

Route 25 Curve Realignment

In San Benito County on Route 25

05-SBt-25-PM 18.8/19.5

Project ID: 05-0002-0030

EA: 0T6400

Initial Study with Proposed Mitigated Negative Declaration

Prepared by the
State of California Department of Transportation

June 2012



General Information About This Document

What's in this document?

The California Department of Transportation (Caltrans) has prepared this Initial Study with Proposed Mitigated Negative Declaration, which examines the potential environmental impacts of alternatives being considered for the proposed project in San Benito County, California. The document describes why the project is being proposed, alternatives for the project, the existing environment that could be affected by the project, potential impacts from the project, and proposed avoidance, minimization, and/or mitigation measures.

What should you do?

- Please read this document. Additional copies of this document as well as the technical studies are available for review at the Caltrans district office at 50 Higuera in San Luis Obispo, the San Benito County Free Library at 470 5th Street in Hollister, and the Monterey County Free Library at 402 Broadway in King City. The document can also be accessed electronically at the following website:

<http://www.dot.ca.gov/dist05/projects>

- No public hearing is scheduled. Please contact Caltrans if you would like a public hearing.
- We welcome your comments. If you have any concerns about the proposed project, please send your written comments to Caltrans by the deadline. Submit comments via U.S. mail to Caltrans at the following address:

Matt Fowler, Senior Environmental Planner
California Department of Transportation
50 Higuera
San Luis Obispo, CA 93401

Submit comments via email to: Matt_Fowler@dot.ca.gov.

- Submit comments by the deadline: August 20, 2012.

What happens next?

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

Printing this document: To save paper, this document has been set up for two-sided printing (to print the front and back of a page). Blank pages occur where needed throughout the document to maintain proper layout of the chapters and appendices.

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: Matt Fowler, 50 Higuera, San Luis Obispo, CA 93401; 805-542-4603 Voice, or use the California Relay Service TTY dial 711.

Realign a curve on Route 25 from post miles 18.8 to 19.5 in San Benito County

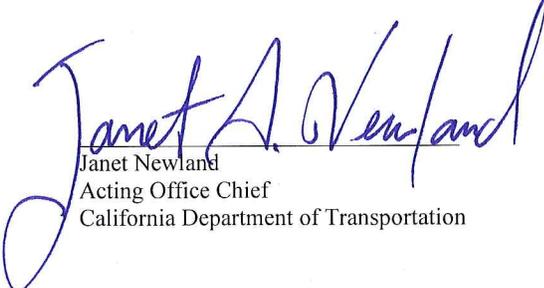
**INITIAL STUDY
with Proposed Mitigated Negative Declaration**

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

THE STATE OF CALIFORNIA
Department of Transportation

California Department of Fish and Game

28 June 2012
Date of Approval


Janet Newland
Acting Office Chief
California Department of Transportation

Proposed Mitigated Negative Declaration

Pursuant to: Division 13, Public Resources Code

Project Description

The California Department of Transportation (Caltrans) proposes to realign and straighten Route 25 from post miles 18.8 to 19.5 in San Benito County. The project would cut into the hillside at a particularly tight curve to provide a straighter section with better sight distance. The new section would be about 900 feet long and 40 feet wide. It has been designed with two 12-foot lanes, 4-foot paved shoulders, and 4 to 6 feet of unpaved surface on each side, which includes a rock catchment area.

Determination

This proposed Mitigated Negative Declaration is included to give notice to interested agencies and the public that it is Caltrans' intent to adopt a Mitigated Negative Declaration for this project. This does not mean that Caltrans' decision on the project is final. This Mitigated Negative Declaration is subject to change based on comments received by interested agencies and the public.

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

- The project would have no effect on land use, growth, farmlands/timberlands, any local community, utilities/emergency services, traffic, transportation/pedestrian or bicycle facilities, hydrology, the floodplain, water quality, storm water runoff, geology, soils, topography, paleontology, air quality, wetlands, or other waters.
- The project would not create any impacts due to noise, vibration, hazardous waste or materials, or invasive species; the proposed project would not be particularly vulnerable to seismic activity.
- The project would have no significant impact on cultural resources or natural communities.

In addition, the proposed project would have no significant, adverse impact on any special-status plant or animal species because the following mitigation measures would reduce potential effects to less than significant:

- To restore shining navarretia to the area after construction, one or more of the following methods would be used:
 - Seed would be hand-collected from individual shining navarretia plants prior to construction and appropriately stored for reseeded in the restoration/ replacement site. Seed would then be hand-broadcast in the proposed shining navarretia restoration/replacement area as soon after collection as practicable. Various locations for seeding within the replacement area would be considered.
 - Individual shining navarretia plants would be collected and transplanted onsite.
 - Shining navarretia plants would be propagated offsite and transplanted in the restoration/replacement site. Prior to construction, the shining navarretia replacement area would be marked with environmentally sensitive area fencing, markers, or equivalent and would remain a conservation area within Caltrans' right-of-way. After construction is complete, the area would be permanently marked with environmentally sensitive area paddles.

- The success goal will be 1:1 replacement of shining navarretia (about 50 plants). To ensure success, monitoring would occur annually for three years.
- Prior to construction, a qualified biologist would conduct a training session on shining navarretia for all construction personnel.
- Hydroseeding would be applied to exposed soil using a native seed mix that would not outcompete with shining navarretia.
- Caltrans would obtain U.S. Fish and Wildlife Service (Service) and California Department of Fish and Game (Fish and Game) approval of a Designated Biologist(s) and Designated Monitors prior to project-related activities that might result in impacts to the California tiger salamander. The Designated Biologist(s) would hold all applicable state and federal permits including an active Scientific Collecting Permit from Fish and Game that specifically names California tiger salamander surveys as an authorized activity. Any proposed biologist(s) that do not have the required permits must work under the supervision of one who does have the required permits. These individuals would be referred to as Designated Monitors.
- The Designated Biologist with the active permits must be present at all surveys and during all initial ground-disturbing activities in areas of potential California tiger salamander habitat to help minimize or avoid impact to the California tiger salamander and to minimize disturbance of habitat. Designated Biologists and/or Designated Monitors who handle California tiger salamanders would ensure that their activities do not transmit diseases or pathogens harmful to amphibians, such as chytrid fungus (*Batrachochytrium dendrobatidis*), by following the fieldwork code of practice developed by the Declining Amphibians Task Force. Designated Monitors may monitor project activities after initial ground-disturbing activities have been completed provided the Designated Biologist with the active permits can be contacted should the need arise to relocate a California tiger salamander. Work that could potentially harm the California tiger salamander would have to be stopped until the Designated Biologist arrived to relocate the California tiger salamander to a pre-approved location. If the Designated Biologist or Designated Monitor recommends that work be stopped, he or she must notify the resident engineer immediately. The resident engineer would resolve the situation by requiring that all actions that are causing these effects be halted. When work is stopped, the Service would be notified as soon as possible.
- Small mammal burrows within the proposed areas of permanent impact must be hand-excavated by a Service/Fish and Game-approved biologist prior to construction. Timing of hand excavation would occur outside of the California tiger salamander breeding season. Excavation of burrows between June 15 and November 1 would avoid the breeding season (November to March) and most juvenile dispersal movements. Caltrans proposes hand-excavation of several dozen small mammal burrows that have the greatest potential to serve as refugia for California tiger salamanders, in coordination with and approval from the Service and Fish and Game. Determination of these burrows would include known parameters of preferred refugia, such as proximity to the pond within the biological study area and burrow type. If no California tiger salamanders are found during hand-excavation of high-potential burrows, Caltrans would infer the area is not serving as upland habitat and proceed with work as planned.
- Following hand excavation, environmentally sensitive area/animal exclusion fencing would be established around the proposed areas of disturbance and maintained through construction to ensure no California tiger salamanders or other special-status amphibians enter the work area. Caltrans would establish environmentally sensitive area fencing along the outer limits of proposed disturbance to preserve small mammal burrows in upland areas outside of the limits of disturbance to the maximum extent feasible. In addition, Caltrans would install fencing that would exclude salamanders from the work area. Fencing would be buried to a depth of 6 inches and would be a minimum of 3.3 feet tall following installation. Exclusionary fencing would be monitored daily, prior to the start of construction activities each day, to evaluate its effectiveness

and ensure that no California tiger salamanders become trapped in the fencing. If a California tiger salamander is found along the fence, a Service/Fish and Game-approved biologist would relocate the animal to the small pond within the biological study area that will be avoided by project-related activities. All fencing would be maintained for the duration of construction and removed on project completion.

- Effects to California tiger salamanders would be minimized during rainy weather and at night. Between November 1 and April 1, the project site would be surveyed nightly by the Designated Biologist or a Designated Monitor before any night work. When the chance of rainfall within 72 hours is predicted to be 70 percent or greater, only critical project activities will be allowed at night within potential California tiger salamander habitat, until no further rain is forecast.
- Designated Biologists/Monitors would inspect all open trenches, auger holes, and other excavations that may trap a California tiger salamander before any work in or around these features and before they are back-filled.
- The Designated Biologist would conduct an education program for all persons employed or otherwise working on the project site before performing any work onsite. The program would include a discussion of the biology of the California tiger salamander and project-specific avoidance and minimization measures. Upon completion of the program, employees must sign a form stating they attended the program and understand all protection measures.
- Prior to ground-disturbing activities, Caltrans would satisfy the requirement of the Section 2081 Incidental Take Permit to provide an anticipated 6.47 acres of California tiger salamander habitat by complying with one of the following:
 - Purchase credits equivalent of up to 6.47 acres at a California Endangered Species Act-certified and Fish and Game-approved Conservation Bank (in a location to be determined) authorized to sell credits for the California tiger salamander; or,
 - Acquire, permanently preserve, and perpetually manage up to 6.47 acres of Habitat Management Lands.
- Only Service-approved biologists would participate in activities associated with the capture, handling, and monitoring of California red-legged frogs.
- Ground disturbance would not begin until written approval is received from the Service that the biologist is qualified to do the work.
- A Service-approved biologist would survey the project area no more than 48 hours prior to the onset of work activities. If any life stage of the California red-legged frog is found and these individuals are likely to be killed or injured by work activities, the approved biologist would be allowed sufficient time to move them from the site before work activities begin. The Service-approved biologist would relocate the California red-legged frogs the shortest distance possible to a location that contains suitable habitat and will not be affected by the activities associated with the project. The Service-approved biologist would maintain detailed records of any individuals that are moved (e.g., size, coloration, any distinguishing features, photographs) to assist him or her in determining whether translocated animals are returning to the point of capture.
- Before any activities begin on a project, a Service-approved biologist would conduct a training session for all construction personnel. At minimum, the training would include a description of the California red-legged frog and its habitat, the specific measures that are being implemented to conserve the California red-legged frog for the current project, and the boundaries within which the project may be accomplished.
- A Service-approved biologist must be present at the work site until all California red-legged frogs have been removed, workers have been instructed, and disturbance of the habitat has been completed. After this time, Caltrans would designate a person to monitor onsite compliance with all minimization measures. The Service-approved biologist would ensure that this monitor

receives the training outlined in the measure above and training on the identification of California red-legged frogs. If the monitor or the Service-approved biologist recommends that work be stopped because California red-legged frogs would be affected, he or she would notify the resident engineer immediately. The resident engineer would resolve the situation by requiring that all actions that are causing these effects be halted. Once work is stopped, the Service would be notified as soon as possible.

- During project activities, all trash that may attract predators or scavengers would be properly contained, removed from the work site, and disposed of regularly. Following construction, all trash and construction debris would be removed from work areas.
- All refueling, maintenance and staging of equipment and vehicles would occur at least 60 feet from the riparian habitat or water bodies and not in a location from where a spill would drain directly toward aquatic habitat. The monitor would ensure contamination of habitat does not occur during such operations. Before work begins, Caltrans would ensure that a plan is in place for prompt and effective response to any accidental spills. All workers would be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur.
- Project areas would be replanted with an assemblage of native upland vegetation suitable for the area. (No native riparian or wetland areas would be affected by this particular project.) Locally collected plant materials would be used to the extent practicable. Invasive, exotic plants would be controlled to the maximum extent practicable.
- Habitat contours would be returned to a natural configuration at the end of the project activities. This measure would be implemented in all areas disturbed by activities associated with the project, where feasible, and not harmful to the California red-legged frog.
- The number of access routes, size of staging areas, and the total area of activity would be limited to the minimum necessary to achieve the project. Environmentally sensitive areas would be established to confine access routes and construction areas to the minimum area necessary to complete construction, and to minimize the impact to California red-legged frog habitat.
- Work would be scheduled for times of the year when impacts to the California red-legged frog would be minimal. Habitat assessments, surveys, and technical assistance between Caltrans and the Service during project planning would be used to assist in scheduling work activities to avoid sensitive habitats during key times of year.
- The Service-approved biologist would be responsible for ensuring his or her activities comply with the California Fish and Game Code.
- Copies of all relevant agreements/permits (such as the Biological Opinion and Section 2081 Incidental Take Permit) would be maintained at the worksite.

Janet Newland
Acting Chief, Central Region
Environmental Central Coast Office

Date

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List of Abbreviated Terms

Caltrans	California Department of Transportation
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
ESA	Environmental Sensitive Area
Fish and Game Service	California Department of Fish and Game U.S. Fish and Wildlife Service

Chapter 1 Proposed Project

1.1 Introduction

The California Department of Transportation (Caltrans) proposes to improve the safety of a section of Route 25 in San Benito County where there has been a higher than average number of collisions for similar roadway types. Route 25 is primarily a rural, two-lane conventional highway. This section of Route 25 is in mountainous, rolling terrain, resulting in a curving road that often requires drivers to slow below the standard 55 miles per hour speed limit. The proposed project addresses a tight curve where signs are posted with an advisory speed of 25 miles per hour. Figures 1-1 and 1-2 show the project vicinity and location.

The project is proposed for funding from the Safety Improvements Program of the 2010 State Highway Operations and Protection Program (SHOPP). The construction cost estimate is \$1,158,000 with an additional \$354,000 expected for right-of-way costs.

Caltrans is the lead agency under the California Environmental Quality Act.

1.2 Purpose and Need

1.2.1 Purpose

The purpose of the project is to improve the safety of this segment of the highway by reducing the number of run-off-the-road and cross-over accidents.

1.2.2 Need

Caltrans is recording a higher than average number of collisions at this particular curve in the road. Collision data at this location was collected for the 3-year period from January 1, 2006 to December 31, 2008. Table 1-1 shows the actual rate of collisions versus the average rate for this type of roadway.

Table 1-1 Collision Rate per Million Vehicle Miles

Actual			Average		
Fatal	Fatal + Injury	Total	Fatal	Fatal + Injury	Total
1.724	8.62	12.07	0.042	0.81	1.750

The existing roadway within the project limits is a two-lane conventional highway, with 10-foot lanes and unpaved shoulders. The proposed project encompasses a tight curve that does not meet current design standards and has limited sight distance. The posted speed limit for the highway is 55 miles per hour, but there are curve warning signs with a recommended speed of 25 miles per hour through this section. The nearest posted speed limit of 55 miles per hour is 17 miles north of the project location. In addition, at the apex of the curve there is a private driveway entrance, creating a potential conflict for approaching vehicles as they round the curve.

1.3 Alternatives

1.3.1 Build Alternative

Caltrans is proposing to realign and straighten the highway within the project limits. The project would cut into the hillside that the road currently curves around to provide a straighter section with better sight distance. The new section would be about 900 feet long and 40 feet wide. It has been designed with two 12-foot lanes, 4-foot paved shoulders, and 4 to 6 feet of unpaved surface on each side, which includes a rock catchment area.

The new alignment would have steep slopes about 40 feet high on each side. Data has shown that most of the material is rock that can be graded at a nearly vertical 0.25:1 (horizontal distance to vertical distance) slope. Surface soil is relatively shallow, ranging from 1 to 11 feet deep. Where the excavation reaches soil, the cuts would be at a flatter 2:1 slope, which would allow for planting and reduce the potential for erosion.

To provide standard sight distance, the driveway that intersects the highway at the apex of the curve would be realigned to intersect closer to the west end of the project, using a portion of the existing road. The rest of the existing road would be removed and replanted.

Approximately 2.9 acres of new right-of-way would be required for the new roadway alignment and to accommodate the wider roadbed. One utility pole might be relocated. The project layout is shown on Attachment D.

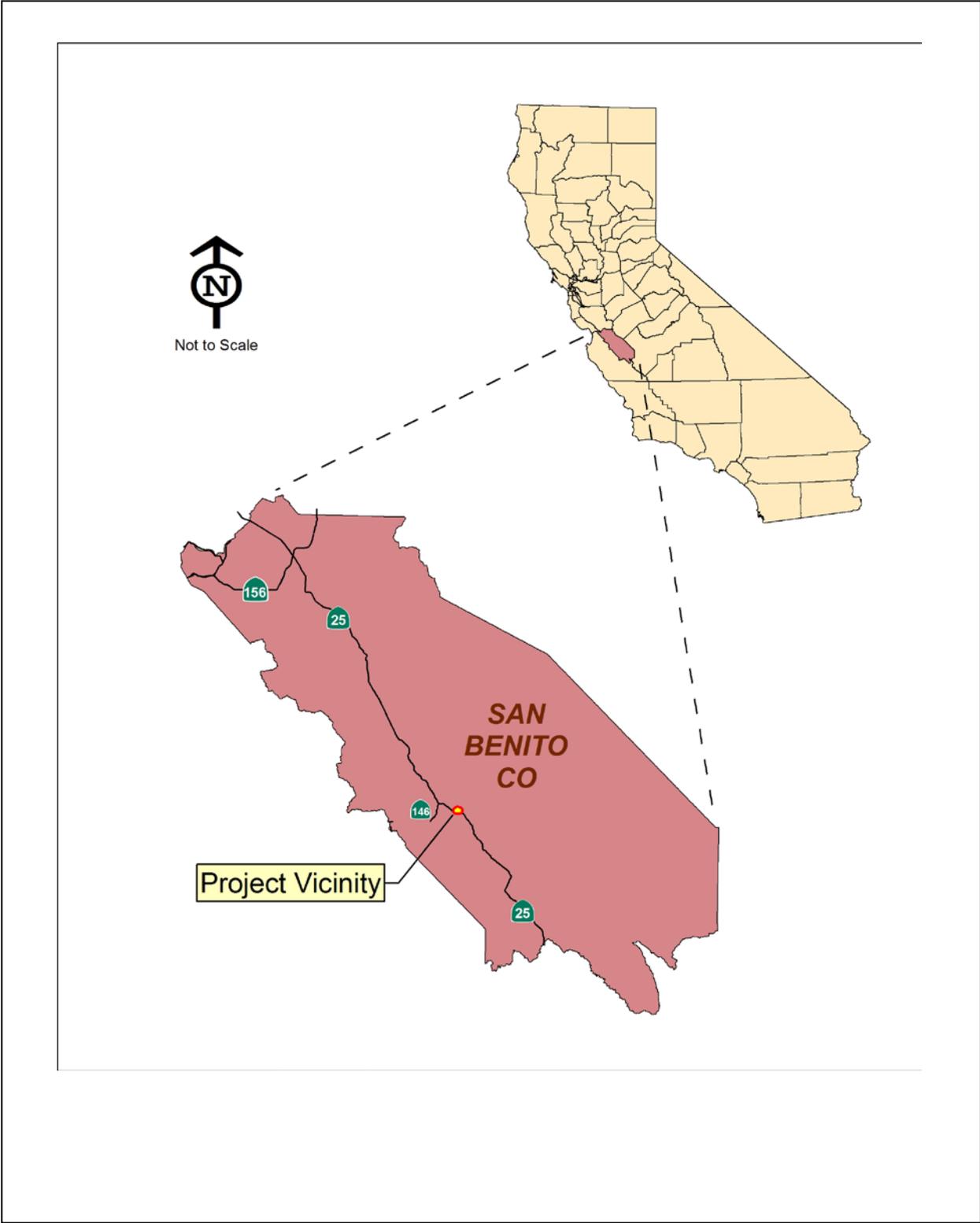


Figure 1-1 Project Vicinity Map

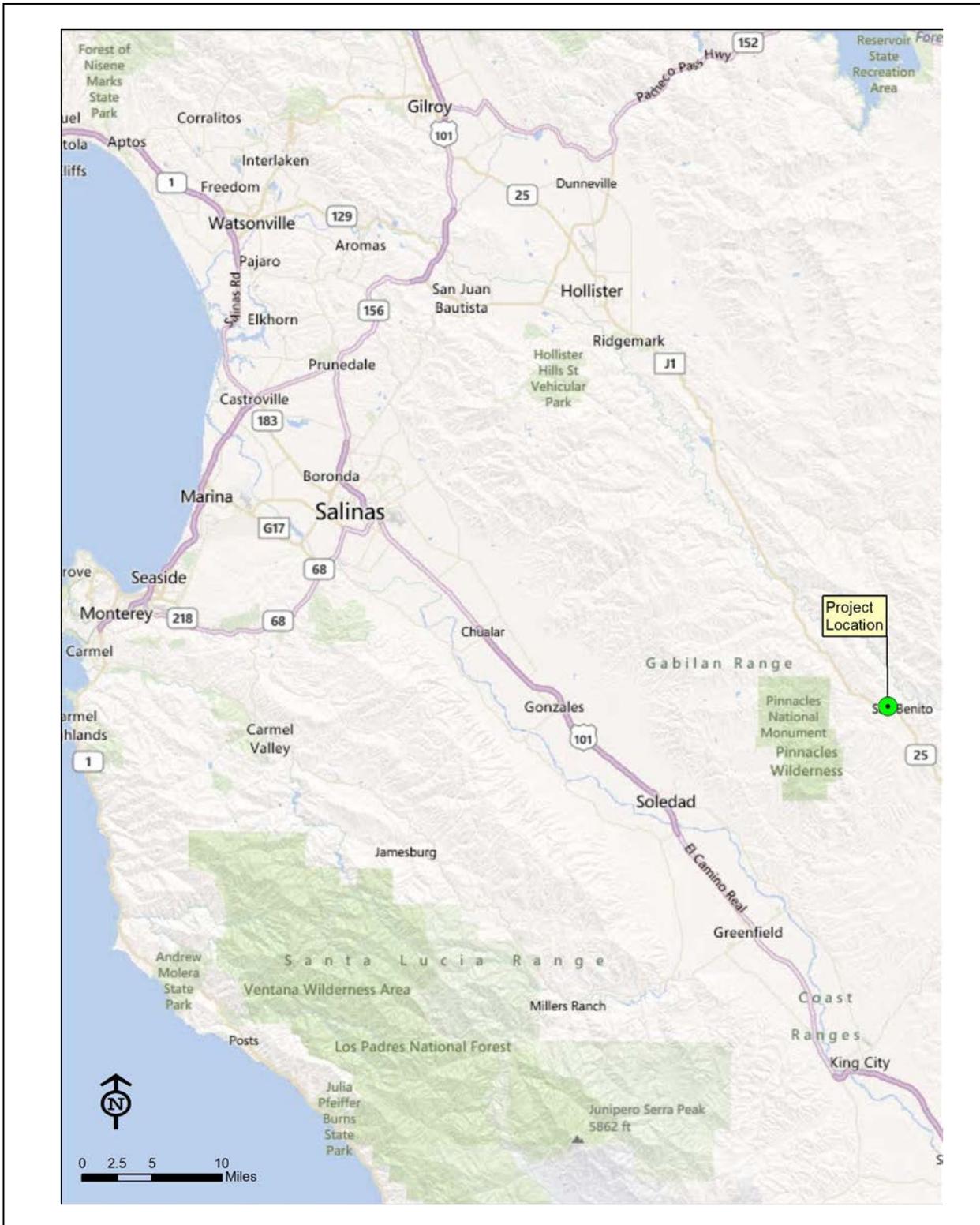


Figure 1-2 Project Location Map

1.3.2 No-Build Alternative

The No-Build Alternative would leave the road as it is. If the realignment were not built, Caltrans would continue to maintain the roadway and monitor the collision data. As traffic volumes increase, it is expected that the number of collisions at this location would also increase. To reduce the likelihood of errant vehicles colliding with fixed objects, Caltrans could remove trees within 20 feet of the road as a minimum measure. Otherwise, there would be no immediate environmental impacts associated with this alternative.

1.3.3 Alternatives Considered but Eliminated from Further Discussion

There were no other alternatives considered for this location. A design variation was considered to build a 25-foot-high retaining wall as part of the new alignment, which could minimize the amount of new right-of-way needed and reduce environmental impacts. This was dropped from consideration because the retaining wall's high cost makes this alternative difficult to fund.

1.4 Permits and Approvals Needed

Caltrans would be required to have a Section 2081 Incidental Take Permit for California tiger salamander from the California Department of Fish and Game prior to construction of the project. The application for this permit would be submitted during final design of the project, once enough project design details were available to provide sufficient information.

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 for the project, the following environmental issues were considered, but no adverse impacts were identified. Consequently, there is no further discussion of these issues in this document.

- **Land Use**—The area is zoned as Agricultural Rangeland; the land use is pasture. The project is consistent with all local land use plans. (Source: San Benito County Assessor’s Office, San Benito County General Plan Land Use Element.)
- **Growth**—This project does not change the serviceability of the facility, and therefore has no potential to affect growth. (Source: project description.)
- **Farmlands/Timberlands**—There are no prime soils, farmlands of importance, or properties in a Williamson Act contract that would be affected by the project. There is no timberland within the project area. (Source: Natural Resources Conservation Service Web Soil Survey, San Benito County Assessor’s Office.)
- **Community Impacts**—The few residences in the vicinity are located more than 500 feet from the project site and would not be affected by the proposed project. (Source: project plans.)
- **Utilities/Emergency Services**—There would be a power pole relocated as a result of this project, but no change to utility service. The project would increase the safe travel speed of the roadway within the project limits, thereby improving the service for emergency vehicles. (Source: project plans.)
- **Traffic and Transportation/Pedestrian and Bicycle Facilities**—The project would have no adverse impact on modes of transportation. The existing road would be

maintained until the new alignment opens. No detours are planned. (Source: project plans.)

- Hydrology and Floodplain—The project does not affect any water source and is not located within a floodplain. (Source: project plans and Storm Water Data Report.)
- Water Quality and Storm Water Runoff—There is no work anticipated in a waterway; no water quality impacts are anticipated. (Source: Water Quality Assessment.)
- Geology/Soils/Seismic/Topography—Existing slopes are stable; proposed cut slopes are planned at 0.25:1 (horizontal distance:vertical distance) where the substrate is rock, and 2:1 where the substrate is soil. No structures are included in the project, so there is no increased risk from seismic activity. (Source: Geotechnical Design Report; Project Report.)
- Paleontology—A field survey of the project area indicated weathered, volcanic rock formations in the project vicinity. No fossils were encountered. There is a low probability of encountering paleontological resources during excavation for the project. (Source: Paleontology Review memorandum.)
- Hazardous Waste or Materials—Due to the remote location of the project and low traffic counts, no impacts due to hazardous waste are expected. (Source: Initial Site Assessment memorandum.)
- Air Quality—No additional lanes are being added to the highway, so there would be no difference in long-term air quality emissions with or without the project. Construction emissions are expected to be within the threshold limits of the Monterey Bay Unified Air Pollution Control District. There are no nearby sensitive receptors that might be adversely affected by construction emissions. According to the California Air Resources Board, the air basin is in attainment and/or unclassified with respect to national standards for carbon monoxide and small particulate matter. (Source: Air Quality Review memorandum; project mapping.)
- Noise and Vibration—There are no sensitive receptors within 500 feet of the project, so no impacts from realigning the highway are anticipated. (Source: Noise Quality Study memorandum.)
- Wetlands and other Waters—No wetlands or other waters are within the area of potential impacts. (Source: Natural Environment Study.)
- Cumulative impacts—There would be no cumulative impacts as a result of this project because there are no other planned projects in the vicinity.

2.1 Human Environment

2.1.1 Visual/Aesthetics

Regulatory Setting

The California Environmental Quality Act (CEQA) 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

This information came from the Visual Impact Study (February 2012) prepared for the project.

The visual setting is distinctly rural, with grazing and low-intensity agriculture uses occurring on the valley floors and lower slopes of the adjacent hillsides. Oak savanna, oak woodland, and pines are the predominant vegetation on the upper hillsides, with sycamore and cottonwood trees in the drainages and riparian corridors. Rock outcroppings are noticeable throughout the area.

Scenic vistas in the project vicinity include views of open space, oak trees, and distant views of the hills to the east and west. The visual quality of the area is moderately high, due mostly to the varied topography and natural vegetation patterns. The somewhat narrow curvilinear roadway adds to the rural visual quality of the setting.

The main viewer group affected by the project would be users of the highway itself. On average, 750 vehicles per day now pass through the project limits. Views of the project for motorists travelling the highway would last about 25 seconds. Long distance views of the project would be generally unavailable for highway users due to the curvilinear roadway, varied topography, and scattered mature trees throughout the area.

Environmental Consequences

The project would result in 40-foot-high cut slopes on each side of the road for 600 feet, which would decrease the visual scale of the highway within the project limits. However, the increased roadway width would moderate the decrease in the visual scale. Erosion control seeding would result in a similar groundcover on the new slopes; for most viewers, the cut slopes on both sides would appear as a logical continuation of the pattern of cut slopes along the route and would not detract from the

overall viewing experience for the highway user. Views to hillsides, ridgelines, and native vegetation would be minimally affected.

Tree removal would result in a minor alteration of the roadside views, but several mature trees would remain in the immediate area to maintain the generally vegetated appearance of the corridor.

Route 25 is not an officially designated scenic highway. The project would not detract from the overall viewing experience for the highway user and would result in only a minor effect on the existing visual character and quality of the site and its surroundings.

Avoidance, Minimization, and/or Mitigation Measures

To offset the visual effect of tree removal, grading, and additional pavement, the following measures are recommended:

- Impacts to native oak trees would be minimized to the greatest extent possible. Trees to be preserved would be identified on the plans and in the field with the use of Environmental Sensitive Area fencing installed around the drip lines.
- Slope-warping and tree-box retaining structures would be implemented where possible to avoid impacts to roots and tree crowns.
- Any limb or root pruning of trees would be minimized and, where required, done under the supervision of a Certified Arborist.
- Native oaks greater than 6 inches in diameter at breast height would be restored at a 10:1 ratio, according to plans prepared by Caltrans Landscape Architecture and in conjunction with the Caltrans Biologist. The new planting would include a minimum 3-year plant establishment period.
- Prior to other ground disturbance, the top 4 to 6 inches of native topsoil/duff would be collected and stockpiled. Toward the end of construction, this would be spread over all disturbed soil area at a depth of 1 inch.
- Slope warping and landform grading would be implemented to moderate the visual impact of a 40-foot-high, 0.25:1 cut slope. Where slopes are less than 0.25:1, slopes would be no steeper than 2:1 to allow for successful erosion control and slope stabilization.

2.1.2 Cultural Resources

Regulatory Setting

“Cultural resources” as used in this document refers to all “built environment” resources (structures, bridges, railroads, water conveyance systems, etc.), culturally important resources, and archaeological resources (both prehistoric and historic), regardless of significance.

Historical resources are considered under the California Environmental Quality Act as well as California Public Resources Code Section 5024.1, which established the California Register of Historical Resources. Public Resources Code Section 5024 requires state agencies to identify and protect state-owned resources that meet National Register of Historic Places listing criteria. It further specifically requires Caltrans to inventory state-owned structures in its rights-of-way.

Affected Environment

This information came from the Historic Property Survey Report (January 2012) prepared for the project.

The Area of Potential Effects encompasses all Caltrans right-of-way and proposed new right-of-way where construction activities, including staging areas, would take place. The Area of Direct Impact includes the maximum area in which ground-disturbing activities would take place. No archaeological sites occur within the Area of Direct Impact.

Caltrans contacted the Native American Heritage Commission as well as members of the Ohlone Native American community about the project. In addition, record searches were done for historical resources, archaeological sites, and previous archaeological surveys. The Area of Potential Effects was surveyed twice by Caltrans archaeologists. Soil visibility was good to moderate; in areas where there were oak trees, the duff was scraped away to examine the soils.

One previously unrecorded bedrock mortar was identified, designated CA-SBN-275. This site consists of an isolated lichen-covered blue schist bedrock mortar outcrop containing two moderately developed cupules.

No other cultural materials were observed. If cultural materials are discovered during construction, all earth-moving activity within and around the immediate discovery area will be diverted until a qualified archaeologist can 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 must stop 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 are thought to be Native American, the coroner will notify the Native American Heritage Commission, who will then notify the Most Likely Descendent. At this time, the person who discovered the remains will contact Valerie Levulett, Caltrans District 5, so that Caltrans may work with the Most Likely Descendant on the respectful treatment and disposition of the remains. Further provisions of Public Resources Code 5097.98 are to be followed as applicable.

Environmental Consequences

The archaeological site lies outside of the established Area of Direct Impact. All construction for the proposed project would take place away from this isolated bedrock mortar and would not affect this site. Caltrans has determined a “Finding of No Adverse Effect with Standard Conditions–ESAs” is appropriate for this undertaking. Caltrans has notified the State Historic Preservation Officer of this finding.

Avoidance, Minimization, and/or Mitigation Measures

The CA-SBN-275 site boundary would be shown on construction plans as an Environmentally Sensitive Area. An Environmentally Sensitive Area Action Plan has been prepared to protect CA-SBN-275 during construction. The Action Plan stipulates that, prior to any ground-disturbing activities, the Environmentally Sensitive Area would be delineated in the field with orange plastic construction fencing. Within the boundaries of the Environmentally Sensitive Area and where designated by the engineer, no construction or related activities would be permitted.

Contract details for the Environmentally Sensitive Area fencing would include the following:

- In consultation with the Caltrans archaeologist, the contractor will install exclusionary fencing encircling the entire rock outcrop, leaving a 3- to 6-foot buffer around the outcrop.
- The fence will be installed with driven steel posts at approximately 10-foot centers and must at all times support the fence in a vertical, upright position.
- Signs identifying the Environmentally Sensitive Area as “Restricted Area” will be posted on the boundary fencing to alert project construction personnel to avoid this area. Within the Environmentally Sensitive Area, all ground disturbances associated with construction activities are prohibited, including equipment staging.

- During project construction, the contractor will be responsible for maintaining the fence. A Caltrans District 5 archaeologist will regularly monitor the fencing to confirm that it remains in place.
- The Environmentally Sensitive Area fencing will remain in place until the end of the project construction, at which time the contractor will remove it.

2.2 Biological Environment

2.2.1 Natural Communities

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 2.2.4.

Affected Environment

This information came from the Natural Environment Study (April 2012) prepared for the project.

Blue oaks (*Quercus douglasii*) occur within annual grasslands in the project area. They are a very slow-growing tree, and loss of habitat and the general failure of the species to spread vigorously have had a negative effect on blue oaks in California. Approximately 53 individual blue oak trees, but not true continuous oak woodlands, occur within and next to the project limits. Blue oaks provide foraging and nesting habitat for a variety of bird species, and various mammal species den inside hollow trunks.

A small isolated seasonal pond lies within the northeastern portion of the project area, but outside of the project limits. The pond is supported from roadside runoff that is conveyed from a culvert emptying into the pond at the north end. The pond supports minimal vegetation and provides habitat for various aquatic species, as well as breeding and foraging habitat for the Pacific chorus frog and western toad. The pond is also within vernal pool fairy shrimp critical habitat Unit 28 (San Benito County

Unit) and meets one of the two primary constituent elements for the habitat. The pond is suitable breeding habitat for California tiger salamander and California red-legged frog, though there is no known use of it by these species.

Environmental Consequences

The project has the potential to remove approximately 15 healthy blue oak trees that are within the grading area required for the new road. Table 2-1 shows the sizes of the trees (diameter taken at breast height) slated for removal.

Table 2-1 Impacts to Blue Oak Trees

Diameter	Quantity
6-8 inches	5
12-18 inches	5
30-36 inches	4
48 inches	1

There would be no impacts to the pond.

Avoidance, Minimization, and/or Mitigation Measures

No measures are required for impacts to annual grassland or ruderal/disturbed areas. To minimize the long-term impacts of removing oak trees, the following measures would be included in the project:

- Trees to be removed will be noted on design plans. Prior to any ground-disturbing activities, environmentally sensitive area fencing will be installed around the dripline of trees to be protected within the project limits.
- Impacts to native oak trees greater than or equal to 6 inches in diameter at breast height would be offset by replacement planting within the project limits. Replacement plantings would be achieved using a minimum 10:1 ratio for each oak tree removed, which would be consistent with the goals of the Open Space and Conservation Element Update of the San Benito County General Plan (San Benito County 1995). A portion of the existing Route 25 roadbed would be removed and rehabilitated to allow for revegetation with oak trees as mitigation. Replacement plantings will be detailed in Caltrans' Landscape Architecture Landscape Planting Plan, in

coordination with a biologist, with developed planting specifications to ensure survival of the replacement trees.

- To ensure success, monitoring and a three-year plant establishment period will be required, which will include irrigation, semi-annual (twice a year) inspections, weeding, and replacement. Oak tree replacement areas will be delineated on project plans.

To ensure avoidance of impacts to vernal pool fairy shrimp critical habitat, the following measures would be included in the project:

- Fencing would be placed and maintained around any avoided (preserved) vernal pool habitat to prevent impacts from vehicles.
- All onsite construction personnel would receive instruction on the presence of listed species and the importance of avoiding impacts to these species and their habitat.
- Caltrans would ensure that construction and maintenance activities avoid impacts to the pond and watershed onsite.

2.2.2 Plant Species

Regulatory Setting

The U.S. Fish and Wildlife Service and California Department of Fish and Game have regulatory responsibility for the protection of special-status plant species. “Special-status” species are selected for protection because they are rare and/or subject to population and habitat declines. Special-status is a general term for species that are afforded varying levels of regulatory protection. The highest level of protection is given to threatened and endangered species; these are species that are formally listed or proposed for listing as endangered or threatened under the Federal Endangered Species Act and/or the California Endangered Species Act. Please see *Threatened and Endangered Species* Section 2.2.4 in this document for detailed information on these species.

This section of the document discusses all the other special-status plant species, including Fish and Game species of special concern, Fish and Wildlife candidate species, and California Native Plant Society rare and endangered plants.

The regulatory requirements for the California Endangered Species Act can be found at California Fish and Game Code, Section 2050, et seq. Caltrans projects are also subject to the Native Plant Protection Act, found at California Fish and Game Code,

Section 1900-1913, and the California Environmental Quality Act, Public Resources Code, Sections 2100-21177.

Affected Environment

This information came from the Natural Environment Study (April 2012) prepared for the project.

Non-native annual grassland is the main vegetation community within the project area. This grassland is dominated by introduced annual grasses, but often includes many species of showy native wildflowers. Annual grasslands provide little cover for wildlife, but do provide foraging and breeding habitat. Small mammals, such as mice and gophers, are common residents in annual grasslands; larger mammals such as coyotes occasionally forage in these areas as well. A variety of bird species use annual grasslands as nesting and/or foraging habitat.

The edges of Route 25 between the road shoulders and fence are vegetated mostly by ruderal/disturbed species made up of non-native weedy and/or invasive plants that are tolerant of disturbed conditions. This area has little to no potential to support habitat for special-status species.

Potential habitat occurs within the project area for several special-status plant species, but only shining navarretia (*Navarretia nigelliformis* ssp. *radians*) was observed in the area of potential impact. Shining navarretia is a California Native Plant Society List 1B.2 subspecies (classified as rare, threatened, or endangered in California and elsewhere, fairly endangered in California.) It is a native, annual herb that occurs in San Benito and several other counties. A small colony of about 50 shining navarretia plants was seen growing within annual grasslands just east of the access road through the westernmost parcel of the study area. There are only two other historical records in the region for the species—one about 14.5 miles southeast of the project area and the other about 5 miles northwest of the project area.

Environmental Consequences

The proposed project would result in removal of this shining navarretia colony. This impact would be adverse and could be potentially significant without mitigation.

Avoidance, Minimization, and/or Mitigation Measures

To reduce impacts to below the level of significance, shining navarretia would be re-established in the project area. The following measures would be included in the project and carried out by a biologist determined qualified by Caltrans:

- Prior to construction, a qualified biologist would conduct a training session for all construction personnel. At a minimum, the training would include a description of shining navarretia and its habitat, the specific measures that are being implemented to conserve shining navarretia for the current project, and the boundaries of proposed areas of disturbance.
- Preconstruction surveys would be conducted within the biological study area during each blooming period to reassess the current distribution of shining navarretia.
- To restore shining navarretia to the area after construction, one or more of the following methods would be employed:
 - Seed would be hand-collected from individual shining navarretia plants prior to construction and appropriately stored for reseeded in the restoration/replacement site. Seed would then be hand-broadcast in the proposed shining navarretia restoration/replacement area as soon after collection as practicable. Various locations for seeding within the replacement area would be considered.
 - Individual shining navarretia plants would be collected and transplanted onsite.
 - Shining navarretia plants would be propagated offsite and transplanted in the restoration/replacement site.
- As a first order of work prior to ground disturbance, to preserve the seed bank in the soil and the nutrient-rich duff/topsoil, the top 2 inches of the soil in the general area supporting shining navarretia plants would be collected for redistribution at the restoration/replacement site. If heavy equipment is used, the qualified biologist will monitor the activity. The soil collection area would be delineated in the field during the blooming period prior to ground disturbance. Collection and reapplication of the duff/topsoil at the restoration/replacement site and reapplication would occur as soon as possible.

No irrigation or watering of shining navarretia in the restoration/replacement area is proposed.

- The shining navarretia restoration/replacement area would be delineated on the project plans and delineated in the field with environmentally sensitive area fencing, markers, or equivalent. The location would remain a conservation area within Caltrans' right-of-way permanently marked with environmentally sensitive area paddles and maintained in perpetuity.

- The success goal will be 1:1 replacement of shining navarretia (about 50 plants). To ensure success, monitoring would occur annually for three years during the appropriate blooming period for shining navarretia (typically April to July) to assess the vigor of the population and to determine if weeding and/or replacement are required. Annual monitoring reports will be prepared to evaluate whether success goals are being met and to propose adaptive management methods if necessary.
- After ground disturbance, a compost blanket would be applied to disturbed soil areas that are at a 2:1 slope or flatter. Hydroseeding will be applied to exposed soil using a native seed mix that will not outcompete with shining navarretia.

2.2.3 Animal Species

Regulatory Setting

Many state laws regulate impacts to wildlife. The California Department of Fish and Game is 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 Endangered Species Act, and therefore have no protected status under these laws. Species listed or proposed for listing as threatened or endangered are discussed in section 2.2.4. All other special-status animal species are discussed here, including California Department of Fish and Game fully protected species and species of special concern.

State laws and regulations pertaining to wildlife include the following:

- California Environmental Quality Act
- Sections 1600–1603 of the Fish and Game Code
- Section 3503 of the Fish and Game Code
- Sections 4150 and 4152 of the Fish and Game Code

Affected Environment

This information came from the Natural Environment Study (April 2012) prepared for the project.

Table 2-2 shows a list of the animal species potentially affected by the proposed project, their protection status that requires special protocol, and a summary of their presence in the project area. Because of their state threatened status, the California tiger salamander and San Joaquin kit fox are discussed in section 2.2.4 *Threatened and Endangered Species*.

Table 2-2 Animal Species Potentially Affected

Species	Status	Presence
California tiger salamander ¹	State threatened; California Species of Special Concern	Assumed present; habitat present.
San Joaquin Kit Fox ¹	State threatened	No individuals or dens observed.
California red-legged frog	California Species of Special Concern	Assumed present; critical habitat present.
Western spadefoot toad	California Species of Special Concern	Assumed present.
Cooper's hawk	California Species of Special Concern	No individuals observed; no nests found, but nesting habitat is present.
Sharp-shinned hawk	California Species of Special Concern	No individuals observed; no nests found, but nesting habitat is present.
Golden eagle	California fully-protected species	No individuals observed; no nests found, but nesting habitat is present.
White-tailed kite	California fully-protected species	No individuals observed; no nests found, but nesting habitat is present.
Western red bat	California Species of Special Concern	No evidence of roosting.
Hoary bat ²	California Natural Diversity Database "Special Animals"	No evidence of roosting.
Western mastiff bat	California Species of Special Concern	No evidence of roosting.
Western small-footed myotis ²	California Natural Diversity Database "Special Animals"	No evidence of roosting.
Long-eared myotis ²	California Natural Diversity Database "Special Animals"	No evidence of roosting.
Fringed myotis ²	California Natural Diversity Database "Special Animals"	No evidence of roosting.
Yuma myotis ²	California Natural Diversity Database "Special Animals"	No evidence of roosting.
American badger	California Species of Special Concern	No individuals or dens found.

¹Because of their state threatened status, the California tiger salamander and San Joaquin kit fox are discussed in section 2.2.4 Threatened and Endangered Species.

²"Special Animals" is a general term that refers to all of the animals the California Natural Diversity Database is interested in tracking, regardless of their legal or protection status. This list is also referred to as the list of "species at risk" or "special-status species." The Department of Fish and Game considers the animals on this list to be those of greatest conservation need.

California Red-legged Frog

California red-legged frogs breed in permanent or temporary freshwater bodies that will hold water for at least 20 weeks, usually through July, though these frogs require permanent water for hydration. They will move between aquatic sites to breed, for-age, or to escape drying conditions. These overland movements can extend more than 2 miles, often in straight lines and without regard to habitat type. Refuge may be natural, such as spaces under boulders, rocks, or dead trees, or human-made, such as drains, watering troughs, or stacks of hay. They will also take refuge in small mam-

mal burrows and moist leaf litter. Monterey, San Luis Obispo, and Santa Barbara counties currently support the largest remaining California red-legged populations within California.

The project area is within California red-legged frog critical habitat Unit San Benito County-3 and includes all four habitat types of the Unit: aquatic breeding, aquatic non-breeding, upland, and dispersal.

No California red-legged frogs were found during protocol surveys, but two individuals were found previously within a few miles of the project site. Because of this and the presence of suitable aquatic upland habitat, California red-legged frog is assumed to be present.

Western Spadefoot Toad

This animal is a lowland species that frequents wet marshy areas and vernal pools, but can also be found in the open vegetation of foothills and mountains. It is now extinct throughout much of lowland Southern California. Western spadefoot toads breed in pools that form during heavy rain, or in slow streams, reservoirs or irrigation ditches. They burrow during the dry season and are inactive. Dispersal distances are unknown, but it is presumed that upland movements are not very far. No Western spadefoot adults, juveniles, larvae, or eggs were found in the project area, but an individual was found nearby in 1999. Also, the pond and surrounding grasslands provide suitable breeding and upland habitat, respectively. Therefore, the species is assumed to be present.

Raptors and Other Nesting Birds

Due to the rural nature of the project area and the habitat it provides, several protected bird species could be present within the project area during construction. Raptor species are listed in Table 2-2 above. These raptors hunt in the brush and open terrain and use the large trees for nesting and cover. In addition to these species, numerous other protected bird species could nest in trees in the area.

No bird species described above or other nesting bird species were observed during observational surveys of the project area; no active or inactive nests were found. Common birds seen included the western scrub jay, mourning dove, and American crow.

Bats

The project area provides suitable habitat for a wide variety of bats. Protected species that could be found within the project limits are listed in Table 2-2 above. Bats use a variety of habitats for feeding and roost in the trees or in crevices, depending on the species.

No daytime bat roosting was observed in trees within the project area during general surveys. No nighttime roost surveys were done due to the marginal quality of available habitat. However, numerous bat species have roosting colonies at the nearby Pinnacles National Monument and could also potentially roost in trees within the project area.

American Badger

American badgers typically use open ground that is vegetated with grasses and low shrubs. They dig burrows for cover in crumbly soil and will often reuse old burrows. Badgers are carnivorous, preying on rodents, chipmunks, and especially ground squirrels and pocket gophers, though their diets vary in response to available prey.

The project area suitability for American badger habitat is only fair to good. No badgers were observed during surveys. No potential badger dens or other signs of badger presence were found.

Environmental Consequences

California Red-legged Frog

The project area contains potential habitat for several protected species including California red-legged frog. The permanent loss of these annual grasslands and general ground disturbance during construction activities are the primary sources of potentially adverse impacts. This is discussed more thoroughly in the Environmental Consequences of section 2.2.4 *Threatened and Endangered Species* under California Tiger Salamander.

Western Spadefoot Toad

Similarly to the California red-legged frog, potential impacts to Western spadefoot toad would be primarily from ground disturbance and loss of grasslands. (See section 2.2.4 *Threatened and Endangered Species* under California tiger salamander.)

Raptors and Other Nesting Birds

Vegetation removal could directly affect active bird nests and any eggs or young residing in nests. Indirect impacts could also result from noise and disturbance asso-

ciated with construction, which could alter perching, foraging, and/or nesting behaviors. Tree trimming and removal would reduce the amount of nesting habitat.

Bats

Though no bat roosts were found, it is possible that bats could establish new roosts in trees within the area of potential impacts prior to construction. If this occurs, direct impacts to bats could result during tree removal. These direct effects could result in the injury or death of bats and/or harassment that could alter roosting behaviors. Indirect impacts could also result from noise and disturbance associated with construction, which could also alter roosting behaviors.

American Badger

Similarly to the San Joaquin kit fox, potential impacts to American badger would be primarily from ground disturbance and loss of grasslands. (See section 2.2.4 *Threatened and Endangered Species*.) However, although there is potential habitat within the project site, the potential for adverse effects to the American badger is estimated to be very low.

Avoidance, Minimization, and/or Mitigation Measures

California Red-legged Frog

The mitigation measure for impacts to California tiger salamander habitat would also serve to reduce impacts to critical habitat for California red-legged frog. In addition, the following measures from the U.S. Fish and Wildlife Service's (Service) Programmatic Biological Opinion for the California red-legged frog, *Minimization of Adverse Effects*, would be included in the project:

- Only Service-approved biologists would participate in activities associated with the capture, handling, and monitoring of California red-legged frogs.
- Ground disturbance would not begin until written approval is received from the Service that the biologist is qualified to do the work.
- A Service-approved biologist would survey the project area no more than 48 hours prior to the onset of work activities. If any life stage of the California red-legged frog is found and these individuals are likely to be killed or injured by work activities, the approved biologist would be allowed sufficient time to move them from the site before work activities begin. The Service-approved biologist would relocate the California red-legged frogs the shortest distance possible to a location that contains suitable habitat and will not be affected by the activities associated with the project. The Service-approved biologist would maintain detailed records of

any individuals that are moved (e.g., size, coloration, any distinguishing features, photographs) to assist him or her in determining whether translocated animals are returning to the point of capture.

- Before any activities begin on a project, a Service-approved biologist would conduct a training session for all construction personnel. At minimum, the training would include a description of the California red-legged frog and its habitat, the specific measures that are being implemented to conserve the California red-legged frog for the current project, and the boundaries within which the project may be accomplished.
- A Service-approved biologist must be present at the work site until all California red-legged frogs have been removed, workers have been instructed, and disturbance of the habitat has been completed. After this time, Caltrans would designate a person to monitor onsite compliance with all minimization measures. The Service-approved biologist would ensure that this monitor receives the training outlined in the measure above and training on the identification of California red-legged frogs. If the monitor or the Service-approved biologist recommends that work be stopped because California red-legged frogs would be affected, he or she would notify the resident engineer immediately. The resident engineer would resolve the situation by requiring that all actions that are causing these effects be halted. When work is stopped, the Service would be notified as soon as possible.
- During project activities, all trash that may attract predators or scavengers would be properly contained, removed from the work site, and disposed of regularly. Following construction, all trash and construction debris would be removed from work areas.
- All refueling, maintenance and staging of equipment and vehicles would occur at least 60 feet from the riparian habitat or water bodies and not in a location from where a spill would drain directly toward aquatic habitat. The monitor would ensure contamination of habitat does not occur during such operations. Before work begins, Caltrans would ensure that a plan is in place for prompt and effective response to any accidental spills. All workers would be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur.
- Project areas would be replanted with an assemblage of native upland vegetation suitable for the area. (No native riparian or wetland areas would be affected by this particular project.) Locally collected plant materials would be used to the extent practicable. Invasive, exotic plants would be controlled to the maximum extent practicable.

- Habitat contours would be returned to a natural configuration at the end of the project activities. This measure would be implemented in all areas disturbed by activities associated with the project, where feasible, and not harmful to the California red-legged frog.
- The number of access routes, size of staging areas, and the total area of activity would be limited to the minimum necessary to achieve the project. Environmentally sensitive areas would be established to confine access routes and construction areas to the minimum area necessary to complete construction, and to minimize the impact to California red-legged frog habitat.
- Work would be scheduled for times of the year when impacts to the California red-legged frog would be minimal. Habitat assessments, surveys, and technical assistance between Caltrans and the Service during project planning would be used to assist in scheduling work activities to avoid sensitive habitats during key times of year.
- The Service-approved biologist would be responsible for ensuring his or her activities comply with the California Fish and Game Code.

Western Spadefoot Toad

The first 8 avoidance and minimization measures under California tiger salamander will also be implemented for the Western spadefoot toad. In addition, the following measure was specifically designed to avoid and minimize impacts to the Western spadefoot toad:

- Prior to construction, biologist determined qualified by Caltrans would capture and relocate any western spadefoot (if present) or other special-status species to suitable habitat outside of the area of potential impact. Observations of species of special concern or other special-status species would be documented on California Native Diversity Database forms and submitted to California Department of Fish and Game upon project completion.

Raptors and Other Nesting Birds

The replacement planting of blue oak trees discussed in section 2.2.1 *Natural Communities* would minimize impacts to habitat loss. In addition, the following avoidance and minimization measures would be included in the project:

- Tree removal would be scheduled to occur from September 1 to February 14, outside of the typical nesting bird season if possible, to avoid potential impacts to nesting birds and cavity nesters. If construction activities are proposed to occur

within 100 feet of potential bird nesting habitat during the nesting season (February 15 to August 31) within the biological study area, a nesting bird survey must be done at least two weeks prior to construction by a biologist determined qualified by Caltrans.

- Active bird nests would not be disturbed and eggs or young of birds covered by the Migratory Bird Treaty Act and California Fish and Game Code would not be killed, destroyed, injured, or harassed at any time. Using environmentally sensitive area fencing, readily visible “exclusion zones” where nests must be avoided shall be established by a biologist determined qualified by Caltrans.
- All clearing/grubbing and vegetation removal of annual grassland habitat and oak trees would be monitored and documented by the biological monitor(s), regardless of time of year.

Bats

The measure discussed above under Raptors and Other Nesting Birds regarding a restricted window for tree removal would apply as an avoidance measure for bats as well. In addition, the follow avoidance and minimization measures would be included in the project:

- No more than two weeks prior to tree removal, a bat roost survey would be done by a biologist determined qualified by Caltrans to determine presence/absence of roosting bats. The biologist(s) doing the preconstruction surveys will also identify the nature of the bats’ use (i.e., no roosting, night roost, day roost) and determine if passive bat exclusion will be necessary and feasible.
- If a biologist qualified by Caltrans determines that bat exclusion is necessary and feasible, a qualified/licensed individual or firm would implement passive exclusion (for example, netting) in areas where bats are roosting within the area of potential impact.
- If construction activities are proposed to occur within the work area during the typical maternity bat roosting season (February 15 to August 31), a bat roost survey would be done by a biologist determined qualified by Caltrans at least two weeks prior to construction to determine presence/absence of roosting bats.
- If bats are found to be maternity roosting, active bat maternity roosts would not be disturbed or destroyed at any time.
- In areas where roosts must be avoided, readily visible exclusion zones would be established using environmentally sensitive area fencing.

American Badger

The avoidance and minimization measures proposed for the San Joaquin kit fox (section 2.2.4 *Threatened and Endangered Species*) would also apply to the American badger, except any observations of occupied badger dens or American badgers would be reported to the California Department of Fish and Game instead of the Service.

2.2.4 Threatened and Endangered Species

Regulatory Setting

California has enacted a 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 (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.

The California Department of Fish and Game may authorize impacts to California Endangered Species Act species by issuing a Consistency Determination under Section 2080.1 of the California Fish and Game Code.

Affected Environment

The following information came from the Natural Environment Study (April 2012) prepared for the project.

California Tiger Salamander

The California tiger salamander is a state threatened species. This is a large terrestrial salamander that inhabits upland areas in grassland and oak savannahs, but breeds in ponds. After breeding, adults leave the pool and return to small mammal burrows in surrounding uplands. Although no California tiger salamanders were found in the project area, individuals have been recorded nearby and the project area contains suitable habitat. Therefore they are assumed to be present.

San Joaquin Kit Fox

The San Joaquin kit fox is a state threatened species. It prefers grassland and scrublands, but can also be found in agricultural fields, petroleum fields, and urban areas. Kit foxes use dens for temperature regulation, shelter from adverse environmental conditions, reproduction, and escape from predators. Kit foxes either dig their own dens or modify dens built by other animals. They also use human-made structures such as culverts and abandoned pipes. Habitat loss is a major source of the subspecies' decline.

There have been two recorded sightings of San Joaquin kit fox within 10 miles of the project area. No San Joaquin kit foxes were observed in the project area during nighttime visits. No potential San Joaquin kit fox dens were observed, and no indication of kit fox presence was found.

Environmental Consequences

California Tiger Salamander

The project would convert about 1.86 acres of non-native annual grassland, which is considered upland and dispersal habitat for the salamander, and temporarily affect about 0.87 acre of the same through ground disturbance. Construction activities could result in death or injury to individual salamanders; attempts to capture and relocate the animals could stress them, leading to adverse effects.

San Joaquin Kit Fox

The proposed project would permanently affect about 1.48 acres and temporarily affect about 0.48 acre of non-native annual grassland habitat through ground disturbance and tree removal. Kit foxes could be accidentally entombed during grading or injured by construction equipment. Noise and general disturbance could adversely affect foraging and dispersal, but because kit fox are nocturnal this is unlikely.

Avoidance, Minimization, and/or Mitigation Measures

California Tiger Salamander

The following mitigation measures would be included in the project to address potentially significant permanent and temporary impacts to California tiger salamander and/or its habitat:

- Caltrans would obtain U.S. Fish and Wildlife Service (Service) and California Department of Fish and Game (Fish and Game) approval of a Designated Biologist(s) and Designated Monitors prior to project-related activities that might result in impacts to the California tiger salamander. The Designated Biologist(s) would hold

all applicable state and federal permits including an active Scientific Collecting Permit from Fish and Game that specifically names California tiger salamander surveys as an authorized activity. Any proposed biologist(s) that do not have the required permits must work under the supervision of one who does have the required permits. These individuals would be referred to as Designated Monitors.

- The Designated Biologist with the active permits must be present at all surveys and during all initial ground-disturbing activities in areas of potential California tiger salamander habitat to help minimize or avoid impact to the California tiger salamander and to minimize disturbance of habitat. Designated Biologists and/or Designated Monitors who handle California tiger salamanders would ensure that their activities do not transmit diseases or pathogens harmful to amphibians, such as chytrid fungus (*Batrachochytrium dendrobatidis*), by following the fieldwork code of practice developed by the Declining Amphibians Task Force. Designated Monitors may monitor project activities after initial ground-disturbing activities have been completed provided the Designated Biologist with the active permits can be contacted should the need arise to relocate a California tiger salamander. Work that could potentially harm the California tiger salamander would have to be stopped until the Designated Biologist arrived to relocate the California tiger salamander to a pre-approved location. If the Designated Biologist or Designated Monitor recommends that work be stopped, he or she must notify the resident engineer immediately. The resident engineer would resolve the situation by requiring that all actions that are causing these effects be halted. When work is stopped, the Service would be notified as soon as possible.
- Small mammal burrows within the proposed areas of permanent impact must be hand-excavated by a Service/Fish and Game-approved biologist prior to construction. Timing of hand excavation would occur outside of the California tiger salamander breeding season. Excavation of burrows between June 15 and November 1 would avoid the breeding season (November to March) and most juvenile dispersal movements.

Caltrans proposes hand-excavation of several dozen small mammal burrows that have the greatest potential to serve as refugia for California tiger salamanders, in coordination with and approval from the Service and Fish and Game. Determination of these burrows would include known parameters of preferred refugia, such as proximity to the pond within the biological study area and burrow type. If no California tiger salamanders are found during hand-excavation of high-potential burrows, Caltrans would infer the area is not serving as upland habitat and proceed with work as planned.

- Following hand excavation, environmentally sensitive area/animal exclusion fencing would be established around the proposed areas of disturbance and maintained through construction to ensure no California tiger salamanders or other special-status amphibians enter the work area. Caltrans would establish environmentally sensitive area fencing along the outer limits of proposed disturbance to preserve small mammal burrows in upland areas outside of the limits of disturbance to the maximum extent feasible. In addition, Caltrans would install fencing that would exclude salamanders from the work area. Fencing would be buried to a depth of 6 inches and would be a minimum of 3.3 feet tall following installation.

Exclusionary fencing would be monitored daily, prior to the start of construction activities each day, to evaluate its effectiveness and ensure that no California tiger salamanders become trapped in the fencing. If a California tiger salamander is found along the fence, a Service/Fish and Game-approved biologist would relocate the animal to the small pond within the biological study area that will be avoided by project-related activities. All fencing would be maintained for the duration of construction and removed on project completion.

- Effects to California tiger salamanders would be minimized during rainy weather and at night. Between November 1 and April 1, the project site would be surveyed nightly by the Designated Biologist or a Designated Monitor before any night work. When the chance of rainfall within 72 hours is predicted to be 70 percent or greater, only critical project activities will be allowed at night within potential California tiger salamander habitat, until no further rain is forecast.
- Designated Biologists/Monitors would inspect all open trenches, auger holes, and other excavations that may trap a California tiger salamander before any work in or around these features and before they are back-filled.
- The Designated Biologist would conduct an education program for all persons employed or otherwise working on the project site before performing any work on-site. The program would include a discussion of the biology of the California tiger salamander and project-specific avoidance and minimizations measures. Upon completion of the program, employees must sign a form stating they attended the program and understand all protection measures.
- Copies of all relevant agreements/permits (such as the Biological Opinion and Section 2081 Incidental Take Permit) would be maintained at the worksite.

- Prior to ground-disturbing activities, Caltrans would satisfy the requirement of the Section 2081 Incidental Take Permit to provide an anticipated 6.47 acres of California tiger salamander habitat by complying with one of the following:
 - Purchase credits equivalent of up to 6.47 acres at a California Endangered Species Act-certified and Fish and Game-approved Conservation Bank (in a location to be determined) authorized to sell credits for the California tiger salamander; or,
 - Acquire, permanently preserve, and perpetually manage up to 6.47 acres of Habitat Management Lands.

San Joaquin Kit Fox

- No less than 14 days and no more than 30 days prior to any construction activities or any project activity likely to affect the San Joaquin kit fox, a preconstruction survey would be done for the San Joaquin kit fox. The survey would identify kit fox habitat features on the project site, evaluate use by kit fox and, if possible, assess the potential impacts to the kit fox by the proposed activity. The status of all dens should be determined and mapped. Known dens, if found occurring within the footprint of the activity, would be monitored for three days with tracking medium to determine the current use. If no kit fox activity is observed during this period, the den would be destroyed immediately to preclude subsequent use. If kit fox activity is observed at the den during this period, the den must be monitored for at least five consecutive days from the time of the observation to allow any resident animal to move to another den during its normal activity. Only when the den is determined to be unoccupied would the den be excavated under the direction of the biologist.
- Written results of the preconstruction/preactivity survey would be submitted to the Service within five days after survey completion and prior to the start of ground disturbance and/or construction activities. If the preconstruction/preactivity survey reveals an active natal pupping den or new information regarding kit fox presence within 200 feet of the project boundary, the Service must be immediately notified.
- Prior to ground breaking, the Caltrans- or Service-approved biologist would conduct an environmental education and training session for all construction personnel.
- Project employees would be directed to exercise caution when commuting within the project area. A 20-mile-per-hour speed limit would be strongly encouraged within the project site. Cross-country travel by vehicles would be prohibited outside of the proposed areas of disturbance, unless authorized by the Service. Project employees would be provided with written guidance governing vehicle use, speed

limits on unpaved roads, fire prevention, and other hazards. Construction activity would be confined within the project site, which may include temporary access roads and staging areas specifically designated and marked for these purposes.

- A litter control program would be instituted at each project site. No canine or feline pets or firearms (except for law enforcement officers and security personnel) would be permitted on construction sites to avoid harassment, killing, or injuring a kit fox.
- Maintenance and construction excavations greater than 2 feet deep must be covered (plywood, sturdy plastic, steel plates, or equivalent), filled in at the end of each working day, or have earthen escape ramps no greater than 200 feet apart to prevent trapping a kit fox.
- The resident engineer or his or her designee would be responsible for implementing these conservation measures and would be the point of contact.
- All grindings and asphaltic-concrete waste must be stored within previously disturbed areas absent of habitat and at a minimum of 150 feet from any culvert, wash, pond, vernal pool, or stream crossing.
- Restoration and revegetation work associated with temporary impacts would be done using California endemic plants appropriate for the location. To the maximum extent practicable, topsoil would be removed, cached, and returned to the site according to successful restoration protocols. Loss of soil from runoff or erosion would be prevented with straw bales, straw wattles, or similar means provided they do not entangle or block escape or dispersal routes of kit fox.
- The project construction area would be delineated with high visibility temporary fencing, flagging, or other barrier to prevent encroachment of construction personnel and equipment onto any sensitive areas during project work activities. Such fencing would be inspected and maintained daily until completion of the project and would be removed only when all construction equipment is removed from the site. No project activities would occur outside the delineated project area.

2.2.5 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.”

Affected Environment

This information came from the Natural Environment Study (April 2012) prepared for the project.

A total of 20 invasive plant species, as identified by the online California Invasive Plant Council’s Inventory Database (2012), were observed within the biological survey area, as shown in Table 2-3.

Table 2-3 Invasive Plants in Study Area

Scientific Name	Common Name	Council’s Invasiveness Rating	Relative Density
<i>Avena barbata</i>	slender wild oat	moderate	moderate
<i>Brassica nigra</i>	black mustard	moderate	low/sparse
<i>Bromus diandrus</i>	ripgut brome	moderate	moderate
<i>Bromus hordeaceus</i>	soft chess brome	limited	moderate
<i>Bromus madritensis</i> ssp. <i>rubens</i>	red brome	high	low/sparse
<i>Cardaria draba</i>	hoary cress	moderate	low/sparse
<i>Carduus pycnocephalus</i>	Italian thistle	moderate	moderate
<i>Centaurea melitensis</i>	toçalote	moderate	moderate
<i>Centaurea solstitialis</i>	yellow star-thistle	high	low/sparse
<i>Conium maculatum</i>	poison hemlock	moderate	low/sparse
<i>Erodium cicutarium</i>	redstem filaree	limited	moderate
<i>Hirschfeldia incana</i>	summer mustard	moderate	low/sparse
<i>Lolium multiflorum</i>	Italian ryegrass	moderate	moderate
<i>Marrubium vulgare</i>	horehound	limited	low/sparse
<i>Medicago polymorpha</i>	burclover	limited	moderate
<i>Piptatherum miliaceum</i>	smilo grass	limited	low/sparse
<i>Polypogon monspeliensis</i>	rabbitsfoot grass	limited	low/sparse
<i>Rumex crispus</i>	curly dock	limited	low/sparse
<i>Salsola tragus</i>	Russian thistle	limited	low/sparse
<i>Silybum marianum</i>	milk thistle	limited	moderate

These invasive plant species are distributed throughout the study area, particularly in the ruderal and disturbed areas, but with no notable dense concentrations. Species of moderate density are primarily Mediterranean annual grasses and associated forbs, which are characteristic of the non-native annual grasslands found throughout California.

Environmental Consequences

None of the species on the California list of invasive species is used by Caltrans for erosion control or landscaping, but ground disturbance and other aspects of project

construction (erosion control, landscaping) could spread or introduce invasive species to the project area.

Avoidance, Minimization, and/or Mitigation Measures

- During construction, the biological monitor(s) would ensure that the spread or introduction of invasive exotic plant species would be avoided to the maximum extent possible.
- Only clean fill would be imported. When practicable, invasive exotic plants in the project site would be removed and properly disposed of. All vegetation removed from the construction site would be taken to a certified landfill to prevent the spread of invasive species. If soil from weedy areas must be removed offsite, the top 6 inches containing the seed layer in areas with weedy species would be disposed of at a certified landfill. No species that occurs on the California Invasive Plant Council's Inventory Database would be included in the erosion control seed mix or landscaping plans for the project.
- Construction equipment would be certified as "weed-free" by the biological monitor(s) before entering the construction site. If necessary, wash stations onsite would be established for construction equipment under the guidance of the biological monitor(s) to avoid/minimize the spread of invasive plants and/or seed within the construction area.

2.3 Climate Change

Climate change refers to long-term changes in temperature, precipitation, wind patterns, and other elements of the earth's climate system. An ever-increasing body of scientific research attributes these climatological changes to greenhouse gases (GHGs), particularly those generated from the human production and use of fossil fuels.

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

There are typically two terms used when discussing the impacts of climate change. "Greenhouse Gas Mitigation" is a term for reducing GHG emissions in order to reduce or "mitigate" the impacts of climate change. "Adaptation," refers to the effort of planning for and adapting to impacts due to climate change (such as adjusting transportation design standards to withstand more intense storms and higher sea levels)¹.

Transportation sources (passenger cars, light duty trucks, other trucks, buses and motor-cycles) in the state of California make up the largest source (second to electricity generation) of greenhouse gas emitting sources. Conversely, the main source of GHG emissions in the United States is electricity generation followed by transportation. The dominant GHG emitted is CO₂, mostly from fossil fuel combustion.

There are four primary strategies for reducing GHG emissions from transportation sources, 1- Improve system and operation efficiencies, 2- reduce growth of vehicle miles traveled (VMT) 3- transition to lower GHG fuels and 4- Improve vehicle technologies. To be most effective all four should be pursued collectively. The following regulatory setting section outlines the state and federal efforts to comprehensively reduce GHG emissions from transportation sources.

Regulatory Setting

With the passage of several pieces of legislation including state Senate and Assembly Bills and Executive Orders, California launched an innovative and proactive approach to dealing with greenhouse gas emissions and climate change at the state level.

Assembly Bill 1493 (AB 1493), Pavley. Vehicular Emissions: Greenhouse Gases (AB 1493), 2002: This bill requires the California Air Resources Board (Board) to develop and implement regulations to reduce automobile and light truck greenhouse gas emissions. These stricter emissions standards were designed to apply to automobiles and light trucks beginning with the 2009-model year. In June 2009, the U.S. Environmental Protection Agency Administrator granted a Clean Air Act waiver of preemption to California. This waiver allowed California to implement its own greenhouse gas emission standards for motor vehicles beginning with model year 2009. California agencies will be working with federal agencies to conduct joint rulemaking to reduce greenhouse gas emissions for passenger cars model years 2017-2025.

¹http://climatechange.transportation.org/ghg_mitigation/

Executive Order S-3-05 (signed on June 1, 2005, by then-Governor Arnold Schwarzenegger): The goal of this order is to reduce California’s greenhouse gas emissions to: 1) 2000 levels by 2010, 2) 1990 levels by the 2020 and 3) 80 percent below the 1990 levels by the year 2050. In 2006, this goal was further reinforced with the passage of Assembly Bill 32.

Assembly Bill 32 (AB 32), the Global Warming Solutions Act of 2006: AB 32 sets the same overall greenhouse gas emissions reduction goals as outlined in Executive Order S-3-05, while further mandating that the 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.

Executive Order S-01-07: Then-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 percent by 2020.

Senate Bill 97 (Chapter 185, 2007): This bill required the Governor’s Office of Planning and Research to develop recommended amendments to the State California Environmental Quality Act Guidelines for addressing greenhouse gas emissions. The amendments became effective on March 18, 2010.

Project Analysis

An individual project does not generate enough greenhouse gas emissions to significantly influence global climate change. Rather, global climate change is a cumulative impact. This means that a project may participate in a potential impact through its incremental contribution combined with the contributions of all other sources of greenhouse gas.² 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(h)(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.

² This approach is supported by the AEP: *Recommendations by the Association of Environmental Professionals on How to Analyze GHG Emissions and Global Climate Change in CEQA Documents* (March 5, 2007), as well as the SCAQMD (Chapter 6: The CEQA Guide, April 2011) and the U.S. Forest Service (Climate Change Considerations in Project Level NEPA Analysis, July 13, 2009).

The AB 32 Scoping Plan contains the main strategies California will use to reduce greenhouse gas. As part of its supporting documentation for the Draft Scoping Plan, the Board released the greenhouse gas inventory for California (Forecast last updated: 28 October 2010). The forecast is an estimate of the emissions expected to occur in the year 2020 if none of the foreseeable measures included in the Scoping Plan were implemented. The base year used for forecasting emissions is the average of statewide emissions in the greenhouse gas inventory for 2006, 2007, and 2008.

Caltrans and its parent agency, the Business, Transportation, and Housing Agency, have taken an active role in addressing greenhouse gas emission reduction and climate change. Recognizing that 98 percent of California’s greenhouse gas emissions are from the burning of fossil fuels and 40 percent of all human-made greenhouse gas emissions are from transportation, Caltrans has created and is implementing the Climate Action Program at Caltrans that was published in December 2006 (see Climate Action Program at Caltrans (December 2006)).³

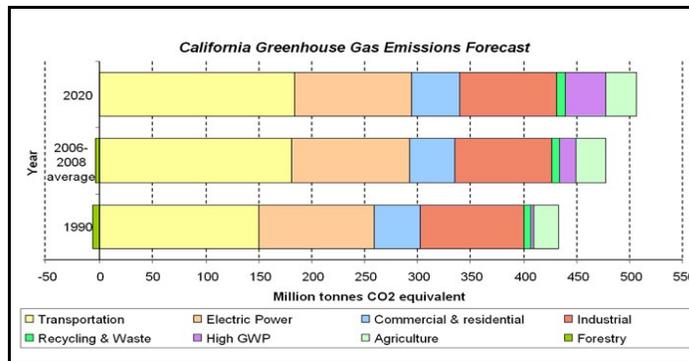


Figure 2-1 California Greenhouse Gas Forecast

The proposed project would not increase the capacity of the highway, as it would be maintain the number of lanes and capacity as the existing roadway. Because the project would not increase capacity nor vehicle hours travelled, no increases in operational greenhouse gas emissions are anticipated. During construction, the existing roadway would be left in place for continuous flow of traffic while the new alignment is constructed. While construction emissions of greenhouse gases are unavoidable, there will likely be long term public benefits with improved safety and operation.

³ Caltrans Climate Action Program is located at the following web address:
http://www.dot.ca.gov/hq/tpp/offices/ogm/key_reports_files/State_Wide_Strategy/Caltrans_Climate_Action_Program.pdf

Construction Emissions

Greenhouse gas emissions for transportation projects can be divided into those produced during construction and those produced during operations. Construction greenhouse gas emissions include emissions produced as a result of material processing, emissions produced by onsite construction equipment, and emissions arising from traffic delays due to construction. These emissions will be produced at different levels throughout the construction phase; their frequency and occurrence can be reduced through innovations in plans and specifications and by implementing better traffic management during construction phases.

In addition, with innovations such as longer pavement lives, improved traffic management plans, and changes in materials, the greenhouse gas emissions produced during construction can be mitigated to some degree by longer intervals between maintenance and rehabilitation events.

CEQA Conclusion

While construction will result in a slight increase in greenhouse gas emissions, it is anticipated that any increase in greenhouse gas emissions due to construction will be offset by the improvement in operational greenhouse gas emissions. While it is Caltrans' determination that in the absence of further regulatory or scientific information related to greenhouse gas emissions and CEQA significance, it is too speculative to make a significance determination regarding the project's direct impact and its contribution on the cumulative scale to climate change. Caltrans is firmly committed to implementing measures to help reduce greenhouse gas emissions. These measures are outlined in the following section.

Greenhouse Gas Reduction Strategies

AB 32 Compliance

Caltrans continues to be actively involved on the Governor's Climate Action Team as the Board works to implement the Executive Orders S-3-05 and S-01-07 and help achieve the targets set forth in AB 32. Many of the strategies Caltrans is using to help meet the targets in AB 32 come from the California Strategic Growth Plan, which is updated each year. Former 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 \$100.7 billion in transportation funding during the next decade. 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 are expected to reduce congestion. The Strategic Growth Plan relies on a complete systems approach to attain carbon dioxide reduction goals: system monitoring and evaluation, maintenance and preservation, smart land use and demand management, and operational improvements as shown in Figure 2-2, the Mobility Pyramid.



Figure 2-2 Mobility Pyramid

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 legislative efforts to increase fuel economy, and by participating on the Climate Action Team. It is important to note, however, that the control of the fuel economy standards is held by U.S. Environmental Protection Agency and the Board. Lastly, the use of alternative fuels is also being considered; Caltrans is participating in funding for alternative fuel research at University of California, Davis.

Table 2-4 summarizes the department and statewide efforts that Caltrans is implementing to reduce greenhouse gas emissions. More detailed information about each strategy is included in the Climate Action Program at Caltrans (December 2006).

Table 2-4 Climate Change/Carbon Dioxide (CO₂) Reduction Strategies

Strategy	Program	Partnership		Method/Process	Estimated CO ₂ Savings (MMT)	
		Lead	Agency		2010	2020
Smart Land Use	Intergovernmental Review (IGR)	Caltrans	Local Governments	Review and seek to mitigate development proposals	Not Estimated	Not Estimated
	Planning Grants	Caltrans	Local and regional agencies & 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	0.07	2.17
Mainstream Energy & GHG 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, CalEPA, 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 0.045 0.0225
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	4.2 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	18.18

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

- All disturbed areas (outside of the steep cut slopes) would be replanted to create vegetative cover and reduce expanses of bare ground.
- According to Caltrans' Standard Specifications, the contractor must comply with all local Air Pollution Control District's rules, ordinances, and regulations in regard to air quality restrictions.

In addition, construction personnel would be encouraged to do the following to further reduce greenhouse gas emissions:

- Carpool to the job site.
- Recycle construction waste where feasible.
- Minimize welding and cutting by compressing mechanical applications where practical and within standards.
- Encourage use of natural gas-powered vehicles for passenger cars and light-duty trucks where feasible and available.

- Minimize construction equipment exhaust by using low-emission or electric construction equipment where feasible.

Adaptation Strategies

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

At the federal level, the Climate Change Adaptation Task Force, co-chaired by the White House Council on Environmental Quality, the Office of Science and Technology Policy, and the National Oceanic and Atmospheric Administration, released its interagency report October 14, 2010 outlining recommendations to President Barack Obama for how federal agency policies and programs can better prepare the United States to respond to the impacts of climate change. The Progress Report of the Interagency Climate Change Adaptation Task Force recommended that the federal government implement actions to expand and strengthen the nation’s capacity to better understand, prepare for, and respond to climate change.

Climate change adaptation must also involve the natural environment as well. Efforts are underway on a statewide-level to develop strategies to cope with impacts to habitat and biodiversity through planning and conservation. The results of these efforts will help California agencies plan and implement mitigation strategies for programs and projects.

On November 14, 2008, then-Governor Schwarzenegger signed Executive Order S-13-08, which directed a number of state agencies to address California’s vulnerability to sea level rise caused by climate change. This order set in motion several agencies and actions to address the concern of sea level rise.

The California Natural Resources Agency (Resources Agency) was directed to coordinate with local, regional, state and federal public and private entities to develop.

The California Climate Adaptation Strategy (Dec 2009)⁴, which summarizes the best known science on climate change impacts to California, assesses California's vulnerability to the identified impacts, and then outlines solutions that can be implemented within and across state agencies to promote resiliency.

The strategy outline is in direct response to Executive Order S-13-08 that specifically asked the Resources Agency to identify how state agencies can respond to rising temperatures, changing precipitation patterns, sea level rise, and extreme natural events. Numerous other state agencies were involved in the creation of the Adaptation Strategy document, including Environmental Protection; Business, Transportation and Housing; Health and Human Services; and Department of Agriculture. The document is broken down into strategies for different sectors that include: Public Health; Biodiversity and Habitat; Ocean and Coastal Resources; Water Management; Agriculture; Forestry; and Transportation and Energy Infrastructure. As data continues to be developed and collected, the state's adaptation strategy will be updated to reflect current findings.

The Resources Agency was also directed to request the National Academy of Science to prepare a Sea Level Rise Assessment Report by December 2012⁵ to advise how California should plan for future sea level rise. The report is to include:

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

Before release of the final Sea Level Rise Assessment Report, all state agencies that are planning to build projects in areas vulnerable to future sea level rise were directed to consider a range of sea level rise scenarios for the years 2050 and 2100 to assess project vulnerability and, to the extent feasible, reduce expected risks and increase resiliency to sea level rise. Sea level rise estimates should also be used in conjunction

⁴ <http://www.energy.ca.gov/2009publications/CNRA-1000-2009-027/CNRA-1000-2009-027-F.PDF>

⁵ The Sea Level Rise Assessment Report is due for completion in 2012 and will include information for Oregon and Washington (state) as well as California.

with information on local uplift and subsidence, coastal erosion rates, predicted higher high water levels, storm surge and storm wave data.

Until the final report from the National Academy of Sciences is released, interim guidance has been released by the Coastal Ocean Climate Action Team (CO-CAT) as well as Caltrans as a method to initiate action and discussion of potential risks to the states infrastructure due to projected sea level rise.

All projects that have filed a Notice of Preparation, and/or are programmed for construction funding from 2008 through 2013, or are routine maintenance projects as of the date of Executive Order S-13-08, may but are not required to consider these planning guidelines. A Notice of Preparation was not required for the proposed project, and it has not been programmed for construction between 2008 and 2013.

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

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

Climate change adaptation for transportation infrastructure involves long-term planning and risk management to address vulnerabilities in the transportation system from increased precipitation and flooding; the increased frequency and intensity of storms and wildfires; rising temperatures; and rising sea levels. Caltrans is an active participant in the efforts being conducted in response to Executive Order S-13-08 and is mobilizing to be able to respond to the National Academy of Science report on Sea Level Rise Assessment, which is due to be released in 2012.

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

Cultural Resource Coordination

In June 2011, Caltrans contacted the Native American Heritage Commission (Commission) requesting a search of the Sacred Lands Inventory as well as a list of names of people with known connections to the project area. The Commission responded that a records search of the Sacred Lands File had failed to indicate the presence of Native American cultural resources in the Area of Potential Effects.

On November 3, 2011, the District 5 Native American Coordinator sent project information letters to 17 members of the Ohlone Native American community with known connections to the project area provided by the Commission. The letters asked whether any known cultural resources were within the project vicinity, provided a summary of the studies done to date, and asked if they would like to be consulted on the project or receive copies of cultural resources reports. One individual responded that he agreed with the placement of fencing to protect CA-SBN-275 and would like to visit the project area before construction begins.

On January 24, 2012, Caltrans notified the State Historic Preservation Officer of its finding regarding CA-SBN-275. Concurrence was received in March.

Biological Resource Coordination

Caltrans has discussed the proposed project with the U.S. Fish and Wildlife Service regarding federally listed species and critical habitat that could be affected, specifically the California tiger salamander, California red-legged frog, and vernal pool fairy shrimp.

Chapter 4 List of Preparers

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

Alhabaly, Allam, Transportation Engineer. B.S., Industrial Engineering; 11 years of experience in environmental technical studies, with emphasis on noise studies. Contribution: noise study.

Chafi, Abdulrahim, P.E., Civil/Environmental Engineer. Ph.D., Environmental Engineering; B.S., M.S., Chemistry and M.S. Civil/Environmental Engineering; 15 years of environmental technical studies experience. Contribution: air quality review.

Duffy, John D., Senior Engineering Geologist. M.S. Geology and Geological Engineering; 35 years of experience in geological engineering. Contribution: Geotechnical Design Report.

Hoetker, Geoff, Associate Environmental Planner. B.S., Biology; M.S., Biological Sciences; 12 years of experience in biological field surveys, technical documentation, and environmental consulting. Contribution: biological resources research, Natural Environment Study, and Biological Assessment.

Huddleston, Paula, Associate Environmental Planner. B.A., Anthropology; 21 years of experience in environmental analysis. Contribution: environmental studies coordination and research.

Leyva, Isaac, Engineering Geologist. B.S., Geology; 23 years of experience in petroleum geology, environmental, and geotechnical engineering. Contribution: Initial Site Assessment (for hazardous materials), Water Quality Assessment, and paleontology review.

Jackson, Jo, Landscape Associate. B.L.A. (Bachelor of Landscape Architecture); 11 years of experience in landscape architecture and design. Contribution: Visual Impact Assessment.

MacDonald, Christina, Associate Environmental Planner. M.A., Cultural Resources Management; B.A., Anthropology; 14 years of experience in California prehistoric and historical archaeology. Contribution: cultural resources study and Historic Property Survey Report.

Saberi, Aziz, Transportation Engineer. B.S., Civil Engineering; 12 years of experience with Caltrans and 16 years of experience with private sector in civil engineering. Contribution: project design.

Other project team members include:

Bonner, Larry, Senior Environmental Planner. B.S., Natural Resource Management; 15 years of experience in environmental analysis.

Espinosa, James, P.E., Senior Transportation Engineer. B.S., Mechanical Engineering; 20 years of experience in civil engineering.

Fowler, Matt, Senior Environmental Planner. B.A., Geographic Analysis; 11 years of experience in environmental analysis.

Levulett, Valerie A., Senior Environmental Planner. Ph.D., Anthropology; 41 years of experience in cultural resource studies.

Rosales, Richard, Project Manager. B.S., Civil Engineering; 14 years of experience in highway design; 11 years of experience in project management.

Appendix A California Environmental Quality Act Checklist

The following checklist identifies physical, biological, social, and economic factors that might be affected by the 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 document. 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
--------------------------------	--	------------------------------	-----------

I. AESTHETICS: Would the project:

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

II. AGRICULTURE AND FOREST 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. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:

- | | | | | |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Conflict with existing zoning for agricultural use, or a Williamson Act contract? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Result in the loss of forest land or conversion of forest land to non-forest use? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

III. 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:

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

- | | | | | |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Conflict with or obstruct implementation of the applicable air quality plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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 which exceed quantitative thresholds for ozone precursors)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Expose sensitive receptors to substantial pollutant concentrations? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) Create objectionable odors affecting a substantial number of people? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

IV. BIOLOGICAL RESOURCES: Would the project:

- | | | | | |
|--|--------------------------|-------------------------------------|--------------------------|-------------------------------------|
| a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

V. CULTURAL RESOURCES: Would the project:

- | | | | | |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|

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

- | | | | | |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Disturb any human remains, including those interred outside of formal cemeteries? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

VI. GEOLOGY AND SOILS: Would the project:

- | | | | | |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: | | | | |
| i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| ii) Strong seismic ground shaking? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| iii) Seismic-related ground failure, including liquefaction? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| iv) Landslides? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Result in substantial soil erosion or the loss of topsoil? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

VII. GREENHOUSE GAS EMISSIONS: Would the project:

- | | |
|---|---|
| a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? | An assessment of the greenhouse gas emissions and climate change is included in the body of environmental document. While Caltrans has included |
|---|---|

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

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

this good faith effort in order to provide the public and decision-makers as much information as possible about the project, it is Caltrans' determination that in the absence of further regulatory or scientific information related to greenhouse gas emissions and CEQA significance, it is too speculative to make a significance determination regarding the project's direct and indirect impact with respect to climate change. Caltrans does remain firmly committed to implementing measures to help reduce the potential effects of the project. These measures are outlined in the body of the environmental document.

VIII. HAZARDS AND HAZARDOUS MATERIALS: Would the project:

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

IX. HYDROLOGY AND WATER QUALITY: Would the project:

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

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

- 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 which would not support existing land uses or planned uses for which permits have been granted)?
- c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?
- 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 which would result in flooding on- or off-site?
- e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?
- f) Otherwise substantially degrade water quality?
- g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?
- h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?
- i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?
- j) Result in inundation by seiche, tsunami, or mudflow?

X. LAND USE AND PLANNING: Would the project:

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

XI. MINERAL RESOURCES: Would the project:

- a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?
- b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

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

XII. NOISE: Would the project result in:

- | | | | | |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| (f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

XIII. POPULATION AND HOUSING: Would the project:

- | | | | | |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

XIV. 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: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Fire protection? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Police protection? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Schools? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Parks? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Other public facilities? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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XV. 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?
- b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

XVI. TRANSPORTATION/TRAFFIC: Would the project:

- a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?
- b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?
- c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?
- d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?
- e) Result in inadequate emergency access?
- f) Conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

XVII. UTILITIES AND SERVICE SYSTEMS: Would the project:

- a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?
- 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?
- 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?
- d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

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

e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

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

f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

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

g) Comply with federal, state, and local statutes and regulations related to solid waste?

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

XVIII. 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, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

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

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

c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

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

STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY

ARNOLD SCHWARZENEGGER, Governor

DEPARTMENT OF TRANSPORTATION
OFFICE OF THE DIRECTOR
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*Flex your power!
Be energy efficient!*

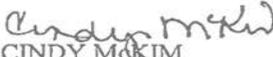
July 20, 2010

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

For information or guidance on how to file a complaint based on the grounds of race, color, national origin, sex, disability, or age, please visit the following web page:
http://www.dot.ca.gov/hq/bep/title_vi/t6_violated.htm.

Additionally, if you need this information in an alternate format, such as in Braille or in a language other than English, please contact Charles Wahnon, Manager, Title VI and Americans with Disabilities Act Program, California Department of Transportation, 1823 14th Street, MS-79, Sacramento, CA 95811. Phone: (916) 324-1353 or toll free 1-866-810-6346 (voice), TTY 711, fax (916) 324-1869, or via email: charles_wahnon@dot.ca.gov.


CINDY MCKIM
Director

"Caltrans improves mobility across California"

Appendix C Minimization and/or Mitigation Summary

The following is a summary of the measures discussed previously that would be included in the project to minimize impacts to resources. The detailed measures can be found in Chapter 2 in the *Avoidance, Minimization and Mitigation* sections referenced for each topic.

Avoidance and/or Minimization Measures for Less Than Significant Impacts

Visual Quality

Trees to be preserved would be protected during construction by fencing, careful grading around roots, and retaining structures where feasible. Pruning would be done under the supervision of a Certified Arborist. Native oaks greater than 6 inches in diameter at breast height would be restored at a 10:1 ratio, and the contract would include a 3-year plant establishment period, including twice-a-year inspections, weeding, and replacement. The top 4 to 6 inches of native topsoil/duff would be stockpiled and redistributed. The project would implement slope-warping and landform grading.

Reference: section 2.1.1 *Visual/Aesthetics*.

Cultural Resources

The archaeological site would be protected during construction with fencing and signs. A Caltrans District 5 archaeologist would regularly monitor the fencing to confirm that it remains in place.

Reference: section 2.1.2 *Cultural Resources*.

Natural Communities

Trees to remain would be protected with fencing; removed trees would be replaced within the project limits at a 10:1 ratio and include a plant establishment period.

Vernal pool fairy shrimp critical habitat would be protected during construction by fencing. Construction staff would be instructed on the species and the importance of avoidance.

Reference: section 2.2.1 *Natural Communities*.

Animal Species

Tree removal within the area of potential impact would be scheduled to occur from September 1 to February 14, outside of the typical nesting bird or roosting bat season. A nesting bird survey would be done at least two weeks prior to construction if construction activities are to occur during the typical bird nesting season within 100 feet of bird nesting habitat. Active bird nests would not be disturbed, and eggs or young of birds covered by the Migratory Bird Treaty Act and California Fish and Game Code would not be killed, destroyed, injured, or harassed at any time. Bird nesting areas would be protected by fencing, and clearing and grubbing would be monitored.

Prior to tree removal, a bat roost survey would be done. Passive bat exclusion would be implemented in areas where bats are roosting. Active bat maternity roosts would be protected with fencing during construction and would not be disturbed or destroyed at any time.

Prior to any ground disturbance, a preconstruction survey would be done for the American badger and any dens monitored. If no badger activity is observed, dens would be destroyed immediately. If a den is occupied, any resident animal would be allowed to move to another den during its normal activity. Only when the den is determined to be unoccupied would the den be excavated under the direction of the biologist.

Reference: section 2.2.3 *Animal Species*.

Threatened and Endangered Species

A preconstruction survey would be done for San Joaquin kit fox. The status of dens would be determined and mapped, and known dens monitored. If no kit fox activity is observed during this period, the den would be destroyed immediately. If kit fox activity is observed at the den, the den would be monitored for at least five more days to allow any resident animal to move to another den during its normal activity. Only when the den is determined to be unoccupied would the den be excavated under the direction of the biologist.

All construction staff would be trained on San Joaquin kit fox. A 20-mile-per-hour speed limit would be encouraged on unpaved roads, and other guidance would be supplied to construction staff. A litter control program would also be instituted. No canine or feline pets or firearms would be permitted on construction sites.

Maintenance and construction excavations greater than 2 feet deep would be covered, filled in at the end of each working day, or have earthen escape ramps no greater than 200 feet apart. All grindings and asphaltic-concrete waste would be stored within previously disturbed areas absent of habitat and at a minimum of 150 feet from any culvert, wash, pond, vernal pool, or stream crossing.

Restoration and revegetation work associated with temporary impacts would be done using California endemic plants appropriate for the location. Loss of soil from runoff or erosion would be prevented with straw bales, straw wattles, or similar means provided they do not entangle or block escape or dispersal routes.

The project construction area would be delineated with high visibility temporary fencing, flagging, or other barrier. No project activities would occur outside the delineated project area.

Written results of the preconstruction/pre-activity survey would be submitted to the U.S. Fish and Wildlife Service within five days after survey completion. If a natal/pupping den is discovered within the project area or within 200 feet of the project boundary, the U.S. Fish and Wildlife Service would be immediately notified. If the preconstruction/pre-activity survey reveals an active natal pupping den or new information, Caltrans District 5 would contact the U.S. Fish and Wildlife Service immediately to obtain the necessary take authorization/permit.

Reference: section 2.2.4 *Threatened and Endangered Species*.

Invasive Species

Only clean fill would be imported. When practicable, invasive exotic plants in the project site would be removed and properly disposed. If soil from weedy areas must be removed offsite, the top 6 inches containing the seed layer in areas with weedy species would be disposed of at a certified landfill. No species that occurs on the California Invasive Plant Council's Inventory Database would be included in the erosion control seed mix or landscaping plans for the project.

Construction equipment would be certified as "weed-free" by the biological monitor(s) prior to entering the construction site. If necessary, wash stations onsite would be established.

Reference: section 2.2.5 *Invasive Species*.

Greenhouse Gasses

All disturbed areas (outside of the steep cut slopes) would be replanted to create vegetative cover and reduce expanses of bare ground. The contractor must comply with all local Air Pollution Control District's rules, ordinances, and regulations in regard to air quality restrictions.

Reference: section 2.3 *Climate Change*.

Mitigation Measures for Potentially Significant Impacts

Plant Species

The following measures would be included in the project to mitigate potentially significant impacts to shining navarretia:

To the extent possible, seed would be collected from existing plants prior to ground-disturbing activities and re-broadcast into the restoration area. If necessary, existing plants could also be transplanted into the restoration area.

The top 2 inches of the soil in the general area supporting shining navarretia plants would be collected for redistribution at the restoration/replacement site. This activity would be monitored by a qualified biologist.

Prior to construction, the shining navarretia replacement area would be demarcated with environmentally sensitive area fencing, markers, or equivalent and would remain a conservation area within Caltrans' right-of-way. After construction is complete, the area would be permanently marked with environmentally sensitive area paddles, and Caltrans maintenance staff would be informed of the location of this area and the need to limit future Caltrans-related impacts in the restoration/replacement site.

The success goal would be 1:1 replacement of shining navarretia (about 50 plants). To ensure success, monitoring would occur annually for three years during the appropriate blooming period for shining navarretia.

Prior to construction, a qualified biologist would conduct a training session on shining navarretia for all construction personnel.

After ground disturbance, a compost blanket would be applied to disturbed soil areas that are at a 2:1 slope or flatter. Hydroseeding would be applied to exposed soil using a native seed mix that would not outcompete with shining navarretia.

Reference: section 2.2.2 *Plant Species*.

Animal Species

The Minimization of Adverse Effects measures from the U.S. Fish and Wildlife Service's Programmatic Biological Opinion for the California red-legged frog, dated April 24, 2003, would be included as applicable. The mitigation measure proposed for impacts to California tiger salamander habitat would also serve to reduce impacts to critical habitat for the California red-legged frog.

Reference: section 2.2.3 *Animal Species*.

Threatened and Endangered Species

Prior to construction, a qualified biologist would capture and relocate any western spadefoot toad or other special-status species to suitable habitat outside of the area of potential impact. Observations of species of special concern or other special-status species would be documented on California Native Diversity Database forms and submitted to the California Department of Fish and Game upon project completion.

Caltrans would obtain U.S. Fish and Wildlife Service (Service) and California Department of Fish and Game (Fish and Game) approval of a Designated Biologist(s) and Designated Monitors prior to project-related activities that might result in impacts to the California tiger salamander. The Designated Biologist(s) would hold all applicable state and federal permits including an active Scientific Collecting Permit from Fish and Game that specifically names California tiger salamander surveys as an authorized activity. Any proposed biologist(s) that do not have the required permits must work under the supervision of one who does have the required permits. These individuals would be referred to as Designated Monitors.

The Designated Biologist with the active permits must be present at all surveys and during all initial ground-disturbing activities in areas of potential California tiger salamander habitat to help minimize or avoid impact to the California tiger salamander and to minimize disturbance of habitat. Designated Biologists and/or Designated Monitors who handle California tiger salamanders would ensure that their activities do not transmit diseases or pathogens harmful to amphibians, such as chytrid fungus (*Batrachochytrium dendrobatidis*), by following the fieldwork code of practice developed by the Declining Amphibians Task Force. Designated Monitors may monitor project activities after initial ground-disturbing activities have been completed provided the Designated Biologist with the active permits can be contacted should the need arise to relocate a California tiger salamander. Work that could

potentially harm the California tiger salamander would have to be stopped until the Designated Biologist arrived to relocate the California tiger salamander to a pre-approved location. If the Designated Biologist or Designated Monitor recommends that work be stopped, he or she must notify the resident engineer immediately. The resident engineer would resolve the situation by requiring that all actions that are causing these effects be halted. When work is stopped, the Service would be notified as soon as possible.

Small mammal burrows within the proposed areas of permanent impact must be hand-excavated by a Service/Fish and Game-approved biologist prior to construction. Timing of hand excavation would occur outside of the California tiger salamander breeding season. Excavation of burrows between June 15 and November 1 would avoid the breeding season (November to March) and most juvenile dispersal movements.

Caltrans proposes hand-excavation of several dozen small mammal burrows that have the greatest potential to serve as refugia for California tiger salamanders, in coordination with and approval from the Service and Fish and Game. Determination of these burrows would include known parameters of preferred refugia, such as proximity to the pond within the biological study area and burrow type. If no California tiger salamanders are found during hand-excavation of high-potential burrows, Caltrans would infer the area is not serving as upland habitat and proceed with work as planned.

Following hand excavation, environmentally sensitive area/animal exclusion fencing would be established around the proposed areas of disturbance and maintained through construction to ensure no California tiger salamanders or other special-status amphibians enter the work area. Caltrans would establish environmentally sensitive area fencing along the outer limits of proposed disturbance to preserve small mammal burrows in upland areas outside of the limits of disturbance to the maximum extent feasible. In addition, Caltrans would install fencing that would exclude salamanders from the work area. Fencing would be buried to a depth of 6 inches and would be a minimum of 3.3 feet tall following installation.

Exclusionary fencing would be monitored daily, prior to the start of construction activities each day, to evaluate its effectiveness and ensure that no California tiger salamanders become trapped in the fencing. If a California tiger salamander is found along the fence, a Service/Fish and Game-approved biologist would relocate the

animal to the small pond within the biological study area that will be avoided by project-related activities. All fencing would be maintained for the duration of construction and removed on project completion.

Effects to California tiger salamanders would be minimized during rainy weather and at night. Between November 1 and April 1, the project site would be surveyed nightly by the Designated Biologist or a Designated Monitor before any night work. When the chance of rainfall within 72 hours is predicted to be 70 percent or greater, only critical project activities will be allowed at night within potential California tiger salamander habitat, until no further rain is forecast.

Designated Biologists/Monitors would inspect all open trenches, auger holes, and other excavations that may trap a California tiger salamander before any work in or around these features and before they are back-filled.

The Designated Biologist would conduct an education program for all persons employed or otherwise working on the project site before performing any work onsite. The program would include a discussion of the biology of the California tiger salamander and project-specific avoidance and minimizations measures. Upon completion of the program, employees must sign a form stating they attended the program and understand all protection measures.

Copies of all relevant agreements/permits (such as the Biological Opinion and Section 2081 Incidental Take Permit) would be maintained at the worksite.

Prior to ground-disturbing activities, Caltrans would satisfy the requirement of the Section 2081 Incidental Take Permit to provide an anticipated 6.47 acres of California tiger salamander habitat by complying with one of the following:

- Purchase credits equivalent of up to 6.47 acres at a California Endangered Species Act-certified and Fish and Game-approved Conservation Bank (in a location to be determined) authorized to sell credits for the California tiger salamander; or,
- Acquire, permanently preserve, and perpetually manage up to 6.47 acres of Habitat Management Lands.

Reference: section 2.2.4 *Threatened and Endangered Species*.

Appendix D Project Layout Map



List of Technical Studies that are Bound Separately

Air Quality Report memorandum, July 2011

Geotechnical Design Report, November 2011

Hazardous Waste Report

- Initial Site Assessment, July 2011

Historical Property Survey Report, January 2012, including:

- Archaeological Survey Report
- Environmentally Sensitive Action Plan

Natural Environment Study, April 2012

Noise Quality Study memorandum, August 2011

Paleontology Review memorandum, July 2011

Scenic Resource Evaluation/Visual Assessment, February 2012

Water Quality Assessment memorandum, July 2011

Other sources used in preparing this document:

Natural Resources Conservation Service Web Soil Survey

San Benito County General Plan Land Use Element

San Benito County Williamson Act Lands 2003 map