

McCoy Creek Bridge Replacement Project

MENDOCINO COUNTY, CALIFORNIA
DISTRICT 1 – MEN – 271 (PM 17.70 / 18.00)
01-0A840 / EFIS 01 1300 0058

**Initial Study with
Proposed Mitigated Negative Declaration**



**Prepared by the
State of California Department of Transportation**



October 2016



General Information about This Document

What's in this document:

The California Department of Transportation (Caltrans) has prepared this Initial Study which examines the potential environmental impacts of the proposed project located in Mendocino County, California. Caltrans is the lead agency under the California Environmental Quality Act (CEQA). This document tells you why the project is being proposed, how the existing environment could be affected by the project, and identifies standard measures as well as any proposed avoidance, minimization, and/or mitigation measures.

What you should do:

- Please read this document. The Initial Study with Proposed Mitigated Negative Declaration (IS/MND) is available for review at the locations listed below. Individual technical studies can be requested by contacting Julie East at (707) 441-4568 or julie.east@dot.ca.gov.
 - Caltrans District 1 Office at 1656 Union Street, Eureka
 - Humboldt County Library - Garberville Branch at 715 Cedar Street, Garberville
 - Mendocino County Library - Willits Branch at 390 East Commercial Street, Willits
 - Online at www.dot.ca.gov/dist1/d1projects/mccoy/
- Submit comments via postal mail to:
Julie East, Associate Environmental Planner
Caltrans District 1, Environmental Management Branch
1656 Union Street
Eureka, CA 95501
- Submit comments via email to: julie.east@dot.ca.gov
- Be sure to submit comments by the deadline: December 12, 2016

We'd like to hear what you think. If you have any comments about the proposed project, please send your written comments to Caltrans by December 12, 2016.

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, in large print, on audiocassette, or on computer disk. To obtain a copy in one of these alternate formats, please call or write to Caltrans, Attn: Julie East - Associate Environmental Planner, North Region Environmental, E-1 Branch, 1656 Union Street, Eureka, CA 95901; email julie.east@dot.ca.gov; (707) 441-4568 voice; or use the California Relay Service at 711.





Proposed Mitigated Negative Declaration

Pursuant to: Division 13, Public Resources Code

Project Description

The California Department of Transportation (Caltrans) proposes to replace McCoy Creek Bridge (#10-0036) with a new structure that has 12-foot lanes and 4-foot shoulders. The existing centerline of the roadway would shift to the east. Roadway widening would be required on each end of the bridge as well as a cut slope on the northeast corner of the bridge extending approximately 260 feet and up to 50 feet high. To construct the bridge, Route 271 would be completely closed for the duration of construction with through traffic detoured to Route 101.

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 a decision regarding the project is final. This MND is subject to change based on comments received by interested agencies and the public.

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

- The proposed project would have minimal or no effect on agricultural and forest resources, air quality, cultural resources, geology and soils, greenhouse gas emissions, hazardous waste and materials, hydrology and water quality, land use and planning, mineral resources, noise, population and housing, public services, recreation, transportation/traffic, and utilities and service systems.
- The proposed project would have less than significant effects to biological and aesthetic resources because avoidance and minimization measures have been included.

Sandra Rosas, Chief
Office of Environmental Services, North (Eureka)
California Department of Transportation

Date



List of Abbreviated Terms

AB	Assembly Bill
APCD	Air Pollution Control District
ARB	Air Resources Board
BMP	Best Management Practices
BSA	Biological Study Area
Cal/EPA	California Environmental Protection Agency
CARB	California Air Resources Board
CC	California Coastal
Caltrans	California Department of Transportation
CDFW	California Department of Fish and Wildlife
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFGC	California Fish and Game Codes
CFR	Code of Federal Regulations
CH ₄	Methane
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CO ₂	Carbon dioxide
CO-CAT	Coastal Ocean Climate Action Team
CTP	California Transportation Plan
CWA	Clean Water Act
dbh	Diameter at Breast Height (4.5 feet)
DPS	Distinct Population Segment
EFH	Essential Fish Habitat
EIR	Environmental Impact Report
EO	Executive Order
ESA	Environmentally Sensitive Area
ESL	Environmental Study Limits
ESU	Evolutionarily Significant Unit
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
GHG	Greenhouse Gas (emissions)

HFC-23	Fluoroform
HFC-134a	s, s, s, 2-tetrafluoroethane
HFC-152a	Difluoroethane
IPCC	Intergovernmental Panel on Climate Change
IS/MND	Initial Study with Proposed Mitigated Negative Declaration
ITS	Intelligent Transportation System
MND	Mitigated Negative Declaration
MPO	Metropolitan Planning Organization
MSA	Magnuson-Stevens Fishery Conservation and Management Act
NCRWQCB	North Coast Regional Water Quality Control Board
N ₂ O	Nitrous oxide
ND	Negative Declaration
NEPA	National Environmental Policy Act
NES	Natural Environment Study
NMFS	National Oceanic and Atmospheric Administration - National Marine Fisheries Service
NHTSA	National Highway Traffic Safety Administration
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
NSO	Northern Spotted Owl
OHWM	Ordinary High Water Mark
OPR	Office of Planning and Research
OSTP	Office of Science and Technology Policy
PBO	Programmatic Biological Opinion
PM	Post Mile or Post Miles
RSP	Rock Slope Protection
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCS	Sustainable Communities Strategy
SF ₆	Sulfur hexafluoride
SONCC	Southern Oregon/Northern California Coast (coho salmon)
SSC	Species of Special Concern
SR	State Route
SWRCB	State Water Resources Control Board
TMDL	Total Maximum Daily Load
USACE	U. S. (United States) Army Corps of Engineers

USEPA	United States Environmental Protection Agency
USFWS	U. S. Fish and Wildlife Service
VIA	Visual Impact Analysis
WDRs	Waste Discharge Requirements
WQC	Water Quality Certification (CWA Section 401)
WQOs	Water Quality Objectives



Table of Contents

<i>PROPOSED MITIGATED NEGATIVE DECLARATION</i>	2
<i>LIST OF ABBREVIATED TERMS</i>	4
<i>PROPOSED PROJECT</i>	1
<i>AFFECTED ENVIRONMENT, ENVIRONMENTAL CONSEQUENCES, AND AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES</i>	15
<i>ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED</i>	17
<i>CALIFORNIA ENVIRONMENTAL QUALITY ACT CHECKLIST</i>	19
<i>HUMAN ENVIRONMENT</i>	29
<i>BIOLOGICAL ENVIRONMENT</i>	31
<i>CLIMATE CHANGE</i>	62
<i>LIST OF PREPARERS</i>	73



Proposed Project

Project Title

McCoy Creek Bridge Replacement Project

Lead Agency & Project Sponsor's Name, Address and Contact Person

California Department of Transportation
Julie East, Associate Environmental Planner
1656 Union Street
Eureka, CA 95501

Project Location

This project is located on State Route (SR) 271 between Post Mile (PM) 17.70 and PM 18.00 in northern Mendocino County (Figures 1 and 2). Route 271 is a two-lane road that runs roughly parallel to US Route 101.

Purpose and Need

The purpose of this project is to provide a structurally sufficient bridge which meets current design standards.

This project is needed because the McCoy Creek Bridge was built in 1935 and has reached the end of its service life. The structural concrete deck is cracked and the timber support members are in various stages of decay. The existing structure has no permit load capacity.

Project Description/Build Alternative

The California Department of Transportation (Caltrans) proposes to replace the McCoy Creek Bridge (#10-0036) with a new structure that has 12-foot lanes and 4-foot shoulders (Figure 3). To construct the bridge, Route 271 would be completely closed for the duration of construction with through traffic detoured to Route 101.

The scope of work for the proposed Build Alternative includes replacing the bridge, widening the roadway lanes, bridge shoulders, and bridge approaches (to accommodate the new, wider bridge), as well as replacing guardrails at the bridge corners and repaving the roadway with asphalt concrete. Strips of concrete for weed control would be placed beneath the new guardrail. The existing centerline of the roadway would shift to the east from 0 to 6 feet. At the northeast corner of the bridge, a cut slope 260 feet long and up to 50 feet high would be required to accommodate the widening and alignment shift (Figure 4). All work would occur above McCoy Creek's Ordinary Highwater Mark (OHWM, Figure 5).

The proposed Build Alternative would remove trees within the 20-foot clear recovery zone. The large redwood trees at the northwest corner of the bridge would be left in place and shielded with guardrail a minimum of four feet from the traveled way.

As part of the project, fill would be placed and cuts would be made (Figure 4). Temporary disturbed soil area for the access road, abutment construction, and under-bridge work area would be approximately 12,300 square feet (0.28 acre). The access road would be on the northeast side of the bridge and approximately 25 feet wide, partially constructed on an old roadbed. The access road would require the clearing and grubbing of vegetation from an area of about 4,050 square feet (0.09 acre). After construction, the access road (including 1600 square feet of old roadbed asphalt) would be removed and recontoured. Permanent disturbed soil area for alignment-related cuts and fills and roadway widening would be 18,600 square feet (0.43 acre). Total disturbed soil area for the project would therefore be 30,900 square feet (0.71 acre).

Staging

It is anticipated that the contractor would use the existing closed roadway and existing unpaved turnouts for staging areas.

Schedule

Construction is currently scheduled to take up to 310 working days. Two construction seasons would be required.

Standard Measures and Best Management Practices (BMPs) Included in Build Alternative

In compliance with several State and Federal laws, Caltrans typically implements standard measures during construction. These may be standard prescriptions for resources that could be present near the work area. They may be identified in Caltrans Standard Specifications, Standard Special Provisions, other manuals, or may otherwise be standard business practices. Typical measures may include water quality Best Management Practices (BMPs), pre-construction surveys, or standard work distances for bird nests. Examples of standard measures that are expected to apply to this project include:

- Soil stabilization practices (vegetation, rolled erosion control blankets).
- Silt fences/fiber rolls to control sediment discharge from the project area during construction.
- Measures to prevent construction equipment effluents from contaminating soil or waters in the construction site, such as absorbent pads.
- Equipment would not operate in sensitive areas or habitats, such as wetlands and surface waters.
- Equipment would be inspected on a daily basis for leaks and completely cleaned of any external petroleum products, hydraulic fluid, coolants, and other deleterious materials prior to operating equipment.

- Maintenance and fueling of construction equipment and vehicles would occur at 50 feet from the ordinary high water level (OHWL) of surface water or the edge of sensitive habitats (e.g., wetlands).
- Excavated spoils controlled to prevent sedimentation to watercourses.
- Weed-free straw mulch and fiber rolls applied to exposed soil areas for over-wintering.
- The contractor would be required to develop and implement site-specific BMPs and emergency spill controls.
- No concrete debris or contact water allowed to flow into waterways.
- No concrete poured within flowing water in the waterways.
- Water that has come into contact with setting concrete would be pumped into a tank truck and disposed of at an approved disposal site or settling basin.
- Concrete truck washouts at upland staging areas located a minimum of 150 feet away from watercourses.
- Trash receptacles with lids.
- Environmentally Sensitive Areas (ESAs) designated on construction plans and protected during construction. ESAs would include the bank below the Ordinary High Water Mark (OHWM) of McCoy Creek.
- Work windows as identified in programmatic and other agency agreements.
- Vegetation removal outside of the nesting season (February through mid-September) and maintained, trimmed, and/or cleared prior to, as well as during construction to discourage nesting; or surveys conducted prior to vegetation removal by a biologist to confirm absence of nesting birds.
- None of the species on the California list of invasive species are used by Caltrans for erosion control or landscaping. All equipment and materials would be inspected for the presence of invasive species. The contract specifications for permanent erosion control would require the use of locally appropriate California native forb and grass species, or a seed mix of sterile forb and grass seeds, mulch, or similar weed-free erosion control measure.
- Vegetation would be removed between September 15 and February 1 of any year, which is outside the nesting season of most breeding birds.
- Vegetation would be kept trimmed and/or cleared prior to, as well as, during, construction to discourage nesting.
- If vegetation is not cleared during the proposed dates, surveys would be conducted (no earlier than two days prior to vegetation removal) by a qualified biologist to identify and locate nesting birds.
- If nests are found, areas would be established around active nests with input from the California Department of Fish and Wildlife (CDFW). Construction activities that may potentially disturb birds would not occur within the buffer area. The buffer areas would be marked as environmentally sensitive and nests would be monitored for disturbance behaviors by a qualified biologist.

No Build Alternative

The No Build Alternative would make no changes to the existing McCoy Creek Bridge, allowing it to continue to deteriorate. The No Build Alternative would not satisfy the project need, nor would it achieve the project purpose.

Permits and Approvals Needed

Construction of the proposed project would require the following:

- Section 1602 Lake or Streambed Alteration Agreement from the California Department of Fish and Wildlife
- A U.S. Army Corps of Engineers Section 404 of the Clean Water Act (CWA) Nationwide Permit
- A CWA Section 401 Water Quality Certification (WQC) from the North Coast Regional Water Quality Control Board
- Coverage under the Programmatic Biological Opinion issued by the National Oceanic and Atmospheric Administration - National Marine Fisheries Service (NMFS) under Section 7 of the Federal Endangered Species Act

Figure 1. Project Location Map

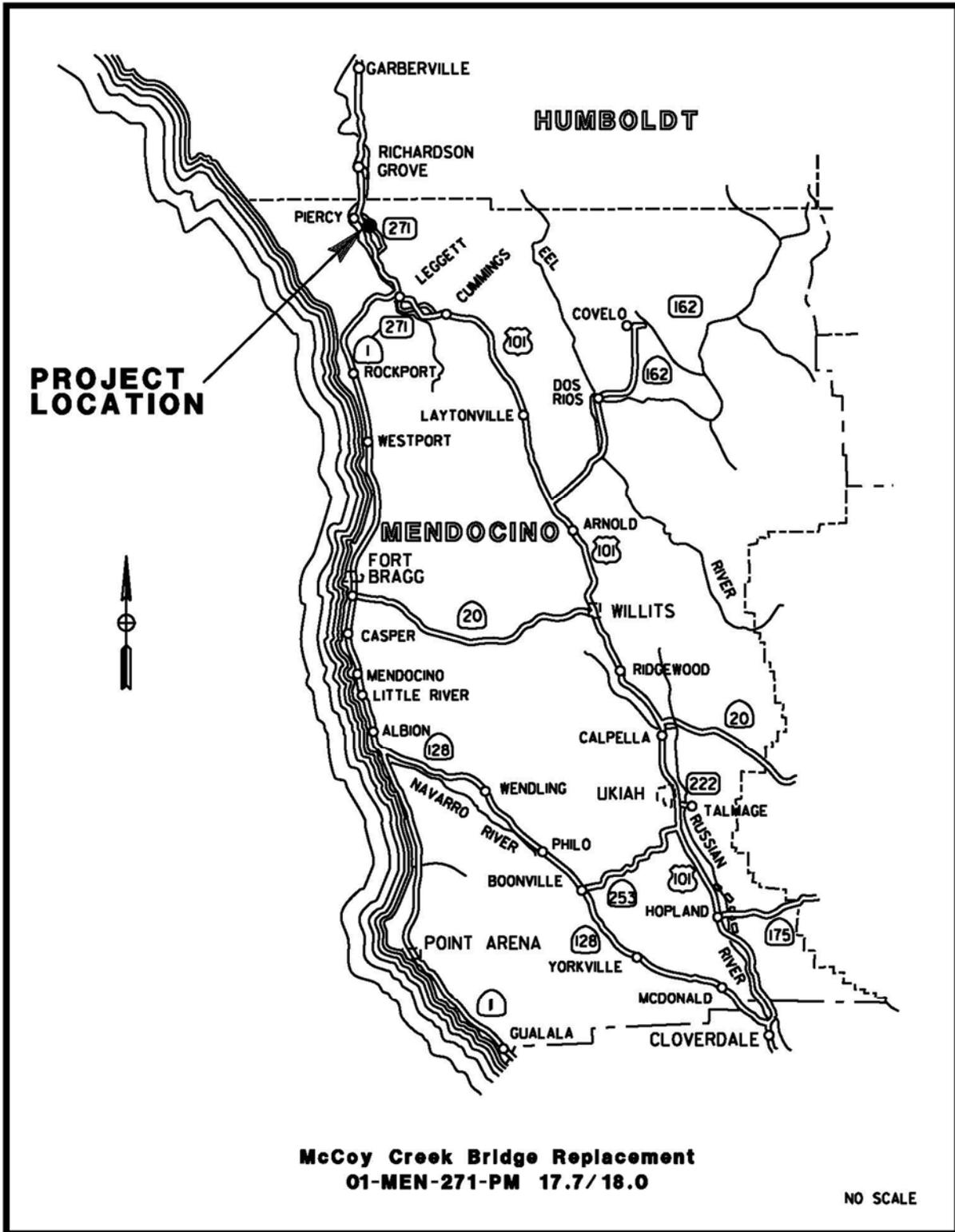




Figure 2. Project Vicinity Map

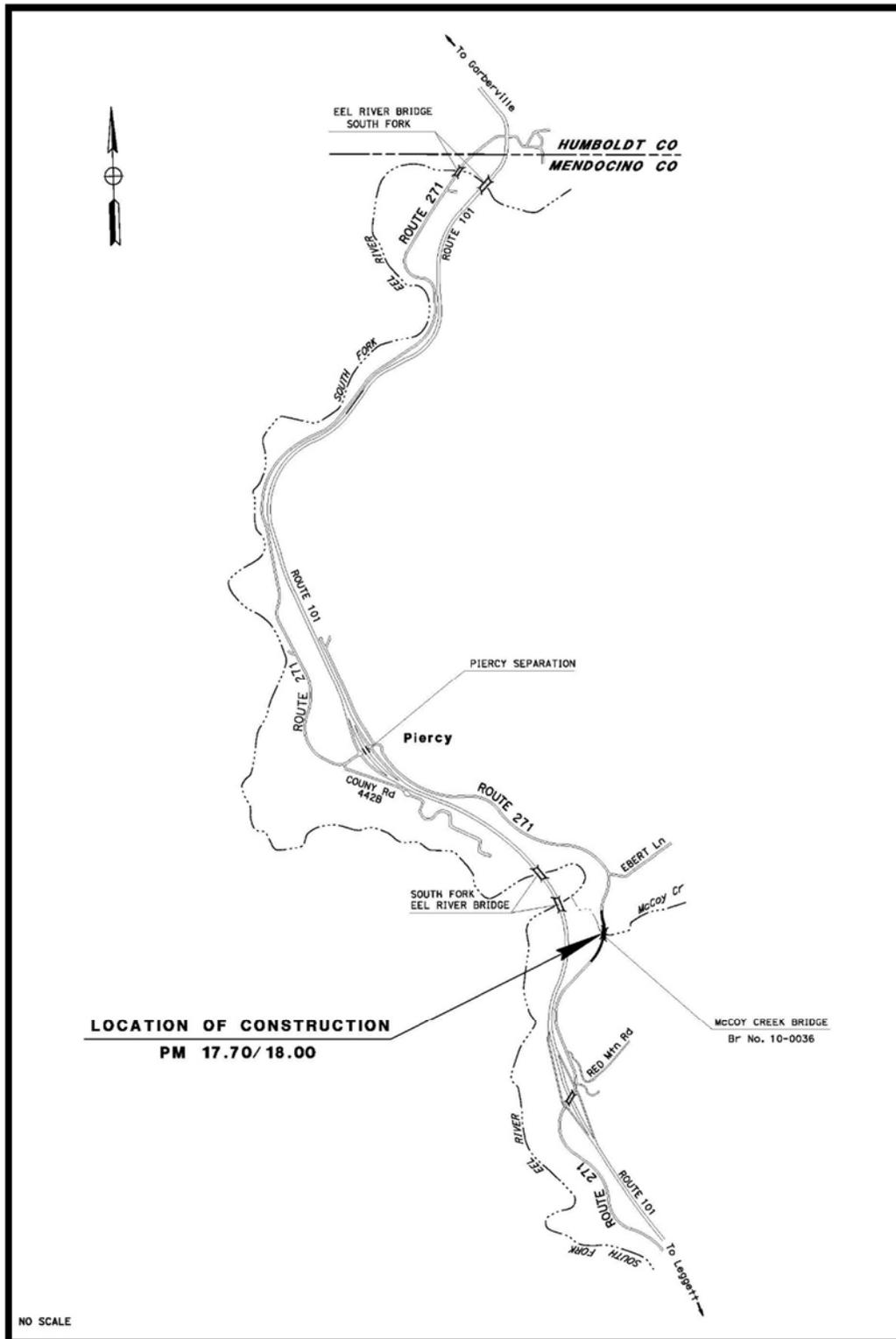




Figure 3. McCoy Creek Bridge General Plan

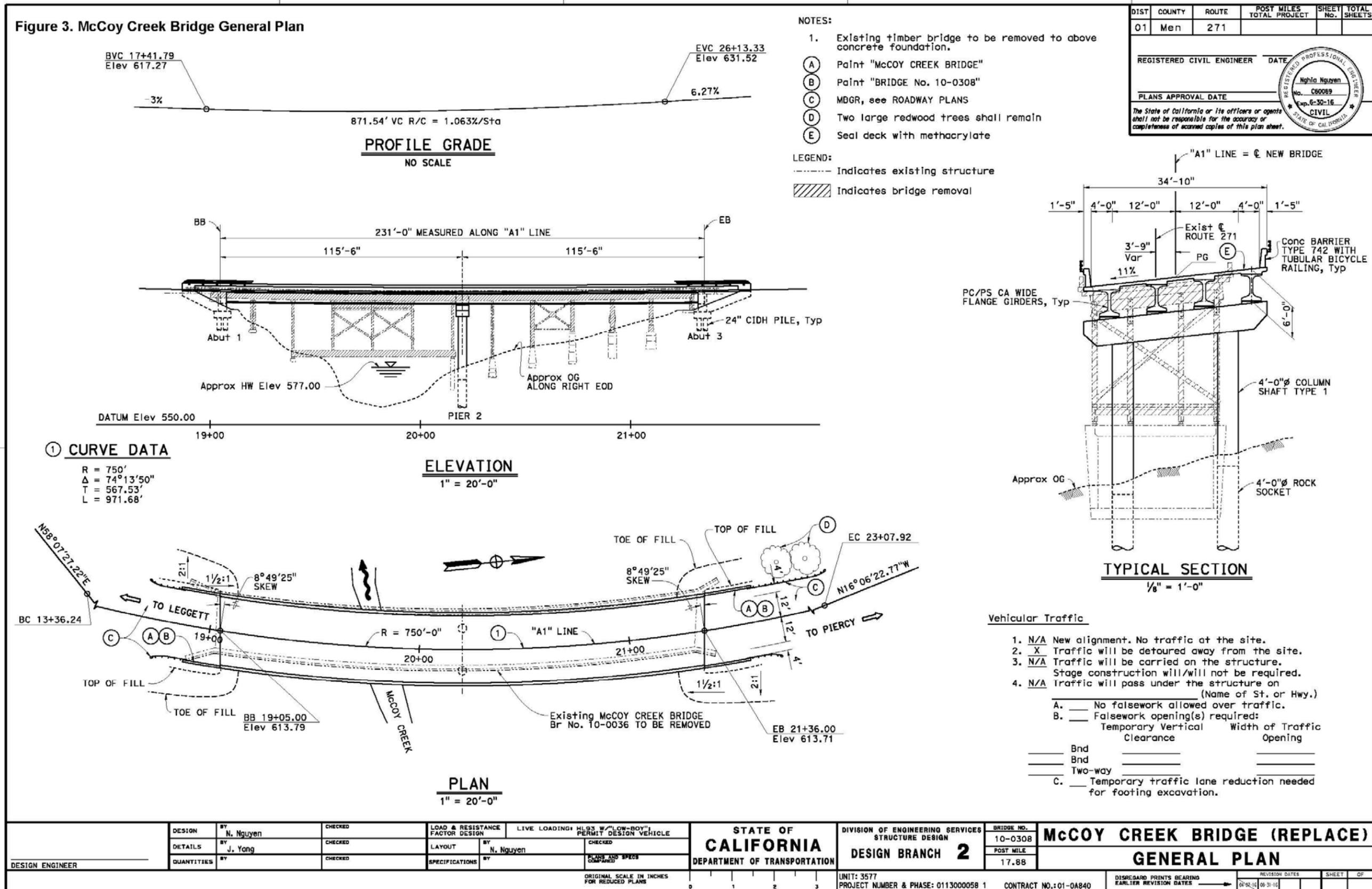
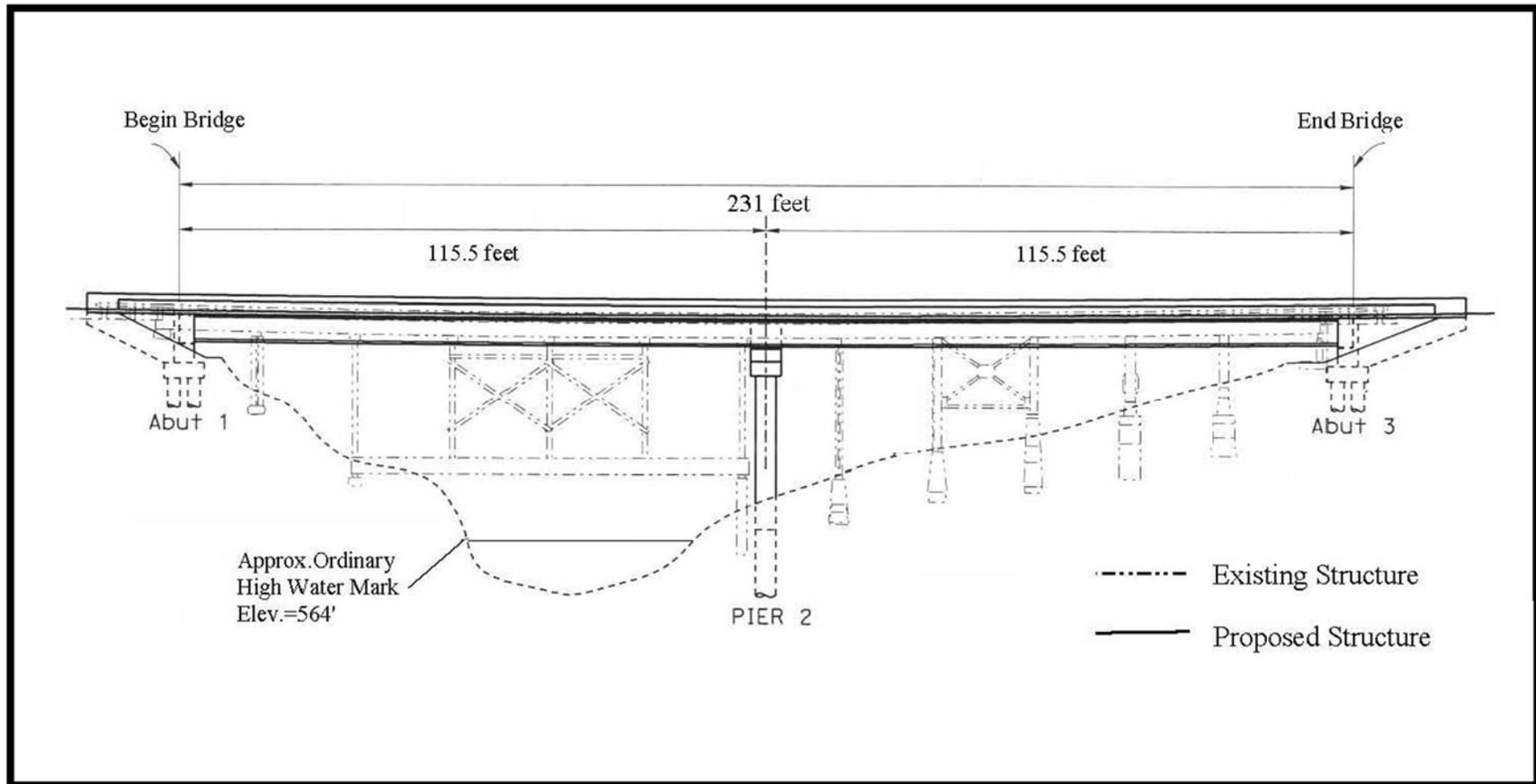


Figure 3. McCoy Creek Bridge General Plan





Figure 5. McCoy Creek Ordinary High Water Mark (OHWM)¹



¹ Looking west toward the bridge, south is to the left and north is to the right.



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

This chapter explains the impacts the proposed project could have on the human, physical, and biological environments in the project area. It describes the regulatory setting, existing environment that could be affected by the project, potential impacts from the Build Alternative, and proposed avoidance, minimization, and/or mitigation measures pursuant to CEQA requirements. A CEQA checklist that evaluates the level of impacts under each environmental resource is included in this chapter.

Project Impact Analysis under CEQA for Initial Study

CEQA broadly defines “project” to include “the whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment” (14 CCR § 15378). Under CEQA, the baseline for environmental impact analysis consists of the existing conditions at the time the environmental studies began. The CEQA Guidelines require a “statement of objectives sought by the proposed project” (14 CCR § 15124(b)).

CEQA requires the identification of each “significant effect on the environment” resulting from the action, and ways to mitigate each significant effect. Significance is defined as “Substantial or potentially substantial adverse change to any of the physical conditions within the area affected by the project” (14 CCR § 15382). The legal standard for determining the significance of impacts is whether a “fair argument” can be made that a “substantial adverse change in physical conditions” would occur. The fair argument must be backed by substantial evidence including facts, reasonable assumption predicated upon fact, or expert opinion supported by facts. Generally, an environmental professional with specific training in a particular area of environmental review can make this determination.

This determination is made prior to and separate from the development of mitigation measures for the project. Public agencies are encouraged to use thresholds of significance. In addition, the CEQA Guidelines list a number of mandatory findings of significance.

If the action may have a significant effect on any environmental resource, then an Environmental Impact Report (EIR) must be prepared. Under CEQA, the lead agency may adopt a negative declaration (ND) if there is no substantial evidence that the project may have a significant effect on the environment (14 CCR § 15070(a)). A proposed negative declaration must be circulated for public review, along with a document known as an Initial Study. CEQA allows for a “mitigated negative declaration,” in which mitigation measures are proposed to reduce potentially significant effects to less than significant (14 CCR § 15369.5). Proposed

mitigation measures must generally be subject to public review prior to adopting a mitigated negative declaration (14 CCR § 15073.5 [new mitigation measures necessary to reduce a significant impact require recirculation]; 15074.1 [different mitigation measures may be substituted if they are equally effective if the lead agency holds a hearing and makes a specific finding]). Under CEQA, mitigation is defined as avoiding, minimizing, rectifying, reducing, and compensating for any potential impacts (CEQA, 15370).

The environmental impacts section of CEQA documents also must consider direct and indirect impacts of the project (CAL. PUB. RES. CODE § 21065.3). They are to focus on significant impacts (14 CCR § 15126.2(a)). Impacts that are less than significant need only be briefly described (14 CCR § 15128). All potentially significant effects must be addressed. To assist lead agencies in evaluating all impacts, the CEQA Guidelines provide an environmental checklist that often guides the analysis.

CEQA requires that any feasible mitigation measures that can reduce a significant impact be adopted. CEQA mitigation requirements apply only to adverse environmental impacts found to be significant.

Standard Practices and Mitigation

Under CEQA, agencies must adopt mitigation measures or alternatives to substantially lessen the significant effect, if feasible, before approving the project (CAL. PUB. RES. CODE §§ 21002, 21002.1.). Measures may also be adopted, but are not required, for environmental impacts that are not found to be significant (14 CCR § 15126.4(a)(3)). If an agency relies on mitigation measures to avoid preparation of an EIR, those proposed measures must be circulated for public review with a proposed mitigated negative declaration prior to adoption of the project (14 CCR 15070(b)(1)).

For clarity, this document will refer to incorporated measures that are prescriptive and sufficiently standardized to be generally applicable, and do not require special tailoring to a project situation, as “Standard Practices” or “BMPs” as discussed in Section 1.7. Measures which are not sufficiently standardized enough to be called Standard Measures or BMPs, but are proposed to reduce impacts that are not significant without mitigation are referred to as “Mitigation Measures”. The determination of whether or not mitigation would be reducing impacts that are not significant, or reducing an impact to less than significant, is indicated in the CEQA determination section of each resource.

Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this project. Please see the CEQA checklist for additional information. Any boxes *not* checked represent issues that were considered as part of the scoping and environmental analysis for the project, but for which no significant impacts were identified. Therefore, no further discussion of these issues is in this document.

<input checked="" type="checkbox"/>	Aesthetics	<input type="checkbox"/>	Agriculture and Forestry	<input type="checkbox"/>	Air Quality
<input checked="" type="checkbox"/>	Biological Resources	<input type="checkbox"/>	Cultural Resources	<input type="checkbox"/>	Geology/Soils
<input type="checkbox"/>	Greenhouse Gas Emissions	<input type="checkbox"/>	Hazards and Hazardous Materials	<input type="checkbox"/>	Hydrology/Water Quality
<input type="checkbox"/>	Land Use/Planning	<input type="checkbox"/>	Mineral Resources	<input type="checkbox"/>	Noise
<input type="checkbox"/>	Paleontology	<input type="checkbox"/>	Population/Housing	<input type="checkbox"/>	Public Services
<input type="checkbox"/>	Recreation	<input type="checkbox"/>	Transportation/Traffic	<input type="checkbox"/>	Utilities/Service Systems
<input type="checkbox"/>	Mandatory Findings of Significance				



California Environmental Quality Act Checklist

01-MEN-271

17.70 / 18.00

01-0A840

Dist.-Co.-Rte.

P.M./P.M.

E.A.

This checklist identifies physical, biological, social and economic factors that might be affected by the proposed project. In many cases, background studies performed in connection with the project indicate no impacts. A NO IMPACT answer in the last column reflects this determination. Where there is a need for clarifying discussion, the discussion is included either following the applicable section of the checklist or is within the body of the environmental document itself. The words "significant" and "significance" used throughout the following checklist are related to CEQA impacts. The questions in this form are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

	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 checked="" type="checkbox"/>	<input type="checkbox"/>
See discussion of Visual/Aesthetics in the Human Environment section of this document.				
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" determinations in this section are based on the Visual Impact Assessment dated July 15, 2016.				
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"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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” determinations in this section are based on the scope, description, and location of the proposed project, as well as various field reviews in 2015 and 2016.

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:

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” determinations in this section are based on information provided in the Air Quality memo dated July 1, 2016.

The proposed project would not result in any significant changes in traffic volumes, vehicle mix, location of existing facility or any other factor that would cause an increase in emissions relative to the no build alternative; therefore, this project would not increase operational emissions above existing conditions.

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

“No Impact,” “Less Than Significant Impact,” and “Less Than Significant Impact with Mitigation” determinations in this section are based on information provided in the August 2016 Natural Environment Study (NES). See further discussion of biological resources in Biological Resources section of this document.

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” determinations in this section are based on information provided in the Historic Property Survey Report/Archaeological Survey Report dated May 16, 2016. McCoy Creek Bridge is not eligible for listing in the California Register of Historical Resources and no cultural resources were identified within the project limits.

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"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

“No Impact” determinations in this section are based on the scope, description, and location of the proposed project, as well as the Preliminary Foundation Report dated March 7, 2016. The potential for surface fault rupture at the site is absent, nor is liquefaction a consideration for this location.

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 in the Climate Change section.

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” determinations in this section are based on the scope, description, and location of the proposed project, as well as information provided in the Initial Site Assessment dated November 26, 2012.

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 type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner 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"/>

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

“No Impact” determinations in this section are based on information provided in the Water Quality Assessment Report (WQAR) dated August 15, 2016.

All construction activities would take place approximately ten feet or more above the ordinary high water mark (OHWM) of McCoy Creek. This project is not anticipated to increase traffic on SR 271 and therefore is not anticipated to increase highway stormwater runoff-related contaminants.

The project would maintain the site’s existing drainage patterns overall. The ditch located on the south east side of the bridge would be slightly shifted to the east to accommodate the widening of the bridge approaches and the shift in roadway alignment. The reconstructed ditch would be designed with the appropriate materials and capacities to convey site specific flows.

Roadway drainage from the existing bridge flows off the deck via scuppers at multiple locations onto the creek bank. The profile of the new bridge would also require drainage to flow off of the deck. This drainage would be channeled onto the upper bank above OHWM onto RSP to reduce the potential for erosion and to allow for infiltration before reaching McCoy Creek.

The outlet of the drainages would be designed to ensure adequate energy dissipation in order to prevent bank erosion at each confluence with McCoy Creek. Implementation of temporary and permanent BMPs would avoid long-term impacts on the physical and chemical characteristics of the aquatic environment. Disturbed soil areas would be reseeded with an appropriate California Native seed mix. The temporary access road and an old roadbed on the northeast side of the bridge would be recontoured and planted with appropriate native plants. The area of the old roadbed to be removed is approximately 1600 square feet.

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” determinations in this section are based on the scope, description, and location of the proposed project.

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

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” determinations in this section are based on the scope, description, and location of the proposed project.

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” determinations in this section are based on information provided in the Noise Analysis dated July 1, 2016. The proposed project would not substantially change the alignment and would not increase the number of traffic lanes. No adverse noise impacts from construction are anticipated.

XIII. POPULATION AND HOUSING: Would the project:

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

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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” determinations in this section are based on the scope, description, and location of the proposed project.

XIV. PUBLIC SERVICES:

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

“No Impact” determinations in this section are based on the scope, description, and location of the proposed project.

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” determinations in this section are based on the scope, description, and location of the proposed project.

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

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

“No Impact” determinations in this section are based on the scope, description, and location of the proposed project.

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” determinations in this section are based on the scope, description, and location of the proposed project.

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

Human Environment

VISUAL/AESTHETICS

This section evaluates the project's potential to impact visual resources within the project area. A Visual Impact Assessment was completed in July 2016 and is available upon request.

Regulatory Setting

The California Environmental Quality Act (CEQA) establishes that it is the policy of the state to take all action necessary to provide the people of the state "with...enjoyment of aesthetic, natural, scenic and historic environmental qualities" (CA Public Resources Code [PRC] Section 21001[b]).

Affected Environment

The project area is located on a rural section of Route 271 in northern Mendocino County just south of the Humboldt-Mendocino County line. Within the project limits, Route 271 has a curving alignment that runs through second-growth redwoods, mixed forest, and grasslands. Homes in the area are located sporadically and cannot be seen from the roadway. This section of highway roughly parallels nearby US Route 101 and serves as a scenic alternate; however, no unique scenic views have been identified within the project limits.

Potential Effects

The following CEQA Checklist item was used to evaluate the impacts of the proposed project on Visual/Aesthetics:

- Would the project substantially degrade the existing visual character or quality of the site and its surroundings?

Build Alternative:

Through the addition of the new bridge and bank cut, the project would alter the aesthetics of the project area. The bridge rail type on the new bridge would be higher and less see-through than the existing rail. Though Route 271 is a scenic alternate to US 101, no unique scenic views would be obscured by the higher bridge barrier rail.

Small to medium trees and minor vegetation would be removed for the project, but the project area would remain consistent with the rest of the corridor's land cover types (mixed forest understory, mixed-forest midstory, and grasslands). The large redwood trees near the northwest corner of the bridge would remain and be shielded with guardrail.

No Build Alternative:

The existing condition would remain; therefore, no impact would occur.

Avoidance, Minimization, and/or Mitigation Measures

Based on the determination in the VIA that the project would have low visual impacts, no avoidance, minimization, and/or mitigation measures have been proposed.

CEQA Considerations

Based on the following, a “less than significant impact” determination for the build alternative was made with respect to aesthetic resources:

- Though Route 271 is a scenic alternate to US 101, no unique scenic views would be obscured by the project.
- The removal of small to medium trees and minor vegetation would not make the views in project area inconsistent with the rest of the corridor (i.e., forest and grasslands).
- Standard measures, such as reseeding or mulching disturbed soil areas, would be included as part of the project.

Given the No-Build alternative would not alter the environment, a “no impact” determination was made for this alternative.

Cumulative Effects

Given that the project would result in low visual impacts and those impacts would be addressed by the implementation of standard measures, cumulative impacts to visual resources would not be anticipated with the project.

Biological Environment

A Natural Environment Study (NES) was completed for this project in August 2016 and is available upon request.

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.

Habitat areas that have been designated as critical habitat under the Endangered Species Acts are discussed below in the Threatened and Endangered Species section. Wetlands and other waters are also discussed below.

Riparian Vegetation

Regulatory Setting

Riparian vegetation provides dense multi-storied habitat available to birds, amphibians, mammals, and reptiles. Riparian vegetation also provides migration, foraging, and breeding habitat for neotropical birds that breed during the spring and summer in North America. Riparian zones adjacent to waterways provide shade, sediment transport, nutrient or chemical regulation, stream bank stability, and input of large woody debris or organic matter. It also provides shelter, cover, and a source of food input for fish. Activities within riparian habitat are regulated under sections 1600-1616 of the California Fish and Game Code. The areas regulated by sections 1600-1616 include the bed, channel, and bank of any river, stream, or lake in which there is at any time an existing fish or wildlife resource, or from which these resources derive benefit. The limits of this jurisdiction typically extend to the outer edge of riparian vegetation, or to the top of the bank for areas with little or no riparian habitat.

Affected Environment

Vegetation communities are groups of plants that occur in repeatable patterns across the landscape. Several vegetation communities were found in the project area. Vegetation communities were identified based on the vegetation classification by the dominant plant species. Ruderal (disturbed) areas and areas of non-native grasslands (pastures) are also present in the project area.

Vegetation communities present at the project site are typical of the North Coast Ranges of the California Floristic Province and include mixed stands of tanoak forest (*Lithocarpus densiflorus* Forest Alliance), Douglas-fir forest (*Pseudotsuga menziesii* Forest Alliance), California bay forest (*Umbellularia californica* Forest Alliance), Redwood forest (*Sequoia sempervirens* Forest Alliance) and red alder forest (*Alnus rubra* Forest Alliance). Common species found at the

project site includes California bay (*Umbellularia californica*), tanoak (*Lithocarpus densiflorus*), Douglas-fir (*Pseudotsuga menziesii*), coast redwood (*Sequoia sempervirens*) and poison oak (*Toxicodendron diversilobum*). Although several redwoods are found within the project limits, this species appears to have been harvested for lumber in the past and seems to be limited to the roadside edges.

McCoy Creek flows through a narrow canyon. Vegetation immediately adjacent to the creek does not vary greatly in type from upland vegetation in the project area, and is largely red alder forest community.

Potential Effects

The following CEQA Checklist item was used to evaluate the impacts of the proposed project on Natural Communities:

- Would the project 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 Wildlife or US Fish and Wildlife Service?

Build Alternative:

The proposed project would have minor, temporary impacts to upland riparian vegetation through the removal of trees and vegetation for work at the southeast corner of the bridge, which would include construction of the new south abutment and the new alignment. The new alignment would be slightly east of the current alignment (Figure 4) and would require the relocation of a roadside ditch (see Wetlands and Other Waters section). In order to relocate the ditch, approximately five 18- to 24-inch diameter at breast height (dbh) redwood trees would be removed from an upland riparian area. Additional vegetation clearing of up to approximately 1,800 square feet (0.04 acre) would be necessary at this location.

Construction equipment would also utilize the existing roadway at the north and south abutments, which would limit the amount of riparian vegetation areas that would need to be cleared. Upon completion of construction, the bridge would be slightly wider than existing.

The new bridge pier would be constructed on previously developed fill and would consist of two 4-foot diameter columns (Figures 3, 4, and 5). The permanent impact from these columns would be approximately 25 square feet. Though within the riparian zone, no riparian vegetation removal would be needed for pier construction. This area is shaded, consists largely of rocks and concrete, and is therefore of negligible value as habitat.

No Build Alternative:

The existing condition would remain; therefore, no impact would occur.

Avoidance, Minimization, and/or Mitigation Measures

Given the project would have minor impacts to riparian vegetation, no avoidance, minimization, and/or mitigation measures have been proposed for Natural Communities.

CEQA Considerations

Based on the following, a “less than significant impact” determination for the build alternative was made with respect to riparian vegetation:

- The amount of habitat potentially affected is located adjacent to the highway and bridge, where it is subject to periodic disturbance from maintenance and the public.
- The habitat is degraded by invasive species.
- Vegetation disturbance would not have a substantial effect on the quality or function of the riparian habitat.
- Standard measures would be part of the project and include:
 - A revegetation plan to establish native vegetation back into disturbed areas, and
 - Designation of Environmentally Sensitive Areas (ESAs) on construction plans for protection during construction.

Given the No-Build alternative would not alter the environment, a “no impact” determination was made for this alternative.

Cumulative Effects

Given the scope and scale of the potential effects and the inclusion of standard measures, the proposed project would not be expected to have a cumulative impact on Natural Communities.

WETLANDS AND OTHER WATERS

A Water Quality Assessment Report was prepared in August 2016 and is available for public review upon request.

Regulatory Setting

The various laws and regulations described in this chapter protect surface and groundwater quality and hydrology by establishing water quality compliance standards and waste discharge requirements (WDRs). These laws, regulations, and policies require implementation of a number of design, construction, and operational controls for proper stormwater runoff management, treatment, and water quality protection.

The federal Clean Water Act (CWA) of 1972 is the basic federal law that addresses surface water quality control and protection of beneficial uses of water. The purpose of the CWA is to provide guidance for the restoration and maintenance of the chemical, physical, and biological integrity of the nation's waters through prevention and elimination of pollution. The CWA applies to discharges of pollutants into waters of the U.S. The CWA establishes a framework for regulating stormwater discharges from municipal, industrial, and construction activities under National Pollutant Discharge Elimination System (NPDES) regulations. In California, the State Water Resources Board (SWRCB) administers the NPDES program.

CWA Section 402(p) establishes performance standards for discharges from municipal separate storm sewer systems (MS4s). CWA Section 402(p)(3)(B) obligates NPDES permit holders to require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques, and system design and engineering methods. The SWRCB implements the Caltrans NPDES permit and other water quality programs for the State of California by regulating point-source and non-point source discharges to land and surface waters in order to protect beneficial uses. To comply with the CWA water quality regulations, the SWRCB and nine Regional Water Quality Control Boards (RWQCBs) in California administer the NPDES permit program and require permits for discharges that have the potential to impact water quality. Caltrans MS4 NPDES Permit, Order No. 2012-011-DWQ (Caltrans NPDES Permit) became effective in July 2013. The permit was issued by the SWRCB and regulates stormwater discharges, and permitted non-stormwater discharges, from all Caltrans highways, facilities, and right-of-way.

The Water Quality Control Plan for the North Coast Region (Basin Plan) sets forth water quality standards and water quality objectives (WQOs) for surface water and groundwater of the Klamath River and North Coastal basins (North Coast RWQCB 2011). The plan designates beneficial uses for water bodies and establishes WQOs, waste discharge prohibitions, and other implementation measures to protect those beneficial uses. State water quality standards also include an Anti-degradation Policy for the protection of beneficial uses. Water quality control measures include total maximum daily loads (TMDLs), which are often, but not always, adopted as Basin Plan amendments. Stormwater discharges from Caltrans right-of-way are required to meet water quality criteria established in the North Coast RWQCB Basin Plan, in accordance with Caltrans NPDES Permit.

Every applicant for a federal permit or license for any activity that may result in a discharge of dredge or fill material to waters of the U.S. must obtain a CWA Section 401 Water Quality Permit. However, if a proposed project does not require a federal permit, but does involve dredge or fill activities that may result in a discharge to "Waters of the State", the Regional Board has the option to regulate the project under state authority (Porter-Cologne) in the form of Waste Discharge Requirements (WDRs) or Waiver of Waste Discharge Requirements. The proposed

project is within the jurisdiction of the North Coast Regional Water Quality Control Board (NCRWQCB).

Under CWA Section 404, a permit program administered by the US Army Corps of Engineers (USACE) regulates discharge of dredged or fill materials into waters of the U.S., including traditional navigable waters, interstate waters, and impoundments of jurisdictional waters which are jurisdictional by rule. The proposed project is within the USACE San Francisco District regulatory consultation boundary.

Affected Environment

The project is located within the South Fork Eel River drainage. McCoy Creek is a tributary to South Fork Eel River, which is a tributary to Eel River, which drains to the Pacific Ocean. McCoy Creek is a fourth order stream and has approximately 11.1-miles of blue line stream according to the USGS Piercy 7.5-minute quadrangle. McCoy Creek drains a watershed of approximately 6.8-square miles. Elevations range from about 525 feet at the mouth of the creek to 1,600 feet in the headwaters. Mixed conifer forest dominates the watershed. The watershed is primarily privately owned and managed for timber production.

There are two drainages located within the project limits; McCoy Creek and a roadside ditch located adjacent to the highway southeast of McCoy Creek Bridge. McCoy Creek is a jurisdictional drainage. The roadside ditch captures water from an ephemeral drainage located adjacent to the project limits and empties into McCoy Creek just east of the abutment. Given the varying and in some locations absent OHWM, the ditch could be considered jurisdictional. This would be determined by USACE.

Roadway drainage from the existing bridge flows off the deck and onto the creek bank via scuppers at multiple locations. The profile of the new bridge would also require drainage to flow off the deck. This drainage would be channeled onto the upper bank above the OHWM onto rock slope protection (RSP).

Potential Effects

The following CEQA Checklist item was used to evaluate the impacts of the proposed project on wetlands and other waters:

- Would the project 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?

Build Alternative:

All construction activities would occur above the OHWM of McCoy Creek. Therefore, direct impacts to McCoy Creek are not anticipated.

The proposed project would remove approximately five 18- to 24-inch dbh redwood trees for the placement of the new south abutment and relocating the roadside ditch. These trees are considered upland riparian vegetation, but removal is not anticipated to increase water temperature due to the existing overarching canopy or result in erosion due to the implementation of standard measures.

The roadside ditch located adjacent to the highway southeast of the McCoy Creek would be reconfigured to accommodate the new highway alignment (Figure 4). The reconfigured ditch would have approximately the same acreage (e.g., drainage capacity) as the existing ditch.

Given the geometry of the roadway and bridge, the new bridge would require drainage to flow off of the deck. This drainage would be channeled onto the upper bank above the OHWM onto RSP, which would have a beneficial effect on water quality.

During construction, an old roadbed on the northeast side of the bridge would be used as a part of the access road and equipment work area. After bridge construction, this roadbed would be removed. The ground would be recontoured and revegetated with appropriate native plants. The area of roadbed to be removed is approximately 1,600 square feet.

Per protocol, standard approvals (CDWF 1602, RWQCB 401, and USACE 404) would be obtained after project approval, if required.

No Build Alternative:

The existing condition would remain; therefore, no impact would occur.

Avoidance, Minimization, and/or Mitigation Measures

Given that no work would occur below the OHMW of McCoy Creek, that the ditch's drainage capacity would be approximately the same post construction, and that standard measures (e.g., containment of construction materials and replanting of disturbed areas with native species) would be implemented, no mitigation measures are proposed.

CEQA Considerations

Based on the following, a "less than significant impact" determination for the Build Alternative was made with respect to jurisdictional waters:

- After bridge construction, approximately 1,600 square feet of old roadbed on the northeast side of the bridge would be removed and the ground would be recontoured and revegetated with appropriate native plants.
- Water draining from the bridge deck would be channeled via scupper onto RSP to reduce the potential for erosion and to allow for infiltration before reaching McCoy Creek, thereby having a beneficial effect on water quality.
- The roadside ditch would not be removed—it would be reconfigured and have approximately the same drainage capacity as the existing ditch.
- No work would occur below the OHWM of McCoy Creek.
- Standard measures would be part of the project and include:
 - Soil stabilization practices (vegetation, rolled erosion control blankets),
 - Silt fences/fiber rolls to control sediment discharge from the project area during construction,
 - Measures to ensure that materials do not fall onto the bank or into the creek.
 - No concrete debris or contact water would be allowed to flow into waterways, and
 - Measures to prevent construction equipment effluents from contaminating soil or waters in the construction site, such as absorbent pads.

Given the No-Build alternative would not alter the environment, a “no impact” determination was made for this alternative.

Cumulative Effects

Given the small scale of potential effects and the design features and standard measures to offset these effects, the proposed project would not be expected to have a cumulative impact on jurisdictional waters.

PLANT SPECIES

Regulatory Setting

The U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW) 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 provided 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).

This section of the document discusses all the other special-status plant species, including CDFW 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 Code of Federal Regulations (CFR) Part 402. The regulatory requirements for CESA can be found at California Fish and Game Code, Section 2050, et seq. Department 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), CA Public Resources Code, Sections 2100-21177.

Affected Environment

As described in the Natural Communities section, the project limits are composed of mixed stands of tanoak forest, Douglas-fir forest, California bay forest, Redwood forest, and red alder forest. Common species found at the project site include California bay, tanoak, Douglas-fir, coast redwood, and poison oak.

According to database searches (CNPS and California Natural Diversity Database [CNDDDB]), the project area has the potential to contain several listed plant species. Seasonally-appropriate floristic surveys were conducted according to Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities (CDFG, 2009). Natural Communities in the Biological Study Area (BSA) were identified based on the vegetation classification used in A Manual of California Vegetation, 2nd edition (Sawyer J. O.-W., 2009).

Although the CNPS inventory and CNDDDB indicate there a number of rare plants in the region, the surveys found no rare plants within the project limits (Table 1). The botanical survey report, which documents the results of floristic surveys carried out for the proposed project, is provided as an attachment to the NES.

Table 1. Special Status Plants Potentially Occurring in the Project Area

Common Name (Species Name)	Status* USFWS/CDFW/ CNPS	Typical Habitat	Potential to Occur at the Project Site
McDonald's rockcress (<i>Arabis mcdonaldiana</i>)	--/--/1B.1	Lower montane coniferous forest, upper montane coniferous forest. Rocky outcrops, ridges, slopes, and flats on serpentine. 135-1455 m.	Low. Suitable habitat does not exist on-site.
Raiche's manzanita (<i>Arctostaphylos stanfordiana</i> ssp. <i>raichei</i>)	--/--/1B.1	Chaparral, lower montane coniferous forest. Rocky, serpentine sites. Slopes and ridges. 450-1000 m.	Low. Project location is at 187 m, suitable habitat does not exist on-site.
Humboldt County milk-vetch (<i>Astragalus agnicidus</i>)	--/SE/1B.1	Openings, disturbed areas, sometimes roadsides. Broadleaved upland forest, North Coast coniferous forest.	Medium. Suitable habitat may exist on-site; however, species was not discovered during botanical surveys.
dissected-leaved toothwort (<i>Cardamine pachystigma</i> var. <i>dissectifolia</i>)	--/--/1B.2	Usually serpentinite, rocky. Chaparral, lower montane coniferous forest.	Low. Species was not discovered during botanical surveys.
Oregon coast paintbrush (<i>Castilleja litoralis</i>)	--/--/2B.2	Coastal bluff scrub, coastal dunes, coastal scrub. Sandy sites. 15-100 m.	Low. Project location is at 187 m, suitable habitat does not exist on-site.
Mendocino Coast paintbrush (<i>Castilleja mendocinensis</i>)	--/--/1B.2	Coastal bluff scrub, closed-cone coniferous forest, coastal dunes, coastal prairie, coastal scrub.	Low. Species was not discovered during botanical surveys.
Vine Hill ceanothus (<i>Ceanothus foliosus</i> var. <i>vineatus</i>)	--/--/1B.2	Chaparral.	Low. Suitable habitat does not exist on-site.
Whitney's farewell-to-spring (<i>Clarkia amoena</i> ssp. <i>whitneyi</i>)	--/--/1B.1	Coastal bluff scrub, coastal scrub.	Low. Suitable habitat does not exist on-site.
Kellogg's buckwheat (<i>Eriogonum kelloggii</i>)	FC/SE/1B.2	Lower montane coniferous forest (rocky, serpentinite).	Low. Suitable habitat does not exist on-site.
coast fawn lily (<i>Erythronium revolutum</i>)	--/--/2B.2	Bogs and fens, broadleaved upland forest, North Coast coniferous forest. 0-1065m.	Low. Species was not discovered during botanical surveys.
Mendocino gentian (<i>Gentiana setigera</i>)	--/--/1B.2	Lower montane coniferous forest, meadows and seeps. Meadows, seeps and bogs. Usually or always on serpentine. 490-1065 m.	Low. Suitable habitat does not exist on-site.
Pacific gilia (<i>Gilia capitata</i> ssp. <i>pacifica</i>)	--/--/1B.2	Coastal bluff scrub, chaparral, coastal prairie, valley and foothill grassland.	Low. Species was not discovered during botanical surveys.
Point Reyes horkelia (<i>Horkelia marinensis</i>)	--/--/1B.2	Coastal dunes, coastal prairie, coastal scrub. Sandy flats and dunes near coast; in grassland or scrub plant communities. 5-30m.	Low. Project location is at 187 m, suitable habitat does not exist on-site.

Common Name (Species Name)	Status* USFWS/CDFW/ CNPS	Typical Habitat	Potential to Occur at the Project Site
Burke's goldfield (<i>Lasthenia burkei</i>)	FT/ST/1B.1	Vernal pools, meadows and seeps. Most often in vernal pools and swales. 15-600 m.	Low. Suitable habitat does not exist on-site.
Contra Costa goldfields (<i>Lasthenia conjugens</i>)	FE/--/1B.1	Valley and foothill grassland, vernal pools, alkaline playas, cismontane woodland.	Low. Suitable habitat does not exist on-site.
Howell's montia (<i>Montia howellii</i>)	--/--/2B.2	Meadows, north coast coniferous forest, vernal pools. Vernal wet sites; often on compacted soil.	Medium. Suitable habitat may exist on-site; however, species was not discovered during botanical surveys.
white-flowered rein orchid (<i>Piperia candida</i>)	--/--/1B.2	North coast coniferous forest, lower montane coniferous forest, broadleafed upland forest. Coast ranges from Santa Cruz County north; on serpentine. Forest duff, mossy banks, rock outcrops and muskeg. 0-1200m.	Medium. Suitable habitat may exist on-site; however, species was not discovered during botanical surveys.
Red Mountain stonecrop (<i>Sedum laxum</i> ssp. <i>eastwoodiae</i>)	FC/--/1B.2	Lower montane coniferous forest. Serpentine soils among rocks. 600-1200 m.	Low. Project location is at 187 m, suitable habitat does not exist on-site.
Red Mountain catchfly (<i>Silene campanulata</i> ssp. <i>campanulata</i>)	--/SE/4.2	Lower montane coniferous forest, chaparral. Rocky dry shallow serpentine soil. 420-1200m.	Low. Project location is at 187 m, suitable habitat does not exist on-site.
Showy Indian clover (<i>Trifolium amoenum</i>)	FE/--/1B.1	Valley and foothill grassland, coastal bluff scrub. Sometimes on serpentine soil, open sunny sites, swales. Most recently cited on roadside and eroding cliff face. 5-310 m.	Low. Species was not discovered during botanical surveys.
Oval-leaved viburnum (<i>Viburnum ellipticum</i>)	--/--/2B.3	Chaparral, cismontane woodland, lower montane coniferous forest. 215-1400 m.	Low. Project location is at 187 m, suitable habitat does not exist on-site.

*** Status Explanations:**

• **Federal**

-- = No status definition

FE = Endangered

FPT = Proposed for federal listing as threatened under the federal Endangered Species Act

FT = Listed as threatened under the federal Endangered Species Act

FC = Candidate for Federal listing (taxa for which the U.S. Fish and Wildlife Service has sufficient biological information to support a proposal to list as Endangered or Threatened)

D = Delisted

FSC = Species of Concern

SLC = Species of Local Concern

- **State**

-- = No status definition

SE = Listed as endangered under the California Endangered Species Act

ST = Listed as threatened under the California Endangered Species Act

SC = Proposed for state listing as threatened under the California Endangered Species Act

FP = Fully protected, species may not be taken or possessed without a permit from the FG Commission and/or the DFG

SSC = Species of Special Concern

- **California Native Plant Society (CNPS)**

-- = No status definition

List 1A = Plants presumed extinct in California

List 1B = Plants are rare and endangered in California

List 2 = Plants endangered in California, but more common elsewhere

List 3 = Plants which more information is needed

List 4 = Plants of limited distribution (a "watch" list)

Source: Caltrans, 2015-16; CNDDDB, 2016; USFWS, 2016.

Potential Effects

Build Alternative:

The following CEQA Checklist item was used to evaluate the impacts of the proposed project on any special status plant species:

- Would the project 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 Wildlife or US Fish and Wildlife Service?

Based on field surveys and database searches, impacts to special status plant species would not be expected.

No Build Alternative:

The existing condition would remain; therefore, no impact would occur.

Avoidance, Minimization, and/or Mitigation Measures

Given the project would not be expected to directly or indirectly affect special status plant species, no mitigation measures are proposed.

CEQA Considerations

Based on the following, a “no impact” determination for the build alternative was made with respect to special status plant species:

- Field surveys indicated that no special-status plant species occur within the project limits.

Given the No-Build alternative would not alter the environment, a “no impact” determination was made for this alternative.

Cumulative Effects

Given the project would not be expected to directly or indirectly affect any special-status plant species, cumulative impacts to any of these species would not be expected.

ANIMAL SPECIES

Regulatory Setting

Many state and federal laws regulate impacts to wildlife. United States Fish and Wildlife Service (USFWS), the National Oceanic and Atmospheric Administration - National Marine Fisheries Service (NMFS) and the California Department of Fish and Wildlife (CDFW) 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 federal or state Endangered Species Act. Species listed or proposed for listing as threatened or endangered are discussed below. All other special-status animal species are discussed here, including CDFW fully protected species and species of special concern, and USFWS or NMFS candidate species.

Federal laws and regulations relevant to wildlife include the following:

- National Environmental Policy Act
- Migratory Bird Treaty Act
- Fish and Wildlife Coordination Act

State laws and regulations relevant to wildlife include the following:

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

Affected Environment

Animals are considered to be of special concern based on (1) federal, state, or local laws regulating their development; (2) limited distributions; and/or (3) the habitat requirements of special status animals occurring on-site. Several special-status animal species have the potential to be present within the BSA. Special status species occurrences within the project region are included on the CNDDDB query and the USFWS and NMFS species lists. Species listed or proposed for listing as threatened or endangered are discussed in the Threatened and Endangered Species section in this document. All other special status animal species are discussed in this section— including CDFW fully protected species and species of special concern, and the USFWS or NMFS candidate species (Table 2).

Table 2. Special Status Animals Potentially Occurring or Known to Occur in the Project Area

Common Name (Species Name)	Status* USFWS/CDFW/ CNPS	Typical Habitat	Potential to Occur at the Project Site**
Amphibians			
Pacific tailed frog (<i>Ascaphus truei</i>)	--/SSC/--	Occurs in montane hardwood-conifer, redwood, Douglas-fir and ponderosa pine habitats. Restricted to perennial montane streams. Tadpoles require water below 15 degrees C.	Low. Suitable habitat may be present; however, nearest record is over 13-miles away (CNDDDB 2016).
foothill yellow-legged frog (<i>Rana boylei</i>)	--/SSC/--	Partly-shaded, shallow streams and riffles with a rocky substrate in a variety of habitats.	High. Suitable habitat present; however, project would not impact or encroach upon habitat.
California red-legged frog (<i>Rana draytonii</i>)	FT/SSC/--	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation.	Low. Suitable habitat is not present on-site.
Birds			
northern goshawk (<i>Accipiter gentilis</i>)	--/SSC/--	Within, and in vicinity of, coniferous forest. Uses old nests, and maintains alternate sites.	Low. Suitable habitat is not present on-site.
marbled murrelet (<i>Brachyramphus marmoratus</i>)	FT/--/--	(Nesting) feeds nearshore; nests inland along coast, from Eureka to Oregon border and from Half Moon Bay to Santa Cruz. Nests in old-growth redwood dominated forests, up to six-miles inland, often in Douglas-fir trees.	Low. Suitable habitat is not present on-site.
western snowy plover (<i>Charadrius alexandrinus nivosus</i>)	FT/SSC/--	Breeds above the high tide line on coastal beaches, sand spits, dune-backed beaches, sparsely-vegetated dunes, beaches at creek and river mouths, and salt pans at lagoons and estuaries.	Low. Suitable habitat is not present on-site.
western yellow-billed cuckoo (<i>Coccyzus americanus</i>)	FPT/--/--	(Nesting) riparian forest nester, along the broad, lower flood-bottoms of larger river systems. Nests in riparian jungles of willow, often mixed with cottonwoods, with lower story of blackberry, nettles, or wild grape.	Low. Suitable habitat is not present on-site.
northern spotted owl (<i>Strix occidentalis caurina</i>)	FT/SC/--	Old-growth forests or mixed stands of old-growth and mature trees. Occasionally in	Absent. Suitable habitat is present; however, protocol level surveys

Common Name (Species Name)	Status* USFWS/CDFW/ CNPS	Typical Habitat	Potential to Occur at the Project Site**
		younger forests with patches of big trees. High, multistory canopy dominated by big trees, many trees with cavities or broken tops, woody debris and space under canopy.	have not resulted in detections of species.
Fish			
tidewater goby (<i>Eucyclogobius newberryi</i>)	FE/SSC/--	Brackish water habitats along the California coast from Agua Hedionda Lagoon, San Diego County, to the mouth of the Smith River. Found in shallow lagoons and lower stream reaches, they need fairly still but not stagnant water & high oxygen levels.	Low. Suitable habitat is not present on-site.
Southern Oregon/Northern California coho salmon (<i>Oncorhynchus kisutch</i>)	FT/ST/--	Streams, rivers between Cape Blanco, OR and Punta Gorda, Humboldt County, CA.	High. Suitable habitat is present on-site.
Summer-run steelhead trout (<i>Oncorhynchus mykiss irideus</i>)	FT/SSC/--	Northern California coastal streams south to Middle Fork Eel River. Within range of Klamath Mountains province DPS and Northern California DPS. Cool, swift, shallow water and clean loose gravel for spawning, and suitably large pools in which to spend the summer.	High. Suitable habitat is present on-site.
California Coastal Chinook salmon (<i>Oncorhynchus tshawytscha</i>)	FT/SSC/--	Juvenile Chinook may spend from 3 months to 2 years in freshwater before migrating to estuarine areas as smolts and then into the ocean to feed and mature. They prefer streams that are deeper and larger than those used by other Pacific salmon species.	High. Suitable habitat is present on-site.
Mammals			
Pallid bat (<i>Antrozous pallidus</i>)	--/SSC/--	Deserts, grasslands, shrublands, woodlands and forests. Most common in open, dry habitats with rocky areas for roosting. Chaparral, coastal scrub, desert wash, Great Basin grassland, Great Basin scrub, Mojavean desert scrub, riparian woodland, Sonoran desert scrub, upper montane coniferous forest, valley & foothill grassland.	Present. Surveys have identified individuals roosting on the bridge.

Common Name (Species Name)	Status* USFWS/CDFW/ CNPS	Typical Habitat	Potential to Occur at the Project Site**
Sonoma tree vole (<i>Arborimus pomo</i>)	--/SSC/--	North coast fog belt from Oregon border to Sonoma County. In Douglas-fir, redwood and montane hardwood-conifer forests. Feeds almost exclusively on Douglas-fir needles. Will occasionally take needles of grand fir, hemlock or spruce.	Medium. Suitable habitat is present on-site; however, suitable habitat for this species is limited.
Townsend's big-eared bat (<i>Corynorhinus townsendii</i>)	--/SC/--	Throughout California in a wide variety of habitats. Most common in mesic sites. Roosts in the open, hanging from walls and ceilings. Roosting sites limited. Extremely sensitive to human disturbance.	Low. Suitable habitat is not present on-site.
fisher, West Coast DPS (<i>Martes pennanti</i>)	FC/SC/--	Intermediate to large-tree stages of coniferous forests and deciduous-riparian areas with high percent canopy closure. Uses cavities, snags, logs and rocky areas for cover and denning. Needs large areas of mature, dense forest.	Low. Suitable habitat is not present on-site.
Reptiles			
western pond turtle (<i>Emys marmorata</i>)	--/SSC/--	A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation, below 6000 ft elevation. Needs basking sites and suitable upland habitat (sandy banks or grassy open fields) up to 0.5 km from water for egg-laying.	Low. Suitable habitat does not exist on-site.

*** Status Explanations:**

• **Federal**

-- = No status definition

FE = Endangered

FPT = Proposed for federal listing as threatened under the federal Endangered Species Act

FT = Listed as threatened under the federal Endangered Species Act

FC = Candidate for Federal listing (taxa for which the U.S. Fish and Wildlife Service has sufficient biological information to support a proposal to list as Endangered or Threatened)

D = Delisted

FSC = Species of Concern

SLC = Species of Local Concern

- **State**

-- = No status definition

SE = Listed as endangered under the California Endangered Species Act

ST = Listed as threatened under the California Endangered Species Act

SC = Proposed for state listing as threatened under the California Endangered Species Act

FP = Fully protected, species may not be taken or possessed without a permit from the FG Commission and/or the DFG

SSC = Species of Special Concern

- **California Native Plant Society (CNPS)**

-- = No status definition

List 1A = Plants presumed extinct in California

List 1B = Plants are rare and endangered in California

List 2 = Plants endangered in California, but more common elsewhere

List 3 = Plants which more information is needed

List 4 = Plants of limited distribution (a "watch" list)

** Species with a low potential to occur at the project site will not be discussed further in this document.

Source: Caltrans, 2015-16; CNDDDB, 2016; USFWS, 2016.

Bat Species

Bats are commonly associated with open forests and woodlands where there is a water source nearby over which to feed. Suitable roosting and nesting areas include caves, mines, tree snags, buildings, and other human-made structures. In the mild northern California coastal climate, bats are present year round. Bats are presumed to be present at the McCoy Creek bridge all year as observations of bats were made in winter as well as summer.

The McCoy Creek Bridge provides crevice and sheltered habitat for day and night roosting bats. Crevice habitat exists where wooden joists and columns intersect with bents to create narrow spaces. Sheltered habitat is present in the open boxes formed by the wooden joists on the underside of the bridge's deck. During the time of year and conditions present during the surveys, bats seemed to prefer particular areas of the bridge for roosting. However, guano was scattered beneath the length of the bridge.

The McCoy Creek Bridge provides suitable habitat for, and is occupied by, day roosting bats. Multiple daytime surveys by Caltrans biologists were performed in 2015 and 2016. Roosting bats were observed during these surveys; however, the numbers in winter were low (one on February 2, 2016, and five on February 17, 2016) compared to summer (over one hundred in July 2016). Roosting bat surveys were performed by ICF International biologists in July 2016. Four species of bats were consistently detected in the ICF acoustic surveys and comprised the bulk of calls that were auto-classified to species by the SonoBat Batch classifier. These species were:

- Pallid bat (*Antrozous pallidus*)
- Mexican free-tailed bats (*Tadarida brasiliensis*)
- Fringed myotis (*Myotis thysanodes*)
- Yuma myotis (*Myotis yumanensis*)

During the ICF July survey, approximately 6 to 12 Pallid bats were observed day roosting on the bridge. Mexican free-tailed bats appear to be the largest group utilizing the structure for day roosting with approximately 100 individuals observed. Approximately 34 to 40 other Myotis species (acoustically detected as Yuma myotis and fringed myotis) were also present.

Pallid bats are listed by the California Department of Fish and Wildlife as a Species of Special Concern (SSC). Although CDFW Species of Special Concern generally have no special legal status, they are given special consideration under CEQA. California Fish and Game Codes (CFGC) continue to protect non-listed bat species and their roosting habitat, including individual roosts and maternity colonies.

Foothill Yellow-Legged Frog

Foothill yellow-legged frog (*Rana boylei*) is a SSC in California. The species is characteristically found close to water. Little is known about the life history of foothill yellow-legged frog, but they

are associated with partly shaded, shallow streams and riffles with rocky substrate in a variety of habitats, mostly at elevations higher than 650 feet not occupied by bullfrogs. Elevation at the project location is 614 feet.

Reproduction is aquatic, but mating and egg-laying occurs exclusively in streams and rivers (not in ponds or lakes) from April until early July, after streams have slowed from winter runoff. Eggs hatch within 5 to 37 days, depending on temperature. Tadpoles transform in 3 to 4 months, typically from July to October. Suitable habitat for foothill yellow-legged frog is present in the project area.

Protocol surveys were not conducted for foothill yellow-legged frog, as instream habitat would not be impacted as a result of the project.

Migratory Birds

Trees and other woody vegetation support migratory bird nesting. Migratory birds are presumed present in and near the project area due to the presence of trees and shrubs. Birds may be nesting in trees and shrubs from February through mid-September.

Sonoma Tree Vole

The Sonoma tree vole (*Arborimus pomio*) is a SSC in California. These voles inhabit the north coast fog belt from the Oregon border to Sonoma County. The species' habitat consists of mixed evergreen forests; optimum habitat appears to be wet and mesic old-growth Douglas-fir forest, but this species can occur in younger forests (e.g., Douglas-fir 47 years old). Douglas-fir forest is present within the project limits, but it is marginally suitable as Sonoma tree vole habitat as it is not old growth.

This vole is primarily arboreal but exhibits some terrestrial activity. It nests in trees, 6.5 to 64 feet above ground; and it may use old nests of birds, squirrels, or woodrats. Nests usually are in Douglas-fir trees but sometimes may be in other conifer or in Pacific madrone. The species is associated with large-diameter Douglas-fir, high percentage canopy cover, high stump density, low snag density, shorter snags and logs, and lower elevation.

Protocol surveys were not conducted for Sonoma tree vole, as only marginally suitable habitat for this species exists at the project site and this habitat would not be altered as a result of the project.

Potential Effects

Build Alternative:

Bat Species

The following CEQA Checklist items were used to evaluate the impacts of the proposed project on sensitive bat species:

- Would the project 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?
- Would the project 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 Wildlife or U.S. Fish and Wildlife Service?

The project would require the removal of the existing bridge which would result in a temporary impact on bats; however, the new bridge would have design features (including bat boxes) that would provide habitat similar to the existing bridge. Given this, it is anticipated that the four bat species would recolonize the new bridge due to the new bridge bat habitat and the advantageous qualities of the bridge's location (e.g., proximity to the creek, climate, and prey base).

Foothill Yellow-Legged Frog

The following CEQA Checklist items were used to evaluate the impacts of the proposed project on foothill yellow-legged frog:

- Would the project 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 Wildlife or U.S. Fish and Wildlife Service?

Suitable habitat for foothill yellow-legged frog is present in the project area; however project activities would not encroach on their habitat. No work would occur within OHWM of McCoy Creek. The project is not expected to impact foothill yellow-legged frogs.

Migratory Birds

The following CEQA Checklist item was used to evaluate the impacts of the proposed project on migratory birds:

- Would the project 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?

Individual nests and migratory birds are protected by the Migratory Bird Treaty Act and California Fish & Game Code. The project would require the removal of minor vegetation and small to medium trees; however, with the implementation of standard Migratory Bird Treaty Act measures, the project would not be anticipated to affect any nesting birds.

Sonoma Tree Vole

While marginally suitable habitat for this species exists at the project location, no suitable habitat would be altered as a result of this project. The project is not expected to impact the Sonoma tree vole.

No Build Alternative:

The existing conditions would remain; therefore, no impacts would occur to any animal species.

Avoidance, Minimization, and/or Mitigation Measures

Bat Species

Although techniques to exclude bats and birds from bridges on Caltrans related projects are standard measures, McCoy Creek Bridge presents a unique situation given the structure's configuration and that it is a complete bridge replacement. The following mitigation measures would minimize the potential effects of bridge replacement on maternity colonies and other roosting bats. Mitigation measures would be approved by CDFW before implementation.

- *Work Window:* To avoid impacts on the maternity colonies and hibernating bats, the bridge would be demolished between September 15 and October 31, which is after maternity season and prior to hibernation. It is anticipated that bats would be roosting on the bridge during this September/October window, therefore exclusion devices would be installed (see below).
- *Replacement Habitat:* Prior to excluding bats from the bridge, temporary (or permanent, if feasible) off-bridge replacement habitat would be erected in proximity to the bridge, but outside of the anticipated construction disturbance area. This replacement habitat would be installed in late winter or early spring, prior to the formation of the maternity colonies. Caltrans would consult with a bat biologist on the appropriate type and locations of replacement habitat. The replacement habitat would be monitored regularly (at least once to twice per month) throughout the exclusion and construction work period to determine the species, number of individuals, and nature of the roost occupancy to ensure it is providing appropriate replacement for the habitat lost.

On-bridge replacement habitat on the new structure would be provided to accommodate at least the existing numbers of individuals and species present that occur on the bridge now. Two potential replacement habitat designs are the Texas Bat-Adobe and the

Oregon Wedge bat-box. Installation of replacement habitat would occur during bridge construction. In order to avoid water quality impacts from bat guano, habitat would not be placed directly over McCoy Creek. Also, in order to avoid predation of bats, replacement habitat would be placed at a minimum of 10 feet off the ground. Plans and placement would be approved by CDFW.

- *Exclusion Devices:* Installation of exclusion devices to preclude bats from occupying a roost site during demolition would occur after the maternity season and prior to hibernation. Exclusionary devices would only be installed by or under the supervision of a bat biologist:
 - *Pre-installation Surveys:* A minimum of two daytime surveys and two evening emergence surveys would be conducted prior to installation of exclusion devices to confirm known roosting sites and identify additional roosting sites.
 - *Monitoring of Exclusion Devices:* Exclusion devices would be checked every two weeks and maintained such that they do not allow bats to re-enter known roosting sites before demolition.
- *Other Deterrence Measures:* Other measures, such as using lights or acoustic disturbance, to deter bat roosting, may be used (if feasible) in coordination with and approved by CDFW.

Foothill Yellow-Legged Frog, Migratory Birds, Sonoma Tree Vole

Given the project would not be expected to impact foothill yellow-legged frog, migratory birds, and Sonoma tree vole, no mitigation measures are proposed.

CEQA Considerations

Bat Species

Based on the following, a “less than significant with mitigation” determination for the build alternative was made with respect to bats and their maternity colonies:

- Use of work windows would avoid direct impacts to maternity colonies and hibernating bats.
- Exclusion devices would keep bats off the existing structure for demolition.
- Off-bridge replacement habitat for use during construction would be installed in the vicinity of the existing structure prior to demolition. If feasible, this habitat would be left in place permanently.
- Permanent, on-bridge replacement habitat would be provided.
- Caltrans would coordinate the above measures with an experienced bat biologist.

Foothill Yellow-Legged Frog

Based on the following, a “no impact” determination for the build alternative was made with respect to foothill yellow-legged frog:

- Suitable habitat for foothill yellow-legged frog is present in the project area; however project activities would not encroach on their habitat.
- No work would occur within OHWM of McCoy Creek.

Migratory Birds

Based on the following, a “no impact” determination for the build alternative was made with respect to migratory birds:

- Vegetation would be removed outside of the nesting season and would be kept trimmed and/or cleared prior to, as well as, during, construction to discourage nesting.
- If vegetation must be removed during nesting season, surveys would be conducted by a qualified biologist to identify and locate nesting birds and a buffer would be established around active nests.

Sonoma Tree Vole

Based on the following, a “no impact” determination for the build alternative was made with respect to Sonoma tree vole:

- While marginally suitable habitat for this species exists at the project location, no suitable habitat would be altered as a result of this project.

No Build Alternative:

Given the No-Build alternative would not alter the environment, a “no impact” determination was made for this alternative.

Cumulative Effects

Bat Species

With the use of work windows, bat exclusion, off-bridge (permanent if feasible) replacement habitat for use during construction, and on-bridge permanent replacement habitat for bats and their maternity colonies, no cumulative impacts to bat species are anticipated.

Foothill Yellow-Legged Frog, Migratory Birds, Sonoma Tree Vole

Given the scope of the project and the inclusion of standard measures, cumulative impacts to foothill yellow-legged frogs, migratory birds, and the Sonoma tree vole are not expected to occur as a result of the proposed project.

THREATENED AND ENDANGERED SPECIES

Regulatory Setting

The primary federal law protecting threatened and endangered species is FESA: 16 United States Code (USC) Section 1531, et seq. See also 50 CFR Part 402. This act and later 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 USFWS and NMFS 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 may include a Biological Opinion with an Incidental Take statement, a Letter of Concurrence and/or documentation of a No Effect finding. 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. CDFW 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 the CDFW. For species listed under both the FESA and CESA requiring a Biological Opinion under Section 7 of the FESA, the CDFW 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

Anadromous Fish

McCoy Creek provides habitat for Southern Oregon/Northern California (SONCC) coho salmon (*Oncorhynchus kisutch*) and California Coastal (CC) Chinook salmon (*Oncorhynchus tshawytscha*) Evolutionarily Significant Units (ESU) and Northern California (NC) steelhead (*Oncorhynchus mykiss*) Distinct Population Segment (DPS). These species may be present within McCoy Creek at the project location. Essential Fish Habitat for Chinook salmon and coho salmon is present at the project location (Table 3).

Table 3. Designation of McCoy Creek for Listed Fish Species

	SONCC Coho Salmon	CC Chinook Salmon	NC Steelhead
Critical Habitat	Yes	Yes	Yes
Essential Fish Habitat Present	Yes	Yes	No

Southern Oregon/Northern California Coho Salmon

SONCC coho salmon is listed as a federal and state threatened species. SONCC coho salmon ESU includes all naturally spawned populations of coho in coastal streams between Cape Blanco, Oregon, and Punta Gorda, California, as well as salmon produced by three artificial propagation programs: the Cole River Hatchery near the Rogue River in Oregon, and the Trinity River and Iron Gate (Klamath River) hatcheries in California (NMFS, 2014).

The proposed McCoy Creek Bridge Replacement Project is within designated critical habitat for SONCC coho. Critical habitat for SONCC coho salmon was designated on May 5, 1999. Critical habitat is designated to include all river reaches accessible to listed coho salmon between Cape Blanco, Oregon, and Punta Gorda, California.

McCoy Creek within the project area is considered Essential Fish Habitat (EFH) for coho salmon, as designated under the Magnuson-Stevens Fishery Conservation and Management Act (MSA). EFH refers to those waters and substrates necessary for the spawning, breeding, feeding, or growth to maturity.

California Coastal Chinook Salmon

CC Chinook salmon was listed as a federal threatened species on September 16, 1999 and reaffirmed on June 28, 2005. The California Coastal Chinook salmon ESU includes all naturally spawned populations of Chinook salmon from rivers and streams south of the Klamath River (exclusive) to the Russian River (inclusive). Seven artificial propagation programs are

considered part of the ESU: the Humboldt Fish Action Council (Freshwater Creek), Yager Creek, Redwood Creek, Hollow Tree, Van Arsdale Fish Station, Mattole Salmon Group, and Mad River Hatchery fall-run Chinook hatchery programs.

McCoy Creek is considered critical habitat for CC Chinook. Critical habitat for the CC Chinook salmon was published on September 2, 2005, with an effective date of January 2, 2006. EFH is also present for Chinook salmon.

Northern California Steelhead DPS

The NC steelhead DPS was listed as a federal threatened species on June 7, 2000, and reaffirmed on January 5, 2006. The NC steelhead is also listed as a state Species of Special Concern. The NC steelhead DPS includes all naturally spawned populations below natural and manmade impassable barriers in California coastal river basins from Redwood Creek southward to, but not including, the Russian River, as well as two artificial propagation programs: the Yager Creek Hatchery and North Fork Gualala River Hatchery (Gualala River Steelhead Project) steelhead hatchery programs.

McCoy Creek is considered critical habitat for NC Steelhead. Critical habitat for the NC steelhead was published on September 2, 2005, with an effective date of January 2, 2006.

Northern Spotted Owl (NSO)

NSO (*Strix occidentalis caurina*) is a federal and state threatened species. NSO nest in old growth forests, mixed stands of old growth and mature trees, and occasionally in younger forests with patches of big trees. NSO generally have large home ranges and use large tracts of land containing significant acreage of older forest to meet their biological needs. The attributes of superior northern spotted owl nesting and roosting habitat typically include a moderate to high canopy closure (60 to 80 percent); a multi-layered, multi-species canopy with large overstory trees; a high incidence of large trees with deformities (large cavities, broken tops, mistletoe infections, and debris accumulations); large accumulations of fallen trees and other debris; and sufficient open space below the canopy for flight.

Revisions to the critical habitat for the northern spotted owl were published by USFWS on December 4, 2012, with an effective date of January 3, 2013. The proposed project is not located within designated critical habitat for NSO. Potential foraging, roosting, nesting, and dispersal habitat is present within the project limits.

Protocol level surveys for northern spotted owl were conducted in 2015 and completed in August 2016. Three call points were established as calling locations; the bridge site itself, and two locations within 0.25-mile of McCoy Creek Bridge in either direction located along SR 271. NSO were not contacted or detected; therefore NSO has been determined to be absent from the project limits.

Potential Effects

Anadromous Fish

Build Alternative:

The following CEQA Checklist item was used to evaluate the impacts of the proposed project on anadromous fish:

- Would the project 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 Wildlife or United States Fish and Wildlife Service?

Work on the bridge would be conducted above the OHWM of McCoy Creek. Due to standard containment measures, no material would be anticipated to fall onto the bank or into the creek.

The proposed project would have minor impacts to what could be considered upland riparian vegetation through the removal of small redwood trees for the access at the northeast corner of the bridge, the placement of the new abutments, and the new alignment, which would be slightly east of the current alignment.

Based on the scope of the work, the project is expected to have no impact on anadromous fish; however, Caltrans is proceeding conservatively, and exercising coverage under Programmatic Biological Opinion (PBO) issued to Caltrans by NMFS in October 2013. For the purposes of the PBO, Caltrans has determined that the proposed project ***may affect, but is not likely to adversely affect*** the southern Oregon/Northern California coho salmon, Northern California steelhead, and California Coastal Chinook salmon. Further, given the project would not affect EFH or designated critical habitat, a ***no effect*** determination was made for these resources.

No Build Alternative:

The existing condition would remain; therefore, no impact would occur to anadromous fish.

NSO

Build Alternative:

The following CEQA Checklist item was used to evaluate the impacts of the proposed project on the northern spotted owl:

- Would the project 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 Wildlife or United States Fish and Wildlife Service?

Based on protocol surveys, this species has been determined to be absent from the project location, therefore, the project is not expected to have any impact on NSO. For FESA purposes, given the project would not affect NSO critical habitat, a **no effect** determination was made for NSO.

No Build Alternative:

The existing condition would remain; therefore, no impact would occur.

Avoidance, Minimization, and/or Mitigation Measures

Anadromous Fish

Given that the project is not anticipated to adversely affect anadromous fish, no mitigation measures are proposed.

NSO

Given that the project is not anticipated to impact NSO or their designated critical habitat, no mitigation measures are proposed.

CEQA Considerations

Based on the following, a “less than significant impact” determination for the build alternative was made with respect to anadromous fish:

- BMPs and other standard measures to protect water quality, including not placing on-bridge permanent bat habitat over the creek.
- Work on the roadside ditch at the southeast corner of the bridge would occur during the dry season.
- Water draining from the bridge deck would be channeled via scupper onto RSP to reduce the potential for erosion and to allow for infiltration before reaching McCoy Creek, which would improve the existing condition.
- No work would occur below the OHWM of McCoy Creek.
- Standard containment measures would be in place to prevent materials falling onto the bank or into the creek.

Based on the following, a “no impact” determination for the build alternative was made with respect to NSO:

- Two seasons of surveys were conducted; NSO were not found to be present at the project location.
- No designated critical habitat would be affected by the project.

Given the No-Build alternative would not alter the environment, a “no impact” determination was made for this alternative.

Cumulative Effects

Given the scope of the project, the absence of NSO in the project area, and the implementation of a debris containment system, standard measures, and other BMPs, no cumulative effects would be anticipated for anadromous fish and NSO.

INVASIVE SPECIES

Regulatory Setting

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

Affected Environment

Scotch broom (*Cytisus scoparius*) is an invasive/noxious plant species listed on CDFA and Cal-IPC noxious weed lists and was found within the ESL during plant surveys conducted for this project. This species is included on the California Invasive Plant Council (Cal-IPC) inventory in the high category. Species rated as high have severe ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal and establishment. Most species in the high category are widely distributed ecologically. Scotch Broom is the only listed invasive species on the CAL-IPC list; however, several other invasive species are located within the project limits.

Potential Effects

Build Alternative:

Given the standard measures associated with complying with Executive Order (EO) 13112, the project would be expected to have a beneficial effect within the project limits. Standard measures would be applied to all invasive species, whether or not listed by Cal-IPC.

No Build Alternative:

The existing condition would remain; therefore, no impact would occur.

Avoidance, Minimization, and/or Mitigation Measures

Given the project would be expected to have a beneficial effect with regard to invasive species, no mitigation measures are proposed.

CEQA Considerations

Based on the following, a “no impact” determination for the build alternative was made with respect to invasive species:

- Standard measures would be implemented to ensure that:
 - Invasive species would be removed from the project location.
 - Native species or non-persistent hybrids would be used to revegetate disturbed soil areas to prevent reestablishment of invasive species.

Given the No-Build alternative would not alter the environment, a “no impact” determination was made for this alternative.

Cumulative Effects

Given the scope of the project and the inclusion of standard measures to remove and prevent the spread and reestablishment of invasive species, cumulative impacts are not expected to occur as a result of the proposed project.

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 gas (GHG) emissions, 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 in 1988 has led to increased efforts devoted to GHG emissions reduction and climate change research and policy. These efforts are primarily concerned with the emissions of GHGs generated by human activity including carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), tetrafluoromethane, hexafluoroethane, sulfur hexafluoride (SF₆), HFC-23 (fluoroform), HFC-134a (s, s, s, 2-tetrafluoroethane), and HFC-152a (difluoroethane).

In the United States, the main source of GHG emissions is electricity generation, followed by transportation. In California, however, transportation sources (including passenger cars, light-duty trucks, other trucks, buses, and motorcycles) make up the largest source of GHG-emitting sources. The dominant GHG emitted is CO₂, mostly from fossil fuel combustion.

There are typically two terms used when discussing the impacts of climate change: "Greenhouse Gas Mitigation" and "Adaptation." "Greenhouse Gas Mitigation" is a term for reducing GHG emissions to reduce or "mitigate" the impacts of climate change. "Adaptation" refers to the effort of planning for and adapting to impacts resulting from climate change (such as adjusting transportation design standards to withstand more intense storms and higher sea levels)².

There are four primary strategies for reducing GHG emissions from transportation sources: 1) improving the transportation system and operational efficiencies, 2) reducing travel activity, 3) transitioning to lower GHG-emitting fuels, and 4) improving vehicle technologies/efficiency. To be most effective, all four strategies should be pursued cooperatively.³

² http://climatechange.transportation.org/ghg_mitigation/

³ http://www.fhwa.dot.gov/environment/climate_change/mitigation/

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 proactive approach to dealing with GHG emissions and climate change.

Assembly Bill 1493 (AB 1493), Pavley, Vehicular Emissions: Greenhouse Gases, 2002: This bill requires the California Air Resources Board (ARB) to develop and implement regulations to reduce automobile and light truck GHG emissions. These stricter emissions standards were designed to apply to automobiles and light trucks beginning with the 2009-model year.

Executive Order (EO) S-3-05 (June 1, 2005): The goal of this EO is to reduce California's GHG emissions to 1) year 2000 levels by 2010, 2) year 1990 levels by 2020, and 3) 80 percent below the year 1990 levels by 2050. In 2006, this goal was further reinforced with the passage of Assembly Bill 32.

Assembly Bill 32 (AB 32), Núñez and Pavley, The Global Warming Solutions Act of 2006: AB 32 sets the same overall GHG emissions reduction goals as outlined in EO S-3-05, while further mandating that ARB create a scoping plan and implement rules to achieve "real, quantifiable, cost-effective reductions of greenhouse gases."

Executive Order S-20-06 (October 18, 2006): This order establishes the responsibilities and roles of the Secretary of the California Environmental Protection Agency (Cal/EPA) and state agencies with regard to climate change.

Executive Order S-01-07 (January 18, 2007): This order set forth the low carbon fuel standard for California. Under this EO, the carbon intensity of California's transportation fuels is to be reduced by at least 10 percent by 2020.

Senate Bill 97 (SB 97) Chapter 185, 2007, Greenhouse Gas Emissions: This bill required the Governor's Office of Planning and Research (OPR) to develop recommended amendments to the California Environmental Quality Act (CEQA) Guidelines for addressing GHG emissions. The amendments became effective on March 18, 2010.

Senate Bill 375 (SB 375), Chapter 728, 2008, Sustainable Communities and Climate Protection: This bill requires the California Air Resources Board (CARB) to set regional emissions reduction targets from passenger vehicles. The Metropolitan Planning Organization (MPO) for each region must then develop a "Sustainable Communities Strategy" (SCS) that integrates transportation,

land-use, and housing policies to plan for the achievement of the emissions target for their region.

Senate Bill 391 (SB 391) Chapter 585, 2009 California Transportation Plan: This bill requires the State's long-range transportation plan to meet California's climate change goals under AB 32.

FEDERAL

Although climate change and GHG reduction are a concern at the federal level, currently no regulations or legislation have been enacted specifically addressing GHG emissions reductions and climate change at the project level. Neither the United States Environmental Protection Agency (US EPA) nor the Federal Highway Administration (FHWA) has issued explicit guidance or methods to conduct project-level GHG analysis.⁴ FHWA supports the approach that 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 assist in 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 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 outlined by FHWA to lessen climate change impacts correlate with efforts the state is undertaking to deal with transportation and climate change. These strategies include improved transportation system efficiency, cleaner fuels, cleaner vehicles, and a reduction in travel activity.

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 EO 13514 - *Federal Leadership in Environmental, Energy and Economic Performance*.

Executive Order 13514 (October 5, 2009): This order is focused on reducing greenhouse gases internally in federal agency missions, programs and operations, but also directs federal agencies to participate in the Interagency Climate Change Adaptation Task Force, which is engaged in developing a national strategy for adaptation to climate change.

⁴ To date, no national standards have been established regarding mobile source GHGs, nor has US EPA established any ambient standards, criteria or thresholds for GHGs resulting from mobile sources.

US EPA's authority to regulate GHG emissions stems from the U.S. Supreme Court decision in *Massachusetts v. EPA* (2007). The Supreme Court ruled that GHGs meet the definition of air pollutants under the existing Clean Air Act and must be regulated if these gases could be reasonably anticipated to endanger public health or welfare. Responding to the Court's ruling, U.S. EPA finalized an endangerment finding in December 2009. Based on scientific evidence it found that six greenhouse gases constitute a threat to public health and welfare. Thus, it is the Supreme Court's interpretation of the existing Act and EPA's assessment of the scientific evidence that form the basis for EPA's regulatory actions. U.S. EPA in conjunction with NHTSA issued the first of a series of GHG emission standards for new cars and light-duty vehicles in April 2010.⁵

The 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.

The final combined standards that made up the first phase of this national program apply to passenger cars, light-duty trucks, and medium-duty passenger vehicles, from model years 2012 through 2016. The standards implemented by this program are expected to reduce 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 August 28, 2012, U.S. EPA and NHTSA issued a joint Final Rulemaking to extend the National Program for fuel economy standards to model years 2017 through 2025 passenger vehicles. Over the lifetime of model years 2017 to 2025 standards this program is projected to save approximately four billion barrels of oil and two billion metric tons of GHG emissions.

The complementary U.S. EPA and NHTSA standards that make up the Heavy-Duty National Program apply to combination tractors (semi trucks), heavy-duty pickup trucks and vans, and vocational vehicles (including buses and refuse or utility trucks). Together, these standards will cut greenhouse gas emissions and domestic oil use significantly. This program responds to President Barack Obama's 2010 request to jointly establish greenhouse gas emissions and fuel efficiency standards for the medium- and heavy-duty highway vehicle sector. The agencies estimate that the combined standards will reduce CO₂ emissions by about 270 million metric tons and save about 530 million barrels of oil over the life of model year 2014 to 2018 heavy duty vehicles.

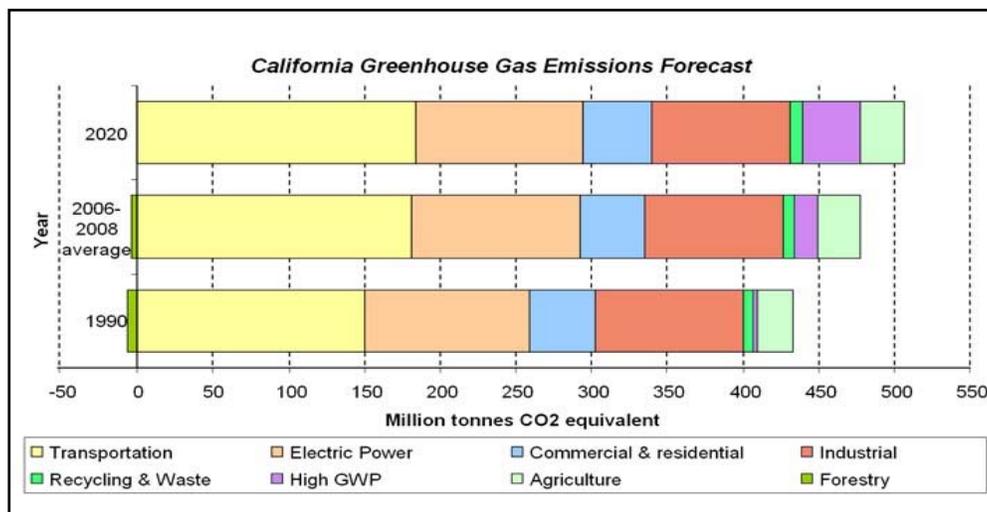
⁵ <http://www.c2es.org/federal/executive/epa/greenhouse-gas-regulation-faq>

Project Analysis

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 contribute to a potential impact through its *incremental* change in emissions when combined with the contributions of all other sources of GHG.⁶ In assessing cumulative impacts, it must be determined if a project's incremental effect is "cumulatively considerable" (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 to make this determination is a difficult, if not impossible, task.

The AB 32 Scoping Plan mandated by AB 32 includes the main strategies California will use to reduce GHG emissions. As part of its supporting documentation for the Draft Scoping Plan, the ARB released the GHG inventory for California (forecast last updated: October 28, 2010). The forecast is an estimate of the emissions expected to occur in 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.

Figure 6. California Greenhouse Gas Chart



SOURCE: [HTTP://WWW.ARB.CA.GOV/CC/INVENTORY/DATA/FORECAST.HTM](http://www.arb.ca.gov/cc/inventory/data/forecast.htm)

⁶ 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 South Coast Air Quality Management District (Chapter 6: The CEQA Guide, April 2011) and the U.S. Forest Service (Climate Change Considerations in Project Level NEPA Analysis, July 13, 2009).

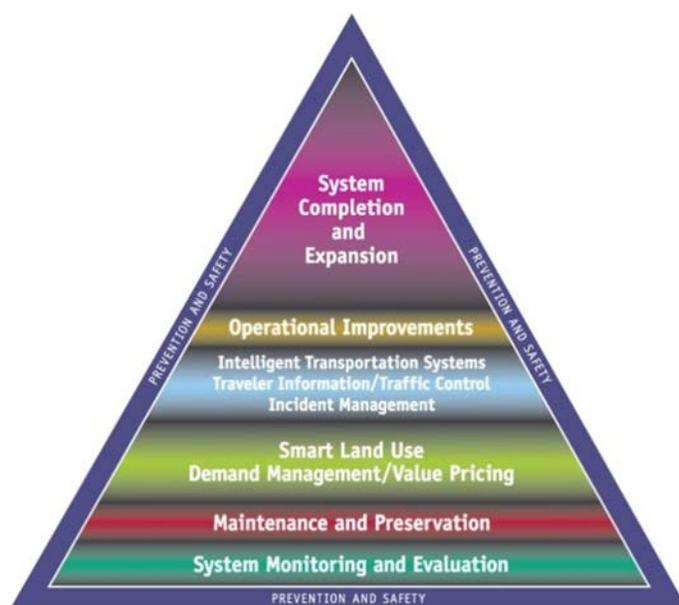
Caltrans and its parent agency, the Transportation Agency, have taken an active role in addressing GHG emission reduction and climate change. Recognizing that 98 percent of California's GHG emissions are from the burning of fossil fuels and 40 percent of all human made GHG emissions are from transportation, Caltrans has created and is implementing the Climate Action Program that was published in December 2006.⁷

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 on-site construction equipment, and emissions arising from traffic delays due to construction. These emissions are 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.

Greenhouse Gas Reduction Strategies

Figure 7: The Mobility Pyramid



The Department continues to be involved on the Governor's Climate Action Team as the ARB works to implement Executive Orders S-3-05 and S-01-07 and help achieve the targets set forth in AB 32. Many of the strategies the Department is using to help meet the targets in AB 32 come from then-Governor Arnold Schwarzenegger's Strategic Growth Plan for California. The Strategic Growth Plan targeted a significant decrease in traffic congestion below 2008 levels and a corresponding reduction in GHG emissions, while accommodating growth in population and

⁷ 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

the economy. 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 shown in Figure 7: The Mobility Pyramid.

Caltrans is supporting efforts to reduce vehicle miles traveled by planning and implementing smart land use strategies: job/housing proximity, developing transit-oriented communities, and high-density housing along transit corridors. The Department works closely with local jurisdictions on planning activities, but does not have local land use planning authority. The Department assists 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 ongoing research efforts at universities, by supporting legislative efforts to increase fuel economy, and by participating on the Climate Action Team. It is important to note, however, that control of fuel economy standards is held by the U.S. EPA and ARB. The Department is also working towards enhancing the State's transportation planning process to respond to future challenges. Similar to requirements for regional transportation plans under Senate Bill (SB) 375 (Steinberg 2008), SB 391 (Liu 2009) requires the State's long-range transportation plan to meet California's climate change goals under Assembly Bill (AB) 32.

The California Transportation Plan (CTP) is a statewide, long-range transportation plan to meet our future mobility needs and reduce greenhouse gas (GHG) emissions. The CTP defines performance-based goals, policies, and strategies to achieve our collective vision for California's future, statewide, integrated, multimodal transportation system.

The purpose of the CTP is to provide a common policy framework that will guide transportation investments and decisions by all levels of government, the private sector, and other transportation stakeholders. Through this policy framework, the CTP 2040 will identify the statewide transportation system needed to achieve maximum feasible GHG emission reductions while meeting the State's transportation needs.

Table 4 summarizes the Departmental and statewide efforts that the Department is implementing to reduce GHG emissions. More detailed information about each strategy is included in the [Climate Action Program at Caltrans](#) (December 2006).

Table 4. Climate Change/CO₂ Reduction Strategies

Strategy	Program	Partnership		Method/Process	Estimated CO ₂ Savings Million Metric Tons (MMT)	
		Lead	Agency		2010	2020
Smart Land Use	Intergovernmental Review (IGR)	Caltrans	Local governments	Review and seek to mitigate development proposals	Not Estimated	Not Estimated
	Planning Grants	Caltrans	Local and regional agencies and other stakeholders	Competitive selection process	Not Estimated	Not Estimated
	Regional Plans and Blueprint Planning	Regional Agencies	Caltrans	Regional plans and application process	0.975	7.8
Operational Improvements & Intelligent Transportation System (ITS) Deployment	Strategic Growth Plan	Caltrans	Regions	State ITS; Congestion Management Plan	0.07	2.17
Mainstream Energy and 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 and Information Program	Office of Policy Analysis & Research	Interdepartmental, CalEPA, ARB, CEC		Analytical report, data collection, publication, workshops, outreach	Not Estimated	Not Estimated
Fleet Greening and Fuel Diversification	Division of Equipment	Department of General Services		Fleet Replacement B20 B100	0.0045	0.0065 0.045 0.0225
Non-vehicular Conservation Measures	Energy Conservation Program	Green Action Team		Energy Conservation Opportunities	0.117	0.34
Portland Cement	Office of Rigid Pavement	Cement and Construction Industries	2.5 % limestone cement mix	1.2	4.2	
			25% fly ash cement mix	0.36	3.6	
			> 50% fly ash/slag mix			
Goods Movement	Office of Goods Movement	Cal EPA, ARB, BT&H, MPOs		Goods Movement Action Plan	Not Estimated	Not Estimated
Total					2.72	18.18

Caltrans Director's Policy 30 (DP-30) Climate Change (June 22, 2012): is intended to establish a Department policy that will ensure coordinated efforts to incorporate climate change into Departmental decisions and activities.

Caltrans Activities to Address Climate Change (April 2013)⁸ provides a comprehensive overview of activities undertaken by Caltrans statewide to reduce greenhouse gas emissions resulting from agency operations.

The following measure will also be included in the project to reduce the GHG emissions and potential climate change impacts from the project:

- According to the Department's Standard Specifications, the contractor must comply with all local Air Pollution Control District's (APCD) rules, ordinances, and regulations for air quality restrictions.

Adaptation Strategies

"Adaptation strategies" refer to how the Department 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, variability in storm surges and intensity, and the frequency and intensity of wildfires. These changes may affect the transportation infrastructure in various ways, such as damage to roadbeds from 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 task force progress report on October 28, 2011⁹, outlining the federal government's progress in expanding and strengthening the Nation's capacity to better understand, prepare for, and respond to extreme events and other climate change impacts. The report provides an update on actions in key areas of federal adaptation, including: building resilience in local communities, safeguarding critical natural resources such as freshwater, and providing accessible climate information and tools to help decision-makers manage climate risks.

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

⁸ http://www.dot.ca.gov/hq/tpp/offices/orip/climate_change/projects_and_studies.shtml

⁹ <http://www.whitehouse.gov/administration/eop/ceq/initiatives/adaptation>

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

In addition to addressing projected 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)¹⁰, 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 EO 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 the California Environmental Protection Agency; Business, Transportation and Housing; Health and Human Services; and the Department of Agriculture. The document is broken down into strategies for different sectors which 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 National Academy of Science was directed to prepare a Sea Level Rise Assessment Report¹¹ to recommend how California should plan for future sea level rise. The report was released in June 2012 and included:

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

¹⁰ <http://www.energy.ca.gov/2009publications/CNRA-1000-2009-027/CNRA-1000-2009-027-F.PDF>

¹¹ *Sea Level Rise for the Coasts of California, Oregon, and Washington: Past, Present, and Future* (2012) is available at http://www.nap.edu/catalog.php?record_id=13389.

In 2010, interim guidance was released by the Coastal Ocean Climate Action Team (CO-CAT) and Caltrans as a method to initiate action and discussion of potential risks to the states infrastructure due to projected sea level rise. Subsequently, CO-CAT updated the Sea Level Rise guidance to include information presented in the National Academies Study.

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

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 also directed the Business, Transportation, and Housing Agency to prepare a report to assess vulnerability of transportation systems to sea level rise 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 effects, 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 to review its current design standards to determine what changes, if any, may be needed 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. The Department is an active participant in efforts being conducted in response to EO S-13-08 and is mobilizing to be able to respond to the National Academy of Science Sea Level Rise Assessment Report.

List of Preparers

Barbash, Phlora, Landscape Associate. Contribution: Visual Impact Assessment

Blair, Steve, Senior Transportation Engineer. Contribution: Project Manager

Croteau, Steve, Senior Environmental Planner. Contribution: Environmental Branch Chief

East, Julie, Associate Environmental Planner. Contribution: Project Coordinator and
Environmental Document Preparation

Hadden, Samantha, Transportation Engineer. Contribution: Water Quality Assessment Report

James, Brian, Associate Environmental Planner (Archaeology). Contribution: Historic Property
Survey Report

Melani, Mark, Associate Environmental Planner. Contribution: Initial Site Assessment

Reynolds, Coady, Associate Environmental Planner (Natural Sciences). Contribution: Natural
Environment Study

Smith, Matt, Project Engineer. Contribution: Project Design

Timmons, Kelly, Senior Transportation Engineer. Contribution: Project Design