SCH# 2009061001

State Route 99/Avenue 12 Interchange

In Madera County south of the City of Madera
06-MAD-SR/99 R7.1/R7.9
06-471000

Initial Study with Mitigated Negative Declaration

Prepared by the

State of California Department of Transportation

August 2009

Caltrans

General Information About This Document

What's in this document?

This document contains a Negative Declaration, which examines the environmental effects of an interchange improvement project at State Route 99 and Avenue 12 in Madera County.

The Initial Study and Proposed Negative Declaration was circulated to the public for review from June 1, 2009 to July 1, 2009. Comments made on the circulated document and the corresponding responses are shown in the Comments and Coordination section of this document (Chapter 3). Throughout this document, a vertical line in the right margin indicates content changes that have been made since the release of the earlier document.

What happens next?

The proposed project completed the environmental impact analysis and documentation phase following the close of the Initial Study and Proposed Negative Declaration circulation process on July 1, 2009. When funding is approved, the California Department of Transportation can design and construct all or part of the project.

For individuals with sensory disabilities, this document is available in Braille, in large print, on audiocassette, or on computer disk. To obtain a copy in one of these alternate formats, please call or write to Caltrans, Attn: G. William "Trais" Norris III, Sierra Pacific Environmental Branch, California Department of Transportation, 2015 East Shields Avenue, Suite 100, Fresno, CA 93726. Phone (559) 243-8178 Voice, or use the California Relay Service TTY number (559) 488-4066.

SCH# 2009061001
06-MAD-Avenue 12-PM R7.1/R7.9
EA: 471000

The California Department of Transportation (Caltrans) proposes to make improvements to the existing State Route 99/Avenue 12 overcrossing, ramps and surrounding local road network between post miles R7.1 and R7.9 in Madera County.

INITIAL STUDY
WITH MITIGATED NEGATIVE DECLARATION

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

THE STATE OF CALIFORNIA
Department of Transportation

8/13/09
Date of Approval

Jennifer H. Taylor
Office Chief, Central Region
Environmental South

Mitigated Negative Declaration

Pursuant to: Division 13, Public Resources Code

Project Description

The California Department of Transportation (Caltrans) proposes to make improvements to the existing State Route 99/Avenue 12 overcrossing, ramps and surrounding local road network between Postmiles R7.1 and R7.9 in Madera County.

Determination

Caltrans has prepared an Initial Study for this project and, pending public review, expects to determine from this study that the proposed project would not have a significant effect on the environment for the following reasons:

- The project would have no effect on archaeological or historic architectural resources, educational facilities, public services, housing, publicly owned parks, wildlife refuges, recreational areas, employment or the economy.
- The project would not conflict with the Madera County General Plan or the Regional Transportation Plan.
- The project would not conflict with the Americans with Disabilities Act, Title VI of the Civil Rights Act or Executive Order 12898 Environmental Justice.
- The project would not cause an exceedance of federal or state noise levels.
- The project would have not significant effect on residences, business or farmland.
- The project would have no significant effect on geology, soils, or mineral resources.
- The project would have no significant adverse effect on transportation, traffic or public services.

Additionally, the project would not have a significant effect on the environment because the following minimization and minimization measures would reduce potential effects to insignificance:

- The project would have no significant effect on visual resources because visual resource impacts would be mitigated by context appropriate architectural elements in the replacement structures, funding for replacement planting and a dedicated conduit for irrigation supply and electrical lines.
- The project would have no significant effect on water quality because storm water runoff would be minimized through storm water Best Management Practices and construction provisions. Potential effects to water quality from storm water runoff would also be minimized by erosion control measures.

- The project would have no significant effect paleontological resources because trained monitors would be on site during excavation activities to identify possible fossils.
- The project would have no significant effect on Waters of the U.S. because provisions of the Clean Water Act Section 404 permit would be incorporated.
- The project would have no significant effect on natural communities because riparian trees would be avoided to the maximum extent possible with the incorporation of Environmentally Sensitive Area fencing. Any riparian trees impacted would be replanted in a ratio specified by the California Department of Fish and Game Streambed Alteration Agreement.
- The project would have no significant effect on animal species. Trees and other potential nest sites would be removed prior nesting season and a nesting survey would be conducted to detect active nests within the project area.
- The project would have no significant effect on Threatened or Endangered Species because preconstruction surveys for Swainson's hawk would be conducted.
- The project would comply with Assembly Bill 32 on climate change in that it would reduce greenhouse gases by reducing traffic idling at congested intersections and improve traffic flow.
- Dust resulting from construction activities would be controlled by compliance with local air district regulations.
- Utility and service system impacts would be mitigated by funding for the relocation of affected features.

Jennifer H. Taylor

Jennifer H. Taylor
Office Chief, Central Region
Environmental South

9/1/09
Date

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Chapter 1 Proposed Project

1.1 Introduction

The proposed project would improve the existing interchange at State Route 99 and Avenue 12 south of the City of Madera in Madera County (see Figure 1.1). Improvements would be made to State Route 99 on- and off-ramps, Avenue 12, the Avenue 12 overcrossing, Road 29, and Golden State Boulevard.

Road 29 and Golden State Boulevard are on the same alignment west of State Route 99. Golden State Boulevard north of Avenue 12 becomes Road 29 south of Avenue 12. State Route 99 is a four-lane freeway at this location, and Avenue 12 is a two-lane arterial road. Road 29 is a north-south two-lane road that connects to Avenue 12 east of State Route 99 from the north and west of State Route 99 from the south. Golden State is a north-south frontage road that connects to Avenue 12 west of State Route 99 from the north. The existing interchange has a hook on-ramp serving southbound State Route 99 traffic and diamond on- and off-ramps serving other State Route 99 traffic.

The Madera County Transportation Commission is the Regional Transportation Planning Agency and the Metropolitan Planning Organization for Madera County. The commission is responsible for the development and adoption of the Regional Transportation Plan and Federal Transportation Improvement Program. The proposed project is programmed in the 2007 Regional Transportation Plan, the 2009 Federal Transportation Improvement Program, and the 2006 State Transportation Improvement Program. The project is also included in the Madera County Association of Governments' financially constrained Madera County 2009 Interim Federal Transportation Improvement Program, which was adopted by the Federal Highway Administration in February 2009.

The estimated cost for the project is $70 million for the Ultimate Build Alternative and $38.8 million for the Minimum Build Alternative. Funding sources include the State Route 99 Bond Program, the Regional Transportation Improvement Program, Local Measure "T" Funds, and other local funds.

Three alternatives are being considered: the Ultimate Build Alternative, the Minimum Build Alternative, and the No-Build Alternative.

The Route Concept Report for State Route 99 produced in November 2003 by the Caltrans District 6 Office of System Planning states that the concept facility for this segment of State Route 99 in the year 2025 is a six-lane freeway. However, the "ultimate" concept for State Route 99 is as an eight-lane freeway. Both the Minimum Build Alternative and Ultimate Build Alternative include a bridge structure over State Route 99 of sufficient length to accommodate the 2025 "ultimate" concept of State Route 99 as an eight-lane facility.

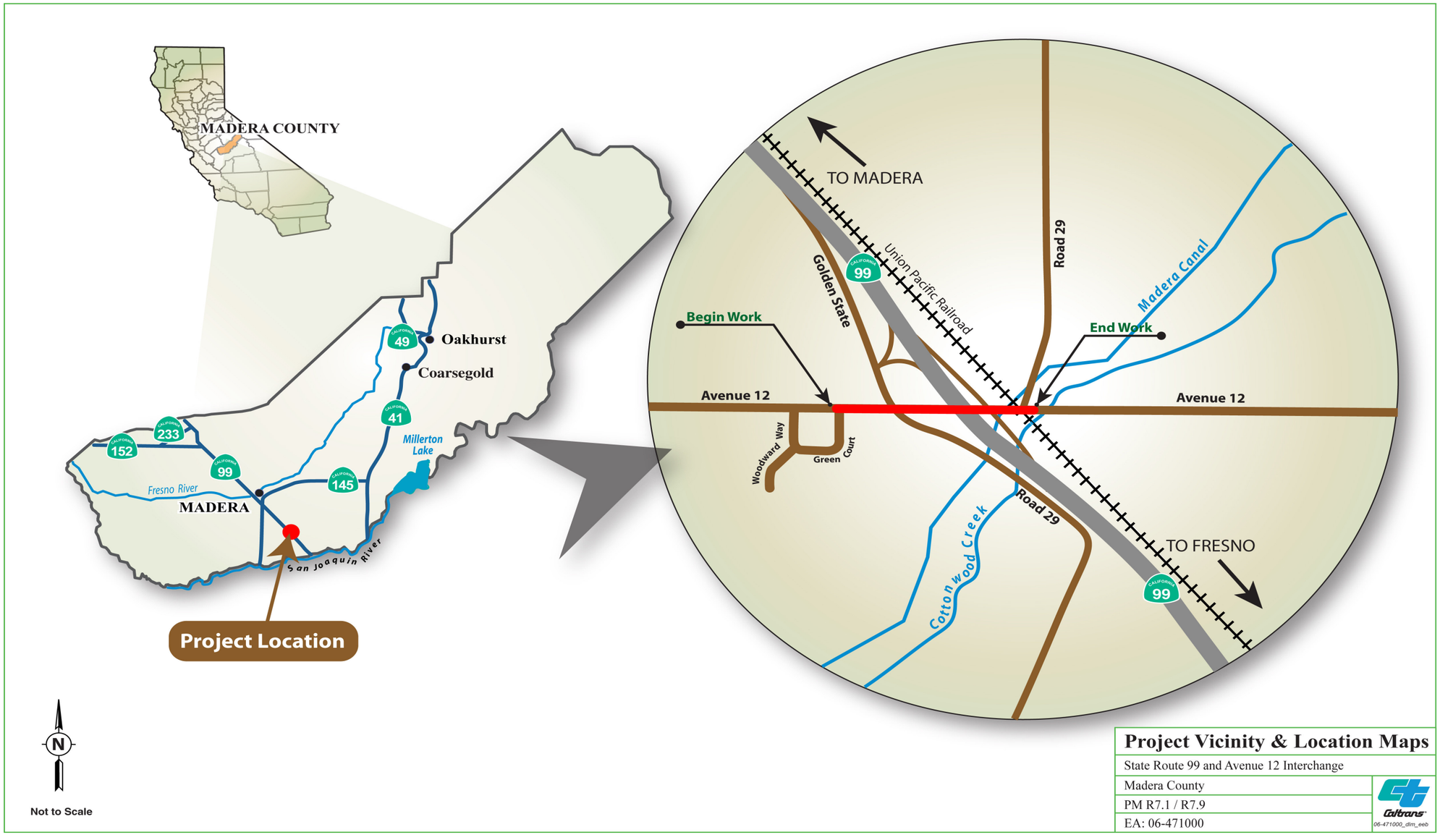


Figure 1.1 Vicinity/Location Map

1.2 Purpose and Need

The Purpose and Need Section discusses the reasons for build alternative development, provides the rationale behind the project proposal, and influences the range of alternatives. A project's purpose is the set of objectives that will be met to address the transportation deficiency. The project's need is an identified transportation deficiency or problem.

1.2.1 Purpose

The purpose of the proposed project is to:

- Improve operations and safety at the Avenue 12 and State Route 99 interchange
- Reduce congestion, including reducing travel time and improving traffic flow
- Meet future traffic demand from planned development

1.2.2 Need

The proposed project is needed because of the following:

Operations

Portions of the existing interchange do not meet current Caltrans Design Manual standards. The existing interchange configuration has intersection spacing, sight distance, and ramps that do not meet current standards based on:

- Existing profile of the overcrossing (bridge)
- Distance between Road 29 and the northbound ramps (less than 300 feet)
- Skew, or angle, of the northbound off-ramp

Sight distance, as defined by the Caltrans Highway Design Manual, is "the continuous length of highway ahead visible to the driver." Stopping sight distance and decision sight distance are the main concerns for this project.

The minimum stopping sight distance is the distance required by the driver of a vehicle, traveling at a given speed, to bring the vehicle to a stop after an object on the road becomes visible. According to the Caltrans Design Manual, stopping sight distance must be provided for all elements of interchanges and intersections at grade, including private road connections. The approaches to the existing overcrossing (bridge) are steep enough to make it difficult to see the oncoming cars cresting the bridge from the ramps east and west of State Route 99. The angle also makes it difficult for vehicles cresting the bridge to stop in a timely manner.

Sight distance is also a concern at the ramp intersections along Avenue 12 on the east and west side of State Route 99. The northbound off-ramp at Avenue 12 is skewed and intersects Avenue 12 at an angle that makes visibility of the oncoming traffic to the left and right difficult.

Sight distance at Road 29 is a concern because the road intersects Avenue 12 too close to the ramps.

Safety

The Avenue 12 accident history from the California Highway Patrol and Madera County Sheriff's Department indicates that six deaths occurred within the project limits between January 1, 2005 and January 1, 2009 (five of those deaths resulted from a single accident).

Accident history for the northbound on- and off-ramps between January 1, 2005 and December 31, 2007 indicates that the Actual Total and Fatal plus Injury accident rates are higher than the statewide average for a similar roadway. See Table 1.1. The safety concern is mainly at Avenue 12 where the accident rate is expected to increase as traffic volume increases. Table 1.1 shows the on-ramp and off-ramp accident rates for the project area compared to the statewide average. No data was available for accident rates specifically on Avenue 12; therefore, comparisons to the statewide average were not made.

Table 1.1 On- and Off-ramp Accident Information

Location	Actual[1]			Average[2]		
	Fatality	Fatality & Injury	Total	Fatality	Fatality & Injury	Total
Northbound off-ramp	0.00	1.48	4.44	0.014	0.43	1.15
Northbound on-ramp	0.00	0.52	.069	0.007	0.21	0.55
Southbound off-ramp	0.00	0.19	0.97	0.013	0.67	1.90
Southbound on-ramp	0.00	0.00	0.00	0.004	0.21	0.60

Caltrans Traffic Accident Surveillance and Analysis System

[1] Per million vehicle miles between January 1, 2005 and December 31, 2007
[2] As compared to the statewide average for similar facilities

Most of the accidents on the northbound off-ramp were broadsides and rear-end accidents; most of the accidents on the northbound on-ramp were broadsides. Most of the accidents on the southbound off-ramp were sideswipes and rear-end accidents. No accidents were recorded on the southbound on-ramp during the study period.

Congestion, Travel Times, and Traffic Flow

Congestion levels are increasing because a growing number of commuters use Avenue 12 instead of using Herndon Avenue in Fresno to travel between State Route 41 and State Route 99. Traffic increases are expected to continue as proposed and planned developments are built out (see Section 2.1.1.1 Existing and Future Land Use).

Level of Service is a term that describes traffic flow. Levels range from "A" to "F," with "A" signifying short delays at intersections and free traffic flow on highways and "F" signifying long delays at intersections and congested traffic flow on highways. See Appendix F for illustrations of intersection Levels of Service for two-way stop intersections (existing) and intersections with traffic signals (future with or without the proposed project). The Madera County General Plan "Transportation Section" states that "Policy 2.A.8 establishes Service Level D as its minimum requirement with an effort to achieve Level C whenever possible." Table 1.2 shows the existing traffic volume and Levels of Service at the intersections within the project limits.

Table 1.2 Traffic and Levels of Service

Intersection	Existing				Predicted 2035			
	Traffic Volume		Intersection Level of Service		Traffic Volume		Intersection Level of Service	
	Peak Hour Morning	Peak Hour Afternoon	Morning	Afternoon	Peak Hour Morning	Peak Hour Afternoon	Morning	Afternoon
Golden State Boulevard at the southbound off-ramp	49	115	C	D	2,324	1,795	F	F
Avenue 12 at Golden State Boulevard	658	717	C	C	4,757	5,033	F	F
Avenue 12 at the northbound ramps	764	880	B	B	5,448	5,816	F	F
Avenue 12 at Road 29 North	1003	1002	B	B	5,044	5,473	F	F

The average daily traffic count predicted for Avenue 12 in the design year (20th year after construction) is 56,500 vehicles. Construction is scheduled for completion in 2015, so the design year for the proposed project is 2035. About 17% of that amount is predicted to be truck traffic. In addition to the low Levels of Service resulting from increased demand, the close proximity of ramps and intersections on Avenue 12 and the lack of ramp capacity would cause substantial traffic backups as traffic volume increases. Table 1.3 shows what the future (2035) peak-hour traffic counts and Levels of Service would be if the project were not built.

Transportation Demand from Future Development

Transportation demand is increasing. Several pending or proposed developments will contribute to increased traffic volumes on both Avenue 12 and State Route 99; the Madera State Center Community College Specific Plan will have the most impact due to its proximity to the proposed project, its size and its approved status. The plan calls for up to 4,500 residential units within the plan's boundaries, which span from Avenues 11 to 13 (south/north) and from State Route 99 to the Atchison, Topeka and Santa Fe Railroad tracks (west/east). Adding to the mix is the community college on Avenue 12 east of the proposed project, which will ultimately support an enrollment of 6,000 students.

Several other developments have been proposed east of the project, but have not yet been approved. These developments include two industrials parks and a residential development with a potential for adding 8,000 more homes within 6 miles of State Route 99. Caltrans includes planned local development in traffic projections. Caltrans considers these projections during the design of transportation projects.

1.3 Alternatives

This section describes in detail the proposed build alternatives that were developed by a multi-disciplinary project development team. Caltrans evaluated alternatives that would feasibly attain the objectives of the project, but would avoid or substantially lessen environmental impacts from the project. Evaluation criteria included the project's purpose and need, environmental impacts, and project cost.

1.3.1 Build Alternatives

The project proposes two build alternatives (a Minimum Build Alternative and an Ultimate Build Alternative) and the No-Build Alternative. Improvements to State

Route 99 are not included in the build alternatives, but State Route 99 features are discussed to establish dimensions on the State Route 99 overcrossing.

The Route Concept Report for State Route 99, produced in November 2003, states that State Route 99 will ultimately be an eight-lane freeway. Both the Minimum Build Alternative and Ultimate Build Alternative include an Avenue 12 overcrossing designed to accommodate an eight-lane State Route 99 underneath.

Common Design Features of the Build Alternatives

Both build alternatives would:

- Remove and replace the existing bridge structure (overcrossing) with a span sufficient to accommodate State Route 99 as an eight-lane facility
- Include 10-foot-wide sidewalks and 8-foot-wide shoulders on both sides of Avenue 12 to accommodate non-motorized and pedestrian traffic
- Include sidewalks on the bridge structure
- Realign Road 29 (east of State Route 99) about 1,200 feet east of its present alignment
- Construct side ditches along both sides of the roadway to retain water runoff
- Allow for future High Occupancy Vehicle lanes (ramps only), ramp metering, ramp metering enforcement areas and maintenance vehicle pullouts

The following alternative descriptions discuss the unique features of the build alternatives.

Minimum Build Alternative

This alternative would widen Avenue 12 to four through lanes and one left-turn lane for eastbound traffic turning onto northbound State Route 99. The northbound on-ramp would begin with two lanes and end with one lane where it joins northbound State Route 99. The northbound off-ramp would begin with one lane at northbound State Route 99 and end with four lanes (two lanes in each direction) at Avenue 12. The southbound on- and off-ramps would remain in their existing configuration (see Figure 1.2).

The existing overcrossing would be removed, and a new overcrossing would be built over State Route 99, Cottonwood Creek, and the Union Pacific Railroad tracks. Avenue 12 would be raised an average of 3 feet to allow vertical clearance over State Route 99. Direct access to businesses on Avenue 12 would be maintained.

This alternative would include intersection improvements, signals, and the relocation of the Road 29 intersection about 1,200 feet east of its existing location to provide adequate intersection spacing. This alternative would not require any basins.

Ultimate Build Alternative

The Ultimate Build Alternative would widen Avenue 12 to six through lanes and two left-turn lanes for northbound State Route 99 traffic. The northbound on-ramp would begin with two lanes at Avenue 12 and end with one lane at northbound State Route 99. The northbound off-ramp would begin with one lane at northbound State Route 99 and end at four lanes (two lanes available for each direction) at Avenue 12. The loop configuration southbound on-ramp would have one lane 16 feet wide to accommodate truck traffic. The southbound off-ramp would begin with two lanes at State Route 99 and end with three lanes at Avenue 12, allowing two lanes for left turns and one lane for right turns (see Figure 1.3).

The Ultimate Build Alternative includes extensive local road and ramp improvements. Road 29 on the east and west sides of State Route 99 would be realigned. Golden State Boulevard would be realigned to intersect with Avenue 12 approximately 1,000 feet west of its existing location and outside of the southbound ramp operations.

A new overcrossing spanning State Route 99, Cottonwood Creek, and the Southern Pacific Railroad tracks would be built in place of the existing overpass. Avenue 12 would be raised 3 to 6 feet to allow vertical clearance over State Route 99, which would eliminate direct access to some business along Avenue 12.

The Ultimate Build Alternative includes intersection improvements, signal lights, and the relocation of the Road 29 intersection about 1,200 feet east of its existing location to provide adequate intersection spacing. Road 29 would also be realigned on the west side of State Route 99, and Golden State Boulevard would be realigned west of its current location.

The Ultimate Build Alternative would use a combination of compact diamond ramps for the northbound lanes and a partial cloverleaf and diamond for the southbound lanes.

This alternative also includes two new basins. One basin, to be built between the southbound off-ramp and the realigned Golden State Boulevard, would be used by

Caltrans. The other basin, to be built south of the realigned Road 29 and north of the Pomona Ranch Housing Center, would be used by Madera County.

Transportation System Management and Transportation Demand Management Alternatives

Transportation System Management strategies consist of actions that increase the efficiency of existing facilities; they are actions that increase the number of vehicle trips a facility can carry without increasing the number of through lanes. Examples of Transportation System Management strategies include ramp metering auxiliary lanes, reversible lanes and traffic signal coordination.

Although Transportation System Management measures alone could not satisfy the project's purpose and need, the project has incorporated Transportation System Management measures such as ramp metering and turn lanes into the build alternatives.

Transportation Demand Management focuses on regional strategies for reducing the number of vehicle trips and vehicle miles traveled as well as increasing vehicle occupancy. It facilitates higher vehicle occupancy or reduces traffic congestion by expanding the traveler's transportation choice in terms of travel method, travel time, travel route, travel costs, and the quality and convenience of the travel experience. Both build alternatives would allow for future High Occupancy Vehicle lanes.

1.3.2 No-Build Alternative

This alternative would keep Avenue 12, the overcrossing, the ramps and local roads as they are, although routine maintenance would continue. The No-Build Alternative would not meet the purpose and need of the project.

1.3.3 Comparison of Alternatives

After comparing and weighing the benefits and impacts of all of the feasible alternatives, and after public review and comments, Caltrans will recommend a preferred alternative.

After the public circulation period, all comments will be considered, and Caltrans will make the final determination of the project's effect on the environment. In accordance with the California Environmental Quality Act, if no unmitigable significant adverse impacts are identified, Caltrans will prepare a Negative Declaration or Mitigated Negative Declaration.

Minimum Build Alternative

The Minimum Build Alternative would only partially address the operational and safety concerns that exist within the current interchange design. The improvements proposed would be limited to changes to the existing interchange configuration, which would limit design year capacity. Specifically, the Level of Service for the northbound ramps and Avenue 12 intersection is expected to deteriorate after 2020. Excessive traffic backups and delays on the southbound ramps would also be likely.

Designing this alternative to accommodate the ultimate eight-lane concept on State Route 99 was investigated and found to create extensive reconstruction of the surrounding west side ramps and local road network. This accommodation would require improvements and construction costs similar to the Ultimate Build Alternative.

At minimum, the southbound ramps would need to be changed before 2030, but the project development team considers this an acceptable risk and promotes this as a viable alternative in case funding is not available for construction of the Ultimate Build Alternative.

Ultimate Build Alternative

The Ultimate Build Alternative would address the operational and safety deficiencies and provide capacity through the design period, but it would require extensive local road and ramp improvements and would affect business access. This Build Alternative would allow for any future widening of State Route 99 to eight lanes.

No-Build Alternative

The No-Build Alternative would not rule out routine maintenance projects or future operational and safety projects. Any future projects would require a separate design process and environmental studies. The No-Build Alternative would not meet the purpose and need of the proposed project because it would not meet current design standards, improve levels of service or improve safety.

Criteria for evaluating alternatives include project purpose and need issues, and potential environmental effects, and cost of the proposed project. Table 1.3 compares all of the alternatives.

Table 1.3 Comparison of Alternatives

Evaluation Criteria	No-Build Alternative	Minimum Build Alternative	Ultimate Build Alternative
Improves Traffic Operations	• Intersection spacing would remain inadequate. • Sight distance problems from the profile grade of the bridge structure and non-standard ramp spacing would not be resolved.	• Limits design year capacity. • Improves sight distance at Road 29. • Improves sight distance at Golden State Boulevard. • Improves sight distance of the bridge structure. • Improves sight distance of northbound off-ramp.	• Provides capacity through the design period. • Improves sight distance at Road 29. • Improves sight distance at Golden State Boulevard. • Improves sight distance of the bridge structure. • Improves sight distance of northbound off ramp. • Improves intersection spacing of Road 29 and Golden State Boulevard. • Allows for widening State Route 99 to eight lanes.
Improves Safety	Would not address the safety and operational concerns anticipated with increased traffic.	Would partially address the safety deficiencies that exist within the current interchange design because improvements would be limited to changes to the existing interchange configuration.	Would address all the safety deficiencies.
Reduces Congestion	Would result in increasing delays at Avenue 12 intersections and possible traffic backups on State Route 99 on- and off-ramps.	Would partially reduce congestion. After 2020, Levels of Service for the northbound ramps and Avenue 12 intersection are expected to deteriorate. Increased traffic backups and delays for the southbound ramps would be likely.	Traffic backups at intersections and on- and off-ramps would be minimized as a result of adequate intersection spacing.
Future Traffic Demand	Does not address projected demand resulting from area development and population increases.	Demand would be partially addressed with the additional two lanes and left-turn lane for the northbound on-ramp.	Demand would be addressed with the additional four lanes and two left-turn lanes for the northbound on-ramps.
Environmental Impacts	No changes	• Does not realign Road 29 south of Avenue 12 and Golden State Boulevard but does realign Road 29 north of Avenue 12. • Does not remove or relocate access to businesses. • Does not relocate section of Madera irrigation canal. • Requires measures for permanent impacts to visual resources, biological resources, and utility and service systems. • Does not require mitigation for paleontological resources or floodplain or hazardous waste clean-up • Requires Special Provisions during construction for temporary impacts to water quality, air quality, noise, biological resources, paleontology, and invasive species.	• Realigns Road 29 both north and south of Avenue 12 and Golden State Boulevard. • Removes or relocates access to businesses. • Relocates section of Madera irrigation canal. • Requires measures for permanent impacts to visual resources, biological resources, paleontological resources, utility and service systems, floodplain and potential hazardous waste clean-up. • Requires Special Provisions during construction for temporary impacts to water quality, air quality, noise, biological resources, paleontology, and invasive species.
Cost	Routine maintenance costs	$38.8 million	$78.5 million

1.3.4 Identification of a Preferred Alternative

After comparing and weighing the benefits and impacts of all of the feasible alternatives, the project development team recommended the Ultimate Build Alternative as the preferred alternative at a meeting held July 23, 2009.

The purpose of a transportation project is typically to meet the needs of the project area for at least 20 years following construction. The main tool for determining these needs is the traffic study, which uses modeling based on traffic trends and traffic generators such as development.

With six through lanes and two left-turn lanes for northbound State Route 99 traffic, the Ultimate Build Alternative would serve traffic demand projected through at least the 20-year design period. This alternative would also improve sight distance by creating intersection spacing in accordance with current design standards.

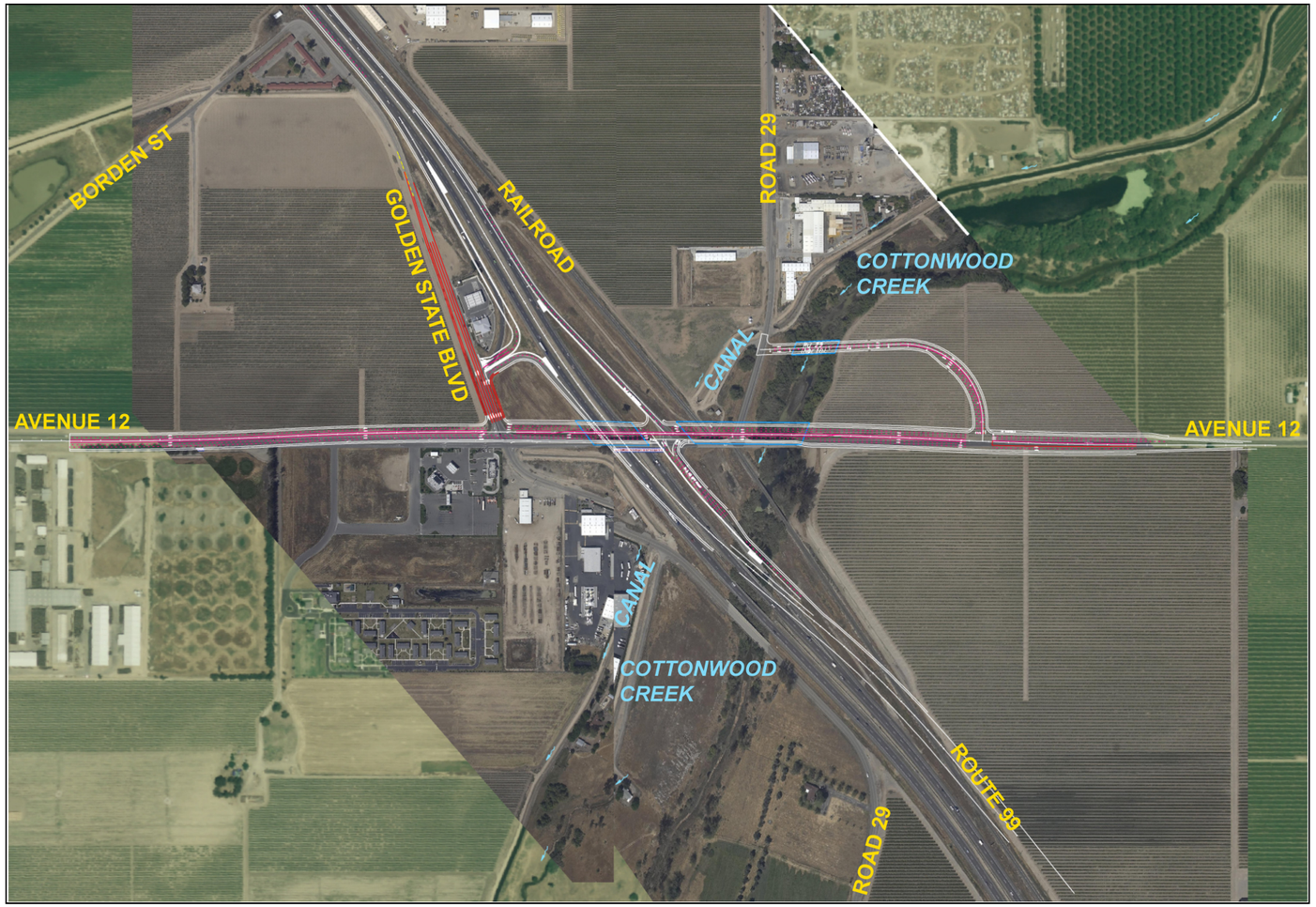
Selection of the Minimum Build Alternative may result in a secondary project to resolve level of service problems for the northbound ramps at Avenue 12 after 2020 and to resolve traffic backup problems at the southbound ramps before 2030.

1.3.5 Alternatives Considered but Eliminated from Further Discussion

No other alternatives were proposed, considered, or eliminated.

1.4 Permits and Approvals Needed

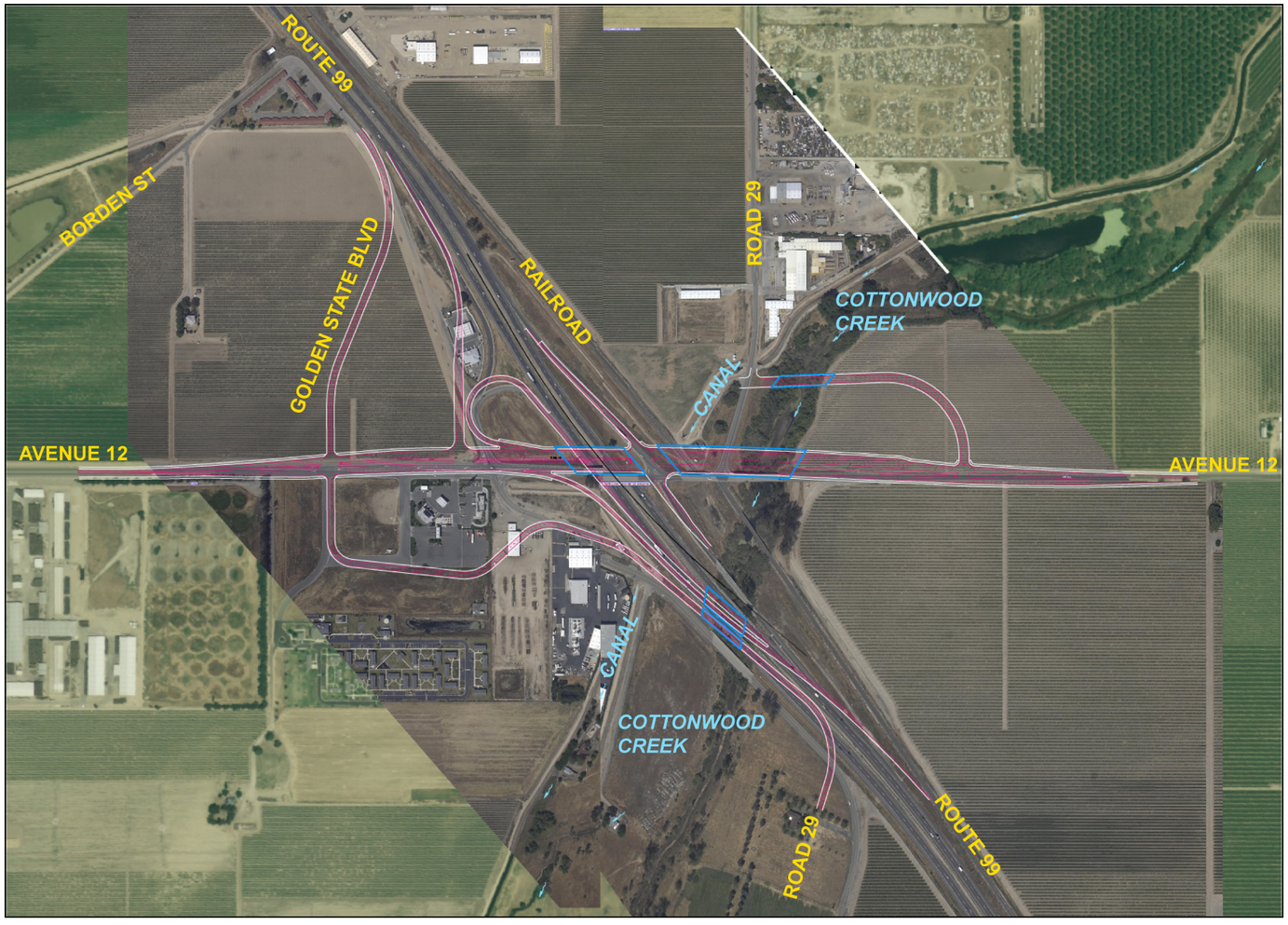
Agency	Permit/Approval	Status
U.S. Army Corps of Engineers	Section 404 permit for filling or dredging waters of the United States	The Section 404 permit would be obtained by 2/1/12.
California Department of Fish and Game	1602 Agreement for Streambed Alteration	The 1602 Agreement for streambed alteration would be obtained by 2/1/12.
California Water Resources Board	Section 401 discharge permit	The Section 401 permit would be obtained by July 1, 2011.



State Route 99/Avenue 12 Interchange
Minimum Build Alternative
Not to Scale

Caltrans

Figure 1.2 Minimum Build Alternative



State Route 99/Avenue 12 Interchange
Ultimate Build Alternative
Not to Scale

Caltrans

Figure 1.3 Ultimate Build Alternative

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

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

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

- Archeological or historic resources—According to the February 2009 Historic Properties Survey Report, the proposed project would not affect cultural resources.
- Geology—According to information supplied for this document, no known faults exist at the proposed project site. The proposed project would not result in substantial soil erosion or landslides. The project site is not located on a geologic unit or soil that is unstable or that will become unstable as a result of the project.
- Emergency services—Access to emergency services would not be affected during construction of the proposed project due to the use of a Transportation Management Plan. Emergency service response time is expected to improve with completion of the proposed project.
- Plants—According to the March 2009 Natural Environment Study, there were no special-status plant species identified during the biological surveys.

2.1 Human Environment

2.1.1 Land Use

This section describes the current and planned land use within the proposed project area. Land use planning is a function of mainly the Madera County Planning Department, which acts in accordance with its county's 1995 General Plan.

2.1.1.1 Existing and Future Land Use

Affected Environment

The project area is semi-rural with land zoned mainly for agriculture. Madera County land use mapping indicates that no parks or recreation facilities exist in or are planned for the proposed project area. Vineyards and orchards dominate the area surrounding the existing interchange, but several businesses and residences sit within or immediately adjacent to the project area (see Table 2.1).

Table 2.1 Business/Residential Land Use in the Project Area

Development (and address)	Land Use
Jack in the Box (28692 Avenue 12)	Fast food restaurant
Shell gas station (28650 Avenue 12)	Gas station and convenience store
Yamaha 99 motorcycle dealership (28615 Green Court)	Retail sales and service of Yamaha products
Arco gas station (12199 Golden State)	Gas station and convenience store
Britz Fertilizer (11856 Road 29)	Retail and wholesale sales of fertilizers, chemicals, seed and on-farm services including aerial and satellite imagery
Madera Pump (11884 Road 29)	Wholesale sales and installer of pumping equipment
Casa Grande Motel (Golden State/Borden St.)	Motel
Sunsweet Driers (28390 Ave 12)	Processing of dried fruit and prune products
Residence (28462 Borden Street)	Victorian-style residence (associated with vineyard)
Residence (29384 Avenue 12)	Single-family residence and vineyard support operations
Residence (11674 Road 29)	Single-family residence
Housing complex (11777 Woodward Way)	Pomona Ranch Housing Center (Housing Authority)
Domries Enterprises (12281 Road 29)	Manufactures soil preparation machinery and wholesales industrial machinery and equipment
National Hardware Rentals (Road 29)	Heavy equipment rental

Figure 2.1 Existing Business/Residential Land Use

A: Agriculture
AE: Agriculture Exclusive
HDR: High-Density Residential
HI: Heavy Industrial
HSC: Highway Service Commercial
LDR: Low-Density Residential
LI: Light Industrial
MDR: Medium-Density Residential
OS: Open Space
PO: Professional
PI: Public Institutional
NC: Neighborhood Commercial
CC: Community Commercial
TS: Transit Station

Future Land Use

Several developments are planned within a 5-mile radius of the proposed project. Table 2.2 lists the planned developments, proposed uses, and status of each proposal. See also Figure 2.2.

Table 2.2 Planned Development

Name	Jurisdiction	Proposed Uses	Status
Madera State Center Community College Specific Plan	Madera County	4,500 residential units on 1,867 acres with commercial development of about 800 acres	Approved
Center Point Industrial Park	Madera County	86-parcel industrial park on 268 acres	Proposed
Silverdust	Madera County	63-acre industrial park	Proposed
Liberty Groves	Madera County	1,371 with up to 8,228 dwelling units	Proposed
New English Ranchos	Madera County	1,400 single-family dwellings on 322 acres	Proposed
Madera 72	Madera County	363 residential lots on 72 acres	Proposed

The planned development that would have the most impact on the proposed project is the Madera State Center Community College Specific Plan due to its proximity to the proposed project, its size and its approved status. The plan itself is not a development per se by rather a guide for development of the 1,867-acre plan area. The plan area consists of single-family and multi-family residential land uses, ranging from very low density to high density and providing 4,500 residential units at full buildout. Other land uses include neighborhood and community commercial, highway service commercial, professional office, a light industrial/business park, public institutional uses and parks.

The plan area circulation network will accommodate cars, buses, bicycles and pedestrians. Pedestrian easements and open space meander throughout the plan area, and special habitat areas are proposed for preservation. The Cottonwood Creek corridor is included in the habitat area.

A key element of the Madera State Center Community College Specific Plan is the Madera County campus of the State Center Community College District. Ultimately, the campus will support 320,000 square feet of development and an enrollment of 6,000 students.

Madera County has experienced a substantially higher population increase since 2000 than has California in general. Table 2.3 shows the population for Madera County and California from 2000 to 2007.

Table 2.3 County and State Population (2000-2007)

Date of Base Population	Madera County Population	California State Population
April 1, 2000	123,109	33,871,655
July 1, 2000	123,588	34,004,051
July 1, 2001	125,567	34,525,902
July 1, 2002	128,148	34,963,856
July 1, 2003	132,502	35,376,833
July 1, 2004	137,183	35,721,991
July 1, 2005	140,521	35,990,312
July 1, 2006	143,933	36,249,872
July 1, 2007	146,513	36,553,215
Numerical increase from base population	23,404	2,681,560
Percentage increase from base population	19.0%	7.9%

US Census Bureau Cumulative Estimates of Population Change for Counties April 1, 2000 to July 1, 2007.

According to the California Employment Development Department *Historical Data for Building Permits in Madera County*, an average of 1,425 building permits were issued annually between 2003 and 2006; only 510 were issued in 2007, reflecting the downturn in housing starts and sales.

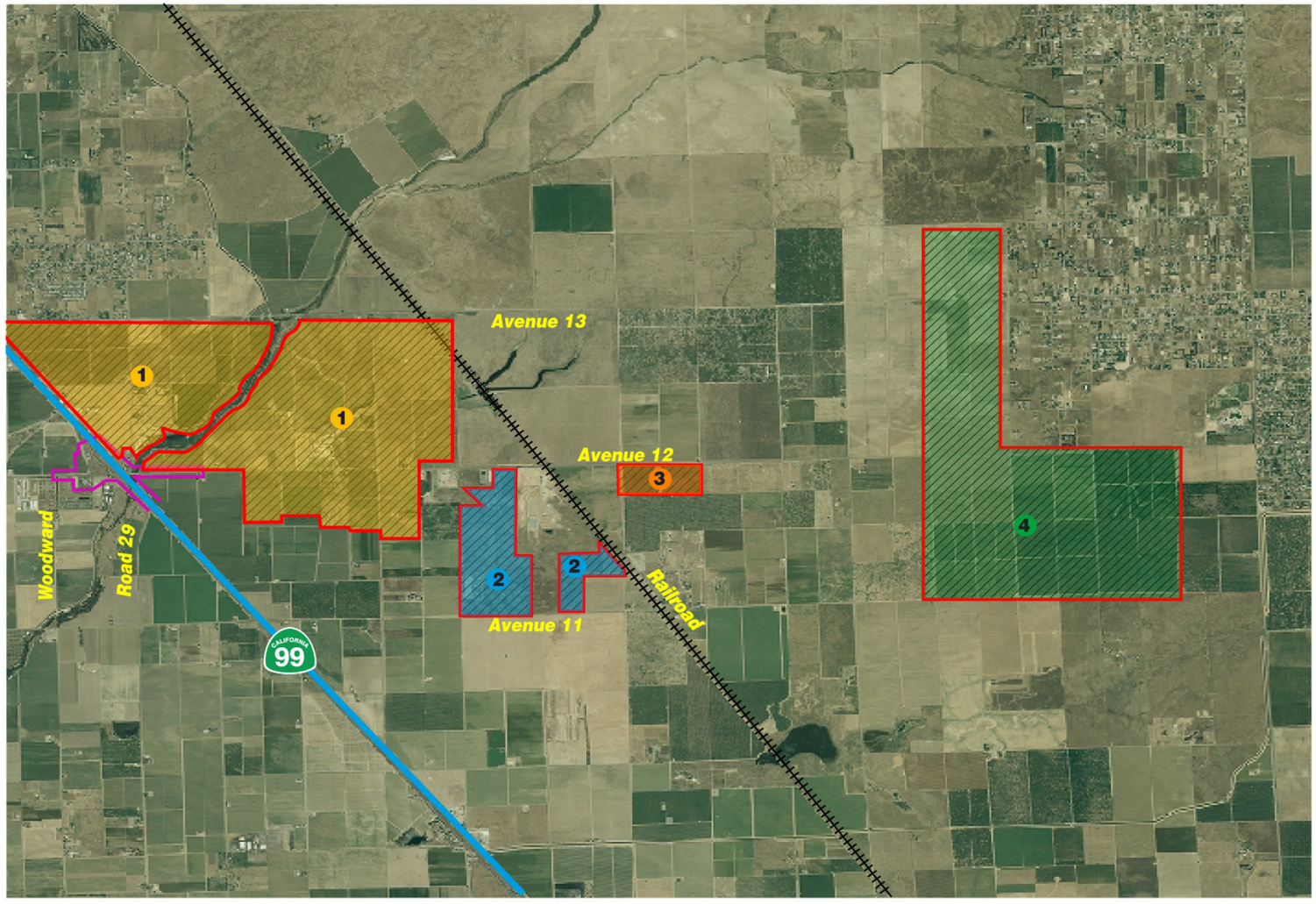
Environmental Consequences

The proposed project would compliment local planning by meeting the needs of increased traffic demand from future development. However, the Ultimate Build Alternative would change access to some businesses that currently have direct access to Avenue 12 because it would raise the elevation (vertical profile) of the road. In addition, the widening of Avenue 12 and realignment of ramps and local roads would require partial or full acquisition of some properties. Property acquisition is discussed in Section 2.1.4 Table 2.7.

Avoidance, Minimization, and/or Mitigation Measures

Temporary Environmentally Sensitive Area fencing would be installed around a Chinese cemetery property on the northeast corner of Avenue 12 and Road 28 ¼, just outside the proposed project's west end. The fencing would prevent construction equipment from entering that area.

Figure 2.2 Planned and Proposed Development



Planned/Proposed Development

1. State Center Community College Specific Plan
2. Center Point
3. Silver Dust
4. Liberty Groves

Project Area
State Route 99

SR-99 / Avenue 12 Interchange

06-MAD-99 PM R7.1 - R7.9

EA: 06-471000

N

Not to Scale

Caltrans

06-471000_dlm_eeb

2.1.1.2 Consistency with State, Regional, and Local Plans

The Madera County Transportation Commission is the Regional Transportation Planning Agency and the designated Metropolitan Planning Organization for Madera County. The commission is responsible for the development and adoption of the Regional Transportation Plan and Transportation Improvement Program as required by state law.

Affected Environment

The proposed project is within the jurisdictional boundaries of the Madera County Transportation Commission. In November 2006, Madera County voters approved Measure "T," which imposed a half-cent retail transaction and use tax for 20 years to provide $213 million in new revenue for transportation improvements. Section One of the Measure "T" Investment Plan is the Commute Corridors/Farm to Market Program (Regional Transportation Program) with a budget of $108.6 million or 51% of the revenue. This section authorizes major new projects to:

- Improve freeway interchanges
- Add additional lanes
- Increase safety as determined by local jurisdictions
- Improve and reconstruct major commute corridors

Additionally, the Madera State Center Community College Specific Plan, which is part of Madera County's General Plan, calls for substantial development and corresponding traffic demand in the proposed project area.

Environmental Consequences

The Madera County Transportation Commission has listed the proposed project as a Measure "T" project programmed in the State Transportation Improvement Plan.

The project is consistent with the General Plan in that it accommodates the increased traffic demand anticipated with completion of the Madera State Center Community College Specific Plan. Therefore, the proposed project is consistent with state, regional and local plans.

Avoidance, Minimization, and/or Mitigation Measures

No avoidance, minimization, and/or mitigation measures are necessary.

2.1.1.3 Growth

This section addresses planned and proposed development and the potential for unplanned project-related development. Caltrans facilitates planned growth by

designing the proposed project to meet a specified level of service for 20 years beyond construction as specified in the most recent system planning Route Concept Report.

Regulatory Setting

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 Environment

Avenue 12 is one of three rural access points within a 10-mile segment of the freeway between the San Joaquin River (the county border) and the City of Madera. The area immediately surrounding the project is zoned for mostly agricultural use, open space, and light- and heavy-industrial use, with a few parcels to the north and east zoned for residential use.

According to the City of Madera's General Plan, the 12th Avenue/State Route 99 intersection is currently outside the City's Urban Development Boundary. The southern border of the Madera City Urban Development Boundary is just northwest of the proposed project along Road 28 and halfway between Avenues 12 and 13.

The City of Madera's Planning Area and General Plan include the northern area of the project. The Planning Area Boundary and the General Plan Boundary are alike except for their eastern boundaries: the Planning Area uses Road 31 and the General Plan uses Road 29. The similar boundaries use 12th Avenue as a southern boundary, 17th Avenue as a northern boundary, and Road 23 as the western boundary.

The County of Madera has several approved or pending proposals for developments that will contribute to increased traffic volumes on both Avenue 12 and State Route 99 (see Land Use Section 2.1.1). These developments sit along Avenue 12 east of State Route 99 within 6 miles of the project.

Environmental Consequences

The project would improve an existing interchange to increase safety and would not result in additional access points on either Avenue 12 or State Route 99. Though the project is expected to result in a decrease in some travel time, it is unlikely that the minimal amount of time saved would lead to changes in travel behavior, trip patterns, or growth patterns.

Therefore, the project is not expected to influence the growth-related policies established by the City and County of Madera. With or without the project, growth would occur. The project is not expected to cause any shift in the location of planned growth. Nor would the project be expected to substantially influence the timing of growth, which is largely dependent on market forces and overall economic health.

Madera County has already approved one development plan east of the project area (see Land Use Section 2.11), and several more developments are proposed. However, any development proposed adjacent to the project would have to consider the physical constraints of the Madera Canal, Cottonwood Creek, and the Southern Pacific Railroad tracks.

Avoidance, Minimization, and/or Mitigation Measures

No avoidance, minimization, and/or mitigation measures are necessary.

2.1.2 Farmlands/Timberlands

Regulatory Setting

The National Environmental Policy Act and the Farmland Protection Policy Act (United States Code 4201-4209; and its regulations, 7 Code of Federal Regulations Ch. VI Part 658) require federal agencies, such as the Federal Highway Administration, to coordinate with the Natural Resources Conservation Service if their activities may irreversibly convert farmland (directly or indirectly) to nonagricultural use. For purposes of the Farmland Protection Policy Act, farmland includes prime farmland, unique farmland, and land of statewide or local importance.

The California Environmental Quality Act requires the review of projects that would convert Williamson Act contract land to non-agricultural uses. The main purposes of the Williamson Act are to preserve agricultural land and to encourage open space preservation and efficient urban growth. The Williamson Act provides incentives to landowners through reduced property taxes to deter the early conversion of agricultural and open space lands to other uses.

Affected Environment

The Madera County Agriculture Commissioner issues an annual *Agricultural Crop Report* in accordance with the California Food and Agriculture Code. The most recent report available, the 2007 Agricultural Crop Report, states that the production value of Madera County agricultural commodities was $1,220,230,000. Milk, nuts and grapes were the top three commodities in dollar value. Table 2.4 shows acreages for the major farmland categories.

Table 2.4 County Farmland Acreages

Farmland Classification	Acreage
Field Crop	101,400 acres
Fruit and Nut	186,900 acres
Nursery	700 acres
Vegetable	6,300 acres
Rangeland	353,000 acres
Total harvested acreage	648,300 acres
Total county acreage	1,366,951 acres

Madera County 2007 Agricultural Crop Report

Soils within the proposed project area are limited mainly to Hanford fine sandy loam, which is suitable for local agriculture. Water for irrigation and farm services is readily available.

Grape vineyards are located north of Avenue 12 and west of State Route 99 as well as south of Avenue 12 and east of State Route 99. An orchard sits north of Avenue 12 and east of State Route 99.

Section 5 of the Madera County General Plan (Agricultural and Natural Resources) lists several policies that protect farmland in the county, including:

- 5.A.2. The County shall discourage the conversion of prime agricultural land to urban uses unless an immediate and clear need can be demonstrated that indicates a lack of land for non-agricultural uses.
- 5.A.3. The County shall seek to ensure that new development and public works projects do not encourage further expansion of urban uses to designated agricultural areas.
- 5.A.12. The County shall actively encourage enrollments of agricultural lands in its Williamson Act program, particularly on the edges of new growth areas.

Environmental Consequences

As required, a Natural Resources Conservation Service Farmland Conversion Impact Rating was completed for the proposed project (see Appendix E). The Farmland Conversion Impact Rating determines the relative value of farmland to be converted by using a formula that weighs farmland classification, soil characteristics, irrigation, acreage, creation of non-farmable land, availability of farm services and other factors. The Natural Resources Conservation Service evaluates only Prime/Unique and Statewide/Local Importance classified land on the Farmland Conversion Impact

Rating form. Farmland classified as Prime and Unique is present within the proposed project area. If the Farmland Conversion Impact Rating exceeds 160 points, Caltrans considers measures that would minimize or mitigate farmland impacts.

The Natural Resources Conservation Service determined that the proposed project would convert farmland having a relative value between 96 and 98 out of 100 possible points under these criteria. Additional points using other criteria were factored in on the Natural Resources Conservation Service form for a total impact rating ranging from 147 to 151 points for the two build alternatives.

The exact amount of farmland acquisition and conversion cannot be determined until the final design stage of the project. Table 2.5 shows the approximate amount of farmland that would be acquired with the proposed project.

Table 2.5 Farmland Conversion by Build Alternative

Alternatives	Land Converted	Prime & Unique farmland	Percentage of farmland in County	Percentage of farmland in State	Farmland Conversion Impact Rating
Minimum Build	18 acres	10 acres	0.00275%	0.0000687%	147 points
Ultimate Build	30 acres	28 acres	0.00459%	0.0001145%	151 points

State law requires that Williamson Act property be avoided unless there is no reasonable alternative. State law requires that an agency acquiring Williamson Act property for public use must notify the Director of the State Department of Conservation and the local governing body before acquiring the property. This document, which is submitted to the State Department of Conservation as part of the Draft Environmental Document circulation process serves as that notification. There is land under the Williamson Act in the proposed project area. The total amount of Williamson Act land that would be acquired for the project would be approximately 11.7 acres (under both build alternatives). See Table 2.6.

Table 2.6 Farmland Impacts by Build Alternative

Parcel	Minimum Build Alternative	Ultimate Build Alternative
APN 047-050-021: This parcel is a working vineyard located north of Avenue 12 and west of State Route 99.	This build alternative would require a partial acquisition of this parcel. Preliminary estimates indicate that less than 1 acre would be acquired.	This build alternative would require a partial acquisition of this parcel. Preliminary estimates indicate that about 14 acres would be acquired.
APN 047-060-013: This parcel is a working orchard located north of Avenue 12 and east of State Route 99. This property is enrolled in the Williamson Act program.	This build alternative would require a partial acquisition of this parcel. Preliminary estimates indicate that about 11.7 acres would be acquired.	This build alternative would require a partial acquisition of this parcel. Preliminary estimates indicate that about 11.7 acres would be acquired.

Avoidance, Minimization, and/or Mitigation Measures

The build alternative designs have incorporated the smallest footprint possible while still meeting the purpose and need of the proposed project. Any conflict with the Madera County General Plan Section 5 would be minimal and balanced by other goals and policies in the General Plan, most notably in the Transportation and Circulation Section. No mitigation is needed because the current build alternative designs minimize harm to farmland and because the farmland itself was rated below 160 points in the Natural Resources Conservation Service farmland assessment (see Appendix E).

2.1.3 Community Impacts

2.1.3.1 Community Character and Cohesion

Regulatory Setting

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 proposed project lies south of the City of Madera, outside the city's limits, in a rural area on State Route 99. The existing area along Avenue 12 on the west side of

State Route 99 consists mostly of vineyards and orchards, with farmhouses scattered throughout the agricultural fields. Southern Pacific Railroad tracks parallel State Route 99, and Avenue 12 crosses over the tracks, the freeway, Madera Canal, and Cottonwood Creek. On the west side of State Route 99 are a couple of highway commercial businesses (gas stations with mini-marts and fast food service) and several commercial businesses. Except for a motel north of the project area and the Pomona Ranch Housing Center on Woodward Way south of Avenue 12, very few residences sit near the project area.

The Madera Housing Authority operates the 50-unit Pomona Ranch Housing Center for seasonal farm workers. According to the residential supervisor of the facility, the facility is empty except when the seasonal housing becomes available between May 15 and November 15. School bus transportation is available to the children of the temporary residents, but other transportation such as Dial-a-Ride must be arranged. Included within this facility is a Head Start program that provides daycare and nursery services to the seasonal residents.

The Casa Grande Motel sits on the west side of State Route 99 in a corner created where Golden State Boulevard and Borden Street intersect and end. This facility faces State Route 99 on the east, but is otherwise surrounded by agricultural fields. The motel can be accessed via Golden Gate Boulevard, which exits onto Avenue 12, or Borden Street, which exits onto Road 28½ to the east.

Based on field surveys, no parks, schools, or community centers were identified within or next to the project area.

Environmental Consequences

The Minimum Build Alternative would not decrease public access to any of the facilities within or next to the project area, would not divide a neighborhood, would not separate residences from any community facilities, would not promote growth, is not expected to make any adverse changes in quality of life, and would not promote urbanization or isolation.

The Ultimate Build Alternative would construct a two-lane roadway (County Road 29) between the Pomona Ranch Housing Center and the Shell gas station and Jack in the Box. The construction of the new roadway would change the existing access to these businesses for the seasonal residents, but it would not prevent access. Currently, the residents can access these businesses by walking across an open field. The

proposed realignment of Road 29 would include sidewalks on both sides of the roadway and a crosswalk for the seasonal residents to gain access to the businesses.

The Ultimate Build Alternative would not decrease public access to any of the facilities within or next to the project area, would not divide a neighborhood, would not separate residences from any community facilities, would not promote growth, is not expected to make any adverse changes in quality of life, and would not promote urbanization or isolation.

Avoidance, Minimization, and/or Mitigation Measures

Neither build alternative would require any avoidance, minimization, and/or mitigation measures.

2.1.4.1 Relocation and Real Property Acquisition

Regulatory Setting

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 USC 2000d, et seq.). See Appendix B for a copy of Caltrans' Title VI policy statement.

The Caltrans Relocation Assistance Program is based on the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (as amended) and Title 49 Code of Federal Regulations Part 24. The purpose of 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 C for a summary of the Relocation Assistance Program.

Affected Environment

A Draft Relocation Impact Memorandum based on design maps, field reviews, literature research and discussions with local realtors was completed on August 25, 2008.

Several businesses, vacant land, vineyards and an orchard exist within the project area. Several residences sit next to the project area. A detailed discussion of these features can be found in Section 2.1.1 Land Use.

Environmental Consequences

Minimum Build Alternative

The only acquisition required with the Minimum Build Alternative would involve the orchard north of Avenue 12 and east of State Route 99 for the Road 29 realignment (see Table 2.7).

Ultimate Build Alternative

The following acquisitions would occur with the Ultimate Build Alternative:

- Four to five businesses would require partial acquisition with appraised damages due to access reconfiguration. This would result from the rise in elevation of Avenue 12 approaching the overcrossing bridge structure and Golden State Boulevard realignment.
- One business would require full acquisition and full relocation assistance.
- One business would be substantially affected and would need relocation assistance, but probably would not require full acquisition of the parcel. This business may reconfigure on the remainder of the parcel or relocate to a more functional location for its business.

Caltrans considered an alignment change to avoid the Arco AM/PM, but the change was found impractical because:

- Realigning Golden State Boulevard to avoid the Arco AM/PM would create an island of private property surrounded by Caltrans property, a situation avoided whenever possible.
- The Route Concept Report describes an ultimate eight-lane highway for State Route 99. Avoidance of the Arco AM/PM for the proposed project would delay but not prevent eventual acquisition.

As a result of these factors, Caltrans determined that an alignment change to avoid the Arco AM/PM was not prudent.

Table 2.7 shows potential acquisitions, subject to the final design.

Based on current design mapping, extensive field reviews, discussions with local realtors, and a 25% vacancy rate for commercial type properties in the area, it is anticipated that sufficient business sites would be available to accommodate any business displacements resulting from the proposed project. Additionally, the

Relocation Assistance Program would also assist businesses in reconfiguring their parcels to accommodate the requirements of the proposed project.

Avoidance, Minimization, and/or Mitigation Measures

The additional lanes proposed in both build alternatives would be built north of the existing alignment to minimize impacts to businesses south of Avenue 12.

Table 2.7 Potential Acquistions

Minimum Build Alternative	Description	Ultimate Build Alternative
Depending on the final design, access to these businesses may be slightly altered due to right-of-way boundary changes along Avenue 12. Some visual changes from these locations may occur due to the raised vertical profile of Avenue 12.	**Jack in the Box** **Shell gas station** **Yamaha dealership**	These properties would no longer have direct access from Avenue 12 due to the raised roadway profile. This would result in partial acquisition with limited relocation assistance and appraised damages, but not displacement. Customer access would be via Road 29 south.
	Arco AM/PM gas station	This property would require acquisition resulting in relocation of the existing business.
	Britz Fertilizer	This property may require partial acquisition due to the realignment of Road 29 south of Avenue 12. Additionally, the property's equipment storage area north of Road 29 may require acquisition. This would result in partial acquisition with limited relocation assistance and appraised damages, but not displacement.
	Madera Pump	This property would require partial acquisition due to the realignment of Road 29 south of Avenue 12. This would require relocation of the existing building further south on the property. This would result in partial acquisition with limited relocation assistance and appraised damages, but not displacement. Should relocation of the existing building on the property not be feasible, full acquisition with full relocation assistance would be required.
No permanent impacts	**Casa Grande Motel**	No permanent impacts
No permanent impacts with the establishment of an environmentally sensitive area around the cemetery to prevent turns by construction equipment	**Sunsweet Driers**	No permanent impacts
	Residence 28462 Borden Street	No impact to the structure, but partial acquisition of the vineyard would be required for the additional lanes on Avenue 12 and realignment of Golden State Blvd. This would result in partial acquisition with limited relocation assistance and appraised damages, but not displacement. Potential indirect impacts include increased noise and light levels from Golden State Blvd.
	Residence 29384 Avenue 12	No permanent impacts
	Residence 11674 Road 29	No impact to structure, but partial acquisition of property may be required for realignment of Road 29. This would result in partial acquisition with limited relocation assistance and appraised damages, but not displacement. Potential indirect impacts include increased noise and light levels from Road 29.
	Orchard North of Avenue 12/East of Cottonwood Creek	Partial acquisition of this property would be required for the realignment of Road 29. This would result in partial acquisition with limited relocation assistance and appraised damages, but not displacement.
	Housing complex **Cemetery** **Domries Enterprises** **National Hardware Rentals**	No permanent impacts would occur with the establishment of an environmentally sensitive area around the cemetery to prevent turns by construction equipment.

2.1.4.2 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 order directs federal agencies to take 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, provided in Appendix B of this document.

Affected Environment

Data from the 2000 U.S. Census were used to complete demographic research on the project area. In addition, field reviews were completed in and around the project area to help identify residential development not readily apparent in the census data.

The 2000 U.S. Census provides demographic data by Census Tract, Block Groups, and Blocks. *Census Tracts* are very large areas with populations ranging from 1,000 to 8,000 people that are further broken down into *Block Groups* containing multiple *Block* units. Blocks are the smallest areas and may correspond to individual city blocks bounded by streets. The project passes through portions of three Census Tracts and Census Block Groups: Census Tract 5.02 Block Group 3, Census Block 5.08 Block Group 1, and Census Tract 10 Block Group 1 (see Figure 2.3).

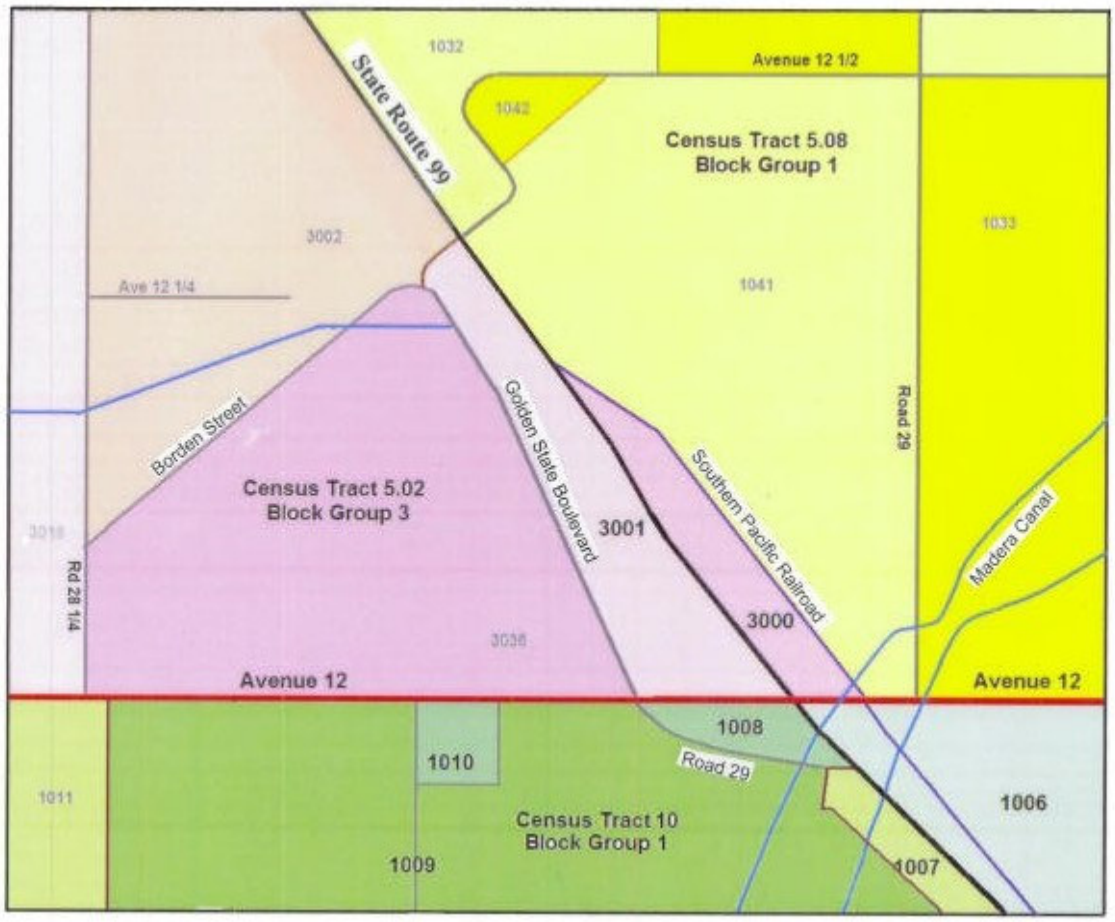


Figure 2.3 2000 U.S. Census Tract Map

Census Tract 5.02 Block Group 3 is south of the City of Madera and covers a rural area north of Avenue 12, west of State Route 99, east of State Route 145, and south of E. Almond Avenue (Avenue 13½). Two Blocks within Block Group 3 would be affected by the proposed project: Blocks 3001 and 3036.

- Block 3001 is bordered by State Route 99 on the east, Avenue 12 on the south, Block 3002 on the north, and Block 3036 on the east. The Arco AM/PM gas station and Casa Grande Motel sit within this block, which has zero population.
- Block 3000 is bordered by Block 3001 on the east, Avenue 12 on the south, Block 3002 on the north, and Road 28¼ on the west. One farmhouse surrounded by farmland sit within this block, which has a population of one White person (2000 U.S. Census Bureau).

Census Tract 5.08 Block Group 1 is east of the City of Madera and covers a vast rural area north of Avenue 12 and east State Route 99, south of State Route 145, and west

of Avenue 36. Two Blocks within Block Group 1 would be affected by the proposed project: Blocks 1033 and 1041.

- Block 1033 is bordered by Road 30 on the east, Avenue 12 on the south, Avenue 13 on the north, and Road 29 on the east. Cottonwood Creek runs through this block, which contains mostly farmland except for a few farmhouses and some commercial businesses along Road 29. This block has a population of 31 people, of which 48% is White, 3.2% is Asian, and 48.4% is Hispanic/Latino.
- Block 1041 is bordered by Road 29 on the east, Avenue 12 on the south, Avenue 12½ on the north, and State Route 99 on the west. Domries Enterprises and National Hardware Rental sit within this block, which has zero population.

Census Tract 10 Block Group 1 covers a rural area south of the proposed project. Block Group 1 is bordered by Avenue 12 on the north, State Route 145 on the west, Avenue 36 on the east, and Avenue 8 on the south. Five Blocks within Block Group 1 would be affected by the proposed project: Blocks 1006 through 1010. Block 1006 is on the east side of State Route 99, and all other blocks are on the west side of State Route 99 and incorporate most of the commercial businesses and population of the proposed project:

- Block 1006 is bordered by Road 30½ on the east, Avenue 12 on the north, Avenue 11 on the south, and State Route 99 on the east. The block contains mostly farmland except for a few farmhouses scattered within the row crops. This block has a population of 18 people: 61.1% is White and 38.9% is Hispanic/Latino. Two people claimed more than one race, which included Asian and Native American.
- Block 1007 covers a very small section of property along county Road 29 west of State Route 99. This block is bordered by Block 1009 on the west, Block 1021 on the south, Block 1008 on the north, and State Route 99 on the east. The block contains mostly farmland and has a zero population.
- Block 1008 is a small triangular-shaped section of property bordered by Avenue 12 on the north, State Route 99 on the east, and Road 29 on the south. The area appears to be used for parking and has a zero population.
- Block 1009 is a large section of property bordered by Road 29 on the east, Avenue 12 on the north, Avenue 11 on the south, and Block 1011 on the west. Block 1009 contains mostly farmland to the south with a few scattered farmhouses. Sunsweet Driers, Madera Pumps, and Britz Fertilizers sit within this

block along Avenue 12 and Road 29. This block has a population of 13 people: 69.2% is White and 30.8% is Hispanic/Latino.

- Block 1010 is very small. Avenue 12 borders the block on the north, and Block 1009 surrounds the block on the east, west, and south. The Shell gas station, Yamaha 99, Jack in the Box and the Pomona Ranch Housing Center sit within this block. The population is 30 people: 3.3% is White, 3.3% is Asian, and 93.3% is Hispanic/Latino.

The City of Madera's Hispanic/Latino population represents 67.8% of the total population, and Madera County's percentage of Hispanic/Latino population is lower at 49.2%. The minority population of all the blocks except for Census Tract 10 Block Group 10 Block 1010 is statistically lower than the minority population of Madera city and county. Within the project study area, there are no African Americans/Blacks or Native Hawaiians or Pacific Islanders reported.

In Census Tract 10 Block Group 1 Block 1010, the high percentage of Hispanic/Latino population is assumed to come from the Pomona Ranch Housing Center, the only residence in the block. The five blocks that would be affected by the project have a total population of 93 people: 39.7% is White, 2.2% is Asian, and 58.1% is Hispanic/Latino. Overall, the block average for the Hispanic/Latino population affected by the project falls within the averages of the City (67.8%) and County (49.2%).

The U.S. Census provided income data for the census tracts affected by the proposed project based on 1999 earnings. Table 2.8 compares the data for median family income to families living below poverty levels for the groups within the project area and the City and County of Madera.

Table 2.8 1999 Family Income

Breakdown	County of Madera	City of Madera	Census Tract 5.02	Census Tract 5.08	Census Tract 10
Median Family Income (1999 dollars)	$31,927	$39,226	$33,688	$33,841	$42,805
Families below poverty level	15.9%	25.6%	20.9%	16.0%	13.3%

2000 U.S. Census Bureau

The comparison indicated:

- Data recorded for Census Tract 5.02 report a median family income less than the city's average but more than the county's average. The recorded number of families living below the poverty level for the same census area is 4.7% less than the city's average.
- Data recorded for Census Tract 5.08 report a median family income less than the city's average but more than the county's average.
- Data recorded for Census Tract 10 report a median family income higher than both the city and county average. The recorded number of families living below the poverty level for the same census area is less than both the city and county average.

Environmental Consequences

No minority or low-income populations would be adversely affected by the proposed project. Therefore, this project is not subject to the provisions of Executive Order 12898.

While the project would cause some short-term disruption of traffic during construction, no long-term detrimental traffic conditions are expected to occur because of the project. All area residents would benefit from a safer route to access and exit State Route 99, with improved intersections and wider roadways. Residents would also have a safer access over the freeway and railroad tracks, and they would have an improved route to access services and businesses.

Although the percentage of families living in poverty in Census Tract 5.02 is 5% higher than the county's average, the two blocks affected by the proposed project have a zero population. The recorded number of families living below the poverty level for Census Tract 5.08 is 9.6% less than the city's average and almost equal to the county's average; therefore, there appears to be no disproportionate effect to the residents in this census tract. The percentage of families living in poverty in Census Tract 10 is much less than both the city and county averages; therefore, there appears to be no disproportionate effect to the low-income residents in Census Tract 10. The Pomona Ranch Housing Center would not be affected, so there would not be a disproportionate effect on minorities in Census Tract 10.

Avoidance, Minimization, and/or Mitigation Measures

No avoidance, minimization, and/or mitigation measures are needed.

2.1.4 Utilities/Emergency Services

Affected Environment

Several utilities are located within the project area. These utilities include overhead lines as well as underground water, gas and fiber optic lines. The utility companies involved include Madera Irrigation District, AT&T, PG&E, Comcast, Sprint, Quest and Kinder Morgan. Table 2.9 shows utility relocation.

Table 2.9 Utility Relocations

Utility	Minimum Alternative	Ultimate Alternative
Poles	21	43
AT&T underground cable	2,635 linear feet	20,400 linear feet
AT&T underground fiber optic	2,775 linear feet	18,270 linear feet
8-inch gas line	420 linear feet	420 linear feet
10-inch gas line	N/A	420 linear feet
12-inch gas line	1,530 linear feet	4,800 linear feet
Irrigation canal	960 linear feet	8,400 linear feet
Headwalls	1	3
Potholes	20	40

Source: Utility Data Sheet

First responders to emergency incidents may include California Highway Patrol, Cal Fire, the Madera County Sheriff's Department, and private emergency medical transportation.

Environmental Consequences

While specific impacts depend on the final design, it appears at this time that all aboveground utilities within highway right-of-way would have to be relocated outside of the proposed project right-of-way.

The Madera Irrigation District has prior rights, therefore the state would pay relocation costs for its facilities that would require realignment. AT&T and PG&E come under utility Master Agreements; specific details would be addressed in the final design stage.

A new bridge would be built over the Southern Pacific Railroad right-of-way. This would require a construction and maintenance agreement between Caltrans and the railroad.

Avoidance, Minimization, and/or Mitigation Measures

A Transportation Management Plan would be in place to ensure timely access for first responders. Response time would be improved on completion of the proposed project.

The Traffic Management Plan may consist of on- and off-ramp closures during construction. Daytime work outside peak hours is expected for the project. Traffic would be directed to exit or enter the freeway at the closest interchange north or south of the Avenue 12. Caltrans would use the media disseminate construction information to the public. The District 6 Transportation Management Center would provide the information to the Caltrans' Public Information Office, which would then relay the information to the media. The resident engineer would keep the Transportation Management Center informed on construction progress, ramp closures, traffic delays or any other information that may be important regarding traffic safety and service. A Construction Zone Enhanced Enforcement Plan would also be used on this project.

2.1.5 Traffic and Transportation/Pedestrian and Bicycle Facilities

Caltrans determines the traffic capacity and design configuration needed on proposed projects by using the design year traffic forecast, which projects out to 20 years after project completion. Assuming completion of the proposed project in 2016, the design year for the project would be 2035. This section discusses how the alternatives would affect traffic over the 20-year design period and explains any short-term construction impacts.

Regulatory Setting

The Federal Highway Administration directs that full consideration should be given to the safe accommodation of pedestrians and bicyclists during the development of federal-aid highway projects (see 23 Code of Federal Regulations 652). It further directs that the special needs of the elderly and the disabled must be considered in all federal-aid projects that include pedestrian facilities. When current or anticipated pedestrian and/or bicycle traffic presents a potential conflict with motor vehicle traffic, every effort must be made to minimize the detrimental effects on all highway users who share the facility.

Caltrans and the Federal Highway Administration are committed to carrying out the 1990 Americans with Disabilities Act by building transportation facilities that provide equal access for all persons. The same degree of convenience, accessibility, and safety available to the general public will be provided to persons with disabilities.

Affected Environment

An Operational Analysis was completed December 15, 2008, and a Safety Analysis was completed November 10, 2008 for the proposed project.

Avenue 12 is a two-lane arterial road with east/west alignment. The existing bridge structure over State Route 99, Cottonwood Creek and the railroad tracks has a sidewalk for pedestrian and bicycle traffic.

Avenue 12 has been increasingly used as a connecting link between State Route 99 and State Route 41. This coupled with increasing local demand resulting from recent development and the new Madera Community College Center just east of the proposed project has resulted in increased congestion. Congestion will most likely continue to increase as the State Center Community College Specific Plan and other proposed developments are built.

The State Center Community College Plan calls for a capacity increase on Avenue 12 east of State Route 99. The plan proposes a four-lane roadway with a 24-foot landscaped median, with a total right-of-way of 130 feet. The project start date has not been determined.

Tables 2.10 and 2.11 show the 2035 design year peak-hour traffic volumes and Levels of Service for the Minimum and Ultimate Build Alternatives at the main Avenue 12 intersections. The differences in the tables reflect the differences in the designs, but both build alternatives indicate a substantial improvement over the No-Build Alternative, which is projected to have Levels of Service of "F" in the 2035 design year.

Table 2.10 2035 Traffic Volumes and Level of Service (Minimum Alternative)

Intersection	Through Traffic Volume		Level of Service	
	Morning Peak Hour	Afternoon Peak Hour	Morning	Afternoon
Golden State Boulevard at the southbound off-ramp	118	115	B	B
Avenue 12 at Golden State Boulevard	2210	1968	C	D
Avenue 12 at the northbound ramps	2772	2944	C	C
Avenue 12 at Road 29 North	3504	3748	C	D

Table 2.11 2035 Traffic Volumes and Level of Service (Ultimate Alternative)

Intersection	Through Traffic Volume		Level of Service	
	Morning Peak Hour	Afternoon Peak Hour	Morning	Afternoon
Avenue 12 at Golden State Boulevard/ Road 29	2367	2379	C	C
Avenue 12 at southbound ramps	2395	2191	B	C
Avenue 12 at the northbound ramps	2772	2944	C	B
Avenue 12 at Road 29 North	3504	3748	C	C

Two fatal accidents on Avenue 12 within the proposed project area since January 1, 2005 have claimed a total of six lives. The accident rates for the northbound ramps are higher than the statewide average in some categories, while the accident rates for southbound ramps are lower than the statewide average.

Table 2.12 shows the on-ramp/off-ramp accident rates for the proposed project compared to the statewide average. Because Avenue 12 is a county road, comparisons to the statewide average are not available.

Table 2.12 On-ramp and Off-ramp Accident Rates

Location	Actual[1]			Average[2]		
	Fatality	Fatality & Injury	Total	Fatality	Fatality & Injury	Total
Northbound off-ramp	0.00	1.48	4.44	0.014	0.43	1.15
Northbound on-ramp	0.00	0.52	.069	0.007	0.21	0.55
Southbound off-ramp	0.00	0.19	0.97	0.013	0.67	1.90
Southbound on-ramp	0.00	0.00	0.00	0.004	0.21	0.60

1. *Within project area*
2. *Statewide average for similar facility*

Most of the accidents on the northbound off-ramp were broadsides and rear-end accidents; most of the accidents on the northbound on-ramp were broadsides. Most of the accidents on the southbound off-ramp were sideswipes and rear-end accidents. No accidents were recorded on the southbound on-ramp during the study period.

Environmental Consequences

It is probable that completion of the proposed project would reduce the frequency and severity of traffic accidents. Without the proposed project, accident frequency may increase as a result of traffic volume increases.

It is probable that operational improvements to the intersection of Avenue 12 and State Route 99 would reduce congestion, improve traffic flow, and reduce travel times, though no substantial change would occur due to proposed ramp metering.

The new bridge structure would also include a sidewalk to comply with Americans with Disabilities Act requirements.

Avoidance, Minimization, and/or Mitigation Measures

A comprehensive Traffic Management Plan to minimize delays during construction would be developed after selection of a preferred alternative. Standard Caltrans construction practices include information on roadway conditions, portable changeable message signs, lane and road closures, advance warning signs, alternate routes, and a traffic contingency plan for unforeseen circumstances and emergencies. Before construction, Caltrans would meet with local public officials to review the plan as well as publicize plan details.

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* (emphasis added) and culturally pleasing surroundings [42 United States Code 4331(b)(2)]. To further emphasize this point, the Federal Highway Administration in its implementation of the National Environmental Policy Act [23 United States 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

A Visual Impact Assessment was completed in October 2008 to determine if either build alternative would have an adverse visual impact. The assessment followed the procedure as outlined in the Federal Highway Administration manual "Visual Impact Assessments for Highway Projects."

The existing visual quality of the area is considered moderate with no outstanding visual resources or historic structures. The proposed project is located in a rural agricultural setting dominated by orchards and field crops. The land is generally flat, with distant views of the Sierra Nevada range to the east and the Coast Range to the west. Gas stations, a fast-food restaurant and other businesses in the project area detract from the agricultural setting.

Avenue 12 is a two-lane arterial road with multiple turn lanes at the intersections with Golden State Boulevard. The road is at-grade, except for elevated bridge structures over State Route 99, Cottonwood Creek and the railroad tracks.

State Route 99 is a four-lane divided highway with a concrete median barrier. Unlike the medians north and south of the project limits, the medians in this portion of State Route 99 do not have oleanders. The horizontal alignment of the highway in the project area is at-grade or below and generally straight. State Route 99 is not a designated scenic route, and there are no known scenic resources in the project area.

Several eucalyptus trees stand in the project area. Although the trees do not screen any objectionable views, they do provide visual interest in an area where there is sparse highway planting. The vertical structure of the trees contrasts sharply with the surrounding flat landscape, accentuating the scale of the trees. The varying heights of the trees give diversity to the visual uniformity of the flat landform.

Environmental Consequences

The proposed removal and replacement of the bridge structures would change the visual setting by adding a somewhat urban look to the area. The new bridge structures would replace existing structures that are typical in the highway environment. Therefore, it is unlikely that the changes to the visual environment for either build alternative would adversely affect the viewer's response. The resulting visual impacts of the new structures would be to maintain or improve the existing overall moderate visual quality of the views.

Local residents and daily commuters are expected to be the most sensitive to these changes in visual resources. Associated project features, such as intersection widening on Avenue 12 and Golden State Boulevard, striping, barrier end treatments, slope paving, and traffic signals would also contribute to a more urban character for this portion of State Route 99, but these features are not unlike those found to the north and south of the project location.

Both build alternatives would require the removal of four mature eucalyptus trees.

During construction of either build alternative, there would be temporary visual impacts from heavy equipment, traffic management equipment, and construction features. Viewers expect that these changes in the visual environment would be temporary and therefore not significant.

Specific build alternative visual impacts include:

- Minimum Build Alternative: This alternative proposes that the bridge structures would accommodate six lanes and that Avenue 12 would be raised about 3 feet above the existing level. This change in height would not likely be noticeable to travelers on State Route 99 or Avenue 12.

- Ultimate Build Alternative: This alternative would accommodate eight lanes, and Avenue 12 would be raised about 3 to 6 feet above the existing level. This alternative would likely create a noticeable visual change to the project area, but it would not be inconsistent with other bridge structures along the highway nor would it necessarily be an adverse impact.

Avoidance, Minimization, and/or Mitigation Measures

Alterations to the existing visual character of the area can be minimized and a more uniform highway corridor would be created by implementing the following measures:

- Replacement of the existing structures is not expected to have adverse impacts. Even so, during the design phase of the project, Landscape Architecture staff will work with County Planning Department staff, local officials, and community members to create context appropriate enhancements that reflect the rural character of Madera County.

- Highway planting removed or damaged as a result of construction activity would be replaced. This replacement planting would be funded from the project and must be in progress within two years of the acceptance of the highway contract.

- The new bridge structures should be designed with a dedicated conduit for irrigation supply line and irrigation electrical. While the project may not be receiving full highway planting at this time, the rapid growth of the area will necessitate future full highway planting.

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 was completed in October 2007 to determine if there would be base floodplain encroachments from the proposed project.

Rain falls mainly between November and March in the project area and averages 10 inches annually. The elevation of the project area is about 275 feet above sea level, and the terrain slopes gently to the southwest.

Cottonwood Creek is ephemeral (a temporary creek that flows when there is rain or water runoff). The creek's alignment runs generally north/south through the project area. Most of the watercourses in the county are poorly defined, and the creeks tend to overflow.

The Flood Insurance Rate Map covering the project area identifies four zones:

- AO—Special flood hazard area inundated by 100-year flood. This zone is along the northeast side of the Southern Pacific Railroad tracks and under State Route

99 at Avenue 12. The base flood elevation at this crossing is 268 feet above sea level.

- AE—This zone is west of State Route 99 and south of Avenue 12. The base flood elevation at this location is 268 feet above sea level.
- AH—Special flood hazard area inundated by 100-year flood. Flood depths of 1 to 3 feet (usually areas of ponding). This zone is south of Avenue 12 and east of the railroad tracks. The base flood elevation at this location is 271 feet above sea level.
- X—Areas outside the 500-year floodplain. This zone is along State Route 99 and extending southwesterly.

Environmental Consequences

The proposed project would have five encroachments into the 100-year floodplain as identified on the Flood Insurance Rate Maps:

- Encroachment one would occur at the proposed realignment of Road 29 southwest of State Route 99.
- Encroachment two would occur just north of this realignment with the widening of the existing Road 29.
- Encroachment three would occur with the widening of the northbound off-ramp.
- Encroachment four would occur with the new overpass spanning both Cottonwood Creek and the Southern Pacific Railroad tracks.
- Encroachment five would occur with the realignment of Road 29 to the north of Avenue 12 and include the new structure spanning Cottonwood Creek.

None of these encroachments would constitute a significant floodplain encroachment as defined in the Code of Federal Regulations, Title 23, Section 650.105(q). The proposed project would not support incompatible floodplain development.

The Madera County Community College Specific Plan has been designed to allow for the collection and holding of floodwaters to protect developments from annual flood hazards.

A Floodplain Evaluation Report Summary determined the following:

- The proposed project is not a longitudinal encroachment of the base floodplain.
- There are no significant risks associated with the proposed project.

- The proposed project would not support probable incompatible floodplain development.
- There are no significant impacts to natural and beneficial floodplain values.
- There are no special mitigation measures necessary to minimize impacts or restore and preserve natural and beneficial floodplain values.
- The proposed project does not constitute a significant floodplain encroachment as defined in 23CFR, Section 650.105(q).
- The Location Hydraulic Study is on file.

Avoidance, Minimization, and/or Mitigation Measures

Detention basins, bio-filtration strips and bio-filtration swales are some of the storm water management measures identified for use with this project. Detailed studies in the design phase must be completed to determine the change in runoff characteristics. The extensive use of cross-culverts would ensure that objectionable backwater is not produced by the extended bridge structure.

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 a project requires a Clean Water Act Section 404 permit. Section 404 of the Clean Water Act requires a permit from the U.S. Army Corps of Engineers to discharge dredged or fill material into waters of the United States.

Along with Clean Water Act Section 401, Clean Water Act Section 402 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 Board 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 require a Storm Water Pollution Prevention Plan to be prepared and implemented during construction. Caltrans activities less than 1 acre require a Water Pollution Control Program.

Affected Environment

A Water Quality Assessment was completed in November 2008 for the proposed project. The purpose of the assessment was to evaluate potential project impacts on surface and groundwater quality and to describe mitigation measures to reduce potential impacts.

The project area is in the South Valley Floor Hydraulic Unit 545.20, which drains to the Pacific Ocean via San Francisco Bay. Surface watercourses within the proposed project limits are Cottonwood Creek and the Madera Canal. Cottonwood Creek is ephemeral with an alignment that runs generally north/south through the project area. Other surface watercourses within the watershed include the San Joaquin River and the Fresno River. The water quality within Cottonwood Creek in the project area is good to excellent, and no segments are impaired.

This project site sits within the Madera Groundwater Basin # 5-22.06 in Madera County. Groundwater is within the U.S. Environmental Protection Agency recommended maximum concentration for total dissolved solids, a measure of salinity commonly used as an indicator of groundwater quality. Groundwater within the project area includes the impairments of high hardness, radiation, iron, nitrates, chloride, and pesticides.

Environmental Consequences

Temporary impacts to Cottonwood Creek water quality could occur during grading, demolition, and construction processes related to the proposed new bridges.

Permanent impacts to Cottonwood Creek water quality could occur from storm water runoff. Storm water runoff can contain sediment from soil erosion, petroleum and wear products from motor vehicle operation as well as hazardous materials spilled in highway accidents.

Avoidance, Minimization, and/or Mitigation Measures

Impacts to water quality would be minimal with the use of the following avoidance, minimization and mitigation measures.

To ensure compliance with the Clean Water Act, the State Water Resources Control Board has issued a National Pollutant Discharge Elimination System Statewide Storm Water Permit. The permit regulates storm water discharges during construction as well as from existing facilities and operations.

Caltrans has implemented a statewide Storm Water Management Plan. The plan addresses Caltrans runoff impacts on water quality standards, development of Total Maximum Daily Loads, and watershed planning. The plan would be used to characterize runoff from Caltrans facilities and to aid in determining appropriate best management practices.

The project design would incorporate permanent erosion control elements, mainly permanent vegetation, to ensure that storm water runoff does not cause soil erosion. Implementation of the project-specific long-term mitigation measures, design best management practices, and if necessary, treatment best management practices, would also reduce or avoid impacts on water quality.

The Water Quality Assessment has determined that impacts to water quality could occur during construction of the project. Avoidance, minimization and mitigation measures include the following:

- Minimize potential erosion by limiting land disturbances such as clearing and grading and cut/fill.
- Preserve any existing terrain providing desirable drainage courses or effective filtration.
- Limit disturbance of natural drainage features and vegetation.
- Prepare and implement an approved Storm Water Pollution Prevention Plan.
- Ensure proper storage and disposal of toxic material.
- Incorporate pollution prevention into operation and maintenance procedures to reduce pollutant loadings to surface runoff.
- Incorporate flared end sections and energy dissipation devices at all culvert outlets.
- Comply with the requirements specified in the Caltrans Standard Specifications Section 7, Legal Relations and Responsibility, subsection 7-1.01G.

- When disturbed acreage is 1 acre or more, Caltrans' National Pollutant Discharge Elimination System Permit requires coordination with the Regional Water Quality Control Board. This project is expected to disturb more than 1 acre of soil and requires the following:

    1. A Notification of Construction is to be submitted to the appropriate Regional Water Quality Control Board at least 30 days before construction starts.

    2. A Storm Water Pollution Prevention Plan is to be prepared before and implemented during construction to the satisfaction of the resident engineer.

    3. A Notice of Completion of Construction is to be submitted to the Regional Water Quality Control Board upon completion of the construction and stabilization of the site.

2.2.3 Paleontology

Regulatory Setting

Paleontology is the study of life in past geologic time based on fossil plants and animals. Although there is no federal law that specifically protects natural or paleontological resources, there are a number of laws that have been interpreted to do so—the main law being the Antiquities Act of 1906, which protects historic or prehistoric ruins or monuments and objects of antiquity. This act has been amended to specifically allow funding for paleontological mitigation. 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

The proposed project is on Quaternary (recent) fan deposits associated with the Great Valley sequence. Although Quaternary sedimentary deposits are generally ranked as low for paleontological resource sensitivity, these deposits have the potential of yielding fossils.

Highly sensitive fossil sites occur in some Quaternary sediments throughout the San Joaquin Valley. At the Fairmead landfill, about 13 miles northwest of the proposed project, 193 fossils have been recovered from the Quaternary Riverbank Formation. Based on review of geologic literature and discoveries from the Fairmead Landfill and Highway 180 West project, the Riverbank Formation is believed to underlie the

interchange project. Excavations of drainage basins could encounter the Quaternary Riverbank Formation.

Environmental Consequences

The project would include two below-grade drainage basins for the Ultimate Build Alternative. Generally, the excavation of basins exposes the largest surface area and depth of undisturbed soils and presents the greatest potential to encounter paleontological resources.

Basin A would be south of the realigned County Road 29. This rectangular basin would measure 260 feet long by 160 feet wide by 8 feet deep with a surface area of 0.95 acre. The basin would have 4:1 side slopes and a bottom dimension of approximately 175 feet long by 75 feet wide.

Basin B would be between the realigned Golden State Boulevard and the realigned southbound on-ramp. This triangular basin would measure 550 feet by 550 feet by 8 feet deep with a surface area of 3.5 acres. The basin would have 4:1 side slopes and a bottom dimension of approximately 482 feet by 482 feet.

Avoidance, Minimization, and/or Mitigation Measures

A Paleontological Evaluation Report and preliminary Paleontological Mitigation Plan with recommendations on monitoring and mitigation must be prepared for the proposed project.

If any vertebrate or plant fossils are discovered during construction, work would stop in the immediate vicinity of the discovery (33-foot radius) until the District Archaeologist or District Paleontology Coordinator could review the discovery.

Remediation of sensitive fossils found before and during construction can include removal, preparation and curation of any significant remains.

2.2.4 Hazardous Waste or 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 main 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
- Atomic Energy 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 (January 2008), Preliminary Site Investigation (September 2008), Aerially Deposited Lead Survey (December 2007), and asbestos/lead evaluation of existing bridges (December 2008) was completed for the proposed project. The Initial Site Assessment identified 25 sites of concern, three of which were investigated as part of the Preliminary Site Investigation due to the potential for acquisition.

The Initial Site Assessment and Preliminary Site Investigation found the following:

- Arco AM/PM at 12199 Golden State Boulevard: The facility is an active, modern, self-service gasoline station with a convenience store. There are two fuel

underground storage tanks and nine fuel dispensers on three dispenser islands beneath a canopy. The facility stores and dispenses diesel and unleaded gasoline.

- Madera Pumps, Inc. at 11884 Road 29: The facility is a sales/service business for water well pumps and includes an office building, a welding/machine shop, a material/product storage yard, a 1,500-gallon dual storage (gasoline/diesel) aboveground storage tank and a storm water runoff basin. A gasoline release was discovered in May 1987 following removal of underground storage tanks from a location immediately south of the existing aboveground storage tank, and fuel spillage was seen around the tank fill. Impacted soil was removed and aerated on-site. Madera County and the Regional Water Quality Control Board closed the case in October 1987.
- Britz Fertilizers, Inc. at 11855 Road 29: The parcel is used to store empty trailer-mounted fertilizer tanks and fertilizer aboveground storage tanks for delivery to agricultural users. An office and shop building used by a company that reconditioned fuel tanks were reportedly previously located at the parcel. Concrete pads indicating former structures are located on the east side of the parcel.

The purpose of the Preliminary Site Investigation was to inform construction contractors of potentially affected soil within project boundaries for health, safety, management, and disposal evaluation purposes. The scope of the investigation included soil borings, soil sample collection and laboratory analyses. The accuracy of the investigation is limited to the actual sample area. It is possible that contamination exists outside the areas sampled and tested. In addition, the report was not intended to address potential impacts associated with sources other than those specified.

Ongoing testing by Caltrans throughout California has indicated that aerially deposited lead exists along major highway routes due to emissions from vehicles powered by leaded gasoline. At sites where soil has not been disturbed, the aerially deposited lead is generally limited to the upper 2 feet of soil within unpaved shoulder and median areas.

Construction activities that disturb materials or paints containing any amount of lead are subject to California Occupational Safety and Health Agency lead standards. The Code of Federal Regulations and Federal/OSHA classify asbestos-containing material. Construction activities that disturb any amount of asbestos are subject to the Cal/OSHA asbestos standard.

Environmental Consequences

Information in this section is based on the results of the Preliminary Site Investigation, which included soil sampling and analysis.

- Arco AM/PM at 12199 Golden State Boulevard: A sample containing a Methyl Tertiary Butyl Ether concentration of 22 micrograms per kilogram was taken at this site. This concentration is well below the Environmental Protection Agency's screening level for both residential and industrial/commercial soil (39 and 190 micrograms per kilogram, respectively). Findings do not indicate that soil at the Arco site has been materially affected by a hazardous material or petroleum product release or that special health and safety, soil handling, or disposal activities during implementation of the proposed project are warranted. No further subsurface assessment of the Arco site is warranted at this time.
- Madera Pumps, Inc. at 11884 Road 29: Soil in the vicinity of one of the borings has been affected by relatively low concentrations of hazardous material or petroleum products due to vehicle fluid spillage/leakage from pump-service vehicles that have historically been parked in that area. Soil analysis did not indicate that the soil has been materially affected by a hazardous material or petroleum product release. The analysis did not indicate that the identified impacts to soil warrant special health/safety or soil handling activities during implementation of the proposed project. Results indicate that no further subsurface assessment of the Madera Pumps site is warranted at this time.
- Britz Fertilizers, Inc. at 11855 Road 29: An approximate ¾-inch-thick interval of gray discolored soil was seen in the soil sample tube collected from a depth of approximately 12 feet from one of the borings. No chemical odor from that sample or other samples was detected. No discoloration was seen in other samples or soil cores. The concentrations of metals detected in the subject sample are consistent with respective naturally occurring background concentrations and do not suggest contamination. Findings do not indicate that soil has been materially affected by hazardous materials or petroleum products. The discolored interval may be due to degraded organic material. Findings do not indicate that soil at the Britz site has been materially affected by a hazardous material or petroleum product release or that special health and safety, soil handling, or disposal activities during implementation of the proposed project are warranted. Results indicate that no further subsurface assessment at the Britz site is warranted at this time.

- Based on the analytical results of soil sampling, soil generated from the top 0.5 to 2.5 feet would not be classified as California hazardous waste for aerially deposited lead. Soils excavated to a maximum depth of 2.5 feet within this area can be reused on-site or disposed of as non-hazardous soil.

- No painted surfaces were seen on the bridge structures other than intact yellow-and-white roadway paint striping. Due to safety constraints, sampling of roadway paint striping was not performed. Road striping applied to bridge decks at the project location should be assumed to contain lead unless/until sampling and analysis indicates otherwise. Chrysotile asbestos at a concentration of 80% was detected in samples representing an undetermined quantity of nonfriable asbestos sheet packing used as barrier rail shims on bridge structures in the proposed project area.

Avoidance, Minimization, and/or Mitigation Measures

- Arco AM/PM at 12199 Golden State Boulevard: Before implementation of the proposed project, removal and closure of the fuel storage and distribution systems at the Arco site would require soil sampling and analytical testing under the oversight of the Madera County Environmental Health Department. Affected and potentially affected soil encountered during service station demolition and closure activities should be excavated, stockpiled, and characterized to evaluate appropriate reuse or disposal alternatives. Confirmation and stockpile sample characterization analytical data and soil reuse/disposal plans should be submitted to the Madera County Environmental Health Department for review and "no further action" status if appropriate.

- Madera Pumps, Inc. at 11884 Road 29 and Britz Fertilizers, Inc. at 11855 Road 29: If affected and potentially affected soil is encountered during project activities, these materials should be excavated, stockpiled, and characterized to evaluate appropriate reuse or disposal alternatives. Confirmation and stockpile sample characterization analytical data and soil reuse/disposal plans should be submitted to the Madera County Environmental Health Department for review and acceptance.

- Per Caltrans requirements, the contractor(s) should prepare a project-specific Lead Commpliance Plan to minimize worker exposure to lead-affected soil.

  With the exception of inaccessible paint striping applied to road surfaces on the bridge decks, painted surfaces were not seen at the bridge structures. Paints at the

project location would be treated as lead-containing for purposes of determining the applicability of the Cal/OSHA lead standard during any future maintenance, renovation, and demolition activities. This recommendation is based on the fact that lead was a common ingredient of paints manufactured before 1978 and is still an ingredient of some industrial paints.

Asbestos-containing barrier rail shims identified on the barrier rail assemblies of Bridges 41-0066, 41-0065R, 41-0065S, and the County Road 29 Bridge over Cottonwood Creek would be removed and disposed of by a licensed contractor registered with Cal/OSHA for asbestos-related work before renovation, demolition, or other activities that would disturb the material. Based on the consistent sample results that identified asbestos in barrier rail shims at four of the five bridges, Caltrans also recommends that barrier rail shims seen on Bridge 41-0065L, but that were inaccessible for sampling, also be treated as assumed asbestos-containing material and removed and disposed of as a Category I nonfriable/nonhazardous material.

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 (CO), nitrogen dioxide (NO_2), ozone (O_3), particulate matter (PM), lead (Pb), and sulfur dioxide (SO_2).

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 Madera County Transportation Commission 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 "non-attainment" or "maintenance" for carbon monoxide and/or particulate matter. A region is a "non-attainment" 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 "non-attainment" 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 proposed project is fully funded and is in 2007 Regional Transportation Plan, which was found to conform by the Madera County Transportation Commission on May 23, 2007. The Federal Highway Administration and Federal Transportation Authority adopted the air quality conformity finding on May 23, 2007. The project is also included in the Madera County Association of Governments' financially constrained Madera County 2007 Federal Transportation Improvement Program and the Madera County Transportation Commission 2007 Annual Listing of Projects with Federal Funding. The project is also included in the Madera County Association of

Governments' financially constrained Madera County 2009 Interim Federal Transportation Improvement Program, which was adopted by the Federal Highway Administration in February 2009.

The design concept and scope of the project is consistent with the project description in the 2007 Regional Transportation Plan, the 2007 Federal Transportation Improvement Program Including Amendment No. 2, and the 2007 Federal Transportation Improvement Program Including Amendment No. 10.

State revenues such as the Statewide Transportation Improvement Program, gas taxes, and Local Transportation Funds are expected to be available. The Madera County Measure T, a local sales tax, is assumed to end in 2027. Cumulative transportation revenues in current dollars for streets and roads mode are projected at $669.1 million for fiscal years 2007-15, and $668.7 million for fiscal years 2016-30.

Anticipated population increases in the overall proposed project area would result in more vehicles on the road, resulting in increases in hydrocarbons, oxides of nitrogen, carbon monoxide, and particulate matter (PM_{10} and $PM_{2.5}$). In September 2008, the Environmental Protection Agency approved the State of California's request to re-designate the San Joaquin Valley Air Basin to attainment for the National Ambient Air Quality Standards for PM_{10}. Particulate matter comes from a variety of sources, including areawide sources such as fugitive dust from paved and unpaved roads, waste burning, agricultural operations, and residential fuel burning. Overall, the amount of direct emissions of PM_{10} and $PM_{2.5}$ has remained relatively unchanged from 1975 to the present. The sources are forecasted to stay relatively unchanged throughout 2020.

The San Joaquin Valley is currently designated as in non-attainment for the national $PM_{2.5}$ standard measures see Table 2.13. While direct emissions of particulate matter are relatively unchanged, $PM_{2.5}$ annual average concentrations show a downward trend from 1999 through 2004. Programs that reduce ozone and diesel particulate matter have been adopted as part of the $PM_{2.5}$ State Implementation Plan. Cleaner-burning diesel fuel, diesel retrofit and replacement grant programs, and regulations sponsored by the San Joaquin Valley Air Pollution Control Board and the California Air Resources Board should result in an additional decrease in the amount of $PM_{2.5}$.

Project-Level Analysis: The proposed project is located in a maintenance area for carbon monoxide. The Caltrans' Transportation Project Level Carbon Monoxide Protocol for local analysis was used to determine carbon monoxide impacts. No

substantial local impacts would occur, and the project would not create a new violation or worsen an existing one.

The San Joaquin Valley Air Basin is in non-attainment for National Ambient Air Quality Standards for particulate matter in size of $PM_{2.5}$ to PM_{10}. Particulate matter hot spot analysis is required for projects in areas that are in non-attainment or maintenance for $PM_{2.5}$ to PM_{10}.

- $PM_{2.5}$ - Based on guidance provided by the Environmental Protection Agency, Federal Highway Administration, and Federal Transit Administration (2006), this project is not a "Project of Air Quality Concern" because it is an intersection channelization or interchange reconfiguration involving turn lanes or other operational improvements.
- PM_{10} - The project is located in a non-attainment area for PM_{10}. Data from the monitoring site near Drummond Street in Fresno indicates that there have been no violations of the federal standard at this site since 2005.

Regional Analysis: The proposed project is located in the San Joaquin Valley Air Basin, which is in non-attainment for ozone (1-hour) and PM_{10}. The project is not exempt from conformity under 40 CFR 93.126.

Mobile Source Air Toxics: The Federal Highway Administration has issued interim guidance on how mobile source air toxics should be addressed in National Environmental Policy Act documents for highway projects. The Federal Highway Administration has developed a tier approach for analyzing mobile source air toxics in National Environmental Policy Act documents. Depending on the specific project circumstances, the Federal Highway Administration has identified three levels of analysis:

1. No analysis for exempt projects with no potential for meaningful mobile source air toxics effects
2. Qualitative analysis for projects with low potential mobile source air toxics effects
3. Quantitative analysis to differentiate alternatives for projects with higher potential mobile source air toxics

The Avenue 12 Interchange Project has a low potential for mobile source air toxics effects. The vehicle miles traveled estimated for each of the build alternatives is

slightly higher than that for the No-Build Alternative because the additional capacity increases the efficiency of the roadway and attracts trips from elsewhere. This increase in vehicle miles traveled would lead to higher mobile source air toxics emissions for the build alternatives, along with a corresponding decrease in mobile source air toxics emissions along the parallel routes. The emissions increase is offset somewhat by lower mobile source air toxics emission rates due to increased speeds; according to Environmental Protection Agency's MOBILE6 emissions model, emissions of all of the priority mobile source air toxics except for diesel particulate matter decrease as speed increases. The extent to which these speed-related emissions decreases will offset vehicle miles traveled-related emissions increases cannot be reliably projected due to the inherent deficiencies of technical models.

Because the estimated vehicle miles traveled for both of the build alternatives are nearly the same, it is expected there would be no appreciable difference in overall mobile source air toxics emissions between the build alternatives. Also, regardless of the alternative chosen, emissions would likely be lower than present levels in the design year as a result of the Environmental Protection Agency's national control programs that are projected to reduce mobile source air toxics emissions by 57% to 87% between 2000 and 2020. Local conditions may differ from these national projections in terms of fleet mix and turnover, vehicle miles traveled growth rates, and local control measures. However, the magnitude of the Environmental Protection Agency-projected reductions is so great that mobile source air toxics emissions in the study area are likely to be lower in the future in nearly all cases.

The proposed project would not fall into Category 1 because it is a categorical exclusion or exempted by the Clean Air Act conformity rule. The project would not fall into Category 3 because it would not alter an intermodal freight facility, nor would it create new or add significantly to the capacity of a roadway where the average annual daily traffic count would exceed 140,000 vehicles in the design year. Consequently, the proposed project falls into Category 2 and requires a qualitative analysis.

Each of the project alternatives would have an average annual daily traffic count of less than the 140,000-vehicle significance level in the project design year as established by the Federal Highway Administration Mobile Source Air Toxics guidance. This results in mobile source air toxics emissions from the vehicle fleet that are lower than what the Federal Highway Administration considers potentially significant.

Also, over time, emissions of mobile source air toxics are expected to decrease as improvements in mobile source control technology result in reductions in reactive organic gases and PM_{10}; therefore, emissions of mobile source air toxics would decrease as average vehicle emissions from the vehicle fleet decrease over time.

Based on these considerations, each project alternative would generate emissions of mobile source air toxics pollutants that would have a less than significant air quality effect.

Table 2.13 Air Quality Standards and Status

Pollutant	Averaging Time	State Standard	Federal Standard	State Attainment Status	Federal Attainment Status	Health and Atmospheric Effects	Typical Sources
Ozone (O_3)[a]	1 hour 8 hours	0.09 ppm 0.070 ppm	–[b] 0.08 ppm	Non-attainment Non-attainment	Non-attainment Non-attainment	High concentrations irritate lungs. Long-term exposure may cause lung tissue damage. Long-term exposure damages plant materials and reduces crop productivity. Precursor organic compounds include a number of known toxic air contaminants.	Low-altitude ozone is almost entirely formed from reactive organic gases (ROG) and nitrogen oxides (NO_x) in the presence of sunlight and heat. Major sources include motor vehicles and other mobile sources, solvent evaporation, and industrial and other combustion processes. Biologically produced ROG may also contribute.
Carbon Monoxide (CO)	1 hour 8 hours	20 ppm 9.0 ppm[c] 6 ppm	35 ppm 9 ppm –	Attainment/ Unclassified	Attainment/ Unclassified	Asphyxiant. CO interferes with the transfer of oxygen to the blood and deprives sensitive tissues of oxygen.	Combustion sources, especially gasoline-powered engines and motor vehicles. CO is the traditional signature pollutant for on-road mobile sources at the local and neighborhood scale.
Respirable Particulate Matter (PM10)[a]	24 hours Annual	50 µg/m^3 20 µg/m^3	150 µg/m^3 –	Non-attainment	Non-attainment	Irritates eyes and respiratory tract. Decreases lung capacity. Associated with increased cancer and mortality. Contributes to haze and reduced visibility. Includes some toxic air contaminants. Many aerosol and solid compounds are part of PM10.	Dust- and fume-producing industrial and agricultural operations; combustion smoke; atmospheric chemical reactions; construction and other dust-producing activities; unpaved road dust and re-entrained paved road dust; natural sources (wind-blown dust, ocean spray).
Fine Particulate Matter (PM2.5)[a]	24 hours Annual	– 12 µg/m^3	35 µg/m^3 15 µg/m^3	Non-attainment	Non-attainment	Increases respiratory disease, lung damage, cancer, and premature death. Reduces visibility and produces surface soiling. Most diesel exhaust particulate matter – considered a toxic air contaminant – is in the PM2.5 size range. Many aerosol and solid compounds are part of PM2.5.	Combustion including motor vehicles, other mobile sources, and industrial activities; residential and agricultural burning; also formed through atmospheric chemical (including photochemical) reactions involving other pollutants including NO_x, sulfur oxides (SO_x), ammonia, and ROG.
Nitrogen Dioxide (NO_2)	1 hour Annual	0.25 ppm –	– 0.053 ppm	Attainment	Attainment/ Unclassified	Irritating to eyes and respiratory tract. Colors atmosphere reddish-brown. Contributes to acid rain.	Motor vehicles and other mobile sources; refineries; industrial operations.
Sulfur Dioxide (SO_2)	1 hour 3 hours 24 hours Annual	0.25 ppm – 0.04 ppm –	– 0.5 ppm 0.14 ppm 0.030 ppm	Attainment	Attainment/ Unclassified	Irritates respiratory tract; injures lung tissue. Can yellow plant leaves. Destructive to marble, iron, steel. Contributes to acid rain. Limits visibility.	Fuel combustion (especially coal and high-sulfur oil), chemical plants, sulfur recovery plants, metal processing.

Sources: California Air Resources Board Ambient Air Quality Standards chart, 05/17/2006 (http://www.arb.ca.gov/aqs/aaqs2.pdf)
Sonoma-Marin Area Rail Transit Draft Air Pollutant Standards and Effects table, November 2005, page 3-52.
U.S. EPA and California Air Resources Board air toxics websites, 05/17/2006

Notes: ppm = parts per million; µg/m^3 = micrograms per cubic meter

[a] Annual PM10 NAAQS revoked October 2006; was 50 µg/m^3. 24-hr. PM2.5 NAAQS tightened October 2006; was 65 µg/m^3.
[b] 12/22/2006 Federal court decision may affect applicability of Federal 1-hour ozone standard. Prior to 6/2005, the 1-hour standard was 0.12 ppm. Case is still in litigation.
[c] Rounding to an integer value is not allowed for the State 8-hour CO standard. A violation occurs at or above 9.05 ppm.
[d] The ARB has identified lead, vinyl chloride, and the particulate matter fraction of diesel exhaust as toxic air contaminants. Diesel exhaust particulate matter is part of PM10 and, in larger proportion, PM2.5. Both the ARB and U.S. EPA have identified various organic compounds that are precursors to ozone and PM2.5 as toxic air contaminants. There is no threshold level of exposure for adverse health effect determined for toxic air contaminants, and control measures may apply at ambient concentrations below any criteria levels specified for these pollutants or the general categories of pollutants to which they belong.

Environmental Consequences

This project would not contribute to a PM_{10} hot spot that would cause or contribute to violation of the PM_{10} National Ambient Air Quality Standards. Caltrans has completed this PM_{10} and $PM_{2.5}$ assessment and has determined that this project is not a "Project of Air Quality Concern"; therefore, no further analysis is required.

Short-Term Construction Impacts: Due to the extensive improvements, the Ultimate Build Alternative would have considerably more construction-related impacts than the Minimum Build Alternative would. During construction, the proposed project would generate air pollutants. The exhaust from construction equipment contains hydrocarbons, oxides of nitrogen, carbon monoxide, suspended particulate matter, and odors. However, the largest percentage of pollutants would be windblown dust generated during excavation, grading, hauling, and various other activities. The impacts of these activities would vary each day as construction progresses. Dust and odors at some residences very close to the right-of-way could cause occasional annoyance and complaints, but Caltrans Standard Specifications pertaining to dust control and dust palliative would be in place to address these impacts.

Madera County is not among the counties listed as containing serpentine and ultramafic rock (Governor's Office of Planning and Research, October 26, 2000). 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.

Avoidance, Minimization, and/or Mitigation Measures

The San Joaquin Valley Air Pollution Control District requires an Air Impact Analysis for Indirect Source Review to be submitted for evaluation of potential construction emissions of PM_{10} and oxides of nitrogen. The Air Impact Analysis calculates emissions resulting from the construction phase of this project. Mitigation is required in the form of payment, calculated per ton of pollutants emitted. Other methods, such as mandating a construction fleet is "newer than average" is possible.

Direct operational impacts of construction would include increased particulate matter and mobile source air toxics at receptors determined to be near the project site. Paved shoulders would reduce PM_{10} emissions from road dust. Improved traffic flow due to reconfiguration would decrease carbon monoxide emissions, thus contributing to attainment in the San Joaquin Valley Air Basin for carbon monoxide.

Caltrans Standard Specifications pertaining to dust control and dust palliative requirement is a required part of all construction contracts and should effectively reduce and control emission impacts during construction. The provisions of Caltrans Standard Specifications, Section 7-1.0F "Air Pollution Control" and Section 10 "Dust Control," require the contractor to comply with San Joaquin Valley Air Pollution Control District rules, ordinances, and regulations.

2.2.6 Noise and Vibration

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.

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 2.14 lists the noise abatement criteria for use in the National Environmental Policy Act and 23 Code of Federal Regulations 772 analysis, and Figure 2.4 shows the noise levels of typical activities.

Table 2.14 Activity Categories and Noise Abatement Criteria

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

Source: Caltrans Traffic Noise Analysis Manual, 1998
A-weighted decibels are adjusted to approximate the way humans perceive sound. Leq(h) is the steady A-weighted level that is equivalent to the same amount of energy as that contained in the actual time-varying levels over one hour.

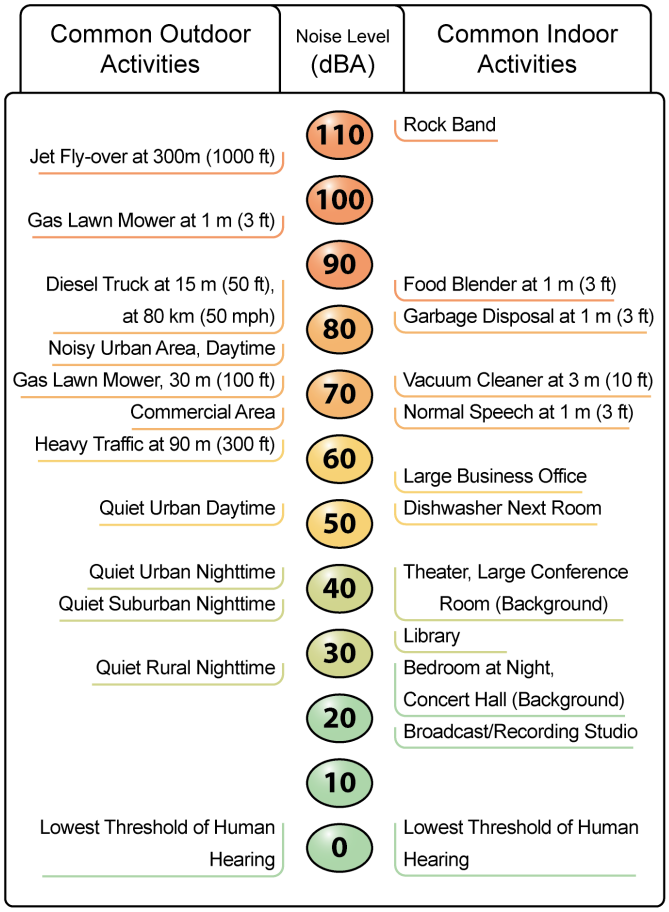


Figure 2.4 Typical Noise Levels

California Environmental Quality Act

The California Environmental Quality Act requires a strictly no-build 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

In accordance with Caltrans' *Traffic Noise Analysis Protocol for New Highway Construction and Reconstruction Projects, October 1998*, 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 in 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 basically 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 basically a cost-benefit analysis. Factors used in determining whether a proposed noise abatement measure is reasonable include residents' acceptance, the absolute noise level, build versus existing noise, environmental impacts of abatement, public and local agencies' input, newly constructed development versus development before 1978, and the cost per benefited residence.

Affected Environment

A Noise Study Report to document noise impacts and any required noise abatement measures was completed in September 2008 for the proposed project.

Except for highway business development west of State Route 99, the project area is sparsely developed. The only sensitive receptor is a single-family residence at the eastern end of the project area. The distance between the residence and the edge of the roadway is approximately 200 feet.

The existing noise level at this location was measured in May 2008. The noise level was 59.7 dBA (decibels A-weighted sound level). The dBA measurement criteria tend to de-emphasize lower-frequency sounds and is generally used to measure the magnitude of traffic noise.

Environmental Consequences under the National Environmental Policy Act

Noise levels at the sensitive noise receptor were predicted using the same variables as the existing noise measurement but corrected for the projected 2035 design year traffic levels. Future noise levels at this location would increase to 62.8 dBA if the proposed project were built. This level does not exceed the noise abatement criteria of 67 dBA for this type of receptor. Table 2.15 shows the Noise Study Report findings.

Table 2.15 Noise Measurement Levels

Receptor # and Location	Activity Category and NAC	Existing Noise Level (dBA)	Predicted Noise Level without Project (dBA)	Predicted Noise Level with Project (dBA)	Predicted Noise Level with Abatement
1# 29384 Avenue 12	B (67)	59.7	62.8	62.8	Not required

dBA: decibels A-weighted sound level
NAC: Noise Abatement Criteria

Noise levels in the vicinity of the proposed project would increase during construction activities. The amount of increased noise would vary with the types and models of equipment used. See Table 2.16 for noise levels of typical construction equipment. The noise would decrease from up to 6 to 7.5 dBA with each doubling of the distance away from the noise source.

Table 2.16 Highway Construction Equipment Noise Levels

Equipment type	Noise Level Range in decibels (dBA) at 50 Feet
Bulldozers	77-95
Compressors	70-95
Cranes	70-94
Front Loaders	75-96
Graders	72-92
Scrapers	70-95
Backhoes	74-92

Federal Highway Administration Highway Noise Manual: Highway Construction Noise: Measurement, Prediction and Mitigation

Average noise from normal construction activities can be as much as 86 decibels at 50 feet from the source. Residences up to 300 feet from the construction activity could experience temporary noise levels greater than the noise abatement criteria level. Nighttime construction is possible with this project.

Avoidance, Minimization, and/or Noise Abatement under the National Environmental Policy Act

Because the projected noise levels do not exceed the noise abatement criteria of 67 dBA, noise abatement for permanent impacts is not recommended. Measures to reduce temporary construction noise impacts include:

- Notice would be published in local news media of the dates and duration of proposed construction activity. A telephone number would be included to answer questions about the project from local residents.
- When possible, noisier construction activities closest to residences would be scheduled during the earlier parts of the evening or afternoon.
- If complaints are received, temporary noise barriers can be constructed where construction activities are conducted near residential receptors. These consist of plywood sheets on portable concrete barriers.

Environmental Consequences under the California Environmental Quality Act

Because the proposed work does not cause a substantial increase, defined as an increase of 12 decibels over existing noise levels at any location, the project has no significant noise impacts under California Environmental Quality Act.

Avoidance, Minimization, and/or Noise Abatement under the California Environmental Quality Act

No permanent noise abatement is recommended because there are no significant noise impacts. Temporary construction noise impact minimization methods would be the same as those listed under the National Environmental Policy Act.

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 in Threatened and Endangered Species, Section 2.3.4. Wetlands and other waters are discussed in Section 2.3.2.

Affected Environment

Riparian habitat occurs along the edges of Cottonwood Creek. The habitat is highly altered from its native state due to human activities and the introduction of non-native invasive species.

Aquatic habitat is limited to Cottonwood Creek. This watercourse supports aquatic insects, freshwater fishes, amphibians, freshwater crustaceans, and aquatic plants. Bats and birds may also use aquatic habitat for foraging on flying insects attracted to open water. While not a natural community, agricultural lands are discussed here because it is the dominant land use and it supports some wildlife. These areas are highly disturbed and provide minimal habitat for terrestrial wildlife, except for common species such as mice, California ground squirrel, mourning dove, common crow, northern mockingbird, Brewer's blackbird, non-native rats, and feral cats.

There is no designated critical habitat within the biological study area for the proposed project.

Environmental Consequences

It is anticipated that the project would result in impacts to riparian habitat. Tree removal would be required within 30 feet on either side of the existing Cottonwood Creek bridge. Native riparian trees that would be removed include cottonwood and Gooding's black willow.

Avoidance, Minimization, and/or Mitigation Measures

To the maximum extent feasible, native riparian trees would be avoided and protection measures would be implemented to protect avoided riparian trees from project-related activities.

Before construction, Caltrans would establish Environmentally Sensitive Areas, consisting of orange mesh fencing around each avoided riparian tree. In addition, the

limits of the construction area would be flagged, and all activity would be confined within the marked area.

Compensatory mitigation would be required by the California Department of Fish and Game to receive a Streambed Alteration Agreement for work in and around the streambed of the Cottonwood Creek bridge. The required compensatory mitigation would include replanting native riparian trees in-kind at a 3:1 ratio for trees between 4 to 25 inches diameter at breast height. Trees over 25 inches diameter at breast height are defined as "heritage" trees and require replanting at the higher ratio of 10:1.

An evaluation would be conducted before submission of the Streambed Alteration Agreement permit application to determine the number of native riparian trees planned for removal. Caltrans would develop an on-site re-vegetation plan to mitigate for project impacts.

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 United States 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: 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 significantly 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

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.

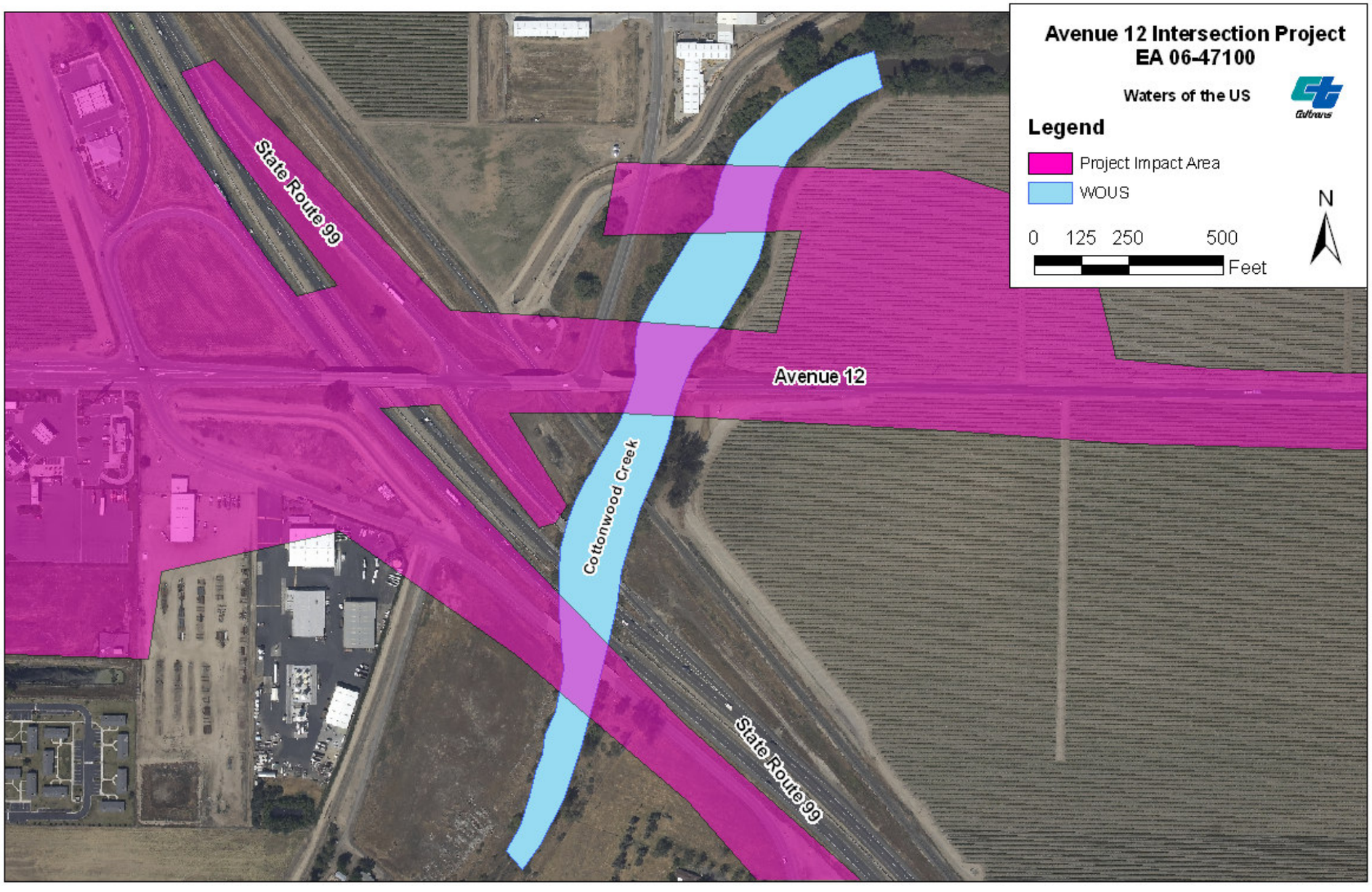
At the state level, wetlands and waters are regulated mainly by the California Department of Fish and Game and the Regional Water Quality Control Boards. In certain circumstances, the Coastal Commission (or Bay Conservation and Development Commission) may also be involved. Sections 1600-1607 of the Fish 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 additional details.

Affected Environment

Cottonwood Creek has been identified as a jurisdictional water of the U.S. The creek is a tributary to navigable waters of the U.S. making it a jurisdictional water. This stream provides aquatic habitat for local wildlife species. No jurisdictional wetlands have been identified on-site. Figure 2.5 displays the boundaries of jurisdictional water of the U.S.

Figure 2.5 Waters of the U.S.



Environmental Consequences

The project area contains 2.08 acres of waters of the U.S. It is anticipated that the project would result in permanent and temporary impacts to portions of the identified waters of the U.S.

Avoidance, Minimization, and/or Mitigation Measures

These waters would be affected by the proposed project activities and would therefore require a Section 404 permit from the U.S. Army Corps of Engineers, a Section 401 certification from the Regional Water Quality Control Board, and a Section 1602 Streambed Alteration Agreement from the California Department of Fish and Game. For additional information see Avoidance, Minimization and/or Mitigation Measures in the previous section 2.3.1 Natural Communities.

Terms, conditions, and provisions provided within the Clean Water Act Section 404 permit, Clean Water Act Section 401 permit, and Streambed Alteration Agreement are designed to minimize and avoid impacts to the waterway. Caltrans would receive these permits and would include these permits in the solicitation for contractor bid information. In addition, the project would incorporate standard Caltrans best management practices to prevent impacts related to degradation of water quality.

Before construction, Caltrans would establish an Environmentally Sensitive Area consisting of orange mesh fencing to avoid unplanned accidental construction-related impacts to waters of the U.S.

To ensure no net loss of waters of the U.S., one or more of the following options would compensate for the permanent loss of waters:

- Payment of the appropriate mitigation fee
- Dedication of mitigation lands
- Purchase of approved mitigation bank credits/in-lieu fees; or development of an alternative mitigation plan

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 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 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

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

Foraging and nesting habitat for various migratory birds exists throughout the project area. Migratory birds that could nest within the project area include the mourning dove, house finch, northern mockingbird, red-tailed hawk, red-shouldered hawk, black phoebe, Brewer's blackbird and Western meadowlark. Birds within California have an approximate breeding and nesting season from February 15 to September 1.

Roosting bats were seen under the State Route 99 northbound and southbound bridges over Cottonwood Creek. Focused surveys identifying species and population size were not conducted because these two bridges would not be affected by the project.

Common bat species that could occupy the project area include the big brown bat, western red bat, California myotis, western pipistrelle, and Brazilian free-tailed bat. Several bat species listed as California Department of Fish and Game species of special concern could occupy the proposed project area, including:

- The pallid bat is a California Department of Fish and Game species of special concern year-round resident of California that is most often found in low to middle elevation areas.

- The Townsend's big-eared bat is a California Department of Fish and Game species of special concern that is associated with caves and mines, but sometimes uses bridge structures for roosting.
- The fringed myotis bat is a California Department of Fish and Game species of special concern that is found from coastal regions to at least 6,400 feet elevation within the Sierra Nevada.
- The western small-footed myotis bat distribution in California is poorly understood. The Western Bat Working Group considers it a medium priority species.
- The Yuma myotis bat is a California Department of Fish and Game species of special concern that is found throughout California. This species is associated with low elevation reservoirs where it roosts commonly in buildings. The Yuma myotis also frequently uses bridge structures for day and night roosting.

Environmental Consequences

With implementation of avoidance and minimization measures, impacts to migratory birds and bats are not anticipated. No impacts to bat species listed as California Species of Concern are anticipated with implementation of avoidance and minimization measures.

Avoidance, Minimization, and/or Mitigation Measures

Due to the implementation of avoidance and minimization efforts, no compensatory mitigation is proposed for potential impacts to migratory birds or bats.

Migratory Birds

Trees, shrubs and other vegetation would be removed before the nesting season of migratory birds. If removal of nests is deemed necessary, the removal would occur during the time of year when the nests are not used (approximately September 2 to February 14).

A pre-construction survey for migratory birds within the proposed project area and adjacent habitat would be conducted 14-30 days before construction starts. If an active nest were detected, the California Department of Fish and Game would be consulted and an Environmentally Sensitive Area around the nest site may be established to prevent nesting disturbance. Work may be temporarily stopped if nesting activity cannot be prevented. Standard specifications would be included in the construction bid package to avoid impacts to migratory birds.

Bats

Construction activities that would disturb a maternity roost or seasonal roost for bats, whether or not the bats are special-status species, is prohibited by Caltrans. Caltrans' goal is to maintain and operate structures for the purposes of transportation without adversely affecting bat populations, while also balancing the needs of bats with the safety of transportation workers. The bridges containing habitat for bat species would be avoided by construction.

2.3.4 Threatened and Endangered Species

Regulatory Setting

The main federal law protecting threatened and endangered species is the Federal Endangered Species Act: 16 United States Code, Section 1531, et seq. See also 50 Code of Federal Regulations Part 402. This act and subsequent amendments provide for the conservation of endangered and threatened species and the ecosystems on which they depend.

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 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

Two threatened or endangered species may occupy the proposed project area:

Vernal Pool Fairy Shrimp

The vernal pool fairy shrimp is a federally threatened crustacean found in vernal pools or vernal pool-like habitats. Within the Central Valley, it is common for the vernal pool fairy shrimp to also occupy disturbed sites that lack the presence of other species. This fairy shrimp ranges from one-half inch to 1 inch long and has a short lifespan of about 139 days.

Swainson's Hawk

The Swainson's hawk is listed by the State of California as threatened and is protected by the Migratory Bird Treaty Act. This hawk is a summer migrant in the Central Valley that breeds in stands with few trees. Breeding occurs from late March to late August, with peak activity occurring in late May through July. Formerly abundant in California, the population has declined from the loss of nesting habitat.

Environmental Consequences

It is anticipated that there will be a "no-effect" determination on listed Threatened and Endangered Species.

Vernal Pool Fairy Shrimp

Impacts to the vernal pool fair shrimp are not expected because no vernal pool fairy shrimp were found during surveys in the project impact area.

Swainson's Hawk

Though no active Swainson's hawk nests were found during surveys, two Swainson's hawks (a pair) were regularly seen along Cottonwood Creek, downstream of the project impact area. No direct impacts to the Swainson's hawks are expected to occur as a result of the proposed project. However, pre-construction surveys for the Swainson's hawk would be conducted.

Avoidance, Minimization, and/or Mitigation Measures

Vernal Pool Fairy Shrimp

Due to lack of presence within the project impact area, avoidance and minimization measures are not necessary for the vernal pool fairy shrimp.

Swainson's Hawk

Pre-construction surveys for this species would be conducted no less than 14 days and no more than 30 days before the project starts. If an active nest were detected, minimization efforts would be coordinated with the California Department of Fish and Game. These efforts may include having a "no work" buffer zone around an active nest and/or a qualified biologist assigned to monitor an active nest during construction activities to ensure that no interference with the hawk's breeding activities would occur.

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, eggs, 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 project area was evaluated for the presence of invasive plant species based on the California Department of Food and Agriculture Noxious Weed List and the Federal Weed List. The following invasive plant species on the state noxious weed list were found in the existing right-of-way of the project area: yellow star thistle, field bindweed, Russian thistle, sunflower, Bermuda grass. The project area does not contain any plant species listed on the federal noxious weed list.

The U.S. Department of Agriculture considers bullfrogs an invasive species that competes with and preys on native species. Bullfrog larvae were found in the project area during surveys.

Environmental Consequences

This project would not include transportation of invasive animals and would not change the surrounding habitat to encourage immigration of invasive animals to the site. With implementation of preventative measures addressed in the next section, the proposed project would not facilitate the spread of invasive plant species.

Avoidance, Minimization, and/or Mitigation Measures

- All equipment and vehicles would be properly maintained and cleaned before bringing them on-site to avoid transporting dirt and seed material to the project site.
- Erosion control free of noxious weed materials should be used.
- Any fill material brought on-site must be free of noxious weed materials.
- If there were a need for off-site disposal of excess fill at the end of construction, special considerations would be made to prevent the spread of noxious weeds.
- All equipment and vehicles shall be properly cleaned when leaving the project site to avoid spreading noxious weeds to other sites by transporting dirt and seed material.

2.4 Climate Change under the California Environmental Quality Act

Regulatory Setting

While climate change has been a concern since at least 1988, as evidenced by the establishment of the United Nations and World Meteorological Organization's Intergovernmental Panel on Climate Change (IPCC), the efforts devoted to greenhouse gas emissions reduction and climate change research and policy have increased dramatically in recent years. These efforts are primarily concerned with the emissions of greenhouse gases related to human activity that include carbon dioxide (CO_2), methane, nitrous oxide, tetrafluoromethane, hexafluoroethane, sulfur hexafluoride, HFC-23 (fluoroform), HFC-134a (1, 1, 1, 2 –tetrafluoroethane), and HFC-152a (difluoroethane).

In 2002, with the passage of Assembly Bill 1493 (AB 1493), California launched an innovative and pro-active approach to dealing with greenhouse gas emissions and climate change at the state level. Assembly Bill 1493 requires the California Air Resources Board (CARB) to develop and implement regulations to reduce automobile and light truck greenhouse gas emissions. These stricter emissions standards were designed to apply to automobiles and light trucks beginning with the 2009-model year; however, in order to enact the standards California needed a waiver from the U.S. Environmental Protection Agency. The waiver was denied by the Environmental Protection Agency in December 2007 and efforts to overturn the decision have been unsuccessful. See *California v. Environmental Protection Agency*, 9th Cir. Jul. 25, 2008, No. 08-70011.

On June 1, 2005, Governor Arnold Schwarzenegger signed Executive Order S-3-05. The goal of this order is to reduce California's greenhouse gas emissions to: 1) 2000 levels by 2010, 2) 1990 levels by the 2020 and 3) 80% below the 1990 levels by the year 2050. In 2006, this goal was further reinforced with the passage of Assembly Bill 32 (AB 32), the Global Warming Solutions Act of 2006. AB 32 sets the same overall greenhouse gas emissions reduction goals while further mandating that California 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 further directs state agencies to begin implementing AB 32, including the recommendations made by the state's Climate Action Team.

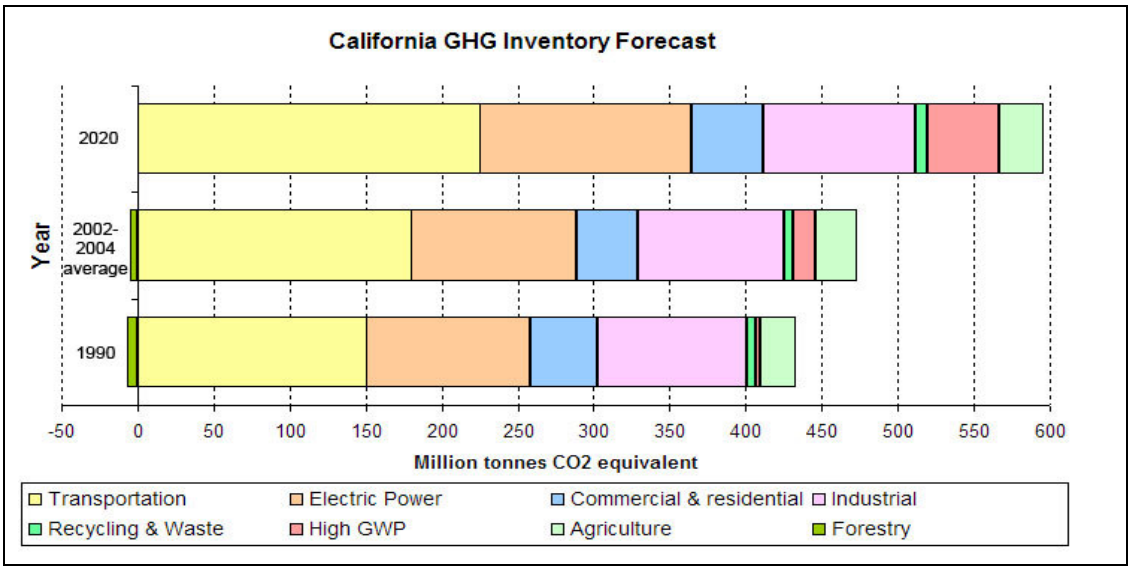
With Executive Order S-01-07, Governor Schwarzenegger set forth the low carbon fuel standard for California. Under this order, the carbon intensity of California's transportation fuels is to be reduced by at least 10% by 2020.

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

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. Rather, global climate change is a cumulative impact. This means that a project may participate in a potential impact through its incremental contribution combined with the contributions of all other sources of greenhouse gases. In assessing cumulative impacts, it must be determined if a project's incremental effect is "cumulatively considerable." See California Environmental Quality Act Guidelines sections 15064(i)(1) and 15130.

To make this determination the incremental impacts of the project must be compared with the effects of past, current, and probable future projects. To gather sufficient information on a global scale of all past, current, and future projects in order to make this determination is a difficult if not impossible task.

As part of its supporting documentation for the Draft Scoping Plan, the California Air Resources Board recently released an updated version of the greenhouse gas inventory for California (June 26, 2008). Figure 2.6 is a graph from that update that shows the total greenhouse gas emissions for California for 1990, 2002-2004 average, and 2020 projected if no action is taken.



Source: http://www.arb.ca.gov/cc/inventory/data/forecast.htm

Figure 2.6 California Greenhouse Gas Inventory

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

One of the main strategies in the Caltrans' Climate Action Program to reduce greenhouse gas emissions is to make California's transportation system more efficient. Transportation's contribution to greenhouse gas emissions is dependent on 3 factors: the types of vehicles on the road, the type of fuel the vehicles use, and the time/distance the vehicles travel. The highest levels of CO_2 from mobile sources, such as automobiles, occur at stop-and-go speeds (0-25 miles per hour). Optimum speeds are between 45 and 50 miles per hour. Looking at the state transportation system as a whole, enhancing operations and improving travel times in high congestion travel corridors may lead to an overall reduction in greenhouse gas emissions.

Project Analysis

Many studies show that an increase in traffic volume correlates to higher overall CO_2 emissions. Although traffic volume is slated to be substantially higher in the targeted

years, it should be noted that the completion of either the Minimum or Ultimate Build Alternative would increase traffic speed and flow, decrease congestion, and improve Levels of Service. By adding lanes, turn-lane channelization, and ramp improvements, traffic density would be more evenly distributed across several lanes, thus increasing traffic flow stability and reducing congestion. Restoration of a free-flowing, "steady-state" traffic pattern would reduce the amount of CO_2 emissions.

The lower average speeds anticipated with the No-Build Alternative equates to more time spent on the road, contributing to higher CO_2 per mile emission rates.

With the current science, project-level analysis of greenhouse gas emissions is limited. There are numerous key greenhouse gas variables that are likely to change dramatically during the design life of the proposed project and would thus dramatically change the projected CO_2 emissions.

First, vehicle fuel economy is increasing. The Environmental Protection Agency's annual report, *Light-Duty Automotive Technology and Fuel Economy Trends: 1975 through 2008* (http://www.epa.gov/oms/fetrends.htm), which provides data on the fuel economy and technology characteristics of new light-duty vehicles including cars, minivans, sport utility vehicles, and pickup trucks, confirms that average fuel economy, has improved each year beginning in 2005, and is now the highest since 1993.

Most of the increase since 2004 is due to higher fuel economy for light trucks, following a long-term trend of slightly declining overall fuel economy that peaked in 1987. These vehicles also have a slightly lower market share, peaking at 52% in 2004, with projections at 48% in 2008.

Table 2.17 Required Miles Per Gallon by Alternative

2015 Required Miles Per Gallon (mpg) by Alternative							
No-Build		**25% Below Optimized**	**Optimized (Preferred)**	**25% Above Optimized**	**50% Above Optimized**	**Total Costs Equal Total Benefits**	**Technology Exhaustion**
Cars	27.5	33.9	35.7	37.5	39.5	43.3	52.6
Trucks	23.5	27.5	28.6	29.8	30.9	33.1	34.7

Table 2.17 shows the alternatives for vehicle fuel economy increases currently being studied by the National Highway Traffic Safety Administration in its Draft

Environmental Impact Statement for New Corporate Average Fuel Economy Standards (June 2008).

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

> "Large advancements have occurred in fuel cell vehicle and hydrogen infrastructure technology over the past 15 years. Fuel cell technology has progressed substantially resulting in power density, efficiency, range, cost, and durability all improving each year. In another sign of progress, automotive developers are now demonstrating over 100 fuel cell vehicles in California – several in the hands of the general public – with configurations designed to be attractive to buyers. Cold-weather operation and vehicle range challenges are close to being solved, although vehicle cost and durability improvements are required before a commercial vehicle can be successful without incentives. The pace of development is on track to approach pre-commercialization within the next decade.
>
> "A number of the U.S. Department of Energy 2010 milestones for fuel cell vehicles development and commercialization are expected to be met by 2010. Accounting for a five to six year production development cycle, the scenarios developed by the U.S. DOE suggest that 10,000s of vehicles per year from 2015 to 2017 would be possible in a federal demonstration program, assuming large cost share grants by the government and industry are available to reduce the cost of production vehicles."[1]

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

Fourth, driver behavior has been changing as the U.S. economy and oil prices have changed. In its January 2008 report, *Effects of Gasoline Prices on Driving Behavior and Vehicle Market*, http://www.cbo.gov/ftpdocs/88xx/doc8893/01-14-GasolinePrices.pdf, the Congressional Budget Office found the following results based on data collected from California: 1) freeway motorists have adjusted to higher gas prices by making fewer trips and driving more slowly; 2) the market share of sports utility vehicles is declining; and 3) the average prices for larger, less-fuel-efficient models have declined over the past five years as average prices for the most-fuel-efficient automobiles have risen, showing an increase in demand for the more fuel-efficient vehicles.

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

Taken from pp. 3-48 and 3-49 of the National Highway Traffic Safety Administration Draft Environmental Impact Statement for New Corporate Average Fuel Economy Standards (June 2008), Figure 2.7 shows how the range of uncertainties in assessing greenhouse gas impacts grows with each step of the analysis:

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

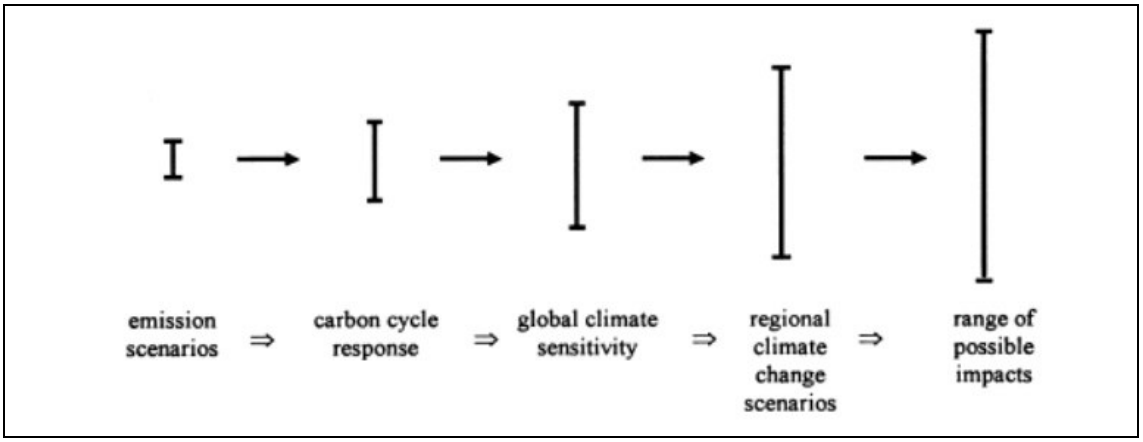


Figure 2.7 Cascade of Uncertainties

Much of the uncertainty in assessing an individual project's impact on climate change surrounds the global nature of the climate change. Even assuming that the target of meeting the 1990 levels of emissions is met, there is no regulatory framework in place that would allow for a ready assessment of what the modeled 11.4- to 20.9-ton increase in CO_2 emissions would mean for climate change given the overall California greenhouse gas emissions inventory of approximately 430 million tons of CO_2 equivalent. This uncertainty only increases when viewed globally.

The Intergovernmental Panel on Climate Change has created multiple scenarios to project potential future global greenhouse gas emissions as well as to evaluate potential changes in global temperature, other climate changes, and their effect on human and natural systems. These scenarios vary in terms of the type of economic development, the amount of overall growth, and the steps taken to reduce greenhouse gas emissions. Non-mitigation Intergovernmental Panel on Climate Change scenarios project an increase in global greenhouse gas emissions by 9.7 billion metric tons CO

up to 36.7 billion metric tons CO_2 from 2000 to 2030, which represents an increase of between 25 and 90%.[2]

The assessment is further complicated by the fact that changes in greenhouse gas emissions can be difficult to attribute to a particular project because the projects often cause shifts in the locale for some type of greenhouse gas emissions, rather than causing "new" greenhouse gas emissions. Although some of the emission increases might be new, a net global increase, reduction, or no change, is uncertain and there are no models approved by regulatory agencies that operate at the global or even statewide scale.

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

> "In analyzing across the Corporate Average Fuel Economy 30 alternatives, the mean change in the global mean surface temperature, as a ratio of the increase in warming between the B1 (low) to A1B (medium) scenarios, ranges from 0.5 percent to 1.1 percent. The resulting change in sea level rise (compared to the No Action Alternative) ranges, across the alternatives, from 0.04 centimeter to 0.07 centimeter. In summary, the impacts of the MY 2011-2015 Corporate Average Fuel Economy alternatives on global mean surface temperature, sea level rise, and precipitation are relatively small in the context of the expected changes associated with the emission trajectories. This is due primarily to the global and multi-sectoral nature of the climate problem. Emissions of CO_2, the primary gas driving the climate effects, from the United States automobile and light truck fleet represented about 2.5 percent of total global emissions of all greenhouse gases in the year 2000 (EPA, 2008; CAIT, 2008). While a significant source, this is a still small percentage of global emissions, and the relative contribution of CO_2 emissions from the United States light vehicle fleet is expected to decline in the future, due primarily to rapid growth of emissions from developing economies (which are due in part to growth in global transportation sector emissions)." [NHTSA Draft Environmental Impact Statement for New Corporate Average Fuel Economy Standards, June 2008, pp.3-77 to 3-78]

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

CEQA Conclusion

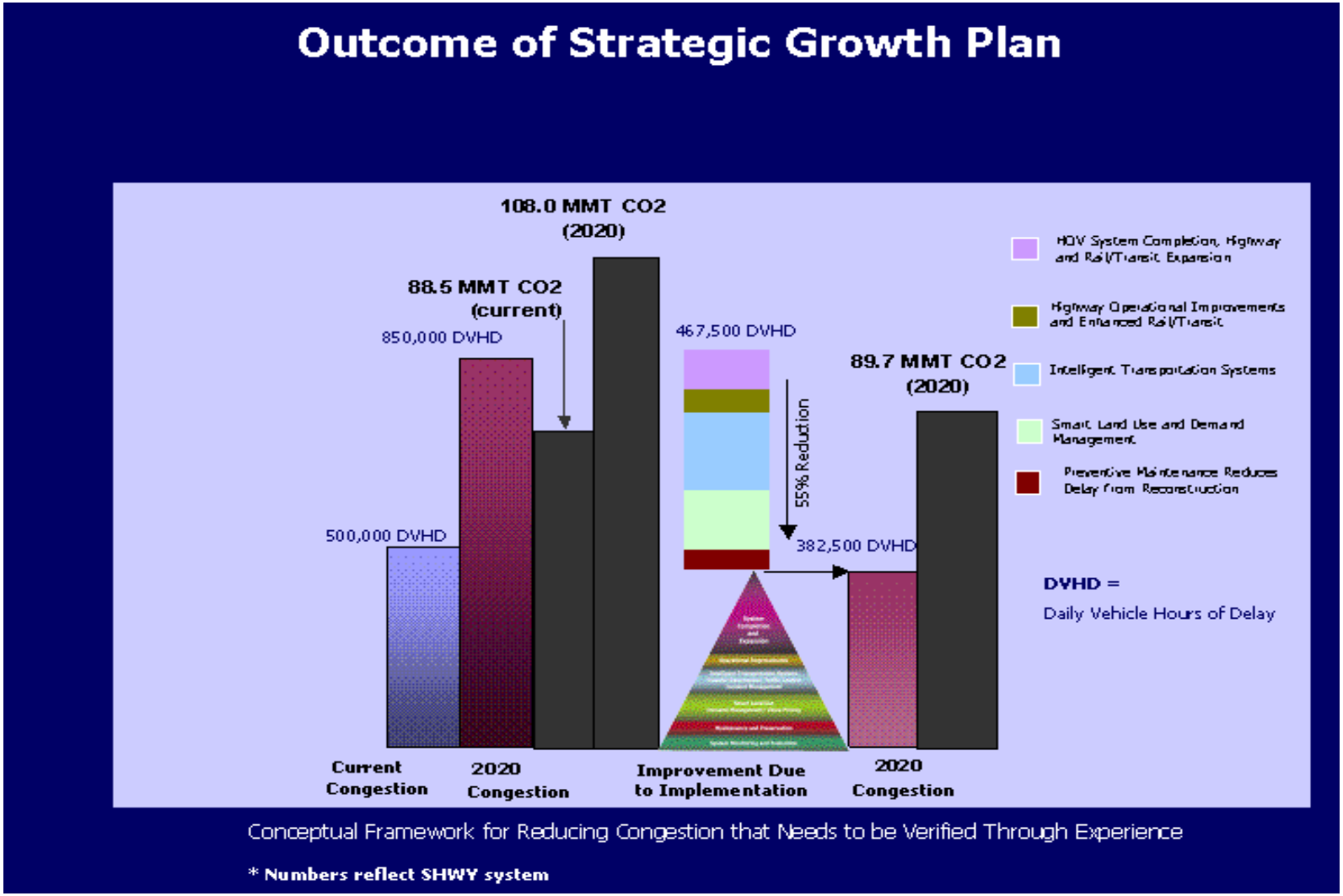
Based on the above, it is Caltrans' determination that in the absence of further regulatory or scientific information related to greenhouse gas emissions and California Environmental Quality Act significance, it is too speculative to make a determination regarding the project's direct impact and its contribution on the cumulative scale to climate change. However, as previously stated, Caltrans does anticipate a reduction in greenhouse gas emissions with the project. Nonetheless, Caltrans is taking further measures to help reduce energy consumption and greenhouse gas emissions. These measures are outlined in the following section.

AB 32 Compliance

Caltrans continues to be actively involved on the Governor's Climate Action Team as the California Air Resources Board works to implement AB 1493 and help achieve the targets set forth in Assembly Bill 32. Many of the strategies Caltrans is using to help meet the targets in Assembly Bill 32 come from the California Strategic Growth Plan, which is updated each year. Governor Arnold Schwarzenegger's Strategic Growth Plan calls for a $222 billion infrastructure improvement program to fortify the state's transportation system, education, housing, and waterways, including $107 billion in transportation funding during the next decade.

As shown in Figure 2.8, the Strategic Growth Plan targets a significant decrease in traffic congestion below today's level and a corresponding reduction in greenhouse gas emissions. The Strategic Growth Plan proposes to do this while accommodating growth in population and the economy. A suite of investment options has been created that combined together yield the promised reduction in congestion. The Strategic Growth Plan relies on a complete systems approach of a variety of strategies: system monitoring and evaluation, maintenance and preservation, smart land use and demand management, and operational improvements.

Figure 2.8 Outcome of Strategic Growth Plan



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

Caltrans is also supporting efforts to improve the energy efficiency of the transportation sector by increasing vehicle fuel economy in new cars, light and heavy-duty trucks; Caltrans is doing this by supporting ongoing research efforts at universities, by supporting legislation efforts to increase fuel economy, and by its participation on the Climate Action Team. It is important to note, however, that the control of the fuel economy standards is held by the U.S. Environmental Protection Agency and the California 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.

Table 2.18 summarizes the Department and statewide efforts that Caltrans is implementing to reduce greenhouse gas emissions. For more detailed information about each strategy, please see *Climate Action Program at Caltrans* (December 2006); it is available at http://www.dot.ca.gov/docs/ClimateReport.pdf.

Table 2.18 Climate Change Stratgies

Strategy	Program	Partnership		Method/Process	Estimated CO2 Savings (MMT)	
		Lead	Agency		2010	2020
Smart Land Use	Intergovernmental Review (IGR)	Caltrans	Local Governments	Review and seek to mitigate development proposals	Not Estimated	Not Estimated
	Planning Grants	Caltrans	Local and regional agencies and other stakeholders	Competitive selection process	Not Estimated	Not Estimated
	Regional Plans and Blueprint Planning	Regional Agencies	Caltrans	Regional plans and application process	0.975	7.8
Operational Improvements & Intelligent Trans. System (ITS) Deployment	Strategic Growth Plan	Caltrans	Regions	State ITS; Congestion Management Plan	0.007	2.17
Mainstream Energy & Greenhouse Gas into Plans and Projects	Office of Policy Analysis & Research; Division of Environmental Analysis	Interdepartmental effort		Policy establishment, guidelines, technical assistance	Not Estimated	Not Estimated
Educational & Information Program	Office of Policy Analysis & Research	Interdepartmental, Cal EPA, CARB, CEC		Analytical report, data collection, publication, workshops, outreach	Not Estimated	Not Estimated
Fleet Greening & Fuel Diversification	Division of Equipment	Department of General Services		Fleet Replacement B20 B100	0.0045	0.0065 0.45 .0225
Non-vehicular Conservation Measures	Energy Conservation Program	Green Action Team		Energy Conservation Opportunities	0.117	0.34
Portland Cement	Office of Rigid Pavement	Cement and Construction Industries		2.5 % limestone cement mix 25% fly ash cement mix > 50% fly ash/slag mix	1.2 0.36	3.6
Goods Movement	Office of Goods Movement	Cal EPA, CARB, BT&H, MPOs		Goods Movement Action Plan	Not Estimated	Not Estimated
Total					2.72	18.67

BT&H-Business, Transportation and Housing Agency
Cal EPA—California Environmental Protection Agency
CARB—California Air Resources Board
CEC—California Energy Commission
MMT-Million Miles Traveled
MPOs—Metropolitan Planning Organizations

To the extent that it is applicable or feasible for the project and through coordination with the project development team, the following measures would also be included in the project to reduce the greenhouse gas emissions and potential climate change impacts from the project:

- Riparian planting would be included to maintain shade along creek corridors. In the short term, immature tree planting would probably not offset greenhouse gas produced as a result of project construction, however in the long-term tree planting should enhance the potential storage of carbon within the project area and greenhouse gas emission levels would in theory continue to improve over time as the trees become more mature.
- The project would seed slopes, drainage channels, and other disturbed areas with native and drought-tolerant shrubs, perennials and grasses.

The following "green" practices and materials would be used in the project as part of highway planting and erosion control work:

- PVC irrigation pipe with recycled content
- Non-chlorinated high-density polyethylene irrigation crossover conduit
- Compost and soil amendments derived from sewage sludge and green waste materials
- Fiber produced from recycled pulp such as newspaper, chipboard, cardboard
- Wood mulch made from green waste and/or clean manufactured wood or natural wood
- Native and drought-tolerant seed and plants species
- Irrigation controllers including water conservation features and solar or battery power
- Restricted pesticide use and reduction goals

The State of California maintains several websites that provide public information on measures to improve renewable energy use, energy efficiency, water conservation and efficiency, land use and landscape maintenance, solid waste measures, and transportation alternatives.

Chapter 3 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 and interagency coordination meetings. This chapter summarizes the results of Caltrans' efforts to identify, address, and resolve project-related issues through early and continuing coordination.

November 8, 2007: Caltrans sent a letter to Susan Jones of the U.S. Fish and Wildlife Service requesting guidance regarding habitat suitability for the vernal pool fairy shrimp and San Joaquin kit fox in the project area.

December 4, 2007: A site visit with Caltrans biologist Sarah Paulson and Rocky Montgomery of the U.S. Fish and Wildlife Service was conducted to review the habitat suitability for the vernal pool fairy shrimp. The U.S. Fish and Wildlife Service recommended completing protocol surveys for vernal pool invertebrates to rule out presence of listed species within the pools collecting within the project site. Mr. Montgomery also stated that the U.S. Fish and Wildlife Service considered the project area to be an area of low habitat suitability for the San Joaquin kit fox. It was agreed, by both parties, that due to the heavily disturbed nature of the project area and surrounding habitats, the lack of recent sightings, and the absence of dispersal corridors in the area, the proposed project would not pose an impact to the San Joaquin kit fox.

August 2008: Caltrans sent a letter to the Native American Heritage Commission requesting a search of their files to determine if any sacred sites, traditional cultural properties, or native plant gathering locations were known to exist within or near the project study area. The letter also requested the names of Native American individuals and group representatives who may be interested in or able to supply information relevant to the proposed project.

August 12, 2008: Katy Sanchez of the Native American Heritage Commission returned a letter to Caltrans stating that the commission's files showed that no known sacred sites, traditional cultural properties, or native plant gathering locations are known to exist within the project study area.

September 4, 2008: Letters describing the project and soliciting comments and information regarding the project and cultural resources were sent to the following consulting parties:

Southern Sierra Miwuk Nation
Chowchilla Tribe of Yokuts
Picayune Rancheria of Chuckchansi
North Valley Yokuts Tribe
Chukchansi Tribe
Southern Sierra Miwuk Nation

The Caltrans District 6 Native American Coordinator reported no additional information was requested by the consulting parties nor made available during follow-up to the letters. Additional consultation was requested of Picayune Rancheria due to its closeness to the valley, but no cultural resources or concerns were indicated.

September 8, 2008: Interagency consultation on the PM_{10} and $PM_{2.5}$ hot-spot conformity assessment occurred with Caltrans, the Environmental Protection Agency, the California Air Resources Board, the San Joaquin Valley Air District and the County of Madera.

November 26, 2008: Caltrans received an email from Rocky Montgomery of the U.S. Fish and Wildlife Service requesting a site visit of the project area.

February 19, 2009: Caltrans contacted California Department of Fish and Game agent Laura Peterson-Diaz regarding Fish and Game concerns about riparian habitat within the project area. A field visit was planned.

March 2, 2009: Caltrans biologist Sarah Paulson and California Department of Fish and Game agent Laura Peterson-Diaz visited the Avenue 12 Interchange Project site to view areas of potential impact. Laura Peterson-Diaz noted that all removal of native vegetation should be replanted, and that pre-construction surveys for migratory birds should be conducted.

March 3, 2009: Caltrans Environmental staff met with Madera County Planning staff to determine all proposed/approved development in the project area and surrounding area.

A public hearing (Open House Format) was held June 18, 2009 at Madera South High School in Madera County. The hearing held between 4:00 and 7:30 had light

attendance with only twelve signing the attendance register. Only three comments were received.

Public Information Meeting
June 18, 2009

NAME: Larry & Patricia Sunia

ADDRESS: 12199 Road 29 CITY: Madera ZIP: 93638

REPRESENTING:

Do you wish to be added to the project mailing list? ☒ YES ☐ NO

Please drop comments in the Comment Box or
Mail to: CALTRANS CENTRAL REGION – DIST. 06
Environmental Analysis Branch
2015 East Shields Suite 100
Fresno, CA 93726
Attention: G. William "Trais" Norris III
Email address: Trais_Norris@dot.ca.gov

I would like the following comments filed in the record (please print):

With the State of California's financial status, we hope that this project will come to fruition. This intersection with its many side roads is not conducive to traffic flow. We think that the Ultimate Build Alternative would be the most beneficial for long term growth and useage.

Response to Larry and Patricia Sunia: Thank you for your participation in the public comment process.

STATE OF CALIFORNIA — Arnold Schwarzenegger, *Governor*

PUBLIC UTILITIES COMMISSION
505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298

July 1, 2009

Trais Norris III
Caltrans, District 6
2015 E. Shields Avenue, Suite 100
Fresno, CA 93726

Re: Notice of Completion, Mitigated Negative Declaration (MND)
State Route 99/Avenue 12 Interchange Project
SCH# 2009061001

Dear Mr. Norris:

As the state agency responsible for rail safety within California, the California Public Utilities Commission (CPUC or Commission) recommends that development projects proposed near rail corridors be planned with the safety of these corridors in mind. New developments and improvements to existing facilities may increase vehicular traffic volumes, not only on streets and at intersections, but also at at-grade highway-rail crossings. In addition, projects may increase pedestrian traffic at crossings, and elsewhere along rail corridor rights-of-way. Working with CPUC staff early in project planning will help project proponents, agency staff, and other reviewers to identify potential project impacts and appropriate mitigation measures, and thereby improve the safety of motorists, pedestrians, railroad personnel, and railroad passengers.

The Commission urges your agency to include consideration of potential project-related rail safety impacts, and measures to reduce adverse impacts to at-grade rail crossings. In general, the major types of impacts to consider are collisions between trains and vehicles, and between trains and pedestrians. General categories of measures to reduce potential adverse impacts on rail safety include:

- Installation of grade separations at crossings, i.e., physically separating roads and railroad track by constructing overpasses or underpasses
- Improvements to warning devices at existing highway-rail crossings
- Installation of additional warning signage
- Improvements to traffic signaling at intersections adjacent to crossings, e.g., traffic preemption
- Installation of median separation to prevent vehicles from driving around railroad crossing gates
- Where soundwalls, landscaping, buildings, etc. would be installed near crossings, maintaining the visibility of warning devices and approaching trains
- Prohibition of parking within 100 feet of crossings to improve the visibility of warning devices and approaching trains
- Installation of pedestrian-specific warning devices and channelization

Trais Norris III
Caltrans District 6
July 1, 2009
SCH #2009061001
Page 2 of 2

- Construction of pull-out lanes for buses and vehicles transporting hazardous materials
- Installation of vandal-resistant fencing or walls to limit the access of pedestrians onto the railroad right-of-way
- Elimination of driveways near crossings
- Increased enforcement of traffic laws at crossings
- Rail safety awareness programs to educate the public about the hazards of highway-rail grade crossings

We concur with Caltrans that this project proposes a new overcrossing be built over SR 99, Cottonwood Creek, and the Union Pacific railroad tracks.

Commission approval is required to modify existing highway-rail crossings or to construct new crossings, the CPUC will be a responsible party under CEQA and the impacts of the crossings must be discussed in the mitigated negative declaration.

Thank you for your consideration of these comments. If you have any questions in this matter, please contact me at (415) 713-0092 or email at ms2@cpuc.ca.gov.

Sincerely,

Moses Stites
Rail Corridor Safety specialist
Consumer Protection and Safety Division
Rail Transit and Crossings Branch
515 L Street, Suite 1119
Sacramento, CA 95814

Response to the Public Utilities Commision: The proposed project (both build-alternatives) would not cause a conflict with rail traffic since an overhead bridge structure would span the railroad tracks. Measures to reduce potential adverse impacts on rail safety described by the California Public Utility Commission comment do not apply to the proposed project.

CENTRAL VALLEY REPORTERS

FRESNO, CALIFORNIA (559) 224-5511

Cal Trans Public Hearing Madera, California June 18, 2009

Reported By:
Lynne A. Howe, CSR, RPR
License No. 13003

Adriana Medina, 705 Deerwood Drive, Madera, California, 93637.

I am interested in that there is development of the streets because they are needed. Also more businesses are needed. I also know that if they expand the streets more, more businesses will come. Even though I know there's not a lot of money available now, but Madera does need a change. Thank you.

Whereupon, the hearing concluded at approximately 7:20 p.m.)

State of California, County of Fresno.

I, LYNNE A. HOWE, License No. 13003, a Certified Shorthand Reporter of the State of California, do hereby certify: That the said proceeding was taken before me as a Certified Shorthand Reporter at the said time and place and was taken down in shorthand writing by me; That the said proceeding was thereafter, under my direction, transcribed with the use of computer-assisted transcription, and that the foregoing transcript constitutes a full, true, and correct report of the proceedings which then and there took place; That I am a disinterested person to the said action. IN WITNESS WHEREOF, I have hereunto subscribed my hand this 29th day of June, 2009.

Lynne A. Howe, CSR, RPR

License No. 13003

Response to Adriana Medina: Your comment is appreciated.

STATE OF CALIFORNIA

GOVERNOR'S OFFICE *of* PLANNING AND RESEARCH

STATE CLEARINGHOUSE AND PLANNING UNIT

ARNOLD SCHWARZENEGGER
GOVERNOR

CYNTHIA BRYANT
DIRECTOR

July 2, 2009

G William "Trais" Norris III
California Department of Transportation, District 6
2015 E Shields Avenue, Suite 100
Fresno, CA 93726-5428

Subject: State Route 99/Avenue 12 Interchange Project
SCH#: 2009061001

Dear G William "Trais" Norris III:

The State Clearinghouse submitted the above named Mitigated Negative Declaration to selected state agencies for review. The review period closed on July 1, 2009, and no state agencies submitted comments by that date. This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act.

Please call the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process. If you have a question about the above-named project, please refer to the ten-digit State Clearinghouse number when contacting this office.

Sincerely,

Terry Roberts

Terry Roberts
Director, State Clearinghouse

Chapter 4 List of Preparers

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

Sherry Alexander, Landscape Associate. M.L.A, Landscape Architecture, California State Polytechnic University, Pomona; 18 years experience in land use planning, environmental studies, site planning, landscape architecture. Contribution: Visual Impact Assessment.

Rajeev L. Dwivedi, Engineering Geologist, Ph.D., Environmental Science, Oklahoma State University; M.S., Civil Engineering, Oklahoma State University; M.S., Geology, Wichita State University; 21 years experience in water quality, geology, and environmental engineering. Contribution: Prepared Water Quality Report.

Susan Greenwood, Associate Environmental Planner. B.S., Environmental Health Science, California State University, Fresno; 19 years experience in environmental health, hazardous waste, and hazardous material management. Contribution: Hazardous Waste Study.

Maya Hildebrand Garcia, Air Quality Specialist. Parsons (Transportation Group). B.S., Geology, Utah State University; 10 years experience in environmental engineering, hazardous waste investigation, air quality regulatory. Contribution: Air Quality Study.

Jennifer Lugo, Architectural Historian. M.A., History, California State University Fresno; B.A., History, California State University Fresno; Minor, Political Science, California State University, Fresno; 3.5 years environmental planning experience. Contribution: Historic Properties Survey Report.

G. William "Trais" Norris, III, Senior Environmental Planner. B.S., Urban Regional Planning, California State Polytechnic University, Pomona; 9 years experience in land use, housing, redevelopment, and environmental planning. Contribution: Environmental Manager, Branch Chief, Sierra Pacific Environmental Analysis Branch.

Sarah Paulson, Biologist. B.S., Molecular Environmental Biology, University of California at Berkeley; 4 years biological science and natural resource assessment experience. Contribution: Natural Environment Study.

Charles Siek, Associate Environmental Planner. M.A., Environmental Policy and Management, University of Denver; B.A., Geography, California State University, Fresno; 8 years environmental planning experience. Contribution: Environmental Coordinator.

Richard C. Stewart, PG, Geologist. B.S., Geology, California State University, Fresno; 5 years paleontological assessment experience. Contribution: Paleontological Identification Report.

A. Kim Tanksley, Associate Archaeologist; B.A., Anthropology, California State University, Fresno; M.A., Archaeology course work, California State University, Hayward; 13 years experience in California prehistoric archaeology. Contribution: Combined Archaeological Survey Report.

Vladimir Cristian Timofei, Transportation Engineer. M.S., Civil Engineering, California State University, Fullerton; 11 years environmental engineering experience. Contribution: Noise Study.

Philip Vallejo, Environmental Planner (Architectural History). B.A., History, California State University, Fresno; 7 years experience in the architectural history field. Contribution: Historic Resource Evaluation Report.

Gordon E. Watkins, Right of Way Agent. B.S., Urban Land Economics, California State University, Fresno; 10 years right of way planning and relocation assistance experience. Contribution: Relocation Impact Document.

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 Initial Study/Environmental Assessment. Documentation of “No Impact” determinations is provided at the beginning of Chapter 2. Discussion of all impacts, avoidance, minimization, and/or mitigation measures is under the appropriate topic headings in Chapter 2.

	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?				X
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic building within a state scenic highway?				X
c) Substantially degrade the existing visual character or quality of the site and its surroundings?			X	
d) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?				X
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?			X	
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X
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?				X
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?			X	

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?			X	
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)?			X	
d) Expose sensitive receptors to substantial pollutant concentration?			X	
e) Create objectionable odors affecting a substantial number of people?			X	
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?		X		
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?		X		
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?				X
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?				X
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				X

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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?				X
CULTURAL RESOURCES - Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?				X
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). [Do not check any box for this question.]			
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?		X		
d) Disturb any human remains, including those interred outside of formal cemeteries?				X
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.				X
ii) Strong seismic ground shaking?				X
iii) Seismic-related ground failure, including liquefaction?				X
iv) Landslides?				X
b) Result in substantial soil erosion or the loss of topsoil?				X
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				X

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
spreading, subsidence, liquefaction or collapse?				
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property.	☐	☐	☐	X
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?	☐	☐	☐	X
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?	☐	☐	☐	X
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?	☐	☐	☐	X
c) Emit hazardous emissions or handle hazardous or acutely hazardous material, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	X
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?	☐	☐	☐	X
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?	☐	☐	☐	X
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?	☐	☐	☐	X
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	X

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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?	☐	☐	☐	X
HYDROLOGY AND WATER QUALITY - Would the project:				
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☐	X
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)?	☐	☐	☐	X
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?	☐	☐	☐	X
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?	☐	☐	☐	X
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?	☐	☐	☐	X
f) Otherwise substantially degrade water quality?	☐	☐	☐	X
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?	☐	☐	☐	X
h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows?	☐	X	☐	☐

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
i) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	X
j) Result in inundation by a seiche, tsunami, or mudflow?	☐	☐	☐	X
LAND USE AND PLANNING - Would the project:				
a) Physically divide an established community?	☐	☐	☐	X
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?	☐	☐	☐	X
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	X
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?	☐	☐	☐	X
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?	☐	☐	☐	X
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?	☐	☐	☐	X
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☐	X
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	X

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	X
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	X
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?	☐	☐	☐	X
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)?	☐	☐	☐	X
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	X
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	X
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?	☐	☐	☐	X
Police protection?	☐	☐	☐	X
Schools?	☐	☐	☐	X

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
Parks?				X
Other public facilities?				X
RECREATION -				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				X
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?				X
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)?			X	
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?				X
c) Result in a change in air traffic patters, including either an increase in traffic levels or a change in location that results in substantial safety risks?				X
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				X
e) Result in inadequate emergency access?				X
f) Result in inadequate parking capacity?				X
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?				X
UTILITY AND SERVICE SYSTEMS - Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?				X

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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?	☐	☐	☐	X
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?	☐	☐	☐	X
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☐	X
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?	☐	☐	☐	X
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☐	X
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	X
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?	☐	☐	☐	X
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)?	☐	☐	☐	X
c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☐	X

Appendix B 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.

WILL KEMPTON
Director

"Caltrans improves mobility across California"

Appendix C Summary of Relocation Benefits

California Dept. of Transportation Relocation Assistance Program

Relocation Assistance Advisory Services

The California Department of Transportation (Caltrans) would provide relocation advisory assistance to any person, business, farm, or non-profit organization displaced as a result of Caltrans' acquisition of real property for public use. Caltrans would assist residential displacees in obtaining comparable decent, safe, and sanitary replacement housing by providing current and continuing information on sales 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 a brochure on the residential relocation program, please contact Chuck Siek at charles_siek@dot.ca.gov, (559) 243-8302, or 2015 East Shields Avenue, Suite 100, Fresno, CA 93726.

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

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

Business and Farm Relocation Assistance Program

For more information or a brochure on the relocation of a business or farm, please contact Chuck Siek at charles_siek@dot.ca.gov, (559) 243-8302, or 2015 East Shields Avenue, Suite 100, Fresno, CA 93726.

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

Additional Information

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

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

Any person, business, farm, or non-profit organization, which has been refused a relocation payment by Caltrans, or believes that the payments are inadequate, may appeal for a hearing before a hearing officer or 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:

Gordon Watkins
Associate Right of Way Agent
Central Region Planning and Appraisals
(559) 445-6181

Appendix D Minimization and/or Mitigation Summary

Cultural Resources	Temporary Environmentally Sensitive Area fencing shall be installed around the Chinese cemetery property to prevent entry to construction equipment. If cultural materials were discovered during construction, all earth-moving activity within and around the immediate discovery area would be diverted until a qualified archaeologist could assess the nature and significance of the find. If human remains are discovered, State Health and Safety Code Section 7050.5 states that further disturbances and activities shall cease in any area or nearby area suspected to overlie remains, and the County Coroner contacted. Pursuant to Public Resources Code Section 5097.98, if the remains were thought to be Native American, the coroner would notify the Native American Heritage Commission, who would then notify the Most Likely Descendent. At this time, the person who discovered the remains would contact Caltrans Environmental Analysis *so* that she may work with the Most Likely Descendent on the respectful treatment and disposition of the remains. Further provisions of Public Resources Code Section 5097.98 are to be followed as applicable.
Traffic and Transportation Pedestrian and Bicycle	A comprehensive Traffic Management Plan to minimize delays would be developed after selection of a preferred alternative. Standard Caltrans construction practices include information on roadway conditions, portable changeable message signs, lane and road closures, advance warning signs, alternate routes, and a traffic contingency plan for unforeseen circumstances and emergencies. Prior to construction, Caltrans will meet with local public officials to review the plan as well as publicize plan details.
Visual Resources	During the design phase of the project, Landscape Architecture staff will work with County Planning Department staff, local officials, and community members to create context appropriate enhancements. Replacement of the existing structures is not expected to have adverse impacts, particularly if the new structures will be enhanced to reflect the rural character of Madera County. Current Caltrans policy requires replacement of any highway planting removed or damaged as a result of construction activity. This replacement planting must be funded from the project and must be in progress within two years of the acceptance of the highway contract. Failure to provide replacement planting would likely result in adverse visual impacts per California Environmental Quality Act guidelines. The new bridge structures should be designed with a dedicated conduit for irrigation supply line and irrigation electrical. While the project may not be receiving full highway planting at this time, the rapid growth of the area will necessitate future full highway planting.
Hydrology and Floodplain	Detention basins, bio-filtration strips and bio-filtration swales are some of the storm water management measures being identified for use with this project. Detailed studies in the design phase shall be completed to determine the change in runoff characteristics. The extensive use of cross-culverts will ensure that objectionable backwater is not produced by the extended bridge structure.

Water Quality	• Protect areas that provide important water quality benefits or are particularly susceptible to erosion or sediment loss. • Minimize potential erosion by limiting land disturbances such as clearing and grading and cut/fill to the maximum practical extent. • Preserve any existing terrain providing desirable drainage courses or effective filtration to the maximum practical extent. • Limit disturbance of natural drainage features and vegetation to the maximum practical extent. • Prepare and implement an approved Stormwater Pollution Prevention Plan. • Ensure proper storage and disposal of toxic material. • Incorporate pollution prevention into operation and maintenance procedures to reduce pollutant loadings to surface runoff. • Flared end sections and energy dissipation devices to be incorporated at all culvert outlets. • The project needs to comply with the requirements specified in the Caltrans Standard Specifications Section 7, Legal Relations and Responsibility, subsection 7-1.01G. • When disturbed acreage is 1 acre or more, Caltrans' National Pollutant Discharge Elimination System Permit requires coordination with the Regional Water Quality Control Board. This project is expected to disturb more than 1 acre of soil, and requires the following: • A Notification of Construction is to be submitted to the appropriate Regional Water Quality Control Board at least 30 days prior to the start of construction. • A Storm Water Pollution Prevention Plan is to be prepared prior to and implemented during construction to the satisfaction of the Resident Engineer. • A Notice of Completion of Construction is to be submitted to the Regional Water Quality Control Board upon completion of the construction and stabilization of the site.
Air Quality	The San Joaquin Valley Air Pollution Control District requires an Air Impact Analysis for Indirect Source Review to be submitted for evaluation of potential construction emissions of PM_{10} and oxides of Nitrogen. The Air Impact Analysis calculates emissions resulting from the construction phase of this project. Mitigation is required in the form of payment, calculated per ton of pollutants emitted. Other methods, such as mandating a construction fleet is "newer than average" is possible. Direct operational impacts of construction would include increased particulate matter and mobile source air toxics at receptors determined to be near the project site. Paved shoulders would reduce PM_{10} emissions from re-entrained road dust. Improved traffic flow due to reconfiguration would decrease carbon monoxide emissions, thus contributing to attainment in the San Joaquin Valley Air Basin for carbon monoxide. Caltrans Standard Specifications pertaining to dust control and dust palliative requirement is a required part of all construction contracts and should effectively reduce and control emission impacts during construction. The provisions of Caltrans Standard Specifications, Section 7-1.0F "Air Pollution Control" and Section 10 "Dust Control" require the contractor to comply with San Joaquin Valley Air Pollution Control District rules, ordinances, and regulations.

Hazardous Waste	• Arco AM/PM at 12199 Golden State Blvd: Prior to implementation of the proposed project, removal and closure of the fuel storage and distribution systems at the Arco site will require soil sampling and analytical testing under the oversight of the Madera County Environmental Health Department. Impacted and potentially impacted soil encountered during service station demolition and closure activities should be excavated, stockpiled, and characterized to evaluate appropriate reuse or disposal alternatives. Confirmation and stockpile sample characterization analytical data and soil reuse/disposal plans should be submitted to the Madera County Environmental Health Department for review and "no further action" status if appropriate. • Madera Pumps, Inc. at 11884 Road 29 and Britz Fertilizers, Inc. at 11855 Road 29: If impacted and potentially impacted soil is encountered during project activities, these materials should be excavated, stockpiled, and characterized to evaluate appropriate reuse or disposal alternatives. Confirmation and stockpile sample characterization analytical data and soil reuse/disposal plans should be submitted to the Madera County Environmental Health Department for review and acceptance. • Per Caltrans requirements, the contractor(s) should prepare a project-specific Lead Compliance Plan to minimize worker exposure to lead-impacted soil. • With the exception of inaccessible paint striping applied to road surfaces on the bridge decks, painted surfaces were not observed at the bridge structures. Paints at the project location be treated as lead-containing for purposes of determining the applicability of the Cal/OSHA lead standard during any future maintenance, renovation, and demolition activities. This recommendation is based on the fact that lead was a common ingredient of paints manufactured before 1978 and is still an ingredient of some industrial paints. • Asbestos-containing barrier rail shims identified on the barrier rail assemblies of Bridges 41-0066, 41-0065R, 41-0065S, and the County Road 29 Bridge over Cottonwood Creek be removed and disposed of by a licensed contractor registered with Cal/OSHA for asbestos-related work prior to renovation, demolition, or other activities that would disturb the material. Based on the consistent sample results that identified asbestos in barrier rail shims at four of the five bridges, we also recommend that barrier rail shims observed on Bridge 41-0065L, but that were inaccessible for sampling, also be treated as assumed asbestos-containing material and removed and disposed of as a Category I nonfriable/nonhazardous material.
Noise Impacts	• Notice would be published in local news media of the dates and duration of proposed construction activity. A telephone number would be included to answer questions about the project from local residents. • When possible, noisier construction activities closest to residences would be scheduled during the earlier parts of the evening or afternoon. • If complaints are received**,** temporary noise barriers can be constructed where construction activities are conducted near residential receptors. These consist of plywood sheets on portable concrete barriers.
Paleontology	A Paleontological Evaluation Report with recommendations on monitoring and mitigation must be prepared for the proposed project. If any vertebrate or plant fossils are discovered during construction, it is required that work be stopped in the immediate vicinity of the discovery (33-foot radius) until the District Archaeologist or District Paleontology Coordinator can review the discovery. Remediation of sensitive fossils found before and during construction can include removal, preparation and curation of any significant remains.

Biological Resources (Waters of the U.S.)	Waters of the U.S. would be affected by the proposed project activities and would therefore require a Section 404 permit from the U.S. Army Corps of Engineers, a Section 401 certification from the Regional Water Quality Control Board and a 1602 Streambed Alteration Agreement from the California Department of Fish and Game. Terms, conditions, and provisions provided within the Clean Water Act Section 404 permit, Clean Water Act Section 401 permit, and Streambed Alteration Agreement are designed to minimize and avoid impacts to the waterway. Caltrans would receive these permits and would include these permits in the solicitation for contractor bid information. In addition, the project would incorporate standard Caltrans best management practices to prevent impacts related to degradation of water quality. Before construction, Caltrans would establish an Environmentally Sensitive Area consisting of orange mesh fencing, to avoid unplanned accidental construction-related impacts to waters. To ensure no net loss of waters of the U.S., one or more of the following options would compensate for the permanent loss of waters: • Payment of the appropriate mitigation fee; • Dedication of mitigation lands; • Purchase of approved mitigation bank credits/in-lieu fees; or development of an alternative mitigation plan.
Biological Resources (Natural Communities)	To the maximum extent feasible, native riparian trees would be avoided and protection measures would be implemented to protect avoided riparian trees from project related activities. Before construction, Caltrans would establish Environmentally Sensitive Areas, consisting of orange mesh fencing for each avoided riparian tree. The Environmentally Sensitive Areas would consist of a drip line protection area for each tree, with a radius measurement from the trunk of the tree to the tip of its longest limb, were feasible. In addition, the limits of the construction area would be flagged, and all activity would be confined within the marked area. Compensatory mitigation would be required by the California Department of Fish and Game to receive a Streambed Alteration Agreement for work in and around the streambed of the Cottonwood Creek Bridge. The required compensatory mitigation would include replanting native riparian trees in-kind at a 3:1 ratio for trees between 4 to 25 inches diameter at breast height. Trees over 25 inches diameter at breast height are defined as “heritage” trees and require replanting at the higher ratio of 10:1. An evaluation would be conducted prior to submission of the Streambed Alteration Agreement permit application to determine the number of native riparian trees planned for removal. Caltrans will then develop an on-site re-vegetation plan, to mitigate for project impacts.

Biological Resources (Animal Species)	Trees, shrubs and other vegetation would be removed before the nesting season of migratory birds. If removal of nests is deemed necessary, the removal would occur during the time of year when the nests are not used (approximately September 2 to February 14). A preconstruction survey for migratory birds within the proposed project area and adjacent habitat would be conducted 14-30 days before the start of construction. If an active nest were detected, the California Department of Fish and Game would be consulted and an Environmentally Sensitive Area around the nest site may be established to prevent nesting disturbance. Work may be temporarily suspended if nesting activity cannot be prevented. Standard specifications would be included in the construction bid package to avoid impacts to migratory birds. Construction activities that would disturb a maternity roost or seasonal roost for bats, whether or not the bats are special-status species, is prohibited by Caltrans. The agency's goal is to maintain and operate structures for the purposes of transportation without adversely affecting bat populations, while also balancing the needs of bats with the safety of transportation workers. The bridges containing habitat for bat species will be avoided by construction. Due to the implementation of avoidance and minimization efforts, no compensatory mitigation is proposed for potential impacts to migratory birds or bats.
Biological Resources (Threatened and Endangered Species)	Vernal pool fairy shrimp: Due to lack of presence within the project impact area, avoidance and minimization measures are not necessary for the vernal pool fairy shrimp. Swainson's hawk: Preconstruction surveys for this species would be conducted no less than 14 days and no more than 30 days before the project starts. If an active nest were detected, minimization efforts would be coordinated with the California Department of Fish and Game. These efforts may include a "no work" buffer zone around an active nest and/or a qualified biologist assigned to monitor an active nest during construction activities to ensure that no interference with the hawk's breeding activities would occur.
Invasive Species	All equipment and vehicles shall be properly maintained and cleaned before bringing them on-site in order to avoid transporting dirt and seed material to the project site. • Erosion control free of noxious weed materials should be used. • Any fill material brought on site must be free of noxious weed materials. • If there were a need for off-site disposal of excess fill at the end of construction, special considerations would be made to prevent the spread of noxious weeds. • All equipment and vehicles shall be properly cleaned when leaving the project site to avoid spreading noxious weeds to other sites.

Appendix E Farmland Impact Rating

U.S. DEPARTMENT OF AGRICULTURE
Natural Resources Conservation Service

NRCS-CPA-106
(Rev. 1-91)

FARMLAND CONVERSION IMPACT RATING
FOR CORRIDOR TYPE PROJECTS

PART I *(To be completed by Federal Agency)*	3 Date of Land Evaluation Request 3/4/08	4 Sheet 1 of 1
1 Name of Project SR-99/Avenue 12 I/C	5 Federal Agency Involved California Department of Transportation	
2 Type of Project Interchange	6 County and State Madera CA.	
PART II *(To be completed by NRCS)*	1 Date Request Received by NRCS	2 Person Completing Form J. Gabor
3 Does the corridor contain prime, unique statewide or local important farmland? (If no, the FPPA does not apply - Do not complete additional parts of this form). YES ☑ NO ☐		4. Acres Irrigated / Average Farm Size
5 Major Crop(s) Vines	6 Farmable Land In Government Jurisdiction Acres: % 98	7. Amount of Farmland As Defined in FPPA Acres: 28.3 % 98
8 Name Of Land Evaluation System Used ArcMap	9 Name of Local Site Assessment System	10 Date Land Evaluation Returned by NRCS 4/7/08

PART III *(To be completed by Federal Agency)*	Maximum Points	Alternative Corridor For Segment: Corridor A	Corridor B	Corridor C	Corridor D
A. Total Acres To Be Converted Directly		30	18		
B. Total Acres To Be Converted Indirectly, Or To Receive Services					
C. Total Acres In Corridor		30	18	0	0
PART IV *(To be completed by NRCS) Land Evaluation Information*					
A. Total Acres Prime And Unique Farmland		28	10		
B. Total Acres Statewide And Local Important Farmland		0	0		
C. Percentage Of Farmland In County Or Local Govt. Unit To Be Converted					
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value					
PART V *(To be completed by NRCS) Land Evaluation Information Criterion Relative value of Farmland to Be Serviced or Converted (Scale of 0 - 100 Points)*		98	96		
PART VI *(To be completed by Federal Agency) Corridor Assessment Criteria (These criteria are explained in 7 CFR 658.5(c))*					
1. Area In Nonurban Use	15	11	11		
2. Perimeter In Nonurban Use	10	5	5		
3. Percent Of Corridor Being Farmed	20	12	12		
4. Protection Provided By State And Local Government	20	5	5		
5. Size of Present Farm Unit Compared To Average	10	0	0		
6. Creation Of Nonfarmable Farmland	25	0	0		
7. Availability Of Farm Support Services	5	4	4		
8. On-Farm Investments	20	12	10		
9. Effects Of Conversion On Farm Support Services	25	2	2		
10. Compatibility With Existing Agricultural Use	10	2	2		
TOTAL CORRIDOR ASSESSMENT POINTS	160	53	51	0	0
PART VII *(To be completed by Federal Agency)*					
Relative Value Of Farmland (From Part V)	100	98	96		
Total Corridor Assessment (From Part VI above or a local site assessment)	160	53	51	0	0
TOTAL POINTS *(Total of above 2 lines)*	260	151	147	0	0

1 Corridor Selected:	2 Total Acres of Farmlands to be Converted by Project:	3 Date Of Selection:	4 Was A Local Site Assessment Used?
N/A	30 Acres		YES ☐ NO ☑

5 Reason For Selection:

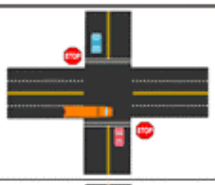
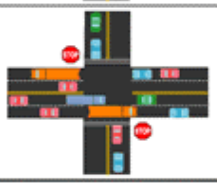
Please note> Corridor A=Ultimate Build-Alternative Corridor B=Minimum Build Alternative
Please note> In accordance with 7 CFR 658.5(C), Part VI questions 5 and 6 were not calculated and up to 25-points were considered in the calculation of question 8.
Please note> Corridor assessment used instead of linear(AD 1006 form) based on length of work on Avenue 12.

Signature of Person Completing this Part: [signature] DATE 6-5-08

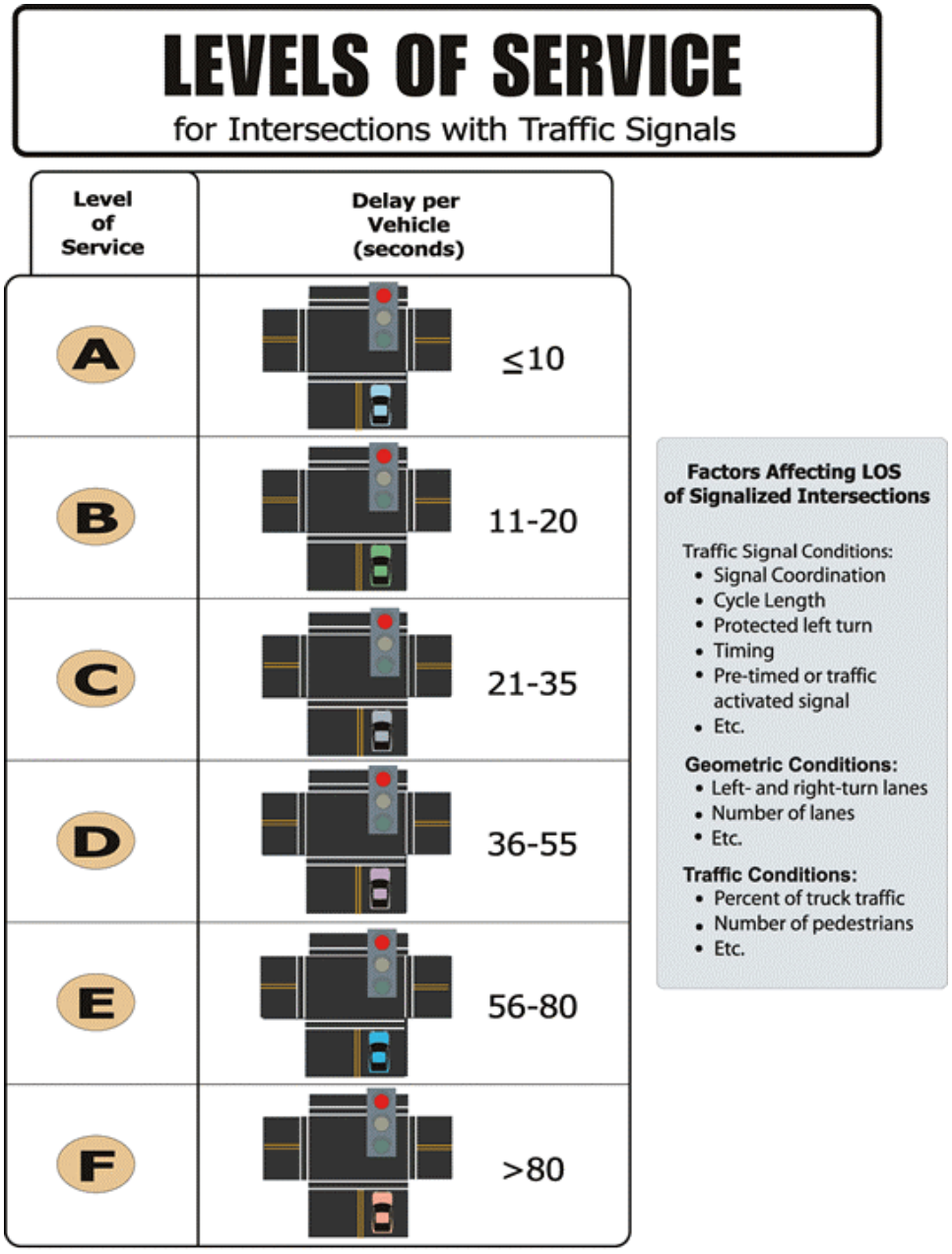
NOTE: Complete a form for each segment with more than one Alternate Corridor

Appendix F Level of Service

LEVELS OF SERVICE
for Two-Way Stop Intersections

Level of Service	Flow Conditions	Delay per Vehicle (seconds)	Technical Descriptions
A		≤10	Very short delays
B		11-15	Short delays
C		16-25	Minimal delays
D		26-35	Minimal delays
E		36-50	Significant delays
F		>50	Considerable delays

Source: 2000 HCM, Exhibit 17-2, Level of Service Criteria for TWSC Intersections



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

Appendix G SHPO 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) 653-6624 Fax: (916) 653-9824
calshpo@ohp.parks.ca.gov
www.ohp.parks.ca.gov

March 27, 2009

Reply In Reference To: FHWA090309A

Jeanne Day Binning
Branch Chief, Cultural Heritage Resources Branch
Department of Transportation, District 6
2015 E. Shields Avenue, Suite 100
Fresno, CA 93726

Re: Determinations of Eligibility for State Route 99 / Avenue 12 Interchange and Overcrossing Project, City of Madera, Madera County, CA

Dear Ms. 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 (Department) is requesting my concurrence, pursuant to Stipulation VIII.C.5 of the PA, that the following properties are not eligible for inclusion on the National Register of Historic Places:

- The Gragnani Property; 28462 Borden Street, Madera, CA
- The Burgess Lateral, Madera, CA
- Segment of Southern Pacific Mainline, Madera, CA
- Pacific Telephone Switch Station, Madera, CA
- Segment of Main 2 Canal, Madera, CA
- Mitchell Property, 29384 Avenue 12, Madera, CA
- Huarte Residence, 11674 Road 29, Madera, CA

Having reviewed the submitted documentation, I concur with the Department's eligibility determinations.

Thank you for considering historic properties during project planning. If you have any questions, please contact Natalie Lindquist or Tristan Tozer of my staff at (916) 654-0631 (Natalie) or (916) 653-8920 (Tristan) or e-mail at nlindquist@parks.ca.gov or ttozer@parks.ca.gov.

Sincerely,

Susan K Stratton for

Milford Wayne Donaldson, FAIA
State Historic Preservation Officer

List of Technical Studies that are Bound Separately

Draft Relocation Statement
Air Quality Report
Noise Study Report
Water Quality Report
Natural Environment Study
Location Hydraulic Study
Historical Property Survey Report (public review restricted)
Hazardous Waste Reports:

- Initial Site Assessment
- Preliminary Site Investigation (geophysical survey)

Scenic Resource Evaluation/Visual Assessment
Initial Paleontology Study