

South Stockton Six-Lane Project

On State Route 99 from 0.4 Mile North of the Arch Road Interchange to 0.1 Mile
South of State Route 4 (Crosstown Freeway)

10-SJ-99-PM 15.0/18.6

10-3A1000

Draft Environmental Impact Report/ Environmental Assessment



Northbound State Route 99 at the Charter Way overcrossing

Prepared by the
U.S. Department of Transportation
Federal Highway Administration
and the
State of California Department of Transportation

March 2008



General Information About This Document

What's in this document?

The California Department of Transportation (Caltrans) and the Federal Highway Administration have prepared this Environmental Impact Report/Environmental Assessment, which examines the potential environmental impacts of alternatives being considered for the proposed project located 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 this Environmental Impact Report/Environmental Assessment. Additional copies of this document as well as the technical studies are available for review at the Caltrans District 10 office at 1976 Dr. Martin Luther King Jr. Boulevard (1976 East Charter Way), Stockton, CA 95201, and at the following libraries: the Cesar Chavez Central Library, 605 N. El Dorado Street, Stockton, CA 95202; the Maya Angelou Southeast Library, 2324 Pock Lane, Stockton, CA 95205; and the Fair Oaks Branch Library, 2370 E. Main Street, Stockton, CA 95205.
- Attend the public hearing.
- 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, Senior Environmental Planner
Central Sierra Environmental Analysis Branch
California Department of Transportation
2015 East Shields Avenue, Suite 100
Fresno, CA 93726
- Submit comments via email to: gail_miller@dot.ca.gov.
- Submit comments by the deadline: May 1, 2008

What happens next?

After comments are received from the public and reviewing agencies, Caltrans and the Federal Highway Administration 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 all or part of the project.

It should be noted that at a future date, the Federal Highway Administration or another federal agency may publish a notice in the Federal Register, pursuant to 23 U.S. Code Section 139(1), indicating that a final action has been taken on this project by the Federal Highway Administration or another federal agency. If such notice is published, a lawsuit or other legal claim will be barred unless it is filed within 180 days after the date of publication of the notice (or within such shorter time period as is specified in the federal laws pursuant to which judicial review of the federal agency action is allowed). If no notice is published, then the lawsuit or claim can be filed as long as the periods of time provided by other federal laws that govern claims are met.

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 call or write to Caltrans, Attn: Gail Miller, Senior Environmental Planner, Central Sierra Environmental Analysis Branch, 2015 East Shields Avenue, Suite 100, Fresno, CA 93726; (559) 243-8405 Voice, or use the California Relay Service TTY number, 711.

Widen State Route 99 from four lanes to six lanes
between Arch Road and State Route 4 (Crosstown
Freeway) (post miles 15.0 to 18.6) with improvements to interchanges.

**DRAFT ENVIRONMENTAL IMPACT REPORT/
ENVIRONMENTAL ASSESSMENT**

Submitted Pursuant to: (State) Division 13, California Public Resources Code
(Federal) 42 U.S. Code 4332(2)(C)

U.S. DEPARTMENT OF TRANSPORTATION
Federal Highway Administration

THE STATE OF CALIFORNIA
Department of Transportation

3/3/08
Date of Approval

Kome Ajise
Kome Ajise
District 10 Director
California Department of Transportation

3/6/08
Date of Approval

for Karen A. Bobo
Gene K. Fong
Division Administrator
Federal Highway Administration



Summary

Overview of Project Area

The California Department of Transportation and the Federal Highway Administration propose to widen State Route 99 from four lanes to six lanes from 0.4 mile north of the Arch Road Interchange to 0.1 mile south of State Route 4 (Crosstown Freeway) in San Joaquin County, California.

State Route 99 is a major north/south highway connecting cities throughout the Central Valley. In San Joaquin County, State Route 99 intersects three major east/west transportation corridors: the State Route 120/State Route 205 corridor, the State Route 4 corridor with a segment in the City of Stockton called the Crosstown Freeway, and the State Route 12 corridor. Within the project area, State Route 99 is a four-lane freeway with 12-foot-wide travel lanes, 8-foot-wide outside shoulders, and 5-foot-wide inside shoulders. Nine structures are in the project area: three culverts in waterways, four local road crossings over the state route, one railroad crossing, and one pedestrian overcrossing.

Purpose and Need

The purpose of the project is to widen and make improvements along a stretch of State Route 99 between the Arch Road Interchange and State Route 4 (Crosstown Freeway) that would do the following:

- Increase capacity to reduce delay (congestion).
- Improve traffic operations
- Improve traffic safety
- Provide route continuity

Within the project limits, State Route 99 is a four-lane freeway with four closely spaced interchanges. Traffic is highly congested during peak hours, with a high demand for both regional and local traffic. High traffic volumes, together with traffic weaving and merging, are key factors in slowing down the flow of traffic to below acceptable levels and contributing to the higher than average number of traffic accidents. Additionally, there is a gap between six-lane roadways at the north and south ends of the project limits.

Proposed Action

The California Department of Transportation and the Federal Highway Administration propose to improve State Route 99 in the City of Stockton. The

project proposes to add two additional lanes to the median of State Route 99 between the Arch Road interchange and State Route 4 (Crosstown Freeway), with proposed improvements to three interchanges: the Mariposa interchange, the Farmington Road interchange, and the Charter Way interchange. Also, one of the alternatives proposes to relocate the Charter Way interchange to a new location south of the existing Golden Gate overcrossing.

Four alternatives have been considered: three build alternatives and a no-build alternative.

Alternative 1 – The Mariposa Alternative

This alternative proposes to widen State Route 99 from four lanes to six lanes and reconfigure the Mariposa interchange to a partial cloverleaf interchange. The new interchange would be constructed to current design standards and be built to accommodate a future eight-lane roadway on State Route 99. The local street intersections would be designed to allow truck turns. Auxiliary lanes would be provided on northbound and southbound State Route 99 between State Route 4 to the west (Crosstown Freeway) and State Route 4 to the east (Farmington Road); and between State Route 4 (Farmington Road) and Mariposa.

Improvements are also proposed at the State Route 4 (Farmington Road), Charter Way, and Main Street overcrossings, which would replace these existing structures with wider structures to accommodate a future eight-lane roadway on State Route 99. All ramps associated with the overcrossings would be removed. The new Charter Way overcrossing would be built to accommodate two-way traffic. The South Stockton overcrossing would be removed, but not replaced. An additional overhead structure would be built over State Route 99 and the existing Burlington Northern and Santa Fe Railroad tracks east of State Route 4 (Farmington Road), replacing the existing at-grade crossing. Access to State Route 99 from Clark Drive would be removed.

To accommodate increased traffic demand, improvements are proposed to Farmington Road, Stagecoach Road, Mariposa Road, and State Route 4 that would include widening the roadways, providing left- and right-turn lanes, and installing traffic signals at intersections. The east frontage road would be realigned to Munford Road.

Traffic signals at the intersection of Mariposa at Farmington Road/Eighth Street would be changed to accommodate the proposed widening and turn lanes. Stagecoach

Road and Farmington Road would be reconstructed to state highway standards to maintain access for State Route 4 (Farmington Road) to State Route 99.

This alternative would require modifying existing bridges and culverts as well as constructing new structures. The proposed structural work would widen the existing Duck Creek Bridge to the east, providing a new structure to span Duck Creek to accommodate widening and realignment of the northbound State Route 99 off-ramp to the east. The existing box culverts on Mariposa Road and on Stagecoach Road would also be widened.

Alternative 2 – Dr. Martin Luther King Jr. Boulevard Alternative

This alternative, in addition to widening State Route 99, proposes to realign the existing Charter Way interchange and construct a new combination two-quadrant cloverleaf interchange just south of Golden Gate Avenue on State Route 99. From this location, Golden Gate Avenue would be renamed Dr. Martin Luther King Jr. Boulevard all the way to a new connection with State Route 4 (Farmington Road). The west end of the realigned Golden Gate Avenue would connect back to Dr. Martin Luther King Jr. Boulevard/Charter Way at its present location.

This alternative would also reconfigure the Mariposa interchange to a Type L-9, partial cloverleaf interchange. Auxiliary lanes would be provided on northbound and southbound State Route 99 between State Route 4 (Farmington Road) and the new Dr. Martin Luther King Jr. Boulevard interchange, and between the new Dr. Martin Luther King Jr. Boulevard interchange and the Mariposa interchange. The east frontage road would be realigned to Munford Road.

The existing State Route 4 (Farmington Road), Charter Way, and Main Street overcrossings would be removed and replaced with wider structures, and the ramps would be removed. The Charter Way overcrossing would be built to accommodate two-way traffic. The South Stockton overcrossing would be removed, but not replaced. The East Stockton Underpass bridge would also be removed and replaced.

Traffic signals would be installed at the following intersections:

- Mariposa Road at the west frontage road
- North and southbound State Route 99 off-ramps at Mariposa Road
- Mariposa Road at the east frontage road
- Mariposa Road at Stagecoach Road

- North and southbound State Route 99 off-ramps at Dr. Martin Luther King Jr. Boulevard/Charter Way.

This alternative would require modifying existing bridges and culverts as well as constructing new structures. New structural work would include providing a new structure spanning Duck Creek where the northbound State Route 99 off-ramp crosses Duck Creek, widening the existing box culvert on Mariposa Road, and widening the box culvert spanning Mormon Slough at the Martin Luther King Jr. Boulevard interchange.

Alternative 3 – The Couplet Alternative

This alternative was formerly known as the Janzen Alternative. It proposes to widen State Route 99 and reconfigure the existing Mariposa Road interchange and Farmington Road interchange into a split spread-diamond interchange configuration connected with couplet ramps. The frontage roads on the east and west sides of State Route 99 that connect the Mariposa Road and Farmington Road interchanges would be built as a large one-way couplet system. The proposed ramps would be built to current design standards and would be configured to accommodate a future eight-lane roadway on State Route 99. Intersections would be designed to allow truck turns. The ramps and overcrossing structure at Charter Way would be removed. The widening of State Route 4 (Farmington Road) at the existing Burlington Northern and Santa Fe Railroad crossing would require an overhead structure.

The existing Charter Way, Golden Gate Avenue, and Main Street overcrossings would be removed and replaced with wider structures, and the ramps would be removed. The Charter Way overcrossing would be removed and replaced with a two-way overcrossing. The South Stockton overcrossing would be removed, but not replaced. The East Stockton Underpass bridge would also be removed and replaced. A new overhead structure would be built to span the at-grade railroad crossing at State Route 4 (Farmington Road).

The following intersections would require traffic signals:

- Mariposa Road at the west frontage road
- Southbound State Route 99 on-ramp/connector road at Mariposa Road
- Northbound State Route 99 off-ramp and the south frontage road at Mariposa Road
- Mariposa Road at the east frontage road
- Mariposa Road at Stagecoach Road

- Southbound State Route 99 off-ramp/connector at State Route 4 (Farmington Road)
- Northbound State Route 99 on-ramp and the south frontage road at State Route 4 (Farmington Road)
- State Route 4 (Farmington Road) at Stagecoach Road

This alternative would require modifying existing bridges and culverts as well as constructing new structures. New structural work would include widening Duck Creek Bridge, adding a new structure spanning Duck Creek at the northbound State Route 99 off-ramp, widening the existing box culvert on Mariposa Road, and removing and replacing the East Stockton Union Pacific Bridge.

Joint California Environmental Quality Act/National Environmental Policy Act Document

The proposed project is a joint project by the California Department of Transportation and the Federal Highway Administration and is subject to state and federal environmental review requirements. Environmental documentation for this project is, therefore, prepared in compliance with both the California Environmental Quality Act and the National Environmental Policy Act. Caltrans is the lead agency under the California Environmental Quality Act and the Federal Highway Administration is lead agency under the National Environmental Policy Act.

Some impacts determined to be significant under the California Environmental Quality Act may not lead to a determination of significance under the National Environmental Policy Act. Because the National Environmental Policy Act is concerned with the significance of the project as a whole, it is quite often the case that a “lower level” document is prepared for the National Environmental Policy Act. One of the most commonly seen joint document types is an Environmental Impact Report/Environmental Assessment.

Following receipt of public comments on the Draft Environmental Impact Report/Environmental Assessment and circulation of the Final Environmental Impact Report/Environmental Assessment, the lead agencies will be required to take actions regarding the environmental document. Caltrans will determine whether to certify the Environmental Impact Report and issue Findings and a Statement of Overriding Considerations and the Federal Highway Administration will decide whether to issue a Finding of No Significant Impact or require an Environmental Impact Statement.

Project Impacts

The following table includes a summary of the results from the environmental studies, displaying the potential impacts for each alternative.

Summary of Potential Impacts from Alternatives

Potential Impact		Alternative 1	Alternative 2	Alternative 3	No-Build Alternative
Land Use	Consistency with the City of Stockton General Plan	Yes	Yes	Yes	No
	Consistency with the San Joaquin County General Plan	Yes	Yes	Yes	No
Growth		No impact	No impact	No impact	No impact
Community Character and Cohesion		Residential displacement and change in circulation patterns	Residential displacement and change in circulation patterns	Residential displacement and change in circulation patterns	No impact
Relocation	Business displacements	14	4	10	None
	Housing displacements	68	77	131	None
	Utility service relocation	Temporary interruption of services to utility customers during relocation of power lines for construction may occur	Temporary interruption of services to utility customers during relocation of power lines for construction may occur	Temporary interruption of services to utility customers during relocation of power lines for construction may occur	None
Environmental Justice		No disproportionately high or adverse effects	No disproportionately high or adverse effects	No disproportionately high or adverse effects	No impact
Utilities/Emergency Services		Temporary interruption of services to utility customers during relocation of the power lines for construction. No interruption of emergency services anticipated.	Temporary interruption of services to utility customers during relocation of the power lines for construction. No interruption of emergency services anticipated.	Temporary interruption of services to utility customers during relocation of the power lines for construction. No interruption of emergency services anticipated.	No impact
Traffic and Transportation/ Pedestrian and Bicycle Facilities		The project would improve conditions for vehicles, pedestrians, and bicycles.	The project would improve conditions for vehicles, pedestrians, and bicycles.	The project would improve conditions for vehicles, pedestrians, and bicycles.	Unacceptable levels without the project
Visual/Aesthetics		Realignment and replacement of structures would have visual impacts.	Realignment and replacement of structures would have visual impacts.	Realignment and replacement of structures would have visual impacts.	No impact

Summary

Potential Impact	Alternative 1	Alternative 2	Alternative 3	No-Build Alternative
Water Quality and Storm Water Runoff	17 infiltration basins	17 infiltration basins	17 infiltration basins	No impact
Paleontology	Potential impacts below 3 feet	Potential impacts below 3 feet	Potential impacts below 3 feet	No Risk
Hazardous Waste/Materials	Preliminary Site Investigations for 17 sites before final environmental document	Preliminary Site Investigation for 11 sites before final environmental document	Preliminary Site Investigation for 11 sites before final environmental document	No impact
Air Quality	No permanent impacts	No permanent impacts	No permanent impacts	No impact
Noise and Vibration	Increased noise levels require <i>consideration</i> of noise abatement at eight locations	Increased noise levels require <i>consideration</i> of noise abatement at seven locations	Increased noise levels require <i>consideration</i> of noise abatement at nine locations	No impact
Wetlands and other Waters	Permanent loss of 0.2 acre of waters of the U.S.	Permanent loss of 0.2 acre of waters of the U.S.	Permanent loss of 0.2 acre of waters of the U.S.	Nothing required
Animal Species	Western burrowing owl, white-tailed kite, loggerhead shrike, cliff swallows	Western burrowing owl, white-tailed kite, loggerhead shrike, cliff swallows	Western burrowing owl, white-tailed kite, loggerhead shrike, cliff swallows	No impact
Threatened and Endangered Species	"Not Likely to Affect" giant garter snake	"Not Likely to Affect" giant garter snake	"Not Likely to Affect" giant garter snake	No impact
Construction	Temporary impacts	Temporary impacts	Temporary impacts	No impact

Permits and Approvals Needed

The following permits, reviews, and approvals would be required for project construction:

Agency	Permit/Approval	Status
United States Army Corps of Engineers	Section 404 Permit for filling or dredging waters of the United States	Pending completion in the Project Specifications and Estimates phase of the process. Anticipate completion before 2012.
California Department of Fish and Game	1601 Agreement for Streambed Alteration Section 2080.1 Agreement for Threatened and Endangered Species	Pending completion in the Project Specifications and Estimates phase of the process. Anticipate completion before 2012.
U.S. Fish and Wildlife Service	Concurrence on " <i>not likely to adversely affect</i> " determination for giant garter snake.	Received concurrence letter from U.S. Fish and Wildlife Service on August 1, 2007.
California Water Resources Board	Water Discharge Permit	Pending completion in the Project Specifications and Estimates phase of the process. Anticipate completion before 2012.
Reclamation Board	Reclamation Board Permit for culvert work in Duck Creek	Pending completion in the Project Specifications and Estimates phase of the process. Anticipate completion before 2012.



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List of Abbreviated Terms

Caltrans	California Department of Transportation
CEQA	California Environmental Quality Act
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
NEPA	National Environmental Policy Act
PM	post mile

Chapter 1 Proposed Project

1.1 Introduction

The California Department of Transportation and the Federal Highway Administration propose to widen State Route 99 from a four-lane to a six-lane freeway from 0.4 mile north of the Arch Road interchange to 0.1 mile south of State Route 4 (Crosstown Freeway) in the City of Stockton in San Joaquin County (post miles 15.0 to 18.6). The project would also widen the outside shoulders to 10 feet, add auxiliary lanes, modify interchanges, and reconstruct ramps to current standards. The project would reconstruct overcrossings to accommodate a future eight-lane roadway along State Route 99. Figures 1.1 and 1.2 show the Project Vicinity Map and Project Location Map, respectively.

The project is included in the Fiscal Year 2007 Federal Statewide Transportation Improvement Program Amendment 5, the San Joaquin Council of Governments' 2007 Regional Transportation Plan, and the 2007 Regional Transportation Improvement Program. Funding would come from the Regional Improvement Program, Interregional Improvement Program, the 2006 State Transportation Improvement Program, the State Route 99 Bond, San Joaquin County Measure "K" funds, and Regional Traffic Impact Fees. Cost estimates for construction of the project alternatives range from \$135.8 to \$157 million, with additional costs for right-of-way and utility relocation estimates ranging from \$68.6 to \$71.4 million.

Background

State Route 99 is a major north/south road connecting cities throughout the Central Valley between Interstate 5 south of Bakersfield in Kern County to State Route 36 north near Red Bluff in Tehama County. State Route 99 is a main route for the movement of people, goods, and services throughout the San Joaquin Valley. It is considered the main transportation route for agricultural products, which is the primary economic base for the valley counties.

In the county, the route intersects three major east/west transportation corridors: the State Route 120/State Route 205 corridor, the State Route 4 corridor with a segment in the City of Stockton called the Crosstown Freeway, and the State Route 12 corridor.

Within the project area, State Route 99 is a four-lane freeway built to the standards required at the time of construction in 1949. The posted speed for this section of roadway is 65 miles per hour. Within the project limits there are ten structures: three culverts in waterways, five existing structures crossing the state route, one railroad crossing, and one pedestrian overcrossing. The abutments for the overcrossing structures are built right up to the edge of the existing highway and do not meet current standards for vertical and horizontal clearance.

Two sections of State Route 99 are depressed within the project limits:

- From about post miles 17.3 to 17.5, beginning north of State Route 4 (Farmington Road) to south of Mormon Slough
- From post miles 17.9 to 18.2, beginning just south of the Burlington Northern and Santa Fe Railroad tracks, continuing north under the Golden Gate and Charter Way overcrossings, and ending just north of the Main Street overcrossing

State Route 4 intersects State Route 99 within the project area, following a zigzag alignment where a portion of State Route 4 follows the Crosstown Freeway from the west, joining State Route 99 briefly, and veering east along State Route 4 (Farmington Road).

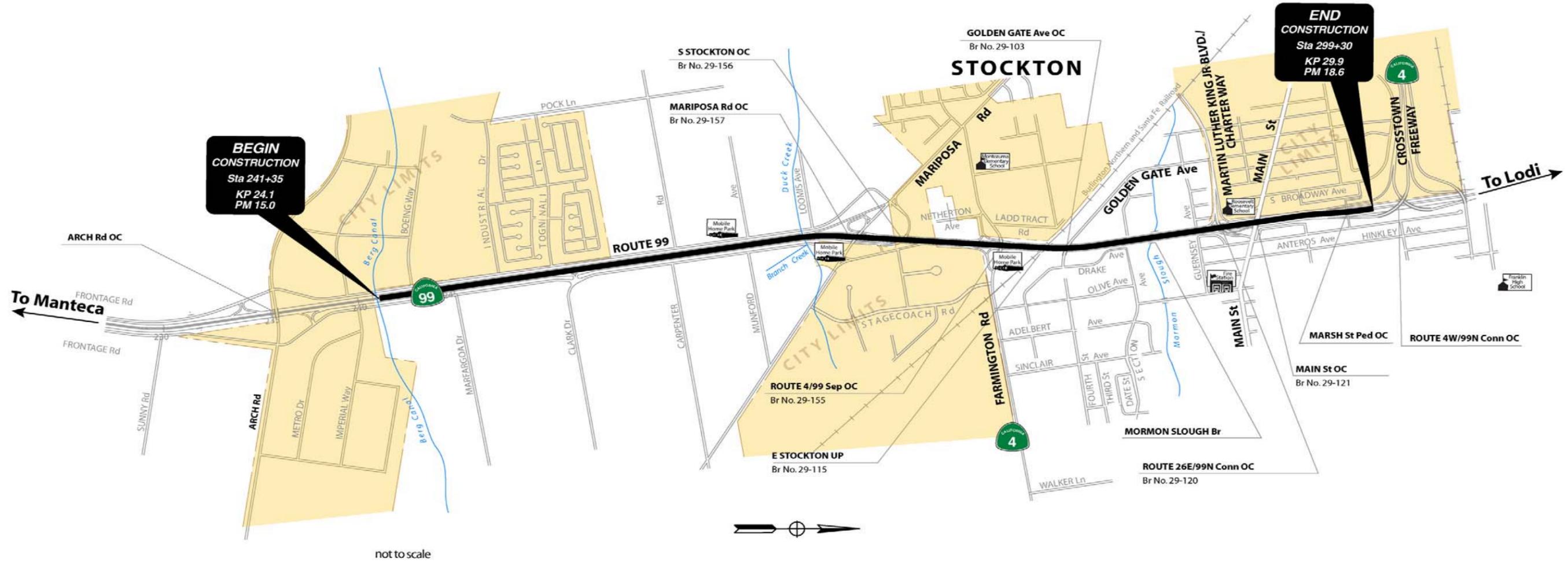
There is one uncontrolled at-grade access to State Route 99 located at Clark Drive at the southern end of the project area on the east side of State Route 99, just south of the Mariposa Road interchange. Traffic access here is not controlled with signals, nor is there enough roadway available to accelerate to acceptable speeds to merge easily into northbound traffic.



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Figure 1.1 Project Vicinity Map





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Figure 1.2 Project Location Map



1.2 Purpose and Need

1.2.1 Purpose

The purpose of the project is to widen and make improvements along a stretch of State Route 99 between the Arch Road interchange and State Route 4 (Crosstown Freeway) to:

- Increase capacity to reduce delay (congestion)
- Improve traffic operations
- Improve traffic safety
- Provide route continuity for both State Route 99 and State Route 4 in the project area

1.2.2 Need

Within the project limits, State Route 99 is a four-lane freeway with interchanges close to a major freeway-to-freeway interchange. Traffic is highly congested during peak hours, with a high demand from both regional and local traffic. High traffic volumes, together with localized traffic weaving, are key factors in slowing down the traffic flow to below acceptable levels of service and contributing to the higher than average number of traffic accidents.

Traffic studies for this project were completed in November 2006. Studies are conducted using traffic indicators such as *average daily traffic volume*, *level of service ratings*, *vehicle delay savings*, and *traffic accident numbers* to measure the effectiveness of the existing roadway and to help design solutions to meet the purpose of the project: increase capacity, improve traffic operations, improve safety, and provide route continuity.

Capacity

Average Daily Traffic: This indicator is used to measure the carrying capacity of the existing roadway. Average Daily Traffic volume numbers represent the traffic demand or the volume of traffic using the roadway in one 24-hour period. Roadways are designed to handle a specific volume of traffic. When the capacity of a roadway is exceeded, the effectiveness of the roadway is reduced. State Route 99 in the project area is currently a four-lane highway designed to carry 64,000 vehicles.

The traffic data shown in this section represents average daily traffic volumes for three timelines: today (2006), the year 2014 (opening day of the finished project), and

the year 2034 (a 20-year planning horizon required for all proposed highway improvement projects). Table 1.1 Average Daily Traffic Forecast shows average daily traffic counts for four segments, subdividing the project area.

Table 1.1 Average Daily Traffic Forecast

Roadway Segments	2006 Average Daily Traffic	2014 Average Daily Traffic	2034 Average Daily Traffic
Arch Road Interchange to Mariposa Interchange (post miles 15.0/16.7)	65,000	75,000	131,000
Mariposa Interchange to Farmington Interchange (post miles 16.7/17.2)	73,000	81,000	128,000
Farmington Interchange to Charter Way Interchange (post miles 17.2/18.0)	79,000	85,000	126,000
Charter Way Interchange to Crosstown Freeway Interchange (post miles 18.0/18.6)	89,000	98,000	125,000

The current roadway is designed to carry 64,000 Average Daily Traffic.

The average daily traffic numbers in Table 1.1 for the years 2006, 2014, and 2034 are higher than what the roadway is designed to carry. These numbers suggest the need to increase the number of lanes on the current roadway to meet current and future traffic demand.

Level of Service: A qualitative system called Level of Service is used to measure the effectiveness of the roadway to transport vehicles through a corridor. The level of service rating system uses letters “A” through “F” to describe and measure service quality. A designation of level of service “A” is used to indicate excellent travel conditions, while level of service “F” indicates very poor, congested travel conditions. According to Caltrans and Federal Highway Administration standards, an acceptable level of service rating for this type of roadway is “D.” See Figure 1.3 Level of Service for Freeways.

Table 1.2 shows the efficiency of State Route 99 in its current condition, with no improvements made, and forecasts the condition of the roadway showing conditions if the project is not built. The table divides the route in the project area into four segments from south to north, presenting data for both northbound and southbound traffic for each segment.

LEVELS OF SERVICE

for Freeways

Level of Service	Flow Conditions	Operating Speed (mph)	Technical Descriptions
A		70	Highest quality of service. Traffic flows freely with little or no restrictions on speed or maneuverability. No delays
B		70	Traffic is stable and flows freely. The ability to maneuver in traffic is only slightly restricted. No delays
C		67	Few restrictions on speed. Freedom to maneuver is restricted. Drivers must be more careful making lane changes. Minimal delays
D		62	Speeds decline slightly and density increases. Freedom to maneuver is noticeably limited. Minimal delays
E		53	Vehicles are closely spaced, with little room to maneuver. Driver comfort is poor. Significant delays
F		<53	Very congested traffic with traffic jams, especially in areas where vehicles have to merge. Considerable delays

Figure 1.3 Levels of Service for Freeways



Table 1.2 State Route 99 Level of Service in Project Area

Segments	Existing	No-Build	
	2006	2014	2034
Southbound Off-ramp Arch Road to Mariposa	D	E	F
Northbound On-ramp Arch Road to Mariposa	D	E	F
Southbound Off-ramp Mariposa to Farmington	D	F	F
Northbound On-ramp Mariposa to Farmington	D	F	F
Southbound Off-ramp Farmington to MLK*	E	F	F
Northbound On-ramp Farmington to MLK*	E	F	F
Southbound Off-ramp MLK* to Charter	E	E	F
Northbound On-ramp MLK* to Charter	E	E	F

* MLK: Proposed Dr. Martin Luther King Jr. Boulevard interchanges

An acceptable level of service rating is within the range of “A” through “D,” and an “E” or “F” rating indicates the conditions need improvement. The current conditions on the route between the Arch Road interchange and the Farmington Road interchange are just meeting an acceptable level of service with a “D” rating. From State Route 4 (Farmington Road) north to State Route 4 (Crosstown Freeway), the conditions are below acceptable levels of service with a rating of “E.”

The ratings are predicted to be “E” or “F” for all segments for the years 2014 and 2034. These ratings show that the worst traffic conditions would exist for some segments by 2014 and for all segments by 2034, if no improvements were made to State Route 99.

Operations

Traffic Weaving: Traffic “weaving” refers to traffic changing lanes and merging with traffic going in the same direction. In areas where there is a high incidence of weaving, there needs to be enough lane length, or distance, for vehicles to change lanes and merge. There are several locations in the project area where lengths for traffic weaving are insufficient, the most evident being between State Route 4 (Crosstown Freeway) and Charter Way. In this area, eastbound traffic from State Route 4 (Crosstown Freeway) merges onto southbound State Route 99 as traffic diverges from State Route 99 onto the Charter Way southbound off-ramp. Because of

the closeness of these two ramps, the weaving length is inadequate to maintain effective traffic flow or acceptable level of service.

Also, just north of the Main Street northbound off-ramp, traffic in the northbound auxiliary lane merges into the northbound off-ramp to go west onto State Route 4 (Crosstown Freeway) as the Charter Way northbound on-ramp traffic merges into the northbound auxiliary lane. Because of the closeness of these two ramps, the weaving length is not adequate to maintain an acceptable level of service. Short weaving lengths and congested traffic conditions are factors contributing to traffic accidents.

Cost of Congestion: To understand the costs resulting from no improvements on State Route 99, calculations have been made to identify the average timesavings for vehicles traveling the route and dollars saved in time delay. This average is based on potential savings of the build alternatives, which translates into savings for the consumer. Table 1.3 shows the average time delay savings in vehicle hours and cost savings per year.

Table 1.3 Cost of Congestion

Vehicle Hour Savings Per Year	Delay Cost Savings Per Year
1,058,600	\$15,212,000

These numbers are based on the traffic congestion delay index of 20 years design life (2034), assuming a safety index=0.

Safety

Caltrans is responsible for maintaining the state highway transportation system and providing safe travel throughout California. Traffic accident data is analyzed to assess the need for safety improvements. The traffic accident data collected for this project indicated that the northbound traffic data showed a higher accident rate than the statewide average and the southbound traffic data showed a lower accident rate than the statewide average. The majority of the accidents that occurred in the northbound and southbound lanes are indicative of congested traffic conditions.

Traffic Accident Data: Northbound traffic accident data came from the Caltrans Traffic Accident Surveillance and Analysis System. The accident report produced for this project spans the three-year period from January 1, 2003 to December 31, 2005. Data from the report is presented in various tables below. Table 1.4 shows that the

fatal and total accident rates are higher than the statewide fatal and average total accident rates.

Table 1.4 Northbound Actual versus Statewide Average Accident Rate

Location	Actual			Average		
	Fatal	Fatal and Injury	Total	Fatal	Fatal and Injury	Total
Post miles 15.0/18.6						
Northbound	0.017	0.30	0.99	0.011	0.32	0.87

The accident rate numbers are represented in accidents per million-vehicle-miles.

Table 1.5 Northbound Accident Data

Primary Collision Factor	Type of Collision							
	Head-on	Side-swipe	Rear-End	Broad-side	Hit Object	Over Turn	Auto/Pedestrian	Other
Influence of Alcohol			2	1	3			
Following Close		1	13					
Improper Turn		3	3	1	20	3		1
Speeding		5	77		5	1		1
Other Violation		11	2	1	8		1	1
Other than Driver					4			
Unknown			1		1			
Total		20	98	3	41	4	1	3

Traffic Data from Table –B Report 2007.

Table 1.5 shows that there were a total of 170 collisions reported for the northbound traffic in the project limits. Of these, 3 were fatal, 48 had injuries, and 119 included property damage. Thirty accidents occurred in the morning peak hours from 6:00 a.m. to 8:00 a.m., with 14 collisions reported due to the movement of preceding traffic, such as stopped, slowing and stopping, and stop-and-go traffic. Sixty-seven accidents occurred in the afternoon peak hours from 3:00 p.m. to 5:00 p.m., with 49 collisions reported due to the movement of preceding traffic, such as stopped, slowing and stopping, and stop-and-go traffic. Rear-end collisions were the most common type of accident.

Southbound traffic accident data for the same three-year period for the southbound segment of State Route 99 within the project limits indicates that the actual accident rates are below the statewide average accident rates. Table 1.6 shows that the actual fatal and total accident rates are lower than the statewide fatal and average total accident rates.

Table 1.6 Southbound Actual versus Statewide Average Accident Rate

Location	Actual			Average		
	Fatal	Fatal and Injury	Total	Fatal	Fatal and Injury	Total
Post miles 15.0/18.6						
Southbound	0.00	0.13	0.55	0.011	0.32	0.87

The accident rate numbers are represented in accidents per million-vehicle-miles.

Table 1.7 Southbound Accident Data

Primary Collision Factor	Type of Collision							
	Head-on	Side-swipe	Rear End	Broad-side	Hit Object	Over Turn	Auto/Pedestrian	Other
Influence of Alcohol	1		1		3			1
Following too Close			2					
Improper Turn		2	3	1	14			
Speeding		3	30	3				
Other Violation		17	3		5			2
Other than Driver					4			
Total	1	22	39	4	26			3

Traffic Data from *Table –B Report 2007*.

Table 1.7 shows a total of 95 collisions reported for the southbound freeway. Of these 0 were fatal, 23 had injuries, and 72 included property damage. The majority of the collisions (30) occurred between 3:00 p.m. and 5:00 p.m., with 15 of the 30 caused by the movement of preceding traffic, such as stopped, slowing and stopping, and stop-and-go traffic. Speeding was the main cause for most of the rear-end collisions. Of the 95 total collisions, 15 collisions occurred in the right lane and near the ramps. Most of the “other violation” collisions were caused by unsafe lane changes.

Route Continuity

There are two route continuity issues that involve both State Route 99 and State Route 4. The first issue is on State Route 99 where this project proposes to fill a gap between two projects, each designed with the same six-lane cross-section configuration. The proposed project would begin in the south by tying into the newly completed Arch Road Interchange and end in the north by tying into a project currently under construction (EA: 10-445404) located at the Crosstown Freeway interchange. Both the Arch Road Interchange and the project to the north are designed with six lanes. The other widening project located south of the Arch Road Interchange (EA: 10-0E6100) is currently in the environmental studies phase and is scheduled for construction in 2014. Like the proposed project, this future project is also fully funded and is in the 2007 Federal Transportation Improvement Program

and the San Joaquin Council of Governments' 2007 Regional Transportation Plan. When all projects are completed, there would be 17 ½ miles of a continuous six-lane freeway on State Route 99, between post miles 5.30 and 22.9.

The second issue is to maintain route continuity for State Route 4 as it zigzags through the project area. State Route 4 comes from the west along the Crosstown Freeway to State Route 99 where it follows south on State Route 99 to the Farmington Road exit and departs to the east along State Route 4 (Farmington Road) toward the foothills of the Sierra Nevada Mountain Range. This project is required to include features that follow design standards to maintain access and traffic flow for State Route 4 through the project area.

Interstate Status

On August 10, 2005, State Route 99 was designated to be part of the federal Interstate Transportation System by legislation entitled “Safe, Accountable, Flexible Efficient Transportation Equity Act – A Legacy for Users.” If the State of California decides to pursue the interstate designation, Caltrans may be required to complete construction to bring State Route 99 to Interstate System standards. This work is currently in the early planning stages and is beyond the scope of this project. However, the design of the project geometrics is consistent with the Transportation Concept Report for the route, which is the most current plan that states the objective for the route is to have 6 lanes at minimum, with 8 lanes as the final objective.

1.3 Alternatives

The alternatives for this project were developed by an interdisciplinary team consisting of Caltrans staff from the departments of design, traffic operations, environmental, and right-of-way; including representatives from the project stakeholders, which includes the city of Stockton Public Works Department, the San Joaquin County Public Works Department, and the San Joaquin Council of Governments.

The criteria used by the team to develop the project alternatives were to meet the objectives of the purpose and need established for the project, with consideration to avoid and minimize impacts on local streets in the community adjacent to the project, while adhering to Caltrans design and safety standards.

Environmental law requires evaluation of a “reasonable range” of alternatives in the project’s environmental document, with the purpose and need information used as the basis for evaluating the effectiveness of each alternative. Public input has been an important part of the project development process and has been essential to design alternatives that consider the goals and objectives of the local community, as well as the purpose and need for the state roadway system.

Five alternatives were considered for this project. Three build alternatives and a No-Build Alternative have gone forward for evaluation in this document. This section describes the alternatives under consideration, explains why other alternatives were dropped from further consideration, and provides a comparison of how the alternatives meet the purpose and need, including input from other public agencies and the public.

1.3.1 Build Alternatives

Common Design Features of the Build Alternatives

State Route 99: All three build alternatives propose to improve State Route 99 to meet current design standards for a six-lane freeway by adding two 12-foot lanes in the median, widening the outside shoulders to 10 feet, constructing a concrete median barrier throughout the length of the project, and correcting the cross slopes across the roadway to 2 percent to improve drainage.

Auxiliary Lanes (additional travel-lanes): Auxiliary lanes are proposed in all the alternatives to provide safer traffic movements.

Structures (overcrossings, bridges, culverts): All alternatives propose to rebuild the Mariposa Overcrossing, the Charter Way Overcrossing, and the Main Street Overcrossing. All structures over State Route 99 would comply with design requirements to accommodate a future widening of State Route 99 to eight lanes. The box culvert at State Route 99 crossing Duck Creek is proposed to be widened in all alternatives. All the alternatives would remove access to State Route 99 from Clark Drive.

Local Streets: Curbs, gutters, and sidewalks removed from local streets would be replaced. A cooperative agreement between Caltrans and the city and county would be drafted that would include the locations of any new areas receiving curbs, gutters, and sidewalks. Proposed improvements at intersections on the local streets would be designed with appropriate curb radii to accommodate truck turning.

Pedestrian and Bicycle Access: Pedestrian access would be provided on all new overcrossings with additional shoulder, sidewalks, and curb ramps to meet Americans with Disabilities Act requirements. The shoulder area would provide sufficient width along the improved overcrossings and local streets to accommodate bicyclists. The existing Class III Bike Routes at Main Street and Golden Gate Avenue would be facilitated by the project improvements.

Drainage: All project alternatives would include infiltration basins to comply with the statewide National Pollutant Discharge Elimination System Permit. Several potential sites have been identified throughout the project area, with different potential sites identified for each alternative.

Park and Ride Facilities: All project alternatives would include a Park-and-Ride site to comply with the San Joaquin Council of Governments' Park-and-Ride Plan (June 1993). Several potential sites have been identified throughout the project area.

Landscaping: The project would provide landscaping throughout the project area in a separate project following construction of the preferred alternative.

Alternative 1 – Mariposa Alternative

In addition to the common features discussed in the previous section, this alternative proposes to reconfigure the Mariposa interchange to a partial cloverleaf interchange configuration (Type L-9). The new interchange would be constructed to current design standards and be built to accommodate a future eight-lane roadway on State Route 99. Auxiliary lanes would be provided on northbound and southbound State Route 99 between State Route 4 to the west (Crosstown Freeway) and State Route 4 to the east (Farmington Road); and between State Route 4 (Farmington Road) and Mariposa Road. See Figure 1.4 Typical Cross-Sections and Figure 1.5 Alternative 1 – Mariposa Alternative for a diagram showing the proposed cross-sections and design.

Improvements are also proposed at the State Route 4 (Farmington Road), Charter Way, and Main Street overcrossings, which would replace these existing structures with wider structures to accommodate a future eight-lane roadway on State Route 99. All ramps associated with the overcrossings would be removed. With removal of the ramps at Farmington Road, State Route 4 would be realigned to connect to the Mariposa Road interchange via Stagecoach Road. The new Charter Way overcrossing would be built to accommodate two-way traffic. The South Stockton overcrossing would be removed, but not replaced.

The widening of State Route 4 (Farmington Road) at the existing at-grade Burlington Northern and Santa Fe Railroad crossing would require the construction of an overhead structure. This structure is proposed to span over State Route 99 and over the existing at-grade railroad located on Farmington Road (State Route 4).

To accommodate increased traffic demand, improvements are needed at State Route 4 (Farmington Road), Stagecoach Road, Mariposa Road, and State Route 4, which would include widening the roadways, and providing either left-/right-turn lanes or installing traffic signals at intersections. The east frontage road would be realigned to Munford Road.

This alternative would require widening the existing box culvert at State Route 99 and Duck Creek, and providing a new box culvert on Duck Creek to the east of State Route 99 to accommodate the realignment of the northbound State Route 99 off-ramp to the east. The existing box culverts on Mariposa Road and on Stagecoach Road would be widened.

Alternative 2 – Dr. Martin Luther King Jr. Boulevard Alternative

In addition to the common features discussed in the previous section, this alternative proposes to reconfigure the existing Charter Way interchange and construct a new combination two-quadrant cloverleaf interchange just south of Golden Gate Avenue on State Route 99. From this location, Golden Gate Avenue would be renamed Dr. Martin Luther King Jr. Boulevard all the way to State Route 4 East. The west end of the realigned Golden Gate Avenue would connect back to Dr. Martin Luther King Jr. Boulevard/Charter Way at its present location. See Figure 1.6 Alternative 2 – Dr. Martin Luther King Jr. Boulevard Alternative for a diagram showing the proposed design.

This alternative would also reconfigure the Mariposa interchange to a Type L-9, partial cloverleaf interchange. Auxiliary lanes would be provided on northbound and southbound State Route 99 between State Route 4 and the new Martin Luther King Jr. Boulevard interchange, and between the new Martin Luther King Jr. Boulevard interchange and the Mariposa interchange.

The existing State Route 4 (Farmington Road), Charter Way, and Main St. overcrossings would be removed and replaced with wider structures, and the ramps would be removed. The Charter Way overcrossing would be built to accommodate two-way traffic. The South Stockton overcrossing would be removed, but not replaced. The East Stockton Underpass Bridge would also be removed and replaced.

The east frontage road would be realigned to Munford Road and traffic signals would be installed at the following intersections:

- Mariposa Road at the west frontage road
- The north and southbound State Route 99 off-ramps at Mariposa Road
- Mariposa Road at the east frontage road
- Mariposa Road at Stagecoach Road
- The north and southbound State Route 99 off-ramps at Martin Luther King Jr. Boulevard/Charter Way.

This alternative would require modifying existing bridges and culverts as well as constructing new structures. New structural work would include providing a new structure spanning Duck Creek where the northbound State Route 99 off-ramp crosses Duck Creek, widening the existing box culvert on Mariposa Road, and widening the box culvert spanning Mormon Slough at the Martin Luther King Jr. Boulevard interchange.

The Burlington Northern and Santa Fe Railroad crossing over State Route 99 is proposed to be rebuilt to allow for the proposed widening and auxiliary lanes to be constructed. A temporary railroad structure would be constructed adjacent and to the north of the existing structure to allow rail traffic to continue while the new permanent structure is built. The widening of Farmington Road at the existing at-grade Burlington Northern and Santa Fe Railroad crossing would require the construction of an overhead structure.

Alternative 3 – Couplet Alternative

This alternative was formerly known as the Janzen Alternative. In addition to the common features discussed in the previous section, this alternative proposes to reconfigure the existing Mariposa Road and Farmington Road interchanges into a split, spread-diamond interchange configuration connected with couplet ramps. The frontage roads on the east and west sides of State Route 99 that connect the Mariposa Road and Farmington Road interchanges would be built as a large one-way couplet system. See Figure 1.7 Alternative 3 – Couplet Alternative.

The existing Golden Gate Avenue and Main Street overcrossings would be removed and replaced with wider structures, and the ramps removed. The Charter Way and South Stockton overcrossings would be removed, but not replaced. The East Stockton Underpass Bridge would also be removed and replaced.

The following intersections would require traffic signals:

- Mariposa Road at the west frontage road
- Southbound State Route 99 on-ramp/connector road at Mariposa Road
- Northbound State Route 99 off-ramp and the south frontage road at Mariposa Road
- Mariposa Road at the east frontage road
- Mariposa Road at Stagecoach Road, southbound State Route 99 off-ramp/connector at Farmington Road
- Northbound State Route 99 on-ramp and the south frontage road at State Route 4 (Farmington Road)
- State Route 4 (Farmington Road) at Stagecoach Road

This alternative would require modifying existing bridges and culverts as well as constructing new structures. New structural work would include widening Duck Creek Bridge, adding a new structure spanning Duck Creek at the northbound State Route 99 off-ramp, widening the existing box culvert on Mariposa Road, and removing and replacing the East Stockton Union Pacific Bridge.

Caltrans proposes rebuilding the Burlington Northern and Santa Fe Railroad crossing over State Route 99 to allow for the proposed widening and auxiliary lanes to be constructed. A temporary railroad structure would be constructed adjacent and to the north of the existing structure to allow rail traffic to continue while the new permanent structure is built. The widening of State Route 4 (Farmington Road) at the existing Burlington Northern and Santa Fe Railroad crossing would require the construction of an overhead structure. The new overhead structure would span the at-grade railroad crossing at Farmington Road.

Transportation Systems Management (TSM) and Mass Transit Alternatives, Transportation Demand Management Alternative (TDM)

Transportation Systems Management strategies were considered in the project design. These strategies consist of actions that increase the efficiency of existing facilities and increase the number of vehicle trips a roadway can carry without increasing the number of through lanes. Examples of Transportation System Management strategies include ramp metering, auxiliary lanes, turn lanes, reversible lanes, and traffic signal coordination. Transportation Systems Management also encourages public and private transit, ridesharing programs, and bicycle and pedestrian improvements as elements of a unified urban transportation system. Modal alternatives integrate

multiple forms of transportation modes, such as pedestrian, bicycle, automobile, rail, and transit.

Although Transportation Systems Management measures alone could not satisfy the purpose and need of the project, the following Transportation Systems Management measures have been incorporated into the build alternatives for this project: ramp metering, auxiliary lanes, and traffic signal coordination. Additionally, on-ramps would include a carpool lane, where there would be a three-lane ramp metering system with two mixed-flow lanes and one high-occupancy-vehicle lane.

Also, the project would include a park-and-ride roadway as defined in the San Joaquin Council of Governments' countywide Park-and-Ride Plan adopted June 22, 1993. With the increased local development in the project vicinity, it is necessary and beneficial to construct a roadway in the project area because of heavy commute traffic volumes. A roadway would decrease the number of vehicle trips onto the adjacent highway system and, in turn, reduce congestion, as well as motor vehicle emissions.

Each build alternative in the proposed project provides for a park-and-ride site consistent with the San Joaquin Council of Governments' plan. The site would require one acre of land near the Mariposa Road interchange to accommodate a minimum of 100 spaces. The proposed roadway would also comply with Caltrans park-and-ride requirements.

1.3.2 No-Build Alternative

The No-Build Alternative would consist of no improvements to State Route 99. Traffic congestion would continue to be a problem between Arch Road and State Route 4 (Crosstown Freeway) and would soon reach unacceptable levels. The closely spaced interchanges and existing traffic-weaving problem would remain. The accident rate would also continue to be above average for northbound traffic.

1.3.3 Comparison of Alternatives

Criteria considered by the Project Development Team to evaluate the project alternatives included project purpose and need objectives, project costs, potential environmental effects, and input from public services, public agencies, property owners, and the general public.

Each of the build alternatives is viable and meets the project purpose and need; however, the build alternatives vary in how well they improve operations throughout the entire project area, including State Route 99 with on- and off-ramps, and local streets and intersections. All of the alternatives add capacity to State Route 99 and provide route continuity for State Route 99 and State Route 4. The build alternatives differ in their estimated total cost. Alternative 1 would cost roughly \$150 million for construction, plus \$68,900,000 for right-of-way and utility relocation for a total cost of \$216,200,000. Alternative 2 would cost roughly \$135.8 million for construction, plus \$71,400,000 for right-of-way and utility relocation for a total cost of \$205,200,000. Alternative 3 would cost roughly \$157 million for construction, plus \$68,600,000 for right-of-way and utility relocation for a total cost of \$222,700,000 (December 2007). The differences lie in the improvements proposed at four existing interchanges and the associated local streets system.

Alternative 1 would provide reduction in delay on State Route 99 as compared to the No-Build Alternative. Since this alternative focuses traffic at one interchange, it reduces non-standard weaving on the state route; however, the consequences of having only one access point means there is less access for local traffic on and off the state route. Also, building only one interchange would take up a larger footprint, reducing the amount of space available for development and for any future expansion of the interchange. While this alternative would result in improved conditions on the state route, it provides for less overall circulation on and off the state route and on local streets intersecting the route, as stated in the Traffic Operations Analysis Report (November 2006). Alternative 1 has greater impacts to the local street system, requiring rerouting traffic on local streets and causing negative impacts to six local intersections. Alternatives 2 and 3 affect only one local intersection. See Chapter 2, Section 2.1.5 Traffic and Transportation/Pedestrian and Bicycle Facilities, for more discussion about the local intersections affected.

Alternative 2 has been identified in the Traffic Operations Analysis Report (November 2006) as the most effective alternative, providing the best overall benefit to State Route 99 and local street circulation. This alternative reduces traffic delay on State Route 99 and provides two interchanges for local access (Mariposa interchange and Dr. Martin Luther King Jr. Boulevard interchange). Traffic studies indicate that this alternative would require the least rerouting of traffic throughout the local street

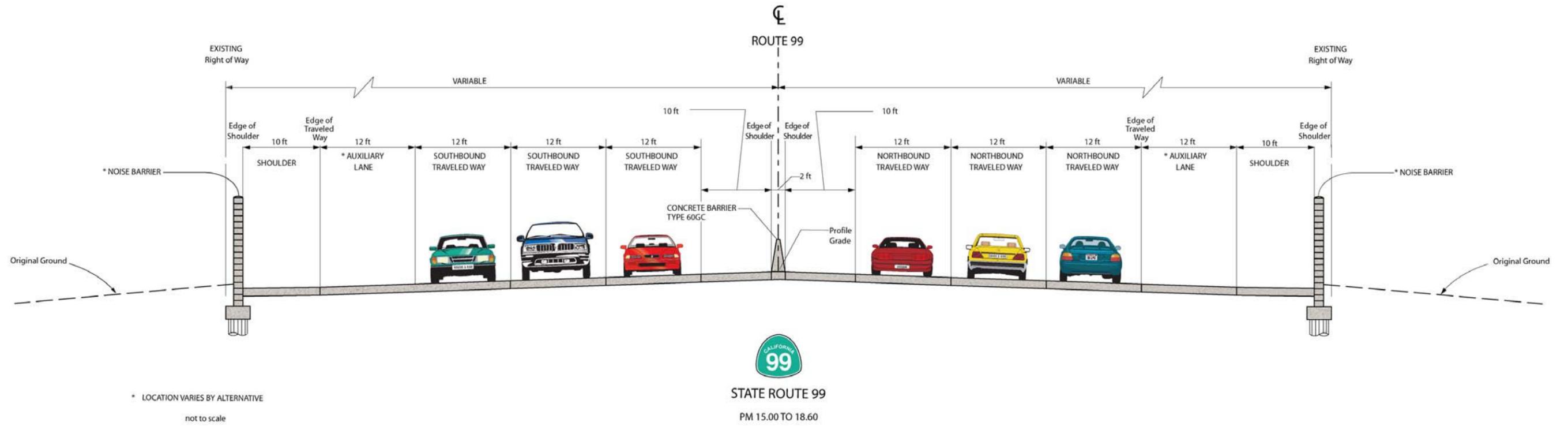


Figure 1.4 Typical Cross-Section



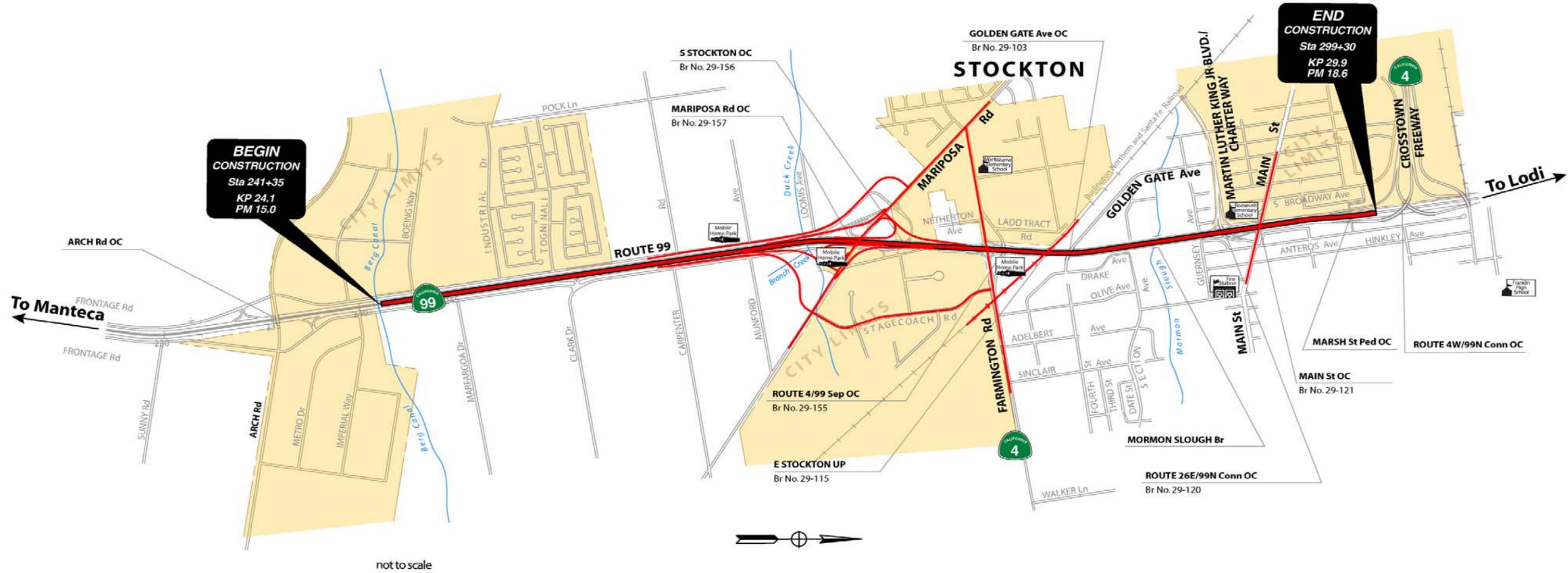


Figure 1.5 Alternative 1 – Mariposa Alternative



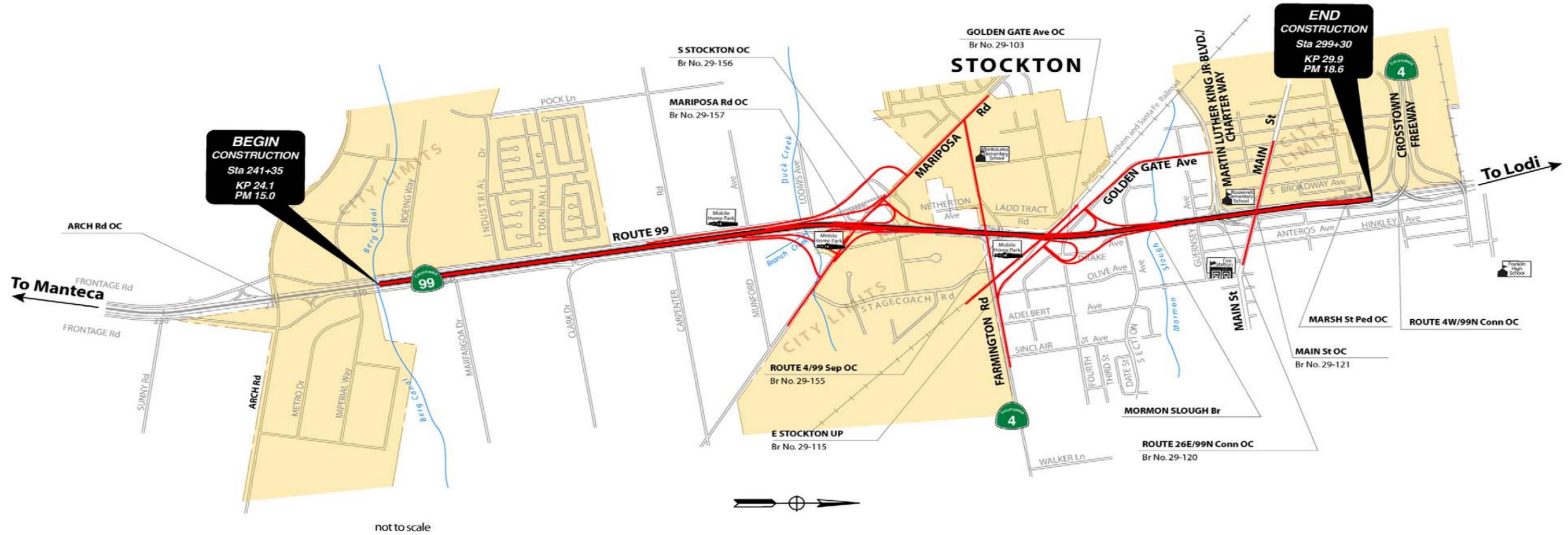


Figure 1.6 Alternative 2 – Dr. Martin Luther King Jr. Boulevard Alternative



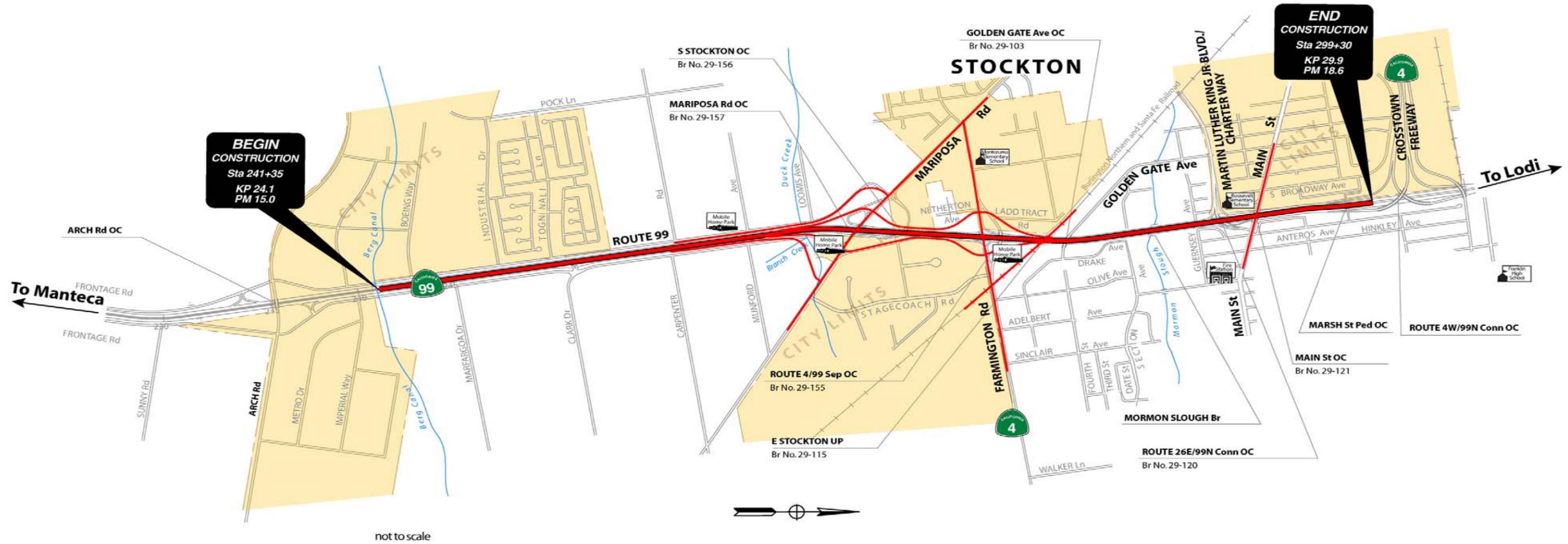


Figure 1.7 Alternative 3 – Couplet Alternative



system. Also, the area surrounding the new proposed interchange accommodates development and any necessary future expansion of the interchange required due to planned growth in the area. Additionally, this alternative provides more even interchange spacing as compared with Alternative 3, as well as direct route continuity for State Route 4, which is not true for Alternatives 1 and 3.

Alternative 3 also provides a viable solution to improve traffic conditions on the state route and intersecting local street system. While this alternative provides two access points at two improved interchanges (Mariposa and Farmington), as Alternative 2 does, the configuration would require more rerouting of local traffic, and it may be more confusing for drivers to follow the proposed couplet system design. Like Alternative 2, this alternative accommodates development and any necessary future expansion of the interchange required due to planned growth in the area.

Environmental impacts vary per alternative. See Table 1.8 Potential Environmental Impacts for Alternatives for a comparison of the environmental impacts for each alternative. The table shows that Alternative 1 would displace 14 businesses and 68 residential homes, encounter 17 hazardous waste sites, require approximately 58.0 acres of right-of-way, and erect 8 potential soundwalls. Alternative 2 would displace 4 businesses and 77 residential homes, encounter 11 hazardous waste sites, require approximately 59.6 acres of right-of-way, and erect 7 soundwalls. Alternative 3 would displace 10 businesses and 131 residential homes, encounter 11 hazardous waste sites, require approximately 66.8 acres of right-of-way, and erect 9 soundwalls.

Table 1.8 Potential Environmental Impacts for Alternatives

	Acquire Land	Relocate Residential Homes	Relocate Businesses	Hazardous Waste Sites	Sound Walls
Alternative 1	58.0 acres	68 Homes	14 Businesses	17 Sites	8 Walls
Alternative 2	59.6 acres	77 Homes	4 Businesses	11 Sites	7 Walls
Alternative 3	66.8 acres	131 Homes	10 Businesses	11 Sites	9 Walls
No-Build Alternative	00.0 acres	0 Homes	0 Businesses	No Clean Up	No Noise Reduction

Meetings have been held to share information and collect input from emergency service providers, community groups, and residents and businesses within the project area. At a public information meeting on May 3, 2007, attendees stated (on comment cards) their preference for a particular alternative: five people preferred Alternative 1, five people preferred Alternative 2, and one person preferred Alternative 3.

Several coordination meetings have been held with emergency responder services such as the Stockton Police Department, the Stockton Fire Department, the California Highway Patrol, and the San Joaquin County Sheriff's Department. The Stockton Fire Department ran traffic models to see if the alternatives reduced response times to State Route 99 and to the local coverage area. The modeling showed that Alternative 2 did not slow response times, but Alternatives 1 and 3 did reduce access time to State Route 99 and local neighborhoods. See Chapter 4 Comments and Coordination for a full discussion of meetings and coordination.

After the public circulation period, all comments will be considered, and the California Department of Transportation and the Federal Highway Administration will select a preferred alternative and make the final determination of the project's effect on the environment. In accordance with the California Environmental Quality Act, the California Department of Transportation will certify that the project complies with the act, prepare findings for all significant impacts identified, prepare a Statement of Overriding Considerations for impacts that will not be mitigated below a level of significance, and certify that the findings and Statement of Overriding Considerations have been considered prior to project approval.

The California Department of Transportation will then file a Notice of Determination with the State Clearinghouse that will identify whether the project will have significant impacts, mitigation measures were included as conditions of project approval, findings were made, and a Statement of Overriding Considerations was adopted. Similarly, if the Federal Highway Administration determines the action does not significantly affect the environment, the Federal Highway Administration will issue a Finding of No Significant Impact in accordance with the National Environmental Policy Act.

1.3.4 Alternatives Considered but Eliminated from Further Discussion

An alternative that was considered but eliminated from further consideration was the Mariposa-Braid Alternative. It was eliminated because it would increase the impacts to the residents and businesses adjacent to State Route 99 and would not be feasible to build. The southern portion of the Mariposa Braid Alternative is identical to Alternative 1 - Mariposa Alternative except for the work at the Charter Way interchange. The existing ramps at Charter Way would be removed and replaced with ramps configured to current design standards. Under this alternative, the Charter Way interchange would remain open.

To eliminate the weaving problem on southbound State Route 99 between State Route 4 (Crosstown Freeway) and Charter Way, a grade separation for the freeway entrance and exit ramps would be necessary. Providing grade-separated ramps (braided ramps) would require the following work:

- The existing entrance ramp to State Route 99 from State Route 4 would be realigned to allow the proposed exit ramp from State Route 99 to Charter Way to cross under. The existing soundwall at this location would be removed and replaced to build the wall to required standards.
- The proposed grade-separation structure would require outrigger girders to provide support for the longer span because of the small skew angle between ramps. The cost for a structure of this type would be more than twice that for a conventional structure.
- State Route 99 would be shifted east about 40 feet to avoid affecting Roosevelt Elementary School and allow room for the proposed southbound exit ramp to Charter Way. Shifting the freeway alignment would require complete reconstruction of the structural section of State Route 99 for about 1.5 miles. Shifting the freeway alignment would require a significant amount of additional right-of-way acquisition. Right-of-way would be needed from 74 additional parcels (more than 19 additional acres).
- Reconfiguration of the Charter Way interchange would result in an isolated off-ramp at Main Street.

This alternative was studied as an attempt to keep the existing Charter Way interchange open. However, because of very high construction costs, safety issues related to the proposed isolated off-ramp at Main Street, and increased right-of-way impacts, this alternative has been withdrawn from consideration.

1.4 Permits and Approvals Needed

The following permits, reviews, and approvals would be required for project construction:

Agency	Permit/Approval	Status
United States Army Corps of Engineers	Section 404 Permit for filling or dredging waters of the United States.	Pending completion in the Project Specifications and Estimates phase of the process. Anticipate completion before 2012.
U.S. Fish and Wildlife Service	Concurrence on “ <i>not likely to adversely affect</i> ” determination for giant garter snake.	Received concurrence letter from U.S. Fish and Wildlife Service on August 1, 2007. See Appendix I.
California Department of Fish and Game	1602 Agreement for Streambed Alteration Section 2080.1 Agreement for Threatened and Endangered Species	Pending completion in the Project Specifications and Estimates phase of the process. Anticipate completion before 2012.
California Water Resources Board	Water Discharge Permit	Pending completion in the Project Specifications and Estimates phase of the process. Anticipate completion before 2012.
California Reclamation Board	Reclamation Board Permit for culvert work in Duck Creek.	Pending completion in the Project Specifications and Estimates phase of the process. Anticipate completion before 2012.

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. Where applicable, any indirect or construction 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 adverse impacts were identified. Consequently, there is no further discussion regarding these issues in this document.

- Parks and Recreational Facilities—No parks or other recreational facilities would be affected directly or indirectly by construction of this project.
- Cultural Resources—A Historic Property Survey Report was completed in October 2007. The report combines the results of archaeology, history, and architectural history studies. Results of the studies indicate that the properties evaluated were not eligible for inclusion in the National Register of Historic Places and that no historic properties are affected. In a letter dated December 14, 2007, the State Historic Preservation Officer concurred with the Federal Highway Administration’s determination (see Appendix H).
- Farmland—There is no land considered Prime, Unique, or of Local Significance within the project area. None of the land is under Williamson Act contract. A Farmland Conversion Impact Rating Form AD 1006 was used to determine that there would be no impacts to farmland from construction of the proposed project (September 2007).
- Geology/Soils/Seismic/Topography—A Preliminary Geotechnical Report dated February 22, 2007 states that “the potential for surface rupture due to fault movement at the project site is considered negligible, as there are no known faults projecting towards or passing through the project site,” and “the potential for

liquefaction along the project alignment is considered low due to soil and groundwater conditions.”

- Energy—Implementation of the “Energy Decision Tree” determined that this project is not a “Major Project” requiring further energy analysis. When balancing energy used during construction and operation against energy saved by relieving congestion and other transportation efficiencies, the project would not have substantial energy impacts; in fact, the project build alternatives provide travel savings and savings in fuel consumption as compared with the No-Build Alternative.
- Plant Species—A Natural Environment Study was prepared in October 2007 to present the studies conducted and potential impacts to biological resources in the project area. No special-status plant species or habitat for special-status plant species was identified within the project area.

2.1 Human Environment

2.1.1 Land Use

2.1.1.1 Existing and Future Land Use

Affected Environment

A Community Impact Assessment, which included an assessment of the current and future land uses in the project impact area, was completed in November 2007. Field surveys were conducted. Assessor parcel maps and the city and county general plans were reviewed. And interviews were conducted with planners at the city and county to develop an understanding of the current and future planned land uses for the project study area.

According to the San Joaquin County General Plan and the City of Stockton General Plan, the land use designations within the project impact area include Residential (housing), Commercial (sales of goods and services), and Industrial (production of goods). See Figures 2.1 and 2.2 for current land use designations within the project area. The project area, as with most towns developing along State Route 99, follows a pattern of commercial and industrial development up close to the freeway, with pockets of residential housing nearby. Commercial and industrial land uses also exist along Mariposa Road and Main Street where there is new mixed with old development.

Three existing mobile home parks are in the project area. They are located on Mariposa Road east of State Route 99, State Route 4 (Farmington Road) on the east side of State Route 99, and on the west frontage road, just west of State Route 99, south of Mariposa Road. The mobile home park on east Mariposa Road is considered a non-conforming use within commercial and industrial land uses.

Residential land use lies mainly in the area where work is proposed for the Northern Burlington and Santa Fe Railroad crossing and where a new interchange is proposed at the Golden Gate Avenue crossing, immediately adjacent to State Highway 99.

Future land use is following a regional trend toward more residential development within the areas just east and south of the project area where there is currently open land designated for agriculture. A shortage of affordable housing in the San Francisco Bay Area has led to the creation of new housing in San Joaquin County, where land costs are lower and workers can still commute easily to the Bay Area. The historical development trend has been toward the north side of Stockton, but in recent years has expanded to include the south side as opportunities on the north side have been exhausted. To respond to a high demand for housing that is “within commuting distance” from the San Francisco Bay area, numerous proposals for large-scale, market-rate residential development are in the application development process or in the construction pipeline, in and near the study area. See Table 2.1 Proposed Major Projects for a list of the most relevant development projects located within the vicinity of the proposed project. Refer to Figure 2.3 Major Projects, for the location of these projects and several other major projects located further north of the City of Stockton.

Table 2.1 Proposed Major Projects

Name	Jurisdiction	Proposed Uses	Status
Mariposa Lakes	City of Stockton	Master-planned community 10,560 new residential housing units on 3,810 acres.	Environmental Impact Report being finalized. Land use applications submitted for approval.
Origone Ranch	City of Stockton	Master planned community 1,500 new residential housing units on 460 acres	Environmental Impact Report being finalized. Land use applications submitted for approval
Empire Ranch	City of Stockton	Master planned community 2,121 new residential housing units on 502 acres	Environmental Impact Report being finalized. Land use applications submitted for approval
Oakmore Gateway	City of Stockton	Master planned community 2,500 new residential housing units on 630 acres	Environmental Impact Report being finalized. Land use applications submitted for approval
Riverbend	City of Stockton	Master planned community 756 new residential housing units on 168 acres	Application and entitlements approved
Tidewater Crossing	City of Stockton	Master planned community 2,500 new residential housing units on 878 acres	Environmental Impact Report being finalized. Land use applications submitted for approval

Environmental Consequences

Land would have to be acquired for each build alternative. Table 2.2 below shows the acres required for each alternative.

No substantial impacts to land use would result from construction of the proposed project because the project is consistent with local planning for the area and would not cause inconsistent land uses. The project also improves roadway conditions that support the current and future land use activities within the project area

Table 2.2 Estimate of Land to be Acquired

Alternative	Estimated Acres of Land to be Acquired
No-Build Alternative	0
Alternative 1	58.0 acres
Alternative 2	59.6 acres
Alternative 3	66.8 acres

Avoidance, Minimization, and/or Mitigation Measures

No specific measures are required.



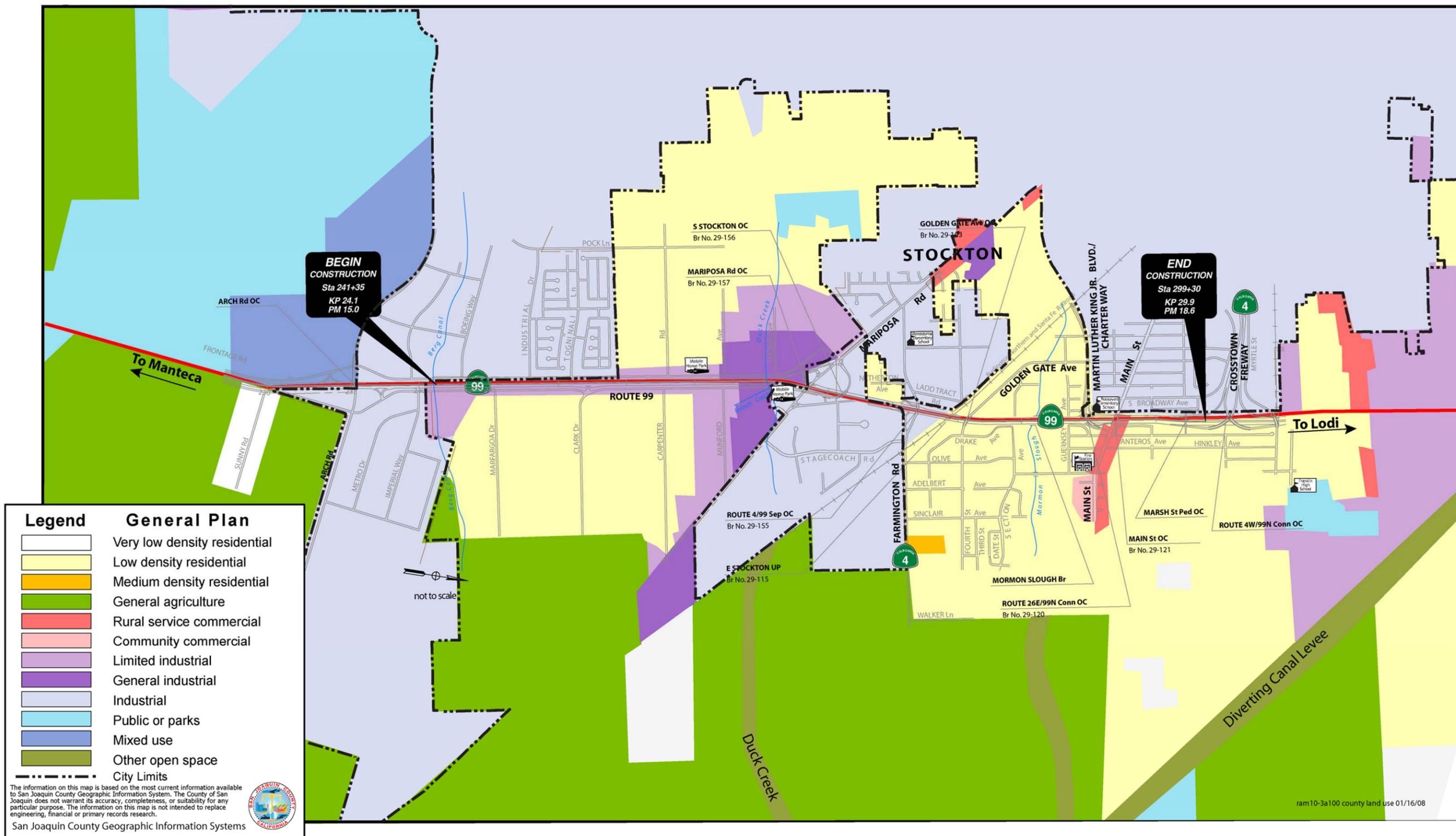


Figure 2.2 San Joaquin County General Plan



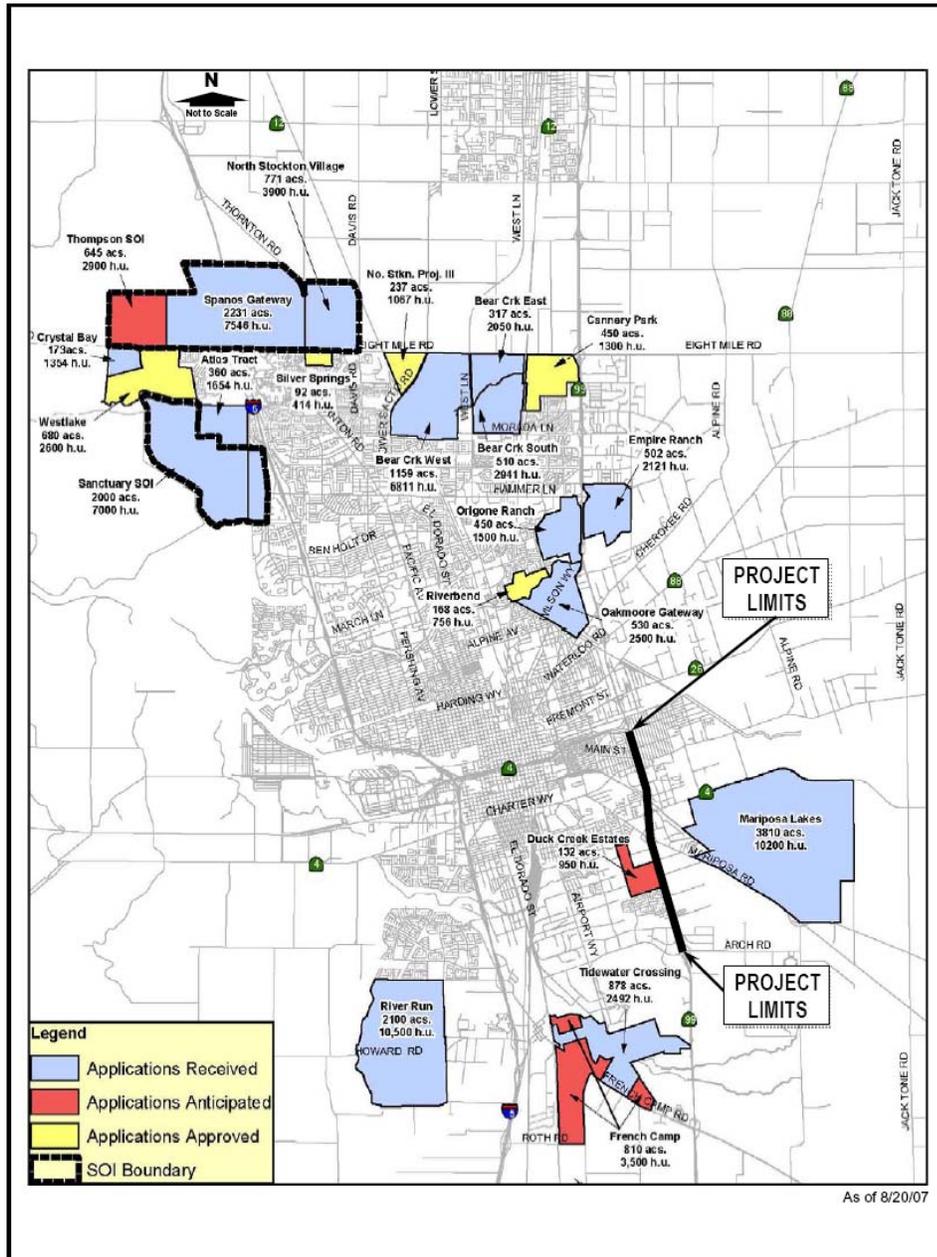


Figure 2.3 Proposed Major Projects

2.1.1.2 Consistency with State, Regional, and Local Plans

Affected Area

State

State Improvement Plan for Air Quality: The project complies with the State Improvement Plan for Air Quality. It is listed in the San Joaquin County 2007 Regional Transportation Plan, approved by the San Joaquin Council of Governments on May 24, 2007.

Regional

Ultimate Route Concept: The ultimate route concept for this section of State Route 99 is an eight-lane freeway. While this project proposes only six lanes, it complies with the concept because all structures would be built to accommodate a future eight-lane roadway. While planning teams have considered widening the roadway to eight or 10 lanes to meet the future traffic demand, it was determined the costs and impacts to the community would be too high. A six-lane roadway would provide some benefit at a reasonable cost with fewer impacts to the community.

State Route 99 Business Plan and Port Security Bond Act: The project is consistent with the Caltrans State Route 99 Business Plan because it would add lanes to increase the capacity of the roadway to accommodate current and future traffic volumes. Additionally, the project has been approved by the California Transportation Commission for funding from the Highway Safety, Traffic Reduction, Air Quality, and Port Security Bond Act of 2006 (99 Bond Fund). This act was approved by voters on November 7, 2006, for safety, operational enhancements, rehabilitation, or capacity improvements necessary to improve the State Route 99 corridor in the San Joaquin and Sacramento valleys.

San Joaquin Regional Transportation Plan: The project is consistent with the San Joaquin Regional Transportation Plan to widen all of State Route 99 to a minimum of six-lanes through the length of the county.

Airport Land Use Plan: The project lies within the Area of Influence for the Stockton Metropolitan Airport. The project is consistent with this plan and does provide service to the airport.

Local

City of Stockton General Plan 1990 and the 2030: The project is consistent with the city's general plan as documented in the sections for Urban Growth and Overall

Development, Residential Land Use, Streets and Highways, and Natural and Cultural Resources. Specifically, these sections identify the importance of an effective roadway and freeway system to support and accommodate development, and to provide safe access for residents and businesses, while maintaining environmental quality, especially with regard to air and noise impacts.

San Joaquin County General Plan 2010 adopted 1992: The project is consistent with the county's general plan as documented in the sections for Infrastructure and Services, Residential Development, Housing and Neighborhood Preservation, and Transportation Coordination with Land Use. The project does provide features to improve access and congested traffic conditions within the project area and the freeway. The project does coordinate well to provide improvements for all land uses, residents, and businesses.

Environmental Consequences

There are no impacts. The project is consistent with state, regional, and local planning for the project area.

2.1.2 Growth

Regulatory Setting

The Council on Environmental Quality regulations, which implement the National Environmental Policy Act of 1969, requires evaluation of the potential environmental consequences of all proposed federal activities and programs. This provision includes a requirement to examine indirect consequences, which may occur in areas beyond the immediate influence of a proposed action and at some time in the future. The Council on Environmental Quality regulations, 40 Code Federal Regulations 1508.8, refers to these consequences as indirect impacts. Indirect impacts may include changes in land use, economic vitality, and population density, which are all elements of 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..."

Affected Area

A growth inducement analysis was performed for the proposed project and related cumulative projects. The proposed project widens State Route 99 to six lanes for a distance of approximately 3.6 miles, from 0.4 mile north of Arch Road to 0.1 mile south of State Route 4 West. The related cumulative projects include the proposed project as well as the widening of State Route 99 to six lanes from the State Route 120 West interchange in the City of Manteca to the limits of the proposed project 0.4 mile north of Arch Road, a combined distance of 13.3 miles. Additionally, the State Route 99 widening from Hammer Lane to the northern limits of the proposed project is in construction and will open in 2008; combined with the two planned projects, there would be a six-lane freeway from Hammer Lane to State Route 120 West, a total distance of 17.7 miles.

The growth inducement analysis uses a sample of nine employment zones and four residential areas to evaluate travel time. The nine employment zones include Sacramento, North Stockton, West Stockton, South Stockton, Manteca, Tracy, Modesto, the Outer Bay Area, and the Inner Bay Area. The four residential areas include Northeast Stockton, Mariposa Lakes, Northern Manteca, and Southern Manteca.

Two analysis years—2020 (Interim year) and 2034 (Planning Horizon year)—are used to evaluate conditions under the no-build, build, and related cumulative projects to demonstrate results under good level of service conditions (2020) and high traffic congestion conditions (2034).

Projected employment, housing, and population data used for the growth inducement analysis report were obtained from the San Joaquin Council of Governments, Association of Bay Area Governments, and Sacramento Area Council of Governments. The travel times and speeds used for the project were obtained from the California Department of Transportation.

Traffic volumes from the nearby Mariposa Lakes Development project were not used to estimate traffic growth in the area for this project because they have not been completed. Traffic study techniques must meet Caltrans standards, as increased traffic volumes are needed to decide potential mitigation measures for State Route 99 and the local streets in the area. Traffic generated by the Mariposa Lakes Development would be addressed in a separate stand-alone project and environmental document for that project. Traffic congestion on State Route 99 in years 2020 and 2034 may be

worse than what is reflected in this growth inducement analysis, due to the increased traffic volumes generated by the Mariposa Lakes Development and other projects that the county is approving in the area. The travel times and speeds used for the proposed project were obtained from Caltrans operational studies dated November 2006.

Environmental Consequences

Potential growth pressures from the proposed project include the building of affordable housing and commutes to surrounding urban employment centers with higher salaries. These potential pressures in addition to construction of related transportation projects are anticipated to increase pressures cumulatively, only slightly in residential areas of northern and southern Manteca in 2020, and decrease slightly in the northeast area of Stockton and southeast near the project. In 2034, the trend would be similar except that there would be no change in residential growth pressures in the southern Manteca residential area or the southeast area near the project. Planned growth varied among the four residential areas depending on the assumptions of build-out timing and ultimate zoning, with the most growth concentrated in the two Stockton residential areas.

Slight changes in residential growth from the proposed project and related cumulative projects are unlikely to have an important effect on actual residential growth. The proposed project and its related cumulative projects would help alleviate some of the future traffic congestion on State Route 99, but would not resolve future traffic congestion due to the high rate of growth planned for the region. Therefore, the proposed project and its related cumulative projects would not stimulate unplanned residential or related commercial growth.

A panel of representatives from regional and local planning agencies and a local developer met on August 15, 2007 to review the growth inducement analysis results and receive an assessment of the likely growth inducement effects of the proposed project and its related cumulative projects. The panel concluded that the proposed project and its related cumulative projects would have minimal impacts on growth in the study area. Growth and development interests would continue regardless of whether the proposed project was adopted. The availability of cheap land, higher wage jobs in surrounding urban employment centers, and the demand for affordable housing would perpetuate future growth patterns. The proposed widening project would accommodate future growth, but additional widening would be needed on State Route 99 and other surrounding freeways by 2034 to accommodate the full magnitude of the anticipated growth.

Any potential traffic impacts to State Route 99 as a result of the traffic generated by additional development projects would be addressed in separate stand-alone projects and associated environmental documents, as the required traffic data for those projects have not been available to use in the analysis for this project.

Avoidance, Minimization, and Mitigation

The proposed project and its relative cumulative projects would not stimulate unplanned residential or related commercial growth. It is not foreseeable that project-related growth would put pressure on or cause impacts to the environmental resources of concern. No avoidance, minimization, and/or mitigation measures are proposed because growth impacts would be minimal.

2.1.3 Community Impacts

2.1.3.1 Community Character and Cohesion

Regulatory Setting

The National Environmental Policy Act of 1969, as amended, established that the federal government use all practicable means to ensure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings [42 U.S. Code 4331(b)(2)]. The Federal Highway Administration in its implementation of the National Environmental Policy Act [23 U.S. Code 109(h)] directs that final decisions regarding projects be made in the best overall public interest. This requires taking into account adverse environmental impacts, such as destruction or disruption of human-made resources, community cohesion, and the availability of public facilities and services.

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.

Affected Environment

The Community Impact Assessment identified three neighborhoods potentially affected by the project. These areas are characterized using the age of buildings, land

use types, and development patterns. Local streets in the project area are used to describe boundaries between the neighborhoods. For this project, three distinct neighborhoods were identified: the East Stockton neighborhood (east of State Route 99 and north of State Route 4 East), the South Stockton neighborhood (south of State Route 4 West and west of State Route 99), and the Airport Industrial District (on either side of State Route 99 near Arch Road).

East Stockton Neighborhood

The East Stockton neighborhood includes the unincorporated rural and suburban subdivisions in the area east of State Route 99, south of the Crosstown Freeway interchange, and north of State Route 4 (Farmington Road), all under county jurisdiction. The largest residential area in the neighborhood is Garden Acres, east of State Route 99 and north of Main Street. Housing in this area consists mostly of single-family residences built in the 1930s and 1940s, with some in-fill where lots were subdivided and additional houses were built.

In the area between Main Street and State Route 4 (Farmington Road), houses were built gradually with small, acre “ranchettes.” As further subdivision occurred, low-cost housing has filled in the area.

Franklin High School lies at the north edge of the neighborhood, with a zone boundary that includes the East Stockton neighborhood and extends to the west side of State Route 99. Elementary-aged children in this area go to either Henry Elementary School along Main Street east of the study area or to Roosevelt Elementary School on Main Street, west across State Route 99. Goods and services such as markets, laundries, and corner stores are available along Main Street within the neighborhood or along Main Street and Mariposa Road west of the freeway.

South Stockton Neighborhood

The South Stockton neighborhood lies west of State Route 99 and consists mainly of residential housing with strips of commercial and pockets of open land and industrial use. There are four distinct areas of this neighborhood: Fair Oaks, Mormon Slough, Kennedy, and Ladd Tract. The area north of Dr. Martin Luther King Jr. Boulevard (Charter Way) is the Fair Oaks neighborhood, which was built in the 1950s. Some older homes from the 1930s and 1940s are scattered throughout the neighborhood.

The Martin Luther King and Roosevelt Elementary schools lie in this neighborhood, which is under City of Stockton jurisdiction. Some commercial development exists

along Main Street and industrial land use occurs along Dr. Martin Luther King Jr. Boulevard. South of this area is the Mormon Slough area with homes built in a more rural setting within a large sliver of land under county jurisdiction. Residents in this area use the services that exist in the Fair Oaks area.

The Kennedy neighborhood is south and west of the Northern Burlington and Santa Fe Railroad tracks, and north of Mariposa Road. This area includes remnants of subdivision neighborhoods around a large county island centered on Kennedy Park. Hamilton Middle and Monroe Elementary schools are adjacent to the park. Another school in this area is Montezuma Elementary School on Farmington Road.

The Ladd Tract area, adjacent to State Route 99, is an older subdivision where homes sit next to the right-of-way. Similarly, the Del Lea mobile home park and the Leisure Manor mobile home park are both very close to the existing State Route 99 right-of-way.

Airport Industrial District

The Airport Industrial District covers the southern section of the project area, on both sides of the freeway, from south of Farmington Road to the Arch Road interchange area. This district contains a mix of industrial, regional business, and a few in-fill residential properties (such as the new subdivision on Togninali Road off of the State Route 99 frontage road). The street network in this area is designed mainly to support office and business development parks, in addition to regional trucking, agricultural, and related agri-business concerns. There are no schools or community centers in this area, and restaurants and convenience stores are limited to the Arch Road exit area.

The following tables provide a breakdown of the demographics in the project area. The population of the study area is 20,486. Of this population, almost 44 percent are under the age of 18 or elderly; most of those individuals (35 percent) are under the age of 18. Table 2.3 presents population data from the 2000 Census, comparing data from the census tract in the project area, the city of Stockton, and San Joaquin Country.

Table 2.3 Age of Population

Age	Total Over 18		Total Under 18		Total Under 5	Total 5-18	Total Elderly (65+ Years)		Percent Under 18 and Elderly
Study Area Total	13,236	65%	7,250	35%	965	6,285	1,943	9%	44%
City of Stockton	164,687	68%	79,084	32%	10,744	68,340	24,975	10%	43%
San Joaquin County	389,029	69%	174,569	31%	23,117	151,452	59,799	11%	42%

Source: 2000 Census Data

Table 2.4 shows the number of households, average size of households, estimated total number of families, and the median household income in the study area, compared with the City of Stockton and San Joaquin County.

Table 2.4 Number, Size, and Income of Households

Geographic Area	Number of Households*	Average Household Size	Total Number of Families	Percentage of Family Households	Median Household Income
Study Area	5,861	3.50	4,637	79%	\$30,118
City of Stockton	78,556	3.10	56,186	72%	\$35,453
San Joaquin County	181,629	3.10	134,708	74%	\$41,282

Source: 2000 Census Data

Table 2.5 shows the current trend of the population to grow, with housing trying to keep up with the projected growth. However, the statistics show that the estimates for employment in the area and the greater region would not achieve the same level of increase as that of population and housing.

Table 2.5 Population, Housing, and Employment

Area	Population			Housing Units			Employment (Jobs)		
	2000	2030	Percentage of Change	2000	2030	Percentage of Change	2000	2030	Percentage of Change
San Joaquin County	563,598	1,117,006	98%	189,160	359,414	90%	195,710	289,461	48%
City of Stockton	243,771	438,770	80%	82,042	136,959	67%	88,645	116,895	32%

Source: San Joaquin County of Governments—projections were officially adopted in 2004 and cover the period from 2005 to 2030.

Regional wage and income levels generally follow the same price patterns as housing. Table 2.6 shows the annual pay ranges from 2001 to 2005. Assuming that 30 to 40 percent of a person’s income can be put toward housing rental or purchase, San Joaquin County residents could spend up to \$11,600 per year on housing (more than \$240 per week). If the average San Joaquin housing unit price is \$351,000, a 30-year mortgage on a \$325,000 loan at 6 percent interest would yield a monthly payment of almost \$1,950, well beyond the average San Joaquin worker’s means.

Alameda County workers, however, could meet that requirement. Alameda County workers could spend up to \$19,700 (or \$1,638 per month) on housing in 2005. Contra Costa workers (with \$1,717 per month available for housing) could also afford this rate.

Table 2.6 Average Annual Pay-All Establishments/Industries by County

Year	Merced	San Joaquin	Sacramento	Contra Costa	Alameda
2001	\$25,479	\$30,818	\$39,173	\$44,744	\$46,489
2002	\$26,771	\$31,958	\$40,642	\$46,015	\$47,307
2003	\$28,152	\$32,926	\$42,110	\$46,660	\$48,822
2004	\$29,122	\$34,175	\$43,196	\$49,643	\$51,402
2005	\$30,209	\$35,030	\$44,732	\$51,515	\$53,152

Source: US Census, 2000

A larger percentage of housing units in the study area are owner-occupied (62 percent) as compared with those in Stockton (49 percent) or the county (58 percent), and the value of units in the study area are lower than that of housing in Stockton or the county. However, gross median rents do not vary greatly between the areas.

Tables 2.7 and 2.8 show census statistics for housing in the project area, as compared with the city and the county.

Table 2.7 Existing Residential Characteristics

Geographic Area	Total Housing Units	Single-Family	%	Multi-Family	%	Other	%	Mobile Home	%
Study Area	6,145	5,192	84%	564	9%	33	1%	361	6%
City of Stockton	82,042	55,736	68%	25,100	31%	73	0%	1,216	1%
San Joaquin County	189,160	140,512	74%	39,459	21%	453	0%	8,736	5%

Source: U.S. Census Bureau, Census 2000

Table 2.8 Housing Vacancies and Costs

Geographic Area	Median Household Value (year 2000)	Median Gross Rent	Owner-Occupied	%	Renter-Occupied	%	Total Vacant	%	Vacant/For Rent or For Sale Only	%
Study Area	\$87,200	\$560	3,811	62	2,050	33	284	5	146	2.38
City of Stockton	\$117,500	\$581	40,534	49	38,022	46	3,486	4	2,276	2.77
San Joaquin County	\$139,800	\$617	109,667	58	71,962	38	7,531	4	4,222	2.23

Source: U.S. Census Bureau, Census 2000

The makeup of the labor force to be displaced or affected by the project was gathered from census data. Table 2.9 shows the number of employees working in the study area, county, and City of Stockton, broken down by occupational area.

Table 2.9 Labor Force by Occupation, 2000

Occupational Area	Study Area		San Joaquin County		City of Stockton	
	Total	Percent of entire work force	Total	Percent of entire work force	Total	Percent of entire work force
Agriculture, forestry, fishing and hunting, and mining	501	6.66%	11,878	4.86%	3,741	3.68%
Construction	389	5.17%	16,190	6.63%	5,224	5.13%
Manufacturing	890	11.83%	26,814	10.98%	9,714	9.55%
Wholesale trade	387	5.14%	10,766	4.41%	4,023	3.95%
Retail trade	545	7.24%	25,692	10.52%	10,458	10.28%
Transportation and warehousing, and utilities	539	7.16%	13,661	5.59%	5,616	5.52%
Information	92	1.22%	5,510	2.26%	2,368	2.33%
Finance, insurance, real estate and rental and leasing	192	2.55%	12,970	5.31%	5,709	5.61%
Professional, scientific, management, administrative, and waste management	444	5.90%	16,838	6.89%	6,261	6.15%
Educational, health and social services	1,030	13.69%	42,132	17.25%	19,460	19.12%
Arts, entertainment, recreation, accommodation and food services	394	5.24%	14,791	6.06%	6,726	6.61%
Other services (except Public Administration)	425	5.65%	10,169	4.16%	4,349	4.27%
Public administration	244	3.24%	11,589	4.74%	5,516	5.42%
Employed Labor Force	6,072	80.70%	219,000	89.65%	89,165	87.62%
Unemployed Labor Force	1,452	19.30%	25,277	10.35%	12,593	12.38%
Total Labor Force	7,524		244,277		101,758	

Labor force totals are for civilians, aged 16 and older

Source: US Census Bureau, 2000. Extrapolations from Employment Development Department data, 2003.

Employment in the retail trade (at 7.24 percent, a relatively strong presence in the study area) declined significantly (-27 percent) over the 10-year period, while employment in all other categories remained fairly constant. The extent of retail trade remaining in the study area does not appear to be affected by the proposed project.

Trucking and warehousing jobs (at 7.16 percent) represented one of the fastest-growing segments of the San Joaquin County economy between 1991 and 2000. It is highly concentrated relative to the rest of California and a large job generator in the study area (benefiting from the location and infrastructure). Many of these types of businesses would be affected by the proposed project, as their locations abut State Route 99 or the frontage roads. Ease of access and low land costs are extremely important to these businesses to ensure long-term stability.

Declining economic base industries include agricultural production (6.66 percent), manufacturing (11.83 percent), paper products, stone, clay, and glass products, and miscellaneous repair services jobs. They represent economic sectors that may require business retention efforts to stay viable. Many of these types of jobs are located within the study area and are affected by the proposed project. Retention and relocation services would be important to retain local businesses.

Educational, health, and social services jobs in the study area (13.69 percent) are provided by San Joaquin County, the school district, and local non-profits. These employment sectors are largely unaffected by the proposed project. The retail trade, finance, public administration, and arts jobs in the study area are fewer than those in the City of Stockton and San Joaquin County, demonstrating that the study area's economy is more dependent on agricultural, industrial, and service sector jobs.

Community Facilities and Services

The Community Impact Assessment identified and evaluated community facility resources available to residents within the project area. Although many of these facilities are outside the direct impact area, they are important to people living and working in the project study area. Access to these land uses may be affected by the proposed project and therefore must be analyzed. See Table 2.10 for the name and locations of community facilities and services located within the project vicinity.

For a discussion on emergency services see Section 2.1.4 Utilities/Emergency Services.

Table 2.10 Community Facilities and Services

Facility	Location
Community Facilities	
California National Guard	8010 S. Airport Way
Stockton Metropolitan Airport	5000 S. Airport Way
U.S. Post Office (Arch Rd.)	3131 Arch Airport Rd.
Community Center @ Kennedy Park	2800 S. D St.
Central Valley Medical Center/ San Joaquin County Hospital	2003 E. Mariposa Rd.
Fire Station #12	4010 E. Main St.
U.S. Post Office (Main St.)	3333 E. Main St.
Boys & Girls Club of Stockton	303 Olympic Circle
Maya Angelou Southeast Library	2324 Pock Lane
San Joaquin County Sports Complex	7171 S. Highway 99
Fire Station #12	4010 E. Main St.
U.S. Post Office (Main St.)	3333 E. Main St.
Boys & Girls Club of Stockton	303 Olympic Cir
Maya Angelou Southeast Library	2324 Pock Lane
San Joaquin County Sports Complex	7171 S. Highway 99
Houses of Worship	
A New Beginning Church of God	2393 E. Sonora St.
Bethany Baptist Church	3372 S. Highway 99
Calvary Christian Center	3051 E. Main St.
Centro de Vida Cristiana	3051 E. Main St.
Seventh Day Adventist Church	1324 S. Golden Gate Ave.
Thessalonians Baptist Church	1940 S. Drake Ave.
Third Missionary Baptist Church	721 S. Gertrude Ave.
Trinity Christian Church of Stockton	4032 E. Washington St.
Church of Christ	3906 E. Main St.
Church of Jesus Christ of Latter-Day Saints	3112 Loomis Rd.
Eastside Church-God In Christ	3206 E. Marsh St.
Eastside Missionary Baptist	17 N. Oro Ave.
Emmanuel Baptist Church	715 S. Windsor Ave.
Hmong Christian	4040 Clark Dr.
Iglesia Bautista Biblical	1565 S. Oro Ave.
Korean Baptist Church of Stockton	4610 E. Washington St.
Mt. Moriah Missionary Baptist	2209 Pock Lane
Newborn Christian Center	2088 S. Adelbert Ave.
River of Life	706 S. Drake Ave.
True Light Apostolic Church	3423 Horner Ave.
United Apostolic Church	836 S. Drake Ave.
United Pentecostal Church	1121 S. Oro Ave.
Wilburn's Temple Church of God	533 Rendon Ave.
Jehovah's Witnesses	4601 E. Main St.
Rock of Hope City Church	1565 S. Oro Ave.
Jehovah's Witnesses Kingdom Hall	2201 Hall Ave.
Evangelist Church of God In Christ	2303 E. 11th St.
Pearly Gate Church of God In Christ	2171 E. 11th St.

Facility	Location
Wat Dharmararam Buddhist Temple	3732 Carpenter Rd.
Assembly of God	2444 Carpenter Rd.
Schools	
Nightingale Elementary School	1721 Carpenter Rd.
Monroe Elementary School	2236 E. 11th St.
Hamilton Elementary School	2245 E. 11th St.
Franklin High School	300 N. Gertrude
Montezuma Elementary School	2843 Farmington Rd.
Roosevelt Elementary School	776 S. Broadway
King Elementary School	2640 E. Lafayette
Henry Elementary School	1107 S. Wagner

Environmental Consequences

The proposed alternatives would not constitute any new physical or psychological barriers that would further divide the community or isolate neighborhoods, individuals, or community focal points on either side of the existing corridor. State Route 99 has existed as a major highway since 1949; the existing communities have grown up around this highway. Because the proposed project would widen State Route 99 toward the median, most communities and neighborhoods adjacent to State Route 99 would not experience any negative impacts, only positive ones with new and better access to State Route 99 and local streets, which would be enhanced in the project area.

Avoidance, Minimization, and Mitigation

No impacts would be expected on community character and cohesion; therefore, no mitigation is required.

Any potential temporary impacts to facilities in the area would be minimized and avoided with implementation of best management practices during construction and a Traffic Management Plan.

2.1.3.2 Relocations

Regulatory Setting

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 will not suffer

disproportionate injuries as a result of projects designed for the benefit of the public as a whole. Please see Appendix D 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 U.S. Code 2000d, et seq.). Please see Appendix C for a copy of Caltrans' Title VI Policy Statement.

Affected Area

A Draft Relocation Impact Report was completed for this project in July 2007. The purpose of a relocation study is to provide decision makers and the public with information on any potential for the project to relocate residents and businesses, or to temporarily and/or permanently change access to properties along local streets.

Residential, commercial, and industrial properties lie in the area of the project. Two trailer parks sit close to existing interchanges at Mariposa Road and Farmington Road. Public facilities such as schools, a community center, churches, and a post office also lie in the project area. Emergency services such as police, fire, ambulance, and transportation services regularly travel through the project area. All of these entities rely on State Route 99 and the local streets of Main Street, Dr. Martin Luther King Jr. Boulevard (Charter Way), Farmington Road, and Mariposa Road to access other streets and properties within the project area.

Environmental Consequences

Since the preparation of the Draft Relocation Impact Report and completion of the Community Impact Assessment, the project alternatives have been modified to incorporate 2:1 slopes and reduce relocation impacts. Table 2.11 identifies properties by category that either has the potential to be relocated or require other benefits to minimize impacts to their respective properties.

Table 2.11 Estimated Displacements by Alternative

Residential			
Property	Alternative 1	Alternative 2	Alternative 3
Single-Family Residences	12	15	24
Multiple-Unit Residences	8	14	32
Mobile Homes	48	48	75
Total Residential Units	68	77	131
Non-Residential			
Commercial Businesses	14	4	10
Industrial/Manufacturing Businesses	0	0	0
Nonprofit Organizations	0	0	0
Agricultural Farms	0	0	0
Total Nonresidential Units	14	4	10
Total Affected Properties	82	81	141

Source: Draft Relocation Impact Report, August 2007/Community Impact Assessment, November 2007/Design modifications to proposed project

Single- and multi-family residential communities that would be affected by the build alternatives include the edge of the Fair Oaks neighborhood, directly adjacent to (west of) State Route 99 between State Route 4 and Charter Way, and the edge of the Garden Acres neighborhood, directly adjacent to (east of) State Route 99 between Main and State Route 4 (Farmington Road). In these areas, parcels that directly abut State Route 99 may need to be acquired for the project.

Alternative 1 could affect residential areas along Mariposa Road near Eighth Street, depending on the requirements for widening the street and adjusting the angle of that intersection. Houses on the north side of State Route 4 (Farmington Road) close to the at-grade Burlington North Santa Fe Railroad crossing would be affected due to the railroad grade separation being constructed under this alternative. A total of 12 single-family residences, 8 multi-family residences, and 48 mobile homes would be affected, for a combined total of 68 residential units.

Alternative 2 could affect single-family housing units near the corner of Charter Way and Golden Gate Avenue. On the east side of State Route 99, adjacent to the highway, the Garden Acres neighborhood along South Drake between Section Avenue and State Route 4 (Farmington Road) would be affected. A portion of the Section Avenue neighborhood on the west side of State Route 99 would also be affected, as would the edge of an established neighborhood that backs up to Golden Gate Avenue/Fourth Street and State Route 4 (Farmington Road) on the west side. The proposed project

includes a more extensive alteration of the Burlington Northern Santa Fe Railroad line in this area, in addition to other improvements along State Route 99. The Charter Way overcrossing between the eastern and western sides of State Route 99 would remain, allowing continued access across the freeway. A total of 15 single-family residences, 14 multi-family residences, and 48 mobile homes would be affected, for a combined total of 77 residential units.

Alternative 3 also affects the established neighborhood behind Golden Gate Avenue/Fourth Street and Farmington Road on the west side, but to a lesser degree. Residential properties in the Ladd Tract area are more affected by this alternative because of the alternate Farmington overcrossing alignment. A total of 24 single-family residences, 32 multi-family residences, and 75 mobile homes would be affected, for a combined total of 131 residential units.

Avoidance, Minimization, and Mitigation

The Caltrans Relocation Assistance Program would reduce impacts as benefits are provided to relocate residences and businesses, reducing the level of impact to below a substantial level. A range of benefits is available; some include finding comparable replacement housing and paying for costs associated with moving. Details are identified at the time property is acquired. The Draft Relocation Impact Report found that there is adequate comparable replacement housing property within the required distance in the City of Stockton and San Joaquin County.

With implementation of the Caltrans Relocation Assistance Program, no substantial impact to persons, businesses, or property access would result from construction of the project. All parties would be treated in a fair and equal manner as prescribed by Caltrans policy, the Federal Uniform Relocations Assistance and Real Property Acquisition Policies Act of 1970 (as amended), Title 49–Code of Federal Regulations–Part 24, and Title VI of the Civil Rights Act (42 US Code 2000d, et seq.). See Caltrans’ Title VI Policy Statement in Appendix C.

2.1.3.3 Environmental Justice

Regulatory Setting

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 executive 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. For the year 2007, this was \$20,650 for a family of four.

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 (see Appendix C).

Affected Environment

The project area is composed of communities that may be affected either directly or indirectly by the build alternatives. The area is dominated by low-density, single-family housing in the northern part of the study area and a combination of multi-family housing, low-intensity commercial, and large industrial uses in the central and southern parts of the study area. Industrial and residential land uses predominate within the City of Stockton's jurisdiction along the State Route 99 corridor, while county areas contain a mix of residential, industrial, institutional, and agricultural lands. Few commercial areas exist.

Types of housing in the affected neighborhoods include single-family residences, multi-family apartment units, and mobile homes. State Route 99 pre-dates all housing in the area except an occasional farmhouse or rural residence. State Route 99 has been in existence since 1949. The residential communities within the project area grew up alongside the corridor.

A Community Impact Assessment was completed on November 2007 for this project. The Community Impact Assessment study area consists of communities that could be affected either directly or indirectly by the project alternatives. Data from the 2000 US Census was used to determine the presence of minority and low-income populations, as directed in Executive Order 12898. According to the 2000 US Census data, the study area is composed of the following Block Groups: 20, 21, 27.01, 28, 37, and 38.03. See Figure 2.4 for a map showing the socioeconomic study area census tracts.

A minority population is defined as any person who is Black, Hispanic, Asian American (including Pacific Islander), or American Indian or Alaskan native, and is readily identifiable. Low-income populations are defined as a household income at or

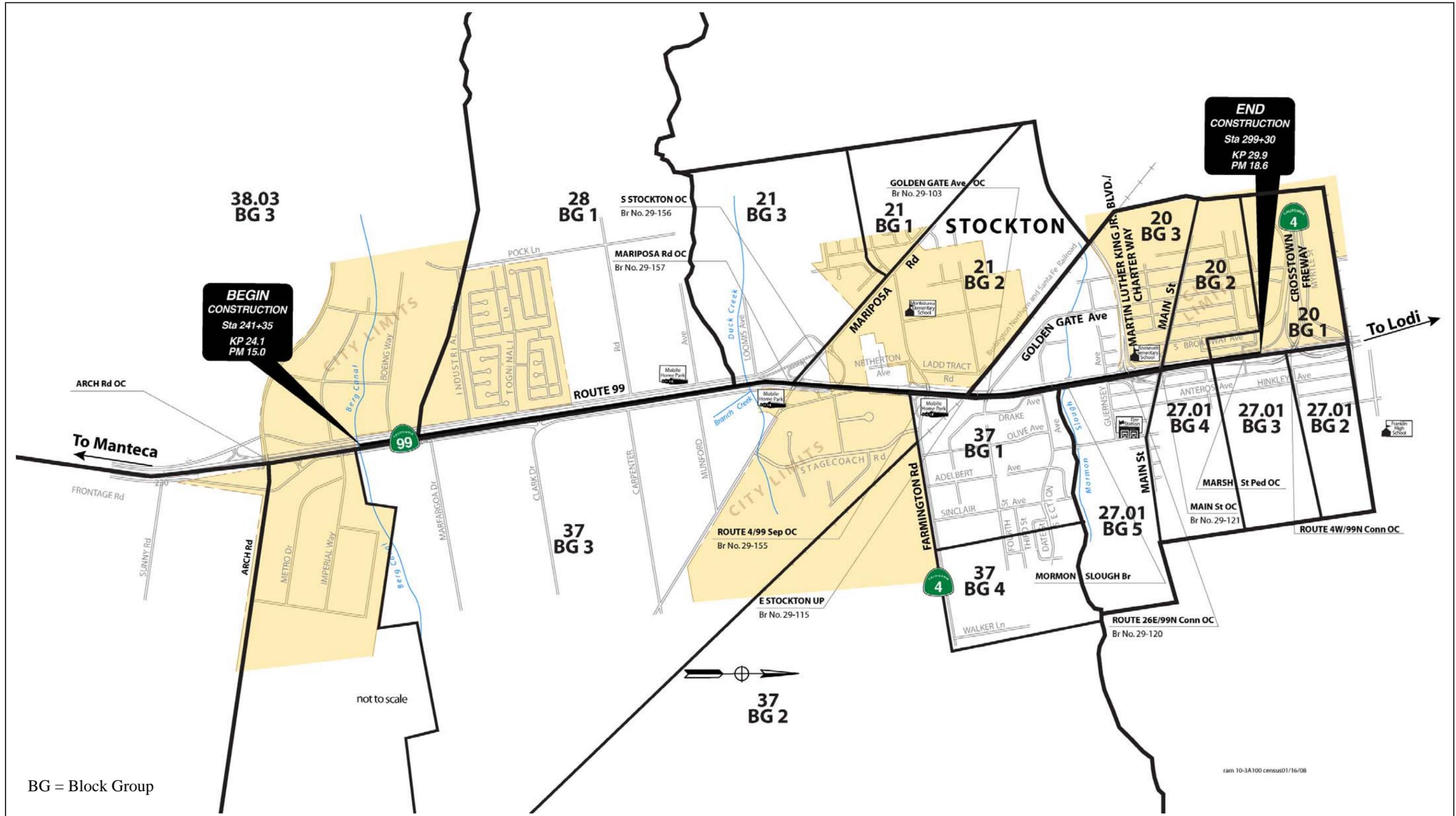


Figure 2.4 Socioeconomic Study Area Census Tracts



below the poverty level established by the Department of Health and Human Services, and are readily identifiable.

Table 2.12 shows a breakdown of minority and low-income populations in the project area, city, and county. The data indicate that the minority population as a whole is greater in the project area than in the city or county. Also, more households qualifying as low-income are in the project area than in the city and county.

Table 2.12 Minority and Low-Income Populations

Breakdown Area	Minority Population	Low-Income Population
Project Area	75%	30%
City of Stockton	68%	23%
San Joaquin County	53%	17%

Source: 2000 US Census

Environmental Consequences

Single- and multi-family residential communities that would be affected by the build alternatives include the edge of the Fair Oaks neighborhood, directly adjacent to (west of) State Route 99 between State Route 4 and Charter Way, and the edge of the Garden Acres neighborhood, directly adjacent to (east of) State Route 99 between Main Street and Farmington Road. Parcels in these locations that abut State Route 99 may need to be acquired for the project.

Additionally, every build alternative would affect the Leisure Manor Mobile Home Park (48 units at Mariposa Road and State Route 99), which sits in one of the few census tracts (census tract 37, block group 3) that does not qualify as having low-income or minority status. (This may be because the mobile home park is located in an area that according to the City and County’s General Plans is designated and zoned for industrial use.) Table 2.13 gives the minority and poverty status of block groups in the study area according to the 2000 Census. The shaded areas indicate block groups that meet criteria to be considered as one of the protected groups.

The study area has a predominantly Hispanic population (49 percent) compared to the City of Stockton (32 percent) and San Joaquin County (31 percent). The study area also has a significant Black or African American population (12 percent), which is mirrored in Stockton (11 percent) but is more than double the County’s rate (six percent), as shown in Table 2.14 Ethnicity Breakdown.

Table 2.13 Minority and Poverty Status

Block Group	Minority Population Percentage	Poverty Percentage
CT 20 BG-1	99%	31%
CT 20 BG-2	87%	42%
CT 20 BG-3	79%	22%
CT 21 BG-1	98%	29%
CT 21 BG-3	93%	35%
CT 27.01 BG 2	57%	32%
CT 27.01 BG 3	58%	26%
CT 27.01 BG 4	60%	26%
CT 27.01 BG 5	65%	14%
CT 28 BG-1	78%	23%
CT37 BG-1	54%	33%
CT37 BG-2	55%	32%
CT37 BG-3	47%	16%
CT37 BG-4	60%	14%
CT 38.03 BG-3 (Airport Area)	43%	33%
San Joaquin County	53%	17%
Stockton	68%	23%
Study Area	75%	30%

Source: 2000 US Census; CT = Census Tract; BG = Block Group
Shading indicates minority or low-income status under environmental justice criteria.

Table 2.14 Ethnicity Breakdown

Study Area	Total Persons	White	%	Black or African American	%	American Indian/Alaskan Native	%	
Study Area	20,486	5,466	27%	2,480	12%	145	1%	
City of Stockton	243,771	78,539	32%	26,359	11%	1,337	1%	
San Joaquin County	563,598	267,002	47%	36,139	6%	3,531	1%	
	Asian	%	Native Hawaiian/Other Pacific Islander	%	Other	%	Hispanic	%
Study Area	1,623	8%	19	0%	735	4%	10,018	49%
City of Stockton	47,093	19%	810	0%	10,416	4%	79,217	32%
San Joaquin County	62,126	11%	1,624	0%	21,103	4%	172,073	31%

Source: 2000 U.S. Census Data

Avoidance, Minimization, and/or Mitigation Measures

A sequential mitigation approach was taken—first avoidance was considered, then measures to minimize, and finally mitigation. Outreach to the affected community was central to this process.

There is no feasible avoidance alternative. State Route 99 is a major roadway, providing access to cities and farms throughout the San Joaquin Valley. There is no feasible bypass alternative that could avoid the neighborhoods along the existing State Route 99 corridor. If a bypass were proposed, minority and low-income populations would still be encountered to the east and west of the current project study area. A separate new alignment for State Route 99 would be too costly in terms of both impacts to the surrounding area and in dollars to fund a feasible avoidance alternative. Additionally, a realignment alternative would not provide an avoidance alternative based on the minority and low-income populations on either side of the existing corridor in the surrounding areas.

The project design would reduce negative impacts to properties. The project team has worked diligently to design a roadway that follows the required regulatory and safety standards and has the least negative effects to the surrounding community. Residents to be relocated would be provided a full range of benefits through the Relocation Assistance Program.

Measures were implemented to redesign and reduce the number of properties negatively affected. Soundwalls are proposed to provide abatement for a potential increase in noise issues along State Route 99 (See Section 2.2.6 Noise). The walls would not only alleviate potential increased noise resulting from this project, but would alleviate noise in areas that never received walls in the past, when developers were not required to build sound barriers with housing developments. This project also includes landscaping, which does not currently exist in some portions of the study area (See Section 2.1.6 Visual/Aesthetics). Additionally, a restoration project is planned to enhance Duck Creek to maintain potential passage between areas of suitable habitat for the giant garter snake (See Section 2.3 Biological Environment). Features are included to provide better drainage for safer travel of vehicles along the roadway during rainy conditions, and to collect run-off, which would protect the surrounding environment from potential pollutants draining off the roadway (See Section 2.2.2 Water Quality/Storm Water Runoff).

The project development team conducted public outreach meetings to identify interested parties and groups within the project area, to hear their concerns, and to determine how the project could be designed to better fit into the community. Once a set of design alternatives were identified, a public meeting was held May 3, 2007 to begin public outreach. Continuing efforts have included meetings with the San Joaquin County Hispanic Chamber of Commerce and the Stockton Branch for the National Association for the Advancement of Colored People.

Additional outreach meetings were held with residents of the Leisure Manor Mobile Home Park, the Lau Khmu Organization, the Comerciantes Unidos Hispanic Business Group, and Reverend Moore's First Thessalonians' Baptist Church. An open house for all affected property owners was held on November 26, 2007 at the Montezuma Elementary School to hear concerns and solicit comments. Several meetings were also held with police and fire officials, including the California Highway Patrol, which provides emergency services to residential communities within the project area.

Based on the results of the project team's public outreach efforts, the build alternatives were modified to minimize relocation impacts and maximize improvements to provide better access to properties, services, and shopping for the community in the project area.

Additionally, to address the concerns raised by emergency responders regarding a potential increase to their four-minute response time, the Charter Way overcrossing was designed to remain open to maintain an additional east-west connection to the surrounding community.

Based on the above discussion and analysis, the proposed alternatives would not cause a disproportionately high and adverse impact on any minority and/or low-income populations as per Executive Order 12898 regarding environmental justice.

2.1.4 Utilities/Emergency Services

Affected Environment

Utilities would have to be relocated with this project. Utility relocations would include approximately 80 utility poles with Pacific Gas and Electric, Southern Bell Corporation, and Comcast cable television aerial lines. Underground utilities that may be affected include high-pressure Pacific Gas and Electric gas lines, fiber optic

Southern Bell Corporation telephone lines, Stockton Water Company water lines, Stockton Irrigation District irrigation lines, and City of Stockton storm drains. A large tank for the municipal drinking water system is also on the west side of State Route 99 and adjacent to the proposed Mariposa interchange ramps in all three build alternatives

Emergency service vehicles use State Route 99 and local streets in the project area to respond to emergency situations. Several coordination meetings have been held to get input from the City of Stockton Fire Department, City of Stockton Police Department, San Joaquin County Sheriff's Department, and California Highway Patrol. See Chapter 4 Comments and Coordination for more information on public outreach and input gathering.

Environmental Consequences

There would be no adverse impacts due to relocation of utilities, as relocating utility service lines is a normal aspect of conducting business, and the utility relocation is coordinated to occur while other work is conducted so all ground disturbance happens at the same time. Caltrans has established procedures to work with individual utility companies. The relocation process is designed to minimize impacts.

Each of the emergency responders has provided feedback to help the Project Development Team plan the project design. Caltrans received a letter from the San Joaquin County Sheriff's Department to document its concern about the removal of the Charter Way overcrossing because the sheriff's department believes that would slow down its response time through the project area.

Other responders had similar concerns over response times to properties on the east side of State Route 99 and on the state route. The City of Stockton Fire Department provided results from a model the department used to determine response times to different locations in the project area and along State Route 99. Results of the model indicated that the removal of Charter Way would not make much difference in response times and that Alternative 2 would be the best alternative to provide access to the project area.

Avoidance, Minimization, and/or Mitigation Measures

By following the established process, Caltrans would minimize impacts due to utility relocation. Current emergency response patterns would remain the same.

2.1.5 Traffic and Transportation/Pedestrian and Bicycle Facilities

Affected Area

A Traffic Operations Analysis Report was completed in October 2006. The report presents the results of studies conducted on traffic operations on State Route 99 and in the local street system.

The traffic study analyzed a three-mile stretch of State Route 99 between the Crosstown Freeway interchange and the Arch Road interchange. Related local street conditions were studied as well. The following local streets intersect State Route 99 in the project area: Mariposa Road, the east and west frontage roads, Stage Coach Road, Munford Road, State Route 4 (Farmington Road), Dr. Martin Luther King Jr. Boulevard, Golden Gate Avenue, Drake Avenue, and Main Street.

Public Bus Transit Metro Route 26 is the bus route closest to the project area. The bus route goes along Airport Road, west of the project area, to the Stockton Municipal Airport, which is south of the project area. The bus route does not travel through the project area.

The project is located within the Area of Influence for the Stockton Municipal Airport. Most traffic along State Route 99 accesses the airport via the Arch Road interchange at the southern end of the project area and Airport Road, which runs west to the airport.

Pedestrians use the local streets in the project area. Walkers go in a westerly direction where most of the shops and services are located. Children under the age of 18 walk to and from school or town. The local streets in the area are Mariposa Road, Golden Gate Avenue, State Route 4 (Farmington Road), and Main Street. A pedestrian overcrossing crosses State Route 99 between the Main Street overcrossing and the Crosstown Freeway interchange.

Bicycle routes exist in the project vicinity as defined in the Stockton General Plan Update - Existing and Future Bikeway Plan. Within the project area, there is one Class III signed bicycle route along Golden Gate Avenue. Several bicycle routes are planned in the project area—along the South 99 Frontage Road near the Arch Road interchange, along Duck Creek, State Route 4 (Farmington Road), and Stage Coach Road, and along Mormon Slough. Bicycle and pedestrian traffic is prohibited on the state highway.

Environmental Consequences

Traffic analysis indicates that by widening State Route 99 with additional through-lanes and auxiliary-lanes, the project would increase the capacity of the route and improve traffic flow and travel time. Additional lanes would also add more lane length to the route for traffic weaving that would improve traffic operations and safety. In addition, removal of some existing on and off ramps, and adding signals with ramp meters to ramp intersections, would improve traffic flow and safety on and off the route as well.

Table 2.15 provides average daily traffic numbers and level of service information to compare traffic conditions for the No-Build Alternative with each of the project alternatives. The table shows current conditions for the year 2006, conditions for opening day of construction in the year 2014, and for the required 20-year planning horizon in the year 2034. (See section 1.2.2 Need for further explanation of average daily traffic and level of service.)

The average daily traffic numbers show an increase in traffic volumes on the route as time passes between the years 2006 and 2034. These numbers are shown for the No-Build Alternative, as if no improvements were made to State Route 99. Then, for the build Alternatives 1, 2, and 3, the table shows a continuing pattern of increasing traffic volumes even with two additional lanes added. This increase suggests there is more traffic demand than what traffic modeling has predicted for the route. It is estimated that there is more traffic from the local street system ready to use the route once the new lanes are constructed.

The level of service data shows how the route is performing as a result of increasing traffic volumes. The level of service data shows that currently the route is just meeting acceptable levels of service on several segments with a level of service “D” rating, and exceeding acceptable levels in some segments with a level of service “E” rating. These ratings suggest that the freeway is currently experiencing congestion and reduced traffic flow, and that improvements are needed.

The table also shows how the freeway performs in the future, with no improvements. By the year 2014 the ratings are predicted to be “E” and “F,” and by 2034 all segments are “F.” These ratings indicate that by 2014 the existing roadway would be operating at the worst traffic conditions, if no improvements were made.

Table 2.15 Average Daily Traffic and Level of Service

Count Locations	Existing Conditions		No-Build Alternative		Alternative 1		Alternative 2		Alternative 3									
	2006		2014	2034	2014	2034	2014	2034	2014	2034								
	ADT	LOS	ADT	LOS	ADT	LOS	ADT	LOS	ADT	LOS								
Southbound North of Arch	62700	D	75060	E	131010	F	80870	C	138300	F	81320	C	140870	F	85020	C	141450	F
Northbound North of Arch		D																
Southbound North of Mariposa	69900	D	81220	F	127860	F	86850	D	144460	F	89500	C	152990	F	67220	C	116350	F
Northbound North of Mariposa		D																
Southbound North of Farmington	75700	E	84810	F	125940	F	86850	D	144460	F	88600	C	152990	F	90420	D	150730	F
Northbound North of Farmington		E																
Southbound North of MLK Jr Blvd to Charter	86000	E	97500	E	125120	F	86850	D	144460	F	92840	D	157910	F	90420	D	154790	F
Northbound North of MLK Jr Blvd to Charter		E																

Source: Traffic Operations Analysis Report – November 2006

* **ADT:** Average Daily Traffic, **LOS:** Level of Service, **Arch:** Arch Road Interchange, **Mariposa:** Mariposa Interchange, **MLK:** proposed Dr. Martin Luther King Jr. Interchange, **Charter:** Charter Way Overcrossing

The table also shows future traffic conditions on the freeway if any of the build alternatives are constructed. The results of the analysis shows that in the year 2014 the proposed Alternatives (1, 2 and 3) all operate at level of service “C” and “D,” which is acceptable under Caltrans standards; however, the studies also show that all alternatives deteriorate to level of service “F” by the year 2034.

While traffic studies show failing conditions on State Route 99 for the required planning year of 2034, the planning team recognizes there would be benefits to building a six-lane roadway. Widening the state route to 10 lanes has been considered in the past to achieve the required acceptable level of service for 20 years, but the cost to do so would be high with numerous property owners and businesses negatively affected. It was determined that the roadway could be widened to six lanes without widening to the outside of the current roadway, providing some benefit at a reasonable cost, with fewer impacts to the community.

Additionally, studies show there are further benefits in timesavings for the public. Calculations show that with the project the average timesavings for vehicles traveling the route would be 1,058,600 vehicle hours saved per year, with \$15,212,000 saved in time delay per year. This is an average based on potential savings of the build alternatives, which translates into savings for the consumer.

The proposed work would also enhance conditions for local traffic traveling across the state route or to properties located within the project area. Several local streets would be upgraded with new pavement, providing additional shoulder area and with sidewalks, curb, and gutter to meet Americans with Disabilities Act requirements. The existing Class III Bike Route at Golden Gate Avenue would be helped by the project improvements because the additional shoulder area would provide sufficient width along the improved overcrossings and local streets to accommodate bicyclists. These upgraded features would benefit both residents and businesses, and add needed upgrades to local streets that accommodate bicycle and pedestrian traffic, making conditions better than what currently exists in the project area today.

The project would not negatively affect an existing bus route or access to the Stockton Municipal Airport. Traffic traveling to the airport using State Route 99 would benefit from the improvements proposed in this project.

Avoidance, Minimization, and Mitigation

No mitigation is required for this project.

Any potential temporary impacts to the area would be minimized and avoided with implementation of guidelines for construction in the Caltrans Best Management Practices Manual, as well as implementation of a Traffic Management Plan.

The traffic management plan is a detailed plan that describes exactly where and when traffic would be detoured during the different phases of construction to minimize construction impacts. This plan is developed during the Project Specifications and Estimates Phase, following conclusion of the environmental process.

2.1.6 Visual/Aesthetics

Regulatory Setting

The National Environmental Policy Act of 1969, as amended, establishes that the federal government use all practicable means to ensure all Americans safe, healthful, productive, and *aesthetically* and culturally pleasing surroundings [42 U.S. Code 4331(b)(2)]. To further emphasize this point, the Federal Highway Administration in its implementation of the National Environmental Policy Act [23 U.S. Code 109(h)] directs that final decisions regarding projects are to be made in the best overall public interest taking into account adverse environmental impacts, including among others, the destruction or disruption of aesthetic values.

Likewise, 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)]

Affected Environment

The regional landscape in the project area is characterized by large open expanses with little differences in elevation, typical of the Central Valley of California. Landforms are generally flat. Any landform differences are typically the result of human-made features and/or elements such as elevated overpasses, interchanges, and depressed roadways.

A Visual Impact Assessment was prepared for the proposed project in November 2007. The assessment included a field review where three distinct landscape units were identified within the project area. A landscape unit is a portion of the regional landscape that corresponds to a place or district that is commonly known among the local viewers. Characteristics for each of the landscape units are described below.

Landscape Unit 1 - Southern 99 Corridor Development

Landscape Unit 1 extends north from the project, beginning at State Route 99 and ending at the north side of the Mariposa Road interchange. This area is defined by

urban development and a combination of residential, commercial, and industrial land uses. It transitions from rural agricultural/open space lands to more intensive urban development to the south, outside the project area.

Land use within this area is characterized by moderate to intense business and manufacturing, with a new residential tract along the southwest quadrant near Arch Road and three trailer parks along State Route 99. This landscape unit has little noticeable landscape planting, except for some sparsely planted trees at the Mariposa Road interchange and adjacent to select businesses.

Development adjacent to the roadway results in views that are restricted. Views are visually bounded by the existing commercial/industrial businesses.

The visual quality of the southern State Route 99 corridor is moderately low due to the low levels of vividness (memorability of the landscape), unity (visual coherence and compositional harmony of the landscape), and intactness (visual integrity of the natural and man-built landscape and its freedom from encroaching elements). Distant views are all but eliminated by the adjacent development, forcing views to the foreground and ultimately forward along the roadway. The lack of striking or distinctive visual patterns leaves motorists with little or no memorability.

Landscape Unit 2 - Northern 99 Corridor Development

Landscape Unit 2 extends from the north side of Mariposa Road to the end of the project near the State Route 4 (Crosstown Freeway) connector ramp. This area is also defined by urban development, but is predominately residential in nature.

Commercial businesses exist within this unit, but are typically set back from State Route 99 and are virtually unseen.

Three open-space or undeveloped parcels, each between 10 to 15 acres, also exist in this landscape unit. One of these parcels is immediately north of the Mariposa Road interchange and is visible to only northbound travelers. The remaining two parcels, one immediately north of the Mariposa Road interchange and the other north of the Golden Gate Avenue overcrossing, are seen in a limited way only by southbound travelers.

Land uses within this landscape unit are less intense than those of the commercial/industrial business district to the south. Landscape planting extends almost the entire stretch of this landscape unit. Plants consist mainly of trees, with

some additional shrubs and groundcover at the Charter Way/Martin Luther King Jr. Boulevard interchange.

About half of the freeway alignment within this landscape unit is depressed in elevation to allow traffic under the Burlington Northern and Santa Fe Railroad tracks, Golden Gate Avenue, and Charter Way/Martin Luther King Jr. Boulevard overcrossings. The remaining roadway is aligned at or just above existing grade.

The depressed section of State Route 99 is visually bounded by the adjacent 2:1 side-slopes in the foreground, giving the viewer a feeling of being enclosed. The elevated or at-grade sections of State Route 99 are both enclosed and open visually. Enclosed portions are where residential housing, soundwalls, and trees and shrubs block views. Open portions are adjacent to existing open space areas. Although views are longer in the open areas, they are still relatively short, extending only to the nearest tree line about ½ mile away.

The visual quality of the northern State Route 99 corridor is moderate due to the low level of vividness and the moderate to moderately high levels of unity and intactness. Views to background features are all but eliminated by the adjacent development, forcing views to the immediate foreground and ultimately forward to the oncoming roadway, leaving the traveler with little or no memorable view.

Landscape Unit 3 - Eastern Commercial Development

This landscape unit is visually separated from the State Route 99 corridor. The visual character of this landscape unit is defined by development: large buildings, with a hard-line edge that dominates the visual environment, prohibiting long-range views.

Views from State Route 99 to this landscape unit are blocked mainly by the Mariposa Road interchange, although a short easterly view window lies just north of the structure. Views from within this landscape unit toward State Route 99 are likewise limited by the Mariposa Road structure. Views from Stagecoach Road are relegated to the immediate foreground, resulting in a feeling for the motorist of being enclosed.

Existing vegetation—both landscape and streetscape plants—is mature and continuous throughout the entire area. The plants provide continuity as well as contrasting color and texture.

Duck Creek flows under Stagecoach Road to the south near Mariposa Road. In this location, Duck Creek is well vegetated, with water often present. The creek here is highly visible to motorists due to slower traffic speeds and unobstructed views.

The visual quality of this landscape unit is moderate to moderately high due to the moderate level of vividness and the moderately high levels of intactness and unity. While this area has large buildings that block distant views, the immediate views along the roadway provide visual coherence or unity in the form of landscaping and streetscape plants. These landscape and streetscape plants are common throughout the industrial development areas, where they screen views of buildings that encroach into the regional natural landscape.

Environmental Consequences

All three build alternatives include landscaping. This would be particularly beneficial to Landscape Unit 1, which currently has little noticeable landscape planting. The Visual Impact Assessment concluded that all three build alternatives would result in impacts to the visual environment that would be noticeable and generally adverse. Changes to the State Route 99 roadway for any of the proposed alternatives would bring more urban elements, by increased right-of-way boundaries, into remaining adjacent open spaces and natural areas. But project construction, in some cases, would reduce undesirable views by replacing old highway and thereby enhancing portions of the highway system.

Views from the highway would remain virtually constant because urban development already exists along State Route 99. Proposed structural additions would mostly replace existing roadway and would not create additional visual impairments or impacts. Motorists would be exposed to essentially the same views that exist now. Changes to the corridor, however, would be noticeable. The most noticeable change would be the addition of soundwalls, which would block views and create a hard-line edge extending to the outer right-of-way limits. Views to the highway would have a higher degree of visual impact, primarily due to viewer proximity. See Figure 2.7 Soundwalls Under Consideration.

Other views affected would be areas where highway right-of-way would encroach into areas otherwise unaffected by the current State Route 99 alignment. Such encroachments result in a greater potential effect due to the size and scale of the new structures (such as interchanges) and related work near established residential

communities and businesses. The demolition, realignment, and replacement of existing structures would also have a visual impact.

Avoidance, Minimization, and/or Mitigation Measures

Mitigation is based on the understanding that the State Route 99 corridor is a preexisting condition and the project would not therefore impose a completely new impact to the adjacent area. Nevertheless, visual impacts would occur, and mitigation measures would be required to lessen the impact of construction.

The following proposed mitigation measures incorporated design features and methods to avoid permanent adverse impacts. These measures would be done in cooperation with the District 10 Landscape Architect.

- All side slopes associated with the elevated structures would be landscaped to help lessen the visual dominance of the elevated structures.
- Architectural detailing and/or surface treatments consistent with the surrounding community should be incorporated into new bridge designs.
- Artistic soundwall design should be implemented to break up the built environment and enhance the driving experience. Soundwall design should be compatible with the surrounding area and meet community goals.
- Soundwalls should be designed to discourage the proliferation of graffiti. Some examples of soundwall design may include rough-textured finishes or uneven surfaces, graffiti-resistant coatings, and vine plantings of a type that will attach to walls.
- Highway art may also be incorporated to break up the built environment and enhance the quality of the driving experience. Artistic design elements must be consistent with community goals.
- Highway planting would be provided to screen and/or soften undesirable views both to and from the project area.
- Every effort must be made to avoid the removal of existing plant material.
- Replacement planting would be required to replace plant material removed by construction.
- Replacement planting would also include the replacement of removed median landscaping and oak tree plantings.
- Areas affected or disturbed by construction would be revegetated in the form of new landscape planting and irrigation systems.

- Vegetation for highway or replacement planting would be plant species adapted to the specific zone or region of the project area.
- Mitigation planting would occur along all areas of Duck Creek affected by construction. Mitigation planting would serve as replacement of habitat for the giant garter snake.
- Graded slopes should be maintained at 1:4 or flatter wherever possible to help in the revegetation process.
- Where feasible, slope contouring would be implemented in such a way as to match existing adjacent contours.
- Where possible, no slopes should exceed 1:2 (vertical: horizontal) in gradient.
- Pedestrian and bicycle accessibility would be incorporated to meet mandated access requirements.

2.2 Physical Environment

2.2.1 Hydrology and Floodplain

Regulatory Setting

Executive Order 11988 (Floodplain Management) directs all federal agencies to refrain from conducting, supporting, or allowing actions in floodplains unless it is the only practicable alternative. The Federal Highway Administration requirements for compliance are outlined in 23 Code of Federal Regulations 650 Subpart A.

To comply, the following must be analyzed:

- The practicability of alternatives to any longitudinal encroachments
- Risks of the action
- Impacts on natural and beneficial floodplain values
- Support of incompatible floodplain development
- Measures to minimize floodplain impacts and to preserve/restore any beneficial floodplain values affected by the project.

The base floodplain is defined as “the area subject to flooding by the flood or tide having a one percent chance of being exceeded in any given year.” An encroachment is defined as “an action within the limits of the base floodplain.”

Affected Environment

A Location Hydraulic Study and Floodplain Evaluation Report Summary form was completed for this project in March of 2007. The report was prepared by a registered engineer to evaluate potential impacts resulting from the proposed project on a 100-year floodplain.

There are four watercourses within the project area: North Littlejohns Creek, Duck Creek, Branch Creek, and Mormon Slough. The existing state route crosses over each of these and their respective floodplain zones (Zone A and Zone B), as defined on the Flood Insurance Rate Map panels produced by the Federal Emergency Management Agency. See Appendix G for copies of the Flood Insurance Rate Map panels—0602990455C April 2, 2002; 0602990465C April 2, 2002; 0603020025E April 2, 2002; and 0603020040E April 2, 2002.

North Littlejohns Creek (also known as Bergs Canal) is an east-to-west channel with well-developed, vegetated banks. The creek is an overflow channel for flows controlled by Farmington Dam. North Littlejohns Creek passes under State Route 99 at post mile 15.22 through a concrete box culvert. There are no proposed changes to the culvert. The 100-year floodwaters are contained within the channel with a floodwater surface elevation of 34 feet. Just south of the creek, between post mile 15.0 and 15.1, State Route 99 crosses a flood hazard area, where the state route is at an elevation of 33 feet, one foot below the expected 100-year floodwater surface elevation.

Duck Creek is a well-defined channel with an east-to-west alignment with water flowing toward the west. There is vegetation growth in the channel and water flow is determined by releases from New Hogan Reservoir. State Route 99 crosses Duck Creek at post mile 16.47 with an existing box culvert allowing water to flow beneath the route. The project proposes to extend the box culvert by approximately 30 feet. The highway elevation at this location is 29.5 feet. The base floodplain is contained within the channel, with a base floodwater surface elevation of 25.7 feet.

Branch Creek is a small tributary creek that flows in a westward direction into Duck Creek just east of State Route 99. Where the two creeks meet, the channel is well defined and has vegetation. A box culvert is proposed at this location. The elevation of the state route is 29.5 feet, with an estimated base floodwater surface elevation of 25.7 feet.

Mormon Channel is a well-developed channel with east-to-west flows, which are diverted to the Stockton Diverting Canal, located east of the project area. The channel does not have regular flow because it only acts as an overflow channel and captures adjacent storm water runoff from the surrounding area. The channel is well vegetated with orchard trees and wild vegetation filling in the channel. Mormon Channel is located on State Route 99 at post mile 17.76, with a roadway elevation of 29 feet. The proposed design would widen the east side of the Mormon Slough Bridge by approximately 38 feet. The 100-year flood is contained within the channel, with water surface elevation at 21.9 feet.

Environmental Consequences

There are no regulatory floodways in the project area, nor would there be a “significant encroachment” as defined in federal regulations. The study concluded there are no impacts to the existing floodplain, as the project does not alter the existing circumstances, nor does it create a longitudinal encroachment, significant encroachment, or support any incompatible floodplain development. The project does not present a significant potential for interruption or termination of a transportation facility that is needed for emergency vehicles or that provides a community’s only evacuation route. The proposed project would not present a significant risk to life or property or a significant adverse impact on natural and beneficial floodplain values.

Avoidance, Minimization, and/or Mitigation Measures

Measures to minimize floodplain impacts are included in the project design to also comply with the Caltrans Statewide Storm Water Permit. A number of locations for infiltration basins are being considered as part of the design of the project and included in the Alternatives section of this environmental document.

2.2.2 Water Quality and Storm Water Runoff

Regulatory Setting

Section 401 of the Clean Water Act requires water quality certification from the State Water Resources Control Board or from a Regional Water Quality Control Board when the project requires a Clean Water Act Section 404 permit from the U.S. Army Corps of Engineers to place dredged or fill material into waters of the United States.

Along with Section 401 of the Clean Water Act, Section 402 of the Clean Water Act establishes the National Pollutant Discharge Elimination System permit for the discharge of any pollutant into waters of the United States. The federal

Environmental Protection Agency has delegated administration of the National Pollutant Discharge Elimination System program to the State Water Resources Control Board and nine Regional Water Quality Control Boards. The State Water Resources Control Board and Regional Water Quality Control Boards also regulate other waste discharges to land within California through the issuance of waste discharge requirements under authority of the Porter-Cologne Water Quality Act.

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 requires 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.

Affected Environment

A Water Quality Assessment was prepared for this project in June 2006. The assessment identified potential impacts from the proposed project to surface water and/or groundwater.

Surface Water

Within the project area, State Route 99 intersects three waterways: Bergs Canal, Duck Creek, and Mormon Slough. The project proposes to modify the box culvert at Duck Creek, add box culverts to several locations on Duck Creek and at Branch Creek, and widen a crossing at Mormon Slough.

Alternative 1 proposes culverts at four locations on Duck Creek: (1) where the creek meets existing State Route 99, (2) at a relocation site for a northbound off-ramp, (3) at Mariposa Road, and (4) at Stage Coach Road. Alternatives 2 and 3 propose three of these locations on Duck Creek: at State Route 99, the northbound off-ramp, and Mariposa Road.

All four water bodies are intermittent streams, flowing in a westerly direction through the City of Stockton to the Stockton Deep Water Channel and on to the San Joaquin River Delta. The water flow in Mormon Slough east of the project area is diverted north to the Calaveras River.

Of the four water bodies, Mormon Slough is listed on the 2006 Clean Water Act Section 303(d) List as impaired for pathogens. Pathogens are organisms, frequently microorganisms or components of these organisms that cause disease. Microbial pathogens include various species of bacteria and viruses that cause disease in humans and animals.

Ground Water

The project lies within the jurisdiction of the District 5–Central Valley Regional Water Quality Control Board and the Central District of the California Department of Water Resources. In the project area, the depth to ground water is 33 to 80 feet.

Environmental Consequences

The project includes 17 infiltration basins that would collect and treat all runoff from the state highway to ensure there is no impact to surface or ground water. With incorporation of proper and accepted engineering practices, and with local agency coordination, the proposed project should not produce substantial or lasting impacts to water quality during construction or its operation.

Avoidance, Minimization, and/or Mitigation Measures

The design and construction of the proposed project must adhere to the requirements in the National Pollutant Discharge Elimination System, Caltrans Storm Water Management Plan, the Caltrans Project Planning and Design Guide, and Best Management Practices.

No significant impacts would occur from temporary construction activities due to the implementation of Caltrans National Pollutant Discharge Elimination System – Statewide Storm Water Pollution Prevention Plan that would address all requirements for pollution prevention, and erosion and sediment control.

In the construction phase, the contractor has the responsibility, as stated in Caltrans' Standard Specifications Section 7-1.01G, to take the necessary steps to eliminate potential impacts during construction. These steps include but are not limited to the following:

- Soil stabilization
- Sediment control
- Wind erosion control
- Tracking control
- Non-storm water control

- Waste management and material pollution control

A Notification of Construction would be submitted to the Regional Water Quality Control Board at least 30 days before the start of construction. A Notice of Construction Completion would be submitted to the Regional Water Quality Control Board upon completion of construction.

2.2.3 Paleontology

Regulatory Setting

Paleontology is the study of life in past geologic time based on fossil plants and animals. A number of federal statutes specifically address paleontological resources, their treatment, and funding for mitigation as a part of federally authorized or funded projects (such as the Antiquities Act of 906 [16 U.S. Code 431-433], Federal-Aid Highway Act of 1935 [20 U.S. Code 78]). 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.

Affected Environment

An Assessment Report on Paleontological Sensitivity was prepared for the project in April 2002. The assessment consisted of a review of pertinent geologic maps and a literature search to identify fossil-containing stratigraphic units (rock layers) in the project area. The literature search involved finding relevant professional publications. A review of two databases and a search of archives at the University of California Museum of Paleontology at Berkeley and at the Los Angeles County Museum of Natural History were done to identify known fossil sites within the project area.

The Assessment Report indicated that Quaternary (dated roughly 1.8 million years ago to the present) deposits exist within the entire project area. Also, the following stratigraphic units have been recognized in the area over time: Victor Formation, Arroyo Seco Gravel, Laguna Formation, Modesto Formation, and Post-Modesto Formation. Only the Modesto Formation has yielded vertebrate fossils throughout the area.

The Los Angeles County Museum search did not identify any recorded fossil locations within the project area or locations in the surrounding region. Information retrieved from the University of California Museum of Paleontology also showed

there were no fossil locations within the project area, but indicated there were seven fossil sites in the surrounding region. These locations have yielded Pleistocene-aged specimens of *Mammuthus* (mammoth), *Equus* (horse), *Mammut* (mastodon), and *Carnivora* (carnivore). The seven fossil sites are located in the following areas:

- About five miles northwest of the project area (Lincoln Village)
- About two miles southeast of the project area (Mormon Slough)
- Several miles southeast of the project boundary (Malakas Well and Cometa Road)
- One and half miles east of the project boundary (Hammer Well)
- In the region to the east in Tuolumne County (Tuolumne Co. General and Kincaide Flat)

Environmental Consequences

The project area is underlain by Quaternary strata, which have produced vertebrate fossils throughout the region. The Assessment Report concluded that the project area is considered to be a moderate sensitivity area. Although the strata are typically ranked as low sensitivity for yielding scientifically significant vertebrate remains, because there are fossil locations near the project area, the sensitivity rating in this case is designated as moderate.

Shallow excavations in the Quaternary deposit throughout the project area are not likely to produce significant vertebrate fossil remains. Because of nearby fossil localities from the Modesto Formation and older Quaternary strata, there is a moderate possibility that deeper excavation would yield vertebrate fossils.

The proposed project activities include substantial excavation to remove on-ramps and off-ramps, build new off-ramps, and eliminate some freeway access. A railroad bridge would be replaced. Also, excavation for storm water drainage may be required.

Avoidance, Minimization, and/or Mitigation Measures

Due to planned excavation for the project, the Assessment Report recommended that monitoring take place where excavation would disturb in-place sedimentary strata below the upper soil layers (upper three feet). The project area would also require monitoring if excavation were performed below the uppermost three feet of sediment.

- A qualified principal paleontologist (M.S. or PhD in paleontology or geology familiar with paleontological procedures and techniques) would be retained to be present at pre-grading meetings to consult with grading and excavation contractors.

- A paleontological monitor, under the direction of the qualified principal paleontologist, would be onsite to inspect cuts for fossils at all times during original grading involving sensitive geologic formations.
- When fossils are discovered, the paleontologist (or paleontological monitor) would recover them. Construction work in these areas would be halted or diverted to allow recovery of fossil remains in a timely manner.
- Fossil remains collected during the monitoring and salvage portion of the mitigation program would be cleaned, repaired, sorted, and cataloged.
- Prepared fossils, along with copies of all pertinent field notes, photos, and maps, would then be deposited in a scientific institution with paleontological collections.
- A final report would be completed that outlines the results of the mitigation program.
- Where feasible, selected road cuts or large finished slopes in areas of critically interesting geology may be left exposed so they can serve as important educational and scientific features. This may be possible if no substantial adverse visual impact results.

2.2.4 Hazardous Waste Materials

Regulatory Setting

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.

The primary federal laws regulating hazardous wastes/materials are the Resource Conservation and Recovery Act of 1976 and the Comprehensive Environmental Response, Compensation and Liability Act of 1980. The purpose of the Comprehensive Environmental Response, Compensation and Liability Act, often referred to as Superfund, is to clean up contaminated sites so that public health and welfare are not compromised. The Resource Conservation and Recovery Act provides for “cradle to grave” regulation of hazardous wastes. Other federal laws include the following:

- Community Environmental Response Facilitation Act of 1992
- Clean Water Act
- Clean Air Act
- Safe Drinking Water Act
- Occupational Safety and Health Act

- Toxic Substances Control Act
- Federal Insecticide, Fungicide, and Rodenticide Act

In addition to the acts listed above, Executive Order 12088, Federal Compliance with Pollution Control, mandates that necessary actions be taken to prevent and control environmental pollution when federal activities or federal facilities are involved.

Hazardous waste in California is regulated mainly 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.

Affected Environment

An Initial Site Assessment was conducted for the proposed project in November 2007. The assessment determined the presence of contaminated properties within the project boundaries that may affect selection of project alternatives, right-of-way property acquisition, and construction of the proposed highway improvements. Acquisition of additional right-of-way property would be required for the proposed highway widening and improvements to local connector streets, as well as for construction of interchanges and bridge improvements. Information for the assessment was obtained from regulatory database records, historical references, physical setting references, and onsite field reviews.

Land use of properties in the area, from a hazardous waste perspective, generally include the State Highway built in the early 1900s with west and east frontage roads, railway, new and older rural residences, and varying ages of commercial and industrial development. These properties can contain or have contained in the past underground storage tanks, petroleum products, monitoring of petroleum-related releases, facilities that handle or store hazardous materials and/or wastes, material associated with railroads, and/or material associated with highways. Each alternative for this project presents a risk for encountering hazardous waste during construction.

An Aerially Deposited Lead Site Investigation Report was prepared in October of 2007. The site investigation was conducted within the State Route 99 median, and at the overcrossings and interchanges where improvements are proposed.

An Asbestos and Lead-Containing Paint Survey Report was prepared in October of 2007 to investigate the presence of asbestos and/or lead-containing paint. The following bridges, which are located within the limits of the project alternatives, were included in the survey:

- Bridge 29-0012 (Duck Creek)
- Bridge 29-0157 (Mariposa Road)
- Bridge 29-0156G (South Stockton)
- Bridge 29-0155 (Farmington Road)
- Bridge 29-0115 (Santa Fe Railroad)
- Bridge 29-0103 (Golden Gate Avenue)
- Bridge 29-0119 (Mormon Slough)
- Bridge 29-0120 (Charter Way)
- Bridge 29-0121 (Main Street)
- Bridge 29-0307 (Marsh Street pedestrian overcrossing)

Environmental Consequences

The Initial Site Assessment identified 42 facilities that have the potential to contain hazardous waste. Table 2.16 shows the properties containing hazardous substances of concern and what the potential is for encountering the material during construction of the project.

- Alternative 1 has the potential to affect 17 sites: 6 low-risk sites, 7 moderate-risk sites, and 4 high-risk sites.
- Alternative 2 has the potential to affect 11 sites: 4 low-risk sites, 6 moderate-risk sites, and 1 high-risk site.
- Alternative 3 has the potential to affect 11 sites: 6 low-risk sites, 5 moderate-risk sites, and no high-risk sites. Once the preferred alternative is determined, Preliminary Site Investigations would be conducted for properties in the path of the preferred alternative.

According to the site investigation for aerially deposited lead, a total of 104 soil samples were collected along State Route 99 and State Route 4. No “total lead” was detected in the soil samples collected that exceed the California hazardous waste threshold. However, soluble lead levels in nine samples did exceed the hazardous

waste criteria. It is recommended that further soil sampling for lead occur once the preferred alternative is identified.

The asbestos survey indicated that eight bridges located within the project limits were sampled to determine the presence and quantity of asbestos. Chrysotile asbestos was detected in a sample at a concentration of 90 percent, representing approximately 5 square feet of nonfriable asbestos. Nonfriable refers to asbestos that cannot be crumbled, pulverized, or reduced to powder by hand pressure when it is dry. This was found in sheet packing used as barrier rail shims on the Golden Gate Avenue overcrossing (Bridge 29-0103).

The same eight bridges were sampled for lead-containing paint. All bridges were found to contain varying levels of lead-containing paint, with two bridges at higher levels than the Total Threshold Limit Concentration of 1,000 milligrams per kilogram.



Table 2.16 Summary of Potential Hazardous Waste Sites

	Facility	Address	Assessor's Parcel Number	Impact to Right-of-Way Acquisition	Chemical of Concern Regulatory Status	Potential Impact to South Stockton Six-Lane Project
1	California Live Floors, Inc.	4580 South SR 99 Frontage Road	17920029	Low Impact Alt 1-3	Active truck and equipment storage roadway. Facility operational since at least 1963. No pending regulatory action or active violations are noted for this facility.	This facility presents a low risk of affecting the South Stockton Six-Lane Project based on proposed construction area boundaries for each of the three alternatives. Exploratory borings should be performed if partial or full parcel acquisition is contemplated to evaluate potential site impacts related to current and historical facility operations.
2	FedEx Freight (Former Yellow Freight Systems)	4520 South SR 99 Frontage Road	17920034	Low Impact Alt 1-3	Active trucking freight terminal with existing refueling and emergency generator diesel aboveground storage tanks. Facility received regulatory closure from the San Joaquin County Environmental Health Department and Central Valley Regional Water Quality Control Board for removal of a fuel underground storage tank and associated impacted soil in 1996. No pending regulatory action or active violations are noted for this facility.	This facility presents a low risk of affecting the South Stockton Six-Lane Project based on proposed construction area boundaries for each of the three alternatives. Exploratory borings should be performed if partial or full parcel acquisition is contemplated to evaluate potential site impacts related to former underground storage tank refueling facilities and truck maintenance/washing activities, and existing fuel storage.
3	L&B Environmental, Inc.	4448 and 4460 South SR 99 Frontage Road	17920032	Low Impact Alt 1-3	Active construction equipment storage and maintenance yard. Facility operational since at least 1963. No pending regulatory action or active violations are noted for this facility.	This facility presents a low risk of affecting the South Stockton Six-Lane Project based on proposed construction area boundaries for each of the three alternatives. Exploratory borings should be performed if partial or full parcel acquisition is contemplated to evaluate potential site impacts related to current and historical facility operations.
4	Stockton Transport Refrigeration	4408 South SR 99 Frontage Road	17920001	Low Impact Alt 1-3	Active truck maintenance facility. Diesel aboveground storage tanks formerly located on west side of onsite building. Facility operational since at least 1963. No pending regulatory action or active violations are noted for this facility.	This facility presents a low risk of affecting the South Stockton Six-Lane Project based on proposed construction area boundaries for each of the three alternatives. Exploratory borings should be performed if partial or full parcel acquisition is contemplated to evaluate potential site impacts related to current and historical facility operations.
5	Redfean Trucking Inc.	3736 South SR 99 Frontage Road	17916003	Low Impact Alt 1-3	Active truck maintenance facility operational since at least 1963. No pending regulatory action or active violations are noted for this facility.	This facility presents a low risk of affecting the South Stockton Six-Lane Project based on proposed construction area boundaries for each of the three alternatives. Exploratory borings should be performed if partial or full parcel acquisition is contemplated to evaluate potential site impacts related to current and historical facility operations.
6	Roek Construction	3736 South SR 99 Frontage Road	17916003	Low Impact Alt 1-3	Active construction facility that received regulatory closure from the San Joaquin County Environmental Health Department for removal of fuel underground storage tanks and associated impacted soil in 1997. No pending regulatory action or active violations are noted for this facility.	This facility presents a low risk of affecting the South Stockton Six-Lane Project based on proposed construction area boundaries identified for each of the three alternatives. Exploratory borings should be performed if partial or full parcel acquisition is contemplated to evaluate potential site impacts related to former underground storage tank refueling facilities and other onsite chemical handling operations.
7	All Cal Equipment Services Inc.	3724 South SR 99 Frontage Road	17916002	Low Impact Alt 1-3	Active heavy equipment maintenance facility. Diesel aboveground storage tanks and other aboveground storage tanks at rear of facility. No pending regulatory action or active violations are noted for this facility.	This facility presents a low risk of affecting the South Stockton Six-Lane Project based on proposed construction area boundaries for each of the three alternatives. Exploratory borings should be performed if partial or full parcel acquisition is contemplated to evaluate potential site impacts related to current and historical facility operations.
8	Residential	3692 South SR 99 Frontage Road	17915025	Low Impact Alt 1-3	Equipment and vehicle storage yard. No pending regulatory action or active violations are noted for this facility.	This facility presents a low risk of affecting the South Stockton Six-Lane Project based on proposed construction area boundaries for each of the three alternatives. Exploratory borings should be performed if partial or full parcel acquisition is contemplated to evaluate potential site impacts related to current and historical facility operations.
9	Valley Pacific CFN (Washrack)	3550 South SR 99 Frontage Road	17916043	Low Impact Alt 1-3	Active truck maintenance facility with permitted underground storage tank refueling facilities. No pending regulatory action or active violations are noted for this facility.	This facility presents a low risk of affecting the South Stockton Six-Lane Project based on proposed construction area boundaries identified for each of the three alternatives. Exploratory borings should be performed if partial or full parcel acquisition is contemplated to evaluate potential site impacts related to former and existing underground storage tank facilities and other onsite chemical handling operations.
10	Cassaró Residence	3615 South SR 99 Frontage Road	17915016	Low Impact Alt 1-3	Equipment and vehicle storage yard. No pending regulatory action or active violations are noted for this facility.	This facility presents a low risk of affecting the South Stockton Six-Lane Project based on proposed construction area boundaries for each of the three alternatives. Exploratory borings should be performed if partial or full parcel acquisition is contemplated to evaluate potential site impacts related to current and historical facility operations.
11	Residential	3472 South SR 99 Frontage Road	17908245	Low Impact Alt 1-3	Rural residential parcel with aboveground storage tank with unknown contents and soil piles at front of parcel. No pending regulatory action or active violations are noted for this facility.	This facility presents a low risk of affecting the South Stockton Six-Lane Project based on proposed construction area boundaries identified for each of the three alternatives. Exploratory borings should be performed if partial or full parcel acquisition is contemplated to evaluate potential site impacts.
12	Smog Time (Former Pacific Gas)	2088 Mariposa Road E	17304034	Low Impact Alt 1	Active smog test station and former Pacific Gas service station facility that received regulatory closure from the San Joaquin County Environmental Health Department and Central Valley Regional Water Quality Control Board for removal of fuel underground storage tanks and associated impacted soil in 1996.	This facility presents a low risk of affecting Alternative 1 of the South Stockton Six-Lane Project based on proposed construction area boundaries. Exploratory borings should be performed if partial or full parcel acquisition is contemplated to evaluate potential site impacts related to former underground storage tank refueling facilities and other onsite chemical handling operations.

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	Facility	Address	Assessor's Parcel Number	Impact to Right-of-Way Acquisition	Chemical of Concern Regulatory Status	Potential Impact to South Stockton Six-Lane Project
					No pending regulatory action or active violations are noted for this facility.	Exploratory borings should also be performed for proposed construction excavations on and adjacent to this facility to evaluate worker health & safety and soil disposal options.
13	B&B Equipment	3132 Farmington Road	17306002	Low Impact Alt 1 & 3	Active equipment/vehicle storage facility that received regulatory closure from the San Joaquin County Environmental Health Department and Central Valley Regional Water Quality Control Board for removal of used oil underground storage tank and associated impacted soil in 2002. No pending regulatory action or active violations are noted for this facility.	This facility presents a moderate risk of affecting the South Stockton Six-Lane Project based on proposed construction area boundaries for Alternatives 1 and 3. Exploratory borings should be performed if partial or full parcel acquisition is contemplated to evaluate potential site impacts related to former underground storage tank facilities and other onsite chemical handling operations.
14	Light Industrial Complex	3632 Duck Creek Drive	17907001	Low Impact Alt 1-3	Active light industrial facilities (three structures and storage yards) including Summit Plastering, Amberland Composite, and Chevy Classic Parts. No pending regulatory action or active violations are noted for this facility.	This facility presents a low risk of affecting the South Stockton Six-Lane Project based on proposed construction area boundaries identified for each of the three alternatives. Exploratory borings should be performed if partial or full parcel acquisition is contemplated to evaluate potential site impacts.
15	Ryder Truck	3633 Duck Creek Drive	17907001	Low Impact Alt 1-3	Active trucking terminal with permitted underground storage tank refueling facilities. Diesel impacted soil removed during product piping repairs in 2003. Case closed by the San Joaquin County Environmental Health Department in 2004. No pending regulatory action or active violations are noted for this facility.	This facility presents a low risk of affecting the South Stockton Six-Lane Project based on proposed construction area boundaries for each of the three alternatives. Exploratory borings should be performed if partial or full parcel acquisition is contemplated to evaluate potential site impacts related to former and existing underground storage tank facilities and other onsite chemical handling operations.
16	Baker Roofing Co.	3400 Peterson Road	17307012	Low Impact Alt 1-3	Active roofing facility/storage yard with gasoline aboveground storage tank. No pending regulatory action or active violations are noted for this facility.	This facility presents a low risk of affecting the South Stockton Six-Lane Project based on proposed construction area boundaries identified for each of the three alternatives. Exploratory borings should be performed if partial or full parcel acquisition is contemplated to evaluate potential site impacts.
17	Penske Truck Terminal	3663 Peterson Road	17307032	Low Impact Alt 1-3	Active truck terminal with existing aboveground storage tank refueling facilities. No pending regulatory action or active violations are noted for this facility.	This facility presents a low risk of affecting the South Stockton Six-Lane Project based on proposed construction area boundaries identified for each of the three alternatives. Exploratory borings should be performed if partial or full parcel acquisition is contemplated to evaluate potential site impacts related to existing refueling facilities and other onsite chemical handling operations.
18	L.H. Voss Materials, Inc.	3030 South SR 99 Frontage Road	17908115	Low Impact Alt 1-3	Active landscape supply facility with maintenance shop and low quantity (55-gallon) fuel storage. No pending regulatory action or active violations are noted for this facility.	This facility presents a low risk of affecting the South Stockton Six-Lane Project based on the facility type and lack of identified or reported onsite impacts. Exploratory borings should be performed if partial or full parcel acquisition is contemplated to evaluate potential site impacts.
19	Diesel Truck Service	2327 Mariposa Road E	17129016	Low Impact Alt 1-3	Active truck repair facility. No pending regulatory action or active violations are noted for this facility.	This facility presents a low risk of affecting the South Stockton Six-Lane Project based on proposed construction area boundaries identified for each of the three alternatives. Exploratory borings should be performed if partial or full parcel acquisition is contemplated to evaluate potential site impacts.
20	Delta Auto Wreckers	3151 and 3175 South SR 99 Frontage Road	17910012	Low Impact Alt 1-3	Active auto wrecking facility with parking lot adjacent to frontage road. No pending regulatory action or active violations are noted for this facility.	This facility presents a low risk of affecting the South Stockton Six-Lane Project based on proposed construction area boundaries identified for each of the three alternatives. Exploratory borings should be performed if partial or full parcel acquisition is contemplated to evaluate potential site impacts.
21	Residence	2058 Sinclair Avenue S	17316024	Low Impact Alt 2	Residential parcel that received regulatory closure from the San Joaquin County Environmental Health Department for removal of fuel underground storage tank and associated impacted soil in 2002. No pending regulatory action or active violations are noted for this facility.	This facility presents a low risk of affecting Alternative 2 of the South Stockton Six-Lane Project based on proposed construction area boundaries. Exploratory borings should be performed if partial or full parcel acquisition is contemplated to evaluate potential site impacts related to former underground storage tank refueling facilities.
22	Residence Crowl's Service Automotive Technology	1137 Golden Gate Avenue	15713007	Low Impact Alt 2	Residential parcel used for boat and automotive engine repair. No pending regulatory action or active violations are noted for this facility.	This facility presents a low risk of affecting Alternative 2 of the South Stockton Six-Lane Project based on proposed construction area boundaries. Exploratory borings should be performed if partial or full parcel acquisition is contemplated to evaluate potential site impacts related to facility operations.
23	Snow White Cleaners	3410 Main Street	15716001	Low Impact Alt 1-3	Active laundry facility. No pending regulatory action or active violations are noted for this facility.	This facility presents a low risk of affecting the South Stockton Six-Lane Project based on proposed construction area boundaries identified for each of the three alternatives. Exploratory borings should be performed if partial or full parcel acquisition is contemplated to evaluate potential site impacts related to onsite chemical handling operations.

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	Facility	Address	Assessor's Parcel Number	Impact to Right-of-Way Acquisition	Chemical of Concern Regulatory Status	Potential Impact to South Stockton Six-Lane Project
24	N Auto Repair	3403 Main Street	15717017	Low Impact Alt 1-3	Active auto repair facility. No pending regulatory action or active violations are noted for this facility.	This facility presents a low risk of affecting the South Stockton Six-Lane Project based on proposed construction area boundaries identified for each of the three alternatives. Exploratory borings should be performed if partial or full parcel acquisition is contemplated to evaluate potential site impacts related to onsite chemical handling operations.
25	Cal Sierra Pipe Inc.	3033 South SR 99 Frontage Road	17910011	Low Impact Alt 1-3	Active pipe supply facility. No pending regulatory action or active violations are noted for this facility.	This facility presents a low risk of affecting the South Stockton Six-Lane Project based on proposed construction area boundaries identified for each of the three alternatives. Exploratory borings should be performed if partial or full parcel acquisition is contemplated to evaluate potential site impacts.
26	California Concrete Pipe Corp.	2960 South Highway 99 Frontage Road	17908105-07 &04	Moderate Impact Alt 1-3	Active concrete fabrication and casting facility operational since the late 1950s. Existing and former fuel aboveground storage tanks and historical use of oil-based form cleaning products. No pending regulatory action or active violations are noted for this facility.	This facility presents a moderate risk of affecting the South Stockton Six-Lane Project based on proposed construction area boundaries identified for each of the three alternatives. Exploratory borings should be performed within planned partial or full parcel acquisitions to evaluate potential site impacts related to former and existing facility operations and onsite chemical handling.
27	Sala Trucking	2929 South SR 99 Frontage Road	17910010	Moderate Impact Alt 1-3	Active truck terminal facility. No pending regulatory action or active violations are noted for this facility.	This facility presents a moderate risk of affecting the South Stockton Six-Lane Project based on proposed construction area boundaries identified for each of the three alternatives. Exploratory borings should be performed if partial or full parcel acquisition is contemplated to evaluate potential site impacts.
28	Tuff Shed	2829 South SR 99 Frontage Road	17911011	Moderate Impact Alt 1-3	Active light industrial manufacturing facility. No pending regulatory action or active violations are noted for this facility.	This facility presents a moderate risk of affecting the South Stockton Six-Lane Project based on proposed construction area boundaries identified for each of the three alternatives. Exploratory borings should be performed if partial or full parcel acquisition is contemplated to evaluate potential site impacts.
29	Unknown	2829 South SR 99 Frontage Road	17911008	Moderate Impact Alt 1-3	Active light industrial manufacturing facility. No pending regulatory action or active violations are noted for this facility.	This facility presents a moderate risk of affecting the South Stockton Six-Lane Project based on proposed construction area boundaries identified for each of the three alternatives. Exploratory borings should be performed if partial or full parcel acquisition is contemplated to evaluate potential site impacts.
30	Maxim (former Husky) Crane	2373 Mariposa Road E	17130009	Moderate Impact Alt 1-3	Active crane facility that received regulatory closure from the San Joaquin County Environmental Health Department and Central Valley Regional Water Quality Control Board for removal of fuel underground storage tanks and associated impacted soil in 1999. No pending regulatory action or active violations are noted for this facility.	This facility presents a moderate risk of affecting the South Stockton Six-Lane Project based on proposed construction area boundaries for each of the three alternatives. Exploratory borings should be performed if partial or full parcel acquisition is contemplated to evaluate potential site impacts related to former underground storage tank refueling facilities and other onsite chemical handling operations.
31	Residential Parcels	3706, 3732, & 3808 Farmington Road	17307003 17307002 17307001	Moderate Impact Alt 1 & 3	Adjacent residential parcels used for equipment/vehicle storage and Falco and Arceo Construction yards. No pending regulatory action or active violation.	These facilities present a moderate risk of affecting the South Stockton Six-Lane Project based on proposed construction area boundaries identified for Alternatives 1 and 3. Exploratory borings should be performed if partial or full parcel acquisition is contemplated to evaluate potential site impacts.
32	Economy Fence	2004 Mariposa Road E	17304036	Moderate Impact Alt 1	Active fencing facility that received regulatory closure from the San Joaquin County Environmental Health Department and Central Valley Regional Water Quality Control Board for removal of fuel underground storage tanks and associated impacted soil in 1996. No pending regulatory action or active violations are noted for this facility.	This facility presents a moderate risk of affecting Alternative 1 of the South Stockton Six-Lane Project based on proposed construction area boundaries. Exploratory borings should be performed if partial or full parcel acquisition is contemplated to evaluate potential site impacts related to former underground storage tank refueling facilities and other onsite chemical handling operations.
33	Vacant Parcel	Mariposa Road	17314003	Moderate Impact Alt 1	Vacant parcel adjacent to railroad tracks with soil/debris stockpiles. 1963 aerial photograph and 1971 as-built plan depicts industrial facility with several structures and significant yard storage. No pending regulatory action or active violations are noted for this facility.	This facility presents a moderate risk of affecting the South Stockton Six-Lane Project based on proposed construction area boundaries for each of the three alternatives. Exploratory borings should be performed if partial or full parcel acquisition is contemplated to evaluate potential site impacts related to former facility operations.
34	Atchison Topeka & Santa Fe Railroad	SR 99 Crossing	17304072	Moderate Impact Alt 1-3	Active railroad bridge crossing over State Route 99. No pending regulatory action or active violations are noted for this facility.	This facility presents a moderate risk of affecting the South Stockton Six-Lane Project due to planned bridge replacement for each of the three alternatives. Exploratory borings should be performed in areas of planned grading and foundation construction to full depth of excavation to evaluate potential impacts and soil-handling requirements.

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	Facility	Address	Assessor's Parcel Number	Impact to Right-of-Way Acquisition	Chemical of Concern Regulatory Status	Potential Impact to South Stockton Six-Lane Project
35	Tote A Shed (Former American Transfer Company)	2701 South SR 99 Frontage Road	17911008	Moderate Impact Alt 1-3	Former trucking terminal facility that received regulatory closure from the San Joaquin County Environmental Health Department and Central Valley Regional Water Quality Control Board for removal of fuel underground storage tanks and associated impacted soil in 1999. No pending regulatory action or active violations are noted for this facility.	This facility presents a moderate risk of affecting the South Stockton Six-Lane Project based on proposed construction area boundaries for each of the three alternatives. Exploratory borings should be performed if partial or full parcel acquisition is contemplated to evaluate potential site impacts related to former underground storage tank refueling facilities and other onsite chemical handling operations.
36	BJJ Company, Inc.	2431 and 2459 Mariposa Road E	17130018 and 17130017	High Impact Alt 1-3	Active trucking terminal facility with existing underground storage tank refueling facilities. Received regulatory closure from the San Joaquin County Environmental Health Department and Central Valley Regional Water Quality Control Board for removal of fuel underground storage tanks and associated impacted soil in 2000. 1963 aerial photograph depicts refueling facilities at front of northern parcel and tanker trucks. No pending regulatory action or active violations are noted for this facility.	This facility presents a high risk of affecting the South Stockton Six-Lane Project based on proposed construction area boundaries for each of the three alternatives with more impact for Alternatives 1 and 2. Exploratory borings should be performed if partial or full parcel acquisition is contemplated to evaluate potential site impacts related to former or existing underground storage tank refueling facilities and other onsite chemical handling operations.
37	California Smog (Former Service Station)	2101 Mariposa Road E	17129005	High Impact Alt 1	Active smog test station and former service station facility. No pending regulatory action or active violations are noted for this facility.	This facility presents a high risk of affecting the South Stockton Six-Lane Project based on proposed construction area boundaries for Alternative 1. A geophysical survey and exploratory borings should be performed if partial or full parcel acquisition is contemplated to evaluate potential site impacts related to former underground storage tank refueling facilities and other onsite chemical handling operations. Exploratory borings should also be performed for proposed construction excavations on and adjacent to this facility to evaluate worker health & safety and soil disposal options.
38	Vacant Parcel	NW Corner Mariposa & Farmington	17129004	High Impact Alt 1	Vacant parcel and former service station facility as identified in 1963 aerial photograph. No pending regulatory action or active violations are noted for this facility.	This facility presents a high risk of affecting the South Stockton Six-Lane Project based on proposed construction area boundaries for Alternative 1. A geophysical survey and exploratory borings should be performed if partial or full parcel acquisition is contemplated to evaluate potential site impacts related to former underground storage tank refueling facilities and other onsite chemical handling operations. Exploratory borings should also be performed for proposed construction excavations on and adjacent to this facility to evaluate worker health & safety and soil disposal options.
39	Low Price Auto Glass (Former Texaco)	3978 South SR 99 Frontage Road	17917103	High Impact Alt 1-3	Existing auto glass repair facility formerly operated as a Texaco service station between 1957 and 1973. Subsurface environmental investigations between 2002 and 2006 included the performance of soil borings and the installation of one groundwater-monitoring well. Gasoline impacted soil and groundwater (65 feet deep) have been identified at this facility. The extent of contamination and disposition of the fuel underground storage tanks have not been determined. A domestic well located adjacent and north of facility does not appear to be impacted by the fuel release. The San Joaquin County Environmental Health Department and the Central Valley Regional Water Quality Control Board have directed this facility to complete further environmental assessment to determine the nature and extent of fuel underground storage tank related soil and groundwater impacts.	This facility presents a high risk of affecting the South Stockton Six-Lane Project based on proposed construction area boundaries for each of the three alternatives. A partial or full parcel acquisition may require underground storage tank removals, and additional soil and groundwater characterization and remediation. Exploratory borings should be performed for proposed construction excavations on and adjacent to this facility to evaluate worker health & safety and soil disposal options. Existing monitoring well will need to be protected in place, properly abandoned, and/or replaced under county permit where conflicting with roadway work.
40	USA Gasoline Station #110	2132 East Mariposa Road	17306035	High Impact Alt 1	Existing USA Gasoline service station facility. Site impacts associated with underground storage tank refueling facilities identified in 1987. Eight groundwater-monitoring wells installed in 2005 and currently sampled on a quarterly basis. Depth to groundwater generally at 55 feet with southeasterly flow. Gasoline groundwater impacts reported in six of eight wells during June 2007 sampling event. The San Joaquin County Environmental Health Department and the Central Valley Regional Water Quality Control Board have directed this facility to continue to perform quarterly monitoring until regulatory cleanup objectives are achieved.	This facility presents a high risk of affecting Alternative 1 of the South Stockton Six-Lane Project based on proposed construction area boundaries. A partial or full parcel acquisition may require underground storage tank removals, and additional soil and groundwater characterization and remediation. Exploratory borings should be performed for proposed construction excavations on and adjacent to this facility to evaluate worker health & safety and soil disposal options. Existing monitoring wells will need to be protected in place, properly abandoned, and/or replaced under county permit where conflicting with roadway work.
41	United Gasoline (Former Beacon)	3440 East Main Street	15716002	High Impact Alt 1-3	Active service station facility with documented gasoline soil and groundwater impacts resulting from leaking underground storage tank dispensing facilities. Active remediation consists of vapor extraction and air sparge systems. Soil and groundwater impacts generally confined to northern portion of property. Depth to groundwater is generally at 60 feet with variable northwesterly to southeasterly flow. The San Joaquin County Environmental Health Department and the Central Valley Regional Water Quality Control Board have directed this facility to continue to perform quarterly monitoring and operation of remediation systems until regulatory cleanup objectives are achieved.	This facility presents a high risk of affecting the South Stockton Six-Lane Project based on proposed construction area boundaries for each of the three alternatives. A partial or full parcel acquisition may require underground storage tank removals, and additional soil and groundwater characterization and remediation. Exploratory borings should be performed for any planned construction excavations on and adjacent to this facility to evaluate worker health & safety and soil disposal options. Existing onsite groundwater monitoring wells including offsite wells in Main Street (MW-4) and Broadway (MW-5) where conflicting with roadway work will need to be protected in place, properly abandoned, and/or replaced under county permit. Existing remediation infrastructure including buried piping will further be required to be protected in place.

	Facility	Address	Assessor's Parcel Number	Impact to Right-of-Way Acquisition	Chemical of Concern Regulatory Status	Potential Impact to South Stockton Six-Lane Project
42	Continental Baking Co.	636 Drake Ave. S	15724112	Low Impact Alt 1-3	Inactive bakery facility currently for sale. Impacted soil identified during fuel underground storage tank removal in 1988. Facility received regulatory closure from the San Joaquin County Environmental Health Department and Central Valley Regional Water Quality Control Board in 1996. No pending regulatory action or active violations are noted for this facility.	This facility presents a low risk of affecting the South Stockton Six-Lane Project based on proposed construction area boundaries for each of the three alternatives. Exploratory borings should be performed if partial or full parcel acquisition is contemplated to evaluate potential site impacts related to former underground storage tank refueling facilities and other potential onsite chemical handling operations.



Avoidance, Minimization, and/or Mitigation Measures

Prior to completion of the Final Environmental Document, Preliminary Site Investigations would be conducted for those facilities in the path of the preferred alternative. See Figure 2.5 Potential Hazardous Waste Sites for a map showing the locations of the potential hazardous waste sites. All numbers on the map correspond with numbers in Table 2.16 where there is a description of the potential waste. The investigation would focus on assessing potential and/or documented soil and groundwater impacts associated with the identified potential hazardous waste facilities proposed for partial or complete parcel acquisitions or use as construction easements. Soil sampling is also recommended in Caltrans existing right-of-way where soil excavation is planned next to identified potential hazardous waste facilities; the sampling would help in evaluating the management and disposal of potentially contaminated soil and construction worker health and safety requirements.

A Lead Compliance Plan is required for soils containing lead (California Code of Regulations, Title 8, Section 1532.1, the “Lead in Construction” standard) and to protect construction workers. This plan would also be required for work performed on painted structures. In accordance with Title 8, Section 1532.1(p), written notification to the nearest California Occupational Safety and Health Administration district office is required at least 24 hours before certain lead-related work. For samples where lead levels exceed hazardous waste criteria, the excavated soil should be either managed and disposed of as a California hazardous waste or stockpiled and resampled to confirm waste classification. Further investigation of lead in soils is recommended.

Asbestos-containing barrier rail shims are classified as a Category 1 nonfriable/nonhazardous material and were identified on the barrier rail assemblies of Bridge 29-0103 (at Golden Gate Avenue). They would be removed and disposed of by a licensed contractor registered with the California Occupational Safety and Health Administration for asbestos-related work or by a licensed and certified asbestos abatement contractor before renovation, demolition, or other activities that would disturb the material.

It is recommended that the contractor be notified of the presence of asbestos. A copy of the Asbestos and Lead-Containing Paint Report dated October 2007 would be given to the contractor before abatement activities. The contractor is responsible for informing the landfill management of the intent to dispose of asbestos waste. Some

landfills may require additional waste characterization. The contractor is responsible for segregating and characterizing waste streams before disposal.

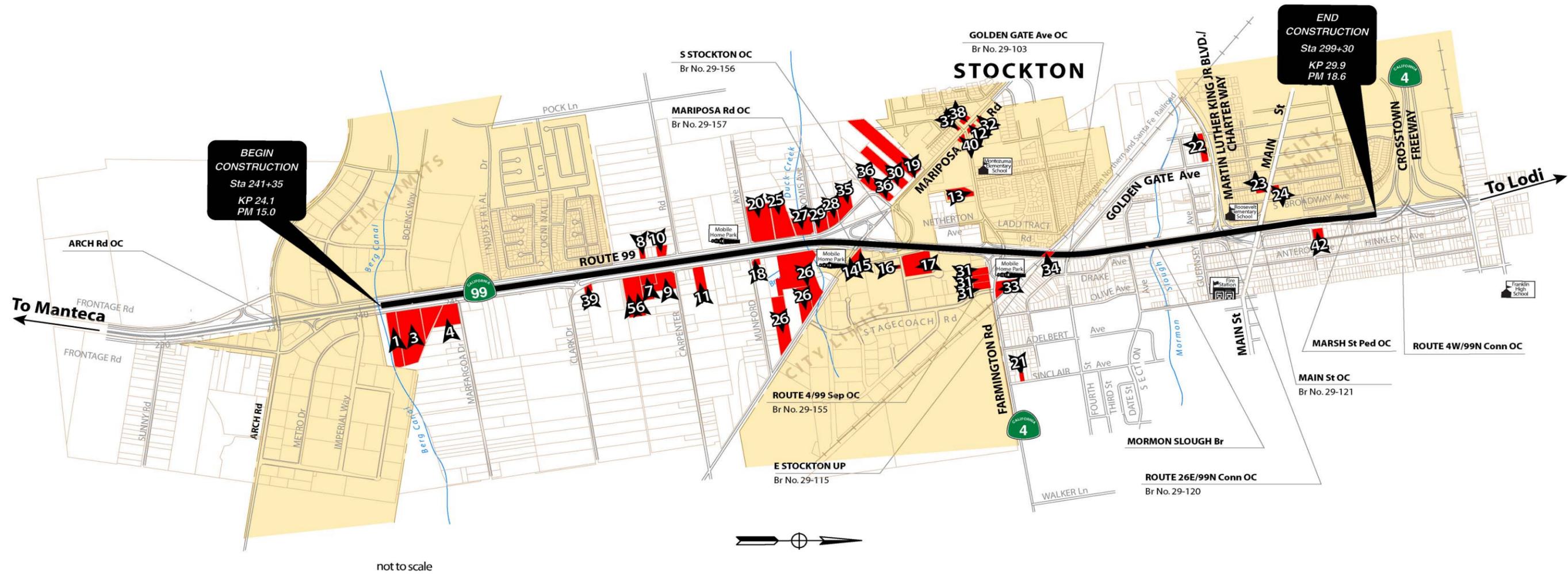
In accordance with San Joaquin Valley Air Pollution District Regulation IV, Rule 4002, written notification to the San Joaquin Valley Air Pollution District is required 10 working days before beginning of any demolition activity, whether asbestos is present or not.

It is recommend that all paints at the project location be treated as lead-containing for purposes of determining the applicability of the California Occupational Safety and Health Administration lead standard during any future maintenance, renovation, and demolition activities. The recommendation is based on lead-containing paint sample results and the fact that lead was a common ingredient of paints manufactured before 1978 and is still an ingredient of some industrial paints. Construction activities (including demolition) that disturb materials containing *any* amount of lead are subject to certain requirements of the California Occupational Safety and Health Administration lead standard contained in Title 8, California Code of Regulations, Section 1532.1.

It is recommended that personnel who work in the area should have lead-related construction certification, as appropriate, from the California code for personnel performing “trigger tasks” as defined in Title 8 California Code of Regulations Section 1532.1(d). Common trigger tasks include manual scraping or sanding, heat gun applications, power tool cleaning, spray painting with lead paint, abrasive blasting, welding, cutting, grinding, and torch burning. Contractors should consult the California Occupational Safety and Health Administration (Cal/OSHA) lead standard for additional guidance.

In accordance with Title 8, California Occupational Safety and Health Administration, Section 1532.1(p), written notification to the nearest California Occupational Safety and Health Administration district office is required at least 24 hours before certain lead-related work.

Contractors are responsible for informing the landfill of the contractor’s intent to dispose of Resource Conservation Recovery Act waste, California hazardous waste, and/or architectural components with intact lead-containing paint. Deteriorated paint is a surface coating that is cracking, chalking, flaking, chipping, peeling, non-intact, failed, stripped, or otherwise separated from the substrate. Demolition of a



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Figure 2.5 Potential Hazardous Waste Sites



deteriorated component with lead-containing paint would require waste characterization and appropriate disposal. Intact lead-containing paint on a component is currently accepted by most landfill facilities; however, contractors are responsible for segregating and characterizing waste streams prior to disposal. Some landfills may require additional waste characterization. Contractors are responsible for segregating and characterizing waste streams before disposal.

2.2.5 Air Quality

Regulatory Setting

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, 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 federal agencies, such as the Federal Highway Administration, make 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 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 National Environmental Policy Act and 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.

Affected Environment

The project lies in San Joaquin County in the San Joaquin Valley Air Basin. San Joaquin County is characterized by hot, dry summers and cool winters. Temperatures in the summer months range from 50 to 94 degrees Fahrenheit, and winter months average from 36 to 53 degrees Fahrenheit. The rainy season is typically between November and April, with the average annual rainfall ranging from 8 inches in the southern part of the county to 18 inches in the northern part of the county. Warm temperatures, prevailing winds, and the location of the county within an enclosed valley all play a role in the air quality of the area.

The project is fully funded and is in the San Joaquin Council of Governments’ 2007 Regional Transportation Plan, which was found to conform by the San Joaquin Council of Governments on May 24, 2007. The Federal Highway Administration and Federal Transportation Administration adopted the air quality conformity finding on June 29, 2007.

The project is also included in San Joaquin Council of Governments' financially constrained 2007 Regional Transportation Improvement Program (Amendment 5, Appendix B, page 8). The San Joaquin Council of Governments' 2007 Regional Transportation Improvement Program was found to conform by the Federal Highway Administration and Federal Transit Administration on June 29, 2007. The design concept and scope of the proposed project are consistent with the project description in the 2007 Regional Transportation Plan, the 2007 Regional Transportation Improvement Program, and the assumptions in the San Joaquin Council of Governments regional emissions analysis.

The project is located in an attainment/maintenance area for the federal carbon monoxide standard. However, an area of potential concern was the Roosevelt Elementary School, which was identified as a sensitive receptor. The east edge of the school property comes up to the soundwall west of State Route 99 on the southbound lane. The proposed project widens State Route 99 from four to six lanes and adds lanes in the existing median.

The project is also located in a nonattainment area for the federal and state ozone and particulate matter standards. Therefore, a local hot spot analysis for conformity was required. Currently, there is no hot spot procedure for ozone, which is considered to be a regional pollutant. See Table 2.17.

Table 2.17 State and Federal Conformity

Standard	Ozone (O ₃) 8-hour	Ozone (O ₃) 1-hour	Carbon Monoxide (CO)	Particulate Matter (PM ₁₀)	Particulate Matter (PM _{2.5})
Federal	Serious Nonattainment	Extreme	Attainment/ Maintenance	Nonattainment	Nonattainment
State	Nonattainment	Nonattainment	Attainment/ Unclassified	Nonattainment	Nonattainment

Environmental Consequences

An Air Quality Study Report was completed in November 2007. The study used data from two air pollution monitors in Stockton. The Stockton-Hazelton monitor at 1593 E. Hazelton Place in Stockton monitored PM_{2.5}, PM₁₀, and carbon monoxide. It is located 1.6 miles northeast of the project. The Stockton Wagner-Holt School monitor at 8776 Brattle Place monitored PM₁₀. It is located 8 miles northwest of the northern project boundaries.

The CALINE model, along with the Caltrans Project-Level Carbon Monoxide Protocol dated December 1997, was used as a screening tool to assess carbon monoxide impacts at the Roosevelt Elementary School. Based on the assessment, the project should not increase the amount of vehicles operating closer to the receptor because the proposed new lanes would be added to the median. The screening analysis determined the project would not worsen air quality. Additionally, past air quality data show that existing carbon monoxide levels for the project area and the general vicinity do not exceed either the state or federal ambient air quality standards.

A qualitative PM10 and PM2.5 hot spot analysis was conducted. The monitoring station closest to the project area is at 1593 E. Hazelton Place in Stockton. The Brattle Place monitor does not monitor PM2.5; however, this station was used for comparison due to its proximity to Interstate 5.

Between 2001 and 2006, no days exceeded the national annual standard for both PM2.5 and PM10 at the 1593 Hazelton Place and 8776 Brattle Place monitors. Therefore, proposed project improvements would not result in any violations of federal standards. See Tables 2.18 and 2.19.

Table 2.18 Number of Days Exceeding National Annual Standards for Particulate Matter

Monitoring Station: Stockton Wagner-Holt School at 8776 Brattle Place		
Year	PM_{2.5}	PM₁₀
2001	N/A	0
2002	N/A	0
2003	N/A	0
2004	N/A	0
2005	N/A	0
2006	N/A	0

Source: California Air Resources Board, ADAM database

**Table 2.19 Number of Days Exceeding National Annual Standards for
Particulate Matter**

Monitoring Station: 1593 E. Hazelton Place, Stockton		
Year	PM_{2.5}	PM₁₀
2001	0	0
2002	0	0
2003	0	0
2004	0	0
2005	0	0
2006	0	0

Source: California Air Resources Board, ADAM database

This project is considered to be a Project of Air Quality Concern because it has an annual average daily traffic count of more than 125,000 vehicles and a diesel truck percentage higher than 8 percent in the horizon year of 2030 (the project's percentage of diesel truck traffic is 11 percent). For that reason, the project must have documented consideration with Interagency Consultation and Public Involvement of whether or not it is a Project of Air Quality Concern; if it is a Project of Air Quality Concern, a full qualitative analysis is needed.

The PM₁₀ and PM_{2.5} project-level conformity analysis was conducted as a Project of Air Quality Concern and submitted to the Model Coordinating Committee on August 30, 2007. The analysis was resubmitted to the committee after addressing comments by the Environmental Protection Agency and Caltrans headquarters environmental staff. Concurrence was received from the Environmental Protection Agency on October 30, 2007, and from the Federal Highway Administration on November 5, 2007. Future new or worsened PM₁₀ and PM_{2.5} violations of any standards are not anticipated.

San Joaquin County is not among the counties listed as containing serpentine and ultramafic rock (Governor's Office of Planning and Research, October 26, 2000), which may both contain naturally occurring asbestos. Therefore, the impact from naturally occurring asbestos during project construction would be minimal to none. If structures that may contain asbestos are to be demolished, it is the responsibility of the contractor to comply with the Rules and Regulations of the Air Pollution Control District. Refer to Section 2.2.4 Hazardous Waste Materials for further discussion.

Mobile Source Air Toxics

Mobile Source Air Toxics are a subset of the 188 air toxics defined in the Clean Air Act. They are now federally regulated under 40 Code of Federal Regulations 1502.22 by the U.S. Environmental Protection Agency. Mobile Source Air Toxics are 21 compounds emitted from highway vehicles and non-road equipment. There are six main toxics, including diesel exhaust, benzene, and formaldehyde.

In addition to the criteria air pollutants for which there are National Ambient Air Quality Standards, the Environmental Protection Agency also regulates air toxics. Most air toxics originate from human-made sources, including on-road mobile sources, non-road mobile sources (such as airplanes), area sources (such as dry cleaners), and stationary sources (such as factories or refineries).

The Environmental Protection Agency is the lead federal agency for administering the Clean Air Act and has certain responsibilities regarding the health effects of Mobile Source Air Toxics. The Environmental Protection Agency issued a Final Rule on Controlling Emissions of Hazardous Air Pollutants from Mobile Sources (66 Final Rule 17229, March 29, 2001). This rule was issued under the authority in Section 202 of the Clean Air Act. In its rule, the Environmental Protection Agency examined the impacts of existing and newly promulgated mobile source control programs, including its reformulated gasoline program, its national low emission vehicle standards, its Tier 2 motor vehicle emissions standards and gasoline sulfur control requirements, and its proposed heavy duty engine and vehicle standards and on-highway diesel fuel sulfur control requirements.

The Environmental Protection Agency has issued a number of regulations that will dramatically decrease Mobile Source Air Toxics through cleaner fuels and cleaner engines. According to a Federal Highway Administration analysis, even if vehicle miles traveled increases by 64 percent, these programs will reduce on-highway emissions of benzene, formaldehyde, 1,3-butadiene, and acetaldehyde by 57 to 65 percent, and will reduce on-highway diesel particulate matter emissions by 87 percent.

Unavailable Information for Project Specific Mobile Source Air Toxics Impact Analysis

This Environmental Assessment includes a basic analysis of the likely Mobile Source Air Toxic emission impacts of this project. However, available technical tools do not enable us to predict the project-specific health impacts of the emission changes

associated with the alternatives in this environmental document. Due to these limitations, the following discussion is included in accordance with Council on Environmental Quality regulations (40 Code of Federal Regulations 1502.22(b)) regarding incomplete or unavailable information.

Information that is Unavailable or Incomplete. Evaluating the environmental and health impacts from Mobile Source Air Toxics on a proposed highway project would involve several key elements, including emissions modeling, dispersion modeling to estimate ambient concentrations resulting from the estimated emissions, exposure modeling to estimate human exposure to the estimated concentrations, and then final determination of health impacts based on the estimated exposure. Each of these steps is encumbered by technical shortcomings or uncertain science that prevents a more complete determination of the Mobile Source Air Toxic health impacts of this project.

Exposure Levels and Health Effects. Finally, even if emission levels and concentrations of Mobile Source Air Toxics could be accurately predicted, shortcomings in current techniques for exposure assessment and risk analysis preclude us from reaching meaningful conclusions about project-specific health impacts. Exposure assessments are difficult because it is difficult to accurately calculate annual concentrations of Mobile Source Air Toxics near roadways, and to determine the portion of a year that people are actually exposed to those concentrations at a specific location. These difficulties are magnified for 70-year cancer assessments, particularly because unsupported assumptions would have to be made regarding changes in travel patterns and vehicle technology (which affects emissions rates) over a 70-year period. There are also considerable uncertainties associated with the existing estimates of toxicity of the various Mobile Source Air Toxics, because of factors such as low-dose extrapolation and translation of occupational exposure data to the general population. Because of these shortcomings, any calculated difference in health impacts between alternatives is likely to be much smaller than the uncertainties associated with calculating the impacts. Consequently, the results of such assessments would not be useful to decision makers, who would need to weigh this information against other project impacts that are better suited for quantitative analysis.

Summary of Existing Credible Scientific Evidence Relevant to Evaluating the Impacts of the Mobile Source Air Toxic. Research into the health impacts of Mobile Source Air Toxics is ongoing. For different emission types, there are a variety of

studies that show that some either are statistically associated with adverse health outcomes through epidemiological studies (frequently based on emissions levels found in occupational settings) or that animals demonstrate adverse health outcomes when exposed to large doses.

Exposure to toxics has been a focus of a number of Environmental Protection Agency efforts. Most notably, the agency conducted the National Air Toxics Assessment in 1996 to evaluate modeled estimates of human exposure applicable to the county level. While not intended for use as a measure of or benchmark for local exposure, the modeled estimates in the National Air Toxics Assessment database best illustrate the levels of various toxics when aggregated to a national or state level.

The Environmental Protection Agency is in the process of assessing the risks of various kinds of exposures to these pollutants. The Environmental Protection Agency Integrated Risk Information System is a database of human health effects that may result from exposure to various substances found in the environment. The Integrated Risk Information System database is located at <http://www.epa.gov/iris>. The following toxicity information for the six prioritized Mobile Source Air Toxics was taken from the Integrated Risk Information System database *Weight of Evidence Characterization* summaries. This information is taken verbatim from the Environmental Protection Agency's Integrated Risk Information System database and represents the agency's most current evaluations of the potential hazards and toxicology of these chemicals or mixtures. The six priority Mobile Source Air Toxics are the following:

- **Benzene** is characterized as a known human carcinogen.
- The potential carcinogenicity of **acrolein** cannot be determined because the existing data are inadequate for an assessment of human carcinogenic potential for either the oral or inhalation route of exposure.
- **Formaldehyde** is a probable human carcinogen, based on limited evidence in humans, and sufficient evidence in animals.
- **1,3-butadiene** is characterized as carcinogenic to humans by inhalation.
- **Acetaldehyde** is a probable human carcinogen based on increased incidence of nasal tumors in male and female rats and laryngeal tumors in male and female hamsters after inhalation exposure.
- **Diesel exhaust** is likely to be carcinogenic to humans by inhalation from environmental exposures. Diesel exhaust as reviewed in this document is the combination of diesel particulate matter and diesel exhaust organic gases.

- **Diesel exhaust** also represents chronic respiratory effects, possibly the primary noncancer hazard from Mobile Source Air Toxics. Prolonged exposures may impair pulmonary function and could produce symptoms, such as cough, phlegm, and chronic bronchitis. Exposure relationships have not been developed from these studies.

Some recent studies have reported that proximity to roadways is related to adverse health outcomes—particularly respiratory problems. Much of this research is not specific to Mobile Source Air Toxics, instead surveying the full spectrum of both criteria and other pollutants. The Federal Highway Administration cannot evaluate the validity of these studies, but more importantly, they do not provide information that would be useful to alleviate the uncertainties listed above and enable us to perform a more comprehensive evaluation of the health impacts specific to this project.

Because of the uncertainties outlined above, a quantitative assessment of the effects of air toxic emissions on human health cannot be made at the project level. While available tools do allow us to reasonably predict relative emissions changes between alternatives for larger projects, the amount of Mobile Source Air Toxic emissions from each of the project alternatives and Mobile Source Air Toxic concentrations or exposures created by each of the project alternatives cannot be predicted with enough accuracy to be useful in estimating health impacts. (As noted above, the current emissions model is not capable of serving as a meaningful emissions analysis tool for smaller projects.) Therefore, the relevance of the unavailable or incomplete information is that it is not possible to make a determination of whether any of the alternatives would have “significant adverse impacts on the human environment.”

Project Level Analysis

Caltrans conducted a quantitative analysis of Mobile Source Air Toxic emissions for the various alternatives. The emission estimates were derived from the University of California at Davis/Caltrans spreadsheet tool. The highest concentration of all pollutants is in the base year (2005). The operation year build alternatives would produce fewer emissions than the base year. The No-Build Alternative for the operational year would produce more emissions than both the base year and the operational year build alternatives. The no-build horizon year (2030) emissions are slightly less than the build alternative emissions. The horizon year build and no-build emissions are less than half of the base year emissions due to expected improvement in vehicle emissions controls and cleaner burning fuels. All the project alternatives

may result in increased exposure to Mobile Source Air Toxic emissions in certain locations, although the concentrations and duration of exposures are uncertain, and because of this uncertainty, the health effects from these emissions cannot be estimated.

Roosevelt Elementary School is a sensitive land use identified in the vicinity of the project. The school grounds are less than 500 feet (the guideline for inclusion in analysis) from the edge of the nearest traveled lane. The paved playground is about 30 feet from the soundwall bordering the property from the east, adjacent to the nearest travel lane. The proposed additional travel lanes would be in the median; therefore, the distance to the vehicle emissions would remain the same as the no-build and base year. The current modeling tools do not provide a reliable method of predicting emissions to a receptor based on location relative to the freeway. The one certainty is that the more vehicle miles traveled in any given year, the more emissions. However, each year the total Mobile Source Air Toxics emitted per vehicle mile traveled are expected to decrease based on stronger regulations.

In summary, the Environmental Protection Agency projections indicate a continuing downward trend of the six primary Mobile Source Air Toxics. This differs somewhat from the results derived from the University of California at Davis/Caltrans spreadsheet tool that indicates that the Mobile Source Air Toxic emissions would start to increase again at the design year. As discussed above, the study of Mobile Source Air Toxics, dose-response effects, and modeling tools are currently in a state where accurate information is incomplete or unavailable. This is relevant to making an accurate prediction of any reasonably foreseeable adverse effects on the human environment. There is currently no specific significance level for receptor exposure. Without a significance level for exposure, one cannot accurately and scientifically predict the effects on the human environment. Studies are currently being conducted to clarify some of these unknowns; however, the information is not available now.

Avoidance, Minimization, and/or Mitigation Measures

Short-term construction impacts

The project would be subject to a Dust Control Permit from the San Joaquin Unified Air Pollution Control District. Following the District's Regulation VIII requirements and the Caltrans Standard Special Provisions for Dust should minimize the effect of dust during construction.

2.2.6 Noise

Regulatory Setting

The National Environmental Policy Act of 1969 and the California Environmental Quality Act provide the broad basis for analyzing and abating the effects of highway traffic noise. The intent of these laws is to promote the general welfare and to foster a healthy environment. The requirements for noise analysis and consideration of noise abatement and/or mitigation, however, differ between the National Environmental Policy Act and the California Environmental Quality Act.

California Environmental Quality Act

The California Environmental Quality Act requires a strictly baseline versus build analysis to assess whether a proposed project will 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.

The rest of this section will focus on the National Environmental Policy Act-23 Code of Federal Regulations 772 noise analysis; please see Chapter 3 for further information on noise analysis under the California Environmental Quality Act.

National Environmental Policy Act and 23 Code of Federal Regulations 772

For highway transportation projects with Federal Highway Administration involvement, 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 decibels) is lower than the criterion for commercial areas (72 decibels). Table 2.20 lists the noise abatement criteria, and Table 2.21 shows the noise levels of typical activities.

Table 2.20 Noise Abatement Criteria

Activity Category	Noise Abatement Criteria (A-weighted Noise Level, Average Decibels Over 1 Hour)	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
A-weighted decibels are adjusted to approximate the way humans perceive sound

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-decibel 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 decibel 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 into the project.

Caltrans' *Traffic Noise Analysis Protocol* sets forth the criteria for determining when an abatement measure is reasonable and feasible. Feasibility of noise abatement is essentially an engineering concern. A minimum 5-decibel 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. The reasonableness determination is based on a cost-benefit analysis. Factors used in determining whether a proposed noise abatement measure is reasonable include: residents' acceptance, the absolute noise level, and 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.

Table 2.21 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	
Quiet Urban Daytime	50	Large Business Office
		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

Affected Environment

A traffic noise study was completed in the summer of 2007 to study the existing noise environment in the project area and noise from traffic traveling on State Route 99. Noise monitors were placed in strategic locations around the project area to obtain the existing noise levels. Land uses were also assessed to identify where noise impacts would potentially occur. Single-family and multi-family residences, places of

worship, and school outdoor land uses were identified in the project area and were classified under Activity Category B, with a Noise Abatement Criteria of 67 for exterior areas. Existing commercial and industrial areas in the project area were identified as Activity Category C uses with a Noise Abatement Criteria of 72 for exterior areas. Refer to Table 2.22 Land Use Descriptions in the Study Area for a listing of the land uses found in the noise study area. Notice the far left column in the table titled “Area.” For the purposes of the noise study, the project area was divided up into areas “A” through “O.” See Figure 2.6 Noise Monitor/Receiver Locations for an illustration showing the noise monitor station locations where noise level readings were taken, within the areas defined as “A” through “O.”

Environmental Consequences

The results of the noise study showing existing traffic noise levels and predicted levels are presented in Tables 2.23, 2.24, and 2.25. These tables show the potential noise impacts for each project alternative, as prescribed under 23 Code of Federal Regulations 772 and the Traffic Noise Analysis Protocol. The predicted noise levels were calculated to predict the design-year (2032) conditions, which is a 20-year planning horizon required to show noise levels 20 years following construction of the project. The table presents a summary of the existing noise levels and noise levels predicted for the year 2032, with and without the project, showing the direct effect of the project alternatives.

However, noise levels recorded in Areas A, B, D, E, H, I, J, K, and N for all of the three build alternatives are at 75 dBA or greater, which requires that noise abatement must be “*considered*” for these areas, as defined in the protocol. Noise levels in Areas F, G, and O were recorded below 75 dBA, but do qualify for consideration for noise abatement because noise levels do approach and/or exceed the 67 dBA Noise Abatement Criteria for land uses in Activity Category B. See Tables 2.23, 2.24, and 2.25 and the column labeled Reasonable and Feasible. All Noise Monitor Stations with a YES in the Reasonable and Feasible column would be considered further for soundwalls to be constructed with the project. Once the Preferred Alternative is selected, further reasonableness and feasibility analysis is anticipated and meetings would be conducted with affected property owners. See Figure 2.7 Soundwalls Under Consideration for a diagram showing the locations of walls being considered for construction.

Table 2.22 Land Use Descriptions in the Study Area

Area	Land Use Description	East/West of State Route 99	Existing Noise Barrier
A	Between Mariposa Road, near southern end, and Clark Drive; mobile home parks, single-family homes, commercial and industrial properties, and open space.	East	No
B	Between Clark Drive and East Mariposa Road; mobile home parks, single-family homes, a place of worship (Bethany Baptist Church), and industrial use.	East	No
C	Between East Mariposa Road and Santa Fe Railroad line; triplex apartment building, single-family homes, located in the southeastern quadrant of the intersection of Farmington/State Route 99 frontage road. A mobile home park is located in the northeastern corner of the intersection. The area south of the intersection consists mostly of industrial and commercial land uses.	East	No
D	Between the Santa Fe Railroad line and Mormon Slough; primarily single-family residences.	East	No
E	Between Mormon Slough and East Main Street; primarily single-family residences.	East	No
F	Between East Main Street and East Washington Street; single-family residences. Three sound barriers are located between State Route 99 and this residential area. Each barrier has an estimated nominal height of 12 feet.	East	Yes
G	Between Route 4 and East Main Street; single-family residences and Roosevelt Elementary School, includes several athletic fields adjacent to the State Route 99 right-of-way. A sound barrier with a nominal height of 12 feet extends along eastbound State Route 4 and the transition ramp to southbound State Route 99, ending near East Main Street.	West	Yes
H	East Main Street and Charter Way; single-family residences and a place of worship (Crossroads of the Valley Church). The church does not include an area of frequent outdoor use.	West	No
I	Between Charter Way and Mormon Slough; single-family residences and a place of worship (Filam Seventh Day Adventist Church). The church does not include an area of frequent outdoor use.	West	No
J	Between Mormon Slough and Santa Fe Railroad; single-family residences.	West	No
K	Between Santa Fe Railroad line and Farmington Road; single-family residences, multi-family apartment buildings, and Montezuma School, athletic fields exist on the school property.	West	Yes
L	Between Farmington Road and Mariposa Road; single-family residences and commercial uses.	West	No
M	Southbound side of Mariposa Road, adjacent single-family neighborhood.	West	No
N	Between Clark Drive and Mariposa Road; single-family residences, commercial and industrial uses.	West	No
O	Southern end of the project residential subdivisions, sound barriers surround each of the subdivisions, each with a nominal height of 12 feet.	West	Yes

No land uses in Category C have been evaluated for noise abatement, since none of the land uses in this category have areas of “*frequent human use*” as defined in the protocol. Also, it has been determined that it would not be *feasible* to provide abatement to Areas F, G, and O due to the presence of existing walls in each area and the inability to improve the existing walls to meet the required 5-dBA reduction. Detailed analysis of the existing walls indicates increasing the height of the barriers from the existing 12 feet to 16 feet would not result in the required noise reduction of at least 5 dBA; therefore, noise abatement is no longer being considered for these areas. Additionally, the noise levels of residences in Area M would increase to 70 dBA under all three build alternatives; however, to build noise barriers at this location would prevent necessary access to Mariposa Road. For this reason, a noise barrier would not be feasible for Area M.

Avoidance, Minimization, and/or Noise Abatement

Based on the studies completed to date, the California Department of Transportation and the Federal Highway Administration intend to incorporate noise abatement in the form of masonry block barriers (soundwalls) at nine separate locations. See Figure 2.7 Soundwalls Under Consideration for a map showing the locations of all the soundwalls being considered for the three project alternatives. The soundwalls under consideration would be approximately 733 feet long with an average height of 14 feet. Calculations based on preliminary design data indicate that the barriers would reduce noise levels by 5 to 14 decibels for 207 residences at a cost of \$9,710,000. If, during final design, conditions have substantially changed, noise abatement may not be necessary. The final decision on noise abatement would be made on completion of the project design and the public involvement process.

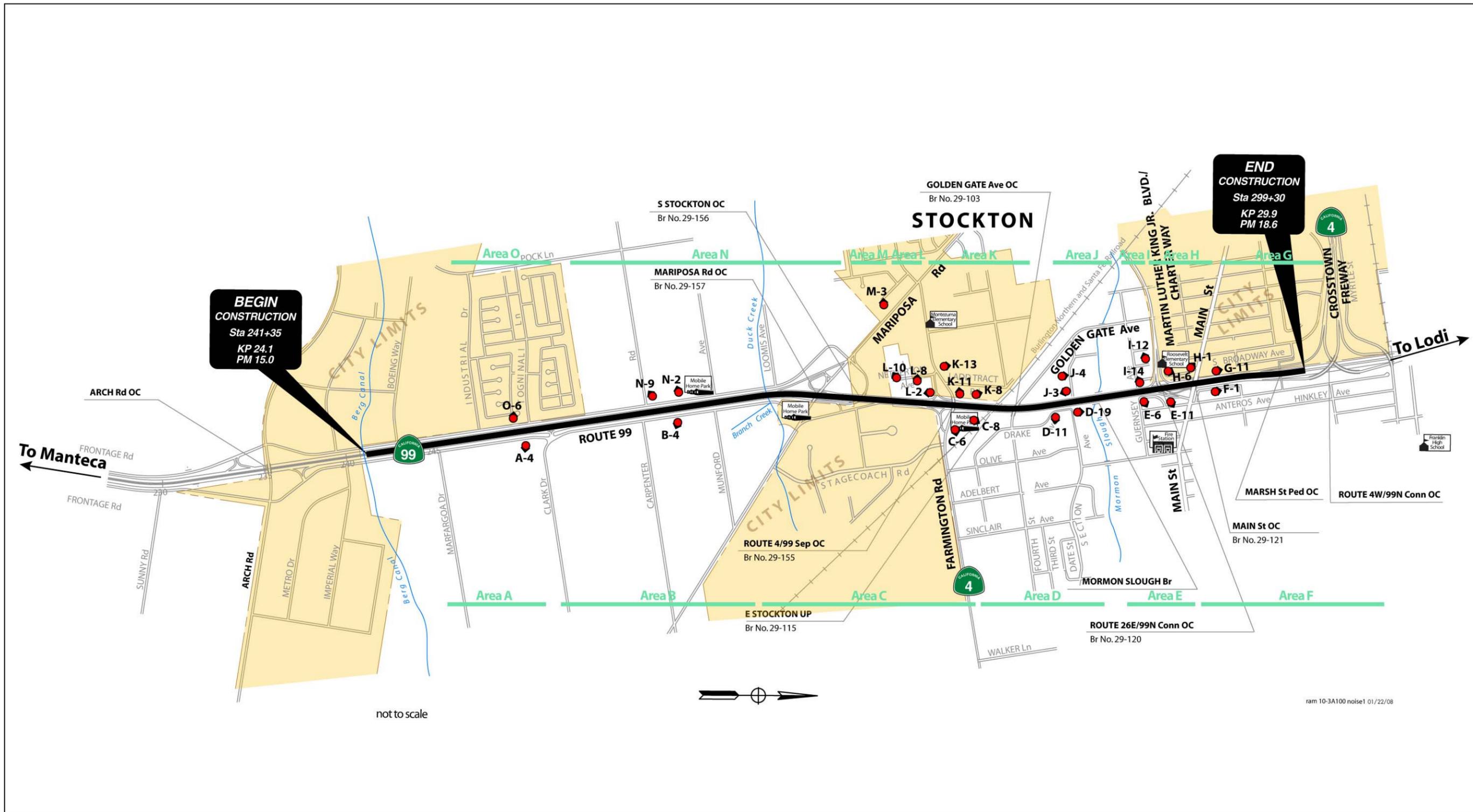


Figure 2.6 Noise Monitor/Receiver Locations



Table 2.23 Summary of Noise Impacts for Alternative 1

Noise Monitor Station	Existing Noise Levels	Year 2032 Noise Level Without Project (dBA)	Year 2032 Noise Level Alternative 1 (dBA)	Predicted Noise Level with Abatement (dBA)			Reasonable and Feasible?
				12-foot wall	14-foot wall	16-foot wall	
A4	76	78	80 (+4)	70	69	68	YES
B4	78	79	80 (+2)	78	79	80	YES
C6	69	69	72 (+3)	65	64	63	YES
C8	69	70	72 (+3)	65	64	63	YES
D11	77	78	79 (+2)	68	68	67	YES
D19	74	75	76 (+2)	68	68	67	YES
E6	77	77	79 (+2)	68	67	66	YES
E11	72	73	74 (+2)	63	62	61	YES
H1	77	77	79 (+2)	69	68	67	YES
H6	77	77	78 (+1)	68	67	66	YES
I12	67	69	70 (+3)	59	58	57	YES
I14	78	78	80 (+2)	69	68	67	YES
J3	79	79	81 (+2)	71	69	69	YES
J4	70	71	72 (+2)	62	60	60	YES
K8	69	70	72 (+3)	65	64	63	YES
K11	76	76	78 (+2)	71	70	69	NO
K13	62	64	66 (+4)	59	58	57	NO
L2	72	73	76 (+4)	67	66	65	NO
L8	65	66	69 (+4)	60	59	58	NO
L10	65	66	68 (+3)	59	58	57	NO
N2	77	78	80 (+3)	75	74	74	NO
N9	77	78	80 (+3)	75	74	74	NO

All noise levels are in dBA.

All Areas (A-O) considered for abatement have land uses identified in Activity Category B of the Noise Abatement Criteria.

Table 2.24 Summary of Noise Impacts for Alternative 2

Noise Monitor Station	Existing Noise Levels	Year 2032 Noise Level Without Project (dBA)	Year 2032 Noise Level Alternative 2 (dBA)	Predicted Noise Level with Abatement (dBA)			Reasonable and Feasible ?
				12-foot wall	14-foot wall	16-foot wall	
A4	76	78	80 (+4)	70	69	68	YES
B4	78	79	80 (+2)	78	79	80	YES
C6	69	69	72 (+3)	65	64	63	YES
C8	69	70	72 (+3)	65	64	63	YES
D19	74	75	77 (+3)	68	67	67	NO
E6	77	77	79 (+2)	68	67	66	YES
E11	72	73	74 (+2)	63	62	61	YES
H1	77	77	79 (+2)	69	68	67	YES
H6	77	77	78 (+1)	68	67	66	YES
I12	67	69	70 (+3)	59	58	57	YES
I14	78	78	80 (+2)	69	68	67	YES
J4	70	71	72 (+2)	60	59	58	YES
K8	69	70	72 (+3)	65	64	63	YES
K11	76	76	78 (+2)	71	70	69	NO
K13	62	64	66 (+4)	59	58	57	NO
L2	72	73	76 (+4)	67	66	65	NO
L8	65	66	69 (+4)	60	59	58	NO
L10	65	66	68 (+3)	59	58	57	NO
N2	77	78	80 (+3)	75	74	74	NO
N9	77	78	80 (+3)	75	74	74	NO

All noise levels are in dBA.

All Areas (A-O) considered for abatement have land uses identified in Activity Category B of the Noise Abatement Criteria.

Table 2.25 Summary of Noise Impacts for Alternative 3

Noise Monitor Station	Existing Noise Levels	Year 2032 Noise Level Without Project (dBA)	Year 2032 Noise Level Alternative 3 (dBA)	Predicted Noise Level with Abatement (dBA)			Reasonable and Feasible?
				12-foot wall	14-foot wall	16-foot wall	
A4	76	78	80 (+4)	70	69	68	YES
B4	78	79	80 (+2)	78	79	80	YES
C6	69	69	72 (+3)	65	64	63	YES
C8	69	70	72 (+3)	65	64	63	YES
D11	77	78	79 (+2)	68	68	67	YES
D19	74	75	76 (+2)	68	68	67	YES
E6	77	77	79 (+2)	68	67	66	YES
E11	72	73	74 (+2)	63	62	61	YES
H1	77	77	79 (+2)	69	68	67	YES
H6	77	77	78 (+1)	68	67	66	YES
I12	67	69	70 (+3)	59	58	57	YES
I14	78	78	80 (+2)	69	68	67	YES
J3	79	79	81 (+2)	71	69	69	YES
J4	70	71	72 (+2)	62	60	60	YES
K13	62	64	70 (+8)	60	59	59	NO
L8	65	66	69 (+4)	64	63	62	NO
L10	65	66	68 (+3)	63	62	61	NO
N2	77	78	80 (+3)	75	74	74	NO
N9	77	78	80 (+3)	75	74	74	NO

All noise levels are in dBA.

All Areas (A-O) considered for abatement have land uses identified in Activity Category B of the Noise Abatement Criteria.



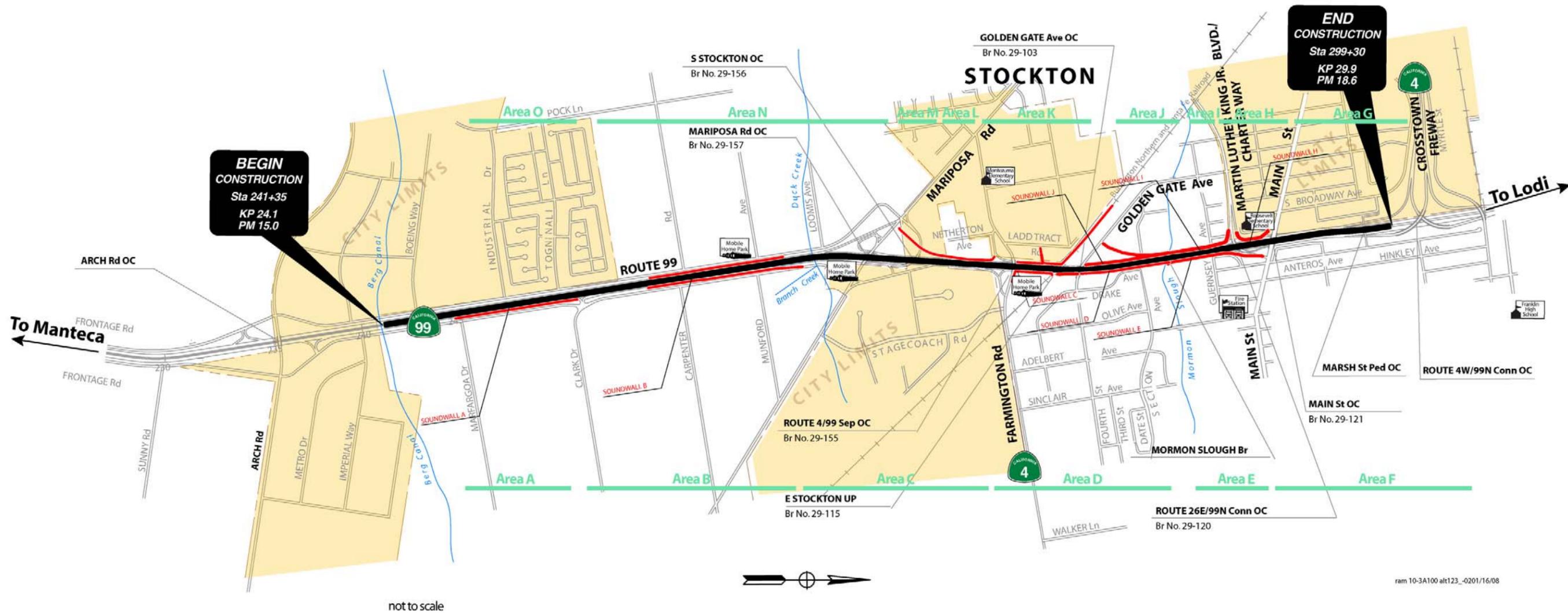


Figure 2.7 Soundwalls Under Consideration



Construction Noise

During construction of the project, noise from construction activities may intermittently dominate the noise environment in the immediate area of construction. Construction noise is regulated by Caltrans Standard Specifications Section 7-1.0011, “Sound Control Requirements,” which states that noise levels generated during construction would comply with applicable local, state, and federal regulations and that all equipment would be fitted with adequate mufflers according to the manufacturer’s specifications.

Construction equipment can generate noise levels ranging from 70 to 90 decibels at a distance of 50 feet; noise produced by construction equipment would be reduced over distance at a rate of about 6 decibels per doubling of distance.

No adverse noise impacts from construction are anticipated because construction would be conducted in accordance with Caltrans Standard Specifications Section 7-1.011 and applicable local noise standards. Construction noise would be short term, intermittent, and overshadowed by local traffic noise. Further, implementing the following measures would minimize the temporary noise impacts from construction:

- All equipment would have sound-control devices that are no less effective than those provided on the original equipment. No equipment would have an unmuffled exhaust.
- As directed by Caltrans, the contractor would implement appropriate additional noise mitigation measures, including changing the location of stationary construction equipment, turning off idling equipment, rescheduling construction activity, notifying adjacent residents in advance of construction work, and installing acoustic barriers around stationary construction noise sources.

2.3 Biological Environment

2.3.1 Natural Communities

Regulatory Setting

This section of the document discusses natural communities of concern. The focus of this section is on biological communities, not individual plant or animal species. This section also includes information on wildlife corridors and habitat fragmentation. Wildlife corridors are areas of habitat used by wildlife for seasonal or daily migration.

Habitat fragmentation involves the potential for dividing sensitive habitat and thereby lessening its biological value.

Habitat areas that have been designated as critical habitat under the Federal Endangered Species Act are discussed under Threatened and Endangered Species, Section 2.3.4. Wetlands and other waters are discussed in Section 2.3.2.

Affected Environment

A Natural Environment Study for the project was completed in July 2007. The project lies on the San Joaquin Valley floor in central San Joaquin County on State Route 99, in the southern portion of the City of Stockton. A biological study area with a 10-mile radius was established after considering the environmental setting and special-status species potentially occurring in the vicinity of the project impact area.

Within the biological study area, there are two areas of impact considerations. The first is the area to be directly affected by construction-related activities. The second is the area outside the immediate construction area that would be indirectly affected.

Land use within the biological study area consists mainly of commercial, industrial, and residential areas, with agricultural areas occurring in the eastern portion of the study area. Within the project impact area, habitat consists of urban or developed land, agricultural land, ruderal upland, and waters of the United States.

Environmental Consequences

Biological studies were completed for this project in the spring of 2007. According to the studies, approximately 180 valley oaks exist within the project impact area of all of the proposed build alternatives. Roughly 30 of these occur within the State Route 99 right-of-way and these would be removed during widening activities under any of the proposed alternatives. The remaining 150 oak trees occur where State Route 99 intersects Mariposa Road, and at both the State Route 4 (Farmington Road) and Charter Way overcrossings. Most, if not all, of these oaks would be removed during the following project activities: widening of State Route 99 and proposed improvements at the Mariposa, State Route 4 (Farmington Road), and Charter Way overcrossings (the impact amount varies slightly for each of the alternatives).

Senate Concurrent Resolution No. 17–Oak Woodlands is legislation that requests state agencies having land use planning duties and responsibilities to assess and determine the effects of their decisions or actions within any oak woodlands containing Blue, Engleman, Valley, or Coast Live Oak. The measure requests those

state agencies to preserve and protect native oak woodlands to the maximum extent feasible or provide replacement plantings where designated oak species are removed from oak woodlands.

The trees identified within the project impact area were originally planted for landscaping purposes by Caltrans and are not considered to be oak woodlands by definition.

Avoidance, Minimization, and/or Mitigation Measures

As a standard procedure for the removal of trees, Caltrans would replace any existing tree or plants removed as a result of construction of the project. A landscape plan would be completed for the project and would include replacement of the oaks removed. (See Section 2.1.6 Visual/Aesthetics, Avoidance, Minimization, and/or Mitigation Measures) Additionally, if the trees were to be removed during nesting season for migratory birds (February 15–September 1), a qualified biologist would conduct preconstruction surveys before tree removal to ensure no nesting birds are present.

2.3.2 Wetlands and Other Waters

Regulatory Setting

Wetlands and other waters are protected under a number of laws and regulations. At the federal level, the Clean Water Act (33 U.S. Code 1344) is the main law regulating wetlands and waters. The Clean Water Act regulates the discharge of dredged or fill material into waters of the United States, including wetlands. Waters of the United States include navigable waters, interstate waters, territorial seas, and other waters that may be used in interstate or foreign commerce. To classify wetlands for the purposes of the Clean Water Act, a three-parameter approach is used that includes the presence of the following: hydrophytic (water-loving) vegetation, wetland hydrology, and hydric soils (soils subject to saturation/inundation). All three parameters must be present, under normal circumstances, for an area to be designated as a jurisdictional wetland under the Clean Water Act.

Section 404 of the Clean Water Act establishes a regulatory program that provides that no discharge of dredged or fill material can be permitted if a practicable alternative exists that is less damaging to the aquatic environment or if the nation's waters would be substantially degraded. The Section 404 permit program is run by

the U.S. Army Corps of Engineers with oversight by the Environmental Protection Agency.

The Executive Order for the Protection of Wetlands (Executive Order 11990) also regulates the activities of federal agencies with regard to wetlands. Essentially, this executive order states that a federal agency, such as the Federal Highway Administration, cannot undertake or provide assistance for new construction located in wetlands unless the head of the agency finds: 1) that there is no practicable alternative to the construction, and 2) the proposed project includes all practicable measures to minimize harm.

At the state level, wetlands and waters are regulated mainly by the California Department of Fish and Game and the Regional Water Quality Control Boards. In certain circumstances, the Coastal Commission (or Bay Conservation and Development Commission) may also be involved. Sections 1600-1607 of the Fish and Game Code require any agency that proposes a project that would substantially divert or obstruct the natural flow of or substantially change the bed or bank of a river, stream, or lake to notify the California Department of Fish and Game before beginning construction. If the California Department of Fish and Game determines that the project may substantially and adversely affect fish or wildlife resources, a Lake or Streambed Alteration Agreement would be required. The California Department of Fish and Game's jurisdictional limits are usually defined by the tops of the stream or lake banks, or the outer edge of riparian vegetation, whichever is wider. Wetlands under jurisdiction of the Army Corps of Engineers may or may not be included in the area covered by a Streambed Alteration Agreement obtained from the Department of Fish and Game.

The Regional Water Quality Control Boards were established under the Porter-Cologne Water Quality Control Act to oversee water quality. The Regional Water Quality Control Boards also issue water quality certifications in compliance with Section 401 of the Clean Water Act. See the Water Quality section for more details.

Affected Environment

Within the project impact area, three surface water drainages cross beneath State Route 99: Mormon Slough, Duck Creek, and Berg's Canal. All three waters are potential "Waters of the United States," pending further determination from the Army Corps of Engineers. There are no vernal pools or wetlands identified in or near the project area.

All three build alternatives propose work in two of the drainages: Duck Creek and Mormon Slough. Proposed work within these two drainages would require widening the box culvert spanning Mormon Slough and building a new bridge and culvert at Duck Creek where the northbound State Route 99 off-ramp crosses the creek. No work is proposed in Berg's Canal.

Mormon Slough flows intermittently and typically runs dry by early spring when it is diverted upstream for agricultural water supply. In its lower reaches below the project area, Mormon Slough receives storm water and dry weather non-storm water discharges from the City of Stockton; it continues to the Delta. Duck Creek, in the project impact area, is used mainly for agricultural water supply and for conveying winter and spring runoff for flood control. Berg's Canal is also a conveyance for agricultural irrigation and tail water discharge, as well as flood event flows for the Farmington Flood Control Basin during extremely high water events.

Environmental Consequences

No impact is anticipated to wetlands since none of the waterways in the project area qualify as wetlands as defined by the Army Corps of Engineers.

The project would modify structures (bridges and culverts) at Duck Creek, resulting in the permanent loss of 0.2 acre within the channel. Approximately 270 linear feet of channel bank would be temporarily disturbed during construction. Further coordination with the Army Corps of Engineers for permits would finalize a determination of whether the 0.2 acre qualifies as "*Waters of the United States.*"

Avoidance, Minimization, and/or Mitigation Measures

The banks at Duck Creek that are temporarily disturbed during construction would be restored to their original condition when work is completed in this area. The project alternatives would likely result in a discharge of fill material to waters of the U.S. and therefore require a Section 404 permit from the Army Corps of Engineers. The surface waters in the project area are considered waters of the state by the Central Valley Regional Water Quality Control Board and are subject to state regulation. The California Department of Fish and Game may also require a Section 1602 Streambed Alteration Agreement if it determines potentially affected streams with defined beds, banks, and channels support wildlife resources that may be at risk from project activities.

2.3.3 Animal Species

Regulatory Setting

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. 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 in Section 2.3.4. All other special-status animal species are discussed here, 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.

Federal laws and regulations pertaining to wildlife include the following:

- National Environmental Policy Act
- Migratory Bird Treaty Act
- Fish and Wildlife Coordination Act
- Marine Mammal Protection Act
- Bald and Golden Eagle Protection Act

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

Affected Environment

A database search of state-listed species from the California Department of Fish and Game, California Natural Diversity Database, California Native Plant Society, and U.S. Fish and Wildlife Service federal endangered and threatened species list was conducted and updated in 2007 (see Appendix F for each species list).

Field studies were subsequently conducted to evaluate the presence or absence of all special-status animal species that could potentially be found within the project impact area. As indicated in Table 2.26, surveys conducted of the biological study area resulted in the identification of the following animal species with potential to occur in the project area.

Table 2.26 Special-Status Animal Species Potentially in the Project Impact Area

Common Name	Scientific Name	Status	Habitat Present/Absent	Species Present/Absent	Evaluation of Effect
Western pond turtle	<i>Clemmys marmorata</i>	FSC, SSC	P	A	No effect. There is suitable habitat present within the Biological Study Area and Project Impact Area within Duck Creek. Surveys for aquatic species showed no presence of this species. Giant garter snake avoidance and minimization measures outlined would also provide protection for the turtles during construction activities within and around the Duck Creek. This species was not observed during site surveys.
Western burrowing owl	<i>Athene cunicularia hypugaea</i>	SC	P	A	No effect. Although found generally throughout the Central Valley, this species was not observed in the Project Impact Area during site surveys. Pre-construction surveys would be conducted no more than 30 days prior to the start of construction.
Ferruginous hawk	<i>Buteo regalis</i>	SC	A	A	No effect. This species is believed not to nest within the Central Valley and typically departs by mid-April.
White-tailed kite	<i>Elanus leucurus</i>	SC	A	P	No effect. Found generally throughout the Central Valley, this species was observed in the Biological Study Area during site surveys. Pre-construction surveys would be conducted no more than 30 days prior to the start of construction.
Long-legged myotis	<i>Myotis volans</i>	SSC	A	A	No effect. This species was not observed during site surveys. No suitable roosting sites occur in the Project Impact Area.
Yuma myotis	<i>Myotis yumanensis</i>	SSC	A	A	No effect. This species was not observed during site surveys. No suitable roosting sites occur in the Project Impact Area.
Moestan blister beetle	<i>Lytta moesta</i>	SC	A	A	No effect. The Project Impact Area lacks suitable habitat.
Vernal pool tadpole shrimp	<i>Lepidurus packardi</i>	FE	A	A	No effect. The Project Impact Area lacks any suitable habitat.
Midvalley fairy shrimp	<i>Branchinecta mesoallensis</i>	SC	A	A	No effect. The Project Impact Area lacks the vernal pools or seasonal wetlands necessary for this species. Lacks suitable habitat.
Cliff swallows	<i>Petrochelidon pyrrhonota</i>	MTBA	P	P	No effect. Bridge structure provides suitable nest sites and has remnant nests from ongoing use of the bridge for nesting. Therefore, the Migratory Bird provisions would be implemented during construction work on bridges. These provisions require removing nests prior to nesting season (February 15), installing exclusionary netting, and monitoring weekly to ensure no new nests are built on the structure during construction activities.
Yellow-headed blackbird	<i>Xanthocephalus xanthocephalus</i>	SC	A	A	No effect. The Project Impact Area contains no suitable breeding or nesting habitat. Lacks suitable habitat.
Tri-colored blackbird	<i>Agelaius tricolor</i>	SC, MTBA,	A	A	No effect. The Project Impact Area lacks suitable nesting substrate for this species.

Common Name	Scientific Name	Status	Habitat Present/Absent	Species Present/Absent	Evaluation of Effect
loggerhead shrike	<i>Lanius ludovicianus</i>	SC	A	P	No effect. Project site lacks breeding habitat such as thorn-bearing plants. Pre-construction surveys would be conducted no more than 30 days prior to the start of construction
Pacific western big-eared bat	<i>Corynorhinus townsendii townsendii</i>	SSC	A	A	No effect. No California Natural Diversity Database records in or near the Biological Study Area; site lacks caves, coastal mountains; species occasionally roosts under bridges, however, no bat species were observed in focused surveys for bats in July 2006.

Absent [A] No further work needed. Present [P] means general habitat is present and species may be present. Status: Federal Threatened (FT); Federal Species of Concern (FSC); State Threatened (ST); State Species of Special Concern (SSC).

Western Pond Turtle

The western pond turtle is a federal Species of Concern and a State of California Species of Special Concern. Although suitable habitat was identified within the biological study area, the species was not observed during site surveys.

Western Burrowing Owl

The western burrowing owl is a Species of Concern in California, and is also a federal Species of Concern. The project area itself is heavily disturbed from human use and adjacent traffic noise and does not provide suitable habitat for burrowing owls. However, several ground squirrel burrows that provide potential habitat for burrowing owls were observed within the project area. These burrows appear to support active ground squirrel colonies, but no evidence of burrowing owl use was identified at or near the openings of any of these burrows. Numerous surveys of the project area for nesting migratory birds did not record seeing this species.

White-Tailed Kite

White-tailed kite has fully protected status in the State of California. It is also designated as a federal Species of Concern. During breeding season, trees are needed for nests, which are made of sticks, hay, and/or leaves. The project area contains a number of large eucalyptus and oak trees that are potential nesting sites. This species was observed in the biological study area during site surveys.

Cliff Swallows

Cliff swallows are migratory birds, which are protected under the Migratory Bird Treaty Act and the California Department of Fish and Game code. There is evidence that cliff swallows nest or have nested beneath the bridges over Mormon Slough,

Duck Creek, and Berg's Canal. Specialists conducting field studies saw parts of old nests during surveys.

Loggerhead Shrike

Loggerhead shrike is a federal Species of Concern and a State of California Species of Special Concern. This species was seen in the biological study area during numerous site surveys of the project area.

Environmental Consequences

The project would affect waterways that have suitable habitat for the western pond turtles; however, they are not present within the project impact area, and therefore there would be no permanent impact to the species.

No permanent or temporary impacts, or direct or indirect impacts were identified for the western burrowing owl.

No permanent or temporary, or direct or indirect impacts are anticipated for the white-tailed kite due to the construction of this project.

No permanent, direct effects to cliff swallows have been identified.

Avoidance, Minimization, and/or Mitigation Measures

Western Burrowing Owl

Due to the presence of suitable habitat and burrows present within the project area, a qualified biologist would conduct a nesting season survey no less than 30 days before the start of construction to ensure no nesting burrowing owls would be affected by construction. The western owl is covered under the Migratory Bird Treaty Act with a nesting period of February 15 through September 1

If active burrows were present within 250 feet of the project area or within 160 feet of occupied burrow sites during the non-breeding season, an onsite biological monitor would be present to monitor owl burrows during construction, in consultation with the California Department of Fish and Game.

White-Tailed Kite and Loggerhead Shrike

To ensure avoidance of any potential temporary and/or indirect impacts to white-tailed kite and loggerhead shrike, pre-construction surveys for migratory birds would be conducted no more than 30 days before the start of construction.

Cliff Swallows

Since evidence of nests was observed, there is the potential that swallows would attempt to establish nests under the bridges before the work window for construction. Exclusionary netting would be installed around the undersides of the bridge before February 15 of the construction year to prevent new nests from being formed, and/or prevent the reoccupation of existing nests. The construction contractor would do the following:

- Adhere to all state and federal laws and regulations pertaining to the protection of migratory birds, their nests, and young birds.
- Remove all existing unoccupied swallow nests on listed structures when assigned a structure.
- Keep all structures on the assigned list free of swallow nests until notified by the Caltrans Contract Manager to cease swallow activities.
- Inspect all listed structures for swallow activity a minimum of three days per week; no two days of inspection would be consecutive. A weekly log would be submitted to the Caltrans responsible biologist. The contractor would continue inspections until notified by the Caltrans Contract Manager to stop inspections. If an exclusion device were found to be ineffective or defective, the contractor would complete repairs to the device within 24 hours. If birds were found trapped in an exclusion device, the contractor would immediately remove the birds in accordance with U.S. Fish and Wildlife guidelines.
- Submit for approval working drawings or written proposals of any exclusion devices, procedures, or methods to the Caltrans Biologist before installing them. The method of installing exclusion devices would not damage permanent features of the structure. Approval by the Caltrans Biologist of the working drawings or inspection performed by the authorized Caltrans responsible biologist would in no way relieve the contractor of full responsibility for deterring nesting.

2.3.4 Threatened and Endangered Species

Regulatory Setting

The primary federal law protecting threatened and endangered species is the Federal Endangered Species Act: U.S. 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.

Under Section 7 of this act, federal agencies, such as the Federal Highway Administration, are required to consult with the U.S. Fish and Wildlife Service and the National Oceanic and Atmospheric Administration Fisheries Service to ensure that they are not undertaking, funding, permitting, or authorizing actions likely to jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat. Critical habitat is defined as geographic locations critical to the existence of a threatened or endangered species. The outcome of consultation under Section 7 is a Biological Opinion or an incidental take statement. Section 3 of the Federal Endangered Species Act defines take as “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or any attempt at such conduct.”

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. For projects requiring a Biological Opinion under Section 7 of the Federal Endangered Species Act, the California Department of Fish and Game may also authorize impacts to the California Endangered Species Act species by issuing a consistency Determination under Section 2080.1 of the Fish and Game Code.

Affected Environment

According to a U.S. Fish and Wildlife Service database search, the giant garter snake, Swainson’s hawk, Valley elderberry longhorn beetle, riparian brush rabbit, and California tiger salamander have the potential to be found within the project impact area. As indicated in Table 2.27, surveys concluded that the Swainson’s hawk and giant garter snake were found to potentially be present or have habitat in the biological study area.

Table 2.27 Threatened and Endangered Species Potentially in the Project Impact Area

Common Name	Scientific Name	Status	Habitat Present/ Absent	Species Present/ Absent	Evaluation of Effect
Giant garter snake	<i>Thamnophis gigas</i>	FT	P	P	May effect, not likely to adversely affect. After further investigation and consultation with the U.S. Fish and Wildlife Service, Duck Creek was deemed potential habitat for giant garter snake, and has historic occurrences within five miles of the project site. Avoidance, minimization, and mitigation measures outlined in the discussion of giant garter snake below would be implemented within Duck Creek.
Swainson's hawk	<i>Buteo swainsoni</i>	ST	P	P	No effect. Although the species was observed in the Biological Study Area, any trees that must be removed would be removed outside the nesting season. Pre-construction surveys of all large trees in the Project Impact Area for nesting Swainson's hawks would occur within two weeks prior to initial ground disturbance.
Valley elderberry longhorn beetle	<i>Desnocerus californicus dimorphus</i>	FT	A	A	No elderberry shrubs present within Project Impact Area; lacks suitable habitat.
Riparian brush rabbit	<i>Sylvilagus bachmani riparius</i>	SE, FE	A	A	No effect. The Project Impact Area lacks scrub, native grasslands, and all other suitable habitat for this species.
California tiger salamander	<i>Ambystoma californiense</i>	FT	A	A	No effect. There are no vernal pools or wetlands present within or near the Project Impact Area. Lacks suitable habitat.

Giant Garter Snake

The giant garter snake is state and federally *threatened*, and the species is protected by the California Endangered Species Act and the Federal Endangered Species Act. The giant garter snake has historically been present in waterways within a five-mile vicinity of Duck Creek and could potentially be affected by project activities. The U.S. Fish and Wildlife Service therefore considers Duck Creek as potential habitat for giant garter snake.

Swainson's Hawk

The Swainson's hawk is listed by the State of California as threatened and is protected by the California Endangered Species Act, and by the Migratory Bird Treaty Act. The Swainson's hawk is not listed under the Federal Endangered Species Act, but is a federal Species of Concern. Swainson's hawks are known to nest in the biological study area. Numerous large eucalyptus and oak trees, which occur in the project impact area, may potentially be used as nesting sites. Surveys in the project impact area for nesting Swainson's hawks occurred on 12 separate occasions between March 27, 2002 and July 1, 2002. Surveyors logged over 37 occurrences of Swainson's hawks in flight and in nests within the biological study area.

Environmental Consequences

After informal consultation with the U.S. Fish and Wildlife Service, it was determined that a Biological Evaluation be written to address impacts to the giant garter snake, with a determination of *Not Likely to Adversely Affect*. The Biological Evaluation was submitted to the U.S. Fish and Wildlife Service in May 2007.

Avoidance, Minimization, and/or Mitigation Measures

Giant Garter Snake

A Letter of Concurrence of *Not Likely to Adversely Affect* was received from the U.S. Fish and Wildlife Service on August 1, 2007 (Appendix I). The following measures developed by the U.S. Fish and Wildlife Service would be implemented to avoid and minimize effects to giant garter snake. These measures would be implemented only at Duck Creek because it is the only waterway within the biological study area with the potential to support giant garter snake.

- In-water and bank-side construction activities must be done between May 1 and October 1 as necessary to ensure that construction occurs during the active period of the giant garter snake. Any work occurring after October 1 would be restricted to bridge surface work with water quality controls in place.
- Between April 15 and September 30, any dewatered habitat would remain dry, with no puddle water, for at least 15 consecutive days before workers excavate or fill dewatered habitat. Efforts would be made to ensure that the dewatered habitat does not continue to support giant garter snake prey (for example, fish, tadpoles, and aquatic insects), which could detain or attract snakes into the area.
- Temporary fencing (or similar devices that lack openings that might cause the giant garter snake to become stranded or otherwise become entangled) would be

installed at the edge of the project impact area, both upstream and downstream, to deter giant garter snake from entering the project area.

- The fencing would be installed regardless of whether or not there is aquatic habitat present during the time of construction to ensure that giant garter snakes do not enter the project impact area.
- Construction personnel would participate in an environmental awareness program approved by the U.S. Fish and Wildlife Service. A qualified biologist would inform all construction personnel about the life history of giant garter snake, how to identify species and their habitats, and what to do if a giant garter snake is encountered during construction activities, as well as explain the state and federal laws pertaining to giant garter snake
- A qualified biologist would conduct a pre-construction survey for giant garter snake no more than 24 hours before the start of construction activities (site preparation and grading). If construction activities stop for a period of two or more weeks, a new giant garter snake survey would be completed no more than 24 hours before the reinitiating of construction activities.
- Clearing would be confined to the minimal area necessary within 200 feet of aquatic habitat to facilitate construction activities. To ensure that construction equipment and personnel do not affect upland and aquatic habitat for giant garter snake outside of the project impact area, orange barrier fencing would be erected to clearly define the habitat to be avoided. This would delineate the environmentally sensitive areas on the project.
- If a live giant garter snake were encountered during construction activities, the project's biological monitor and the U.S. Fish and Wildlife Service would be immediately notified. The biological monitor would stop construction activity in the vicinity of the giant garter snake, monitor the giant garter snake, and allow the giant garter snake to leave on its own. The monitor would remain in the area for the remainder of the workday to make sure the giant garter snake is not harmed or if it leaves the site that it does not return. Escape routes for giant garter snake would be determined in advance of construction. If the giant garter snake does not leave on its own within one working day, further consultation with U.S. Fish and Wildlife Service would be conducted.
- Only personnel with a U.S. Fish and Wildlife Service recovery permit pursuant to Section 10(a)(1)(A) of the Endangered Species Act would have the authority to capture and/or relocate giant garter snake encountered in the project impact area.
- Upon locating a dead, injured, or sick giant garter snake, Caltrans would notify the U.S. Fish and Wildlife Service Division of Law Enforcement or the

Sacramento Fish and Wildlife Office within one working day. Written notification to both offices would be made within three (3) calendar days and would include the date, time, and location of the finding of a specimen and any other pertinent information.

- No plastic, monofilament, jute, or similar erosion control matting that could entangle giant garter snake would be placed. Possible substitutions include coconut coir matting, tactified hydro seeding compounds, or other material approved by the U.S. Fish and Wildlife Service.
- Standard construction Best Management Practices would be implemented throughout construction to avoid and minimize adverse effects to the water quality within the project area.

The U.S. Fish and Wildlife Service also proposed the revegetation of Duck Creek between State Route 99 and Stagecoach Road.

Swainson's Hawk

The following minimization measures are to be used when work involves structures, ground, or vegetation that may be subject to nesting by migratory birds that may be adversely affected, injured, or killed during construction activities. This is a general Migratory Bird Treaty Act provision. Additional provisions for specific species such as swallows or for particular exclusion issues or devices may be necessary. Contact the District Biologist or Division of Environmental Analysis Wildlife Biologist for guidance. When a Clearing and Grubbing standard special provision is used, add, "Attention is directed to 'General Migratory Bird Protection' regarding clearing and grubbing of bird habitat."

- The contractor would protect migratory birds, their occupied nests, and their eggs as specified in these special provisions. Nesting is typically February 15 to September 1, or as determined appropriate in consultation with the District Biologist.
- When evidence of migratory bird nesting that may be adversely affected by construction activities is discovered, or when birds are injured or killed as a result of construction activities, the contractor would immediately stop work within 0.25 mile of the nests and notify the engineer. Work would not resume until the engineer provides written notification that work may begin in this location.

The California Department of Fish and Game may require a Section 2081 Agreement for impacts to state threatened or endangered species.

2.3.5 Invasive Species

Regulatory Setting

On February 3, 1999, President Bill Clinton signed Executive Order 13112 requiring federal agencies to combat the introduction or spread of invasive species in the United States. The order defines invasive species as “any species, including its seeds, spores, or other biological material capable of propagating that species, that is not native to that ecosystem whose introduction does or is likely to cause economic or environmental harm or harm to human health.” Federal Highway Administration guidance issued August 10, 1999 directs the use of the state’s noxious weed list to define the invasive plants that must be considered as part of the National Environmental Policy Act analysis for a proposed project.

Affected Environment

The following invasive species are present in the project impact area:

Yellow star-thistle

Yellow star-thistle is an exotic, invasive species widely distributed in the Central Valley and adjacent foothills of California, and is currently spreading into the mountainous regions of the Sierra Nevada and Coastal Ranges. The California Department of Food and Agriculture estimated this weed covers over 12 million acres in California. It is toxic to horses and is avoided by most grazers. Yellow star-thistle is a serious nuisance on recreational lands and poses a major threat to biodiversity in native ecosystems. Throughout the biological study area this species is present within the California Department of Transportation right-of-way.

Giant Water Reed

Giant water reed is a tall, perennial, reed-like grass reaching heights of up to 26 feet. The fleshy, almost bulbous, creeping rootstocks form compact masses from which arise tough, fibrous roots that penetrate deeply into the soil. Giant water reed, a native of Mediterranean countries, has escaped cultivation in California to become established in ditches, streams, and seeps in arid and cismontane regions. It tolerates a wide variety of ecological conditions, and is reported to flourish in all types of soils, from heavy clays to loose sands and gravelly soils. It can spread from the water’s

edge up the banks and far beyond the zone previously occupied by riparian woody vegetation.

In Mormon Slough, there are large areas where this reed is choking out the native riparian habitat. The largest area is where Mormon Slough and State Route 99 intersect. There does not appear to be any giant water reed present in Duck Creek or Berg's Canal within the project impact area.

Environmental Consequences

Project activities have the potential to cause or promote the introduction or spread of invasive species.

Avoidance, Minimization, and/or Mitigation Measures

In compliance with the Executive Order on Invasive Species, and subsequent guidance from the Federal Highway Administration, the landscaping and erosion control included in the project would not use species listed as noxious weeds. In areas of particular sensitivity, extra precautions would be taken if invasive species were found in or adjacent to the construction areas. These include the inspection and cleaning of construction equipment and eradication strategies to be implemented should an invasion occur.

To control the spread of invasive species either to or from the project area, the following measures would be included in the construction contract special provisions:

- All equipment and vehicles would be thoroughly cleaned to remove dirt and weed seeds prior to being transported or driven to or from the project site.
- The borrow site or stockpile would be inspected for the presence of noxious weeds or invasive plants.
- If noxious weeds or invasive plants were present, the contractor would remove approximately five inches of the surface of the material from the site before transporting to the project.
- Before removal, this material would be chemically or mechanically treated to kill the existing noxious weeds and invasive plants, and would not be used for the project without approval.

2.3.6 Cumulative Impacts

This discussion is based on regional land use forecasts for 2030 and assumes transportation improvements programmed within the same time frame. Effects

evaluated with the project include the cumulative effects of development within the region.

If two or more projects in the same transportation corridor are under construction at the same time, there could be temporary traffic delays and detours. To minimize these effects a traffic management plan is implemented for transportation projects. The proposed project is the second in a series of three major roadway improvements planned to widen State Route 99. The project north of this segment on State Route 99 has already been approved and is moving into the engineering and construction phase. It consists of widening State Route 99 from a four-lane freeway to a six-lane freeway between State Route 4 and Hammer Lane and adding auxiliary lanes between Wilson Way and Hammer Lane. The widening would help alleviate traffic congestion, improve operations, and accommodate additional traffic capacity along State Route 99.

Construction of the proposed project between State Route 4 and Arch Road could begin as early as 2012. Properties could be directly affected depending on the alternative constructed. The project to the south, between Manteca and Arch Road (which is also an expansion from four to six lanes), is in the early environmental study phase. At this time, Caltrans preliminary studies indicate no significant impacts from the proposed widening, including impacts to housing or businesses.

Construction of the southern project would occur last in the series of roadway improvements. Therefore, at present, cumulative impacts due to housing and business relocation are not substantial. The Caltrans Relocation Assistance Program is implemented to minimize impacts for relocation. Assuming a construction period of three years for each project, the construction of all of the State Route 99 projects would overlap at least from 2009 through 2014, with the overlaps tapering on either side of this period.

Permanent cumulative effects of State Route 99 widening would be beneficial, as future traffic demand would be better accommodated by increased capacity with the added lanes. Though the proposed widening project and its directly related cumulative projects would help relieve future traffic congestion, it would not solve future traffic congestion for the following reasons: 1) the rate of planned future growth (without the proposed project and its related cumulative projects) is already high due to the presence of cheap land; 2) higher wage jobs exist in the surrounding urban employment centers, thereby necessitating travel to work; 3) the demand for

affordable housing is ongoing; and 4) political pressures are increasing to allow higher residential densities on agricultural lands in the South Stockton area.

There are foreseeable growth and land use changes without the proposed project and its related cumulative projects due to the future planned growth for the region. Development trends discussed in the Land Use section indicate more than 20,000 residential units proposed or in the pipeline. Therefore, the proposed widening project and its directly related cumulative projects would help relieve future traffic congestion, but not eliminate it. Additional widening would be needed on State Route 99 and other surrounding freeways by 2034 to accommodate the full magnitude of the anticipated growth. Projections for growth in the area already far exceed the capacity of the proposed roadways.

Sections in this document have discussed how certain aspects of the proposed project would not lead to negative impacts. Section 2.1 Human Environment describes how there is no substantial impact to the community and that the net effects are to benefit both residents and businesses in the community by providing better and safer access to the freeway and improving conditions for traffic traveling through the project area. Section 2.2 Physical Environment, which addresses potential impacts to a floodplain, water quality, paleontology, hazardous waste, air quality, and noise, shows how the project would mitigate for potential impacts from this project, as well as effects from past projects. Examples of this include mitigation for noise and water quality. The project proposes building soundwalls to reduce noise in locations where developers did not build them in the past. Drainage basins are also proposed to capture all water in areas where the roadway would have drained into waterways in the past. And, Section 2.3 Biological Environment shows there would be no negative effects to species of concern or their habitat; in fact the project would implement measures to improve Duck Creek and leave it in better condition than it is in today. In addition, the project would plant vegetation and trees along the roadway where none existed in the past.

Overall, the results from the analysis conducted for this project show positive effects for resources in the project area. The analysis also shows that the incremental effects of the proposed project, combined with the effects of present, past, and probable future projects are not cumulatively considerable for this project.



Chapter 3 California Environmental Quality Act Evaluation

3.1 Determining Significance under the California Environmental Quality Act

The proposed project is a joint project by the California Department of Transportation (Caltrans) and the Federal Highway Administration and is subject to state and federal environmental review requirements. Project documentation, therefore, has been prepared in compliance with both the California Environmental Quality Act and the National Environmental Policy Act. Caltrans is the lead agency under the California Environmental Quality Act; the Federal Highway Administration is lead agency under the National Environmental Policy Act.

One of the main differences between the National Environmental Policy Act and the California Environmental Quality Act is the way significance is determined.

Under the National Environmental Policy Act, significance is used to determine whether an Environmental Impact Statement, or some lower level of documentation, will be required. The National Environmental Policy Act requires that an Environmental Impact Statement be prepared when the proposed federal action (project) *as a whole* has the potential to “significantly affect the quality of the human environment.” The determination of significance is based on context and intensity. Some impacts determined to be significant under the California Environmental Quality Act may not be of sufficient magnitude to be determined significant under the National Environmental Policy Act. Under the National Environmental Policy Act, once a decision is made regarding the need for an Environmental Impact Statement, it is the magnitude of the impact that is evaluated and no judgment of its individual significance is deemed important for the text. The National Environmental Policy Act does not require that a determination of significant impacts be stated in the environmental documents.

The California Environmental Quality Act, on the other hand, does require Caltrans to identify each “significant effect on the environment” resulting from the project and ways to mitigate each significant effect. If the project may have a significant effect on any environmental resource, then an Environmental Impact Report must be prepared. Each significant effect on the environment must be disclosed in the Environmental

Impact Report and mitigated if feasible. In addition, the California Environmental Quality Act Guidelines list a number of “mandatory findings of significance,” which also require the preparation of an Environmental Impact Report. There are no types of actions under the National Environmental Policy Act that parallel the findings of mandatory significance under the California Environmental Quality Act. This chapter discusses the effects of this project and California Environmental Quality Act significance.

3.2 Discussion of Significant Impacts

3.2.1 Less Than Significant Effects of the Proposed Project

The following impacts would have a less than significant effect on the environment:

- Emergency Services
- Traffic and Transportation
- Visual/Aesthetics
- Water Quality and Storm Water Runoff
- Paleontology
- Hazardous Waste Materials
- Biology

For a full discussion of less than significant effects for the above issues, please see Chapter 2, Section 2.1.4 Utilities/Emergency Services, Section 2.1.5 Traffic and Transportation/Pedestrian and Bicycle Facilities, Section 2.1.6 Visual/Aesthetics, Section 2.2.2 Water Quality and Storm Water Runoff, Section 2.2.3 Paleontology, Section 2.2.4 Hazardous Waste Materials, and Section 2.3 Biological Environment.

Noise

When determining whether a noise impact is significant under the California Environmental Quality Act, comparison is made between the no-build noise level and the build noise level. A significant traffic noise impact is considered to occur if the increase between the two noise levels is at least 12 dBa. The California Environmental Quality Act noise analysis is completely independent of the National Environmental Policy Act 23 Code of Federal Regulations 772 analysis discussed in Chapter 2, which is centered on noise abatement criteria.

A traffic noise study was completed for the project in 2007 to study the existing noise environment in the project area and noise from traffic traveling on State Route 99. Results of the noise study are presented in Chapter 2, Tables 2.23, 2.24, and 2.25 showing the existing traffic noise levels and predicted noise levels for each project alternative. The predicted noise levels were calculated to show design-year (2032) conditions. As indicated in the tables, none of the recorded areas showed a noise increase of 12 dBA or greater, therefore, there would be *no substantial impacts* due to increased noise from construction of the proposed project.

3.2.2 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. 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 will 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 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, 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.

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.

Affected Environment

According to *Recommendations by the Association of Environmental Professionals on How to Analyze Greenhouse Gas 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. Global climate change is a cumulative impact; a project participates in this potential impact through its incremental contribution combined with the cumulative increase of all other sources of greenhouse gases.

Caltrans and its parent agency, the Business, Transportation, and Housing Agency, have taken an active role in addressing greenhouse gas emissions 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, Caltrans has created and is implementing the Climate Action Program at Caltrans (December 2006).

One strategy in 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 miles per hour. Relieving congestion by enhancing operations and improving travel times in high congestion travel corridors will lead to an overall reduction in greenhouse gas emissions.

Environmental Consequences

Within the project limits, State Route 99 is a four-lane freeway with four closely spaced interchanges. Traffic in the project area is highly congested during peak hours, with a high demand from both regional and local traffic. These high traffic volumes, coupled with localized traffic weaving on State Route 99, cause traffic to slow down to below acceptable levels.

State Route 99, between Arch Road and Mariposa Road, has a current average daily traffic count of 65,000 vehicles and operates at a level of service of "D;" between Mariposa Road and State Route 4 (Crosstown Freeway), the average daily traffic count is 98,000 vehicles and the level of service is currently "E." By the year 2034, average daily traffic counts for the two segments are projected to increase to 131,000

vehicles and 128,000 vehicles, respectively, resulting in a level of service of “F” throughout the project limits. The 20-year concept level of service for this whole stretch of State Route 99 is “D.” With the proposed improvements, the level of service is expected to increase to C-D at the build-out year (2014).

The proposed project would relieve traffic congestion, improve the flow of traffic, and increase capacity by doing the following:

- Increasing capacity to reduce delay (congestion)
- Improving traffic operations
- Adding auxiliary lanes
- Reconfiguring ramps
- Widening the outside shoulders

The project would also increase existing interchange spacing, therefore increasing the lengths of the weaving sections between entrance and exit ramps. Additionally, based on the proposed improvements, the project would result in a reduction in the vehicle hours traveled despite what may be an increase in vehicle miles traveled. Due to this reduction in vehicle hours traveled and improved traffic flow, carbon dioxide emissions would be reduced.

The project is included in the San Joaquin County Regional Transportation Plan and the Federal Transportation Improvement Program. Associated conformity analysis was adopted by the San Joaquin Council of Governments on May 24, 2007 and approved by the Federal Highway Administration and the Federal Transit Administration on June 29, 2007.

Caltrans recognizes the concern that carbon dioxide emissions raise for climate change. However, modeling and gauging the impacts associated with an increase in greenhouse gas emission levels, including carbon dioxide, at the project level is not currently possible. No federal, state, or regional regulatory agency has provided methodology or criteria for greenhouse gas emissions and climate change impact analysis. Therefore, Caltrans is unable to provide a scientific- or regulatory-based conclusion regarding whether the project’s contribution to climate change is cumulatively considerable.

Avoidance, Minimization, and/or Mitigation Measures

Caltrans continues to be actively involved on the Governor’s Climate Action Team as the Air Resources Board works to implement Assembly Bills 1493 and 32. As part of

the Climate Action Program at Caltrans (December 2006), Caltrans is supporting efforts to reduce vehicle miles traveled by planning and implementing smart land use strategies: job/housing proximity, 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 efficiency of the transportation sector by increasing vehicle fuel economy in new cars and light and heavy-duty trucks. However, it is important to note that control of fuel economy standards is held by the U.S. Environmental Protection Agency and the Air Resources Board.

Lastly, the use of alternative fuels is also being considered; Caltrans is participating in funding for alternative fuel research at the University of California at Davis.

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, interagency coordination meetings, public meetings, and informal communication with the public, businesses, and interested parties as studies were being conducted. 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 Agencies

San Joaquin County—Public Works Department: The project is located within San Joaquin County's jurisdiction. Much of the east side of the highway is in the county. San Joaquin County has consistently provided input to ensure there are minimal impacts to local residents and business owners. See Figures 2.1 and 2.2 to see the county boundary within the project area.

City of Stockton—Public Works Department: The project lies within the City of Stockton's jurisdiction. Much of the west side of the highway is within the boundary of the city. The city has provided input to ensure minimal impacts to residents and business owners. The city has also been actively involved to ensure that any changes to Dr. Martin Luther King Jr. Boulevard (previously Charter Way) would not affect its commitments to the local community (for example, if Alternative 2 were selected as the preferred alternative, the new interchange would be titled the "Dr. Martin Luther King Jr. Interchange," with signs for the northbound and southbound off-ramps on State Route 99 reflecting that title). See Figures 2.1 and 2.2 to see the city boundary within the project area.

California Regional Water Quality Control Board: The control board was consulted for concurrence on the revegetation plan for Duck Creek. Consultation continues as the 401 permit is acquired later in the project development process.

U.S. Army Corps of Engineers: The corps was consulted for concurrence on the revegetation plan for Duck Creek. Consultation continues as the 404 permit is acquired later in the project development process.

San Joaquin County–Public Works Department: The Channel Maintenance Section was consulted about maintenance activities in Duck Creek. The department carries out an extensive channel maintenance program. The department was also consulted about developing a revegetation plan for Duck Creek.

U.S. Fish and Wildlife Service: Caltrans coordinated informally with the Service for concurrence on a “*Not likely to adversely affect*” finding for giant garter snake. Caltrans received a letter of concurrence, dated August 1, 2007, contingent on implementation of a revegetation plan for the affected section of Duck Creek to maintain a pathway between areas of suitable habitat.

California Department of Fish and Game: Caltrans coordinated with Fish and Game to determine state listed special-status species in the project area, to participate in field surveys of the project site for presence of Sacramento splittail, and to show representatives the proposed activities in Duck Creek. Consultation continues as the 1602 permit is acquired later in the project development process. A Section 2080.1 Agreement for Threatened and Endangered Species will be needed.

National Marine Fisheries Service: The Service was consulted for potential impacts to special-status species, specifically for fish passage and steelhead salmon in Mormon Slough. It was determined that the culvert work proposed would not alter the existing hydraulic and hydrologic characteristics of the stream channel. No further coordination was required.

State Historic Preservation Officer: Caltrans coordinated with the State Historic Preservation Officer for concurrence on a finding of “no effect” to historic properties. The Historic Property Survey Report, which is a combination of reports for archaeology, history, and architectural studies, was sent to the State Historic Preservation Officer in October 2007.

San Joaquin Council of Governments: Model Coordination Committee: Caltrans coordinates with this committee for air quality conformity. The following committee members provided comment: U.S. Environmental Protection Agency, Federal Highway Administration, Caltrans Headquarters, San Joaquin Council of Governments, and San Joaquin Valley Air Pollution Control District.

4.2 Public Outreach

Between January 2007 and November 2007, various meetings were held to inform all interested parties about the proposed project. Caltrans held multiple public outreach meetings to present the project alternatives and obtain input from local agencies, businesses, organizations, and the public.

The following groups participated in one or more of these meetings: the National Association for the Advancement of Colored People, the Hispanic Chamber of Commerce, the South Stockton Merchants Association, the Stockton Chamber of Commerce, the Stage Coach Business Group, the Stockton City Fire Department, the San Joaquin County Fire Department, the California Highway Patrol, the San Joaquin County Sheriff's Department, the San Joaquin County Board of Supervisors, the San Joaquin Unified School District, congregation members of First Thessalonians Baptist Church, and residents of the Leisure Manor Mobile Home Park.

4.3 Public Information Meeting

Caltrans held a public information meeting for the South Stockton Six-lane Widening Project on Thursday, May 3, 2007 at the San Joaquin County Fairgrounds, Building 3, from 5:00 p.m. to 8:00 p.m. Approximately 150 people attended the meeting. A Public Meeting Summary Report was produced to document the meeting; the report includes copies of all the material presented at the meeting, along with pictures and copies of all comments received and the court reporter's transcript.

Purpose and Goals of the Public Meeting

The purpose of the meeting was to explain the project and alternatives to the public and interested parties, answer questions, and gather comments from anyone who had input.

Caltrans staff and representatives from the City of Stockton, San Joaquin County, and the San Joaquin Council of Governments were onsite to answer questions and gather comments about the project. A court reporter was onsite to enable attendees to have their comments recorded for the official record. Attendees could also submit written comments on comment cards provided at the meeting.

Announcement of the Public Meeting

To announce the meeting, Caltrans published a public notice in local newspapers. The notice was published in English in *The Stockton Record* on April 19, 2007 and May 3,

2007. The notice was published in Spanish in *Vida en el Valle* on April 19, 2007 and May 3, 2007. A copy of the notice was also mailed to 669 property owners and 43 public officials, agencies, and interested groups.

Format of the Public Meeting

An open house type format was used to facilitate communication and the exchange of information between the Caltrans project team members and members of the public who attended the meeting. Attendees could wander through the room, view the displays, and freely ask questions. Kevin Sheridan, the Caltrans project manager, made a brief presentation at 6:00 p.m.

Stations set up in the meeting room featured information boards with project information. Caltrans staff members from one or more divisions (Project Management, Environmental, Design, Traffic, Right of Way and Public Information) were available to answer questions at each station. Representatives from the City of Stockton, San Joaquin County, and the San Joaquin Council of Governments were also available to answer questions about the project.

In addition to information at the individual stations, display boards set up around the edge of the room provided information about the project and the Caltrans environmental and right-of-way processes.

Written Comments Submitted at the Meeting

Caltrans received 33 comment cards, emails, or letters between May 3, 2007 and June 15, 2007. Some comments were submitted in the comment collection box at the public meeting. Several comment cards, emails, and letters were sent in by mail or email after the meeting. Fourteen attendees gave their comments to the court reporter onsite at the meeting; nine of the 14 also submitted a comment card.

The comments are summarized below. After each comment, the number in parentheses indicates how many individuals had the same comment.

Comments asking for maps or documents

Asked for a copy of the Noise Study. (1)

Asked for copies of maps. (12)

Asked for a copy of the Public Information Meeting report. (2)

Asked for a copy of the environmental document. (2)

Comments asking to be placed on the project mailing list

Asked to be added to the mailing list. (29)

Comments stating a preference for an alternative

For Alternative 1. (5)

For Alternative 2. (5)

Against Alternative 2. (3)

For Alternative 3. (1)

Comments on specific issues

Against removal of Charter Way overpass. (1)

Have bad health, hard on people to relocate. (2)

Is there relocation assistance? (1)

Would my property taxes change? (2)

Potential for eminent domain abuse? (1)

Concern about disproportionate impacts on ethnic and economically disadvantaged communities. (1)

Concern about the lack of clarity and information in public meeting materials. (1)

Will there be more public meetings? (1)

Is the agricultural crossing south of Mormon Slough Bridge going to be modified?
(1)

How will the project affect my property? (1)

How will I be able to reach State Route 99? (1)

How soon will the property purchases begin? (1)

Will there be soundwalls? We need soundwalls. (5)

If a portion of land is needed, then take it all. (1)

Concern about Little John Creek. (2)

Do I have to dedicate land? (1)

What is to be done with the portion of Charter Way between Golden Gate and State Route 99? Could build houses and offer them to people displaced by the project, or it would make good public park. (1)

Please keep existing landscape. (1)

How will each alternative affect my access? (1)

Project would cause more noise and dust. (1)



Chapter 5 List of Preparers

This document was prepared with contributions from the following:

Theresa Goewert, Air Quality Specialist. Bachelor of Science, Food Science, from Colorado State University; 10 years experience in air pollution compliance and permitting; 1.5 years experience in air pollution planning. Contribution: Air Quality Study Report.

Agnes Jenkins, Senior Transportation Engineer. Bachelor of Science, Civil Engineering, California State University, Fresno; 12 years environmental technical studies experience. Contribution: Quality control on Air Quality, Water Quality, and Noise Studies.

Kenneth J. Romero, Transportation Engineer. Bachelor of Science in Civil Engineering, California State University, Fresno; 14 years experience in engineering. Contribution: Project Engineer.

Louis L. Birdwell, Associate Right-of-Way Agent. BBA Corporation Finance and Real Estate; Texas Tech University; 19 years experience with Caltrans. Contribution: Draft Relocation Impact Study.

Bill Ray, Associate Environmental Planner. Master of Arts in Interdisciplinary Studies from California State University, Stanislaus; 19 years experience in archaeology. Contribution: Archaeology Study Report and Historic Property Survey Report.

William Lawrence Duttera, Landscape Architect. Bachelor of Science in Landscape Architecture from California Polytechnic State University, San Luis Obispo; 18 years experience as a landscape architect. Contribution: Visual Impact Assessment.

Armando Perez Soria, Transportation Engineer. Bachelor of Science in Civil Engineering; 7 years experience as an engineer. Contribution: Traffic Operations Analysis Report.

Sean Pledger, Transportation Engineer. Bachelor of Science in Civil Engineering; with 15 years experience as an engineer. Contribution: Project Engineer.

Susan Greenwood, Associate Environmental Planner. Bachelor of Science, Environmental Health Science, California State University, Fresno; 17 years environmental health, hazardous waste, and hazardous material management experience. Contribution: Hazardous Waste Studies oversight.

Tamra Nunes, Associate Environmental Planner (Biologist). Bachelor of Arts, Biology, California State University, Fresno; 13 years biology experience. Contribution: Biology studies.

Zachary Parker, Senior Environmental Planner. Bachelor of Science, Environmental Biology, California State University, Humboldt; 9 years wildlife biology and environmental planning experience. Contribution: Biology studies.

Vladimir Timofei, Transportation Engineer. M.S., Civil Engineering, California State University, Fullerton; 8 years environmental technical studies experience. Contribution: Noise Study oversight.

David Troop, Transportation Engineer. Bachelor of Science, Environmental Engineering, California State University, Humboldt; 15 years environmental technical studies experience, Chemical Fate and Transport modeling along with forensics. Contribution: Water Quality Report.

Shawn Ogletree, Associate Environmental Planner. Bachelor of Science, Environmental Conservation of Natural Resources, Texas Tech University; B.S., Wildlife/Fisheries Management, Texas Tech University; MPH California State University, Fresno; 9 years environmental health, environmental technical studies experience; 7 years biology experience. Contribution: Hazardous Waste contract manager.

Peter Hansen, Engineering Geologist. Bachelor of Science from California State University, Fresno; 8 years experience with Caltrans. Contribution: Paleontology Analysis.

Rita Susan Mason, Senior Right-of-Way Agent. Bachelor of Science in Business Administration with a concentration in Accounting; 25 years with Caltrans. Contribution: Draft Relocation Impact Study.

Iris Starr, AICP. Bachelor of Arts in Architecture from University of California at Berkeley; Master of Arts in Architecture from University of California at Berkeley; Master. City and Regional Planning, University of California at

Berkeley; 18 years of experience. Contribution: Primary author of the Community Impact Report.

Guillaume Shearin, Ph.D. in Transportation Planning and Economics, Stanford University; 33 years of experience. Contribution: Technical review of Community Impact Report.

Craig Richey, Assistant Planner. Bachelor of Arts. Literature, California State University, San Bernardino; over 5 years experience in environmental and transportation planning. Contribution: Environmental Justice tables and analysis.

Ljubica B. Osgood, Graphics Designer. Bachelor of Fine Arts, Art Institute and University of Chicago; over 31 years experience in the supervision and design of graphics and presentation materials for engineering, environmental, and transportation planning projects. Contribution: Graphics design and production.

Jeanne Hazemoto, Supervisor of Word Processing; 16 years experience in the production of publications. Contribution: Document preparation.

Toriana Henderson, Senior Environmental Planner. J.D., University of Miami; M.A. (Urban Planning) and Bachelor of Arts. (Political Science), University of California at Los Angeles; 2 years experience in land use/zoning. Contribution: Prepared the growth and cumulative impacts sections.

David Buehler, P.E. Noise Analyst. Bachelor of Science in Civil Engineering, California State University, Sacramento; 26 years experience. Contribution: Noise Study Report.

Jason Volk, Noise Analyst. Bachelor of Science in Mechanical Engineering, North Carolina State University, Raleigh; 7 years experience. Contribution: Noise Study Report.

Gail Miller, Senior Environmental Planner. Bachelor of Arts, Public Administration, California State University, Fresno; 17 years land use and environmental planning experience. Contribution: Document preparation.

Annie McCuen, Graphic Designer III. Fine Arts, Graphic Design, Fresno City College, California State University, Fresno; 25 years visual design and public participation experience. Contribution: Document graphics.

Raychel Skeen, Associate Environmental Planner. Bachelor of Arts in Geography with a minor in Geology from California State University, Humboldt; 9 years experience as a planner. Contribution: Document preparation.

Chapter 6 Distribution List

Through the California State Clearinghouse, a copy of the environmental document is sent to the following state agencies:

- Air Resources Board
- California Highway Patrol
- Caltrans Planning (Headquarters)
- Department of Conservation
- Delta Protection Commission
- Department of Education
- Energy Commission
- Fish and Game Region #2
- Housing and Community Development
- Integrated Waste Management Board
- Native American Heritage Commission
- Office of Emergency Services
- Office of Historic Preservation
- Office of Public School Construction
- Parks and Recreation
- Public Utilities Commission
- Reclamation Board
- Regional Water Quality Control Board # 5 Sacramento
- Resources Agency
- San Joaquin River Conservancy
- State Lands Commission
- Storm Water Regional Control Board: Water Quality
- Department of Toxic Substances Control
- Department of Water Resources

The document was also sent to the following interested parties:

- Stockton Unified School District
- County of San Joaquin, Community Development Department
- County of San Joaquin, Public Works Department
- Stockton Metropolitan Airport
- San Joaquin County Public Works Department
- Office of Emergency Services
- County of San Joaquin, Parks and Recreation
- Roosevelt Elementary School
- Montezuma Elementary School
- Franklin High School
- San Joaquin Regional Transit District
- Community Development, City of Stockton
- Parks and Recreation, City of Stockton
- Fire Department, City of Stockton
- Redevelopment, City of Stockton
- Airport Corridor Action Team
- West Lane Towing

- Saint George's Neighborhood Association
- San Joaquin County Hispanic Chamber of Commerce
- Greater Stockton Chamber of Commerce
- Lao Khmu Association, Inc.
- El Concilio
- California Highway Patrol - Business Office
- San Joaquin County Sheriff's Department
- Stockton Police Department
- Cesar Chavez Central Library
- Maya Angelou Southeast Library
- Fair Oaks Branch Library
- San Joaquin Council of Governments
- Environmental Affairs Council
- Council Member Susan Talamantes
- Council Member Rebecca G. Nabors
- Mayor Edward J. Chavez
- Supervisor Larry Ruhstaller
- Supervisor Steven Gutierrez
- South Stockton Merchants Association
- Asian American Chamber of Commerce
- California Concrete Pipe
- R.B. Moore
- Christine Cowen
- First Thessalonians Baptist Church
- David and Elizabeth Lopez

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 Chapter 2 of this Environmental Impact Report/Environmental Assessment. Documentation of “No Impact” determinations is provided at the beginning of Chapter 2. Except for noise, discussion of all impacts, avoidance, minimization, and/or mitigation measures is under the appropriate topic headings in Chapter 2. Noise impacts under the California Environmental Quality Act are discussed in Chapter 3.



Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
--------------------------------	--	------------------------------	-----------

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 type="checkbox"/> | <input type="checkbox"/> | <input checked="" 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 type="checkbox"/> | <input checked="" 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 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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b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

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

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

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

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

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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Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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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"/>
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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?

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

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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d) Disturb any human remains, including those interred outside of formal cemeteries?

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

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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ii) Strong seismic ground shaking?

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

iii) Seismic-related ground failure, including liquefaction?

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

iv) Landslides?

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

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

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

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?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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d) Be located on expansive soil, as defined in Table 17-2 of the

Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property.

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

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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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"/>
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Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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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"/>
--------------------------	--------------------------	-------------------------------------	--------------------------

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)?

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

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?

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

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?

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

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?

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

f) Otherwise substantially degrade water quality?

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

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?

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

h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows?

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

i) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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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:

a) Physically divide an established community?

b) 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?

c) Conflict with any applicable habitat conservation plan or natural community conservation plan?

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?

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?

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?

b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

e) For a project located within an airport land use plan or,

Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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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"/>
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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 type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	--------------------------	-------------------------------------

b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

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

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

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

Police protection?

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

Schools?

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

Parks?

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

Other public facilities?

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

a) Would the project increase the use of existing neighborhood and regional parks or other recreational

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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facilities such that substantial physical deterioration of the facility would occur or be accelerated?

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

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"/>
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e) Result in inadequate emergency access?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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f) Result in inadequate parking capacity?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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UTILITY AND SERVICE SYSTEMS - Would the project:

a) Exceed wastewater treatment requirements of the California Regional Water Quality Control Board

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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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"/>
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Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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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 type="checkbox"/>	<input checked="" 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"/>
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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"/>
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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"/>
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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"/>
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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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Appendix B Evaluated Relative to the Requirements of Section 4(f)

The proposed projects build alternatives would not affect any significant publicly owned public park, recreation area, or wildlife and waterfowl refuge and any land from an historic site of national, state or local significance. Therefore this project does not trigger the need for 23 Code of Federal Regulation 771.135 evaluation (Section 4(f)).



Appendix C Title VI Policy Statement

STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY

ARNOLD SCHWARZENEGGER, Governor

DEPARTMENT OF TRANSPORTATION
OFFICE OF THE DIRECTOR
1120 N STREET
P. O. BOX 942873
SACRAMENTO, CA 94273-0001
PHONE (916) 654-5266
FAX (916) 654-6608
TTY (916) 653-4086



*Flex your power!
Be energy efficient!*

January 14, 2005

TITLE VI POLICY STATEMENT

The California 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, and age, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity it administers.

A handwritten signature in black ink that reads "Will Kempton".

WILL KEMPTON
Director

"Caltrans improves mobility across California"



Appendix D Summary of Relocation Benefits

Caltrans 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 prices 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 any of the brochures mentioned below, please contact Raychel Skeen, Associate Environmental Planner at raychel_skeen@dot.ca.gov, (559) 243-8266, or 2015 East Shields Avenue, Suite100, 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.

The Business and Farm Relocation Assistance Program

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 the 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 E. Charter Way/1976 E. Dr. Martin Luther King Jr. Blvd, Stockton, CA 95205

Appendix E Minimization and/or Mitigation Summary

Relocations

The Caltrans Relocation Assistance Program would reduce impacts as benefits are provided to relocate residences and businesses, reducing the level of impact to below a substantial level. A range of benefits is available; some include finding comparable replacement housing and paying for costs associated with moving. Details are identified at the time property is acquired. The Draft Relocation Impact Report found that there is adequate comparable replacement housing property within the required distance in the City of Stockton and San Joaquin County.

With implementation of the Caltrans Relocation Assistance Program, no substantial impact to persons, businesses, or property access would result from construction of the project. All parties would be treated in a fair and equal manner as prescribed by Caltrans policy, the Federal Uniform Relocations Assistance and Real Property Acquisition Policies Act of 1970 (as amended), Title 49–Code of Federal Regulations–Part 24, and Title VI of the Civil Rights Act (42 US Code 2000d, et seq.). See Caltrans’ Title VI Policy Statement in Appendix C.

Visuals/Aesthetics

The following proposed mitigation measures incorporated design features and methods to avoid permanent adverse impacts. These measures would be done in cooperation with the District 10 Landscape Architect.

- All side slopes associated with the elevated structures would be landscaped to help lessen the visual dominance of the elevated structures.
- Architectural detailing and/or surface treatments consistent with the surrounding community should be incorporated into new bridge designs.
- Artistic soundwall design should be implemented to break up the built environment and enhance the driving experience. Soundwall design should be compatible with the surrounding area and meet community goals.
- Soundwalls should be designed to discourage the proliferation of graffiti. Some examples of soundwall design may include rough-textured finishes or uneven surfaces, graffiti-resistant coatings, and vine plantings of a type that will attach to walls.

- Highway art may also be incorporated to break up the built environment and enhance the quality of the driving experience. Artistic design elements must be consistent with community goals.
- Highway planting would be provided to screen and/or soften undesirable views both to and from the project area.
- Every effort must be made to avoid the removal of existing plant material.
- Replacement planting would be required to replace plant material removed by construction.
- Replacement planting would also include the replacement of removed median landscaping and oak tree plantings.
- Areas affected or disturbed by construction would be revegetated in the form of new landscape planting and irrigation systems.
- Vegetation for highway or replacement planting would be plant species adapted to the specific zone or region of the project area.
- Mitigation planting would occur along all areas of Duck Creek affected by construction. Mitigation planting would serve as replacement of habitat for the giant garter snake.
- Graded slopes should be maintained at 1:4 or flatter wherever possible to help in the revegetation process.
- Where feasible, slope contouring would be implemented in such a way as to match existing adjacent contours.
- Where possible, no slopes should exceed 1:2 (vertical: horizontal) in gradient.
- Pedestrian and bicycle accessibility would be incorporated to meet mandated access requirements.

Water Quality

The design and construction of the proposed project must adhere to the requirements in the National Pollutant Discharge Elimination System, Caltrans Storm Water Management Plan, the Caltrans Project Planning and Design Guide, and Best Management Practices.

No significant impacts would occur from temporary construction activities due to the implementation of Caltrans National Pollutant Discharge Elimination System – Statewide Storm Water Pollution Prevention Plan that would address all requirements for pollution prevention, and erosion and sediment control.

In the construction phase, the contractor has the responsibility, as stated in Caltrans' Standard Specifications Section 7-1.01G, to take the necessary steps to eliminate

potential impacts during construction. These steps include but are not limited to the following:

- Soil stabilization
- Sediment control
- Wind erosion control
- Tracking control
- Non-storm water control
- Waste management and material pollution control

A Notification of Construction would be submitted to the Regional Water Quality Control Board at least 30 days before the start of construction. A Notice of Construction Completion would be submitted to the Regional Water Quality Control Board upon completion of construction.

Paleontology

Due to planned excavation for the project, the Assessment Report recommended that monitoring take place where excavation would disturb in-place sedimentary strata below the upper soil layers (upper three feet). The project area would also require monitoring if excavation were performed below the uppermost three feet of sediment.

- A qualified principal paleontologist (M.S. or PhD in paleontology or geology familiar with paleontological procedures and techniques) would be retained to be present at pre-grading meetings to consult with grading and excavation contractors.
- A paleontological monitor, under the direction of the qualified principal paleontologist, would be onsite to inspect cuts for fossils at all times during original grading involving sensitive geologic formations.
- When fossils are discovered, the paleontologist (or paleontological monitor) would recover them. Construction work in these areas would be halted or diverted to allow recovery of fossil remains in a timely manner.
- Fossil remains collected during the monitoring and salvage portion of the mitigation program would be cleaned, repaired, sorted, and cataloged.
- Prepared fossils, along with copies of all pertinent field notes, photos, and maps, would then be deposited in a scientific institution with paleontological collections.
- A final report would be completed that outlines the results of the mitigation program.

- Where feasible, selected road cuts or large finished slopes in areas of critically interesting geology may be left exposed so they can serve as important educational and scientific features. This may be possible if no substantial adverse visual impact results.

Hazardous Waste

Before the final environmental document, Preliminary Site Investigations would be conducted for those facilities in the path of the preferred alternative. The investigation would focus on assessing potential and/or documented soil and groundwater impacts associated with the identified potential hazardous waste facilities proposed for partial or complete parcel takes or use as construction easements. Soil sampling is also recommended in Caltrans existing right-of-way where soil excavation is planned next to identified potential hazardous waste facilities; the sampling would help in evaluating the management and disposal of potentially contaminated soil and construction worker health and safety requirements.

A Lead Compliance Plan is required for soils containing lead (California Code of Regulations, Title 8, Section 1532.1, the “Lead in Construction” standard) and to protect construction workers. This plan would also be required for work performed on painted structures. In accordance with Title 8, Section 1532.1(p), written notification to the nearest California Occupational Safety and Health Administration (Cal/OSHA) district office is required at least 24 hours before certain lead-related work. For samples where lead levels exceed hazardous waste criteria, the excavated soil should be either managed and disposed of as a California hazardous waste or stockpiled and resampled to confirm waste classification. Further investigation of lead in soils is recommended.

Asbestos-containing barrier rail shims are classified as a Category 1 nonfriable/nonhazardous material and were identified on the barrier rail assemblies of Bridge 29-0103 (at Golden Gate Avenue). They would be removed and disposed of by a licensed contractor registered with the California Occupational Safety and Health Administration (Cal/OSHA) for asbestos-related work or by a licensed and certified asbestos abatement contractor before renovation, demolition, or other activities that would disturb the material.

It is recommended that the contractor be notified of the presence of asbestos. A copy of the Asbestos and Lead-Containing Paint Report dated October 2007 will be given to the contractor before abatement activities. The contractor is responsible for

informing the landfill management of the intent to dispose of asbestos waste. Some landfills may require additional waste characterization. The contractor is responsible for segregating and characterizing waste streams before disposal.

In accordance with San Joaquin Valley Air Pollution District Regulation IV, Rule 4002, written notification to the San Joaquin Valley Air Pollution District is required 10 working days before beginning of any demolition activity, whether asbestos is present or not.

It is recommend that all paints at the project location be treated as lead-containing for purposes of determining the applicability of the California Occupational Safety and Health Administration (Cal/OSHA) lead standard during any future maintenance, renovation, and demolition activities. The recommendation is based on lead-containing paint sample results and the fact that lead was a common ingredient of paints manufactured before 1978 and is still an ingredient of some industrial paints. Construction activities (including demolition) that disturb materials containing *any* amount of lead are subject to certain requirements of the California Occupational Safety and Health Administration (Cal/OSHA) lead standard contained in Title 8, California Code of Regulations, Section 1532.1.

It is recommended that personnel who work in the area should have lead-related construction certification, as appropriate, from the California code for personnel performing “trigger tasks” as defined in Title 8 California Code of Regulations Section 1532.1(d). Common trigger tasks include manual scraping or sanding, heat gun applications, power tool cleaning, spray painting with lead paint, abrasive blasting, welding, cutting, grinding, and torch burning. Contractors should consult the California Occupational Safety and Health Administration (Cal/OSHA) lead standard for additional guidance.

In accordance with Title 8, California Occupational Safety and Health Administration, Section 1532.1(p), written notification to the nearest California Occupational Safety and Health Administration district office is required at least 24 hours before certain lead-related work.

Contractors are responsible for informing the landfill of the contractor’s intent to dispose of Resource Conservation Recovery Act waste, California hazardous waste, and/or architectural components with intact lead-containing paint. Deteriorated paint is a surface coating that is cracking, chalking, flaking, chipping, peeling, non-intact, failed, stripped, or otherwise separated from the substrate. Demolition of a

deteriorated component with lead-containing paint would require waste characterization and appropriate disposal. Intact lead-containing paint on a component is currently accepted by most landfill facilities; however, contractors are responsible for segregating and characterizing waste streams prior to disposal. Some landfills may require additional waste characterization. Contractors are responsible for segregating and characterizing waste streams before disposal.

Air Quality

The project would be subject to a Dust Control Permit from the San Joaquin Unified Air Pollution Control District. Following the District's Regulation VIII requirements and the Caltrans Special Provisions for Dust should minimize the effect of dust during construction.

Noise

Based on the studies completed to date, Caltrans and the Federal Highway Administration intend to incorporate noise abatement in the form of masonry block barriers (soundwalls) at nine separate locations. See Figure 2.7 Soundwalls Under Consideration for a map showing the location of all of the soundwalls being considered for the three project alternatives. The soundwalls under consideration would be approximately 733 feet long with an average height of 14 feet. Calculations based on preliminary design data indicate that the barriers would reduce noise levels by 5 to 14 decibels for 207 residences at a cost of \$9,710,000. If, during final design, conditions have substantially changed, noise abatement may not be necessary. The final decision on noise abatement would be made on completion of the project design and the public involvement processes.

Construction Noise

During construction of the project, noise from construction activities may be noticeable in the immediate area of construction. Construction noise is regulated by Caltrans Standard Specifications Section 7-1.0011, "Sound Control Requirements," which states that noise levels generated during construction would comply with applicable local, state, and federal regulations and that all equipment would be fitted with adequate mufflers according to the manufacturers' specifications.

Construction equipment is expected to generate noise levels ranging from 70 to 90 decibels at a distance of 50 feet, and noise produced by construction equipment would be reduced over distance at a rate of about 6 decibels doubling of distance.

No adverse noise impacts from construction are anticipated because construction would be conducted in accordance with Caltrans Standard Specifications Section 7-1.011 and applicable local noise standards. Construction noise would be short term, intermittent, and overshadowed by local traffic noise. Further, implementing the following measure would minimize the temporary noise impacts from construction:

- All equipment will have sound-control devices that are no less effective than those provided on the original equipment. No equipment will have an un-muffled exhaust.
- As directed by Caltrans, the contractor will implement appropriate additional noise mitigation measures, including changing the location of stationary construction equipment, turning off idling equipment, rescheduling construction activity, notifying adjacent residents in advance of construction work, and installing acoustic barriers around stationary construction noise sources.

Biology

Natural Communities

Per standard procedure for the removal of trees, Caltrans would replace any existing tree or plants removed as a result of construction of the project. A landscape plan would be completed for the project to include replacement of the oaks removed. Additionally, if the trees were to be removed during nesting season for migratory birds (February 15–September 1), a qualified biologist would conduct preconstruction surveys before tree removal to ensure no nesting birds were present.

Wetlands and Waters

The banks at Duck Creek that are temporarily disturbed during construction would be restored to better than original condition when work is completed in this area. The project alternatives would likely result in a discharge of fill material to waters of the U.S. and therefore require a Section 404 permit from the Army Corps of Engineers. The surface waters in the project area are considered waters of the state by the Central Valley Regional Water Quality Control Board and are subject to state regulation. The California Department of Fish and Game may also require a Section 1602 Streambed Alteration Agreement if it determines potentially affected streams with defined beds, banks, and channels support wildlife resources that may be at risk from project activities.

Animal Species

Due to the presence of suitable habitat and burrows within the project area, a qualified biologist would conduct a nesting season survey for burrowing owls no less

than 30 days before the start of construction. This would ensure that no nesting burrowing owls would be affected by construction activities. The nesting season for burrowing owls occurs February 1–August 31 and peaks April 15–July 15. If active burrows were present within 250 feet of the project impact area or within 160 feet of occupied burrow sites during the non-breeding season, an onsite biological monitor would be present to monitor owl burrows during construction activities, in consultation with the California Department of Fish and Game.

To ensure avoidance of any potential temporary and/or indirect impacts to white-tailed kite and loggerhead shrike, pre-construction surveys for migratory birds would be conducted no more than 30 days before the start of construction.

Since there was evidence of nests in the project area, there is the potential that swallows would attempt to establish nests under the bridges before construction. Exclusionary netting would be installed around the undersides of the bridge before February 15 of the construction year to prevent new nests from being formed, and/or prevent reoccupation of existing nests. The construction contractor would do the following:

- Adhere to all state and federal laws and regulations pertaining to the protection of migratory birds, their nests, giant garter snake, young birds, and bats.
- Remove all existing unoccupied swallow nests on listed structures when assigned a structure.
- Keep all structures on the assigned list free of swallow nests and roosting bats until notified by the Caltrans Contract Manager to cease swallow and/or bat exclusion activities.
- Inspect all listed structures for swallow activity a minimum of three days per week; no two days of inspection shall be consecutive. A weekly log shall be submitted to the Caltrans responsible biologist. The contractor shall continue inspections until notified by the Caltrans Contract Manager to stop inspections. If an exclusion device is found to be ineffective or defective, the contractor shall complete repairs to the device within 24 hours. If birds are found trapped in an exclusion device, the contractor shall immediately remove the birds in accordance with the U.S. Fish and Wildlife Service guidelines.
- Submit to the Caltrans Biologist for approval working drawings or written proposals of any exclusion devices, procedures, or methods before installing them. The method of installing exclusion devices shall not damage permanent features of the structure. Approval by the Caltrans Biologist of the working

- drawings or inspection performed by the authorized Caltrans responsible biologist shall in no way relieve the contractor of full responsibility for deterring nesting.
- Use temporary devices. No permanent exclusionary devices will be permitted. All devices are to be removed at the end of the nesting period.
 - Notify the Caltrans Biologist and engineer of any occupied nests found on the structure. Nests found to be occupied may not be removed.
 - Do not use any exclusion device, procedure, or method that will impede water flows or debris flowing in waters. The contractor shall not use any exclusion device, procedure, or od that will impede traffic or present safety problems to traffic or pedestrians.

Threatened and Endangered Species

Giant Garter Snake

A Letter of Concurrence of *Not Likely to Adversely Affect* was received from the U.S. Fish and Wildlife Service on August 1, 2007. The following measures developed by the U.S. Fish and Wildlife Service would be implemented to avoid and minimize effects to giant garter snake. These measures would be implemented only at Duck Creek because it is the only waterway within the biological study area with the potential to support giant garter snake.

- In-water and bank-side construction activities must be done between May 1 and October 1 as necessary to ensure that construction occurs during the active period of the giant garter snake. Any work occurring after October 1 would be restricted to bridge surface work with water quality controls in place.
- Between April 15 and September 30, any dewatered habitat would remain dry, with no puddle water, for at least 15 consecutive days before workers excavate or fill dewatered habitat. Efforts would be made to ensure that the dewatered habitat does not continue to support giant garter snake prey (for example, fish, tadpoles, and aquatic insects), which could detain or attract snakes into the area.
- Temporary fencing (or similar devices that lack openings that might cause the giant garter snake to become stranded or otherwise become entangled) would be installed at the edge of the project impact area, both upstream and downstream, to deter giant garter snake from entering the project area.
- The fencing would be installed regardless of whether or not there is aquatic habitat present during the time of construction to ensure that giant garter snakes do not enter the project impact area.

- Construction personnel would participate in an environmental awareness program approved by the U.S. Fish and Wildlife Service. A qualified biologist would inform all construction personnel about the life history of giant garter snake, how to identify species and their habitats, and what to do if a giant garter snake is encountered during construction activities, as well as explain the state and federal laws pertaining to giant garter snake
- A qualified biologist would conduct a pre-construction survey for giant garter snake no more than 24 hours before the start of construction activities (site preparation and grading). If construction activities stop for a period of two or more weeks, a new giant garter snake survey would be completed no more than 24 hours before the reinitiating of construction activities.
- Clearing would be confined to the minimal area necessary within 200 feet of aquatic habitat to facilitate construction activities. To ensure that construction equipment and personnel do not affect upland and aquatic habitat for giant garter snake outside of the project impact area, orange barrier fencing would be erected to clearly define the habitat to be avoided. This would delineate the environmentally sensitive areas on the project.
- If a live giant garter snake were encountered during construction activities, the project's biological monitor and the U.S. Fish and Wildlife Service would be immediately notified. The biological monitor would stop construction activity in the vicinity of the giant garter snake, monitor the giant garter snake, and allow the giant garter snake to leave on its own. The monitor would remain in the area for the remainder of the workday to make sure the giant garter snake is not harmed or if it leaves the site that it does not return. Escape routes for giant garter snake would be determined in advance of construction. If the giant garter snake does not leave on its own within one working day, further consultation with U.S. Fish and Wildlife Service would be conducted.
- Only personnel with a U.S. Fish and Wildlife Service recovery permit pursuant to Section 10(a)(1)(A) of the Endangered Species Act would have the authority to capture and/or relocate giant garter snake encountered in the project impact area.
- Upon locating a dead, injured, or sick giant garter snake, Caltrans would notify the U.S. Fish and Wildlife Service Division of Law Enforcement or the Sacramento Fish and Wildlife Office within one working day. Written notification to both offices would be made within three (3) calendar days and would include the date, time, and location of the finding of a specimen and any other pertinent information.

- No plastic, monofilament, jute, or similar erosion control matting that could entangle giant garter snake would be placed. Possible substitutions include coconut coir matting, tactified hydro-seeding compounds, or other material approved by the U.S. Fish and Wildlife Service.
- Standard construction Best Management Practices would be implemented throughout construction to avoid and minimize adverse effects to the water quality within the project area.

The U.S. Fish and Wildlife Service also proposed the revegetation of Duck Creek between State Route 99 and Stagecoach Road.

Swainson's Hawk

The following minimization measures are to be used when work involves structures, ground, or vegetation that may be subject to nesting by migratory birds that may be adversely affected, injured, or killed during construction activities. This is a general Migratory Bird Treaty Act provision. Additional provisions for specific species such as swallows or for particular exclusion issues or devices may be necessary. Contact the District Biologist or Division of Environmental Analysis Wildlife Biologist for guidance. When a Clearing and Grubbing standard special provision is used, add, "Attention is directed to 'General Migratory Bird Protection' regarding clearing and grubbing of bird habitat."

- The contractor would protect migratory birds, their occupied nests, and their eggs as specified in these special provisions. Nesting is typically February 15 to September 1, or as determined appropriate in consultation with the District Biologist.
- Nesting or attempted nesting by migratory birds is anticipated to occur between, but not limited to, February 1 through September 1.
- When evidence of migratory bird nesting that may be adversely affected by construction activities is discovered, or when birds are injured or killed as a result of construction activities, the contractor would immediately stop work within 0.25 mile of the nests and notify the engineer. Work would not resume until the engineer provides written notification that work may begin in this location.
- When ordered by the engineer, the contractor would use exclusion devices or remove and dispose of partially constructed and unoccupied nests of migratory birds on a regular basis to prevent their occupation.
- Use exclusionary devices when nesting may be located on a bridge structure above a water body.

- Nest removal activities would not deposit in, permit to pass into, or place nest materials where they can pass into the waters of this state.

The California Department of Fish and Game may require a Section 2081 Agreement for impacts to state threatened or endangered species.

Invasive Species

In compliance with the Executive Order on Invasive Species, and subsequent guidance from the Federal Highway Administration, the landscaping and erosion control included in the project would not use species listed as noxious weeds. In areas of particular sensitivity, extra precautions would be taken if invasive species were found in or adjacent to the construction areas. These include the inspection and cleaning of construction equipment and eradication strategies to be implemented should an invasion occur.

To control the spread of invasive species either to or from the project area, the following measures would be included in the construction contract special provisions:

- All equipment and vehicles would be thoroughly cleaned to remove dirt and weed seeds prior to being transported or driven to or from the project site.
- The borrow site or stockpile would be inspected for the presence of noxious weeds or invasive plants.
- If noxious weeds or invasive plants were present, the contractor would remove approximately five inches of the surface of the material from the site before transporting to the project.
- Before removal, this material would be chemically or mechanically treated to kill the existing noxious weeds and invasive plants, and would not be used for the project without approval.

Appendix F Species Lists

U.S. Fish and Wildlife Service Special-Status Species List

Database Last Updated: June 9, 2007

Quad Lists

Listed Species

Invertebrates

- *Branchinecta conservatio*
 - Conservancy fairy shrimp (E)
- *Branchinecta lynchi*
 - Critical habitat, vernal pool fairy shrimp (X)
 - vernal pool fairy shrimp (T)
- *Desmocerus californicus dimorphus*
 - Valley elderberry longhorn beetle (T)
- *Lepidurus packardi*
 - vernal pool tadpole shrimp (E)

Fish

- *Acipenser medirostris*
 - green sturgeon (T) (NMFS)
- *Hypomesus transpacificus*
 - Critical habitat, Delta smelt (X)
 - Delta smelt (T)
- *Oncorhynchus mykiss*
 - Central Valley steelhead (T) (NMFS)
 - Critical habitat, Central Valley steelhead (X) (NMFS)
- *Oncorhynchus tshawytscha*
 - Central Valley spring-run Chinook salmon (T) (NMFS)
 - winter-run Chinook salmon, Sacramento River (E) (NMFS)

Amphibians

- *Ambystoma californiense*
 - California tiger salamander, central population (T)

- *Rana aurora draytonii*
 - California red-legged frog (T)

Reptiles

- *Thamnophis gigas*
 - giant garter snake (T)

Mammals

- *Sylvilagus bachmani riparius*
 - riparian brush rabbit (E)
- *Vulpes macrotis mutica*
 - San Joaquin kit fox (E)

Plants

- *Castilleja campestris ssp. succulenta*
 - succulent (=fleshy) owl's-clover (T)

Candidate Species

Fish

- *Oncorhynchus tshawytscha*
 - Central Valley fall/late fall-run Chinook salmon (C) (NMFS)

Quads Containing Listed, Proposed, or Candidate Species:

PETERS (461A)

STOCKTON EAST (461B)

MANTECA (461C)

AVENA (461D)

STOCKTON WEST (462A)

LATHROP (462D)

WATERLOO (478C)

LINDEN (478D)

LODI SOUTH (479D)

San Joaquin County

Listed Species

Invertebrates

- *Branchinecta conservatio*
 - Conservancy fairy shrimp (E)
- *Branchinecta longiantenna*
 - longhorn fairy shrimp (E)
- *Branchinecta lynchi*
 - Critical habitat, vernal pool fairy shrimp (X)
 - vernal pool fairy shrimp (T)
- *Desmocerus californicus dimorphus*
 - Valley elderberry longhorn beetle (T)
- *Lepidurus packardi*
 - vernal pool tadpole shrimp (E)

Fish

- *Acipenser medirostris*
 - green sturgeon (T) (NMFS)
- *Hypomesus transpacificus*
 - Critical habitat, Delta smelt (X)
 - Delta smelt (T)
- *Oncorhynchus mykiss*
 - Central Valley steelhead (T) (NMFS)
 - Critical habitat, Central Valley steelhead (X) (NMFS)
- *Oncorhynchus tshawytscha*
 - Critical habitat, winter-run Chinook salmon (X) (NMFS)
 - winter-run Chinook salmon, Sacramento River (E) (NMFS)

Amphibians

- *Ambystoma californiense*
 - California tiger salamander, central population (T)
 - Critical habitat, California tiger salamander, central population (X)
- *Rana aurora draytonii*
 - California red-legged frog (T)

Reptiles

- *Masticophis lateralis euryxanthus*
 - Alameda whipsnake [=striped racer] (T)
 - Critical habitat, Alameda whipsnake (X)

- *Thamnophis gigas*
 - giant garter snake (T)

Mammals

- *Neotoma fuscipes riparia*
 - riparian (San Joaquin Valley) woodrat (E)
- *Sylvilagus bachmani riparius*
 - riparian brush rabbit (E)
- *Vulpes macrotis mutica*
 - San Joaquin kit fox (E)

Plants

- *Amsinckia grandiflora*
 - Critical habitat, large-flowered fiddleneck (X)
 - large-flowered fiddleneck (E)
- *Castilleja campestris ssp. succulenta*
 - Critical habitat, succulent (=fleshy) owl's-clover (X)
 - succulent (=fleshy) owl's-clover (T)

(X) Critical Habitat designated for this species

Candidate Species

Fish

- *Oncorhynchus tshawytscha*
 - Central Valley fall/late fall-run Chinook salmon (C) (NMFS)
 - Critical habitat, Central Valley fall/late fall-run Chinook (C) (NMFS)

Key:

(E) Endangered - Listed as being in danger of extinction.

(T) Threatened - Listed as likely to become endangered within the foreseeable future.

(P) Proposed - Officially proposed in the Federal Register for listing as endangered or threatened.

(NMFS) Species under the Jurisdiction of the National Oceanic & Atmospheric Administration Fisheries Service. Consult with them directly about these species.

Critical Habitat - Area essential to the conservation of a species.

(PX) Proposed Critical Habitat - The species is already listed. Critical habitat is being proposed for it.

(C) Candidate - Candidate to become a proposed species.

(V) Vacated by a court order. Not currently in effect. Being reviewed by the Service.

California Natural Diversity Database Special-Status Species List

Scientific Name	Common Name	CNPS List	State Status	Federal Status
<i>Ambystoma californiense</i>	California tiger salamander			Threatened
<i>Branchinecta lynchi</i>	vernal pool fairy shrimp			Threatened
<i>Buteo swainsoni</i>	Swainson's hawk		Threatened	
<i>Cordylanthus palmatus</i>	palmate-bracted bird's-beak	1B.1	Endangered	Endangered
<i>Desmocerus californicus dimorphus</i>	Valley elderberry longhorn beetle			Threatened
<i>Eryngium racemosum</i>	Delta button-celery	1B.1	Endangered	
<i>Lepidurus packardi</i>	vernal pool tadpole shrimp			Endangered
<i>Lilaeopsis masonii</i>	Mason's lilaeopsis	1B.1	Rare	
<i>Sylvilagus bachmani riparius</i>	riparian brush rabbit		Endangered	Endangered
<i>Thamnophis gigas</i>	giant garter snake		Threatened	Threatened
<i>Tuctoria greenei</i>	Greene's tuctoria	1B.1	Rare	Endangered

California Native Plant Society Results

CNPS Inventory of Rare and Endangered Plants

Scientific Name	Common Name	Family	CNPS
<u>Aster lentus</u>	Suisun Marsh aster	Asteraceae	List 1B.2
<u>Astragalus tener var. tener</u>	alkali milk-vetch	Fabaceae	List 1B.2
<u>Atriplex joaquiniana</u>	San Joaquin spearscale	Chenopodiaceae	List 1B.2
<u>California macrophylla</u>	round-leaved filaree	Geraniaceae	List 1B.1
<u>Cirsium crassicaule</u>	slough thistle	Asteraceae	List 1B.1
<u>Cordylanthus palmatus</u>	palmate-bracted bird's-beak	Scrophulariaceae	List 1B.1
<u>Delphinium recurvatum</u>	recurved larkspur	Ranunculaceae	List 1B.2
<u>Eryngium racemosum</u>	Delta button-celery	Apiaceae	List 1B.1
<u>Hibiscus lasiocarpus</u>	rose-mallow	Malvaceae	List 2.2
<u>Lathyrus jepsonii var. jepsonii</u>	Delta tule pea	Fabaceae	List 1B.2
<u>Lilaeopsis masonii</u>	Mason's lilaeopsis	Apiaceae	List 1B.1
<u>Limosella subulata</u>	Delta mudwort	Scrophulariaceae	List 2.1
<u>Sagittaria sanfordii</u>	Sanford's arrowhead	Alismataceae	List 1B.2
<u>Trichocoronis wrightii var. wrightii</u>	Wright's trichocoronis	Asteraceae	List 2.1

Appendix G Federal Emergency Management Agency (FEMA), Flood Insurance Rate Maps

This appendix contains copies made from the following Flood Insurance Rate Map Panels:

0602990455C, April 2, 2002

0602990465C, April 2, 2002

0603020025E, April 2, 2002

0603020040E, April 2, 2002

Study References:

Federal Emergency Management Agency (FEMA) Preliminary Flood Insurance Study – San Joaquin County, California, Unincorporated Areas; December 3, 2003.

FEMA Flood Insurance Study – San Joaquin County, California, Unincorporated Areas; February 1997, Vol. 1-3.

FEMA Flood Insurance Study – City of Stockton, California, San Joaquin County; February 4, 1988.

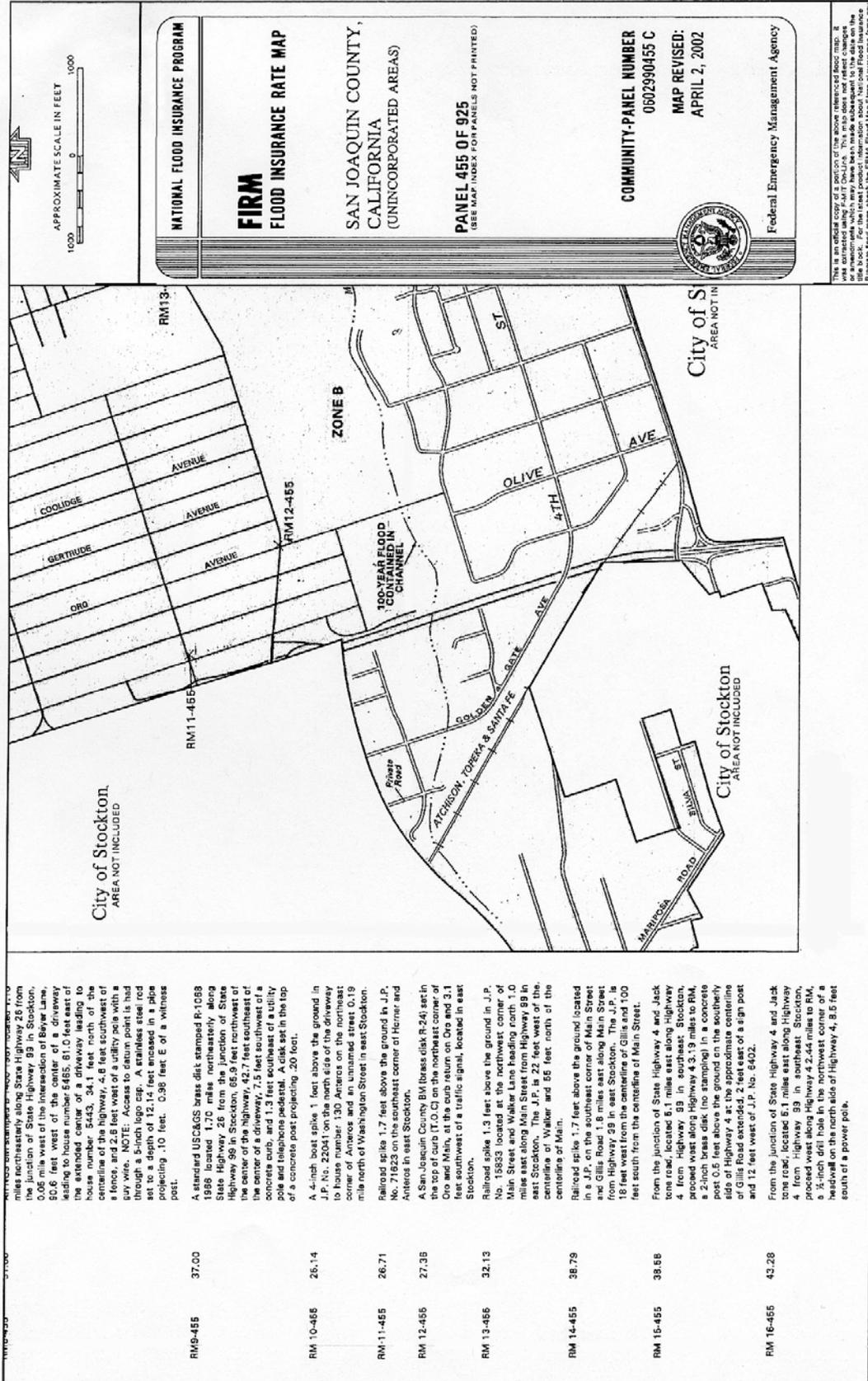
Flood Plain Information, Southeast Stream Group, Stockton, California Department of the Army, June 1974.

National Oceanic and Atmospheric Administration, Stockton Fire Station, California 048560.

<http://countrystudies.us/united-states/weather/California/stockton.htm>

U.S. Geological Survey 7.5' Quadrangle Topographic map, Stockton East, CA, 1968

Appendix F • Federal Emergency Management Agency (FEMA),
Flood Insurance Rate Maps



THIS IS AN UNOFFICIAL COPY OF A MAP OF THE NATIONAL FLOOD INSURANCE PROGRAM. It is not intended for use in any legal proceeding. The information on this map is for informational purposes only. The information on this map is not intended to be used for any other purpose. For more information, contact the Federal Emergency Management Agency, 500 Capitol Mall, Sacramento, CA 95833. This map does not reflect changes or amendments which may have been made subsequent to the date on the map. For the most current information, contact the Federal Emergency Management Agency. Program flood maps check the FEMA Flood Atlas Store at www.fema.gov.

RM9-455 37.00
 A standard USCGS brass disk stamped R-1088 1996 located 1.70 miles northwesterly along State Highway 26 from the junction of State Highway 99 in Stockton, 0.06 mile west of the intersection of Bayler Lane, 50.6 feet west of the center of a driveway leading to house number 5485, 81.0 feet east of the extended center of a driveway leading to house number 5443, 34.1 feet north of the centerline of the highway, 4.8 feet southwest of a fence, and 2.8 feet west of a utility pole with a guy wire. A concrete post projecting .20 feet from the ground to a depth of 12 feet extends from the top of the concrete post projecting .20 feet.

RM 10-466 26.14
 A 4-inch brass spike 1.7 feet above the ground in J.P. No. 22041 on the north side of the driveway to house number 130 Aneres on the northeast corner of Aneres and an unnamed street 0.19 mile north of Washington Street in east Stockton.

RM 11-455 26.71
 Railroad spike 1.7 feet above the ground in J.P. No. 71823 on the southeast corner of Horner and Aneres in east Stockton.

RM 12-455 27.36
 A San Joaquin County BM (brass disk R-24) set in the top of curb (T.O.C) on the northeast corner of Oro and Main, at the curb return on Oro and 3.1 feet southwest of a traffic signal, located in east Stockton.

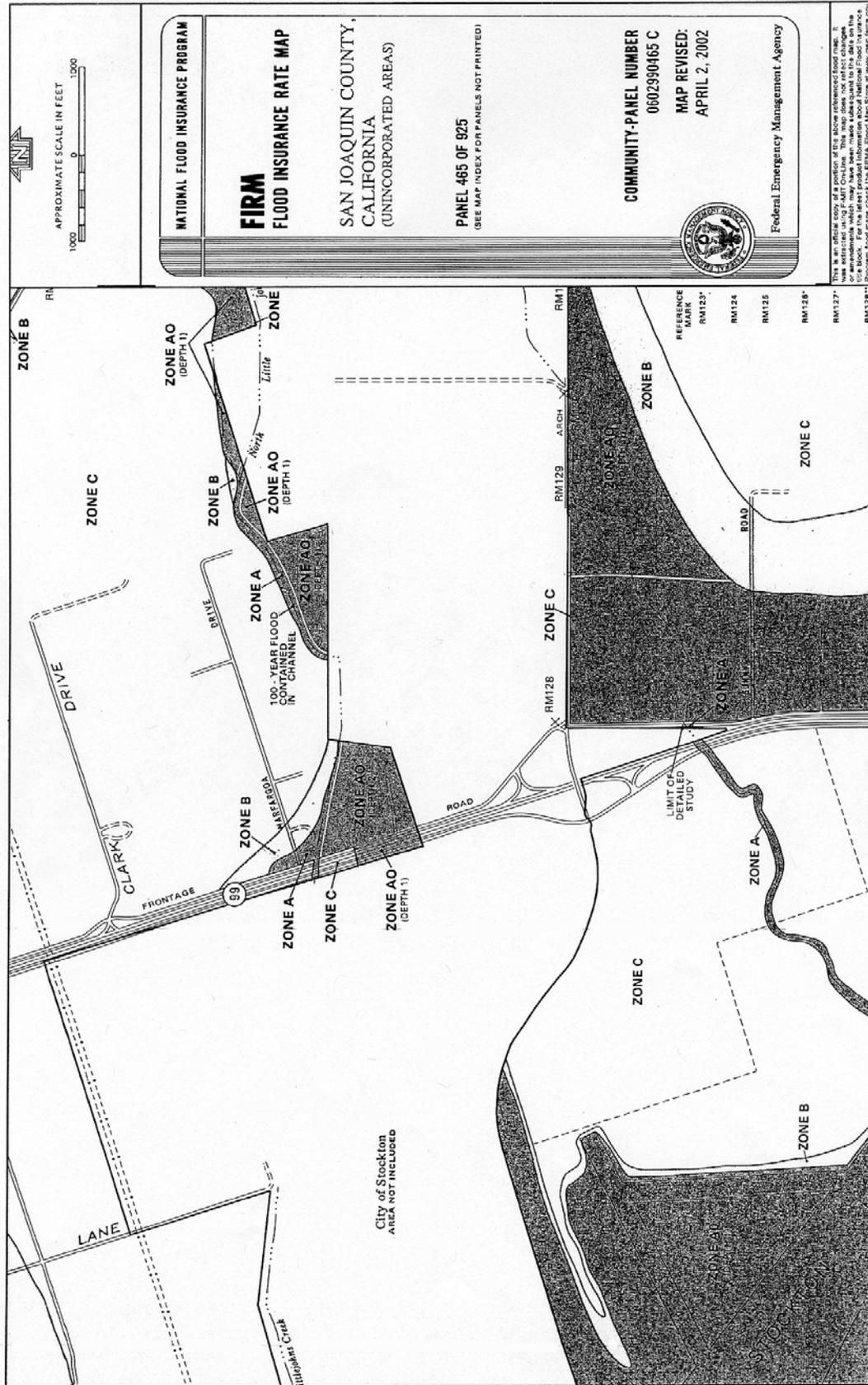
RM 13-466 32.13
 Railroad spike 1.3 feet above the ground in J.P. No. 15833 located at the northwest corner of Main Street and Walker Lane heading north 1.0 mile east along Main Street from Highway 99 in east Stockton. The J.P. is 19 feet east of the centerline of Gillis Road and 100 feet south from the centerline of Main Street.

RM 14-455 36.79
 Railroad spike 1.7 feet above the ground located in a J.P. on the southeast corner of Main Street and Gillis Road 1.8 miles east along Main Street from Highway 99 in east Stockton. The J.P. is 19 feet east of the centerline of Gillis Road and 100 feet south from the centerline of Main Street.

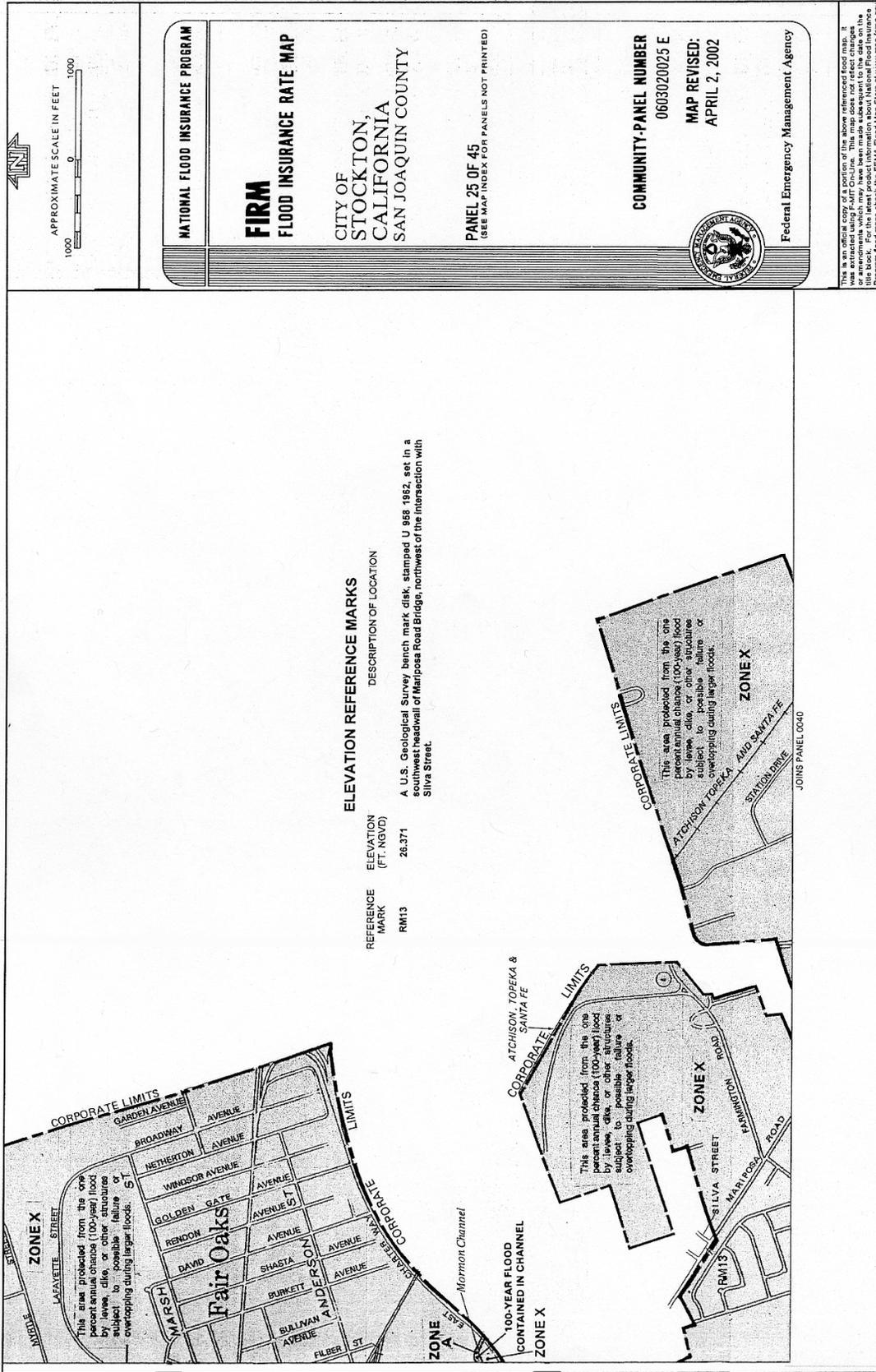
RM 15-455 38.68
 From the junction of State Highway 4 and Jack tone road, located 5.1 miles east along Highway 4 from Highway 99 in southeast Stockton, proceed west along Highway 4 3.19 miles to RM, a 2-inch brass disk (no stamping) in a concrete curb on the ground surface. The ground surface is 1.5 feet above the ground surface. The centerline of Gillis Road extended 2 feet east of a sign post and 12 feet west of J.P. No. 8402.

RM 16-455 42.28
 From the junction of State Highway 4 and Jack tone road, located 5.1 miles east along Highway 4 from Highway 99 in southeast Stockton, proceed west along Highway 4 2.44 miles to RM, a 2-inch brass disk (no stamping) in a concrete curb on the north side of Highway 4, 8.6 feet south of a power pole.

Appendix F • Federal Emergency Management Agency (FEMA),
Flood Insurance Rate Maps



Appendix F • Federal Emergency Management Agency (FEMA),
Flood Insurance Rate Maps





Appendix H State Historic Preservation Officer Concurrence

STATE OF CALIFORNIA – THE RESOURCES AGENCY

ARNOLD SCHWARZENEGGER, Governor

**OFFICE OF HISTORIC PRESERVATION
DEPARTMENT OF PARKS AND RECREATION**

P.O. BOX 942896
SACRAMENTO, CA 94296-0001
(916) 653-8624 Fax: (916) 653-9824
calshpo@ohp.ca.gov
www.ohp.parks.ca.gov



December 14, 2007

Reply To: FHWA071017A

Jeanne Day Binning, Ph.D.
Branch Chief, Central California Cultural Resources Branch
Caltrans District 06, Fresno
2015 East Shields Avenue, Suite A-100
Fresno, CA 93726-5428

Re: Determinations of Eligibility for the Proposed South Stockton 6-Lane Widening, San Joaquin County, CA

Dear Dr. Binning:

Thank you for consulting with me about the subject undertaking in accordance with the *Programmatic Agreement Among the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and the California Department of Transportation Regarding Compliance with Section 106 of the National Historic Preservation Act, as it Pertains to the Administration of the Federal-Aid Highway Program in California (PA)*.

The California Department of Transportation (Caltrans) is requesting my concurrence, pursuant to Stipulation VIII.C.5 of the PA that the properties listed on pages 2-5 of your letter of October 10, 2007, are not eligible for the National Register of Historic Places (NRHP). Based on my review of the submitted documentation, I concur with the foregoing determinations.

Thank you for considering historic properties during project planning. If you have any questions, please contact Natalie Lindquist of my staff at (916) 654-0631 or e-mail at nlindquist@parks.ca.gov.

Sincerely,

A handwritten signature in cursive script that reads "Lucas K. Statten for".

Milford Wayne Donaldson, FAIA
State Historic Preservation Officer



Appendix I U.S. Fish and Wildlife Service Concurrence Letter



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish and Wildlife Office
2800 Cottage Way, Room W-2605
Sacramento, California 95825-1846



In reply refer to:
1-1-07-I-1115

AUG 1 2007

Zachary K. Parker
Biology Branch Chief
California Department of Transportation, District 6
2015 East Shields Avenue, Suite A-100
Fresno, California 93726

Subject: Request for Concurrence with a Determination of Not Likely to Adversely Affect the Giant Garter Snake (*Thamnophis gigas*) for the South Stockton 6-Lan Project, San Joaquin County, California

Dear Mr. Parker:

This letter is in response to your May 15, 2007, letter, received on May 17, 2007, requesting concurrence from the U.S. Fish and Wildlife Service (Service) for the South Stockton 6-Lane Project, San Joaquin County, California (Project). At issue are the potential adverse effects on the threatened giant garter snake (GGS), and/or any other species under jurisdiction of the Service. This response is provided pursuant to section 7(a) of the Endangered Species Act, as amended (16 U.S.C. 1531 *et seq.*)(Act), and in accordance with the regulations governing interagency consultations (50 CFR §402).

The Service has reviewed your May 17, 2007 request, the *South Stockton State Route 99 Six-Lane Project Biological Evaluation* (BE), your July 24, 2007 letter, received on July 25, 2007, and other information on file at the Sacramento Fish and Wildlife Office.

The Service concurs with the determination by the California Department of Transportation (Caltrans) that the measures described in the BE and the July 24, 2007 letter designed to conserve and protect GGS and enhance potential GGS habitat along Duck Creek are sufficient to reduce any direct, indirect, and/or cumulative effects on this species, and its habitat to an insignificant or discountable level. The closest known occurrences of GGS (CNDDDB 2007) are approximately 4 miles north of the Project at the Stockton Diverting canal, and approximately 8 miles east in a marsh just south of Duck Creek. No critical habitat has been designated at this time for GGS. This concurrence is provided specifically for this action area, and for the project action only as originally described within the BE. If additional project work descriptions or time frame changes are necessary, or were not evaluated, it is our recommendation that the changes be submitted for our review.



Mr. Zachary K. Parker

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This concludes the Service's review of the proposed South Stockton 6-Lane Project, San Joaquin County, California, and no further coordination with the Service under the Act is necessary at this time. Please note however that this letter does not authorize take of listed species. As provided in 50 CFR §402.14, initiation of formal consultation is required where there is discretionary Federal involvement or control over the action (or is authorized by law) and if: (1) new information reveals the effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this review; (2) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in this opinion; or (3) a new species is listed or critical habitat designated that may be affected by the action.

We appreciate your efforts to protect and conserve endangered species. If you have any questions regarding this response, please contact Richard Montgomery or Susan Jones at (916) 414-6600.

Sincerely,



 Peter A. Cross
Deputy Assistant Field Supervisor

cc:
Gene K. Fong, FHWA, Sacramento, California

List of Technical Studies that are Bound Separately

Traffic Operations Analysis Report

Air Quality Report

Noise Study Report

- Draft Noise Abatement Decision Report

Water Quality Report

Natural Environment Study

Location Hydraulic Study

Historical Property Survey Report

- Historic Study Report
- Historic Resource Evaluation Report
- Historic Architectural Survey Report
- Archaeological Survey Report

Hazardous Waste Reports

- Initial Site Assessment

Scenic Resource Evaluation/Visual Assessment

Initial Paleontology Study

Community Impact Analysis Report

- Growth Inducement Analysis Report
- Draft Relocation Statement