

Flag Canyon Creek Bridge Replacement Project

HWY 70 in BUTTE COUNTY, CALIFORNIA
03 – BUT – 70 – 23.91/24.46
EA 0F690 / EFIS 0300000100

Initial Study with Proposed Mitigated Negative Declaration



Prepared by the
State of California Department of Transportation



November, 2012

General Information about This Document

What's in this Document:

The California Department of Transportation, as California Environmental Quality Act (CEQA) lead agency, has prepared this Initial Study (IS), which examines the potential environmental impacts of the alternatives being considered for the proposed project located in Butte County, California. The document tells you why the project is being proposed, what alternatives we have considered for the project, how the existing environment could be affected by the project, the potential impacts of each of the alternatives, and the proposed avoidance, minimization, and/or mitigation measures.

What you should do:

- Please read the document.
- Additional copies of this document, as well as technical studies, are available for review at the Caltrans District 03 Office, at 703 B. Street, Marysville, CA 95901. And at the Oroville Branch Library, 1820 Mitchell Ave, Oroville, CA 95966.
- We'd like to hear your thoughts. If you have any comments regarding the proposed project, please send your written comments to Caltrans by the deadline stated below. Submit comments via postal mail service to the following Caltrans office:

Suzanne Melim, Environmental Branch Chief
Attn: Maggie Ritter
Department of Transportation, District 3 Environmental Planning
703 B. Street,
Marysville, CA 95901

- Submit comments via email to: maggie_ritter@dot.ca.gov
- Be sure to comment by the deadline: **December 27, 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 construct all or part of the project.

For individuals with sensory disabilities, this document can be made available in Braille, large print, on audiocassette, or computer disk. To obtain a copy in one of these alternate formats, please call or write to Caltrans, Attn: Maggie Ritter, Associate Environmental Planner, California Department of Transportation, 703 B Street, Marysville, CA 9590; at (530) 741-4535, or use the California Relay Service 1 (800) 735-2929 (TTY), 1 (800) 735-2929 (Voice) or 711

SCH #

03-BUT-70-PM 23.91/24.46
0F690
0300000100

Flag Canyon Creek Bridge Replacement
State Route 70, in Butte County
at Post Mile 23.91/24.46; 9 miles North of Oroville, CA

INITIAL STUDY with Proposed Mitigated Negative Declaration

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

THE STATE OF CALIFORNIA
Department of Transportation

Date of Approval

John D. Webb, Chief
North Region Environmental Services
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 replace the existing Flag Canyon Creek Bridge structure (Br. No. 12-0140) on State Route 70 in Butte County at post mile 23.91/24.46. The project will replace the existing 3-span bridge with a wider single span bridge. The new bridge would be on the existing tangent alignment; it would be approximately 100-foot long with two 12-foot lanes and standard 8-foot shoulders.

Determination

This proposed Mitigated Negative Declaration (MND) is included to give notice to interested agencies and the public that it is Caltrans' intent to adopt an MND for this project. This does not mean that the Caltrans' decision regarding the project is final. This MND is subject to modification 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 proposed project would not have a significant effect on the environment for the following reasons:

- The proposed project would have no effect on visual aesthetics, agricultural or forest resources, community impacts, floodplains, air quality, noise, hazardous materials, cultural resources, geology/soils, land-use/planning, growth, population and housing, mineral resources, recreation, utilities/service systems, coastal zone, or wild and scenic rivers.
- The proposed project would have a less than significant effect on biological resources, traffic and transportation, pedestrian and bicycle facilities, and public services, as well as water quality and storm water runoff by implementing permit conditions and appropriate Best Management Practices (BMPs).
- The proposed project would have no significantly adverse effect on wetland riparian habitat because the following mitigation measures would reduce potential effects to insignificance.
 - Replace the loss of 0.112 acres of wetland riparian habitat at a 1:1 ratio or purchase 0.112 credits of resource agency approved wetland riparian habitat.

for Susan D. Bauer

John D. Webb, Chief
North Region Environmental Services, South
California Department of Transportation

11-14-12

Date

Chapter 1 – Proposed Project

Introduction

The California Department of Transportation (Caltrans) is the lead agency under National Environmental Policy Act (NEPA) and also under CEQA. Caltrans proposes to replace the existing Flag Canyon Creek Bridge structure (Br. No. 12-0140) on State Route 70 in Butte County from post mile 23.91 to 24.46.

The project is programmed in the 2012 State Highway Operations Protection Program (SHOPP) for delivery in the 2013/2014 fiscal year. The current estimated total capital cost of the project is \$3,429,200. This project is included in the FY 2009/2010 Federal Transportation Improvement Program (FTIP), (Amendment #14).

Project Vicinity Map

INDEX OF PLANS

**STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION**

PROJECT PLANS FOR BUILDING CONSTRUCTION

IN BUTTE COUNTY

ABOUT 9.0 MILES EAST OF OROVILLE

AT FLAG CANYON CREEK BRIDGE (Br No. 12-0140)

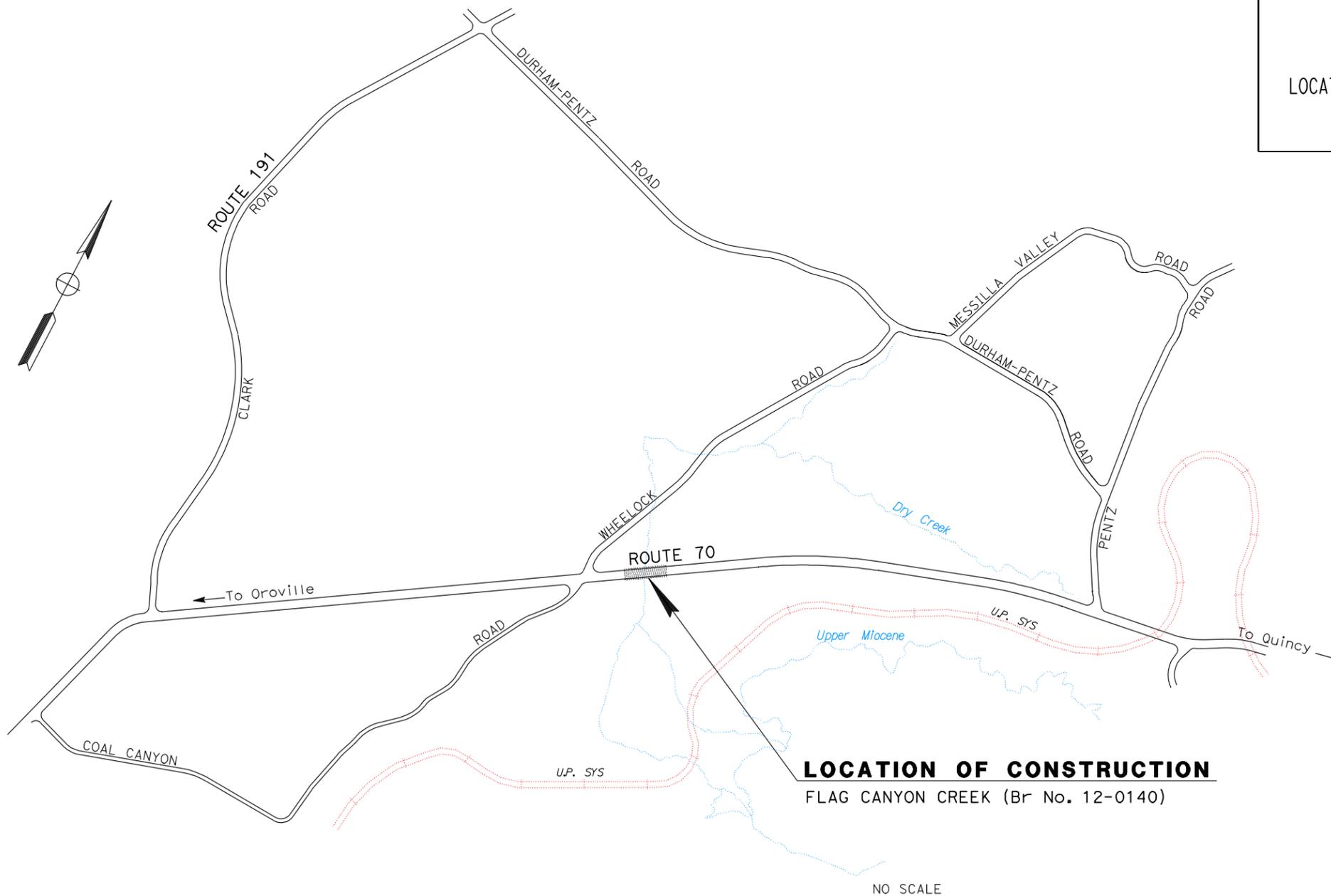
TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006

Dist	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
03	But	70	24.26		





LOCATION MAP



LOCATION OF CONSTRUCTION
FLAG CANYON CREEK (Br No. 12-0140)

NO SCALE

PROJECT ENGINEER _____ DATE _____
REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE _____
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



CONTRACT No. _____

CU 00000 EA 00000

THE CONTRACTOR SHALL POSSESS THE CLASS (OR CLASSES) OF LICENSE AS SPECIFIED IN THE "NOTICE TO CONTRACTORS."

Project Location Map

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	BUT	70	23.96 - 24.43		

REGISTERED CIVIL ENGINEER DATE _____
 PLANS APPROVAL DATE _____
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



LEGEND:
 ——— ESL - ORIGINAL ENVIRONMENTAL STUDY LIMIT
 - - - - - PROPOSED TOE OF SLOPE
 - - - - - PROPOSED TOP OF CUT

RSP (BACKING, No. 2, METHOD B)
 SEE SHEET DD-1
 SEE SHEET 3

+05 NEW AC OSD

+70 NEW AC OSD

+30 CONFORM
 PM 24.429

PM 24.461

MATCH LINE - SEE SHEET 1

EXTEND RCP CULV ENDS

+05 NEW AC OSD

+32 BB

62.8' - TEMP FENCE (TYPE ESA)

+32 EB

ESL

REVISED: 12-15-11, 11-15-12

SCALE: 1" = 50'

2 OF 3

Purpose and Need

The purpose of this project is to preserve the integrity of the transportation facility by replacing the Flag Canyon Creek Bridge (Br. No. 12-0140) structure. This project is needed to address the bridge's scour critical condition and settlement issues. Replacing the existing structure will ensure the integrity of the State Route (SR) 70 system through this area of Butte County.

Project Description

Caltrans proposes to replace the existing Flag Canyon Creek Bridge structure (Br. No. 12-0140) on SR 70 in Butte County at post miles 23.91/24.46. The project will replace the existing 3-span bridge with a wider single span bridge that will be approximately 12 feet longer, in order to accommodate property owner access and cattle crossing under the bridge. The new bridge would be on the existing tangent alignment; it would be approximately 100-foot long with two 12-foot lanes and standard 8-foot shoulders.

The project is on SR 70 in Butte County at post miles 23.91/24.46; the bridge is approximately 9 miles north of Oroville and about 2.5 miles east of the Hwy 191/70 intersection. It is located on the edge of the rolling foothills and just a few miles from the west branch of Lake Oroville and west branch of the Feather River recreational area.

This 0.5 mile segment of SR 70 was constructed in 1957 and is a two-lane-undivided expressway from SR 191 to the west branch of the Feather River Bridge. This segment is part of the Feather River Highway. The route is also on the Truck Network and designated as a Terminal Access Route for Surface Transportation Assistance Act (STAA Trucks).

A temporary bridge on a parallel alignment located just downstream from the existing bridge will be constructed to detour traffic while the existing bridge is removed and replaced. During construction, one-way traffic control will be used for both vehicular and bicycle traffic; a temporary signal light will assist with the one-way traffic control. Construction of temporary false-work will not be required as Precast Girders will be used instead. A creek diversion and/or crossing/cover would be required during bridge demolition and construction.

In addition to construction of a temporary bridge for movement of public traffic, the road work involves the following: repairing failed pavement areas within the lanes, reconstructing existing shoulders and roadbed, removing asphalt concrete pavement by grinding. Other work includes: extending culverts, replacing down-drains and over-side drains, placing rock slope protection, installing a temporary signal system, placing new bridge approach metal beam guard-railing, and a final surface overlay with new asphalt concrete and slurry seal. For approximately 2-3 nights during construction, there will be a 3.9-mile temporary county road detour while the pre-cast girders are brought in and placed.

All construction will be performed within the right of way. However a temporary construction easement (TCE) will be required for placement of temporary power poles for a temporary signal system that will be needed to construct the project. The majority of the TCE is an existing dirt road.

Alternatives

PROJECT ALTERNATIVES

During the development of all projects, alternatives are considered to the extent necessary to minimize items such as cost and/or potential environmental impacts, or to maximize public benefits. Generally, the concept and scope of the project alternatives can include location, geometric features, striping, staging, construction impacts, or a mix of modes. After public circulation of the Draft Environmental Document (DED), the Preferred Alternative is then chosen.

After comparing and weighing the benefits and impacts of the feasible alternatives and options, the project development team identified the single span bridge as the preferred project alternative, subject to public review. Final selection of a preferred alternative will occur after the public review and comment period. See Chapter 3 – Comments and Coordination, for more information.

Proposed Build Alternative

The proposed preferred alternative is a single span bridge. A temporary bridge will also be constructed detouring traffic around the existing bridge to be removed and replaced. Bridge construction is estimated to take one construction season. Complete construction of the project will take 2 years or less.

No-Build (No-Action) Alternative

The no-build alternative would leave the existing bridge in its current condition. This would not address the scour condition, channel degradation, and debris issues of the Flag Canyon Bridge. A no-build alternative could potentially impact the SR 70 corridor and would perpetuate ongoing and unmanageable maintenance costs. Replacement of the bridge is needed to address the failing nature of the bridge.

Permits and Approvals Needed

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

Agency	Permit/Approval	Status
United States Army of Engineers (USACE)	Section 404 Permit for filling or dredging waters of the United States.	Proposed submittal during the Plans Specifications and Estimates (PSE) phase
California Department of Fish and Game (CDFG)	Section 1602 Agreement for Streambed Alteration	Proposed submittal during the Plans Specifications and Estimates (PSE) phase
Regional Water Quality Control Board (RWQCB)	401 Water Quality Certification	Proposed submittal during the Plans Specifications and Estimates (PSE) phase
United States Fish and Wildlife Service (USFWS)	Section 7 Consultation for Threatened and/or Endangered species	Proposed submittal during the Project Approval and Environmental Document (PAED) phase

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

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

- ❖ Land-use / Planning
- ❖ Agriculture / Forest Resources
- ❖ Community Impacts
- ❖ Utilities / Service Systems
- ❖ Recreation
- ❖ Visual / Aesthetics
- ❖ Cultural Resources
- ❖ Geology and Soils
- ❖ Mineral Resources
- ❖ Growth / Population and Housing
- ❖ Air Quality
- ❖ Noise
- ❖ Coastal Zone
- ❖ Wild and Scenic Rivers
- ❖ Floodplains
- ❖ Hazardous Materials

Human Environment

TRAFFIC AND TRANSPORTATION / PEDESTRIAN AND BICYCLE FACILITIES

Regulatory Setting

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

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

Affected Environment

A Traffic Management Plan was completed in March 2012 for this project. Highway 70 in Butte County is a rural route which begins the connection of the west side of the Sierra Nevada Mountains to the east side of the Sierra Nevada's. Further up towards the mountains, the highway generally follows the path of the Feather River. Most of the land adjacent to the project area is used for grazing and small farms. Various modes of transportation use this route. This section of highway shares the road with bicycles as a Class II route but is not part of a major route for bicycles.

The daily peak hour volume (both directions combined) and the AADT (Average Area Daily Traffic "count") within the project limits are approximately 270 vph (vehicles per hour) and 2,400 vpd (vehicles per day), according to 2010 levels. Truck traffic at this location on Highway 70 averages 14.8% of the total AADT.

Environmental Consequences

The temporary bridge on a parallel alignment from the existing bridge will be constructed to detour traffic while the existing bridge is removed and replaced. Using temporary lighting signals, one-way traffic control will be used with one 16' wide roadway during construction for both vehicular and bicycle traffic. In addition, in order to construct the Flag Canyon Creek Bridge, it is anticipated that the contractor will need to close the bridge for approximately 2-3 nights in which a 3.9-mile detour will be implemented. This will allow placement of the new bridge's precast girders via cranes positioned at both ends of the new bridge.

Avoidance, Minimization, and/or Mitigation Measures

The following avoidance and minimization measures will be implemented:

- The bridge will have one way traffic control, provided with a temporary traffic signal.
- The temporary traffic signal shall be equipped with a vehicle detector. If pedestrian/bikes are present, access must be maintained during construction, except during the anticipated 2-3 night temporary closure.
- K-rail will be placed to separate road work from traveling public, when necessary.
- Access to cross roads shall be maintained during construction, in accordance with traffic control standard plans or traffic handling plans.
- The temporary county road detour will be only approximately 3.9 miles long and will be implemented during the night as there is a lower traffic volume during non-peak hours.

Physical Environment

WATER QUALITY AND STORM WATER RUNOFF

Regulatory Setting

Federal Requirements: Clean Water Act

In 1972 Congress amended the Federal Water Pollution Control Act, making the addition of pollutants to the waters of the United States (U.S.) from any point source unlawful unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. Known today as the Clean Water Act (CWA), Congress has amended it several times. In the 1987 amendments, Congress directed dischargers of storm water from municipal and industrial/construction point sources to comply with the NPDES permit scheme. Important CWA sections are:

- Sections 303 and 304 require states to promulgate water quality standards, criteria, and guidelines.
- Section 401 requires an applicant for a federal license or permit to conduct any activity, which may result in a discharge to waters of the U.S. to obtain certification from the State that the discharge will comply with other provisions of the act. (Most frequently required in tandem with a Section 404 permit request. See below.)
- Section 402 establishes the NPDES, a permitting system for the discharges (except for dredge or fill material) of any pollutant into waters of the U.S. Regional Water Quality Control Boards (RWQCB) administer this permitting program in California. Section 402(p) requires permits for discharges of storm water from industrial/construction and municipal separate storm sewer systems (MS4s).
- Section 404 establishes a permit program for the discharge of dredge or fill material into waters of the United States. This permit program is administered by the U.S. Army Corps of Engineers (USACE).

The objective of the CWA is “to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.”

USACE issues two types of 404 permits: Standard and General permits. There are two types of General permits, Regional permits and Nationwide permits. Regional permits are issued for a general category of activities when they are similar in nature and cause minimal environmental effect. Nationwide permits are issued to authorize a variety of minor project activities with no more than minimal effects.

There are two types of Standard permits: Individual permits and Letters of Permission. Ordinarily, projects that do not meet the criteria for a Nationwide Permit may be permitted under one of USACE’s Standard permits. For Standard permits, the USACE decision to approve is based on compliance with U.S. EPA’s Section 404 (b)(1) Guidelines (U.S. EPA CFR 40 Part 230), and whether permit approval is in the public interest. The Section 404(b)(1) Guidelines were developed by the U.S. EPA in conjunction with USACE, and allow the discharge of dredged or fill material into the aquatic system (waters of the U.S.) only if there is no practicable alternative which would have less adverse effects. The Guidelines state that USACE may not issue a permit if there is a least environmentally damaging practicable alternative (LEDPA), to the proposed discharge that would have lesser effects on waters of the U.S., and not have any other significant adverse environmental consequences. Per Guidelines, documentation is needed that a sequence of avoidance, minimization, and compensation measures has been followed, in that order. The Guidelines also restrict permitting activities that violate water quality or toxic effluent standards, jeopardize the continued existence of listed species, violate marine sanctuary protections, or cause “significant degradation” to waters of the U.S. In addition every permit from the USACE, even if not subject to the Section 404(b)(1) Guidelines, must meet general requirements. See 33 CFR 320.4. A discussion of the LEDPA determination, if any, for the document is included in the Wetlands and Other Waters section.

State Requirements: Porter-Cologne Water Quality Control Act

California’s Porter-Cologne Act, enacted in 1969, provides the legal basis for water quality regulation within California. This Act requires a “Report of Waste Discharge” for any discharge of waste (liquid, solid, or gaseous) to land or surface waters that may impair beneficial uses for surface and/or groundwater of the State. It predates the CWA and regulates discharges to waters of the State. Waters of the State include more than just Waters of the U.S., like groundwater and surface waters not considered Waters of the U.S. Additionally, it prohibits discharges of “waste” as defined and this definition is broader than the CWA definition of “pollutant”. Discharges under the Porter-Cologne Act are permitted by Waste Discharge Requirements (WDRs) and may be required even when the discharge is already permitted or exempt under the CWA.

The State Water Resources Control Board (SWRCB) and RWQCBs are responsible for establishing the water quality standards (objectives and beneficial uses) required by the CWA, and regulating discharges to ensure compliance with the water quality standards. Details regarding water quality standards in a project area are contained in the applicable RWQCB Basin Plan. States designate beneficial uses for all water body segments, and then set criteria necessary to protect these uses. Consequently, the water quality standards developed for particular water segments are based on the designated use and vary depending on such use. In addition, each state identifies waters failing to meet standards for specific pollutants, which are then state-listed in accordance with CWA Section 303(d). If a state determines that waters are impaired for one or more constituents and the standards cannot be met through point source controls, the CWA requires the establishment of Total Maximum Daily Loads (TMDLs). TMDLs specify allowable pollutant loads from all sources (point, non-point, and natural) for a given watershed.

State Water Resources Control Board and Regional Water Quality Control Boards

The SWRCB administers water rights, water pollution control, and water quality functions throughout the state. RWQCBs are responsible for protecting beneficial uses of water resources within their regional jurisdiction using planning, permitting, and enforcement authorities to meet this responsibility.

- **National Pollution Discharge Elimination System (NPDES) Program**

Municipal Separate Storm Sewer Systems

Section 402(p) of the CWA requires the issuance of NPDES permits for five categories of storm water dischargers, including Municipal Separate Storm Sewer Systems (MS4s). The U.S. EPA defines an MS4 as any conveyance or system of conveyances (roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, human-made channels, and storm drains) owned or operated by a state, city, town, county, or other public body having jurisdiction over storm water, that are designed or used for collecting or conveying storm water. The SWRCB has identified Caltrans as an owner/operator of an MS4 by the SWRCB and has issued a five (5) year NPDES permit to the department. IN the absence of a new or revised permit, existing permit requirements remain active until a new permit is adopted. The permit covers all Caltrans rights-of-way, properties, facilities, and activities in the state.

Caltrans MS4 Permit, under revision at the time of this update, contains three basic requirements:

1. Caltrans must comply with the requirements of the Construction General Permit (see below);
2. Caltrans must implement a year-round program in all parts of the State to effectively control storm water and non-storm water discharges; and

3. Caltrans storm water discharges must meet water quality standards through implementation of permanent and temporary (construction) Best Management Practices (BMPs) and other measures.

To comply with the permit, Caltrans developed the Statewide Storm Water Management Plan (SWMP) to address storm water pollution controls related to highway planning, design, construction, and maintenance activities throughout California. The SWMP assigns responsibilities within the Department for implementing storm water management procedures and practices as well as training, public education and participation, monitoring and research, program evaluation, and reporting activities. The SWMP describes the minimum procedures and practices Caltrans uses to reduce pollutants in storm water and non-storm water discharges. It outlines procedures and responsibilities for protecting water quality, including the selection and implementation of Best Management Practices (BMPs). The proposed Project will be programmed to follow the guidelines and procedures outlined in the latest SWMP to address storm water runoff.

Part of and appended to the SWMP is the Storm Water Data Report (SWDR) and its associated checklists. The SWDR documents the relevant storm water design decisions made regarding project compliance with the MS4 NPDES permit. The preliminary information in the SWDR prepared during the Project Initiation Document (PID) phase will be reviewed, updated, confirmed, and if required, revised in the

SWDR prepared for the later phases of the project. The information contained in the SWDR may be used to make more informed decisions regarding the selection of BMPs and/or recommended avoidance, minimization, or mitigation measures to address water quality impacts.

Construction General Permit

Construction General Permit (Order No. 2009-009-DWQ), adopted on September 2, 2009, became effective on July 1, 2010. The permit regulates storm water discharges from construction sites which result in a Disturbed Soil Area (DSA) of one acre or greater, and/or are smaller sites that are part of a larger common plan of development. By law, all storm water discharges associated with construction activity where clearing, grading, and excavation results in soil disturbance of at least one acre must comply with the provisions of the General Construction Permit. Construction activity that results in soil disturbances of less than one acre is subject to this Construction General Permit if there is potential for significant water quality impairment resulting from the activity as determined by the RWQCB. Operators of regulated construction sites are required to develop storm water pollution prevention plans; to implement sediment, erosion, and pollution prevention control measures; and to obtain coverage under the Construction General Permit.

The 2009 Construction General Permit separates projects into Risk Levels 1, 2, or 3. Risk levels are determined during the planning and design phases, and are based on potential erosion and transport to receiving waters. Requirements apply according to the Risk Level determined. For example, a Risk Level 3 (highest risk) project would require compulsory storm water runoff pH and turbidity monitoring, and before construction and after construction aquatic biological assessments during specified seasonal windows. For all projects subject to the permit, applicants are required to develop and implement an effective Storm Water Pollution Prevention Plan (SWPPP). In accordance with Caltrans' Standard Specifications, a Water Pollution Control Plan (WPCP) is necessary for projects with DSA less than one acre.

Section 401 Permitting

Under Section 401 of the CWA, any project requiring a federal license or permit that may result in a discharge to a water body must obtain a 401 Certification, which certifies that the project will be in compliance with State water quality standards. The most common federal permits triggering 401 Certification are CWA Section 404 permits issued by USACE. The 401 permit certifications are obtained from the appropriate RWQCB, dependent on the project location, and are required before USACE issues a 404 permit.

In some cases the RWQCB may have specific concerns with discharges associated with a project. As a result, the RWQCB may issue a set of requirements known as Waste Discharge Requirements (WDRs) under the State Water Code that define activities, such as the inclusion of specific features, effluent limitations, monitoring, and plan submittals that are to be implemented for protecting or benefiting water quality. WDRs can be issued to address both permanent and temporary discharges of a project.

Affected Environment

A Water Quality Assessment was prepared in April 2012 by qualified Caltrans environmental staff. The project is located in Butte County along SR 70 at post mile 24.26 and is within the Butte Basin.

Flag Canyon Creek is an ephemeral tributary to Dry Creek northeast of Oroville in Butte County. According to database searches, Flag Canyon Creek was not identified as an impaired 303(d) listed water body. Flag Canyon Creek flows 0.7 miles northwest into Dry Creek; Dry Creek is currently being considered for placement on the 303(d) list by the State Water Resources Control Board for the pollutant of Mercury. Dry Creek eventually flows into the Sacramento River, via the Cherokee Canal.

Because the project does not meet the categories of a sediment-sensitive water body, it may be considered to have a "low" receiving water risk. The project is not located in a MS4 General Permit area and is not close to any drinking water reservoirs or recharge facilities, where potential spills could impact the water supplies.

Environmental Consequences

Direct impacts to water quality could occur during the construction of culvert extensions along small portions of these waters which would convert natural stream habitats to artificial stream habitats. Indirect impacts to Waters of the U.S., during construction activities, may include siltation; this is discussed in the Wetlands and Other Waters Section starting on page 16.

Avoidance, Minimization, and/or Mitigation Measures

Adherence to the following is recommended to prevent receiving water pollution as a result of construction activities and/or operation from this project:

1. The project shall adhere to the conditions of the Caltrans Statewide NPDES Permit CAS No. 000003 (Order No. 99-06-DWQ) issued by the State Water Resources Control Board. It should be noted that the existing Statewide Permit (Order No. 99-06-DWQ), is expected to be superseded by the draft Tentative Order no. 2011-XXX-DWQ, which is undergoing another revision. Adoption of the new Statewide Permit is scheduled for sometime in the near future, and may entail additional requirements upon adoption.
2. The permit requires Caltrans to comply with the requirements of the statewide Construction General Permit (Order No. 2009-009-DWQ). During construction, compliance with the permit requires the appropriate selection and deployment of both structural and non-structural Best Management Practices (BMPs) that achieve the performance standards of Best Available Technology economically achievable/Best Conventional Pollutant Control Technology (BAT/BCT) to reduce or eliminate storm water pollution.
3. Adherence to the compliance requirements of the NPDES Construction General Permit CAS No. 000002 (Order No. 2009-0009-DWQ) for General Construction Activities is required if the total disturbed soil area (DSA) is equal to or greater than 1.0 acre. At this time, the project is expected to exceed one acre of DSA. Commitments for the mentioned permit are listed below:
 - a. A Caltrans approved SWPPP will be required, which specifies the level of temporary pollution control measures for the project.
 - b. Standard Special Provision (SSP) 07-345 shall be included in the PS&E to address Construction's temporary water pollution control measures. These measures must address soil stabilization, water sampling, sediment control, tracking control, and wind erosion control practices. In addition, the project plans must include non-storm water controls, waste management and material pollution controls.
 - c. To obtain coverage under the Construction General Permit (CGP), dischargers must electronically file Permit Registration Documents (PRDs) through the State Water Resource Control Board's Storm Water Multiple Application and Report Tracking System (SMARTS), prior to the commencement of construction activity.

- d. Within 90 day upon completion of the project, the discharger shall electronically file a Notice of Termination (NOT), a final site map and photographs through the State Water Resource Control Board's SMARTS system. The Regional Water Quality Control Board (RWQCB) will consider the construction site complete only when all portions of the site have met the Conditions for Termination of Coverage, of the CGP.
4. Consideration should be given to include SSP 07-346 (Construction Site Management) during PS&E to control potential sources of water pollution before it encounters any storm water system or watercourse. It requires the Contractor to control material pollution, manage waste and non-storm water at the construction site. The Contractor prepared WPCP/SWPPP incorporates appropriate Temporary Construction Site BMPs to implement effective handling, storage, use and disposal practices during construction activities.
5. Operations involving PCC placement and concrete washout methods shall adhere to SSPs 07-405, 07-406, and 07-407.
6. The Caltrans Storm Water Management Plan (SWMP), the Project Planning and Design Guide (PPDG) Section 4, and the Evaluation Documentation Form (EDF) provide detailed guidance in determining if a specific project requires the consideration of permanent Treatment BMPs. Line Item BMPs may be required and incorporated into the PS&E.
7. Appropriate Temporary Construction Site BMPs shall be implemented at the existing disposal site. Implementation of a Maintenance Facility Pollution Prevention Plan (FPPP) may be necessary to protect water quality, and the development/establishment of a permanent erosion control plan/project to close out the FPPP.
8. Caltrans NPDES office will participate in early project design consultation with Central Valley RWQCB if the project entails one or more acre of total soil disturbance.
9. The site will be evaluated for potential water quality impacts associated with the project by an NPDES Coordinator. Changes to site conditions and/or construction operations, not addressed in the environmental study report, may require the application of additional measures to address potential water quality impacts.
10. Construction Site BMPs shall be selected to protect water bodies within or near the project limits from potential water pollution runoff from construction activities. To address the temporary water quality impacts, the contractor will implement Temporary Construction Site BMPs identified in the WPCP/SWPPP or included as Line Item BMPs.
11. If site dewatering is required for the new construction, a dewatering plan is required. Site access for construction must be included in any water quality analysis. Coordination with CVRWQCB for any anticipated Dewatering and determination of WDR (Separate Dewatering Permit) for Dewatering is required during PS&E phase. Coordination with the CVRWQCB should be through the District NPDES Coordinator.

Biological Environment

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. The emphasis of the section is on the ecological function of the natural communities within the area. This section also includes information on fish passage, wildlife corridors, and habitat fragmentation, as necessary. 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 the Threatened and Endangered Species section. Wetlands and other waters are also discussed in the following section.

Affected Environment

The Natural Environment Study was completed in June 2012 by qualified Caltrans biology staff. The natural communities or biological habitats located in the project area consist of annual grassland, Blue Oak-Foothill Pine Woodland and riparian habitats.

- Annual grassland habitat is the most abundant habitat type in the study area. The grasslands are dominated by introduced annual grasses, including wild oats, soft chess, ripgut brome, and foxtail brome. Noxious weed species observed in this habitat type include Italian thistle, yellow star thistle, and field bind weed.
- Blue Oak-Foothill Pine Woodland occurs in uplands adjacent to the roadway, and consists of blue oak, interior live oak, California foothill pine, and California buckeye.
- Riparian habitat occurs along Flag Canyon Creek and consists of valley oak, Fremont cottonwood, white alder, Goodding willow and California wild grape.

Flag Canyon Creek and Dry Creek, which Flag Canyon Creek flows in to, both do not support anadromous fish and do not have any fish passage issues. Here is a brief history of the Flag Canyon Creek and some of the surrounding creeks.

Flag Canyon Creek is an ephemeral tributary to Dry Creek northeast of Oroville in Butte County. Dry Creek is not listed as Essential Fish Habitat (EFH) or critical habitat by the National Marine Fisheries. (Federal Register / Vol. 70, No. 170 / Friday, September 2, 2005). Historically Dry Creek provided spawning habitat for Central Valley Steelhead and Chinook salmon. Dry Creek has been previously altered due to mining activities and water diversions for agricultural purposes in the lower reaches. Instead of flowing directly into the Sacramento River, Dry Creek now flows into the Cherokee Canal before entering the

Sacramento River. As such, Dry Creek no longer provides safe continuous passage for anadromous fish. The mining activities have eliminated habitat and created conditions that do not support anadromous fish.

General wildlife movement corridors within the project area usually follow natural drainages and waterways. Results of the field surveys indicate that the oak riparian habitat along Flag Canyon Creek provides cover and serves as a linear corridor for wildlife passage between habitat fragments in the adjacent foothills. Flag Canyon Creek provides a year round source of water for wildlife that pass through the study area, and under the bridge.

Environmental Consequences

The annual grassland natural community makes up most of the project area. Temporary impacts to the grassland would result from the temporary staging and storage area, some reconstruction of the slopes, extending culverts, and replacing down-drains and over-side drains. The removal of a few trees would indirectly impact the Blue Oak Foothill Pine woodland community where roadway widening is necessary for the construction of the bridge.

Avoidance, Minimization, and/or Mitigation Measures

In order to avoid potential impacts to the natural communities the removal of native vegetation, including riparian habitat, will be confined to the minimal area necessary to facilitate construction activities. All disturbed soil areas will be restored to their original condition, as nearly as possible.

WETLANDS AND OTHER WATERS

Regulatory Setting

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

Section 404 of the CWA establishes a regulatory program that provides that discharge of dredged or fill material cannot be permitted if a practicable alternative exists that is less

damaging to the aquatic environment or if the nation's waters would be significantly degraded. The Section 404 permit program is run by the U.S. Army of Engineers (USACE) with oversight by the United States Environmental Protection Agency (U.S. EPA).

USACE issues two types of 404 permits: Standard and General permits. Nationwide permits, a type of General permit, are issued to authorize a variety of minor project activities with no more than minimal effects. Ordinarily, projects that do not meet the criteria for a Nationwide Permit may be permitted under one of USACE's Standard permits. For Standard permits, the USACE decision to approve is based on compliance with U.S. EPA's Section 404(b)(1) Guidelines (U.S. EPA 40 CFR Part 230), and whether permit approval is in the public interest. The Section 404 (b)(1) Guidelines were developed by the U.S. EPA in conjunction with USACE, and allow the discharge of dredged or fill material into the aquatic system (waters of the U.S.) only if there is no practicable alternative which would have less adverse effects. The Guidelines state that USACE may not issue a permit if there is a least environmentally damaging practicable alternative (LEDPA) to the proposed discharge that would have lesser effects on waters of the U.S., and not have any other significant adverse environmental consequences.

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

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

The RWQCBs were established under the Porter-Cologne Water Quality Control Act to oversee water quality. The RWQCB also issues water quality certifications for impacts to

wetlands and waters in compliance with Section 401 of the CWA. Please see the [Water Quality section](#) for those additional details.

Affected Environment

The Natural Environment Study was completed in June 2012 by qualified Caltrans biology staff. Prior disturbance associated with highway construction and rural development, have drastically altered the functions and values of the watershed within the study area of the project. Previously undisturbed waterways now flow through culverts and roadside ditches or flow over land across storm-water drainage slopes.

Flag Canyon Creek is an ephemeral tributary to Dry Creek northeast of Oroville in Butte County and is considered a Waters of the U.S. Dry Creek has been previously altered due to mining activities and water diversions for agricultural purposes in the lower reaches. Instead of flowing directly into the Sacramento River, Dry Creek now flows into the Cherokee Canal before entering the Sacramento River.

Environmental Consequences

The proposed project activities, such as placement of fill and the extension of culverts, will result in approximately 0.112 acres of permanent, direct impacts (below the ordinary high water mark) to jurisdictional wetlands. Approximately 100 linear feet of wetlands will be temporarily, directly impacted during project construction.

Since the proposed drainage improvement work may divert or obstruct the natural flow of or change the streambed or stream-bank of jurisdictional waterways, a CDFG Code Section 1602 Streambed Alteration Agreement will be required. Because the proposed drainage improvement work will place fill material (rock slope protection or "RSP") in Waters of the U.S., a Clean Water Act Section 404 Permit is required from USACE. A Clean Water Act (CWA) Section 401 from the Central Valley RWQCB will be required as well.

Avoidance, Minimization, and/or Mitigation Measures

Avoidance and Minimization –

Besides the Section 401 Certification, 404 Permit and Section 1602 Agreement measures, which need to be included in the project, the following measures will be complied with as well.

Some of the avoidance and minimization measures to minimize harm to the waters are included in the statewide National Pollutant Discharge Elimination System (NPDES) permit, which calls for a SWPPP if the Disturbed Soil Area (DSA) for the project is over one acre. The Flag Canyon Creek Bridge replacement project does include over one acre of DSA. The NPDES permit and the SWPPP include the following regulations and shall be adhered to:

- Where working areas encroach on live or dry streams, lakes, or wetlands, RWQCB-approved physical barriers adequate to prevent the flow or discharge of sediment into these systems will be constructed and maintained between working areas and streams, lakes and wetlands. During construction of the barriers, discharge of sediment and silt into streams will be held to a minimum. Discharge will be contained through the use RWQCB-approved measures to keep sediment from entering protected waters.
- Oily or greasy substances originating from the Contractor's operations will not be allowed to enter or be placed where they will later enter tributary waters or a live or dry stream. Asphalt concrete will not be allowed to enter tributary waters, a live or dry stream, pond, or wetland.
- During construction, compliance with the NPDES permit requires the appropriate selection and deployment of both structural and non-structural Best Management Practices (BMPs) that achieve the performance standards of Best Available Technology economically achievable/Best Conventional Pollutant Control Technology (BAT/BCT) to reduce or eliminate storm water pollution.
- Additional direct and indirect impacts to sensitive biological resources, including jurisdictional waters, will be avoided or minimized by designating these features outside of the construction impact area as "environmentally sensitive areas" (ESAs) on project plans and in project specifications. Caltrans Design personnel will coordinate with Caltrans Environmental personnel during the development of the project to determine the exact locations of proposed ESA areas. ESA information will be shown on contract plans and discussed in the special provisions. ESA provisions may include, but are not limited to, the use of temporary orange fencing to delineate the proposed limit of work in areas adjacent sensitive resources, or to delineate and exclude sensitive resources from potential construction impacts. Contractor encroachment into ESAs will be prohibited (including the staging/operation of heavy equipment or casting of excavation materials). ESA provisions will be implemented as a first order of work and remain in place until all construction activities are complete.

Compensatory Mitigation –

- Mitigation for impacts to jurisdictional wetlands will be required to reduce project impacts to less than significant. The 0.112 acres of impacted jurisdictional wetland would be mitigated by securing 0.112 credits of seasonal wetland habitat or replanting on site at a 1:1 ratio.

PLANT SPECIES

Regulatory Setting

The U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Game (CDFG) 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 (FESA) and/or the California Endangered Species Act (CESA). Please see the Threatened and Endangered Species Section in this document for detailed information regarding these species.

This section of the document discusses all the other special-status plant species as appropriate, including CDFG species of special concern, USFWS candidate species, and California Native Plant Society (CNPS) rare and endangered plants.

The regulatory requirements for FESA can be found at United States Code 16 (USC), Section 1531, et seq. See also 50 CFR Part 402. The regulatory requirements for CESA 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 (CEQA), Public Resources Code, Sections 2100-21177.

Affected Environment

The Natural Environment Study was completed in June 2012 by qualified Caltrans biology staff. Suitable habitat for special status plants, which were listed on the CNPS 1B list database, were absent through the project area. No habitat for species of concern was found within the project area.

Environmental Consequences

Special status plants will not be impacted by the project. Special status plants are not present within the project area and there is no suitable habitat throughout the project area.

Avoidance, Minimization, and/or Mitigation Measures

Removal of native vegetation shall be confined to the minimal area necessary to facilitate construction activities. Re-vegetation measures shall include erosion control containing native species familiar with the area and be weed free certified with no invasive species. More information can be found in the Invasive Species Section.

ANIMAL SPECIES

Regulatory Setting

Many state and federal laws regulate impacts to wildlife. The US Fish and Wildlife Service (USFWS), the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries Service) and the California Department of Fish and Game (CDFG) are responsible for implementing these laws. This section discusses potential impacts and permit requirements associated with animals not listed or proposed for listing under the state or federal Endangered Species Act. Species listed or proposed for listing as threatened or endangered are discussed in the Section below. All other special-status animal species are discussed here, including CDFG fully protected species and species of special concern, and USFWS or NOAA Fisheries Service candidate species.

Federal laws and regulations pertaining to wildlife include the following:

- National Environmental Policy Act (NEPA)
- Migratory Bird Treaty Act (MBTA)
- Fish and Wildlife Coordination Act (FWCA)

State laws and regulations pertaining to wildlife include the following:

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

Affected Environment

The Natural Environment Study was completed in June 2012 by qualified Caltrans biology staff. Flag Canyon Creek Bridge provides suitable habitat for a nesting colony of cliff swallows. The cliff swallow is a fairly common migratory bird species that forms large nesting colonies on box culverts and bridges. When access to suitable habitat is prevented at one colony, cliff swallows leave the area and join nesting colonies elsewhere.

No bat species or evidence of bat activity (i.e. bat guano) was observed underneath the structure during field investigations. In addition, no other special status animal species would be impacted by the project.

Environmental Consequences

Because Caltrans will implement avoidance and minimization measures for the MBTA, impacts to these species will be avoided. Before construction work starts on the bridge, the bats and birds will be excluded.

Avoidance, Minimization, and/or Mitigation Measures

It is recommended that the following avoidance and minimization measures be adhered to:

- The removal of any woody vegetation (trees and shrubs) required for the project shall be completed between September 1 and February 14th, prior to project construction. This time period is considered to be *outside* of the predicted nesting season for raptors and migratory birds. Vegetation removal outside this time period may not proceed until a survey by a qualified biologist determines that no nests are present or in use.
- If woody vegetation removal, construction, structures work, grading, or other project-related improvements are scheduled during the nesting season of protected raptors and migratory birds (February 15th to August 31st), a focused survey for active nests of such birds will be conducted by a qualified biologist within 30 days prior to the beginning of project-related activities. If active nests are found, Caltrans will consult with USFWS regarding appropriate action to comply with the MBTA of 1918 and with CDFG to comply with provisions of the Fish and Game Code of California. If a lapse in project-related work of fifteen days or longer occurs, another survey and, if required, consultation with USFWS and CDFG will be required before the work can be reinitiated.
- Exclusionary devices should be installed on structures which may have features capable of supporting migratory birds/bats nesting to discourage or exclude the use of the structures by the nesting birds. Exclusionary devices, such as wire mesh, would be installed in the weep holes of the bridge during the non-nesting season for migratory birds (non-nesting season occurs between September 1st and February 14th) in order to prevent migratory birds from constructing nests in the structure.

THREATENED AND ENDANGERED SPECIES

Regulatory Setting

The primary federal law protecting threatened and endangered species is the Federal Endangered Species Act (FESA): 16 USC Section 1531, et seq. See also 50 CFR Part 402. This act and subsequent amendments provide for the conservation of endangered and threatened species and the ecosystems upon which they depend. Under Section 7 of this act, federal agencies, such as the Federal Highway Administration (FHWA), are required to consult with the U.S. Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries Service) to ensure that they are not undertaking, funding, permitting or authorizing actions likely to jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat. Critical habitat is defined as geographic locations critical to the existence of a threatened or endangered species. The outcome of consultation under

Section 7 is a Biological Opinion or an Incidental Take statement. Section 3 of FESA defines take as “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect or any attempt at such conduct.”

California has enacted a similar law at the state level, the California Endangered Species Act (CESA), California Fish and Game Code, Section 2050, et seq. CESA 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 (CDFG) is the agency responsible for implementing CESA. 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." CESA allows for take incidental to otherwise lawful development projects; for these actions an incidental take permit is issued by CDFG. For species listed under both FESA and CESA requiring a Biological Opinion under Section 7 of the FESA, CDFG may also authorize impacts to CESA species by issuing a Consistency Determination under Section 2080.1 of the California Fish and Game Code.

Another federal law, the Magnuson-Stevens Fishery Conservation and Management Act of 1976, was established to conserve and manage fishery resources found off the coast, as well as anadromous species and Continental Shelf fishery resources of the United States, by exercising (A) sovereign rights for the purposes of exploring, exploiting, conserving, and managing all fish within the exclusive economic zone established by Presidential Proclamation 5030, dated March 10, 1983, and (B) exclusive fishery management authority beyond the exclusive economic zone over such anadromous species, Continental Shelf fishery resources, and fishery resources in special areas.

Affected Environment

The Natural Environment Study (NES) was completed in June 2012 by qualified Caltrans biology staff. As part of the NES, a species list of protected species in the immediate area is obtained from the United States Fish and Wildlife Service and then the biologist determines the absence or presence of listed species habitat within the project area.

From field observations and studies, only the federally listed threatened Valley Elderberry Longhorn Beetle (VELB) has the potential to occur in the project area. Two elderberry shrubs (*Sambucus Mexicana*) with two stems greater than five inches diameter at ground level occur in the project area. One shrub is within 50 feet off the southeast embankment of the new bridge and the second shrub is within 50 feet the northwest embankment of the new bridge. The elderberry shrubs occur in the riparian zone of Flag Canyon Creek. There were no exit holes in the stems of the shrub and no VELB beetles were observed on or near the shrub or near the project area in general.

The VELB is federally listed as a threatened species. The VELB larvae feed solely on elderberry shrubs. The larvae are woodborers and feed internally in the roots and main stems of the shrub. Elderberry shrub stems that are greater than 1.0 inch in diameter at ground level are required for the beetle to complete its lifecycle. Adults feed in the flowers and foliage of the shrub. Adult beetles are active when the elderberry shrub is in bloom, usually between mid-March and mid-June. Adult beetles have generally been observed in areas where their associated riparian vegetation is among larger trees. The beetle prefers riparian habitat in the valley with dominant plant species including cottonwood, sycamore, valley oak, and willow, with an understory of elderberry shrubs.

Flag Canyon Creek was analyzed to determine its suitability to provide habitat to listed anadromous fish. The creek does not support listed anadromous fish habitat. Anadromous fish are fish that are born in fresh water and spend most of their life in the sea and then return back to fresh water to spawn. More details about anadromous fish habitat and the history of the creek and some surrounding creeks in the area are in the Natural Communities section.

Environmental Consequences

The project may affect but is not likely to adversely affect the VELB species. The proposed work at this location will not require the removal of the shrub; rather the shrub will be avoided.

Avoidance, Minimization, and/or Mitigation Measures

Caltrans will avoid and protect habitat whenever possible. Since suitable habitat for the VELB occurs on the project site, the buffer area around the shrubs must be designated as an avoidance area and must be protected from disturbance during the construction and operation of the project.

Avoidance: Establishment and Maintenance of a Buffer Zone

- Incomplete avoidance (i.e., may affect, not likely to adversely affect) may be assumed since only a 50-foot wide buffer (instead of the suggested 100 feet) will be established and maintained around elderberry plant containing stems measuring 1.0 inch or greater in diameter at ground level. In buffer areas, like Environmental Sensitive Area (ESA) avoidance fencing, construction-related disturbance should be minimized and any damaged area should be promptly restored following construction. The USFWS must be consulted before any disturbances within the buffer area are considered.
- All areas to be avoided during construction activities will be fenced and flagged. In areas where encroachment on the 50-foot buffer will occur, provide a minimum setback of at least 20 feet from the drip-line of the elderberry plant.

- Contractors will be briefed on the need to avoid damaging the elderberry plants and the possible penalties for not complying with these requirements.
- Signs will be placed every 10 feet along the edge of the avoidance area with the following information: "This area is habitat of the valley elderberry longhorn beetle, a threatened species, and must not be disturbed. This species is protected by the Endangered Species Act of 1973, as amended. Violators are subject to prosecution, fines, and imprisonment." The signs should be clearly readable from a distance of 20 feet, and must be maintained for the duration of construction.
- Work crews will be instructed about the status of the beetle and the need to protect its elderberry host plant.

Restoration and Maintenance

- Any damage done to the buffer area (area within 100 feet of elderberry plants) during construction will be restored. Provide erosion control and re-vegetate with appropriate native plants within 50-100 feet.
- Buffer areas will continue to be protected after construction from the effects of the project (measures such as fencing, signs, weeding, and trash removal are usually appropriate).
- No insecticides, herbicides, fertilizers, or other chemicals that might harm the beetle or its host plant should be used in the buffer areas, or within 100 feet of any elderberry plant with one or more stems measuring 1.0 inch or greater in diameter at ground level.

INVASIVE SPECIES

Regulatory Setting

On February 3, 1999, President Clinton signed Executive Order 13112 requiring federal agencies to combat the introduction or spread of invasive species in the United States (U.S.). The order defines invasive species as "any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem whose introduction does or is likely to cause economic or environmental harm or harm to human health." Federal Highway Administration guidance issued August 10, 1999 directs the use of the State's invasive species list currently maintained by the California Invasive Species Council to define the invasive species that must be considered as part of the NEPA analysis for a proposed project.

Affected Environment

The Natural Environment Study was completed in June 2012 by qualified Caltrans biology staff. The foothill environment is present with many invasive plant species. Noxious weed species in this annual grassland habitat type usually include Italian star thistle, yellow star thistle, and field bind weed.

Environmental Consequences

No plant species on the California list of invasive species are used by Caltrans for erosion control. All equipment and materials will be inspected for the presence of invasive species.

Avoidance, Minimization, and/or Mitigation Measures

The following avoidance and minimization measures will be required:

- In compliance with the Executive Order on Invasive Species, EO 13112, and subsequent guidance from the Federal Highway Administration, the landscaping and erosion control included in the project will not use species listed as invasive. In areas of particular sensitivity, extra precautions will be taken if invasive species are found in or adjacent to the construction areas. These include the inspection and cleaning of construction equipment and eradication strategies to be implemented should an invasion occur.
- To minimize the risk of introducing additional non-native species into the area, only native plant species appropriate for the project area will be used in any erosion control or re-vegetation seed mix or stock.

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 production and use of fossil fuels.

While climate change has been a concern for several decades, the establishment of the Intergovernmental Panel on Climate Change (IPCC) by the United Nations and World Meteorological Organization's 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 (GHG) 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.

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

Transportation sources (passenger cars, light duty trucks, other trucks, buses and motorcycles) 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 (U.S.) 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 state and federal efforts to comprehensively reduce GHG emissions from transportation sources.

Regulatory Setting

State

With the passage of several pieces of legislation including State Senate and Assembly Bills and Executive Orders, California launched an innovative and pro-active 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: requires the California Air Resources Board (CARB) to develop and implement regulations to reduce automobile and light truck greenhouse gas emissions. These stricter emissions standards were designed to apply to automobiles and light trucks beginning with the 2009-model year. In June 2009, the U.S. Environmental Protection Agency (U.S. EPA) Administrator granted a Clean Air Act waiver of preemption to California. This waiver allowed California to implement its own GHG emission standards for motor vehicles beginning with model year 2009. California agencies will be working with Federal agencies to conduct joint rulemaking to reduce GHG emissions for passenger cars model years 2017-2025.

Executive Order S-3-05: (signed on June 1, 2005, by Governor Arnold Schwarzenegger) the goal of this Executive Order is to reduce California's GHG 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.

AB32 (AB 32), the Global Warming Solutions Act of 2006: AB 32 sets the same overall GHG emissions reduction goals as outlined in Executive Order S-3-05, while further mandating that CARB 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: Governor Schwarzenegger set forth the low carbon fuel standard for California. Under this Executive Order, the carbon intensity of California's transportation fuels is to be reduced by at least ten percent by 2020.

Senate Bill 97 (Chapter 185, 2007): required the Governor's Office of Planning and Research (OPR) to develop recommended amendments to the State CEQA Guidelines for addressing greenhouse gas emissions. The Amendments became effective on March 18, 2010.

Caltrans Director's Policy 30 (DP-30) Climate Change (approved June 22, 2012): is intended to establish a Department policy that will ensure coordinated efforts to incorporate climate change into Departmental decisions and activities. This policy contributes to the Department's stewardship goal to preserve and enhance California's resources and assets.

Federal

Although climate change and GHG reduction is a concern at the federal level; currently there are, no regulations or legislation that have been enacted specifically addressing GHG emissions reductions and climate change at the project level. Neither the United States Environmental Protection Agency (U.S. EPA) nor Federal Highway Administration (FHWA) has promulgated explicit guidance or methodology to conduct project-level greenhouse gas analysis. As stated on FHWA's climate change website (<http://www.fhwa.dot.gov/hep/climate/index.htm>), climate change considerations should be integrated throughout the transportation decision-making process—from planning through project development and delivery. Addressing climate change mitigation and adaptation up front in the planning process will facilitate decision-making and improve efficiency at the program level, and will inform the analysis and stewardship needs of project level decision-making. Climate change considerations can easily be integrated into many planning factors, such as supporting economic vitality and global efficiency, increasing safety and mobility, enhancing the environment, promoting energy conservation, and improving the quality of life.

The four strategies set forth by FHWA to lessen climate change impacts do correlate with efforts that the State has undertaken and is undertaking to deal with transportation and climate change; the strategies include improved transportation system efficiency, cleaner fuels, cleaner vehicles, and reduction in the growth of vehicle hours travelled.

Climate change and its associated effects are also being addressed through various efforts at the federal level to improve fuel economy and energy efficiency, such as the "National Clean Car Program" and Executive Order 13514- *Federal Leadership in Environmental,*

Energy and Economic Performance.

Executive Order 13514 is focused on reducing greenhouse gases internally in federal agency missions, programs and operations, but also direct federal agencies to participate in

the interagency Climate Change Adaptation Task Force, which is engaged in developing a U.S. strategy for adaptation to climate change.

On April 2, 2007, in *Massachusetts v. EPA*, 549 U.S. 497 (2007), the Supreme Court found that greenhouse gases are air pollutants covered by the Clean Air Act and that the U.S. EPA has the authority to regulate GHG. The Court held that the U.S. EPA Administrator must determine whether or not emissions of greenhouse gases from new motor vehicles cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision.

On December 7, 2009, the U.S. EPA Administrator signed two distinct findings regarding greenhouse gases under section 202(a) of the Clean Air Act:

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

Although these findings did not themselves impose any requirements on industry or other entities, this action was a prerequisite to finalizing the U.S. EPA's *Proposed Greenhouse Gas Emission Standards for Light-Duty Vehicles*, which was published on September 15, 2009². On May 7, 2010 the final *Light-Duty Vehicle Greenhouse Gas Emissions Standards and Corporate Average Fuel Economy Standards* was published in the Federal Register.

U.S. EPA and the National Highway Traffic Safety Administration (NHTSA) are taking coordinated steps to enable the production of a new generation of clean vehicles with reduced GHG emissions and improved fuel efficiency from on-road vehicles and engines. These next steps include developing the first-ever GHG regulations for heavy-duty engines and vehicles, as well as additional light-duty vehicle GHG regulations. These steps were outlined by President Obama in a memorandum on May 21, 2010.³

The final combined U.S. EPA and NHTSA standards that make up the first phase of this national program apply to passenger cars, light-duty trucks, and medium-duty passenger vehicles, covering model years 2012 through 2016. The standards require these vehicles to meet an estimated combined average emissions level of 250 grams of carbon dioxide per mile, equivalent to 35.5 miles per gallon (MPG), if the automobile industry were to meet this

² <http://www.epa.gov/climatechange/endangerment.html>

³ <http://epa.gov/otaq/climate/regulations.htm>

carbon dioxide level solely through fuel economy improvements. Together, these standards will cut GHG emissions by an estimated 960 million metric tons and 1.8 billion barrels of oil over the lifetime of the vehicles sold under the program (model years 2012-2016).

On January 24, 2011, the U.S. EPA along with the U.S. Department of Transportation and the State of California announced a single timeframe for proposing fuel economy and greenhouse gas standards for model years 2017-2025 cars and light-trucks. Proposing the new standards in the same timeframe (September 1, 2011), signals continued collaboration that could lead to an extension of the current National Clean Car Program.

Project Analysis

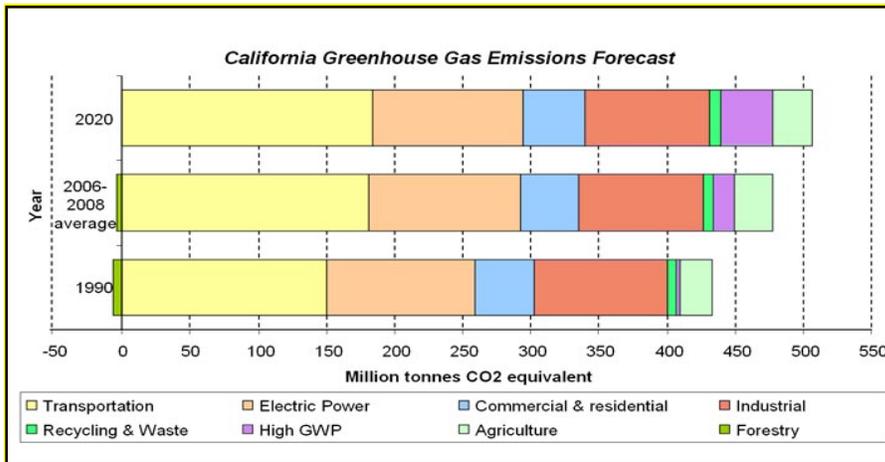
This project is a safety project replacing the existing bridge structure facility in kind, and will not increase or change long-term traffic. The roadway capacity will remain the same. Therefore, no increase in operational GHG emissions is anticipated to occur with the bridge replacement project. Minor emissions from construction will be unavoidable but there will likely be long-term GHG benefits by improved operation of the Highway 70 corridor, smoother pavement surfaces, and a new structure with longevity.

An individual project does not generate enough GHG 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 GHG.⁴ In assessing cumulative impacts, it must be determined if a project's incremental effect is "cumulatively considerable." See California Environmental Quality Act (CEQA) 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.

The AB 32 Scoping Plan contains the main strategies California will use to reduce GHG. As part of its supporting documentation for the Draft Scoping Plan, ARB released the GHG 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 GHG inventory for 2006, 2007, and 2008.

⁴ 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 US Forest Service (Climate Change Considerations in Project Level NEPA Analysis, July 13, 2009).

FIGURE 1 CALIFORNIA GREENHOUSE GAS FORECAST



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

Caltrans and its parent agency, the Business, Transportation, and Housing Agency, have taken an active role in addressing GHG emission reduction and climate change. Recognizing that 98 percent of California’s GHG emissions are from the burning of fossil fuels and 40 percent of all human made GHG emissions are from transportation, the Department 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).⁵

Construction Emissions

Greenhouse gas emissions for transportation projects can be divided into those produced during construction and those produced during operations. Construction GHG 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 GHG emissions produced during construction can be mitigated to some degree by longer intervals between maintenance and rehabilitation events.

⁵ 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

CEQA Conclusion

While construction will result in a slight increase in GHG emissions during construction, it is anticipated that the project will not result in any increase in operational GHG emissions. While it is Caltrans determination that in the absence of further regulatory or scientific information related to GHG 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 GHG emissions. These measures are outlined in the following section.

Greenhouse Gas Reduction Strategies

AB 32 Compliance

The Department continues to be actively involved on the Governor's Climate Action Team as ARB 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



Figure 3 Mobility Pyramid

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 GHG 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 CO₂ reduction goals: system monitoring and evaluation, maintenance and preservation, smart land use and demand management, and operational improvements as depicted in Figure 3: The Mobility Pyramid.

The Department 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. The Department is working closely with local jurisdictions on planning activities; however, the Department does not have local land use planning authority. The Department 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; the Department is doing this by supporting on-going research efforts at universities, by supporting legislative efforts to increase fuel economy, and by its participation on the Climate Action Team. It is important to note, however, that the control of the fuel economy standards is held by U.S. EPA and ARB. Lastly, the use of alternative fuels is also being considered; the Department is participating in funding for alternative fuel research at the UC Davis.

Table 1 summarizes the Department and statewide efforts that the Department is implementing in order to reduce GHG emissions. More detailed information about each strategy is included in the Climate Action Program at Caltrans (December 2006).

Table 1 Climate Change/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	.975	7.8
Operational Improvements & Intelligent Trans. System (ITS) Deployment	Strategic Growth Plan	Caltrans	Regions	State ITS; Congestion Management Plan	.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	.0045	.0065 .045 .0225
Non-vehicular Conservation Measures	Energy Conservation Program	Green Action Team		Energy Conservation Opportunities	.117	.34
Portland Cement	Office of Rigid Pavement	Cement and Construction Industries		2.5 % limestone cement mix	1.2	4.2
				25% fly ash cement mix	.36	3.6
				> 50% fly ash/slag mix		
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 will also be included in the project to reduce the GHG emissions and potential climate change impacts from the project:

- Plants and erosion control reduces surface warming, and through photosynthesis, decreases CO₂. The project proposes wetland mitigation planting on site, drainage channels, and restoring all disturbed areas with native seeds and plants. These plantings and erosion control could help offset any potential CO₂ emissions increase.
- According to the Department's Standard Specifications, the contractor must comply with all local Air Pollution Control District's rules, ordinances, and regulations in regards to air quality restrictions. Air Quality commitments will be incorporated as such.
- Both fugitive dust and construction equipment exhaust emissions will be temporary and transitory in nature. Caltrans Standard Specifications, a required part of all construction contracts, should effectively reduce and control emission impacts during construction under the provisions of Section 7-1.02C "Emission Reduction" and Section 14-9.03 "Dust Control". Provision 14-9.02 "Air Pollution Control" requires the contractor to comply with all pertinent rules, regulations, ordinances, and statutes of the local air district.
- The project would incorporate the use of energy efficient lighting such as the LED temporary traffic signals the project is using. LED bulbs consume 10% of the electricity of regular light bulbs, which will also help reduce the projects CO₂ emissions.

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 (CEQ), the Office of Science and Technology Policy (OSTP), and the National Oceanic and Atmospheric Administration (NOAA), released its interagency report October 14, 2010 outlining recommendations to President Obama for how Federal Agency policies and programs can better prepare the United States (U.S.) to

respond to the impacts of climate change. The Progress Report of the Interagency Climate Change Adaptation Task Force recommends 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, 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 Executive 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)⁶, 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 the 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 2010⁷ 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;

⁶ <http://www.energy.ca.gov/2009publications/CNRA-1000-2009-027/CNRA-1000-2009-027-F.PDF>

⁷ Pre-publication copies of the report, *Sea Level Rise for the Coasts of California, Oregon, and Washington: Past, Present, and Future*, were made available from the National Academies Press on June 22, 2012. For more information, please see http://www.nap.edu/catalog.php?record_id=13389.

- 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.

Prior to the release of the final Sea Level Rise Assessment Report, all state agencies that are planning to construct projects in areas vulnerable to future sea level rise were directed to consider a range of sea level rise scenarios for the years 2050 and 2100 in order to assess project vulnerability and, to the extent feasible, reduce expected risks and increase resiliency to sea level rise. Sea level rise estimates should also be used in conjunction with information regarding local uplift and subsidence, coastal erosion rates, predicted higher high water levels, storm surge and storm wave data

Interim guidance has been released by the Coastal Ocean Climate Action Team (CO-CAT) as well as the Department 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. The proposed project is outside the coastal zone and direct impacts to transportation facilities due to projected sea level rise are not expected.

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. The Department 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, the Department 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, the Department will be able review its current design standards to determine what changes, if any, may be warranted in order to protect the transportation system from sea level rise.

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 Sea Level Assessment Report.

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. It helps planners determine the necessary scope of environmental documentation, the level of analysis required, and to identify 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, and site meetings. This chapter summarizes the results of the Caltrans' efforts to fully identify, address and resolve project-related issues through early and continuing coordination.

This Draft Environmental Document (Initial Study with Proposed Mitigated Negative Declaration) will be circulated to the public for 30 calendar days. The public will have a chance to comment on the document. After the public circulation period, all comments will be considered and Caltrans will select a preferred alternative and make the final determination of the project's effect on the environment and then complete the Final Environmental Document.

Chapter 4 – List of Preparers

Maggie Ritter, Associate Environmental Planner; Contribution: Environmental Document preparer and coordination of environmental studies

Suzanne Melim, Senior Environmental Planner; Contribution: Environmental Branch Chief

Mike Panchesson, Transportation Engineer; Contribution: Project Engineer

Rabindra Gaji, Transportation Engineer; Contribution: Draft Project Report Preparer

Gary Grunder, Associate Environmental Planner; Contribution: Natural Environmental Study (NES)

Santiago Cruz-Roveda, Transportation Engineer and National Pollutants Discharge Elimination System (NPDES) Storm-water Coordinator; Contribution: Water Quality Assessment (WQA)

Saied Zandian, Transportation Engineer (Noise and Air Quality); Contribution: Noise Assessment and Air Quality Assessment

Alicia Beyer, Transportation Engineer (Hazardous Waste/Materials); Contribution: Initial Site Assessment (ISA)

Erick Wulf, Associate Environmental Planner (Cultural Resources); Contribution: Historical Property Survey Report (HPSR) and Archaeological Survey Report (ASR)

Michael DeWall, Transportation Engineer; Contribution: Floodplain Hydraulic Study

APPENDICES

Appendix A. CEQA Checklist

Supporting documentation of all CEQA checklist determinations is provided in Chapter 2 of this Initial Study. Documentation of “No Impact” determinations is provided at the beginning of Chapter 2. Discussion of all impacts, avoidance, minimization, and/or compensation/mitigation measures under the appropriate topic headings are in Chapter 2.

Appendix A: CEQA Checklist - 03-BUT-70-24.26

	Potentially Significant Impact	Less Than Significant 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 type="checkbox"/>	<input checked="" 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"/>

"No Impact" finding is determined by the September 2012 Visual Impact Assessment (VIA).

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"/>

"No Impact" finding is determined by project location setting.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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"/>

"No Impact" Finding is determined by the May 2012 Air Quality Assessment and exempts the project per 40 CFR 93.126, "Safety (Reconstructing bridges (no additional travel lane))."

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

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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"/>

"Impact findings" were determined by the June 2012 Natural Environment Study (NES) and conversations with the biologist.

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"/>
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"/>

"No Impact" finding is determined by the May 2012 Archaeological Survey Report (ASR) and the Historical Property Survey Report (HPSR).

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

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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"/>

"No Impact" findings are based on the March 2012 Preliminary Geotechnical Drilling Report.

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

An assessment of the greenhouse gas emissions and climate change is included in the body of environmental document. While Caltrans has included 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 GHG 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?
- 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?
- 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"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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"/>

"No Impact" finding is determined by the November 2010 Initial Site Assessment (ISA).

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"/>
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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j) Inundation by seiche, tsunami, or mudflow	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

“No Impact” and “Less Than Significant Impact” findings are determined by the June 2012 NES and April 2012 Water Quality Assessment (WQA). The new bridge will be a cast in place, clear-span structure. No piers will be constructed within the streambed channel or surrounding project area.

X. LAND USE AND PLANNING: Would the project:

- | | | | | |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Physically divide an established community? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Conflict with any applicable habitat conservation plan or natural community conservation plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

“No Impact” finding is determined by project scope and location setting.

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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

“No Impact” finding is determined by project location setting.

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"/> |

“No Impact” finding is determined by the May 2012 Noise Study.

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"/> |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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"/>

“No Impact” finding is determined by project area location.

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

“Less than significant impact” is determined because the project includes a 3.9-mile temporary county road detour to provide approximately 2-3 nights of full bridge closure.

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

“No Impact” finding is determined by project area location.

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

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

“Less than significant impact” is determined because the project includes a 3.9 mile temporary county road detour to provide approximately 2-3 nights of full bridge closure.

XVII. UTILITIES AND SERVICE SYSTEMS: Would the project:

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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"/>

“No Impact” finding is determined by project area location and the nature of the project work.

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"/>
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"/>

Appendix B. Title VI Policy Statement

DEPARTMENT OF TRANSPORTATION

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*Flex your power!
Be energy efficient!*

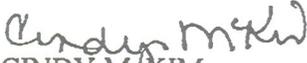
July 20, 2010

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 Wahnnon, 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_wahnnon@dot.ca.gov.


CINDY MCKIM
Director

Appendix C. Avoidance, Minimization and/or Mitigation Summary

Human Environment

Traffic and Transportation / Pedestrians and Bicycle Facilities

The following avoidance and minimization measures will be implemented:

- The bridge will have one way traffic control, provided with a temporary traffic signal.
- The temporary traffic signal shall be equipped with a vehicle detector. If pedestrian/bikes are present, access must be maintained during construction, except during the anticipated 2-3 night temporary closure.
- K-rail will be placed to separate road work from traveling public, when necessary.
- Access to cross roads shall be maintained during construction, in accordance with traffic control standard plans or traffic handling plans.
- The temporary county road detour will be only approximately 3.9 miles long and will be implemented during the night as there is a lower traffic volume during non-peak hours.

Physical Environment

Water Quality and Storm Water

Adherence to the following is recommended to prevent receiving water pollution as a result of construction activities and/or operation from this project:

1. The project shall adhere to the conditions of the Caltrans Statewide NPDES Permit CAS No. 000003 (Order No. 99-06-DWQ) issued by the State Water Resources Control Board. It should be noted that the existing Statewide Permit (Order No. 99-06-DWQ), is expected to be superseded by the draft Tentative Order no. 2011-XXX-DWQ, which is undergoing another revision. Adoption of the new Statewide Permit is scheduled for sometime in the near future, and may entail additional requirements upon adoption.
2. The permit requires Caltrans to comply with the requirements of the statewide Construction General Permit (Order No. 2009-009-DWQ). During construction, compliance with the permit requires the appropriate selection and deployment of both structural and non-structural Best Management Practices (BMPs) that achieve the performance standards of Best Available Technology economically achievable/Best Conventional Pollutant Control Technology (BAT/BCT) to reduce or eliminate storm water pollution.
3. Adherence to the compliance requirements of the NPDES Construction General Permit CAS No. 000002 (Order No. 2009-0009-DWQ) for General Construction Activities is required if the total disturbed soil area (DSA) is equal to or greater than 1.0 acre. At this

time, the project is expected to exceed one acre of DSA. Commitments for the mentioned permit are listed below:

- a. A Caltrans approved SWPPP will be required, which specifies the level of temporary pollution control measures for the project.
 - b. Standard Special Provision (SSP) 07-345 shall be included in the PS&E to address Construction's temporary water pollution control measures. These measures must address soil stabilization, water sampling, sediment control, tracking control, and wind erosion control practices. In addition, the project plans must include non-storm water controls, waste management and material pollution controls.
 - c. To obtain coverage under the Construction General Permit (CGP), dischargers must electronically file Permit Registration Documents (PRDs) through the State Water Resource Control Board's Storm Water Multiple Application and Report Tracking System (SMARTS), prior to the commencement of construction activity.
 - d. Within 90 day upon completion of the project, the discharger shall electronically file a Notice of Termination (NOT), a final site map and photographs through the State Water Resource Control Board's SMARTS system. The Regional Water Quality Control Board (RWQCB) will consider the construction site complete only when all portions of the site have met the Conditions for Termination of Coverage, of the CGP.
4. Consideration should be given to include SSP 07-346 (Construction Site Management) during PS&E to control potential sources of water pollution before it encounters any storm water system or watercourse. It requires the Contractor to control material pollution, manage waste and non-storm water at the construction site. The Contractor prepared WPCP/SWPPP incorporates appropriate Temporary Construction Site BMPs to implement effective handling, storage, use and disposal practices during construction activities.
 5. Operations involving PCC placement and concrete washout methods shall adhere to SSPs 07-405, 07-406, and 07-407.
 6. The Caltrans Storm Water Management Plan (SWMP), the Project Planning and Design Guide (PPDG) Section 4, and the Evaluation Documentation Form (EDF) provide detailed guidance in determining if a specific project requires the consideration of permanent Treatment BMPs. Line Item BMPs may be required and incorporated into the PS&E.
 7. Appropriate Temporary Construction Site BMPs shall be implemented at the existing disposal site. Implementation of a Maintenance Facility Pollution Prevention Plan (FPPP) may be necessary to protect water quality, and the development/establishment of a permanent erosion control plan/project to close out the FPPP.

8. Caltrans NPDES office will participate in early project design consultation with Central Valley RWQCB if the project entails one or more acre of total soil disturbance.
9. The site will be evaluated for potential water quality impacts associated with the project by an NPDES Coordinator. Changes to site conditions and/or construction operations, not addressed in the environmental study report, may require the application of additional measures to address potential water quality impacts.
10. Construction Site BMPs shall be selected to protect water bodies within or near the project limits from potential water pollution runoff from construction activities. To address the temporary water quality impacts, the contractor will implement Temporary Construction Site BMPs identified in the WPCP/SWPPP or included as Line Item BMPs.
11. If site dewatering is required for the new construction, a dewatering plan is required. Site access for construction must be included in any water quality analysis. Coordination with CVRWQCB for any anticipated Dewatering and determination of WDR (Separate Dewatering Permit) for Dewatering is required during PS&E phase. Coordination with the CVRWQCB should be through District NPDES Coordinator.

Hazards and Hazardous Materials

The following commitments are required:

- Soil disturbance will take place while removing and replacing MBGR and widening shoulders and the project will generate excess excavated material in an area where total lead concentration is unknown. Sampling and testing for Aerial Deposited Lead (ADL) will be done prior to PS&E. The contractor must use Non-Standard Special Provision 7-1.02K(6)(j)(iii) which provides a Lead Compliance Plan (LCP).
- Treated Wood Waste (TWW) occurs in the project in the form of MBGR, piles, roadside signs, thrie beam barriers, etc. The Department of Toxic Substances Control (DTSC) requires that TWW either be disposed as a hazardous waste, or if not tested, it can be assumed that TWW is a hazardous waste. The contractor is required to prepare a detailed Health, Safety, and Work Plan for all site personnel in accordance with the DTSC and CAL-OSHA regulations. TWW must be disposed of in an approved TWW facility. The contractor must use SSP 14-11.09.
- National Emission Standards for Hazardous Air Pollutants (NESHAP) Notification is required prior to demolition.
- The contractor must use the N-SSP for removal and testing of asbestos containing materials (ACM's). Without testing ACM presence, it is assumed present.
- The Contractor is required to properly manage removed traffic stripe and pavement marking and must implement a project specific lead compliance plan prepared by a Certified Industrial Hygienist (CIH) as required by Cal/OSHA. The contractor must use Standard Special Provision (SSP) 14-11.07 if they separate removal of paint or thermoplastic (yellow or white - mix paint) from the road surface. The contractor must

use SSP 15-1.03B while grinding the entire pavement surface and the project will not require the yellow paint or yellow thermoplastic paint to be removed before grinding begins.

Biological Resources

Natural Communities

In order to avoid potential impacts to the natural communities the removal of native vegetation, including riparian habitat, will be confined to the minimal area necessary to facilitate construction activities. All disturbed soil areas will be restored to their original condition, as nearly as possible.

Wetlands and Other Waters

Avoidance and Minimization –

Besides the Section 401 Certification, 404 Permit and Section 1602 Agreement measures, which need to be included in the project, the following measures will be complied with as well.

Some of the avoidance and minimization measures to minimize harm to the waters are included in the statewide National Pollutant Discharge Elimination System (NPDES) permit, which calls for a SWPPP if the Disturbed Soil Area (DSA) for the project is over one acre. The Flag Canyon Creek Bridge replacement project does include over one acre of DSA. The NPDES permit and the SWPPP include the following regulations and shall be adhered to:

- Where working areas encroach on live or dry streams, lakes, or wetlands, RWQCB-approved physical barriers adequate to prevent the flow or discharge of sediment into these systems will be constructed and maintained between working areas and streams, lakes and wetlands. During construction of the barriers, discharge of sediment and silt into streams will be held to a minimum. Discharge will be contained through the use RWQCB-approved measures to keep sediment from entering protected waters.
- Oily or greasy substances originating from the Contractor's operations will not be allowed to enter or be placed where they will later enter tributary waters or a live or dry stream. Asphalt concrete will not be allowed to enter tributary waters, a live or dry stream, pond, or wetland.
- During construction, compliance with the NPDES permit requires the appropriate selection and deployment of both structural and non-structural Best Management Practices (BMPs) that achieve the performance standards of Best Available Technology economically achievable/Best Conventional Pollutant Control Technology (BAT/BCT) to reduce or eliminate storm water pollution.

- Additional direct and indirect impacts to sensitive biological resources, including jurisdictional waters, will be avoided or minimized by designating these features outside of the construction impact area as “environmentally sensitive areas” (ESAs) on project plans and in project specifications. Caltrans Design personnel will coordinate with Caltrans Environmental personnel during the development of the project to determine the exact locations of proposed ESA areas. ESA information will be shown on contract plans and discussed in the special provisions. ESA provisions may include, but are not limited to, the use of temporary orange fencing to delineate the proposed limit of work in areas adjacent sensitive resources, or to delineate and exclude sensitive resources from potential construction impacts. Contractor encroachment into ESAs will be prohibited (including the staging/operation of heavy equipment or casting of excavation materials). ESA provisions will be implemented as a first order of work and remain in place until all construction activities are complete.

Compensatory Mitigation –

- Mitigation for impacts to jurisdictional wetlands will be required to reduce project impacts to less than significant. The 0.112 acres of impacted jurisdictional wetland would be mitigated by securing 0.112 credits of seasonal wetland habitat or replanting on site at a 1:1 ratio.

Plant Species

Removal of native vegetation shall be confined to the minimal area necessary to facilitate construction activities. Re-vegetation measures shall include erosion control containing native species familiar with the area and be weed free certified with no invasive species. More information can be found in the Invasive Species Section.

Animal Species

It is recommended that the following avoidance and minimization measures be adhered to:

- The removal of any woody vegetation (trees and shrubs) required for the project shall be completed between September 1 and February 14th, prior to project construction. This time period is considered to be *outside* of the predicted nesting season for raptors and migratory birds. Vegetation removal outside this time period may not proceed until a survey by a qualified biologist determines that no nests are present or in use.
- If woody vegetation removal, construction, structures work, grading, or other project-related improvements are scheduled during the nesting season of protected raptors and migratory birds (February 15th to August 31st), a focused survey for active nests of such birds will be conducted by a qualified biologist within 30 days prior to the beginning to project-related activities. If active nests are found, Caltrans will consult

with USFWS regarding appropriate action to comply with the MBTA of 1918 and with CDFG to comply with provisions of the Fish and Game Code of California. If a lapse in project-related work of fifteen days or longer occurs, another survey and, if required, consultation with USFWS and CDFG will be required before the work can be reinitiated.

- Exclusionary devices should be installed on structures which may have features capable of supporting migratory birds/bats nesting to discourage or exclude the use of the structures by the nesting birds. Exclusionary devices, such as wire mesh, would be installed in the weep holes of the bridge during the non-nesting season for migratory birds (non-nesting season occurs between September 1st and February 14th) in order to prevent migratory birds from constructing nests in the structure.

Threatened and Endangered Species

Caltrans will avoid and protect habitat whenever possible. Since suitable habitat for the VELB occurs on the project site, the buffer area around the shrubs must be designated as an avoidance area and must be protected from disturbance during the construction and operation of the project.

Avoidance: Establishment and Maintenance of a Buffer Zone

- Incomplete avoidance (i.e., may affect, not likely to adversely affect) may be assumed since only a 50-foot wide buffer (instead of the suggested 100 feet) will be established and maintained around elderberry plant containing stems measuring 1.0 inch or greater in diameter at ground level. In buffer areas, like Environmental Sensitive Area (ESA) avoidance fencing, construction-related disturbance should be minimized and any damaged area should be promptly restored following construction. The USFWS must be consulted before any disturbances within the buffer area are considered.
- All areas to be avoided during construction activities will be fenced and flagged. In areas where encroachment on the 50-foot buffer will occur, provide a minimum setback of at least 20 feet from the drip-line of the elderberry plant.
- Contractors will be briefed on the need to avoid damaging the elderberry plants and the possible penalties for not complying with these requirements.
- Signs will be placed every 10 feet along the edge of the avoidance area with the following information: "This area is habitat of the valley elderberry longhorn beetle, a threatened species, and must not be disturbed. This species is protected by the Endangered Species Act of 1973, as amended. Violators are subject to prosecution, fines, and imprisonment." The signs should be clearly readable from a distance of 20 feet, and must be maintained for the duration of construction.
- Work crews will be instructed about the status of the beetle and the need to protect its elderberry host plant.

Restoration and Maintenance

- Any damage done to the buffer area (area within 100 feet of elderberry plants) during construction will be restored. Provide erosion control and re-vegetate with appropriate native plants within 50-100 feet.
- Buffer areas will continue to be protected after construction from the effects of the project (measures such as fencing, signs, weeding, and trash removal are usually appropriate).
- No insecticides, herbicides, fertilizers, or other chemicals that might harm the beetle or its host plant should be used in the buffer areas, or within 100 feet of any elderberry plant with one or more stems measuring 1.0 inch or greater in diameter at ground level.

Invasive Species

The following avoidance and minimization measures will be required:

- In compliance with the Executive Order on Invasive Species, EO 13112, and subsequent guidance from the Federal Highway Administration, the landscaping and erosion control included in the project will not use species listed as invasive. In areas of particular sensitivity, extra precautions will be taken if invasive species are found in or adjacent to the construction areas. These include the inspection and cleaning of construction equipment and eradication strategies to be implemented should an invasion occur.
- To minimize the risk of introducing additional non-native species into the area, only native plant species appropriate for the project area will be used in any erosion control or re-vegetation seed mix or stock.

List of Technical Studies

- Natural Environment Study (Biology, Caltrans 2012)
- Initial Site Assessment (Hazardous Waste, Caltrans 2012)
- Archaeological Survey Report and Historical Property Survey Report (Cultural Resources, Caltrans 2012)
- Water Quality Assessment (Storm Water Coordinator, Caltrans 2012)
- Visual Impact Assessment (Landscape Architecture, Caltrans 2012)
- Noise Assessment (Noise Study, Caltrans 2012)
- Air Quality Assessment (Air Quality Study, Caltrans 2012)
- Floodplain Hydraulic Study (Hydraulics/Floodplain Report, Caltrans 2012)
- Preliminary Geotechnical Drilling Report (Hydraulics Engineer, Caltrans 2012)