Coastal Resources; Water Management; Agriculture; Forestry; and Transportation and Energy Infrastructure. The strategy is in direct response to Gov. Schwarzenegger's November 2008 Executive Order S-13-08 that specifically asked the Natural Resources Agency to identify how state agencies can respond to rising temperatures, changing precipitation patterns, sea level rise, and extreme natural events. As data continues to be developed and collected, the state's adaptation strategy will be updated to reflect current findings.

Currently, Caltrans is working to assess which transportation facilities are at greatest risk from climate change effects. However, without statewide planning scenarios for relative sea level rise and other climate change impacts, Caltrans has not been able to determine what change, if any, may be made to its design standards for its transportation facilities. Once statewide planning scenarios become available, Caltrans would be able review its current design standards to determine what changes, if any, may be warranted in order to protect the transportation system from sea level rise.

Chapter 3 California Environmental Quality Act Evaluation

3.1 Discussion of Significant Impacts

For a discussion of each topic below please refer to the corresponding section in Chapter 2, “Affected Environment, Environmental Consequences, and Avoidance, Minimization, and Mitigation Measures.”

3.1.1 Less than Significant Effects of the Proposed Project Not Requiring Mitigation

The project would have less-than-significant impacts in the following areas, which will not require mitigation:

- Parks and Recreation
- Growth
- Emergency Services
- Utilities
- Schools
- Traffic and Transportation/Pedestrian and Bicycle Facilities
- Cultural Resources
- Hydrology
- Water Quality and Storm Water Runoff
- Geology/Soils/Seismic/Topography
- Air Quality

3.1.2 Significant Environmental Effects of the Proposed Project That Can be Mitigated to a Less-Than-Significant Level with Mitigation

The following areas are expected to experience significant environmental impacts with project construction and would require mitigation to reduce impacts to a less-than-significant level:

- Relocations
- Visual/Aesthetics (short-term impacts)
- Paleontology
- Hazardous Waste or Materials
- Noise (short-term impacts)
- Animal Species
- Threatened and Endangered Species

3.1.3 Unavoidable Significant Environmental Effects

The following project impacts are considered significant and unavoidable:

- Community Character and Cohesion
- Visual/Aesthetics (long-term impacts)
- Noise (long-term impacts)

3.2 Mitigation Measures for Significant Impacts under the California Environmental Quality Act

Community Character and Cohesion

For a discussion of mitigation measures for impacts to community character and cohesion, see section 2.1.3.1.

Relocations

For a discussion of mitigation measures for impacts requiring relocations of residents or businesses, see section 2.1.3.3.

Visual/Aesthetics

For a discussion of mitigation measures for short-term and long-term impacts on the visual and aesthetic values of the area, see section 2.1.6. The mitigation measures for long-term impacts to visual and aesthetic values would not reduce them to a less-than-significant level.

Paleontology

For a discussion of mitigation measures for paleontology, see section 2.2.4

Hazardous Waste or Materials

For a discussion of mitigation measures for hazardous waste or materials, see section 2.2.5.

Noise

For a discussion of mitigation measures for short-term noise impacts, see section 2.2.7. No feasible mitigation is available for long-term noise impacts.

Animal Species

For a discussion of mitigation measures for impacts to animal species, see section 2.3.1.

Threatened and Endangered Species

For a discussion of mitigation measures for impacts to threatened and endangered species, see section 2.3.2.

Chapter 4 Comments and Coordination

Early and continuing coordination with the general public and appropriate public agencies is an essential part of the environmental process to determine the scope of environmental documentation, the level of analysis, potential impacts and mitigation measures, and related environmental requirements. Agency consultation and public participation for this project have been accomplished through a variety of formal and informal methods, including project development team meetings; informational meetings with community organizations, public agencies, private groups, and affected residents and business owners. This chapter summarizes the results of Caltrans' efforts to fully identify, address, and resolve project-related issues through early and continuing coordination.

4.1 Public Outreach Plan

A public outreach plan was prepared for the project to ensure that community participation is consistent with outreach established during the Project Study Report Phase and continues to emphasize and encourage active participation. Outreach strategies and communication tools were designed to reach as many members of the community as possible through a variety of mediums. Opportunities for public involvement in the project have been well publicized through coordination with community-based networks (business and residential); distribution of bi-lingual written communication pieces (letters, postcards, and newsletters); newspaper advertisements; and, notices on agency web pages.

4.2 Community Organizations

Project informational meetings for community organizations began with project initiation in the fall of 2007, were reinitiated in the summer of 2008 at the beginning of the environmental document preparation and review phase of the project, and will continue throughout this phase. Thus far, meetings have been held with representative(s) identified below (see Table 4-1 for a listing of meeting dates and individuals who attended these meetings).

- Boggs Tract Community Advisory Committee:
- Boggs Tract Community Center

- Catholic Charities of San Joaquin
- El Concilio
- Family Resource and Referral Agency of San Joaquin County
- George Washington Elementary School
- Greater Stockton Chamber of Commerce
- Roman Catholic Diocese of Stockton: San Joaquin Hispanic Chamber of Commerce
- St. George Catholic Church
- St. Mary of the Assumption Catholic Church
- WorkNet of San Joaquin County

Efforts to contact the following organizations are ongoing since efforts to date have not been successful:

- Boggs Tract Church/Cooley Funeral Home
- Little Flock Baptist Church
- Mt. Zion Missionary Baptist Church
- People and Congregations Working Together

During the promotion of the public information/open house meeting (described below), meetings were held with several of these key stakeholders to further encourage their participation in the public outreach process and to encourage them to inform their memberships about the meeting.

Questions received from these representatives related to environmental impacts are summarized below:

- How will the churches be impacted?
- What is the timing for relocation of residents?
- Would there be work opportunities for residents of the County related to construction of the project?
- How would existing businesses be affected?
- How many homes would be displaced?

- What would future noise levels be?
- How would the value of homes be affected?
- Are there any laws requiring a setback between the proposed project and existing homes?
- Would community impacts be considered over cost?
- Would the area under the structure be used for community enhancement such as has been done with Chicano Park in San Diego and the farmers market in Sacramento?

4.3 Agencies and Individuals

Meetings similar to those held with community organizations were also held with the following agencies, businesses, and individuals that could be affected by the project (see Table 4-1):

- American Medical Response
- City of Stockton
 - Code Enforcement
 - Fire Department Public Works Department
 - Redevelopment Department
 - Interested and impacted residents
- Latino Times Newspaper
- MC Liquors
- Navy Drive business and property owners
 - All Foreign & Domestic Body Shop
 - Bens Auto Dismantlers/LKQ of Stockton, Inc.
 - C&R International Sales
 - Debco Auto Wrecking, Inc.
 - First Student Transit, Inc. c/o Calfee & Konwinski
 - Jaguar Heaven
 - Mel's Auto Dismantlers
 - Tech Development Corp
 - Velvacon LLC
 - Vernon Transportation

- Port of Stockton
- San Joaquin County
 - Environmental Health Department
 - Public Works Department
 - Sheriff’s Department
 - Community Development Department
- Stebbins of Stockton/U-Haul
- Stockton Unified School District
- Visionary Home Builders of California

Table 4-1 Stakeholders Meetings

Date and Time	Stakeholder(s)	Meeting Location
September 20, 2007 8:30 a.m.	El Concilio – Council for the Spanish Speaking • Jose Rodriguez, President and CEO	El Concilio 308 N. California Street Stockton, CA 95202
September 20, 2007 10:00 a.m.	Boggs Tract Community Center • Arlene Coffee, Executive Director	Boggs Tract Community Center 533 S. Los Angeles Street Stockton, CA 95203
September 20, 2007 1:30 p.m.	Roman Catholic Diocese of Stockton • Sister Terry Davis, Communications Director	Roman Catholic Diocese of Stockton 1105 Lincoln Street Stockton, CA 95203
September 28, 2007 9:00 a.m.	Washington Elementary School • Laurie Leffler, Principal	Washington Elementary School 1735 W. Sonora Street Stockton, CA 95203
September 28, 2007 1:30 p.m.	Stockton Fire Department • Ray Call, Deputy Fire Chief	City Hall, Fire Department 425 N. El Dorado Street Stockton, CA 95202
September 28, 2007 2:30 p.m.	Boggs Tract Community Center • Arlene Coffee, Executive Director	Boggs Tract Community Center 533 S. Los Angeles Street Stockton, CA 95203
October 1, 2007 12:30 p.m.	San Joaquin Sheriff’s Department • David Lampkin, Deputy Sheriff	Boggs Tract Community Center 533 S. Los Angeles Street Stockton, CA 95203
October 1, 2007 2:30 p.m.	San Joaquin Catholic Charities • Richard Fowler, Executive Director	San Joaquin Catholic Charities 1106 N. El Dorado Street Stockton, CA 95202
October 1, 2007 4:00 p.m.	Boggs Tract Church • Rev. Steven Cooley, Minister • MC Liquors • Harding Fultcher, Owner	Boggs Tract Church 640 North California Street Stockton, CA 95202
October 3, 2007 3:00 p.m.	City of Stockton, Redevelopment Department • Steve Pinkerton, Director • Kitty Walker, Program Manager III	City of Stockton - City Hall 425 N. El Dorado Street Stockton, CA 95202
November 26, 2007 11:00 a.m.	Visionary Home Builders • Carol Ornelas, CEO • Justin Llata, Development Director • Lisia Davalos, Project Manager	Visionary Home Builders of California 315 N. San Joaquin Street, 2 nd Floor Stockton, CA 95202

Chapter 4 • Comments and Coordination

Date and Time	Stakeholder(s)	Meeting Location
November 26, 2007 1:30 p.m.	Stockton Unified School District <ul style="list-style-type: none"> • Dr. Paul Disario, CFO • Steve Brakefiled, Director of Facilities Planning 	Stockton Unified School District 701 N Madison Street Stockton, CA 95202
November 28, 2007 10:00 a.m.	Greater Stockton Chamber of Commerce <ul style="list-style-type: none"> • Douglas Wilhoit, Executive Director 	Greater Stockton Chamber of Commerce 445 W. Webber Avenue, Suite 200 Stockton, CA 95203
December 5, 2007 10:00 a.m.	San Joaquin County Hispanic Chamber of Commerce <ul style="list-style-type: none"> • Mark Martinez, Chief Executive Officer • Vernon Transportation Company • John Aguilar, President • Martinez Communications • Timothy Martinez 	San Joaquin County Hispanic Chamber of Commerce 306 E. Main Street, Suite 303 Stockton, CA 95202
August 26, 2008 10:00 a.m.	Roman Catholic Diocese of Stockton <ul style="list-style-type: none"> • Sister Terry Davis • Catholic Charities of San Joaquin • Richard Fowler, Director 	Roman Catholic Diocese of Stockton 1105 North Lincoln Street Stockton, CA 95203
August 26, 2008 1:30 p.m.	Visionary Home Builders <ul style="list-style-type: none"> • Carol Ornelas, CEO • Justin Llata, Development Director 	Visionary Home Builders 315 N. San Joaquin Street Stockton, CA 95202
August 27, 2008 8:30 a.m.	Stockton Unified School District <ul style="list-style-type: none"> • Steve Breakfield, Director of Facilities Planning 	Stockton Unified School District 1944 N. El Pinal Drive Stockton, CA 95205
September 4, 2008 9:00 a.m.	City of Stockton, Redevelopment Department <ul style="list-style-type: none"> • Paul Blumberg, Interim Director • Kitty Walker, Program Manager • Mike McDowell, Planning Manager 	City Hall, Economic Development Conference Room 425 N. El Dorado Street, 3 rd Floor Stockton, CA 95202
September 17, 2008 3:30 p.m.	San Joaquin Hispanic Chamber of Commerce <ul style="list-style-type: none"> • Mark Martinez, Executive Director • Jesus Vargas, VSCE • Vernon Transportation • Tony Ketner • Gregg Wilson 	San Joaquin Hispanic Chamber of Commerce 306 E. Main Street, Suite 303 Stockton, CA 95202
September 18, 2008 2:00 p.m.	Boggs Tract Community Advisory Committee <ul style="list-style-type: none"> • Arlene Coffee, Director • Chris Pehl, Lt. District Commander, San Joaquin County Sheriff Department • Laurie Lefler, Principal, Washington Elementary School • Robert Glissman, San Joaquin County, Code Enforcement • Stacy Rivera, San Joaquin County, Environmental Health • Tom Okamoto, San Joaquin County, Dept. of Public Works • Dwight Brown, City of Stockton Code Enforcement • Jose' Nuno, Visionary Home Builders of California 	Boggs Tract Community Center 533 S. Los Angeles Street Stockton, CA 95203
October 8, 2008 9:00 a.m.	City of Stockton, Fire Department <ul style="list-style-type: none"> • Ray Call, Deputy Fire Chief 	City Hall, Fire Department 425 North El Dorado Street Stockton, CA 95202

Chapter 4 • Comments and Coordination

Date and Time	Stakeholder(s)	Meeting Location
October 8, 2008 10:00 a.m.	El Concilio – Council for the Spanish Speaking <ul style="list-style-type: none"> • Jose Rodriguez, Executive Director • Annette Sanchez, VP Operations 	El Concilio 308 N. California Street Stockton, CA 95202
October 8, 2008 12:00 p.m.	Vernon Transportation Company <ul style="list-style-type: none"> • Gregg Wilson, President • Tony Ketner, Vice President 	Vernon Transportation Company 2313 Navy Drive Stockton, CA 95202
October 21, 2008 9:00 a.m.	St. George Catholic Church <ul style="list-style-type: none"> • Father Javier Campechano 	St. George Catholic Church 120 West 5 th Street Stockton, CA 95206
October 21, 2008 10:30 a.m.	Stebbins of Stockton/U-Haul (interested citizen) <ul style="list-style-type: none"> • Mark Stebbins, Owner 	Denny's Restaurant 642 W Charter Way Stockton, CA 95206
October 28, 2008 11:00 a.m.	Navy Drive Business and Property Owners	Caltrans District 10 Office 1976 E Charter Way Stockton, CA 95205
October 30, 2008 4:00 p.m.	Stockton Chamber of Commerce <ul style="list-style-type: none"> • Douglas Wilhoit, Chief Executive Officer • Dennis Goldstrand, Board President • Member of the Board of Directors 	Stockton Chamber of Commerce 445 W. Weber Avenue, Suite 220 Stockton, CA 95203
June 8, 2009	Boggs Tract Community Center <ul style="list-style-type: none"> • Marvin Pina, Interim Director 	Boggs Tract Community Center 533 S. Los Angeles Street Stockton, CA 95203
June 23, 2009 10:00 a.m.	Navy Drive Business Owners <ul style="list-style-type: none"> • Fran Aguilera, WorkNet of San Joaquin County • John Bedford, Debco Auto Wrecking, Inc. • Cordiano, Jaguar Heaven • Matt Davis, Bens Auto Dismantlers/ LKQ of Stockton, Inc. • Mike Davis, Mel's Auto Dismantlers • Tony Ketner, Vernon Transportation • J. Middlekauff • Charlie Toledo, C&R International Sales • Gregg Wilson, Vernon Transportation • Randy Wittig, Bens Auto Dismantlers/ LKQ of Stockton, Inc. 	Caltrans, District 10 Conference Room 53-66 1976 East Charter Way Stockton, CA 95205
June 25, 2009 2:00 p.m.	Washington Elementary School/Boggs Tract Community Advisory Council (CAC) <ul style="list-style-type: none"> • Laurie Leffler, Principal/Chair 	Washington Elementary School 1735 W. Sonora Street Stockton, CA 95203-3054
July 16, 2009 2:00 p.m.	Boggs Tract Community Advisory Committee (CAC) <ul style="list-style-type: none"> • Manuel Pina, Acting Director • Laurie Leffler, Chair 	Boggs Tract Community Center 533 S. Los Angeles Street Stockton, CA 95203
July 9, 2009 1:00 p.m.	Catholic Charities of San Joaquin <ul style="list-style-type: none"> • Elvira Ramirez, Executive Director 	Catholic Charities 1106 North El Dorado Street, Suite C Stockton, CA 95202
July 21, 2009 3:00 p.m.	Catholic Charities of San Joaquin <ul style="list-style-type: none"> • Elvira Ramirez, Executive Director 	Catholic Charities 1106 North El Dorado Street, Suite C Stockton, CA 95202

Date and Time	Stakeholder(s)	Meeting Location
July 23, 2009 2:00 p.m.	Boggs Tract Community Advisory Committee (CAC) <ul style="list-style-type: none"> • Juanita Huerta, City of Stockton, Code Enforcement • Todd Wright, San Joaquin County, Sheriff Department • David Lampkins, San Joaquin County, Sheriffs Department • Omran Sood, San Joaquin County, Environmental Health Department • Gloria Garcia, Boggs Advisory Community Advisory Committee • Laurie Leffler, Washington Elementary School • Victor Constantino, Board of Supervisors Office • Marvin Pena, Boggs Tract Community Center • Mahmoud Saqqa, San Joaquin County, Public Works • Ana Sanchez, resident • Helen Sanders, resident 	Boggs Tract Community Center 533 S. Los Angeles Street Stockton, CA 95203
July 27, 2009 11:00 a.m.	Port of Stockton <ul style="list-style-type: none"> • Jeff Kaspar • Juan Villanueva • S.Y. Kim 	Port of Stockton 2201 W. Washington Street Stockton, CA 95203

4.4 Notice of Preparation

A Notice of Preparation was sent to the following state agencies on June 1, 2009 notifying them that Caltrans would be preparing an environmental impact report on this project and that they had 30 days to comment on the scope and content on the environmental information germane to their agency:

- Air Resources Board
- California Highway Patrol
- California Transportation Commission
- Department of Conservation
- Fish and Game
- Department of Health Services
- Native American Heritage Commission
- Office of Historic Preservation

- Public Utilities Commission
- Central Valley Regional Water Quality Control Board
- Resources Agency
- Department of Toxic Substances
- State Clearinghouse

Two comment letters were received in response, one from the Public Utilities Commission and one from the California Transportation Commission. The Public Utilities Commission acknowledged its role as a responsible agency under the California Environmental Quality Act and its approval authority for constructing the proposed elevated structure over the Burlington Northern Santa Fe Railway corridor. The California Transportation Commission had no comments regarding the environmental issues to be addressed in the project environmental impact report.

4.5 Public Meetings

The first public information/open house meeting on the project was held on Thursday, October 15, 2009 from 5:00 p.m. to 8:00 p.m. at the George Washington Elementary School, located at 1735 West Sonora Street in the Boggs Tract neighborhood. This site was checked for compliance with the American Disabilities Act in terms of access into the building and restrooms, to emergency exits, and to displays and meeting materials.

The public information/open house meeting was publicized through distribution of newsletter invitations, letters, and media alerts. Public notices in the form of newsletter invites were mailed on October 2, 2009 to approximately 1,045 residents, property owners, and businesses located within the project corridor. Included in this list were regional agencies and stakeholders that may be affected by the project. Extra copies of the newsletter were also provided to the Boggs Tract Community Center, El Concilio, and the San Joaquin County Family Resource and Referral Agency for posting in their San Joaquin County facilities and to provide copies to all client services staff. Newsletters were also hand delivered to several local businesses for display including:

- Arizona Restaurant and Grill
- A and M Liquors

- Mi Ranchito Restaurant
- Sonora Market and Liquor
- Super Mercado La Piedad
- Taqueria Chapala

An invitation letter was also generated and distributed by Director of Caltrans District 10 to federal, state, and local elected officials in San Joaquin County. A second invitation letter was generated and distributed to key community and business stakeholders. Both letters were mailed on October 1, 2009 to the following entities:

- San Joaquin County—Board of Supervisors
 - Carlos Villapudua, District 1
 - Larry Ruhstaller, District 2
 - Steve J. Bestolarides, District 3
 - Ken Vogel, District 4
 - Leroy Ornellas, District 5
- City of Stockton—City Council
 - Mary Ann Johnston, Mayor
 - Katherine Miller, Vice Mayor
 - Elbert H. Holman, Jr., Councilmember, District 1
 - Leslie Baranco Martin, Councilmember, District 3
 - Diana Lowery, Councilmember, District 4
 - Susan Talamantes Eggman, Councilmember, District 5
 - Dale Fritchen, Councilmember, District 6
- State Elected Officials
 - California State Assembly—Cathleen Galgiana, Assemblymember, District 17
 - California State Senate—Lois Wolk, Senator, District 5
- Congressional Elected Officials
 - US House of Representatives—Dennis Cardoza, Congressman, District 18
 - United States Senate
 - Dianne Feinstein, Senator
 - Barbara Boxer, Senator

Public notices were submitted to *The Record* for publication on October 12, and to the *Latino Times* for publication on October 14, 2009. Notices were also posted on two Web sites:

- State Route 4 Crosstown Freeway Extension Web site: www.dot.ca.gov/dist10
- San Joaquin Council of Governments' Web site: www.sjcog.org

Participating public agencies at the public information/open house meeting included Caltrans (as the lead agency under the California Environmental Quality Act), City of Stockton, San Joaquin County, and the San Joaquin Council of Governments. The purpose of the public information/open house meeting was to present general information on the proposed project, such as project location, purpose and need, and schedule, as well as to seek public comment on this information. The public information/open house meeting allowed those in attendance to receive information and provide comments in a comfortable setting by visiting each or any of the 16 stations of interest, available in both English and Spanish.

As a result of the grass roots effort that included various means for reaching out to the public, 78 people attended the public information/open house meeting. Each was greeted and welcomed at the door and informed that Spanish language translators were available to assist them at the meeting. They were directed to the sign-in table where they were asked to sign in and were provided with a project fact sheet, a voluntary survey, and a comment card. Each attendee was also provided with a brief overview of the room, the various stations and was encouraged to review the boards, maps, and topic stations at their own pace. Project staff members were available to answer questions and have open dialogue with attendees throughout the evening. A comment table was available and attendees were encouraged to provide comments directly to the bilingual stenographer or via the comment card by depositing it in the comment card box or via submission to the U.S. Postal Service at a later date.

Below is a list of key comments that were raised by attendees at the October 15, 2009 public information/open house meeting and presented comments in both written and verbal forms. (The comments raised, as presented below, are listed in no particular order in terms of importance or frequency with which the comments were raised.):

- Relocation program
- Safe access to private and public properties during construction
- Project landscaping near the proposed elevated structure
- Community cohesion
- Closing of ramps at Fresno Avenue and distance to access new freeway ramps

- Increase in traffic noise for those living close to the elevated structure
- Property values
- Need for sound wall on elevated structure
- Project would create jobs
- Retaining wall option versus viaduct option
- Proposed project divides the community
- Safety of children and property
- New/additional stop signs
- Construction detours, hours, and impacts
- Project design
- Public input
- Project support

Chapter 5 List of Preparers

5.1 Caltrans

This document was reviewed by the following Caltrans Central Region staff:

Gail Miller, Senior Environmental Planner. B.A., Public Administration, California State University, Fresno; 17 years land use and environmental planning experience. Contribution: senior review

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Jon Brady, Associate Environmental Planner (Architectural Historian). Prehistoric and Historic Archaeology. Contribution: cultural resources review

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5.3 ICF Jones & Stokes

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- Anna Busing, Ph.D., P.G., Geologist. Ph.D., Geological Sciences, University of California, Santa Barbara; B.S., Geology, University of California, Los Angeles; 22 years environmental consulting and geological experience. Contribution: paleontology
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Chapter 6 Distribution List

6.1 Report Available for Public Review

Copies of this draft environmental document are available for public review at the following locations:

Libraries

Cesar Chavez Central Library
605 N El Dorado Street
Stockton, CA 95202

Agency Offices

Caltrans District 10
1976 East Charter Way/East Martin Luther King Jr. Drive
Stockton, CA 95205

San Joaquin Council of Governments
555 East Weber Street
Stockton, CA 95202

6.2 Distribution of Report

A copy of the draft environmental document has been provided to the following state agencies and public officials:

State Agencies

- California Air Resources Board
- California Highway Patrol
- California Transportation Commission
- California Department of Conservation
- California Department of Fish and Game
- California Department of Health Services
- Native American Heritage Commission

- California Office of Historic Preservation
- Public Utilities Commission
- Central Valley Regional Water Quality Control Board
- California Resources Agency
- California Department of Toxic Substances
- State Clearinghouse

Public Officials

- San Joaquin County—Board of Supervisors
 - Carlos Villapudua, District 1
 - Larry Ruhstaller, District 2
 - Steve J. Bestolarides, District 3
 - Ken Vogel, District 4
 - Leroy Ornellas, District 5
- City of Stockton—City Council
 - Mary Ann Johnston, Mayor
 - Katherine Miller, Vice Mayor
 - Elbert H. Holman, Jr., District 1
 - Leslie Baranco Martin, District 3
 - Diana Lowery, District 4
 - Susan Talamantes Eggman, District 5
 - Dale Fritchen, Councilmember, District 6
- State Elected Officials
 - California State Assembly—Cathleen Galgiana, District 17
 - California State Senate—Lois Wolk, District 5
- Congressional Elected Officials
 - U.S. House of Representatives—Dennis Cardoza, District 18
 - U. S. Senate
 - Dianne Feinstein, Senator
 - Barbara Boxer, Senator

Appendix A California Environmental Quality Act Checklist

The following checklist identifies physical, biological, social, and economic factors that might be affected by the proposed project. The California Environmental Quality Act impact levels include “potentially significant impact,” “less than significant impact with mitigation,” “less than significant impact,” and “no impact.”

Supporting documentation of all California Environmental Quality Act checklist determinations is provided in Chapters 2 and 3 of this Environmental Impact Report. Documentation of “No Impact” determinations is provided at the beginning of Chapter 2.

Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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AESTHETICS - Would the project:

- | | | | | |
|---|-------------------------------------|--------------------------|-------------------------------------|-------------------------------------|
| a) Have a substantial adverse effect on a scenic vista? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic building within a state scenic highway? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Substantially degrade the existing visual character or quality of the site and its surroundings? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| d) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

AGRICULTURE RESOURCES - In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:

- | | | | | |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Conflict with existing zoning for agricultural use, or a Williamson Act contract? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Involve other changes in the existing environment that, due to their location or nature, could result in conversion of Farmland, to non-agricultural use? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

AIR QUALITY - Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:

- | | | | | |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|
| a) Conflict with or obstruct implementation of the applicable air quality plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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d) Expose sensitive receptors to substantial pollutant concentration?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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e) Create objectionable odors affecting a substantial number of people?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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BIOLOGICAL RESOURCES - Would the project:

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	--------------------------	-------------------------------------

Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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CULTURAL RESOURCES - Would the project:

a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?
 Archaeological resources are considered “historical resources” and are covered under a).

c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

d) Disturb any human remains, including those interred outside of formal cemeteries?

GEOLOGY AND SOILS - Would the project:

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

ii) Strong seismic ground shaking?

iii) Seismic-related ground failure, including liquefaction?

iv) Landslides?

b) Result in substantial soil erosion or the loss of topsoil?

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on or offsite landslide, lateral spreading, subsidence, liquefaction or collapse?

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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HAZARDS AND HAZARDOUS MATERIALS -

Would the project:

- | | | | | |
|--|--------------------------|-------------------------------------|--------------------------|-------------------------------------|
| a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c) Emit hazardous emissions or handle hazardous or acutely hazardous material, substances, or waste within one-quarter mile of an existing or proposed school? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| d) Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

HYDROLOGY AND WATER QUALITY - Would the project:

- | | | | | |
|---|--------------------------|--------------------------|-------------------------------------|--------------------------|
| a) Violate any water quality standards or waste discharge requirements? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|---|--------------------------|--------------------------|-------------------------------------|--------------------------|

Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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- b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?
- c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on or offsite?
- d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on or offsite?
- e) Create or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?
- f) Otherwise substantially degrade water quality?
- g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?
- h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows?
- i) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?
- j) Result in inundation by a seiche, tsunami, or mudflow?

LAND USE AND PLANNING - Would the project:

- Physically divide an established community?
- Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
MINERAL RESOURCES - Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
NOISE - Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
POPULATION AND HOUSING - Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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PUBLIC SERVICES -

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:

Fire protection?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Police protection?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Schools?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Parks?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	-------------------------------------	--------------------------

Other public facilities?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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RECREATION -

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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b) Does the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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TRANSPORTATION/TRAFFIC - Would the project:

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

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	-------------------------------------	--------------------------

b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Appendix A • California Environmental Quality Act Checklist

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Result in inadequate parking capacity?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
UTILITY AND SERVICE SYSTEMS - Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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MANDATORY FINDINGS OF SIGNIFICANCE -

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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b) Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Appendix B Title VI Policy Statement

STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY

ARNOLD SCHWARZENEGGER, Governor

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*Flex your power!
Be energy efficient!*

August 25, 2009

TITLE VI POLICY STATEMENT

The California State Department of Transportation under Title VI of the Civil Rights Act of 1964 and related statutes, ensures that no person in the State of California shall, on the grounds of race, color, national origin, sex, disability, or age, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity it administers.


RANDELL H. IWASAKI
Director

"Caltrans improves mobility across California"

Appendix C Summary of Relocation Benefits

California Department of Transportation Relocation Assistance Program

Relocation Assistance Advisory Services

The California Department of Transportation (Caltrans) would provide relocation advisory assistance to any person, business, farm, or non-profit organization displaced as a result of Caltrans' acquisition of real property for public use. Caltrans would assist residential displacees in obtaining comparable decent, safe, and sanitary replacement housing by providing current and continuing information on sales price and rental rates of available housing. Non-residential displacees would receive information on comparable properties for lease or purchase.

Residential replacement dwellings would be in equal or better neighborhoods, at prices within the financial means of the individuals and families displaced, and reasonably accessible to their places of employment. Before any displacement occurs, displacees would be offered comparable replacement dwellings that are open to all persons regardless of race, color, religion, sex, or national origin, and are consistent with the requirements of Title VIII of the Civil Rights Act of 1968. This assistance would also include supplying information concerning federal- and state-assisted housing programs, and any other known services being offered by public and private agencies in the area.

Residential Relocation Payments Program

For more information or a brochure on the residential relocation program, please contact Gail Miller at gail_miller@dot.ca.gov, 559-243-8274, or Central Region, California Department of Transportation, 2015 E. Shields Avenue, Fresno, CA 93726.

The brochure on the residential relocation program is also available in English at http://www.dot.ca.gov/hq/row/pubs/residential_english.pdf and in Spanish at http://www.dot.ca.gov/hq/row/pubs/residential_spanish.pdf.

If you own or rent a mobile home that may be moved or acquired by Caltrans, a relocation brochure is available in English at http://www.dot.ca.gov/hq/row/pubs/mobile_eng.pdf and in Spanish at http://www.dot.ca.gov/hq/row/pubs/mobile_sp.pdf.

Business and Farm Relocation Assistance Program

For more information or a brochure on the relocation of a business or farm, please contact Gail Miller at gail_miller@dot.ca.gov, 559-243-8274, or Central Region, California Department of Transportation, 2015 E. Shields Avenue, Fresno, CA 93726.

The brochure on the business relocation program is also available in English at http://www.dot.ca.gov/hq/row/pubs/business_farm.pdf and in Spanish at http://www.dot.ca.gov/hq/row/pubs/business_sp.pdf.

Additional Information

No relocation payment received would be considered as income for the purpose of the Internal Revenue Code of 1954 or for the purposes of determining eligibility or the extent of eligibility of any person for assistance under the Social Security Act or any other federal law (except for any federal law providing low-income housing assistance).

Persons who are eligible for relocation payments and who are legally occupying the property required for the project would not be asked to move without being given at least 90 days advance notice, in writing. Occupants of any type of dwelling eligible for relocation payments would not be required to move unless at least one comparable “decent, safe, and sanitary” replacement residence, open to all persons regardless of race, color, religion, sex, or national origin, is available or has been made available to them by the state.

Any person, business, farm, or non-profit organization, which has been refused a relocation payment by Caltrans, or believes that the payments are inadequate, may appeal for a hearing before a hearing officer or Caltrans’ Relocation Assistance Appeals Board. No legal assistance is required; however, the displacee may choose to obtain legal council at his/her expense. Information about the appeal procedure is available from Caltrans’ Relocation Advisors.

The information above is not intended to be a complete statement of all of Caltrans’ laws and regulations. At the time of the first written offer to purchase, owner-occupants are given a more detailed explanation of the state’s relocation services. Tenant occupants of properties to be acquired are contacted immediately after the first written offer to purchase, and also given a more detailed explanation of Caltrans’ relocation programs.

Important Notice

To avoid loss of possible benefits, no individual, family, business, farm, or non-profit organization should commit to purchase or rent a replacement property without first contacting a Department of Transportation relocation advisor at:

State of California
Department of Transportation, District #10
1976 East Charter Way
Stockton, CA 95210

Appendix D Minimization and/or Mitigation Summary

Parks and Recreation

Caltrans and/or the construction contractor would implement a traffic management plan that would identify signage to be used and the locations of potential temporary detours, if needed, to ensure that local access to the Boggs Tract Community Center and Park is available during construction of the project.

For construction-related air quality impacts, Caltrans would require the construction contractor to prepare and submit a dust control plan to the San Joaquin Valley Air Pollution Control District for approval at least 30 days prior to any earthmoving construction activities. The plan would include dust control measures in compliance with district regulations.

Caltrans and/or the contractors would also ensure that sound-control devices on construction equipment are effective and would implement additional control measures, as needed so that noise from construction activities between the hours of 9:00 p.m. and 6:00 a.m. does not exceed 86 dBA at a distance of 50 feet from the nearest residence.

Community Character and Cohesion

A public outreach program, on-going since 2007, is in effect to ensure that input on the project from residents, businesses, community groups and stakeholders, and partnering municipalities and agencies are addressed to the extent feasible.

Opportunities for public involvement in the project have been well publicized through community-based networks; written communication pieces, such as postcards and fact sheets; and web postings. Project information meetings were held for community organizations, public agencies and private entities, and businesses and residents that could be affected by the project. A public information meeting/open house on the project was also held in Boggs Tract in October 2009. Participants were encouraged to register their comments on comment cards, by talking with participating staff, and/or with a bilingual stenographer who attended the meeting. At the public meeting, residents voiced their concerns about safe access to Washington Elementary School during construction of the project, attracting the homeless who might seek refuge underneath the elevated structure, noise from traffic on the elevated structure, and the loss of homes. Some who commented at the public meeting expressed support for the project. In response to the input received from the public outreach program, the

design of the project has been refined. For example, new sidewalks have been added to the project design along South Los Angeles Avenue from West Hazelton Street to just south of the proposed Caltrans right-of-way for improved pedestrian access. New sidewalk segments have also been added along portions of the east and west sides of Fresno Avenue to connect the existing segments of sidewalks on Fresno Avenue, thereby improving connectivity.

As part of the project, the roadway shoulders along South Ventura Street and West Scotts Avenue would be widened to five feet to provide safer pedestrian access under the proposed elevated structure where there is very little pedestrian activity and mostly motorized traffic.

Relocations

Adequate replacement residential properties are expected to be available on the market for the residents of the 20 owner-occupied and 18 renter-occupied units that would be need to be relocated. The residential replacement area, located in the same zip code as the project area, includes neighborhoods within and surrounding the project area and can be characterized as having similar or better street usage, accessibility, composition, utilities, landscaping, and proximity to transportation, schools, shopping, health facilities, and religious centers. Based on communication with realtors and data from real estate listing web sites, 85 single-family residences were for sale in zip code 95203, with prices ranging from \$38,000 to \$325,000, and three multifamily units and two single-family units were available for rent. However, conversations with local realtors suggest that there are more rentals available than the rental listing resources indicate. The 95203 zip code has a higher proportion of renters (54.3 percent) than homeowners (45.7 percent) suggesting that the majority of the housing available in the 95203 zip code is rental housing. In addition, Stockton has 83 residential units available for rent, ranging from \$445 to \$1,750 per month.

Residents whose properties would be acquired would receive relocation benefits. The Caltrans Relocation Assistance Program is based on the federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (as amended) and Title 49 Code of Federal Regulations Part 24. The purpose of the Relocation Assistance Program is to ensure that persons displaced as a result of a transportation project are treated fairly, consistently, and equitably so that such persons would not suffer disproportionate effects as a result of projects designed for the benefits of the public as a whole. Caltrans would assist people being displaced from their homes to obtain comparable decent, safe, and sanitary replacement housing by providing

current and continuing information on sales price and rental rates of available housing.

Residential replacement dwellings would be in equal or better neighborhoods, at prices within the financial means of the individuals and families displaced, and reasonably accessible to their places of employment. Before any displacement occurs, affected individuals would be offered comparable replacement dwellings that are open to all persons regardless of race, color, religion, sex, or national origin, and are consistent with the requirements of Title VIII of the Civil Rights Act of 1968. This assistance would also include supplying information concerning federal- and state-assisted housing programs, and any other known services being offered by public and private agencies in the area. Specific policies regarding relocation benefits are described in Appendix

Adequate replacement business properties are also expected to be available on the market for sale and rent. Approximately 122 industrial properties are for sale or lease in Stockton. Of these properties, approximately 17 have adequate acreage for relocating the two auto salvage businesses, bulk sugar transportation/truck washing, and machine equipments and parts businesses. Ten of the available properties are located within designated industrial parks. Two of these properties are located within 0.5 mile of the project site, and all but one of the 17 properties are located within 5 miles of the project site.

The feasibility of relocating the auto salvage businesses depends upon the availability of large industrial lots and the relative proximity of the relocation property to residents and other sensitive receptors. New neighbors would likely be opposed to the noise, dust, and unsightliness associated with this type of business.

Based on input from the City of Stockton Municipal Utilities Department, possible relocation sites for the bulk sugar transportation/truck washing business include Arch Road near Airport Way, Navy Road east of Fresno Avenue, and a number of areas in the South Stockton Industrial Area. All these sites would be able to accommodate the sewer discharge for this business. Relocation assistance personnel would need to assess the feasibility of any industrial relocation properties on a case-by-case basis.

There are approximately four retail properties available in the relocation area, two of which appear to be compatible with the convenience store being relocated. There are 23 available retail properties in Stockton, the closest of which is located

approximately 1.9 miles east of the displacement area. There would be adequate relocation properties available for retail business relocation.

All affected businesses would receive relocation benefits and could benefit by relocating within the Port-Downtown Redevelopment Area, Stockton/San Joaquin County Enterprise Zone, or South Stockton Redevelopment Project Area where City, County, and state assistance (in the form of tax savings) is available to support reconstruction and rehabilitation of designated areas.

Those whose businesses are being displaced would receive information on comparable properties for lease or purchase. Specific policies regarding relocation benefits are described in Appendix C.

Emergency Services

Caltrans and/or the construction contractor would implement a traffic management plan to ensure that emergency service vehicle access is available during construction of the project. The plan would also specify the process for notifying emergency services of the construction period and any required detours.

Traffic and Transportation/Pedestrian and Bicycle Facilities

Access to residences and businesses located adjacent to the proposed construction area would be maintained during construction. Access to and from the construction area would be conducted from the existing Caltrans right-of-way, local streets, intersections, and/or acquired right-of-way. If it were to become necessary to limit or restrict access to these properties, it would be for limited durations, and detours would be made available with appropriate signage.

To minimize disruption to the traveling public, construction is proposed to occur in three stages. Stage 1 would consist of construction of the proposed freeway extension from Navy Drive to Fresno Avenue, including the elevated structure over the railroad right-of-way. The Crosstown Freeway and both lanes on the on- and off-ramps to Fresno Avenue would remain operational during this stage. Closures of local streets in the Boggs Tract neighborhood may be required for short periods of time during off-peak hours during this stage. If temporary, short-term closures are required, residents and emergency services would be notified two weeks in advance of the closures.

Stage 2 would consist of construction of the inside lanes (in both directions) of the proposed freeway extension from Fresno Avenue to the project's end at the Garfield

Street Overhead. The Crosstown Freeway and one lane of the on- and off-ramps to Fresno Avenue would remain operational during this stage. Closures of these ramps may be required for short periods of time. Closures of local streets in the Boggs Tract neighborhood may also be required for short periods of time during this stage. If temporary, short-term closures are required, residents and emergency services would be notified two weeks in advance of the closures.

Stage 3 would include construction of the outside lanes of the proposed freeway extension from Fresno Avenue to the project's end at the Garfield Street Overhead. The existing Crosstown Freeway on-and off-ramps at Fresno Avenue would be removed. Traffic would be diverted to the new extension completed during Stages 1 and 2 with a minimum of one lane in each direction open to traffic. The proposed ramps at the Crosstown Freeway/Navy Drive would also be open during this stage.

Caltrans and/or the construction contractor would implement a traffic management plan that would identify necessary signs to be used and the locations of potential temporary detours, if needed, to ensure that local access to residences and businesses and bus and emergency service vehicle access is available during construction of the project. The plan would specify time frames for temporary detours if they are needed. The plan would also specify the process for notifying residents, businesses, San Joaquin Regional Transit District, emergency services, and the traveling public of the construction period and any required detours.

With project construction, the San Joaquin Regional Transit District's bus line 76 would be rerouted so that access to and from the Boggs Tract neighborhood would be from West Church Street to Fresno Avenue. The Transit District would notify the public of any bus stop relocations.

With construction of the project and widening of Navy Drive, both sides of Navy Drive between the Burlington Northern Santa Fe underpass and Fresno Avenue, the shoulders on both sides of Navy Drive would be replaced with new 5-foot shoulders that could accommodate either a Class II or Class III bicycle lane.

Where pedestrian traffic is relatively light and currently must use the roadway shoulder, the project would widen and improve the shoulders including along South Ventura Street and West Scotts Avenue to provide safer pedestrian access under the proposed elevated structure. New sidewalks would be constructed along South Los Angeles Avenue from West Hazelton Street to just south of the proposed Caltrans

right-of-way. New sidewalks would also be built along portions of the east and west sides of Fresno Avenue to connect the existing segments of sidewalks.

Visual/Aesthetics

If Alternative 3B (retaining wall) is selected, a roughened wall surface would be used to soften the massiveness of the wall face, providing texture and reducing the amount of smooth surface that can reflect light. The shade of the wall would be carefully considered. The use of earth-toned colors for the wall surface would help the wall blend with the planted vegetation. Adding a design motif that mimics the appearance of natural materials would make the wall more visually pleasing than a plain surface. A plantable wall surface, such as a retaining wall structure that allows interstices for planting, would be considered for use.

Landscaping would be added within the proposed Caltrans right-of-way primarily between Fresno Avenue and South Ventura Avenue in Boggs Tract. Seventy-five percent of the species planted would be native to the project area and California. Native perennial hydroseed mix would be applied at all locations planned for plantings that have exposed soils and steep slopes. Native species are drought-tolerant, create a space that is attractive, and attract more wildlife than traditional landscape plant species. Landscaping would be planted within the first two years after completion of construction, and an irrigation and maintenance program implemented. The proposed elevated structure would be flanked on both sides by landscaping protected by a six-foot-high chain link fence. The side slopes of the embankments proposed at either end of the elevated structure would also be landscaped, as well as the area within the proposed Caltrans right-of-way at the southeast corner of South Los Angeles Avenue and West Hazelton Avenue.

The construction contractor would install street lights with the lowest height and the lowest wattage allowed under current Caltrans and City requirements; lights would be screened and directed away from residential areas to the greatest extent practicable; and the number of lights installed would be minimized. The need for safety lighting near underpasses and in the newly created cul-de-sacs in Landscape Unit 2 would also be evaluated.

For the proposed retaining walls, the construction contractor would use low-sheen and non-reflective surface materials to reduce glare. The use of smooth surfaces and glossy paint would be avoided. Use of similar building materials and colors to those

found in established communities would also be considered to help blend the proposed wall with its local surroundings.

To the maximum extent feasible, the construction contractor would not schedule construction activities near residences on weekends after 6:00 p.m. or on weekdays so that the work does not continue past daylight hours (which vary according to season). This would reduce the inconvenience caused by construction activities, because most of them would happen during business hours, when most residents are likely at work. The practice would also minimize the need for nighttime lighting. If nighttime construction is required, lighting sources would be screened and directed away from residential areas as much as possible, and the number of nighttime lights would be minimized.

The construction contractor would install fencing (such as chain link with slats or fencing made of windscreen material) or other structures to obstruct undesirable views of construction activities from residences adjacent to the construction site. The fencing would be a minimum of six feet high and would help to maintain the privacy of residents and block views of the construction area.

Cultural Resources

A qualified archaeologist would prepare an archaeological research design/treatment plan to identify any potentially important historical deposits prior to project construction. This plan would include detailed results of archival research, identify areas with the greatest sensitivity, detail field methods, explain the criteria for evaluation, and specify laboratory methods. The field methods section of the plan would follow Caltrans' compressed approach wherein identification, evaluation, and mitigation tasks are conducted in a single field phase directed by a research design/treatment plan. Under this approach, archaeological features are evaluated for eligibility to the California Register of Historic Places as they are discovered. Features that do not meet the criteria presented in the research design are deemed ineligible and abandoned. Those features that do meet the criteria are treated as potentially eligible and fully excavated. Further examination of eligibility can occur later in the laboratory. The compressed approach has the advantage of expediency and is a necessity to prevent the local, well-organized community of illicit artifact collectors from pillaging and destroying archaeological resources.

If cultural materials are discovered during construction, all earth-moving activity within and around the immediate discovery area would be diverted until a qualified archaeologist could assess the nature and significance of the find.

If human remains are discovered, State Health and Safety Code Section 7050.5 states that further disturbances and activities would cease in any area or nearby area suspected to overlie remains, and the County Coroner contacted. Pursuant to Public Resources Code Section 5097.98, if the remains were thought to be Native American, the coroner would notify the Native American Heritage Commission, which would then notify the Most Likely Descendent. At this time, the person who discovered the remains would contact Caltrans District 10 Environmental Branch in Stockton so that they may work with the Most Likely Descendent on the respectful treatment and disposition of the remains. Further provisions of Public Resources Code 5097.98 are to be followed as applicable.

Hydrology

The project would include construction of all improvements that are identified in the Preliminary Drainage Report for the Crosstown Freeway project. These improvements would be described in detail in the drainage plan to be approved prior to start of construction, including new drainage inlets, gutters, roadside ditches, pump (lift) stations, storm drain pipes, and detention basins.

Water Quality and Storm Water Runoff

The construction of physical features such as biofiltration swales would be incorporated into the project. The following best management practices would be considered for the project to minimize water quality impacts:

- Adding biofiltration swales
- Using sediment barriers or silt fences to intercept and slow sediment-laden runoff
- Managing waste (concrete and other hazardous materials) to prevent its release into stormwater,
- Handling, storing, and using construction materials in ways that prevent their release into storm water
- Scheduling construction work to coordinate with the installation of erosion and sediment control practices
- Cleaning construction vehicles and equipment and following appropriate fueling and maintenance procedures to reduce discharge of pollutants

- Preserving existing vegetation
- Implementing water conservation practices such as locating designated equipment wash areas away from exposed areas
- Implementing temporary concentrated flow conveyance controls such as drainage swales and outlet protection and energy dissipater devices

All construction would conform to the National Pollutant Discharge Elimination System General Construction Permit requirements to maintain water quality within the project area and vicinity; these requirements include storm water and non-storm water quality protection measures for all construction activities within Caltrans right-of-way. A Storm Water Pollution Prevention Plan would also be prepared and implemented to ensure that water quality is not adversely affected during construction.

Geology/Soils/Seismic/Topography

As part of final design, a geotechnical investigation would be conducted to evaluate engineering properties of the subsurface soil materials for recommendation of geotechnical parameters, address geotechnical hazards associated with different design elements such as slope stability and settlement, and hazards associated with potential fault rupture/creep, and strong ground motion. This geotechnical report would specify the requirements for foundation design. Recommendations included in this report would be implemented during project construction.

Paleontology

A qualified paleontologist would prepare a Paleontological Evaluation Report during final design of the project, and the recommendations contained in this report would be implemented as part of project construction. Information would be gathered to gain a better understanding of the extent and depth of units that are not paleontologically sensitive to focus paleontological resources mitigation on the areas where it is needed. Mitigation would entail a combination of the following measures; specifics of these measures would be developed during the Paleontological Evaluation Report process:

- Retain a qualified principal paleontologist to be present at pregrading meetings to consult with grading and excavation contractors.
- Conduct reconnaissance field surveys to identify the existing level of disturbance within the project footprint; assess surface exposures; and evaluate potential for

surface recovery of fossils. If necessary, conduct preconstruction salvage or protection of exposed materials, or both.

- Train construction workers to increase their recognition of fossil materials unearthed during construction.
- Provide for monitoring of excavation by a qualified paleontologist during key portions of the project.
- Require that construction crews stop work if fossil materials are encountered.
- Recover any significant fossils found during construction.
- Clean, repair, sort, and catalog fossil remains collected during the monitoring and salvage portion of the mitigation program.
- Deposit prepared fossils, along with copies of all pertinent field notes, photos, and maps, in a scientific institution with paleontological collections.
- Complete a final report that summarizes the monitoring effort and results (if fossils are found).

Hazardous Waste or Materials

Caltrans and/or the construction contractor would prepare a Preliminary Site Assessment to conform to the standards of the American Society for Testing and Materials to identify specific avoidance and minimization measures. Recommended mitigation measures would be implemented prior to construction. This assessment would contain the following:

- Aerially deposited lead study to determine lead levels in project excavation areas
- Asbestos- containing material and lead-containing paint survey at buildings proposed for demolition and measures needed to comply with San Joaquin Valley Air Pollution Control District requirements related to asbestos.
- Soil sampling where soil excavation is proposed next to identified potential contaminated properties to evaluate the management and disposal of contaminated soil and groundwater and construction worker health and safety requirements.

During design of the roadway, the construction contractors would avoid identified sites containing hazardous material or waste contamination, where possible. If the roadway would affect areas of known contamination, remediation would be conducted. If underground storage tanks, septic systems, or domestic/agricultural/oil

wells are found during construction, these facilities would be removed or abandoned in accordance with San Joaquin County requirements.

Caltrans and/or the construction contractor would prepare a Site Management Program/Contingency Plan before construction to address known and potential hazardous material issues, including but not limited to measures to address management of contaminated soil and groundwater; a site-specific health and safety plan, including measures to protect construction workers and general public; and procedures to protect workers and the general public in the event that unknown contamination or buried hazards are encountered.

Air Quality

To control the generation of construction-related PM10 emissions, the construction contractor would follow Caltrans' Standard Specification Section 7-1.01F, Standard Specification Section 10, and Standard Specification Section 18. Section 7-1.01F specifically requires that the construction contractor comply with all applicable laws and regulations related to air quality, including air pollution control district and air quality management district regulations and local ordinances. Section 10 defines dust control measures that would need to be implemented, as described below:

- Water would be applied to the site and equipment as frequently as necessary to control dust emissions.
- Soil binder would be spread on any unpaved roads used for construction.
- Trucks would be washed off as they leave the project site.
- Construction equipment and vehicles would be properly tuned and maintained.
- Construction equipment and materials storage sites would be located as far away from residential and park uses as practical.
- To the extent feasible, environmentally sensitive areas would be established for sensitive air receptors within which construction activities involving extended idling of diesel equipment would be prohibited.
- Gravel pads would be used at project access points to minimize dust and mud deposits on roads.
- Transported loads of soils and wet materials would be covered prior to transport.
- Dust and mud deposited on paved public roads as a result of construction activity and traffic would be removed to decrease particulate matter.

- To the extent feasible, construction traffic would be routed and scheduled to reduce air quality impacts caused by idling vehicles along local roads during peak travel times.
- Mulch or plant vegetation would be installed as soon as is practical after grading.

Caltrans would also require the construction contractor to prepare and submit a dust control plan to the San Joaquin Valley Air Pollution Control District for approval at least 30 days prior to any earthmoving or construction activities. The plan would comply with San Joaquin Valley Air Pollution Control District Regulation VIII and would include dust control measures for the following:

- Structural demolition
- Pre-construction activities
- Operations at the construction site during construction.
- Temporary stabilization of areas that remain unused for 7 or more days
- Unpaved access and haul roads, traffic and equipment storage areas
- Wind events
- Outdoor storage of bulk materials
- On-site transporting of bulk materials
- Off-site transporting of bulk materials
- Outdoor transport using a chute or conveyor

The construction contractor would be required to implement measures to reduce construction-related exhaust emissions. Such measures could include maintaining properly tuned engines; minimizing the idling time of diesel powered construction equipment to two minutes; using alternative-fuel-powered construction equipment (for example, compressed natural gas, biodiesel, or electric); using add-on mitigation devices such as diesel oxidation catalysts or particulate filters; using equipment that meets the California Air Resources Board's most recent certification standard for off-road heavy-duty diesel engines; and limiting the operating hours for heavy-duty equipment.

Optional minimization measures to further reduce air quality impacts include the following:

- Caltrans may enter into an agreement with the San Joaquin Valley Air Pollution Control District and conduct an air impact assessment per San Joaquin Valley Air Pollution Control District's indirect source review.
- Caltrans may enter into an air quality mitigation agreement with the San Joaquin Valley Air Pollution Control District to reduce project emissions below the San Joaquin Valley Air Pollution Control District's threshold levels. With this contract, the San Joaquin Council of Governments would be entering into a voluntary agreement to reduce project emissions through the payment of fees (on a per-ton basis) to the San Joaquin Valley Air Pollution Control District.

Noise

Caltrans and/or the contractor would ensure that sound-control devices are effective and would implement additional noise control measures, as needed so that noise from construction activity between the hours of 9:00 p.m. and 6:00 a.m. does not exceed 86 dBA at a distance of 50 feet from the nearest residence. Measures that can be used to limit noise include changing the location of construction equipment so that they are farther away from residences, turning off idling equipment, rescheduling construction activities, notifying residents in advance of construction work, installing sound barriers around noise-generating construction equipment, pre-drilling of pile foundation holes, use of alternative pile driving methods (such as vibratory driving instead of impact driving), and use of industry standard technology to shroud or muffle equipment and pile-driving operations.

Caltrans and/or the construction contractor would also implement following measures to avoid vibration impacts from impact pile driving:

- Conduct a pre-construction survey of residences located within 150 feet of pile driving to document the existing condition of the structures noting existing cracking and foundation settlement.
- Implement measures to limit ground vibration to 0.2 inches per second at nearby structures. These measures may include but are not limited to:
 - Use an alternative pile driving method that produces less vibration than impact driving such as a vibratory pile driver
 - Use pre-drilling or cast-in-place methods to reduce or eliminate impact driving
 - Use of a larger number of smaller piles.
 - If it is not feasible from an engineering perspective to limit vibration to 0.2 inches per second at nearby structures, Caltrans would conduct a post-

construction survey to identify damage that is directly attributable to pile driving. Caltrans would then repair any damage that is directly attributable to pile driving.

Animal Species

Caltrans or its contractors would conduct environmental awareness training for construction crews for both species before construction begins.

For the white-tailed kite, Caltrans or its contractors would conduct construction prior to the migratory bird nesting season (March 1 through September 1). Beginning construction before the breeding season will establish a level of noise within or near the project area that will dissuade noise-sensitive raptors and other birds from attempting to nest. If this is not possible, Caltrans or its contractors would conduct a preconstruction survey to determine whether active nests are present within or adjacent to the project area. If an active raptor nest is found, California Department of Fish and Game would be contacted to determine the need for a no-disturbance buffer or the need to monitor the nest.

Caltrans or its contractors would conduct preconstruction surveys for active burrowing owl burrows according to California Department of Fish and Game guidelines. The preconstruction surveys would include a wintering season survey (between December 1 and January 31) and a breeding season survey (between April 15 and July 15) to be conducted during the same year that construction begins, if feasible). It is recommended that the construction area and a 500-foot buffer zone around the construction area (where possible) be surveyed. If no burrowing owls or sign are detected, no further mitigation is required. If burrowing owls or their sign are found, Caltrans or its contractors would implement the following mitigation measures.

Burrowing owls and their occupied burrows would not be disturbed during the breeding season (February 1–August 31). A 250-foot buffer, within which no new activity would be permissible, would be maintained between Project activities and nesting owls. The nesting owls would be monitored periodically by a qualified biologist to ensure that nesting activities are not being disrupted. This protected area would remain in effect until August 31, or at the discretion of the California Department of Fish and Game, and would be based upon monitoring evidence, until the young owls are foraging independently. If accidental take (disturbance, injury, or death of owls) occurs, the California Department of Fish and Game would be notified immediately.

When destruction of occupied burrows is unavoidable during the nonbreeding season (September 1–January 31), eviction of owls may be permitted pending an evaluation of eviction plans and receipt of formal written approval from the California Department of Fish and Game authorizing the eviction. The guidelines require that one-way doors be installed at least 48 hours before construction activities. Prior to the installation of one-way doors, unsuitable burrows would be enhanced (enlarged or cleared of debris) or new burrows created (by installing artificial burrows) at a ratio of 2:1 on protected lands approved by the California Department of Fish and Game. Newly created burrows would follow guidelines established by the California Department of Fish and Game. At least 1 week would be necessary to complete passive relocation and allow owls to acclimate to alternate burrows.

If impacts to burrowing owl cannot be avoided, the loss of burrowing, foraging and burrow habitat would be compensated for in accordance with the California Department of Fish and Game Guidelines (acquire and permanently protect a minimum of 6.5 acres of existing breeding and foraging habitat for each pair of owls affected).

Threatened and Endangered Species

Caltrans and/or the contractor would ensure that dust is controlled during construction by periodically watering down construction areas within 100 feet of the elderberry shrubs to prevent dirt from becoming air borne and accumulating on these shrubs.

Caltrans or its contractors would conduct environmental awareness training for the valley elderberry longhorn beetle and the Swainson's hawk to construction crews before project implementation.

Caltrans or its contractors would conduct construction prior to the migratory bird nesting season (March 1 through September 1). If this is not possible, Caltrans or its contractors would conduct a preconstruction survey to determine whether active nests are present within or adjacent to the project area. If an active raptor nest is found, California Department of Fish and Game would be contacted to determine the need for a no-disturbance buffer or the need to monitor the nest.

Appendix E Regulatory Setting

This appendix contains general information about laws and regulations that apply to transportation projects and the topics covered in Chapter 2 of this document.

Growth

The California Environmental Quality Act also requires the analysis of a project's potential to induce growth. California Environmental Quality Act guidelines, Section 15126.2(d), require that environmental documents "...discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment..."

Community Character and Cohesion

Under the California Environmental Quality Act, an economic or social change by itself is not to be considered a significant effect on the environment. However, if a social or economic change is related to a physical change, then social or economic change may be considered in determining whether the physical change is significant. Since this project would result in physical change to the environment, it is appropriate to consider changes to community character and cohesion in assessing the significance of the project's effects.

Relocations

Caltrans' Relocation Assistance Program is based on the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, and Title 49 Code of Federal Regulations, Part 24. The purpose of the Relocation Assistance Program is to ensure that persons displaced as a result of a transportation project are treated fairly, consistently, and equitably so that such persons would not suffer disproportionate injuries as a result of projects designed for the benefit of the public as a whole. Please see Appendix C for a summary of the Relocation Assistance Program.

All relocation services and benefits are administered without regard to race, color, national origin, or sex in compliance with Title VI of the Civil Rights Act (42 United States Code 2000d, et seq.). Please see Appendix B for a copy of Caltrans' Title VI Policy Statement.

Environmental Justice

All projects involving a federal action (funding, permit, or land) must comply with Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, signed by President Bill Clinton on February 11, 1994. This order directs federal agencies to take the appropriate and necessary steps to identify and address disproportionately high and adverse effects of federal projects on the health or environment of minority and low-income populations to the greatest extent practicable and permitted by law. Low income is defined based on the Department of Health and Human Services poverty guidelines. All considerations under Title VI of the Civil Rights Act of 1964 and related statutes have also been included in this project. Caltrans' commitment to upholding the mandates of Title VI is evidenced by its Title VI Policy Statement, signed by the Director, which can be found in Appendix B of this document.

Traffic and Transportation/Pedestrian and Bicycle Facilities

Caltrans directs that full consideration should be given to the safe accommodation of pedestrians and bicyclists during the development of its projects. It further directs that the special needs of the elderly and the disabled must be considered in all projects that include pedestrian facilities. When current or anticipated pedestrian and/or bicycle traffic presents a potential conflict with motor vehicle traffic, every effort must be made to minimize the detrimental effects on all highway users who share the facility.

Caltrans is committed to carrying out the 1990 Americans with Disabilities Act by building transportation facilities that provide equal access for all persons. The same degree of convenience, accessibility, and safety available to the general public would be provided to persons with disabilities.

Visual/Aesthetics

The California Environmental Quality Act establishes that it is the policy of the state to take all action necessary to provide the people of the state "with...enjoyment of *aesthetic*, natural, scenic, and historic environmental qualities" [California Public Resources Code Section 21001(b)].

Cultural Resources

"Cultural resources" as used in this document refers to historic and archaeological resources, regardless of significance. Historical resources are considered under the California Environmental Quality Act, as well as California Public Resources Code

Section 5024.1, which established the California Register of Historical Resources. Section 5024 of the Public Resources Code requires state agencies to identify and protect state-owned resources that meet National Register of Historic Places listing criteria. It further specifically requires Caltrans to inventory state-owned structures in its rights-of-way.

Water Quality and Storm Water Runoff

The State Water Resources Control Board has developed and issued a statewide National Pollutant Discharge Elimination System permit to regulate storm water discharges from all Caltrans activities on its highways and facilities. Caltrans construction projects are regulated under the statewide permit, and projects performed by other entities on Caltrans right-of-way (encroachments) are regulated by the State Water Resources Control Board's Statewide General Construction Permit. All construction projects over 1 acre require a Storm Water Pollution Prevention Plan to be prepared and implemented during construction. Caltrans activities of less than 1 acre require a Water Pollution Control Program.

Geology/Soils/Seismic/Topography

Topographic and geologic features are protected under the California Environmental Quality Act.

The Geology/Soils/Seismic/Topography section in Chapter 2 also discusses geology, soils, and seismic concerns as they relate to public safety and project design. Earthquakes are prime considerations in the design and retrofit of structures. Caltrans' Office of Earthquake Engineering is responsible for assessing the seismic hazard for Caltrans projects. The current policy is to use the anticipated Maximum Credible Earthquake from young faults in and near California. The Maximum Credible Earthquake is defined as the largest earthquake that can be expected to occur on a fault over a particular period of time.

Paleontology

Under California law, paleontological resources are protected by the California Environmental Quality Act, the California Administrative Code, Title 14, Section 4306 et seq., and Public Resources Code Section 5097.5.

Hazardous Waste or Materials

Hazardous materials and hazardous wastes are regulated by many state and federal laws. These include not only specific statutes governing hazardous waste, but also a variety of laws regulating air and water quality, human health, and land use.

Hazardous waste in California is regulated primarily under the authority of the federal Resource Conservation and Recovery Act of 1976 and the California Health and Safety Code. Other California laws that affect hazardous waste are specific to handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning.

Worker health and safety and public safety are key issues when dealing with hazardous materials that may affect human health and the environment. Proper disposal of hazardous material is vital if it is disturbed during project construction.

Air Quality

The Clean Air Act, as amended in 1990, is the federal law that governs air quality. Its counterpart in California is the California Clean Air Act of 1988. These laws set standards for the concentration of pollutants that can be in the air. At the federal level, these standards are called National Ambient Air Quality Standards. Standards have been established for six criteria pollutants that have been linked to potential health concerns: carbon monoxide (CO), nitrogen dioxide (NO₂), ozone (O₃), particulate matter (PM), lead (Pb), and sulfur dioxide (SO₂).

Under the 1990 Clean Air Act Amendments, the U.S. Department of Transportation cannot fund, authorize, or approve federal actions to support programs or projects that are not first found to conform to the State Implementation Plan for achieving the goals of the Clean Air Act requirements. Conformity with the Clean Air Act takes place on two levels—first, at the regional level and second, at the project level. The proposed project must conform at both levels to be approved.

Regional level conformity is concerned with how well the region is meeting the standards set for carbon monoxide, nitrogen dioxide, ozone, and particulate matter. California is in attainment for the other criteria pollutants. At the regional level, Regional Transportation Plans are developed that include all of the transportation projects planned for a region over a period of years, usually at least 20. Based on the projects included in the Regional Transportation Plan, an air quality model is run to determine whether or not the implementation of those projects would conform to emission budgets or other tests showing that attainment requirements of the Clean Air Act are met. If the conformity analysis is successful, the regional planning organization, such as the San Joaquin Council of Governments and the appropriate agency, such as Caltrans, makes the determination that the Regional Transportation Plan is in conformity with the State Implementation Plan for achieving the goals of

the Clean Air Act. Otherwise, the projects in the Regional Transportation Plan must be modified until conformity is attained. If the design and scope of the proposed transportation project are the same as described in the Regional Transportation Plan, then the proposed project is deemed to meet regional conformity requirements for purposes of the project-level analysis.

Conformity at the project-level also requires “hot spot” analysis if an area is in “nonattainment” or “maintenance” for carbon monoxide (CO) and/or particulate matter. A region is a “nonattainment” area if one or more monitoring stations in the region fail to attain the relevant standard. Areas that were previously designated as non-attainment areas but have recently met the standard are called “maintenance” areas. “Hot spot” analysis is essentially the same, for technical purposes, as carbon monoxide or particulate matter analysis performed for California Environmental Quality Act purposes. Conformity does include some specific standards for projects that require a hot spot analysis. In general, projects must not cause the carbon monoxide standard to be violated, and in “nonattainment” areas, the project must not cause any increase in the number and severity of violations. If a known carbon monoxide or particulate matter violation is located in the project vicinity, the project must include measures to reduce or eliminate the existing violation(s) as well.

Noise and Vibration

The California Environmental Quality Act requires a strictly baseline versus build analysis to assess whether a proposed project would have a noise impact. If a proposed project is determined to have a significant noise impact under the California Environmental Quality Act, then the act dictates that mitigation measures must be incorporated into the project unless such measures are not feasible

For State highway projects, the Federal-Aid Highway Act of 1970 and the associated implementing regulations (23 Code of Federal Regulations 772) govern the analysis and abatement of traffic noise impacts. The regulations require that potential noise impacts in areas of frequent human use be identified during the planning and design of a highway project. The regulations contain noise abatement criteria that are used to determine when a noise impact would occur.

The noise abatement criteria differ depending on the type of land use under analysis. For example, the criterion for residences (67 dB) is lower than the criterion for commercial areas (72 dB). Table E.1 lists the noise abatement criteria for use in the

23 Code of Federal Regulations 772 analysis. Table E.2 shows the noise levels of typical activities.

Table E.1 Activity Categories and Noise Abatement Criteria

Activity Category	Noise Abatement Criteria, A-weighted Noise Level, $L_{eq}(h)$	Description of Activities
A	57 Exterior	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose
B	67 Exterior	Picnic areas, recreation areas, playgrounds, active sport areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals
C	72 Exterior	Developed lands, properties, or activities not included in Categories A or B above
D	–	Undeveloped lands
E	52 Interior	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums

Source: Caltrans Traffic Noise Analysis Manual, 1998.

Note: A-weighted decibels are adjusted to approximate the way humans perceive sound. $L_{eq}(h)$ is the steady A-weighted level that is equivalent to the same amount of energy as that contained in the actual time-varying levels over one hour.

Table E.2 Typical Noise Levels

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
Jet Fly-over at 300m (1000 ft)	110	Rock Band
Gas Lawn Mower at 1 m (3 ft)	100	
Diesel Truck at 15 m (50 ft), at 80 km (50 mph)	90	Food Blender at 1 m (3 ft)
Noisy Urban Area, Daytime	80	Garbage Disposal at 1 m (3 ft)
Gas Lawn Mower, 30 m (100 ft)	70	Vacuum Cleaner at 3 m (10 ft)
Commercial Area		Normal Speech at 1 m (3 ft)
Heavy Traffic at 90 m (300 ft)	60	Large Business Office
Quiet Urban Daytime	50	Dishwasher Next Room
Quiet Urban Nighttime	40	Theater, Large Conference Room (Background)
Quiet Suburban Nighttime		Library
Quiet Rural Nighttime	30	Bedroom at Night, Concert Hall (Background)
	20	Broadcast/Recording Studio
	10	
Lowest Threshold of Human Hearing	0	Lowest Threshold of Human Hearing

In accordance with Caltrans' *Traffic Noise Analysis Protocol for New Highway Construction and Reconstruction Projects*, August 2006, a noise impact occurs when the future noise level with the project results in a substantial increase in noise level (defined as a 12-dB or more increase) or when the future noise level with the project approaches or exceeds the noise abatement criteria. Approaching the noise abatement criteria is defined as coming within 1 dB of the criteria.

If it is determined that the project would have noise impacts, then potential abatement measures must be considered. Noise abatement measures that are determined to be reasonable and feasible at the time of final design are incorporated into the project plans and specifications. This document discusses noise abatement measures that would likely be incorporated in the project.

Caltrans' *Traffic Noise Analysis Protocol* sets forth the criteria for determining when an abatement measure is reasonable and feasible. The reasonableness determination is basically a cost-benefit analysis. Factors used in determining whether a proposed noise abatement measure is reasonable include residents' acceptance, the absolute noise level, build versus existing noise, environmental impacts of abatement, public and local agencies' input, newly constructed development versus development pre-dating 1978, and the cost per benefited residence.

Feasibility of noise abatement is basically an engineering concern. A minimum 5-dB reduction in the future noise level must be achieved for an abatement measure to be considered feasible. Other considerations include topography, access requirements, other noise sources, and safety considerations.

Animal Species

Many state and federal laws regulate impacts to wildlife. The U.S. Fish and Wildlife Service, the National Oceanic and Atmospheric Administration Fisheries Service, and the California Department of Fish and Game are responsible for implementing these laws. The section on Animal Species in Chapter 2 discusses potential impacts and permit requirements associated with wildlife not listed or proposed for listing under the state or federal Endangered Species Act. Species listed or proposed for listing as threatened or endangered are discussed in a separate section. All other special-status animal species are discussed under Animal Species in Chapter 2, including California Department of Fish and Game fully protected species and species of special concern, and the U.S. Fish and Wildlife Service or National Oceanic and Atmospheric Administration Fisheries Service candidate species.

State laws and regulations pertaining to wildlife include the following:

- California Environmental Quality Act
 - Sections 1601–1603 of the Fish and Game Code
 - Sections 4150 and 4152 of the Fish and Game Code

Threatened and Endangered Species

The main federal law protecting threatened and endangered species is the Federal Endangered Species Act: 16 United States Code, Section 1531, et seq. See also 50 Code of Federal Regulations Part 402. This act and subsequent amendments provide for the conservation of endangered and threatened species and the ecosystems on which they depend.

California has enacted a similar law at the state level, the California Endangered Species Act, California Fish and Game Code, Section 2050, et seq. The California Endangered Species Act emphasizes early consultation to avoid potential impacts to rare, endangered, and threatened species and to develop appropriate planning to offset project-caused losses of listed species populations and their essential habitats.

The California Department of Fish and Game is the agency responsible for implementing the California Endangered Species Act. Section 2081 of the Fish and Game Code prohibits “take” of any species determined to be an endangered species or a threatened species. Take is defined in Section 86 of the Fish and Game Code as “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.” The California Endangered Species Act allows for take incidental to otherwise lawful development projects; for these actions an incidental take permit is issued by the California Department of Fish and Game.

Cumulative Impacts

Cumulative impacts are those that result from past, present, and reasonably foreseeable future actions, combined with the potential impacts of this project. A cumulative effect assessment looks at the collective impacts posed by individual land use plans and projects. Cumulative impacts can result from individually minor, but collectively substantial impacts taking place over a period of time.

Cumulative impacts to resources in the project area may result from residential, commercial, industrial, and highway development, as well as from agricultural development and the conversion to more intensive types of agricultural cultivation. These land use activities can degrade habitat and species diversity through

consequences such as displacement and fragmentation of habitats and populations, alteration of hydrology, contamination, erosion, sedimentation, disruption of migration corridors, changes in water quality, and introduction or promotion of predators. They can also contribute to potential community impacts identified for the project, such as changes in community character, traffic patterns, housing availability, and employment.

Section 15130 of the California Environmental Quality Act Guidelines describes when a cumulative impact analysis is warranted and what elements are necessary for an adequate discussion of cumulative impacts. The definition of cumulative impacts, under the California Environmental Quality Act, can be found in Section 15355 of the California Environmental Quality Act Guidelines.

Climate Change

While climate change has been a concern since at least 1988 as evidenced by the establishment of the United Nations and World Meteorological Organization's Intergovernmental Panel on Climate Change, the efforts devoted to greenhouse gas emissions reduction and climate change research and policy have increased dramatically in recent years.

In 2002, with the passage of Assembly Bill 1493, California launched an innovative and proactive approach to dealing with greenhouse gas emissions and climate change at the state level. Assembly Bill 1493 requires the Air Resources Board to develop and implement regulations to reduce automobile and light truck greenhouse gas emissions; these regulations would apply to automobiles and light trucks beginning with the 2009-model year. Greenhouse gases related to human activity include carbon dioxide, methane, nitrous oxide, tetrafluoromethane, hexafluoroethane, sulfur hexafluoride, HFC-23 (fluoroform), HFC-134a (1,1,1,2-tetrafluoroethane), and HFC-152a (difluoroethane).

On June 1, 2005, Governor Arnold Schwarzenegger signed Executive Order S-3-05. The goal of this order is to reduce California's greenhouse gas emissions to: 1) 2000 levels by 2010, 2) 1990 levels by the 2020, and 3) 80 percent below the 1990 levels by the year 2050. In 2006, this goal was further reinforced with the passage of Assembly Bill 32, the Global Warming Solutions Act of 2006. Assembly Bill 32 sets the same overall greenhouse gas emissions reduction goals while further mandating that the Air Resources Board create a plan, which includes market mechanisms, and

implement rules to achieve “real, quantifiable, cost-effective reductions of greenhouse gases.”

Executive Order S-20-06, signed on October 17, 2006, further directs state agencies to begin implementing Assembly Bill 32, including the recommendations made by the state’s Climate Action Team.

With Executive Order S-01-07, Governor Schwarzenegger set forth the low carbon fuel standard for California. Under this executive order, the carbon intensity of California’s transportation fuels is to be reduced by at least 10 percent by 2020.

Climate change and greenhouse gas reduction is also a concern at the federal level; however, at this time, no legislation or regulations have been enacted specifically addressing greenhouse gas emissions reductions and climate change. However, California, in conjunction with several environmental organizations and several other states, sued to force the U.S. Environmental Protection Agency (EPA) to regulate greenhouse gases as a pollutant under the Clean Air Act (*Massachusetts vs. Environmental Protection Agency et al.*, U.S. Supreme Court No. 05–1120. 549 U.S. ____ [2007]. Argued November 29, 2006—Decided April 2, 2007).

The court ruled that greenhouse gases do fit within the Clean Air Act’s definition of a pollutant, and that the Environmental Protection Agency does have the authority to regulate greenhouse gases. Despite the Supreme Court ruling, there are no promulgated federal regulations to date limiting greenhouse gas emissions.

List of Technical Studies that are Bound Separately

Community Impact Assessment

Relocation Impact Report

Final Traffic Operations Report

Visual Resources Technical Report

Historical Resources Compliance Report

Water Quality and Hydrology Report

Draft Preliminary Drainage Report

Draft Storm Water Data Report

Geotechnical Report

Paleontological Identification Report

Initial Site Assessment

Air Quality Study Report

Final Noise Study Report

Natural Environment Study

