WESTPORT CULVERTS PROJECT

INITIAL STUDY

with Proposed Mitigated Negative Declaration



MENDOCINO COUNTY, CALIFORNIA

DISTRICT 1 – MEN – 1 Post Miles 75.47 to 84.10

EA 01-0K170 / EFIS 0120000037

Prepared by the
State of California Department of Transportation

August 2024



General Information About This Document

What is in this document?

The California Department of Transportation (Caltrans) has prepared this Initial Study with proposed Mitigated Negative Declaration (IS/MND) which examines the potential environmental effects of the proposed Westport Culverts Project on State Route 1 near Westport, 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, the potential impacts of the project, and proposed avoidance, minimization, and/or mitigation measures.

What should you do?

- Please read this document.
- Additional copies of this document are available for review at the Caltrans District 1 Office, 1656 Union Street, Eureka, CA or at the Fort Bragg Branch of Mendocino County Library, 499 E Laurel St, Fort Bragg, CA 95437.
- This document may be downloaded at the following website: https://dot.ca.gov/caltrans-near-me/district-3/d3-programs/d3-environmental/d3-environmental-docs/d3-mendocino-county.
- 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 the deadline.
- Please send comments via U.S. mail to:

  California Department of Transportation
  Attention: Gillian Levy
  North Region Environmental–District 1
  1656 Union Street
  Eureka, CA 95501

- Send comments via e-mail to: gillian.levy@dot.ca.gov
- Be sure to send comments by the deadline: **September 18, 2024**

What happens after this?

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 obtained, Caltrans could complete the 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 write to or call Caltrans, Attention: Gillian Levy, North Region Environmental-District 1, 1656 Union Street, Eureka, CA 95501; (707) 498-4071 Voice, or use the California Relay Service 1 (800) 735-2929 (TTY to Voice), 1 (800) 735-2922 (Voice to TTY), 1 (800) 855-3000 (Spanish TTY to Voice and Voice to TTY), 1-800-854-7784 (Spanish and English Speech-to-Speech) or 711.

WESTPORT CULVERTS PROJECT

Culvert improvements on State Route 1 in Mendocino County,
from Post Miles 75.47 to 84.10 starting 1.5 miles south of Westport

INITIAL STUDY

with Proposed Mitigated Negative Declaration

Submitted Pursuant to: Division 13, California Public Resources Code

THE STATE OF CALIFORNIA
Department of Transportation

08/13/2024
Date of Approval

Liza Walker
Liza Walker, Office Chief
North Region Environmental-District 1
California Department of Transportation
CEQA Lead Agency

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PROPOSED MITIGATED NEGATIVE DECLARATION

Pursuant to: Division 13, California Public Resources Code

SCH Number: Pending

Project Description

The California Department of Transportation (Caltrans) proposes the Westport Culverts Project to improve drainage systems and reduce erosion along State Route 1 (SR 1) in Mendocino County, starting 1.5 miles south of Westport at Post Mile (PM) 75.47 and ending at PM 84.10.

Determination

This Initial Study with 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 Caltrans' 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 impact on the environment for the following reasons:

The project would have *No Impact on*:

- Aesthetics
- Agriculture and Forest Resources
- Air Quality
- Cultural Resources
- Energy
- Geology and Soils
- Hazards and Hazardous Materials
- Land Use and Planning
- Mineral Resources
- Population and Housing
- Public Services
- Recreation
- Transportation
- Tribal Cultural Resources
- Utilities and Service Systems
- Wildfire
- Mandatory Findings of Significance

DRAFT

The project would have *Less than Significant Impacts* to:

- Greenhouse Gas Emissions
- Hydrology and Water Quality
- Noise

With the following mitigation measures incorporated, the project would have *Less than Significant Impacts to* Biological Resources:

- Mitigation for impacts to Waters of the U.S. and State would be offset at an appropriate off-site location approved by the resource and regulatory agencies. Off-site compensatory mitigation options could include the purchase of credits from the Mendocino Coast Mitigation Bank. Appropriate mitigation ratios would be identified and coordinated with resource agencies.

_____ _____

Liza Walker, Office Chief
North Region Environmental–District 1
California Department of Transportation

Date

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List of Acronyms and Abbreviated Terms

Acronym/Abbreviation	Description
AB	Assembly Bill
ADL	Aerially Deposited Lead
APC	Alternative Pipe Culvert
BMPs	Best Management Practices
BSA	Biological Study Area
Cal-IPC	California Invasive Plant Council
CAA	Clean Air Act
CAFE	Corporate Average Fuel Economy
CAL-CET	Caltrans Construction Emissions Tool
CAL FIRE	California Department of Forestry and Fire Protection
Caltrans	California Department of Transportation
CAPTI	Climate Action Plan for Transportation Infrastructure
CARB	California Air Resources Board
CCA	California Coastal Act
CCC	California Coastal Commission
CCC	Central California Coast (coho salmon ESU)
CCR	California Code of Regulations
CDFG	California Department of Fish and Game
CDFW	California Department of Fish and Wildlife
CDP	Coastal Development Permit
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFGC	California Fish and Game Code
CFR	Code of Federal Regulations
CGP	Construction General Permit
CH	Critical Habitat
CH_4	methane
CNDDB	California Natural Diversity Database
CMP	Corrugated Metal Pipe
CNPS	California Native Plant Society
County	County of Mendocino
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
CRPR	California Rare Plant Rank
CSP	Corrugated Steel Pipe
CTP	California Transportation Plan
CWA	Clean Water Act

Acronym/Abbreviation	Description
dB	decibels
dBA	A-weighted Decibels
DBH	Diameter-at-Breast-Height
Department	Caltrans
DD	Downdrain
DI	Drainage Inlet
DOT	Department of Transportation
DP	Director's Policy
DPP	Design Pollution Prevention
DPS	Distinct Population Segment
DSA	Disturbed Soil Area
ECL	Environmental Construction Liaison
EFH	Essential Fish Habitat
EIR	Environmental Impact Report
EO(s)	Executive Order(s)
EPA	Environmental Protection Agency
ES	Environmental Scientist
ES	Ephemeral Stream
ESA	Endangered Species Act
ESA(s)	Environmentally Sensitive Area(s)
ESHAs	Environmentally Sensitive Habitat Areas
ESL	Environmental Study Limits
ESU	Evolutionarily Significant Unit
ºF	degrees Fahrenheit
FC	Federal Candidate
FGDC	Federal Geographic Data Committee
FE	Federal Endangered (ESA Listing Status)
FES	Flared End Section
FESA	Federal Endangered Species Act
FHSZ	Fire Hazard Severity Zone (CAL FIRE)
FHWA	Federal Highway Administration
FMP	Fishery Management Plan
FP	Federal Proposed (ESA Listing Status)
FP	Fully Protected (Federal or State Listing Status)
FR	Federal Register
FT	Federal Threatened (ESA Listing Status)
FT	Feet/Foot
FYLF	Foothill yellow-legged frog
GDP	Gross Domestic Product
GHG	Greenhouse Gas
GWP	Global Warming Potential

Acronym/Abbreviation	Description
HDPE	High Density Polyethylene
H&SC	Health & Safety Code
HFCs	hydrofluorocarbons
IPaC	Information for Planning and Consultation (USFWS)
IS	Initial Study
IS/MND	Initial Study / Mitigated Negative Declaration
LCP	Local Coastal Program
LSAA	Lake and Streambed Alteration Agreement
MAMU	Marbled murrelet
MBTA	Migratory Bird Treaty Act
MCOG	Mendocino County of Governments
MCV	Manual of California Vegetation
MLD	Most Likely Descendent
MMT	million metric tons
MMRP	Mitigation Monitoring and Reporting Program
$MMTCO_2e$	Million metric tons of carbon dioxide equivalent
MND	Mitigated Negative Declaration
MPO	Metropolitan Planning Organization
MSA	Magnuson-Stevens Fishery Conservation and Management Act
MSL	Mean Sea Level
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriation Act of 1990
NAHC	Native American Heritage Commission
NC	North Coast
NC	Northern California
NCRWQCB	North Coast Regional Water Quality Control Board
ND	Negative Declaration
NEPA	National Environmental Policy Act
NES	Natural Environment Study
NHTSA	National Highway Traffic and Safety Administration
NIS	New Impervious Surface
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NRLF	Northern red-legged frog
NSO	Northern Spotted Owl
NWI	National Wetland Inventory
NWP	Nationwide Permit

Acronym/Abbreviation	Description
OHW	Ordinary High Water
OHWM	Ordinary High Water Mark
OPR	(California Governor's) Office of Planning and Research
OW	Other Waters of the U.S.
PBO	Programmatic Biological Opinion
PDT	Project Development Team
PEM	Palustrine Emergent Wetland
PFMC	Pacific Fishery Management Council
PLACs	Permits, Licenses, Agreements and Certifications
PLOC	Programmatic Letter of Concurrence
PM(s)	Post Mile(s)
Porter-Cologne Act	Porter-Cologne Water Quality Control Act
Project	Westport Culverts Project
PRC	Public Resources Code (California)
R6	Ephemeral Stream classification (Riverine, Ephemeral)
RCP	Representative Concentration Pathways 8.5 Emissions Scenario
RECP	Rolled Erosion Control Products
RED	Rock Energy Dissipator
ROW/RW	Right of Way
RSP	Rock Slope Protection
RTP	Regional Transportation Plan
RTPA	Regional Transportation Planning Agency
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SC	State Candidate (ESA Listing Status)
SCS	Sustainable Communities Strategy
SE	State Endangered (ESA Listing Status)
SF	Square foot/feet
SHPO	State Historic Preservation Officer
SHS	State Highway System
SLR	Sea Level Rise
SNC(s)	Sensitive Natural Community(ies)
SR	State Route
SRA	State Responsibility Area
SRZ	Structural Root Zone
SSC	Species of Special Concern (State)
SSP	Standard Special Provisions
ST	State Threatened (ESA Listing status)
SWMP	Storm Water Management Plan
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board

Acronym/Abbreviation	Description
TCE	Temporary Construction Easement
THVF	Temporary High Visibility Fencing
TMDLs	Total Maximum Daily Loads
TMP	Transportation Management Plan
U.S. or US	United States
USACE	United States Army Corps of Engineers
USC	United States Code
USDOT	U.S. Department of Transportation
U.S. EPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	United States Geological Survey
USGCRP	U.S. Global Change Research Program
VIA	Visual Impact Assessment
VMT	Vehicle Miles Traveled
WOTUS	Waters of the United States
WPCP	Water Pollution Control Program
WPT	Western Pond Turtle



Chapter 1. Proposed Project

1.1 Project History

This project was initiated in 2009 when several failing or damaged drainage systems needing repair or replacement were identified in Mendocino County on State Route (SR) 1. The project initially consisted of 15 culvert locations. The project was later split into three separate projects. For this project, a total of 5 drainage systems were identified as needing repair. All the drainage systems were deemed as being in poor condition.

The Department of Transportation (Caltrans) is the lead agency under the California Environmental Quality Act (CEQA).

1.2 Project Description

The original project that programmed in 2017 and the 15 culverts that were identified for repairs were split into three different projects. That project was renamed Rockport Culverts Project, and it addressed damaged culverts from Post Miles 85.09 to 88.95. The proposed Westport Culverts Project would replace five culvert systems along SR 1 in Mendocino County from PM 75.47 to PM 84.10 between Blue Slide Gulch Bridge and Hardy Creek Bridge. Proposed work activities at each culvert are outlined in detail below.

Project Objective

Purpose

The purpose of the proposed project is to improve drainage systems and reduce erosion to protect the structural integrity of SR 1.

Need

The project is needed because several culverts are severely damaged or have failed, resulting in insufficient drainage capacity causing roadway flooding and embankment erosion. The current condition of the drainage systems within the project limits could lead to roadway failure along SR 1.

Proposed Project

Caltrans proposes a culvert replacement project along SR 1 in Mendocino County, beginning 1.5 miles south of Westport from PM 75.47 to PM 84.10 (Figure 1). While most of the activities would be conducted within the existing Caltrans right of way (ROW), access and culvert replacement at all culvert locations would require a temporary construction easement (TCE) from adjacent private property owners for small areas at the inlets and outlets adjacent to the ROW, as well as permanent drainage easements for these areas. Replacement methods vary based on culvert conditions and topography.

If water is present at the beginning of construction, a Temporary Creek Diversion System for diverting water may be required at any or all of the locations. Minor tree removal, clearing, and grubbing would be required for construction access, culvert replacement, and installation of bank stabilization activities.

All five culverts would be replaced using the half-width cut and cover installation. Existing facilities and detailed descriptions of proposed work by location are described below.

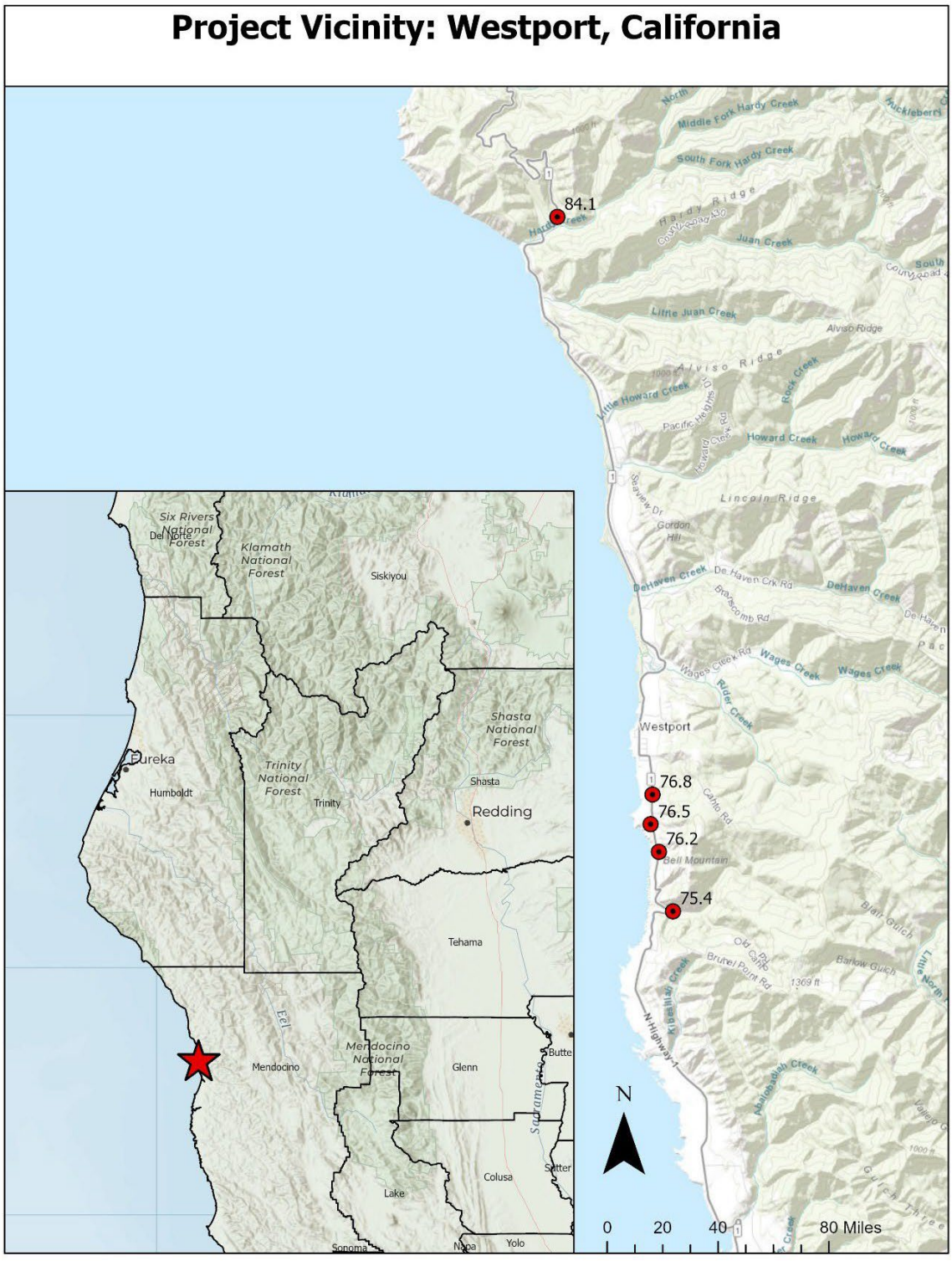


Figure 1. Project Vicinity

Construction Scenario

Replacement of culverts via cut and cover method would generally include the following steps:

1. Set up temporary traffic control using portable delineators and traffic signs for single lane closure as required.
2. Set up staging areas in designated pullouts, as well as within the existing closed portion of the roadbed.
3. Set up project Best Management Practices (BMPs), as needed.
4. Conduct nesting bird surveys, as needed, for vegetation clearing.
5. Conduct minor vegetation removal. May require small equipment such as a bobcat and trimming/removal equipment.
6. Set up clear water diversion, as needed.
7. Sawcut or grind existing roadway one traffic lane at a time (half width construction).
8. Conduct culvert improvements one half at a time (half width construction).
    i. Excavate trench using an excavator.
    ii. Remove or abandon existing culvert, inlets, and associated drainage structures per plan using a crane, excavator, dump truck or bobcat.
    iii. Install new culverts using a crane, backhoe, loader, bobcat, or compactor.
    iv. Construct inlets, headwalls, wingwalls, downdrains (DDs), and outfalls per plan using a crane, excavator, bobcat; compactors may be required. Concrete truck will operate from the closed traffic lane with potential use of a concrete pump.
9. Remove clear water diversion, as needed.
10. Replace or install rock slope protection (RSP) as needed or fill under the DD using excavator, bobcat, skip loader, or boom truck.
11. At locations where culverts would be realigned, backfill existing culvert location with structural backfill (i.e., soil, or fill, from excavated area for new culvert location).

12. Restore asphalt using paver and pavement striper.
13. Restore site, including placing erosion control measures.

Culvert at PM 75.47

The existing drainage system consists of an 18-inch-diameter by 36.2-foot-long corrugated metal pipe (CMP) culvert which conveys stormwater runoff from a shallow ditch on the west side of SR 1 into the inlet. The culvert should then funnel flow from this drainage through the culvert to allow the water to outlet onto a sloped vegetation berm. However, currently the culvert is blocked with sediment and there is no stormwater flow through the culvert.

The existing 18-inch-diameter culvert would be replaced with a 24-inch-diameter by 36.4-foot-long Alternative Pipe Culvert (APC) to better accommodate stormwater flow in major storms and for easier maintenance. The outlet of the new culvert would be raised by 1 foot and the inlet lowered in elevation by 2 feet. A concrete drainage inlet (DI) would be installed at the culvert inlet, approximately 4 feet tall x 6 feet long x 1 foot wide. Approximately 72 square feet (SF) of RSP would be placed on top of a gravel filter at the outlet.

Staging could occur in the pullout west of SR 1, along the northern edge of Chadbourne Gulch on the southbound side of SR 1. Access for culvert replacement, DD installation, and RSP placement would require vegetation clearing and grubbing, but no tree removal would be necessary.

Culvert at PM 76.20

This culvert is located just north of the area known as the Westport Slide and drains an ephemeral/perennial stream that falls down a vertical face to the beach. The existing culvert is a 36-inch-diameter by 128-foot-long corrugated steel pipe (CSP) culvert with a 36-inch-diameter by 24-foot-long CMP downdrain (DD) which conveys water from an unnamed relatively permanently flowing drainage into the culvert inlet which includes a 1-foot-wide by 9-foot-long by 5-foot-tall concrete headwall. The culvert and DD funnel flow from this drainage through the culvert, which outlets downstream directly onto a cliff approximately 215 feet above the Pacific Ocean.

The cut and cover method would be used to replace the existing culvert, which would require the abandonment of the existing culvert, meaning it would be backfilled with sand or slurry cement backfill. The proposed replacement culvert would place the inlet about 5 feet higher than the existing culvert, requiring soil fill at the inlet to attain a slope of 5%, and with a

length of 87 feet by 36 inches. Although the trench required for the proposed pipe would be within 20 feet of the roadway surface, an access road would be required to place the RSP and to dig the outlet portion of the culvert. The old headwall would be replaced and elevated by 5 feet. At the culvert outlet, 162 SF of RSP would be placed on top of a gravel filter.

Staging could occur in the large pullout immediately southwest of PM 76.20 (on the southbound side of SR 1) and at a small unpaved turnout immediately northwest of PM 76.20 (on the northbound side of SR 1). Access for culvert replacement, DD installation, and RSP placement would require vegetation clearing and grubbing, including the removal of protected riparian and Sensitive Natural Community (SNC) coastal willow (*Salix hookeriana*) trees at PMs 76.20, 76.52, and 76.81.

Culvert at 76.52

The existing culvert is a 30-inch-diameter by 76.7-foot-long CSP culvert. Water from an unnamed relatively permanent drainage flows into the culvert inlet, passing through the culvert, then outlets over the edge of a steep 8-foot-tall wall which flows into a deep pool. It then continues downstream on private property through a second 30-inch-diameter, 19-foot-long CSP culvert that outlets into a relatively permanently flowing drainage. This watercourse eventually empties directly into the Pacific Ocean.

The existing culvert would be replaced with a new 30-inch-diameter, 75.7-foot-long APC culvert. A new 1-foot-wide, 10-foot-long, 4.2-foot-high concrete headwall would be installed at the inlet, along with a 12.5-foot-tall cable railing. The new culvert would be vertically realigned so the outlet would be approximately 3 feet higher in elevation. Approximately 75 SF of RSP would be installed at the outlet.

Staging could occur in the small unpaved pullout at PM 76.60 (on the northbound side of SR 1) and at a small unpaved turnout at PM 76.54 (on the southbound side of SR 1). Access for culvert replacement, DD installation, and RSP placement would require vegetation clearing and grubbing, including the removal of protected riparian and SNC coastal willow trees for access upstream of the inlet and surrounding the outlet.

Culvert at 76.81

The existing culvert is a 24-inch-diameter by 40-foot-long CMP culvert. Water from an unnamed relatively permanent drainage flows into the culvert inlet. Water flows through the culvert, then outlets over the edge of a steep 5-foot-tall slope which flows into a deep pool before continuing downstream on private property into a relatively permanent drainage. This watercourse eventually empties directly into the Pacific Ocean.

The existing culvert would be replaced with a new 24-inch-diameter by 33.9-foot-long APC culvert. The new culvert would be vertically realigned so that the outlet would be approximately 3 feet higher in elevation. Approximately 72 SF of RSP would be installed at the outlet.

Staging could occur on the small, unpaved turnout at PM 76.60 (on the northbound side of SR 1) and at a large unpaved turnout at PM 76.81 (on the southbound side to the west of SR 1). Access for culvert replacement and RSP placement would require vegetation clearing and grubbing, including the removal of protected wetland vegetation at the inlet, as well as riparian and SNC coastal willow trees upstream of the inlet and surrounding the outlet.

Culvert at 84.10

The existing culvert consists of an 18-inch-diameter by 34.2-foot-long CMP which conveys stormwater runoff into the inlet on the west side of SR 1. Stormwater runoff flow is then funneled through the culvert where the water outlets into an ephemeral drainage. This drainage eventually connects with a tributary of Hardy Creek approximately 100 feet down the slope. This tributary joins the mainstem of Hardy Creek approximately 0.31 mile from the culvert outlet.

To better accommodate stormwater flow in major storms and for easier maintenance, the existing culvert would be replaced with a new, upsized 24-inch-diameter by 37.3-foot-long APC. A new 0.5-foot-wide, 10-foot-long, 3.8-foot-high concrete headwall would be installed at the inlet, with an 11-foot-long cable railing. The new culvert would be vertically realigned so the outlet would be approximately 3 feet higher in elevation. Approximately 72 SF of RSP would be installed at the outlet.

Staging could occur on the long unpaved turnout at PM 84.08 (on the northbound side of SR 1) and at a small unpaved turnout at PM 84.30 (on the southbound side of SR 1). While culvert replacement and placement of RSP would require vegetation clearing and grubbing, no trees would need to be removed as part of this activity.

Disturbed Soil Areas

Before any ground-disturbing activities, the contractor would prepare a Stormwater Pollution Prevention Plan (SWPPP) that includes erosion control measures and construction waste containment measures to protect Waters of the State during project construction. Vegetated surfaces would feature native plants; the project Revegetation Plan would be developed in the next phase of the project.

Site Cleanup

Upon completion of construction, all materials used for vegetation removal, drainage improvements, and staging would be completely removed from the site. The site would then be restored to a natural setting by regrading and revegetating with native plants as required by the final approved Revegetation and Erosion Control plans. Native vegetation would be planted from November 1 to February 28 in the year following completion of construction.

Utility Relocation

Project activities would include temporary relocation of up to three utility poles and associated guy wires to accommodate culvert repair and replacement at PMs 76.20 and 76.52. Exact locations would be specified in later project phases based on communication between utility companies and Caltrans; however, all proposed locations would be within the existing Caltrans ROW.

Disposal Sites

Excavated material would either be used as needed backfill material during construction or hauled away to an approved permitted disposal site. Any necessary temporary storage site would implement Standard Measures and Best Management Practices (BMPs) to prevent spread of excavated material beyond the Environmental Study Limits (ESL)(Section 1.4).

Construction Schedule

The project would be completed in one season during the late summer and early fall to accommodate the seasonal work windows of various biological resources. Work within drainages would occur during the dry season, June 15–October 15, to avoid impacts to aquatic organisms and water quality. Work windows to avoid auditory impacts to marbled murrelet and Northern spotted owl are described in further detail in Section 1.4.

Alternatives Considered but Eliminated from Further Consideration

No-Build Alternative

The No-Build Alternative would maintain the drainage facilities in their current condition and would not meet the purpose and need of the project. For each potential impact area discussed in Chapter 2, the No-Build Alternative has been determined to have no impact. Under the No-Build Alternative, no alterations to the existing conditions would occur and the proposed improvements would not be implemented.

General Plan Description, Zoning, and Surrounding Land Uses

The project area and surrounding lands are within the coastal zone in Mendocino County and are subject to the County of Mendocino General Plan (County of Mendocino 2009). Within the General Plan, Mendocino County has a Local Coastal Program (LCP) that is contained within the Coastal Element. The LCP contains the policies for development and protection of coastal resources in their jurisdiction consistent with the California Coastal Act (CCA) goals. The Mendocino County Coastal Zoning Code is applicable to all properties in the unincorporated areas of Mendocino County inside the Coastal Zone. This project is subject to the California Coastal Act, Mendocino County's LCP, and the Mendocino County Coastal Zoning Code.

Land uses in the greater surrounding area include open space, agricultural, rural village, remote residential, and forest land. The project would not change the existing land use or zoning designations in the project area.

1.3 Permits and Approvals Needed

The following table (Table 1) indicates the permits, licenses, agreements, and certifications (PLACs) required for the project.

Table 1. Agency, Permit/Approval, Biological Resource, and Permit Status

Agency	Permit/Approval	Biological Resource	Permit Status
California Department of Fish and Wildlife (CDFW)	1600 Lake and Streambed Alteration Agreement (LSAA)	Waters of the U.S. and adjacent riparian habitat (stream bed, bank, channel including above the Ordinary High Water Mark, protected species that utilize habitat within these limits)	Application to be submitted after Final Environmental Document is complete.
Mendocino County	Coastal Development Permit (CDP) (Local)	All resources considered Environmentally Sensitive Habitat Areas (ESHAs) (including Waters of the U.S. and State, riparian habitat, coastal wetlands, Sensitive Natural Communities, habitat for protected species)	Application to be submitted after Final Environmental Document is complete.
North Coast Regional Water Quality Control Board (NCRWQCB)	401 Water Certification	Waters of the State and adjacent riparian habitat (stream bed, bank, channel including above Ordinary High Water Mark)	Application to be submitted after Final Environmental Document is complete.
U.S. Army Corps of Engineers (USACE)	404 Nationwide Permit #3 (non-reporting permit)	Waters of the U.S. (WOTUS)	Application to be submitted after Final Environmental Document is complete.
U.S. Fish and Wildlife Service (USFWS)	Programmatic Letter of Concurrence (PLOC)	Federally protected species under FESA	Use of PLOC approved per discussion on September 28, 2023.
National Marine Fisheries Service (NMFS)	Programmatic Biological Opinion (PBO)	Fisheries protected under FESA	Caltrans anticipates that a Programmatic Biological Opinion to address fish species protected under FESA will be issued in 2024, prior to project permit approval.

1.4 Standard Measures and Best Management Practices Included in All Alternatives

Under CEQA, "mitigation" is defined as avoiding, minimizing, rectifying, reducing/ eliminating, and compensating for an impact. In contrast, Standard Measures and Best Management Practices (BMPs) are prescriptive and sufficiently standardized to be generally applicable, and do not require special tailoring for a project. They are measures that typically result from laws, permits, agreements, guidelines, resource management plans, and resource agency directives and policies. They predate the project's proposal, and apply to all similar projects. For this reason, the measures and practices are not considered "mitigation" under CEQA; rather, they are included as part of the project description in environmental documents.

The following section provides a list of project features, standard practices (measures), and Best Management Practices (BMPs) that are included as part of the project description. Standard measures relevant to the protection of natural resources deemed applicable to the proposed project include:

Aesthetics Resources

AR-1: Temporary access roads, construction easements, and staging areas that were previously vegetated would be restored to a natural contour and revegetated with regionally-appropriate native vegetation.

AR-2: Where feasible, construction lighting would be temporary, and directed specifically on the portion of the work area actively under construction.

AR-3: Where feasible, the removal of established trees and vegetation would be minimized. Environmentally sensitive areas would have Temporary High Visibility Fencing (THVF) installed before start of construction to demarcate areas where vegetation would be preserved and root systems of trees protected.

Biological Resources

BR-1: General

Before start of work, as required by permit or consultation conditions, a Caltrans biologist or Environmental Construction Liaison (ECL) would meet with the contractor to brief them on environmental permit conditions and requirements relative to each stage of the proposed project, including, but not limited to, work windows, drilling site management, and how to identify and report regulated species within the project areas.

BR-2: Animal Species

A. To protect migratory and nongame birds (occupied nests and eggs), if possible, vegetation removal would be limited to the period outside of the bird breeding season (removal would occur between September 16 and January 31). If vegetation removal is required during the breeding season, a nesting bird survey would be conducted by a qualified biologist within five days prior to vegetation removal. If an active nest is located, the biologist would coordinate with CDFW to establish appropriate species-specific buffer(s) and any monitoring requirements. The buffer would be delineated around each active nest and construction activities would be excluded from these areas until birds have fledged, or the nest is determined to be unoccupied.

B. A *Bird Exclusion Plan* would be prepared by a qualified biologist prior to construction. Exclusion devices would be designed so they would not trap or entangle birds or bats. Exclusion devices would be installed outside of the breeding season (September 16 through January 31) to eliminate the re-occupancy of existing structures by migratory bird species that may attempt to nest on the structure during construction. On structures or parts of structures where it is not feasible to install bird exclusion devices, partially constructed and unoccupied nests within the construction area would be removed and disposed of on a regular basis throughout the breeding season (February 1 through September 15 with biologist discretion) to prevent their occupation. Nest removal would be repeated weekly under the guidance of a qualified biologist to ensure nests are inactive prior to removal. Pre-construction surveys for active raptor nests within one-quarter mile of the construction area would be conducted by a qualified biologist within one week prior to initiation

of construction activities. Areas to be surveyed would be limited to those areas subject to increased disturbance because of construction activities (i.e., areas where existing traffic or human activity is greater than or equal to construction-related disturbance need not be surveyed). If any active raptor nests are identified, appropriate conservation measures (as determined by a qualified biologist) would be implemented. These measures may include, but are not limited to, establishing a construction-free buffer zone around the active nest site, biological monitoring of the active nest site, and delaying construction activities near the active nest site until the young have fledged.

C. To prevent attracting corvids (birds of the Corvidae family which include jays, crows, and ravens), no trash or foodstuffs would be left or stored on-site. All trash would be deposited in a secure container daily and disposed of at an approved waste facility at least once a week. Also, on-site workers would not attempt to attract or feed any wildlife.

D. A qualified biologist would monitor in-stream construction activities that could potentially impact sensitive biological receptors (e.g., amphibians, fish). To ensure adherence to permit conditions, the biological monitor would be present during activities such as installation and removal of dewatering or diversion systems. In-water work restrictions would be implemented.

E. An *Aquatic Species Relocation Plan*, or equivalent, would be prepared by a qualified biologist which would include provisions for pre-construction surveys and the appropriate methods or protocols to relocate any species found. If previously unidentified threatened or endangered species are encountered or anticipated incidental take levels are exceeded, work would either be stopped until the species is out of the impact area, or the appropriate regulatory agency would be contacted to establish steps to avoid or minimize potential adverse effects. This Plan may be included as part of the Temporary Creek Diversion System Plan identified in **BR-5**.

F. Artificial night lighting may be required. To reduce potential disturbance to sensitive resources, lighting would be temporary, and directed specifically on the portion of the work area actively under construction. Use of artificial lighting would be limited to Cal/OSHA work area lighting requirements.

G. A Limited Operating Period would be observed, whereby all in-stream work below ordinary high water (OHW) would be restricted to the period between June 15 and October 15 to protect water quality and vulnerable life stages of sensitive fish species.

H. To protect nesting or roosting northern spotted owl and marbled murrelet, suitable northern spotted owl or marbled murrelet nesting trees would be removed between September 16 and January 31. No construction activities generating sound levels 20 or more decibels (dB) above ambient sound or with maximum sound levels (ambient sound level plus activity-generated sound level) above 90 dB (with the exception of backup alarms) would occur between February 1 and August 5. Between August 6 and September 15, work that generates sound levels equal to or greater than 10 dB above ambient sound levels or above 90 dB max would observe a daily work window beginning 2 hours post-sunrise and ending 2 hours pre-sunset. Sound-related work windows would be lifted between September 16 and January 31.

   No human activities (including use of drones) would occur within a visual line-of-sight of 328 feet (100 meters) or less from a known nest site (USFWS 2020), or from unsurveyed suitable nesting habitat containing potential murrelet nest trees within 328 feet (100 meters) of proposed activities or, for NSO, from unsurveyed suitable nesting/roosting habitat containing potential owl nest trees. These visual disturbance restrictions would be lifted after September 15; after which the USFWS considers visual disturbance as having "no effect" on nesting adults or dependent young. The 328-foot (100 meters) visual disturbance distance may be reduced or eliminated through technical assistance with the USFWS if site-specific information suggests that ambient visual disturbance within the action area is already high enough to likely preclude species from nesting within 328 feet (100 meters) of the project footprint, or vegetation near the roadway is sufficiently dense to shield the view from habitat farther from the roadway.

I. Caltrans would contact USFWS if proposed (NSO/MAMU) habitat removal is within the designated critical habitat area to ensure removal would not result in an adverse effect.

BR-3: Invasive Species

Invasive non-native species control would be implemented. Measures would include:

- Straw, straw bales, seed, mulch, or other material used for erosion control or landscaping would be free of noxious weed seed and propagules.

- All equipment would be thoroughly cleaned of all dirt and vegetation prior to entering the job site to prevent importing invasive non-native species. Project personnel would adhere to the latest version of the *California Department of Fish and Wildlife Aquatic Invasive Species Cleaning/Decontamination Protocol (Northern Region)* for all field gear and equipment in contact with water.

BR-4: Plant Species, Sensitive Natural Communities, and ESHA

A. Seasonally appropriate, pre-construction floristic surveys for sensitive plant species would be completed (or updated) by a qualified biologist prior to construction in accordance with *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (CDFW 2018).

B. A *Revegetation Plan* would be prepared which would include a plant palette, establishment period, watering regimen, monitoring requirements, and pest control measures. The Revegetation Plan would also address measures for wetland and riparian areas temporarily impacted by the project.

C. Prior to the start of work, Temporary High Visibility Fencing (THVF) and/or flagging would be installed around sensitive natural communities, environmentally sensitive habitat areas, rare plant occurrences, intermittent streams and wetlands and other waters, where appropriate. No work would occur within fenced/flagged areas.

D. Where feasible, the structural root zone (SRZ) would be identified around each large-diameter tree (>2-foot diameter-at-breast height [DBH]) directly adjacent to project activities, and work within the zone would be limited.

E. When possible, excavation of roots of large diameter trees (>2-foot DBH) would not be conducted with mechanical excavator or other ripping tools. Instead, roots would be severed using a combination of root-friendly excavation and severance methods (e.g., sharp-bladed pruning instruments or chainsaw). At a minimum, jagged roots would be pruned away to make sharp, clean cuts.

F. Upon completion of construction, all superfluous construction materials would be completely removed from the site. The site would then be restored by regrading and stabilizing with a hydroseed mixture of native species along with fast growing sterile erosion control seed, as required by the Erosion Control Plan.

BR-5: Wetlands and Other Waters

A. The contractor would be required to prepare and submit a *Temporary Creek Diversion System Plan* to Caltrans for approval prior to any creek diversion. Depending on site conditions, the plan may also require specifications for the relocation of sensitive aquatic species (see also Aquatic Species Relocation Plan in **BR-2**). Water generated from the diversion operations would be pumped and discharged according to the approved plan and applicable permits.

B. In-stream work would be restricted to the period between June 15 and October 15 to protect water quality and vulnerable life stages of sensitive fish species (see also **BR-2**). Construction activities restricted to this period include any work below ordinary high water (OHW). Construction activities performed above the ordinary high water mark (OHWM) of a watercourse that could potentially directly impact surface waters (i.e., soil disturbance that could lead to turbidity) would be performed during the dry season, typically between June through October, or as weather permits per the authorized contractor-prepared Storm Water Pollution Prevention Plan (SWPPP) or Water Pollution Control Program (WPCP), and/or project permit requirements.

C. See **BR-4** for Temporary High Visibility Fencing (THVF) information.

D. If allowed by regulatory agencies, temporary wetland protection mats may be used to prevent permanent damage and minimize temporary damage to wetlands from construction activities. Mats should be designed to accommodate motorized equipment or vehicles. Mats would be removed when wetland access is no longer needed or by November 1 of each year.

Cultural Resources

CR-1: If cultural materials are discovered during construction, work activity within a 60-foot radius of the discovery would be stopped and the area secured until a qualified archaeologist can assess the nature and significance of the find in consultation with the State Historic Preservation Officer (SHPO).

CR-2: If human remains and related items are discovered on private or State land, they would be treated in accordance with State Health and Safety Code (H&SC) § 7050.5. Further disturbances and activities would cease in any area or nearby area suspected to overlie remains, and the County Coroner contacted. Pursuant to California Public Resources Code (PRC) § 5097.98, if the remains are thought to be Native American, the coroner would notify the Native American Heritage Commission (NAHC) who would then notify the Most Likely Descendent (MLD).

Human remains and related items discovered on federally-owned lands would be treated in accordance with the Native American Graves Protection and Repatriation Act of 1990 (NAGPRA) (23 USC 3001). The procedures for dealing with the discovery of human remains, funerary objects, or sacred objects on federal land are described in the regulations that implement NAGPRA 43 CFR Part 10. All work in the vicinity of the discovery shall be halted and the administering agency's archaeologist would be notified immediately. Project activities in the vicinity of the discovery would not resume until the federal agency complies with the 43 CFR Part 10 regulations and provides notification to proceed.

Geology, Seismic/Topography, and Paleontology

GS-1: The project would be designed to minimize slope failure, settlement, and erosion using recommended construction techniques and Best Management Practices (BMPs). New earthen slopes would be vegetated to reduce erosion potential.

GS-2: In the unlikely event that paleontological resources (fossils) are encountered, all work within a 60-foot radius of the discovery would stop, the area would be secured, and the work would not resume until appropriate measures are taken.

Greenhouse Gas Emissions

GHG-1: Caltrans Standard Specification "Air Quality" requires compliance by the contractor with all applicable laws and regulations related to air quality (Caltrans Standard Specification [SS] 14-9).

GHG-2: Compliance with Title 13 of the California Code of Regulations, which includes restricting idling of diesel-fueled commercial motor vehicles and equipment with gross weight ratings of greater than 10,000 pounds to no more than 5 minutes.

GHG-3: Caltrans Standard Specification “Emissions Reduction” ensures that construction activities adhere to the most recent emissions reduction regulations mandated by the California Air Resource Board (CARB) (Caltrans SS 7-1.02C).

GHG-4: Use of a Transportation Management Plan (TMP) to minimize vehicle delays and idling emissions. As part of this, construction traffic would be scheduled and routed to reduce congestion and related air quality impacts caused by idling vehicles along the highway during peak travel times.

GHG-5: All areas temporarily disturbed during construction would be revegetated with appropriate native species, as appropriate. Landscaping reduces surface warming and, through photosynthesis, decreases CO_2. This replanting would help offset any potential CO_2 emissions increase.

GHG-6: Pedestrian and bicycle access would be maintained on State Route 1 during project activities.

Hazardous Waste and Material

HW-1: Per Caltrans requirements, the contractor(s) would prepare a project-specific *Lead Compliance Plan* (CCR Title 8, § 1532.1, the "Lead in Construction" standard) to reduce worker exposure to lead-impacted soil. The plan would include protocols for environmental and personnel monitoring, requirements for personal protective equipment, and other health and safety protocols and procedures for the handling of materials containing lead.

HW-2: If treated wood waste (such as removal of sign posts or guardrail) is generated during this project, it would be disposed of in accordance with Standard Specification 14-11.14 "Treated Wood Waste."

Noise

NOI-1: Notify residents within 100 feet of the project area in advance of nighttime construction activities.

NOI-2: Limit operation of jackhammer, concrete saw, pneumatic tools and demolition equipment operations to the daytime hours (8AM to 7PM) to the maximum extent feasible. Nighttime construction work should be limited to the portion of the project site furthest from the residences to the maximum extent feasible.

NOI-3: All equipment shall have sound-control devices that are no less effective than those provided on the original equipment. No equipment may have an unmuffled exhaust.

NOI-4: As directed by Caltrans, implement appropriate additional noise mitigation measures, including changing the location of stationary construction equipment, turning off idling equipment, rescheduling construction activity, and installing acoustic barriers around stationary construction noise sources.

Traffic and Transportation

TT-1: Pedestrian and bicycle access would be maintained during construction.

TT-2: The contractor would be required to schedule and conduct work to avoid unnecessary inconvenience to the public and to maintain access to driveways, houses, and buildings within the work zones.

TT-3: A Transportation Management Plan (TMP) would be applied to the project.

TT-4: To the extent feasible, construction traffic will be scheduled and routed to reduce congestion and related air quality impacts caused by idling vehicles along local roads during peak travel times.

Utilities and Emergency Services

UE-1: All emergency response agencies in the project area would be notified of the project construction schedule and would have access to State Route 1 throughout the construction period.

UE-2: Caltrans would coordinate with utility providers to plan for relocation of any utilities to ensure utility customers would be notified of potential service disruptions before relocation.

UE-3: The project is located within the *high* CAL FIRE Fire Hazard Severity Zone (FHSZ). The contractor would be required to submit a jobsite Fire Prevention Plan as required by Cal/OSHA before starting job site activities. In the event of an emergency or wildfire, the contractor would cooperate with fire prevention authorities.

Water Quality and Stormwater Runoff

WQ-1: The project would comply with the provisions of the Caltrans Statewide National Pollutant Discharge Elimination System (NPDES) Permit (Order 2022-0033-DWQ), effective January 1, 2023. If the project results in a land disturbance of one acre or more, coverage under the Construction General Permit (CGP) (Order 2022-0057-DWQ) is also required.

Before any ground-disturbing activities, the contractor would prepare a Stormwater Pollution Prevention Plan (SWPPP) (per the Construction General Permit Order 2022-0057-DWQ) or Water Pollution Control Program (WPCP) (projects that result in a land disturbance of less than one acre) that includes erosion control measures and construction waste containment measures to protect Waters of the State during project construction. For SWPPP projects (which are governed according to both the Caltrans NPDES permit and the Construction General Permit), soil disturbance is permitted to occur year-round as long as the Caltrans NPDES and CGP and the corresponding requirements of those permits are adhered to. For WPCP projects (which are governed according to the Caltrans NPDES permit), soil disturbance is permitted to occur year-round as long as the Caltrans NPDES permit is adhered to.

The SWPPP or WPCP would identify the sources of pollutants that may affect the quality of stormwater; include construction site Best Management Practices (BMPs) to control sedimentation, erosion, and potential chemical pollutants; provide for construction materials management; include non-stormwater BMPs; and include routine inspections and a monitoring and reporting plan. All construction site BMPs would follow the latest edition of the *Caltrans Storm Water Quality Handbooks: Construction Site BMPs Manual* to control and reduce the impacts of construction-related activities, materials, and pollutants on the watershed.

The project SWPPP would be continuously updated to adapt to changing site conditions during the construction phase.



Chapter 2. CEQA Environmental Checklist

Environmental Factors Potentially Affected

The environmental factors noted below would be potentially affected by this project. Please see the CEQA Environmental Checklist on the following pages for additional information.

Potential Impact Area	Impacted: Yes / No
Aesthetics	No
Agriculture and Forest Resources	No
Air Quality	No
Biological Resources	**Yes**
Cultural Resources	No
Energy	No
Geology and Soils	No
Greenhouse Gas Emissions	**Yes**
Hazards and Hazardous Materials	No
Hydrology and Water Quality	**Yes**
Land Use and Planning	No
Mineral Resources	No
Noise	**Yes**
Population and Housing	No
Public Services	No
Recreation	No
Transportation	No
Tribal Cultural Resources	No
Utilities and Service Systems	No
Wildfire	No
Mandatory Findings of Significance	No

The CEQA Environmental 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 will indicate there are no impacts to a particular resource. A "NO IMPACT" answer in the last column of the checklist reflects this determination.

The words "significant" and "significance" used throughout the CEQA Environmental Checklist are only related to potential impacts pursuant to CEQA. The questions in the CEQA Environmental Checklist are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

Project features, which can include both design elements of the project, as well as standardized measures applied to all or most Caltrans projects (such as Best Management Practices [BMPs] and measures included in the Standard Plans and Specifications or as Standard Special Provisions [Section 1.4]), are considered to be an integral part of the project and have been considered prior to any significance determinations documented in the checklist or document.

Project Impact Analysis Under CEQA

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 California Code of Regulations [CCR] § 15378). Under CEQA, normally the baseline for environmental impact analysis consists of the existing conditions at the time the environmental studies began. However, it is important to choose the baseline that most meaningfully informs decision-makers and the public of the project's possible impacts. Where existing conditions change or fluctuate over time, and where necessary to provide the most accurate picture practically possible of the project's impacts, a lead agency may define existing conditions by referencing historic conditions, or conditions expected when the project becomes operational, or both, that are supported with substantial evidence. In addition, a lead agency may also use baselines consisting of both existing conditions and projected future conditions that are supported by reliable projections based on substantial evidence in the record. The CEQA Guidelines require a "statement of the objectives sought by the proposed project" (14 CCR § 15124(b)).

CEQA requires the identification of each potentially "significant effect on the environment" resulting from the project, 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). CEQA determinations are made prior to and separate from the development of mitigation measures for the project.

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 an area of environmental review can make this determination.

Though not required, CEQA suggests Lead Agencies adopt thresholds of significance, which define the level of effect above which the Lead Agency will consider impacts to be significant, and below which it will consider impacts to be less than significant. Given the size of California and it's varied, diverse, and complex ecosystems, as a Lead Agency that encompasses the entire State, developing thresholds of significance on a state-wide basis has not been pursued by Caltrans. Rather, to ensure each resource is evaluated objectively, Caltrans analyzes potential resource impacts in the project area based on their location and the effect of the potential impact on the resource as a whole. For example, if a project has the potential to impact 0.10 acre of wetland in a watershed that has minimal development and contains thousands of acres of wetland, then a "less than significant" determination would be considered appropriate. In comparison, if 0.10 acre of wetland would be impacted that is located within a park in a city that only has 1.00 acre of total wetland, then the 0.10 acre of wetland impact could be considered "significant."

If the action may have a potentially significant effect on any environmental resource (even with mitigation measures implemented), 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 potentially 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).

Although the formulation of mitigation measures shall not be deferred until some future time, the specific details of a mitigation measure may be developed after project approval when it is impractical or infeasible to include those details during the project's environmental review. The lead agency must (1) commit itself to the mitigation, (2) adopt specific performance standards the mitigation will achieve, and (3) identify the type(s) of potential action(s) that can feasibly achieve that performance standard and that will be considered, analyzed, and potentially incorporated in the mitigation measure.

Compliance with a regulatory permit or other similar processes may be identified as mitigation if compliance would result in implementation of measures that would be reasonably expected, based on substantial evidence in the record, to reduce the significant impact to the specified performance standards (§ 15126.4(a)(1)(B)).

Per CEQA, 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)). Under CEQA, mitigation is defined as avoiding, minimizing, rectifying, reducing, and compensating for any potential impacts (CEQA 15370). Regulatory agencies may require additional measures beyond those required for compliance with CEQA. Though not considered "mitigation" under CEQA, these measures are often referred to in an Initial Study as "mitigation", Good Stewardship or Best Management Practices. These measures can also be identified after the Initial Study/Negative Declaration is approved.

CEQA documents must consider direct and indirect impacts of a project (California Public Resources Code [PRC] § 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.

No-Build Alternative

For each of the following CEQA Environmental Checklist questions, the "No-Build" Alternative has been determined to have "No Impact". Under the "No-Build" Alternative, no alterations to the existing conditions would occur and no proposed improvements would be implemented. The "No-Build" Alternative will not be discussed further in this document.

Definitions of Project Parameters

When determining the parameters of a project for potential impacts, the following definitions are provided:

Project Area: This is the general area where the project is located. This term is mainly used in the Affected Environment section (e.g., watershed, climate type, etc.).

Project Limits: This is the beginning and ending post miles for a project. This is different than the ESL in that it sets the beginning and ending limits of a project along the highway. It is the limits programmed for a project, and every report, memo, etc. associated with a project should use the same post mile limits. In some cases, there may be areas associated with a project that are outside of the project limits, such as staging and disposal locations.

Project Footprint: The area within the Environmental Study Limits (ESL) the project is anticipated to impact, both temporarily and permanently. This includes staging and disposal areas.

Environmental Study Limits (ESL): The project engineer provides the Environmental team the ESL as an anticipated boundary for potential impacts. The ESL is *not* the project footprint. Rather, it is the area encompassing the project footprint where there could *potentially* be direct and indirect disturbance by construction activity. The ESL is larger than the project footprint in order to accommodate any future scope changes. The ESL is also used for identifying the various Biological Study Areas (BSAs) needed for different biological resources.

Biological Study Area (BSA): The BSA encompasses the ESL plus any areas outside of the ESL that could potentially be affected by a project (e.g., noise, visual, Coastal Zone, etc.). Depending on resources in the area, a project could have multiple BSAs. Each BSA should be identified and defined.

- The project is located within the Coastal Zone, so this area will include the 100-foot buffer.
- Additional BSAs utilized when assessing potential impacts to protected species include:
    - NSO and MAMU 328 foot (100 meters) disturbance zone
    - Coho salmon—Central California Coast (CCC) Evolutionarily Significant Unit (ESU) and steelhead–Northern California (NC) Distinct Population Segment (DPS) (*winter run population*) distribution at Chadbourne Gulch and Hardy Creek downstream of the project site (referred to as Salmonid BSA)

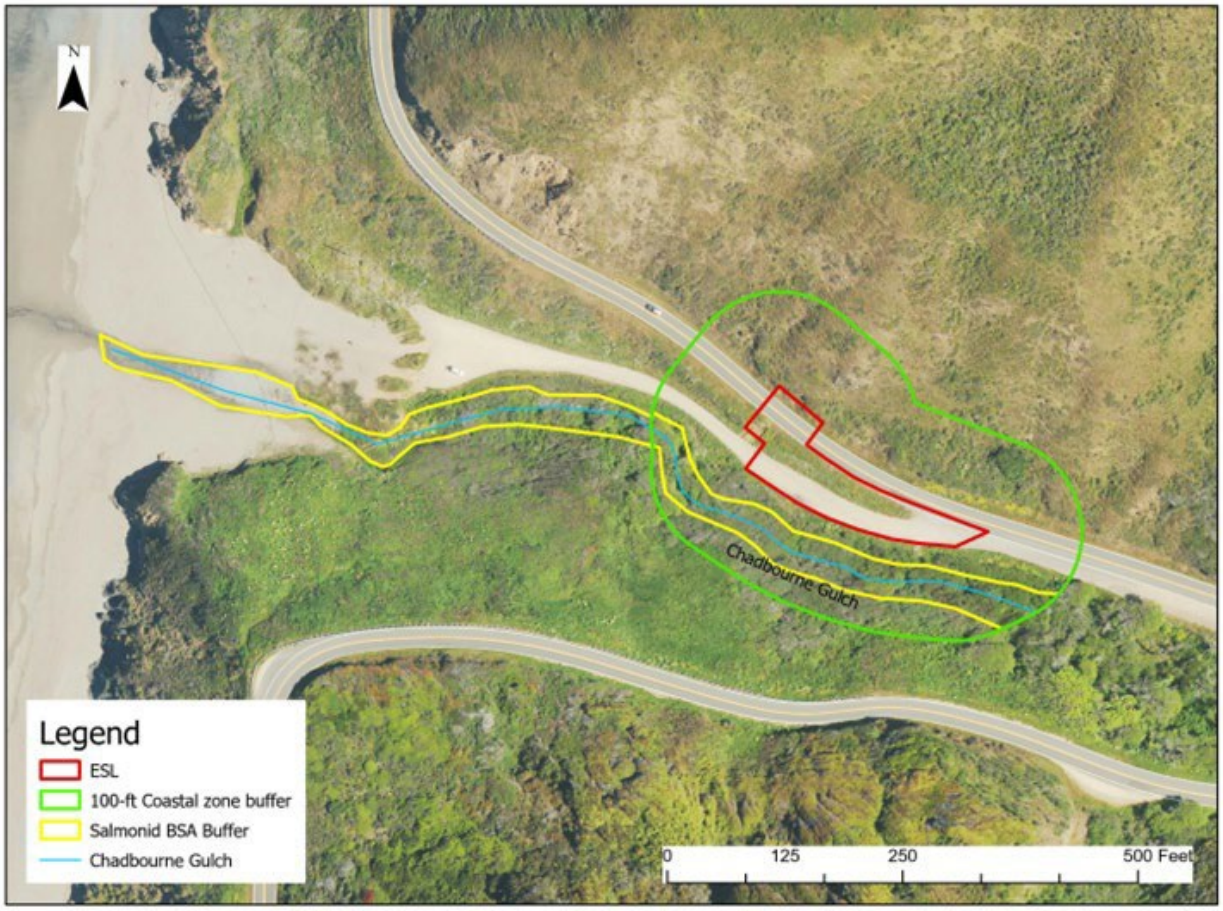


Figure 2. Environmental Study Limits and Biological Study Area at PM 75.47



Figure 3. Environmental Study Limits and Biological Study Area at PM 76.20

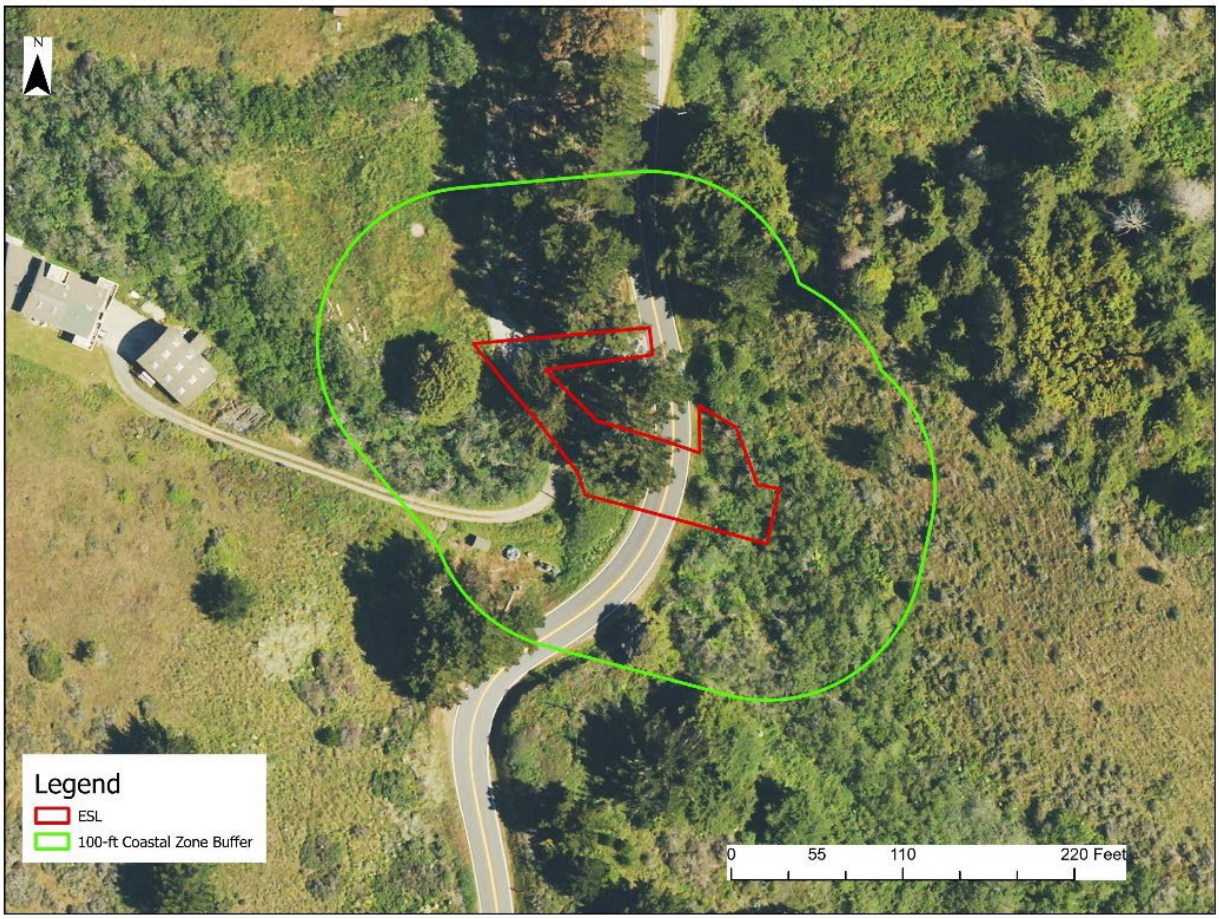


Figure 4. Environmental Study Limits and Biological Study Area at PM 76.52

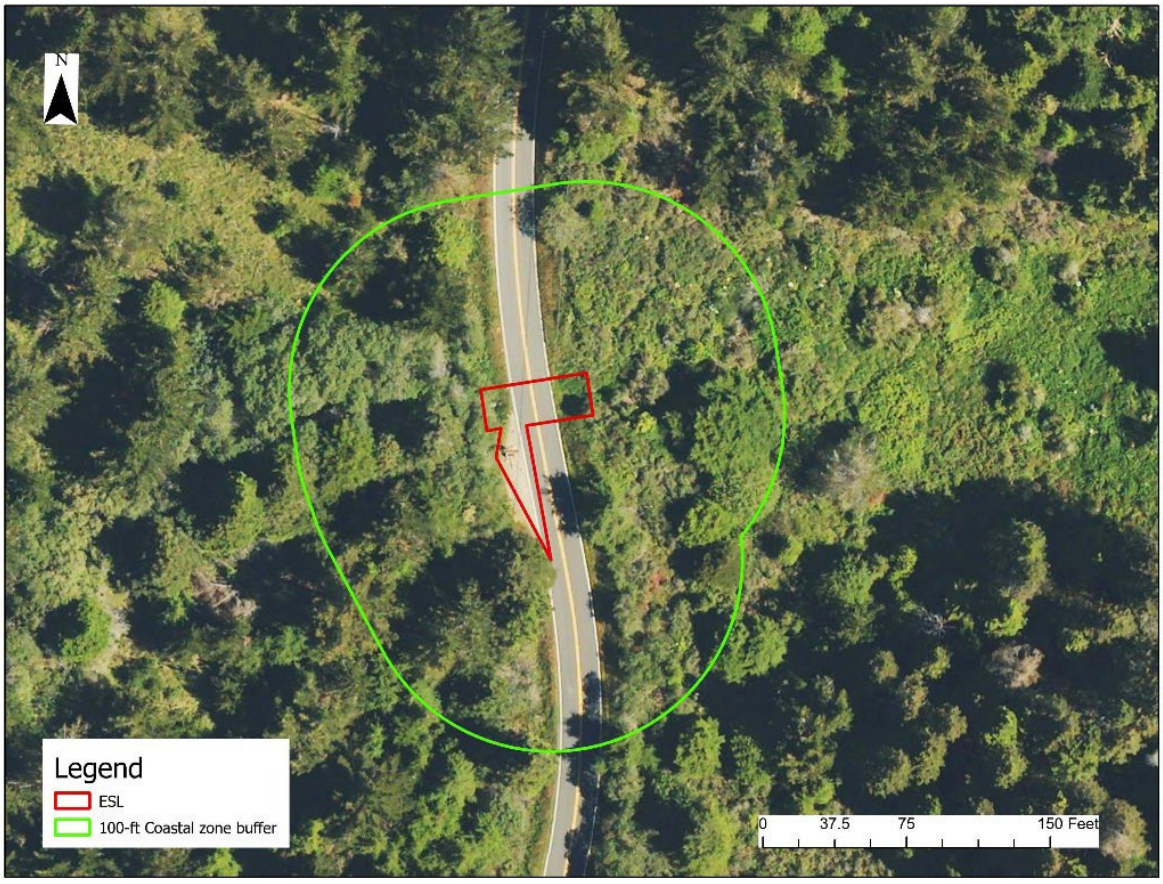


Figure 5. Environmental Study Limits and Biological Study Area PM 76.81

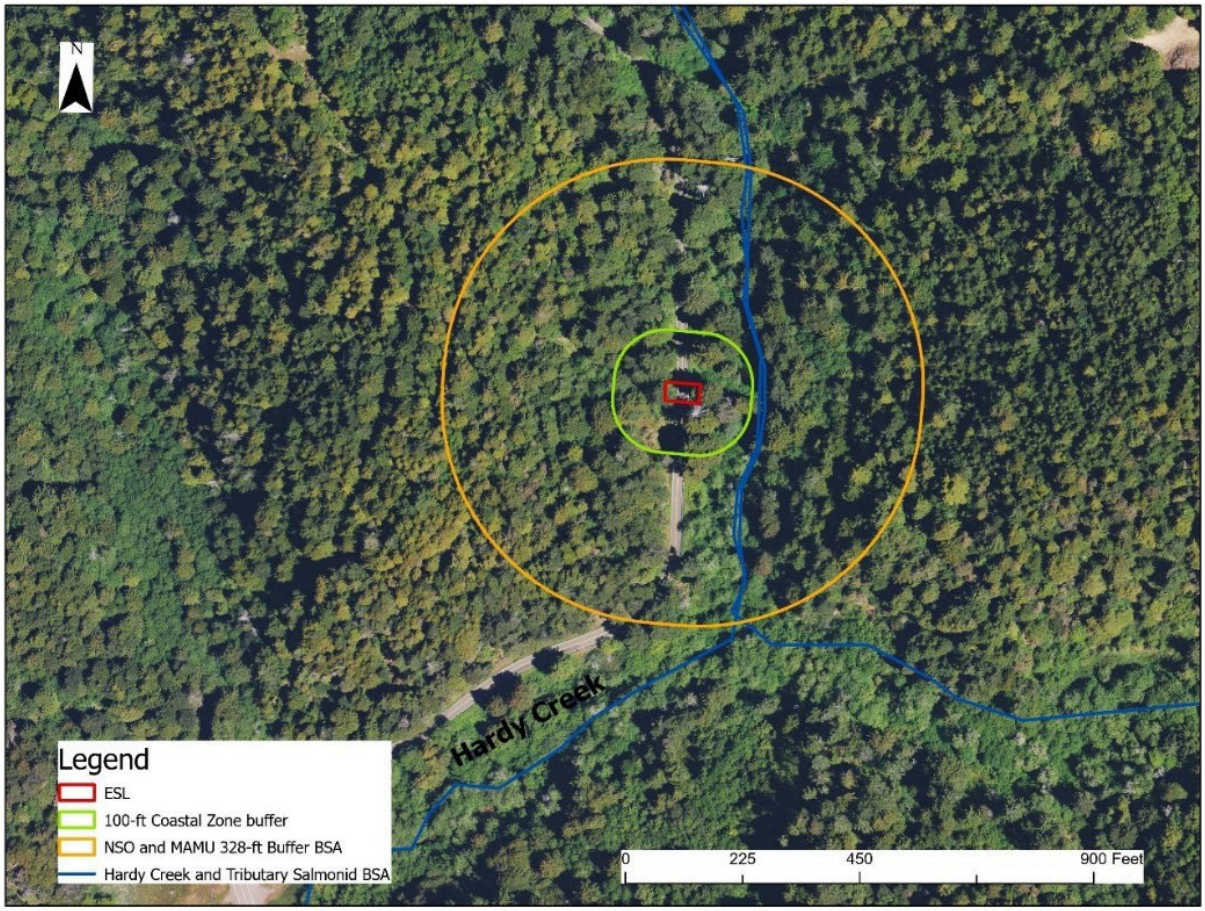


Figure 6. Environmental Study Limits and Biological Study Area PM 84.10

2.1 Aesthetics

Except as provided in the Public Resources Code Section 21099:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project: a) Have a substantial adverse effect on a scenic vista?				✓
Would the project: b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				✓
Would the project: c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?				✓
Would the project: d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?				✓

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project, as well as the *Landscape Architecture Scoping Questionnaire to Determine Visual Impact Assessment Level* dated April 2024 (Caltrans 2024d). Potential impacts to Aesthetics are not anticipated because there are no scenic vistas or designated scenic resources that would be affected by the project. Minor visual impacts caused by vegetation removal would not substantially degrade public views and would be alleviated over time as native vegetation is reestablished. No new source of substantial light or glare would result from the project. No mitigation is required.

2.2 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 Department 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; the Forest Legacy Assessment Project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board (CARB).

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?				✓
Would the project: b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				✓
Would the project: c) Conflict with existing zoning for, or cause rezoning of forest land (as defined by 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))?				✓
Would the project: d) Result in the loss of forest land or conversion of forest land to non-forest use?				✓

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project: 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?				✓

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project. The project site is surrounded by lands that are zoned for open space, agriculture, rural village, remote residential, and forest land. Permanent drainage easements would be obtained for long-term maintenance of the facilities for small areas at the inlets and outlets of the culvert system adjacent to Caltrans right of way. Temporary construction would occur on these adjacent lands. The project would replace existing drainage facilities and would not be incompatible with or cause changes to zoning designations or land use at any of the culvert locations. No mitigation is required.

2.3 Air Quality

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project: a) Conflict with or obstruct implementation of the applicable air quality plan?				✓
Would the project: b) 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?				✓
Would the project: c) Expose sensitive receptors to substantial pollutant concentrations?				✓
Would the project: d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?				✓

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project, as well as the *Air Quality and Noise Analysis for the Westport Culverts Project* dated February 8, 2024 (Caltrans 2024a). Potential impacts to Air Quality are not anticipated because the project would not result in changes to traffic volumes, fleet mix, speed or any other factor that would result in an increase of emissions or pollutants. Mendocino County is categorized as an attainment/unclassified area for all current National Ambient Air Quality Standards (NAAQS). Therefore, transportation conformity requirements do not apply.

Avoidance, Minimization and Mitigation Measures

No mitigation is required.

2.4 Biological Resources

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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, U.S. Fish and Wildlife Service, or NOAA Fisheries?			✓	
Would the project: 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 U.S. Fish and Wildlife Service?		✓		
Would the project: c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?		✓		
Would the project: 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?				✓

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project: e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				✓
Would the project: 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?				✓

Regulatory Setting

Within this section of the document (2.4. Biological Resources), the topics are separated into Sensitive Natural Communities, Wetlands and Other Waters, Plant Species, Animal Species, Threatened and Endangered Species, and Invasive Species. Plant and animal species listed as "threatened" or "endangered" are covered within the Threatened and Endangered sections. Other special status plant and animal species, including USFWS and NMFS candidate species, CDFW Fully Protected (FP) species, Species of Special Concern (SSC), and California Native Plant Society (CNPS) rare plants are covered in the respective Plant and Animal sections.

Sensitive Natural Communities

CDFW maintains a list of sensitive natural communities (SNCs). SNCs are those natural communities that are of limited distribution statewide or within a county or region and are often vulnerable to environmental effects of projects. These communities may or may not contain special status taxa or their habitat.

Wetlands and Other Waters

Waters of the United States (including wetlands) and State are protected under several laws and regulations. The primary laws and regulations governing wetlands and other waters include:

- Federal Clean Water Act (CWA)–33 United States Code (USC) 1344
- Federal Executive Order for the Protection of Wetlands (Executive Order [EO] 11990)
- State California Fish and Game Code (CFGC)–Sections 1600–1607
- State Porter-Cologne Water Quality Control Act–Section 3000 et seq.

Plant Species

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. The primary laws governing plant species include:

- Federal Endangered Species Act (FESA)–USC 16 Section 1531, et seq. See also 50 Code of Federal Regulations (CFR) Part 402
- California Endangered Species Act (CESA)–California Fish and Game Code Section 2050, et seq.
- Native Plant Protection Act–California Fish and Game Code Sections 1900–1913
- National Environmental Policy Act (NEPA)–40 CFR Sections 1500 through 1508
- California Environmental Quality Act (CEQA)–California Public Resources Code (PRC) Sections 21000–21177

Animal Species

The USFWS, NMFS, and CDFW have regulatory responsibility for the protection of special status animal species. The primary laws governing animal species include:

- NEPA–40 CFR Sections 1500 through 1508
- CEQA–California Public Resources Code Sections 21000–21177
- Migratory Bird Treaty Act–16 USC Sections 703–712
- Fish and Wildlife Coordination Act–16 USC Section 661
- California Fish and Game Code Sections 1600–1603
- California Fish and Game Code Sections 4150 and 4152

Threatened and Endangered Species

The primary laws governing threatened and endangered species include:

- FESA–USC 16 Section 1531, et seq. See also 50 CFR Part 402
- CESA–California Fish and Game Code Section 2050, et seq.
- CESA–California Fish and Game Code Section 2080
- CEQA–California Public Resources Code, Sections 21000–21177
- Magnuson-Stevens Fishery Conservation and Management Act, as amended–16 USC Section 1801

Invasive Species

The primary laws governing invasive species are Executive Order (EO) 13112 and NEPA.

Environmental Setting

A Natural Environment Study (NES) was prepared for the project in June 2024 (Caltrans 2024c). Caltrans coordinated with agency personnel from USFWS, NMFS, CDFW, California Coastal Commission (CCC), and the County of Mendocino. Species lists were accessed from USFWS, NMFS, CDFW, CNDDB, and CNPS and are included in Appendix C. See Chapter 3 for a summary of these coordination efforts and professional contacts.

The project area encompasses five locations within Mendocino County along State Route (SR) 1 starting 1.5 miles south of Westport. The project ESLs are located within the general Northwestern California Region; specifically, the ESLs at PMs 75.47 north to 76.81 are located within the North Coast Subregion and the ESL at PM 84.10 is located within the Outer North Coast Ranges District of the California Floristic Province (Baldwin et al., 2012). The Northwestern Range has a Mediterranean climate characterized by moderate daily and annual temperature variations.

The rainfall average is 43 inches per year, mostly falling between November and March. The summer months of July through September receive the lowest rainfall, averaging a combined 0.80 inch annually. Average annual air temperature is 58° Fahrenheit (°F), with a low of 40°F in January and a high of 64°F in August (Western Regional Climate Center 2020).

Topography within the ESL for each culvert site varies, but generally comprises sloping and terraced hills with erosion cut drainages that feed into Hardy Creek, Chadbourne Gulch, and directly into the Pacific Ocean. The elevation varies between locations from approximately 15 feet (at PM 75.47) to 200 feet (at PM 76.81) above mean sea level (MSL). The majority of the culvert ESLs have an elevation difference of approximately 50 feet, with one as low as 30 feet and another as high as 90 feet.

Soil information was obtained from the Natural Resources Conservation Service (NRCS) and Soil Conservation Service's soil surveys for the county (USDA-NRCS 2019). For each culvert, soil units were identified and summarized in Table 2 below.

Table 2. Soil Map Units within the Biological Study Area

Map Unit	Post Miles	Unit Name/ Slope	Drainage	Land Form	Hydric Soil
135	**PM 75.47 and PM 76.20**	Dehaven-Hotel complex 50-75% slopes	Well drained	Hills	No
139	**PM 75.47 and PM 76.20**	Dystropepts 30-75% slopes	Well drained	Marine terraces	No
101	**PM 76.52 and PM 76.81**	Abalobadiah-Bruhel-Vizcaino complex 30- 50% slopes	Well drained	Mountains, hills, ridges	No
139	**PM 76.52 and PM 76.81**	Dystropepts 30-75% slopes	Well drained	Marine terraces	No
131	**PM 84.10**	Dehaven-Hotel complex 50-75% slopes	Well drained	Hills	No

The Biological Study Areas (BSAs) for the proposed project encompass the ESLs plus resource-specific (fish, birds, etc.) areas outside of the ESLs that could potentially be affected by the project. These BSAs were determined based on elements of construction that may reach beyond the ESL, such as elevated noise/hydroacoustic levels, visual disturbances, modifications to surface and subsurface hydrology, and/or downstream water quality impacts.

Immediately south of the culvert and associated drainage at PM 75.47, SR 1 crosses the Chadbourne Gulch watershed. Chadbourne Gulch discharges directly to the Pacific Ocean. It is a first order stream and has approximately 2.1 miles of blue-line stream according to the USGS Inglenook 7.5-minute quadrangle. Chadbourne Gulch drains a watershed of approximately 2.7 square miles. Elevations range from sea level at the mouth of the creek to 560 feet in the headwater areas. Mixed hardwood and conifer forest dominates the Chadbourne Gulch watershed. This watershed is primarily privately owned and is managed for timber production and recreation.

The culvert and associated drainage at PM 84.10 are within the Hardy Creek watershed. This portion of SR 1 ascends in elevation along a ridge parallel to an unnamed tributary to Hardy Creek. The mainstem of Hardy Creek is located approximately 500 feet south of PM 84.10. Hardy Creek discharges into the Pacific Ocean approximately 0.5 mile southeast of PM 84.10. As the Stream Inventory Report (CDFG 2009) describes, “Hardy Creek is a second order stream and has approximately 6.8 miles of blue line stream. Hardy Creek drains a watershed of approximately 5.1 square miles. Elevations range from about 0 feet at the mouth of the creek to 1,500 feet in the headwater areas. Mixed conifer forest dominates the watershed. The watershed is entirely privately owned and is managed for timber production and rural residence.”

Sensitive Natural Communities

The vegetation communities in the study area were identified based on the vegetation classification and keys in *A Manual of California Vegetation*, *second edition* (Sawyer et al., 2009).

Sensitive natural communities (SNCs) are natural communities that are of limited distribution statewide or within a county or region and are often vulnerable to disturbance. High priority SNCs are globally (G) and state (S) ranked 1 to 3, where 1 is critically imperiled, 2 is imperiled, and 3 is vulnerable. Global and state ranks of 4 and 5 are considered apparently secure and demonstrably secure, respectively (CDFW 2018).

SNCs are habitats considered sensitive because of their high species diversity, high productivity, unusual nature, limited distribution, or declining status. The CNDDB provides a list of rare natural communities throughout the state. CDFW, USACE and RWQCB considers certain habitats, such as wetlands and riparian communities, important for water quality and wildlife.

There are three distinct natural communities within the Biological Study Area (BSA): *Baccharis pilularis* Coastal Scrub (Coyote brush scrub); *Salix Hookeriana-Salix Sitchensis-Spiraea Douglasii* (Coastal Dune Willow Thicket) Alliance; and *Sequoia sempervirens* Forest and Woodland Alliance (Redwood forest). Of these three community types, those that meet the criteria for SNC types include Redwood Forest and Coastal Dune Willow Thicket, as outlined in the second edition of *A Manual of California Vegetation* (Sawyer et al., 2009) and as maintained by CDFW. These are described in further detail below.

Coastal Dune Willow Thicket Alliance

The *Salix hookeriana-Salix-sitchensis-Spiraea Douglasi*i Thicket Shrubland Alliance (Coastal Dune Willow Thicket Alliance) is an SNC that is globally ranked "apparently secure", and state ranked "imperiled" (G4/S3) (CDFW 2023b). The project BSA represents specifically the *Salix hookeriana* subclass association (61.203.01). This Association is widespread throughout western Canada and the northwest U.S. north to Alaska. In California, this association exists within 50 miles of the coast from the Oregon border south to San Luis Obispo County. For a vegetation community to qualify as Coastal dune willow thicket, the composition must comprise coastal dune willow in >50% relative cover in the shrub canopy, or >30% relative cover with other willows such as Sitka willow (*Salix sitchensis*) (Sawyer et al., 2009). Other species co-occurring in this alliance include arroyo willow (*Salix lasiolepis*), Douglas' spiraea (*Spiraea douglasii*), wax myrtle (*Morella californica*), and blackberry (*Rubus* spp.). Coastal Dune Willow Thicket habitat includes coastal streams, tidal swamps, riparian, and areas near the ocean where there is standing water and seasonal flooding in dune swales, lagoon margins, and floodplains (Sawyer et al., 2009). Its soils are alluvial and muddy.

This SNC is situated along the California coast and thus may have increased threat due to housing or commercial development, which may be the case in Mendocino County overall. Other threats include hydrologic modification, such as water withdrawals and channelizing streams, introducing invasive non-native plant species, and increased surface runoff (Sawyer et al., 2009). The Coastal Dune Willow Thicket Alliance SNC provides a diverse vegetation structure which is connected to species diversity, as well as refuge and wildlife/migration

corridors, and contributes food resources for a variety of species, including plants, insects, amphibians, reptiles, birds, fish, and mammals. It also serves important flood protection, groundwater recharge, and erosion control functions (USDA-NRCS 2019).

This SNC is present within the BSA at four of the five culvert systems: PMs 74.57, 76.20, 76.52, and 76.81. This is where coastal willow dominates the shrub canopy layer with greater than 50% presence, sometimes co-dominant with arroyo willow and red alder (*Alnus rubra*). Cascara (*Frangula purshiana*), Himalayan blackberry (*Rubus armeniacus*) and California blackberry (*Rubus ursinus*) are common understory shrubs. Piggy-back plant (*Tolmiea menziesii*), common horsetail (*Equisetum* spp.), five-fingered fern (*Adiantum aleuticum*), and cow parsnip (*Heracleum maximum*) dominate the herbaceous layer.

Redwood Forest and Woodland Alliance

The *Sequoia sempervirens* Forest and Woodland Alliance (Redwood Forest and Woodland Alliance) is an SNC that is globally ranked vulnerable and state ranked imperiled (G3/S3) (CDFW 2023b). Ninety-five percent of the range of coastal redwoods exists within California. For a vegetation community to qualify as Redwood Forest, the composition must comprise *of coastal redwoods* in >50% relative cover in the tree canopy, or >30% relative cover with other conifers, such as Douglas-fir, or hardwood trees such as red alder (Sawyer et al., 2009).

This SNC is present at the culvert system at PM 84.10 where coast redwood dominates the canopy layer with greater than 70% presence and either western sword fern (*Polystichum munitum*) or redwood sorrel (*Oxalis oregana*) dominates the herbaceous layer. No redwoods or co-dominant associate trees, such as Douglas-fir, would need to be removed as part of this project, as determined through an arborist assessment at PM 84.10 where Redwood Forest SNC occurs. The vegetation removed for cut and cover culvert replacement would be limited to understory species; therefore, there would be no impact to this SNC.

Wetlands and Other Waters

The U.S. Army Corps of Engineers (USACE) regulates Waters of the U.S. under Section 404 of the Clean Water Act (CWA) and Section 10 of the Rivers and Harbor Act. Waters of the U.S. include essentially all surface waters, such as navigable waters and their tributaries, interstate waters and their tributaries, most natural lakes, wetlands adjacent to these waters, and impoundments of these waters. This may include lakes, rivers, streams (including intermittent and ephemeral streams), natural ponds, mudflats, playa lakes, sloughs, wet meadows, swamps, bottomland hardwood wetlands, and other kinds of watercourses,

wetlands, and aquatic areas. The term "Other Waters of the U.S." is sometimes used simply to describe those jurisdictional waters (such as streams and other aquatic sites) that do not meet the definition of "wetlands."

At the state level, wetlands and waters are regulated primarily by Regional Water Quality Control Boards (RWQCB), CDFW, and, when the project area lies within the Coastal Zone, the California Coastal Commission (CCC). For this project, the County of Mendocino will carry out the policies of the California Coastal Act at the local level. Sections 1600–1607 of the California Fish and Game Code require any agency that proposes a project that will substantially divert or obstruct the natural flow of, or substantially change the bed or bank of a river, stream, or lake to notify CDFW before beginning construction. If it is determined that the project may substantially and adversely affect fish or wildlife resources, a Lake and Streambed Alteration Agreement will be required. CDFW jurisdictional limits are usually defined by the tops of the stream or lake banks or the outer edge of riparian vegetation, whichever is wider.

The RWQCB regulates discharges of fill and dredged material into Waters of the State under Section 401 of the Clean Water Act and the Porter-Cologne Water Quality Control Act. These programs protect all waters in their regulatory scope, but have special responsibility for wetlands, riparian areas, and headwaters because these water bodies have high resource value, are vulnerable to filling, and are not systematically protected by other programs.

Wetland delineations were performed on May 16–17, 2023**,** by Caltrans Biologists in accordance with methods described in *USACE Corps of Engineers Wetland Delineation Manua*l (Environmental Laboratory 1987) and *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region* (USACE 2010). The USACE methodology relies on a three-parameter approach in which criteria for hydrophytic vegetation, hydric soils, and wetland hydrology must each be met to conclude an area qualifies as a wetland. Table 3 below identifies the aquatic resources within the project ESLs and the Coastal Zone BSAs at the various culvert locations.

Table 3. Aquatic Resources within the Project ESLs and Coastal Zone BSAs at the Culvert Locations

Feature Type and ID	Feature Location (Culvert PM)	Jurisdictional Coverage	Linear Feet within the ESL	Linear Feet within the Coastal Zone BSA	Acres within the ESL	Acres within the Coastal Zone BSA
3-parameter wetland (W-1)	76.81	CDFW, Mendocino County, NRWQCB, USACE	N/A	N/A	0.002	0.003
3-parameter wetland (W-2)	76.81	CDFW, Mendocino County, NRWQCB, USACE	N/A	N/A	0	0.013
Perennial Stream/Relatively Permanent Water/Chadbourne Gulch (RPW-1)	75.47	CDFW, Mendocino County, NRWQCB, USACE	0	460	0	0.412
Perennial Stream (RPW-2)	76.20	CDFW, Mendocino County, NRWQCB, USACE	95	314	0.008	0.022
Perennial Stream (RPW-3)	76.52	CDFW, Mendocino County, NRWQCB, USACE	63	346	0.009	0.032
Intermittent Stream/Other Water (OW-1)	76.81	CDFW, Mendocino County, NRWQCB, USACE	55	231	0.001	0.011
Ephemeral Stream/OW (OW-2)	84.10	CDFW, Mendocino County, NRWQCB	25	108	0.001	0.010
Total Waters (including wetlands)	**N/A**	**N/A**	**238**	**1,459**	**0.021**	**0.503**

Feature Type and ID	Feature Location (Culvert PM)	Jurisdictional Coverage	Linear Feet within the ESL	Linear Feet within the Coastal Zone BSA	Acres within the ESL	Acres within the Coastal Zone BSA
Riparian habitat/Coastal Dune Willow thickets (*Salix hookeriana*) Thicket Alliance	75.47	CDFW, Mendocino County, NRWQCB	N/A	N/A	0	0.498
Riparian habitat/Coastal Dune Willow (*Salix hookeriana*) Thicket Alliance	76.20	CDFW, Mendocino County, NRWQCB	N/A	N/A	0.098	0.184
Riparian habitat/Coastal Dune Willow (*Salix hookeriana*) Thicket Alliance	76.52	CDFW, Mendocino County, NRWQCB	N/A	N/A	0.105	0.320
Riparian habitat/Coastal Dune Willow (*Salix hookeriana*) Thicket Alliance	76.81	CDFW, Mendocino County, NRWQCB	N/A	N/A	0.007	0.216
Riparian habitat/Red alder forest (*Alnus rubra*) Woodland Alliance	84.10	CDFW, Mendocino County, NRWQCB	N/A	N/A	0	0.136
Total Riparian Impacts	**N/A**	**N/A**	**N/A**	**N/A**	**0.210**	**1.354**

Wetlands

Wetlands within the BSA are all freshwater and exhibit three parameters—hydrophytic vegetation, hydric soils, and wetland hydrology—and are under the jurisdictions of USACE, NCRWQCB, and County of Mendocino.

There are two 3-parameter wetlands within the BSA at the culvert location PM 76.81 (Table 3). The two wetlands at PM 76.81 are adjacent to each other, just south of the inlet of the culvert (W-1; approximately 0.002 acre within the ESL and 0.003 acre within the BSA) and within the roadside ditch south of the inlet (W-2; approximately 0.013 acre within the BSA) that leads to the culvert inlet (Table 3). W-2 is fully outside of the ESL.

The dominant species in W-1 are velvet grass (*Holcus lanatus*), small-fruited bulrush (*Scirpus microcarpus*), and water parsley. This wetland surrounds the inlet of the culvert. Leading into this wetland is W-2, which was formed by water collecting in a narrow, shallow roadside ditch. Dominant species in W-2 include velvet grass, an overstory of coastal dune willow, and soft rush (*Juncus effusus*). These wetlands represent Palustrine Emergent Persistent wetlands, seasonally flooded (PEMIC) (Federal Geographic Data Committee [FGDC] 2013). These wetlands convey stormwater drainage and runoff from the northbound lane of SR 1 just south of PM 76.81.

Other Waters of the U.S. and State

Within the project's Coastal Zone BSAs, there are three perennial streams or "relatively permanent waters" (RPWs 1, 2, and 3); one intermittent stream (i.e., Other Water–1 [OW-1]); and one ephemeral stream (i.e., OW-2) that convey Other Waters of the U.S. and State (Table 3).

The feature at PM 75.47, classified as RPW-1, is also known as Chadbourne Gulch and is a fish-bearing stream. Chadbourne Gulch represents a perennial stream completely outside of the ESL, however approximately 460 linear feet (0.412 acre) are within the Coastal Zone BSA (Table 3). This feature is classified as Riverine, Lower Perennial, Unconsolidated Bottom, Organic (R2UB4) (FGDC 2013). Chadbourne Gulch/RPW-1 is a first-order stream that flows alongside the culvert system at PM 75.47; this section of the stream receives both groundwater and stormwater runoff from higher elevations, as well as from paved and dirt roads immediately adjacent. Habitat within the BSA at Chadbourne Gulch (PM 75.47) is mainly dense coastal willow and arroyo willow canopy interspersed with red alder. Channel width and depth varies within the BSA from a few inches to several feet. The substrate is a mix of silt and leaf litter, including woody debris with cobble and gravel.

The perennial stream at PM 76.20, classified as RPW-2, represents approximately 95 linear feet (0.008 acre) of an unnamed perennial stream within the ESL and 314 linear feet (0.022 acre) within the Coastal Zone BSA of the PM 76.20 culvert inlet and outlet (Table 3). This feature is classified as Riverine, Upper Perennial, Unconsolidated Bottom (R3UB4) (FGDC 2013). The habitat at and within the Coastal Zone BSA upstream of the culvert inlet mainly comprises dense, tall, coastal willow canopy interspersed with cascara and red elderberry (*Sambucus racemosa*). The habitat at and within the BSA downstream of the culvert outlet has similar vegetation structure and composition as the culvert inlet area. At the culvert inlet, the Ordinary High Water Mark (OHWM) is approximately 1 foot high from the channel bed and the width from edge of OHWM bank to bank is approximately 3 feet. The stream

substrate at the inlet is a mix of silt and leaf litter/small woody debris with cobble and gravel. The stream is perennial and characteristically 3 to 6 inches deep. This section of RPW-2 receives water flow from upstream portions of the drainage and groundwater seepage and, at the culvert outlet, flows sharply downslope approximately 80 feet towards the Pacific Ocean.

The perennial stream at PM 76.52, classified as RPW-3, represents approximately 63 linear feet (0.009 acre) of an unnamed perennial stream within the ESL and 346 linear feet (0.032 acre) within the Coastal Zone BSA (Table 3). This feature is classified as Riverine, Permanent, Unconsolidated Bottom (R3UB4) (FGDC 2013). RPW-3 flows into PM 76.52 at the culvert inlet, then outlets on a vertical rocky slope approximately 6 feet above a 2-foot-deep pool. The habitat at and within the BSA upstream of the culvert inlet mainly comprises dense, tall, coastal willow canopy interspersed with cascara and red elderberry. The habitat downstream of the culvert outlet contains similar vegetation structure and composition as the culvert inlet. As RPW-3 flows towards the ocean and about 50 feet downstream, the vegetation changes to willow, blackberry, elderberry, and red alder. At the culvert inlet, the OHWM is approximately 1 foot high from the channel bed and the width from edge of OHWM bank to bank is approximately 4 feet. The stream is perennial and characteristically 3 to 4 inches deep. The substrate is a mix of silt and leaf litter/small woody debris with cobble and gravel. This portion of RPW-3 within the BSA receives water flow from upstream portions of the drainage and groundwater seepage and, at the culvert outlet, continues to flow gently downslope through a second, 10-foot-long culvert and out into a shallow permanent stream approximately 900 feet to the northwest. It then flows over a steep cliff above the Pacific Ocean.

Within the project limits, the two Other Waters (OWs) are an intermittent stream at PM 76.81 (OW-1) and an ephemeral stream beginning at the outlet of the culvert at PM 84.10 (OW-2).

OW-1 at PM 76.81 is an intermittent stream with an unconsolidated bottom surface (R4UB4) (FGDC 2013) totaling approximately 55 linear feet (0.001 acre) within the ESL and approximately 231 linear feet (0.011 acre) within the BSA (Table 3). The stream is intermittent and characteristically 3 to 6 inches deep. The substrate is a mix of silt and leaf litter/small woody debris with cobble and gravel. OW-1 is relatively narrow and conveys ground water and stormwater runoff from the east towards the southwest, eventually terminating at the Pacific Ocean.

OW-2 at PM 84.10 is an ephemeral stream (FGDC 2013) traversing down a steep slope which totals approximately 25 linear feet (0.001 acre) within the ESL and approximately 108 linear feet (0.010 acre) within the BSA (Table 3). The substrate is a mix of cobble and gravel with heavy leaf litter covering. This ephemeral drainage conveys stormwater runoff from the west towards the east, eventually terminating at a perennial stream tributary to Hardy Creek.

Associated Riparian Habitat

Within the jurisdiction of CDFW and the 1600 Lake and Streambed Alteration Agreement, the definition of "riparian" refers to *"land area that encompasses the river channel and its current or potential floodplain, i.e., bed, bank, and channel up to the OHWM, or land area with the potential to influence the floodplain and river channel, i.e., habitat extending to top of bank."*

Riparian habitat is present within the Coastal Zone BSA at all of the culvert systems and is within the ESL at all but two of the culvert systems (PM 75.47 and PM 84.10). The riparian community occurs adjacent to the OHWM of the Hardy Creek tributary, Chadbourne Gulch, and several unnamed permanent and intermittent streams within the project BSAs. Coastal willow is the dominant tree species at PMs 75.47, 76.20, 76.52, and 76.81. Understory species primarily include coastal willow and arroyo willow saplings, thimbleberry (*Rubus parviflorus*), Himalayan blackberry, and California blackberry. Herbaceous species in the floodplain riparian habitat commonly include piggy-back plant, common horsetail, five-fingered fern, and cow parsnip.

Plant Species

Existing occurrence records of special status plant species and sensitive natural communities were queried prior to conducting field surveys to assist in determining which species may potentially occur within the BSA. Within the project area, there is potentially suitable habitat for 59 special status plant species (Appendix F). Seasonally appropriate floristic surveys were conducted within the project study area on May 16–17, June 28, and August 16, 2023, by Caltrans Biologists (Appendix E). The surveys followed *CDFW Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (CDFW 2018). Botanical surveys did not document any special status plants within or immediately adjacent to the culvert ESLs. Species that were not detected during appropriate blooming surveys were presumed to be absent.

As indicated in the species table (Appendix F), and based on seasonally appropriate botanical surveys, it was determined there was no suitable habitat and no presence within or adjacent to the project ESLs for the following federal and/or state listed plant species:

- Burke's goldfields (*Lasthenia burkei*)
- Contra Costa goldfields (*Lasthenia conjugens*)
- Howell's spineflower *Chorizanthe howellii)*
- Humboldt County milk-vetch (*Astragalus agnicidus*)
- Kellogg's buckwheat (*Eriogonum kelloggii*)
- Lassics lupine (*Lupinus constancei*)
- Menzies' wallflower (*Erysimum menziesii* ssp. *menziesii*)
- Monterey clover (*Trifolium trichocalyx*)
- Red Mountain catchfly (*Silene greenei* ssp. *angustifolia*)

As there would be no impact to these species, they are not discussed further in this section.

Although not observed during botanical surveys, there is potentially suitable habitat for the following federal and/or state species; therefore, they are discussed in further detail below:

- Marsh sandwort (*Arenaria paludicola*)–federal and state endangered
- Showy Indian clover (*Trifolium amoenum*)– federal endangered

Marsh Sandwort

Marsh sandwort (*Arenaria paludicola*) is a federally and state endangered plant species in California with a CRPR of 1B.1. It inhabits freshwater marshes, wetlands, and riparian forests, and is found at elevations of 0 to 985 feet (0 to 300 meters). Marsh sandwort is a perennial herb in the pink family (*Caryophyllaceae*) that grows erect up to 3 feet tall or as a trailing vine; the flower is white with five petals.

Showy Indian Clover

Showy Indian clover (*Trifolium amoenum*) is a federally endangered plant species in California with a CRPR of 1B.1. It inhabits wetlands, valley grasslands, and riparian forests, and is found at elevations of 0 to 330 feet (0 to 100 meters). Showy Indian clover is an annual herb in the pea family (*Fabaceae)* that grows from 4 to 24 inches tall and each

leafstalk has three leaflets meeting at a central point. Individual flowers are 0.5 inch long and purple with white tips that aggregate into a rounded head. Showy Indian clover blooms between April and June.

Animal Species

Animals are considered to be of special concern based on (1) federal, state, or local laws regulating their development; (2) limited distributions; (3) and/or the presence of habitat required by the special status animals occurring on-site.

Based on queries made to USFWS, NMFS, and CDFW-CNDDB databases, 23 special status animals could potentially occur or would have suitable habitat within the BSA. Impacts from the project to special status/listed species that could potentially be present within the project area, based on suitable habitat, elevation, and/or geographical range, will be discussed further. There will be no further discussion of the following federal or state listed animal species where the project study area either lacks suitable habitat or is outside the elevation and/or geographical range of the species:

- Green sea turtle-East Pacific DPS (*Chelonia mydas*)
- Leatherback sea turtle (*Dermochelys coriacea*)
- Olive Ridley sea turtle (*Lepidochelys olivacea*)
- American goshawk (*Accipiter atricapillus*)
- Hawaiian petrel (*Pterodroma sandwichensis*)
- Western snowy plover–Pacific Coast DPS (*Charadrius nivosus nivosus*)
- Yellow-billed cuckoo–Western U.S. DPS (*Coccyzus americanus occidentalis*)
- Chinook salmon–California Coastal ESU (Oncorhynchus tshawytscha)
- Coho salmon–Southern Oregon/Northern California Coast ESU (*Oncorhynchus kisutch*)
- North American green sturgeon–Southern DPS (*Acipenser medirostris*)
- Steelhead-Northern California DPS–**summer-run** (pop. 48) (*Oncorhynchus mykiss irideus*)
- Tidewater goby (*Eucyclogobius newberryi*)
- Blue whale (*Balaenoptera musculus*)

- Fin whale (*Balaenoptera physalus*)
- Guadalupe fur seal (*Arctocephalus townsendi*)
- Humpback whale (*Megaptera novaeangliae*)
- Killer whale–Southern Resident DPS (*Orcinus orca*)
- North Pacific right whale (*Eubalaena japonica*)
- Sei whale (*Balaenoptera borealis*)
- Sperm whale (*Physeter macrocephalus*)
- Pacific (Humboldt) marten (*Martes caurina*)
- Crotch's bumble bee (*Bombus crotchii*)
- Western bumble bee (*Bombus occidentalis*)
- Monarch butterfly-overwintering population (*Danaus plexippus*)

AMPHIBIANS AND REPTILES

Foothill Yellow-legged Frog, Northern Red-legged Frog, Pacific (Coastal) Tailed Frog, Red-bellied Newt, and Southern Torrent Salamander

The culvert project locations support habitat for the following amphibians designated as Species of Special Concern (SSC):

- Foothill yellow-legged frog *(Rana boylii)*
- Northern red-legged frog *(Rana aurora)*
- Pacific (Coastal) tailed frog *(Ascaphus truei)*
- Red-bellied newt *(Taricha rivularis)*
- Southern torrent salamander *(Rhyacotriton variegatus)*

Habitat preferences vary among these species. The Pacific (Coastal) tailed frog is restricted to perennial montane streams, whereas the Foothill yellow-legged frog and Northern red-legged frog can be found in more varied habitats such as roadside ditches, woodlands, grasslands, and rocky substrates. Red-bellied newts and Southern torrent salamanders prefer consistently wet, cool aquatic environments with high shade and canopy cover (California Herps 2023a, b, c, d, e).

Foothill yellow-legged frog (FYLF) could potentially occur within the BSA at PM 84.10 within and along the tributary to Hardy Creek; however, suitable habitat is absent within the ESL at PM 84.10. Northern red-legged frog (NRLF) could potentially occur within the BSA at all culvert systems in perennial streams. Suitable habitat is present within the ESL in perennial streams at PMs 76.20, 76.52, and 76.81. Suitable dispersal habitat for Pacific (Coastal) tailed frog, red-bellied newt, and southern torrent salamander is only present at PM 84.10. While the ESL does not provide suitable breeding habitat for these species, the ESL and the surrounding riparian and upland habitat may provide non-breeding dispersal and foraging habitat.

Surveys for special status amphibians were not conducted but the nearest CNDDB occurrence of these special status amphibians ranges from 0.36 mile to 2 miles northeast of the BSA at PM 84.10 and PM 75.47. However, these species may be present in waterways and adjacent riparian and upland redwood forest habitat; therefore, it is generally presumed they could occur within and adjacent to the project ESL.

BIRDS

Migratory Birds/Migratory Bird Treaty Act

The Federal Migratory Bird Treaty Act (MBTA) (15 USC 703-711), Title 50 Code of Federal Regulations (CFR) Part 21 and 50 CFR Part 10, the California Fish and Game Code (CFGC) Sections 3503, 3513, 3800, and AB-2627 protect migratory birds, their occupied nests, and their eggs from disturbance or destruction. The MBTA provides protection in part by restricting the disturbance of nests during the bird nesting season.

No species-specific surveys were conducted for migratory birds; however, suitable nesting habitat for various migratory bird species is present within the BSA. The habitat for these species includes redwood forest, coyote brush coastal scrub, and willow and alder riparian woodland.

Purple Martin and Vaux's Swift

The coniferous forests found within the BSA around the culvert located at PM 84.10 may provide nesting habitat for purple martin (*Progne subis*) and Vaux's swift (*Chaetura vauxi*). These species are discussed together since they occupy the same taxonomic group, similar ecological niches, and have similar potential to be impacted by construction activities. Both species are considered by CDFW as SSCs.

No purple martins or Vaux's swifts were observed within or adjacent to the ESL at PM 84.10 during field surveys. There are no documented occurrences of Vaux's swift within the nine-quad CNDDB search. No nests of either species have been observed within or adjacent to the ESL at PM 84.10 during field surveys; however, the widespread coast redwood forest mixed with Douglas-fir trees within the BSA at PM 84.10 provides suitable nesting habitat. While Purple martin and Vaux's swift are not likely to nest within the ESL, the potential for these species to occur cannot be discounted due to suitable habitat presence.

White-tailed Kite

The white-tailed kite (*Elanus leucurus*) was listed as a fully protected (FP) species in 1957 in California (CFGC Section 3511). This species can be found in the Central Valley and entire California coast in a variety of habitats. It nests in dense, relatively large stands of riparian, redwood, and Douglas-fir trees. Kites build platform nests in dense canopies at the tops of nest trees. The nesting season for white-tailed kites in California is generally from late January until August (Dunk 2020).

No white-tailed kites were observed within the BSAs at each culvert location. The nearest known occurrence of white-tailed kites is as MacKerricher State Park in Cleone, approximately 9.1 miles south of the BSA at the culvert at PM 75.47. Although no nests were observed within the BSAs, the stands of mixed conifer forest present within the BSA of the culverts at PMs 76.20, 76.52, and 76.81 provide marginally suitable nesting habitat. However, while the habitat is marginally suitable at PM 84.10, there is low potential for the species to nest within the BSA in snags or hollows of mature redwoods or Douglas-fir. Although white-tailed kites are not likely to nest within the ESLs at each culvert location, the potential for this species to occur cannot be discounted.

Yellow Warbler and Yellow-breasted Chat

The dense, low, riparian woodlands found within the BSA around the culverts located at PMs 75.47, 76.20, 76.52, and 76.81 may provide migration and nesting habitat for yellow warbler (*Dendroica petechia*) and yellow-breasted chat (*Icteria virens*)–both species are CDFW SSCs. These species are discussed together since they occupy the same taxonomic group, similar ecological niches, and have similar potential to be impacted by construction activities.

Yellow warblers prefer small trees and shrubs typical of low, open-canopy, riparian woodland and open to medium density woodlands with heavy brush understory. Yellow-breasted chats prefer early successional willow scrub habitat with a well-developed shrub layer and open canopy with blackberry, grape, willow, etc. that form dense thickets and

tangles which are selected for nesting substrate. Both species use riparian thickets of willow and brushy tangles, dense brushy thickets and tangles near water, and thick understory in riparian woodland (Shuford and Gardali, 2008).

No yellow warblers or yellow-breasted chats were observed within or adjacent to ESLs at PMs 75.47, 76.20, 76.52, and 76.81 during field surveys. There are no documented occurrences of either species within the nine-quad CNDDB search. However, an eBird query of the region showed that yellow warblers were observed in September 2022 within the BSA at the culvert located at PM 75.47. The eBird query documented a yellow-breasted chat in August of 2022 approximately 8.9 miles north of the culvert located at PM 84.10 at Usal Beach Campground, but there is no habitat for either species at PM 84.10. No nests were observed within or adjacent to the BSA at PMs 75.47, 76.20, 76.52, or 76.81 during field surveys; however, the dense, widespread willow riparian forest within the BSAs at PMs 75.47, 76.20, 76.52, and 76.81 provides suitable nesting habitat.

As there are no documented occurrences of either species within the CNDDB nine-quad search, there is low potential for yellow warblers and yellow-breasted chats to nest within the ESL; however, the potential for these species to occur cannot be discounted due to suitable habitat presence.

FISH

Pacific Lamprey

Pacific lamprey (*Entosphenus tridentatus*) is a CDFW Species of Special Concern. Pacific lampreys are parasitic anadromous fish native to the Pacific coast of North America and Asia. Abundance estimates for Pacific lamprey populations in California are scarce. As adults in the ocean, Pacific lampreys are parasitic and feed on the body fluids and blood of marine fish. After spending one to three years in the marine environment, they stop feeding and migrate back to fresh water between February and June. They overwinter in fresh water until they spawn the following year between March and July (CalFish 2023c). Pacific lamprey ammocoetes (the larval stage) start life under gravel in freshwater streams. After a few weeks they emerge, usually at night, and drift downstream until they find a low velocity backwater filled with silt or mud where they burrow and live as filter feeders for up to 7 years. Metamorphosis to macrophthalmia (juvenile phase) occurs gradually over several months from July to November. During the transformation, they develop eyes and teeth. Macrophthalmia begin their downstream migration in late summer-early fall when rains increase stream flows that passively carry fish to main stem rivers and eventually the ocean.

Although there are no records of lamprey in Chadbourne Gulch within the BSA of the culvert at PM 75.47, there is marginal dispersal habitat for migrating juveniles. Within the BSA of the culverts at the other drainage locations, there is no suitable spawning habitat with riffles and gravel or cobble and suitable rearing habitat for larvae; the stream substrates are more clay-like rather than sandy, which would prevent burrowing larvae. There is no suitable habitat for lamprey within the ESL.

MAMMALS

Pacific Fisher–West Coast DPS-Northern California ESU

The Pacific fisher (fisher) (*Pekania pennanti*)–West Coast Distinct Population Segment (DPS) is a state SSC in northern California, while other populations outside the North Coast have been designated state and federally threatened (50 CFR 17 2020). Fisher is one of the largest members of the weasel family (Mustelidae) and are opportunistic, generalist predators with a diverse diet which includes mammalian and avian prey, ungulate carrion, vegetation, insects, and fungi.

Fishers are known to occur in coniferous forest in the coastal ranges of northern California, including second growth and old-growth redwood forest, with a possible preference for stands with structural complexity, diversity, and large logs and snags for resting and denning (Zielinski et al., 2004). The fisher requires intermediate to large-tree stages of coniferous forests and deciduous-riparian areas with high percent canopy closure (Zielinski et al., 2004). Trees suitable for fisher den sites include conifers (≥ 22 inches DBH) and hardwoods (≥ 18 inches DBH), not smaller trees. Day resting sites could include branches, platforms, and cavities of live trees.

No signs of fisher occupation were observed and protocol-level surveys were not performed for fisher. There are no CNDDB occurrences within the 9-quad search area of the BSAs.

While the BSA at PM 84.10 is within the current range of the species, there is no suitable denning or nesting habitat present; there is only dispersal habitat where work would be conducted.

Fishers are a nocturnal species averse to interacting with humans. They would likely be absent from otherwise suitable habitat within the BSA due to high levels of human disturbance, such as areas bordering roads, trails, human habitation, etc.

Bats

In California, nine species of bats are considered state SSC by CDFW and three additional species are proposed for that status. The Forest Service and Bureau of Land Management list some species as sensitive, and the Western Bat Working Group lists some as high priority for consideration of conservation measures. CFGC Section 4150 provides further protection to bats (non-game mammals) from take or possession.

The project BSA for all culvert locations lies within the range of three of the nine SSC bats listed in California—pallid bat (*Antrozous pallidus*), Townsend's big-eared bat (*Corynorhinus townsendii*), and western red bat (*Lasiurus blossevillii*). Several more common bat species may also occur in the project vicinity such as big brown bat (Eptesicus fuscus), silver-haired bat (*Lasionycteris noctivagans*), hoary bat (*Lasiurus cinereus*), Yuma myotis (*Myotis yumanensis*), long-legged myotis (*Myotis volans*), and California myotis (*Myotis californicus*) (CDFW 2024).

Several bat species in California either use, or are likely to use, trees for their habitat needs (Taylor 2006). Bats use tree cavities for roosting during the day and for bearing and rearing young (i.e., maternal roost) typically from May through August. They may also use trees in winter as hibernacula. At night, bats often roost in the open on tree bark. Night roosts, which are used from approximately sunset to sunrise, are sites where animals congregate to rest and digest their food between foraging bouts. Night roosts also serve as important stopping points during migration. In the mild northern California coastal climate, bats are present year-round.

No focused surveys were conducted to detect presence of bats within the project areas. There are no CNDDB records of occurrences of special status bat species within the project areas along SR 1. The nearest occurrence documented in CNDDB is Townsend's big-eared bat along the South Fork of Usal Creek, approximately 5.9 miles north of the culvert located at PM 84.10. Other more common species may utilize the forested habitat. Conifer trees and snags lining the boundaries of the ESL at the culvert located at PM 84.10 provide low potential for bat roosting habitat in basal hollows, cavities, sloughed bark, and broken limbs. There is no roosting habitat in trees at the other culvert locations within the ESL.

Ringtail

Ringtail (*Bassariscus astutus*) is a California state fully protected (FP) species. A member of the raccoon family, ringtails can be found in fragmented and disturbed areas and dens inside buildings and other manmade structures (Zeiner et al., 1990). They are nocturnal carnivores that forage for a variety of prey, primarily small mammals, invertebrates, birds, and reptiles. In northwest California, ringtails tend to select diurnal rest sites near steep slopes and water sources (Zeiner et al., 1990). They frequently change rest sites, although some may be revisited regularly. Most litters are born in May or June, with young beginning to forage outside the den site after two months. Dens can be found in rock crevices, living and dead hollow trees, logs, brush piles, buildings, and other manmade structures. Females may regularly move young between dens.

No focused surveys were conducted for this species. No CNDDB occurrence information is available as CNDDB does not track ringtail observations. Although there is a low potential for the species to den, suitable denning or nesting habitat may be present in redwood basal hollows, downed logs, or brush piles within the BSA buffer at the culvert at PM 84.10. However, none of these habitat features are present within the ESL at any of the other culvert sites.

Sonoma Tree Vole

The Sonoma tree vole (*Arborimus pomo*) is a California SSC. It is endemic to California and occurs within the fog belt from Sonoma County north to the Oregon border. Sonoma tree voles feed almost exclusively on Douglas-fir and grand fir needles or tender tree bark. Both males and females nest in trees from 6 to 150 feet above the ground, with females building larger nests up to three feet in diameter (Zeiner et al., 1990). Sonoma tree voles breed year-round. The typical home range of male voles likely encompasses several trees, while females often live in one tree. The main predator of this species is Northern spotted owl.

No focused surveys for the Sonoma tree vole were conducted. The habitat within the ESL at PM 84.10 and adjacent habitat was evaluated for suitable nesting trees as this species could be presumed present where suitable nesting trees (e.g., Douglas-fir or redwood with DBH >12 inches) exist. There is a CNDDB occurrence record approximately 0.28 mile north of the project area at PM 84.10 (a nest detected in 1994). There is no habitat within the ESL at the other culverts.

No suitable nest trees for Sonoma tree vole would be removed for this project. It is adjacent to a highly traveled roadway that would provide low quality habitat due to disturbance from traffic noise and overall fewer old-growth trees present to support tree vole nests, thus there is low potential of use for nesting voles

THREATENED AND ENDANGERED SPECIES

Western (Northwestern) Pond Turtle

Western pond turtle (WPT) (*Actinemys [Emys]marmorata*) (aka Northwestern pond turtle) is a federal proposed threatened species and a state SSC. This species can be found near permanent ponds, lakes, streams, and irrigation ditches (California Herps 2023f). They favor habitats with large numbers of emergent logs or boulders, where they gather to bask. WPT are omnivorous and most of their animal diet includes insects, crayfish, and other aquatic invertebrates. Females typically move overland for up to 100 feet to find suitable nesting sites for egg laying (California Herps 2023f). Eggs are laid from March to August and incubate underground for approximately 75 days. Eggs are typically deposited in nests constructed in sandy banks along large slow-moving streams, though nests have been observed in many soil types as far as 325 feet from water. The time a turtle spends in a terrestrial habitat is highly variable and largely depends on its geographical location but can range from one month to eight months (Holland 1994). When turtles leave the waterbody in late fall, they can move into upland habitats up to 1,640 feet (500 meters) or more to overwinter (Holland 1994). Adults will disperse for overwintering and do not congregate in one direction or area (Bury et al., 2012). If the turtle overwinters on land rather than in the substrate underwater, a thick layer of duff is generally a preferred characteristic of the microsite (Bury et al., 2012, Holland 1994).

No species-specific surveys were conducted for WPT. The nearest WPT CNDDB occurrence is within 7.7 miles southeast of the BSA at PM 75.47. There is marginal potential for WPT to occur within the project BSAs and ESLs at the culverts located at PMs 75.47, 76.20, 76.52, and 76.81. These sites include stream and adjacent riparian habitat which provide marginally suitable dispersal and overwintering habitat for WPT. There is suitable dispersal habitat present within the BSA along the banks and bed of the tributary to Hardy Creek at PM 84.10; however, it is absent from the ESL. Although this species is not likely to be present within the BSAs and ESLs due to lack of nesting and foraging habitat such as ponds, basking sites, and duff substrate, its presence cannot be discounted.

Bald Eagle

Though the bald eagle (*Haliaeetus leucocephalus*) was delisted from federal status, it is still considered state endangered. This species also remains federally protected by the Bald and Golden Eagle Protection Act (16 USC § T668). Bald eagles typically nest in live trees, some with dead tops, and build a large (~6-foot/1.8 meter diameter), generally flat-topped and cone-shaped nest usually below the top with some cover above the nest within one mile of fishable waters (Jackman and Jenkins, 2004). Bald eagle nest trees in northern California are commonly 100 feet tall, average 43-inch DBH, and have an unobstructed view of a water body.

Active breeding occurs February through August (Buehler 2022). In Mendocino County, bald eagles are strongly tied to open water and undisturbed shorelines. River corridors and estuaries attract scattered individuals thought to be migrants, or otherwise nonresident, from October to March (Hunter et al., 2005).

Focused surveys for bald eagles were not conducted. There were no records of bald eagle in the CNDDB nine-quad search, but an eBird query showed that bald eagles have been documented at MacKerricher State Park in Cleone, approximately 9.13 miles south of the BSA for the culvert at PM 75.47. Habitat within the BSA at each culvert was visually assessed for presence of larger conifers with structures that would support nests. Within the ESLs, there is no nesting or foraging habitat. While there is no foraging habitat for bald eagles adjacent to the ESLs, there is low-quality nesting habitat, with several conifers of suitable size within the BSA at PM 84.10 along the tributary to Hardy Creek. Bald eagles are not expected to occur within or adjacent to project locations where they could be affected by auditory or visual disturbance as this species is sensitive to noise and visual disturbance and there is substantial existing human disturbance from traffic and logging activities adjacent to the project sites.

Marbled Murrelet

Marbled murrelet (MAMU) (*Brachyramphus marmoratus*) is federally threatened and state endangered. This species was federally listed in September 1992 and critical habitat was designated in 2011. MAMU was listed as state endangered in March 1992. A federal recovery plan was finalized in September 1997 (USFWS 1997).

MAMU is a small Pacific seabird that breeds along the Pacific coast of North America from Alaska south to central California. They forage primarily in nearshore marine waters (within a few miles of shore) and fly inland to nest in mature conifers. Nesting habitat is primarily associated with large tracts of old-growth forest, typically within 50 miles from shore, characterized by large trees, a multistoried stand, and moderate to high canopy closure. Nests are not built, but an egg is laid in a depression of moss or other debris on the limb of a large conifer. Suitable nest structures include large mossy horizontal branches, mistletoe (*Phoradendron spp*.) infections, structural deformities of the tree, and other such structures. During the March to September breeding season, MAMU typically fly along river corridors for their morning and evening nest visits (USFWS 1997).

No protocol-level surveys were conducted for MAMU. Habitat suitability for MAMU was examined within the ESL at PM 84.10 and up to 328 feet (100 meters) out from the project construction footprint (within the BSA). There is roosting habitat present within the visual and noise disturbance BSA and there is potentially suitable nesting habitat in adjacent forests. Redwood forest habitat adjacent to the ESL at the culvert location at PM 84.10 is primarily second-growth forest, but some of the older trees are greater than 48 inches DBH and there is high canopy closure.

The CNDDB lists the nearest MAMU occurrence as being approximately 0.15 miles north-northwest of the BSA at 84.10. No MAMU critical habitat occurs within or adjacent to the ESL at PM 84.10. The nearest critical habitat is located approximately 7.4 miles southeast of the BSA at PM 84.10.

Northern Spotted Owl

The Northern spotted owl (NSO) (*Strix occidentalis caurina*) is a federal and state threatened species. It was federally listed (55 FR 26114) on June 26, 1990, and state listed on August 25, 2016. Critical habitat was designated (73 FR 47326) on August 13, 2008. A revised Federal Recovery Plan was finalized in October 2011 (USFWS 2011).

NSO generally has large home ranges and uses large tracts of land containing significant acreage of older forest to meet their biological needs. The attributes of high-quality NSO nesting and roosting habitat typically include a moderate-to-high canopy closure (60–80%); 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 accumulation); large accumulations of fallen trees and other debris; and sufficient open space below the canopy for flight. In redwood forests and mixed conifer-hardwood forests along the coast of

northwestern California, considerable numbers of NSO also occur in young forest stands. NSO tends to select broken-top trees and cavities in older forests for nest sites, although they will also use existing platforms such as abandoned raptor nests, squirrel nests, mistletoe brooms, and debris piles (Gutierrez et al., 1995). In younger forests, existing platforms are more frequently utilized for nest sites (Gutierrez et al., 1995). Courtship initiates in February or March with the first eggs laid in late March through April. Fledglings generally leave the nest in late May or in June but continue to be dependent on their parents into September until they are able to fly and hunt on their own. By September juveniles have left their natal area (USFWS 2011).

No protocol-level surveys for NSO were conducted for the proposed project. Habitat suitability for NSO was examined within the ESL at PM 84.10 and up to 328 feet (100 meters) out from the ESL (within the BSA). Presence of NSO was presumed for the culvert location at PM 84.10 due to the presence of suitable nesting and roosting habitat within the BSA, assessed during site visits. The nearest known NSO occurrence is approximately 11.31 miles east of BSA at PM 84.10. Critical habitat is located approximately 6 miles east of the BSA at 84.10.

Salmonids and Salmonid Critical Habitat

Coho salmon–Central California Coast ESU

The Central California Coast (CCC) coho salmon (*Oncorhynchus kisutch*) Evolutionarily Significant Unit (ESU) (pop. 4) is both a federal and state endangered species. Federal listing as threatened (61 FR 56138) occurred on October 31, 1996, and a final listing of endangered was enacted on June 28, 2005 (70 FR 37160). Critical habitat was designated on May 5, 1999 (64 FR 24049). A Recovery Plan for this species was finalized in September 2012 (NMFS 2012). California Fish and Game Commission listed the CCC ESU of coho salmon on August 30, 2002 (CDFG 2004). The current range of the coho salmon–CCC ESU extends from Punta Gorda in southern Humboldt County to Aptos Creek in Santa Cruz County. Historically, the range also included the San Francisco Bay and its tributaries; today, CCC coho salmon are extirpated from all rivers that flow into San Francisco Bay.

In Mendocino County, migration of CCC ESU coho salmon from the ocean to freshwater spawning sites typically occurs between October and January, with a peak in December (S. Gallagher [CDFW], personal communication, July 18, 2016). To swim upstream to spawn in upper reaches, adult coho salmon in Hardy Creek and its tributaries can enter drainages after the sandbar is breached during the first large rain event. Hatched juveniles with attached

yolk sacs remain in the gravel from February to March. Upon emergence from redds (or nests) in March to May, fry utilize river margins and undercut banks for cover. Juveniles remain in fresh water for one to two years before developing into smolts. Coho salmon juveniles in Mendocino County generally out-migrate to the ocean from February to June, although timing may be slightly earlier or later depending on the year (S. Gallagher [CDFW], personal communication, July 18, 2016). After one to two years spent in the ocean, adults return to their natal streams to spawn and continue the life cycle.

Critical habitat is designated to include all river reaches accessible to coho salmon within the range of the ESU and consists of the water, substrate, and adjacent riparian zone of estuarine and riverine reaches (NMFS 2012). Suitable coho salmon freshwater habitat consists of perennial streams with cool, high-quality water; dense riparian canopy; deep complex pools with large woody debris; in-stream cover with woody debris and undercut banks; and a gravel or cobble substrate. These structural features create an environment that supports existence of food sources for coho, including aquatic vegetation, plankton, benthic and nearshore invertebrates, and other fish species. The adjacent riparian zones provide shade, sediment, nutrient and/or chemical regulation, streambank stability, and input of large woody debris and/or organic matter.

Steelhead–Northern California DPS-Winter-run

The steelhead (*Oncorhynchus mykiss*)–Northern California (NC) Distinct Population Segment (DPS) *winter-run* is a federally threatened species. It was listed as threatened under FESA in 2000 and reaffirmed a threatened species on January 5, 2006 (71 FR 834). Critical habitat was designated on September 2, 2005 (70 FR 52488). A draft Recovery Plan was released in October 2015 and finalized in 2016 (NMFS 2016). This DPS ranges from northern Humboldt County to Sonoma County.

Suitable freshwater spawning habitat consists of fast, well-oxygenated rivers and streams with gravel substrates that do not have excessive amounts of silt (NMFS 2016). Suitable rearing habitat contains cover features, such as overhanging and emergent vegetation, boulders, and woody material, and high flow velocity features such as riffles for feeding. Steelhead feed on zooplankton, aquatic and terrestrial insects, mollusks, crustaceans, and other small fishes. The lateral extent of designated critical habitat in estuarine environments that exhibit the critical habitat features for steelhead is defined by the OHWM.

The population of steelhead trout on the Mendocino coast are winter-run, which are ocean-maturing-type steelhead (NMFS 2016). When the fish enter fresh water between November and April, they are already sexually mature and migrate upstream to spawn. Once suitable spawning habitat is found, females prepare the redd (spawning nest) and lay up to 1,000 eggs. Eggs hatch within three to four weeks. Steelhead young rear in freshwater environments for one to three years. Smolt out-migration occurs from February to June, with peak periods in April and May.

Survey Results

Focused surveys were not conducted for special status salmonids within the BSA at PM 75.47 at Chadbourne Gulch or PM 84.10 at Hardy Creek. Hardy Creek, its tributaries, and Chadbourne Gulch are considered anadromous fish critical habitat based on stream inventory surveys (CDFG 2008, 2009) as well as data from Calfish distribution maps (Calfish 2023a, 2023b) and NMFS critical habitat maps.

Suitable foraging and rearing habitat are present at two locations: Hardy Creek and its tributaries (approximately 30 feet downstream of the culvert at PM 84.10) and Chadbourne Gulch (within the ESL downstream of the culvert outlet at PM 75.47). Spawning habitat is not present. Although the ESL at PM 74.57 is within 120 feet of the OHWM of Chadbourne Gulch, which supports these species, they are not expected to utilize the culvert due to blockage that restricts fish passage as confirmed by Caltrans engineers.

Critical Habitat

The culvert at PM 84.10 is within designated critical habitat for CCC coho salmon and NC steelhead. Although the ESL at PM 84.10 is within 110 feet of the OHWM of the tributary to Hardy Creek, which supports these species, they are not expected to utilize the culvert due to the steep slope that restricts fish passage. The culvert at PM 84.10 drains into an unnamed tributary of Hardy Creek that is considered critical habitat. The culvert at PM 84.10 does hydrologically connect downstream to the fish-bearing waters of Hardy Creek.

Relatively permanent waters at the culverts at PMs 76.20, 76.52, and 76.81 are not fish-bearing waters, although they drain directly to the Pacific Ocean; steep cliffs with a slope greater than 20% act as a natural barrier to anadromous fish in the ocean.

Essential Fish Habitat

The Magnuson-Stevens Fishery Conservation and Management Act (MSA) requires federal fishery management plans (FMPs) to describe Essential Fish Habitat (EFH) being managed, as well as describe threats to that habitat from both fishing and non-fishing activities. In addition, to protect this EFH, federal agencies are required to consult with NMFS on activities that may adversely affect EFH.

EFH is defined by the MSA for federally-managed species as "those waters and substrate necessary for fish for spawning, breeding, feeding, or growth to maturity." Pacific Coast Salmon EFH (Chinook salmon and coho salmon) are regulated under the Federal Pacific Coast Salmon FMP (Pacific Fishery Management Council [PFMC] 2016). Freshwater EFH for Pacific Coast salmon consists of four major components: (1) spawning and incubation; (2) juvenile rearing; (3) juvenile migration corridors; and (4) adult migration corridors.

EFH for Pacific Coast salmon is present in Chadbourne Gulch within the BSA of the culvert at PM 75.47 and the tributary to Hardy Creek within the BSA of the culvert at PM 84.10, but there is no EFH within the ESL at either culvert location.

No EFH for groundfish, coastal pelagics, or highly migratory species is present within the BSA.

Invasive Species

Introduction and naturalization of non-native species is one of the leading threats to global biodiversity. Some of the species that most threaten native ecosystem function and structure in Mendocino County include English ivy (*Hedera helix*), jubata grass (*Cortaderia jubata*), and Himalayan blackberry (California Invasive Plant Council [Cal-IPC] 2023), all of which were observed within the project limits. Invasive species occurring within the project ESL are identified in the list of plant species observed (Appendix F–Botanical Survey Results).

Discussion of CEQA Environmental Checklist Question 2.4a)—Biological Resources

"No Impact" determinations were made for Questions d), e) and f) of the CEQA Environmental Checklist-Biological Resources section based on the scope, description, and location of the proposed project, as well as the NES prepared in June 2024 (Caltrans 2024c).

The following discusses Questions a), b) and c), of the CEQA Checklist-Biological Resources section.

a) 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, U.S. Fish and Wildlife Service, or NOAA Fisheries/NMFS?

PLANT SPECIES

Marsh Sandwort and Showy Indian Clover

Both marsh sandwort and Showy Indian clover were not detected during surveys within or adjacent to the project area.

Per FESA, Caltrans has determined the project would have "*No Effect"* on both the marsh sandwort and Showy Indian clover.

Per CESA, Caltrans has determined the project would have no State "*take"* of marsh sandwort.

ANIMAL SPECIES

AMPHIBIANS AND REPTILES

Foothill Yellow-legged Frog, Northern Red-legged Frog, Pacific (Coastal) Tailed Frog, Red-bellied Newt, and Southern Torrent Salamander

In work areas adjacent to or within stream channels where surface waters are present, special status amphibians could be directly impacted during construction activities involving moving construction equipment, open trenches, and pump intakes for dewatering. Implementation of the Standard Measures and Best Management Practices (Section 1.4), which include pre-construction surveys and relocation, would minimize these potential direct impacts.

Project construction could degrade water quality, such as increases in sediment loads and occasional accidental spills of construction-related fluids into or in close proximity to creeks where culvert work would occur. Degraded water quality could harm all life stages if they are in or downstream of work areas. Standard measures to protect water quality would avoid and minimize these potential impacts.

Due to the limited disturbance, short-term nature of the activities, and the abundance of suitable habitat adjacent to the project ESL for which they could relocate if necessary, it was determined the project would have a "*Less than Significant Impact*" on Foothill yellow-legged frog, Northern red-legged frog, Pacific (Coastal) tailed frog, red-bellied newt, or the Southern torrent salamander.

BIRDS

Purple Martin and Vaux's Swift

Nesting purple martins and Vaux's swifts within the BSA would not be impacted by vegetation removal within the ESL at PM 84.10 and there is low potential for the species to nest within the BSA in snags or hollows of mature redwoods or Douglas-fir at PM 84.10. However, noise and visual impacts to this species would not be substantial given the existing relatively high ambient noise along SR 1, the temporary nature of the project, and implementation of the Standard Measures and Best Management Practices (BMPs)identified in Section 1.4 designed to avoid disturbing active nests. Given this, it was determined the project would have a "*Less than Significant Impact*" on purple martin or Vaux's swift.

White-tailed Kite

No white-tailed kites were observed within the BSAs. The nearest known occurrence of white-tailed kites is at MacKerricher State Park in Cleone, approximately 9.1 miles south of the PM 75.47 culvert BSA. While no nests have been observed within the BSA, the stands of mixed conifer forest present within the BSAs at the culverts at PMs 76.20, 76.52, and 76.81 provide marginally suitable nesting habitat. There is low potential for the species to nest within the BSA in snags or hollows of mature redwoods or Douglas-fir at PM 84.10. While White-tailed kites are not likely to nest within the ESL, the potential for this species to occur cannot be discounted. Given this, it was determined that the project would have a "*Less Than Significant Impact*" on white-tailed kite.

Per CESA, there would be *no "take"* of white-tailed kites from auditory or visual disturbance, nor from removal of nest trees.

Yellow Warbler and Yellow-breasted Chat

There is low potential for these species to nest within the BSA in riparian habitat at Chadbourne Gulch, adjacent to PM 75.47. Nesting yellow warblers and yellow-breasted chats within the BSA may potentially be impacted by visual and noise disturbance associated with culvert construction at the culvert locations at PMs 75.47, 76.20, 76.52, and 76.81. Noise and visual impacts to this species would not be substantial given the existing relatively high ambient noise along SR 1, the temporary nature of the project, and implementation of the Standard Measures and Best Management Practices identified in Section 1.4 designed to avoid disturbing active nests. Given this, it was determined the project would have a "*Less than Significant Impact*" on yellow warblers and yellow-breasted chats.

FISH

Pacific Lamprey

There is marginally suitable migration/dispersal habitat present within the BSA in Chadbourne Gulch, however Pacific Lamprey are not known to occur here and there is no suitable habitat present within the ESL. Potential effects to Pacific lamprey in Chadbourne Gulch and the tributary to Hardy Creek may include temporary reductions in water quality from construction upslope at the culvert located at PM 84.10. The proposed project may impact migrating lamprey in downstream waters due to potential short term, localized increases in turbidity caused by ground disturbance, contaminants in roadway stormwater runoff, or accidental spills. Reductions in water quality can compromise safe passage conditions for fish migration. However, with implementation of the Standard Measures and BMPs in Section 1.4, any water quality impacts would be minimized.

Given the project is not anticipated to result in adverse effects to Pacific lamprey populations, it was determined the project would have a "*Less Than Significant Impact*" on Pacific lamprey.

MAMMALS

Pacific Fisher—West Coast DPS-Northern California ESU

This project is not anticipated to impact fisher habitat or denning fishers. Although there is potentially suitable foraging and resting habitat for fisher adjacent to the ESL, there are no potential den structures or day resting locations within the ESL where work would be conducted. The project would have "*No Impact"* on Pacific fisher.

Bats

Pallid bat, Townsend's big-eared bat and Western red bat could potentially be impacted by the project. There is low potential for the species to roost in basal hollows of redwoods within the BSA at PM 84.10 and there is no roosting habitat in trees within the ESL. While the proposed project would involve removal of smaller diameter willows for access at PMs 76.20, 76.52, and 76.81, these trees are not anticipated to host roosting bats.

Other project impacts to these species could occur as a result of indirect auditory disturbance associated with construction noise levels that could temporarily displace nearby bats using suitable day roosting habitat. However, because of the relatively high ambient noise level and as temporary increases in sound level would likely be greatly attenuated by the structure of the roosting habitat itself, noise impacts to bats are expected to be minimal (Taylor 2006). With implementation of the Standard Measures and BMPs indicated in Section 1.4, bats are unlikely to be impacted by the proposed work.

Since the project would not permanently impact bat habitat, result in take of individual bats, or substantially impact roosting and foraging behavior, it was determined the project would have a "*Less than Significant Impact*" on pallid bat, Townsend's big eared bat, and Western red bat.

Ringtail

There is low potential for the ringtail to den in downed logs or basal hollows of redwoods within the BSA at PM 84.10, and there is no denning habitat within the ESL. This project would not remove ringtail denning or nesting habitat and the presence of a highly traveled roadway is likely to prevent denning within the ESL. This project would have "*No Impact"* on ringtail.

Sonoma Tree Vole

No suitable nest trees for Sonoma tree vole would be removed for this project. It is adjacent to a highly traveled roadway that would provide low quality habitat due to disturbance from traffic noise and overall fewer old-growth trees present to support tree vole nest**s**, thus limiting the use for nesting voles. Therefore, this project would have "*No Impact"* on Sonoma tree vole.

THREATENED AND ENDANGERED SPECIES

Western (Northwestern) Pond Turtle

Potential effects of the proposed action to Western (Northwestern) pond turtle (WPT) and its habitat are discussed under the following impact categories:

- Temporary Stream Diversion and Relocation
- Noise and Visual Disturbance
- Water Quality Impacts
- Habitat Modification

Temporary Stream Diversion and Relocation

Stream diversions may be necessary for completion of work at the culverts at PMs 76.20 and 76.52. Diversions may reduce potential impacts from noise and visual stressors on aquatic species. Diversions at these permanent drainages would leave most of the stream habitat upstream and downstream available for WPT to use during construction. The immediate area at the inlet and outlet at the culverts at PMs 76.20 and 76.52 would be dewatered approximately 30 to 50 feet upstream and downstream of the culvert openings by installing a cofferdam upstream of each bridge to divert the stream flow, which would then be pumped downstream of the work area through a diversion pipe. Diversions would be installed on or after June 15 and removed prior to October 15.

The temporary stream diversion system may restrict the movement of any turtles that could be present at the inlets and outlets, potentially making them more vulnerable to stress and predation. However, the timing of diversion avoids the overwintering period (December to March) and most of the foraging period for the turtles (September to December) that may pass through the project area. Elements of habitat potentially affected by the stream diversion include overwintering and foraging sites. There would be no permanent impacts to the aquatic habitat with incorporation of the Standard Measures and Best Management Practices identified in Section 1.4 designed to restore the drainages and their respective upland sites post construction. The short-term loss of a small portion of aquatic habitat alone is not likely to significantly impact WPT given the temporary nature of the diversion and the availability of suitable habitat elsewhere in the watershed.

Due to the timing of the culvert replacement work in early to mid-summer, the WPT would not be utilizing and/or foraging near overwintering habitat, and the chance of encountering a WPT would be negligible; thus, should not require WPT capture and relocation. Additionally, as described above in Section 1.4, if individuals of previously unidentified threatened or endangered species (e.g., WPT) are encountered within the ESL, work would either be stopped until the species is out of the impact area, or the appropriate regulatory agency would be contacted to establish steps to avoid or minimize potential adverse effects.

Noise and Visual Disturbance

Construction activities conducted below top of channel banks could cause stress-related behavioral responses of WPT occupying the BSAs at all culverts. General construction noise and vibrations (i.e., non-impulsive, continuous noise) and other physical disturbances can harass wildlife, disrupt or delay normal activities, or increase potential exposure or vulnerability to predators. The culvert ESLs are in areas with high traffic use. Therefore, noise disturbance due to worker and equipment presence is not expected to substantially exceed baseline levels. General construction noise and visual impacts would be restricted to the immediate vicinity of the culvert.

During construction, movement of WPT may be affected by noise (e.g., vibration from construction equipment) and visual stressors (e.g., sudden movements). However, upon cessation of work, it is anticipated that turtle movement and access would return to pre-construction conditions. Noise and visual disturbances are expected to have only temporary, minor effects on the behavior and distribution of turtles. Noise and visual disturbances would be further minimized through implementation of the Standard Measures and Best Management Practices identified in Section 1.4.

Water Quality Impacts

Construction activities that could impact water quality include excavation and vegetation removal for access, grading, and installation of culvert and erosion control structures. Disturbance to soils from these activities may result in temporary and short-term increases in turbidity and suspended sediments in watercourses downstream from the project areas. At certain thresholds, elevated levels of suspended sediments can cause negative physiological and behavioral effects on aquatic organisms. Short-term increases in turbidity and suspended sediment can disrupt normal behavior patterns of aquatic organisms, potentially affecting foraging, rearing, and migration (Bash et al., 2001). Accidental discharges (spills or leaks) of petroleum products during operation of heavy equipment near drainages or watercourses or contact of surface waters with uncured concrete can be toxic to WPT.

This project is not anticipated to have adverse effects to WPT due to water quality impacts. All work would occur above stream banks or at minimum within dewatered sections immediately adjacent to culvert inlets and outlets. Any minor incursions of sediment from construction activities not contained on site would be short-term and temporary, and limited to the construction period. The drainage work would be conducted during the dry season (June 15 to October 15). By implementing Caltrans' Standard Measures and BMPs to protect water quality as described in Section 1.4, the potential for water quality impacts to WPT would be discountable or insignificant if they were to occur.

Habitat Modification Impacts

The minimal area of vegetation removal within potential WPT dispersal and overwintering habitat at the culverts at PMs 76.20, 76.52, and 76.81 would not result in a reduction in shade or measurable increase in water temperature for fish-bearing waters because there would be no change in canopy cover. Potential riparian vegetation removal impacts on WPT and its habitat would be negligible because the vegetation removal within the riparian zone would be limited to shrubs and herbaceous plants that would be replanted or would regrow within a year.

Summary

Per FESA, based on the minimal and temporary nature of these potential impacts and implementation of the Standard Measures and BMPs (Section 1.4) included as part of the project design, Caltrans anticipates the proposed project *"may affect, but is not likely to adversely affect"* Western (Northwestern) pond turtle.

Bald Eagle

Nesting bald eagles within the BSA could potentially be impacted by removal of suitable nest trees and visual and noise disturbance associated with construction near an active nest. Noise and visual impacts to this species would not be substantial given the relatively high ambient noise and human activity that currently exists along SR 1 and surrounding grasslands, the temporary nature of the project, and the implementation of Standard Measures and Best Management Practices designed to avoid disturbing active nests (Section 1.4). Given this, it was determined the project would have "*No Impact*" on bald eagles.

Per CESA, there would be *no "take"* of bald eagles from auditory or visual disturbance nor from removal of nest trees.

Marbled Murrelet

Potential impacts on MAMU were evaluated using USFWS guidance; potential impacts include noise and visual disturbance to nesting MAMU (USFWS 2006, rev. 2018 and 2020). There would be no visual disturbances to MAMU nests because no activities would occur within a line-of-sight of 328 feet (100 meters) of any known nest location.

The potential for noise-related harassment to MAMU was evaluated using the USFWS guidance (USFWS 2006, rev. 2018 and 2020), *Estimating the Effects of Auditory and Visual Disturbance to Northern Spotted Owl and Marbled Murrelets in Northwestern California.* Daytime ambient noise levels within the ESL along SR 1 were estimated as High (81-90 decibels [dB]) (Table 4). Sound levels for equipment used in project activities were estimated as Moderate (71-80 dB) to Very High (91-100 dB) (Table 5).

Table 4. Estimated Ambient Noise Levels

Measured Sound Source	"Standardized" Value dB at 50 ft[1]	Relative Sound Level
Passenger car (50 mph)	67	Low
Pickup Truck (idle) (low end)	55	Low
Street motorcycle (low end)	65	Low
RVs (small) (low end)	75	Moderate
Street motorcycle (high end)	82	Moderate
RVs (large) (low end)	85	High

[1] All values are based on USFWS (2020, 2018, 2006) unless otherwise indicated.

[2] Average dB based on FHWA (2017)

Table 5. Equipment and Estimated Peak Noise Levels

Measured Sound Source	"Standardized" Value dB at 50 ft[1]	Relative Sound Level
Pickup Truck (driving)	71	Moderate
Dump Truck	85	High
Excavator [2]	81	High
Backhoe (high end)	84	High
Sweeper	80	Moderate
Asphalt paver [2]	77	Moderate
Roller (high end)	80	Moderate

Measured Sound Source	"Standardized" Value dB at 50 ft[1]	Relative Sound Level
Jackhammer [2]	89	High
Compactor (high end)	82	High
Air compressor [2]	80	Moderate
Concrete mixer (high end)	85	High
Crane (high end)	88	High
Chainsaw	85	High
Chipping machine (low end)	91	Very High
Guardrail drill rig (low end)	95	Very High

[1] All values are based on USFWS (2006, 2020) unless otherwise indicated.

[2] Average dB based on FHWA (2017)

Any construction noise that is expected to reach or exceed ambient noise levels within the ESL could result in noise disturbance to nesting MAMU. However, these potential effects would be minimized by implementing standard avoidance and minimization measures for protection of MAMU, which includes conducting work that exceeds 90 dB outside of the breeding season (Section 1.4).

Per FESA, with implementation of the Standard Measures and BMPs, and utilization of the USFWS Programmatic Letter of Concurrence (PLOC) (USFWS 2022) to minimize impacts, Caltrans anticipates the proposed project "*may affect, is not likely to adversely affect"* MAMU.

Because no critical habitat for MAMU is within the BSA at PM 84.10, there would be "*no effect"* on MAMU critical habitat.

Per CESA, as project activities would not directly harm MAMU, there would be no "*take*" of MAMU.

Northern Spotted Owl

The USFWS guidance (USFWS 2006, rev. 2018 and 2020), *Estimating the Effects of Auditory and Visual Disturbance to Northern Spotted Owl and Marbled Murrelets in Northwestern California,* was used to assess the potential for auditory and visual impacts to Northern spotted owl (NSO) during construction. The existing ambient pre-project sound level is estimated as High (81–90 dB) because of its location on SR 1. The noise generated

by construction equipment 50 feet from the source is determined to range from Low (61–70 dB) to Very High (91–100 dB) (Tables 4 and 5). The majority of project-generated noise is estimated to be High (typically 81–90 dB). Suitable NSO breeding and foraging habitat occurs within or adjacent to the ESL within the 165-foot estimated harassment distance for high ambient and high project-generated noise. The project's activities are covered under the PLOC for projects that *may affect, but are not likely to adversely affect* the covered species (USFWS 2006, rev. 2018 and 2020).

Per FESA, based on the Standard Measures and Best Management Practices (Section 1.4) included as part of the project description, as well as those outlined in the PLOC, Caltrans anticipates the proposed project "*may affect, but is not likely to adversely affect"* NSO.

Because no critical habitat for NSO is within the BSA, there would be "*no effect"* on NSO critical habitat. The PLOC issued by the USFWS (2022) would be used for Section 7 consultation for potential effects of the project to NSO.

Per CESA, as project activities would not directly harm NSO, there would be no "*take*" of NSO.

Coho Salmon—Central California Coast ESU

Potential impacts to coho salmon *(Oncorhynchus kisutch)*–Central California Coast ESU (Pop. 4) at culvert locations PMs 75.47 and 84.10 would be negligible because of the fish passage blockage at the culvert at PM 75.47 and topography at PM 84.10. There potentially could be impacts on water quality and temporary riparian habitat modification at PM 84.10 on downstream fish-bearing waters. These potential effects are further described below.

Water Quality Impacts

Construction activities that could impact water quality include excavation and vegetation removal for access, grading, and installation of culvert and erosion control structures. Disturbance to soils from these activities may result in temporary and short-term increases in turbidity and suspended sediments in watercourses downstream from the project areas. At certain thresholds, elevated levels of suspended sediments can cause negative physiological and behavioral effects on fish. Short-term increases in turbidity and suspended sediment can disrupt normal behavior patterns of fish, potentially affecting foraging, rearing, and migration (Bash et al., 2001).

Accidental discharges (spills or leaks) of petroleum products during operation of heavy equipment near drainages or watercourses or contact of surface waters with uncured concrete can be toxic to fish.

No adverse effects to salmonids or salmonid habitat are anticipated under this project. All work would occur from the roadway and not within any salmonid stream. Any minor incursions of sediment from construction activities not contained on site would be short-term and temporary, limited to the construction period. The drainage work would be conducted during the dry season (June 15 to October 15). By implementing Caltrans' Standard Measures and BMPs to protect water quality, as described in Section 1.4, the potential for water quality impacts to affect salmonids would be discountable or insignificant if they were to occur.

Habitat Modification Impacts

The dense canopy and minimal area of vegetation removal at the culvert at PM 84.10 would not result in a reduction in shade or measurable increase in water temperature for fish-bearing waters. Potential riparian vegetation impacts and their effects on salmonids and their designated critical habitat would be negligible because the vegetation removal within the riparian zone would be limited to shrubs and herbaceous plants that would be replanted or would regrow within a year.

Per FESA, based on the minimal and temporary nature of these potential impacts and implementation of the Standard Measures and BMPs included as part of the project design, Caltrans anticipates the proposed project "*may affect, but is not likely to adversely affect"* CCC coho salmon and NC steelhead or their designated critical habitat.

Per CESA, as project activities would not harm individuals of CCC coho salmon; there would be no State *take* of CCC coho salmon.

Essential Fish Habitat

No EFH for groundfish, coastal pelagics, or highly migratory species is present within the BSA, therefore, Caltrans anticipated the proposed project would have *no adverse effect* on EFH for these groups of managed fishes.

Pacific Salmon EFH for coho salmon is present within the BSA at PMs 75.47 and 84.10. Caltrans anticipates the proposed project *may adversely affect* Pacific Coast Salmon EFH; however, the scale of potential impact is anticipated to be small, resulting in no measurable, permanent decrease in the quality of the rearing habitat or migration corridors for EFH

species. The NMFS PBO (NMFS 2013) would be used for EFH consultation to address potential effects on Pacific Coast salmon.

Endangered Species Act Determinations for Species Not Discussed in Section 2.4

Based on the USFWS, NMFS, CDFW-CNDDB and CNPS databases, the following federally listed species were identified as potentially occurring in the project vicinity; however, given they were determined to be absent from the ESL for plants and outside the BSA for animals, there would be no effect to these species (Appendix C (Species Lists) and Appendix F (Plant and Animal Species Tables).

Per FESA, Caltrans has determined the project would have "*No Effect*" on the following federally listed species, critical habitat, or species proposed for listing:

- Burke's goldfields (*Lasthenia burkei*)
- Contra Costa goldfields (*Lasthenia conjugens*)
- Howell's spineflower *Chorizanthe howellii)*
- Lassics lupine *(Lupinus constancei)*
- Menzies' wallflower (*Erysimum menziesii* ssp. *menziesii*)
- Monterey clover (*Trifolium trichocalyx*)
- Green sea turtle (*Chelonia mydas*)–East Pacific DPS
- Leatherback sea turtle (*Dermochelys coriacea*)
- Olive Ridley sea turtle *(Lepidochelys olivacea)*
- Hawaiian petrel (*Pterodroma sandwichensis)*
- Western snowy plover (*Charadrius nivosus* ssp. *nivosus*)–Pacific Coast DPS
- Yellow-billed cuckoo (*Coccyzus americanus*)–Western U.S. DPS
- Chinook salmon *(Oncorhynchus tshawytscha)*–California Coastal ESU and its critical habitat
- Coho salmon *(Oncorhynchus kisutch)*–Southern Oregon/Northern California Coast ESU and its critical habitat
- North American green sturgeon *(Acipenser medirostris)*–Southern DPS and its critical habitat

- Steelhead *(Oncorhynchus mykiss irideus)*–Northern California DPS-*summer-run* (Pop. 48)
- Tidewater goby (*Eucyclogobius newberryi)*
- Blue whale (*Balaenoptera musculus*)
- Fin whale (*Balaenoptera physalus*)
- Guadalupe fur seal (*Arctocephalus townsendi*)
- Humpback whale (*Megaptera novaeangliae*)
- Killer whale (*Orcinus orca*)– Southern Resident DPS
- North Pacific right whale (*Eubalaena japonica*)
- Sei whale (*Balaenoptera borealis*)
- Sperm whale (*Physeter macrocephalus*)
- Pacific (Humboldt) marten *(Martes caurina)*
- Monarch butterfly–overwintering populations (*Danaus plexippus*)

Per CESA, Caltrans has determined the project would result in *no* "*take*" of the following state listed, candidate, and fully protected species:

- Burke's goldfields (*Lasthenia burkei*)
- Howell's spineflower *Chorizanthe howellii)*
- Humboldt County milk-vetch *(Astragalus agnicidus)*
- Kellogg's buckwheat *(Eriogonum kelloggii)*
- Lassics lupine (*Lupinus constance*i)
- Menzies' wallflower (*Erysimum menziesii* ssp. *menziesii*)
- Monterey clover (*Trifolium trichocalyx*)
- Red Mountain catchfly *(Silene greenei* ssp. *angustifolia)*
- Yellow-billed cuckoo (*Coccyzus americanus*)–Western U.S. DPS
- Coho salmon *(Oncorhynchus kisutch)*–Southern Oregon/Northern California Coast ESU and its critical habitat

- Steelhead *(Oncorhynchus mykiss irideus)*–Northern California DPS-*summer-run* (Pop. 48)
- Guadalupe fur seal (*Arctocephalus townsend*i)
- Pacific (Humboldt) marten *(Martes caurina)*
- Crotch's bumble bee (*Bombus crotchii*)
- Western bumble bee (*Bombus occidentali*s)

Given the above, it was determined the project would have "*Less Than Significant Impact*" in response to CEQA Environmental Checklist Question 2.4 a). No mitigation is required.

Discussion of CEQA Environmental Checklist Question 2.4b)—Biological Resources

b) 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 U.S. Fish and Wildlife Service?

Sensitive Natural Communities/ Riparian Habitat

Sequoia sempervirens Forest and Woodland Alliance

No redwoods or co-dominant associate trees, such as Douglas-fir, would need to be removed as part of this project, as determined through an arborist assessment at PM 84.10 where Redwood Forest SNC occurs. The vegetation removed for cut and cover culvert replacement would be limited to understory species; therefore, there would be "*No Impact*" to this SNC.

Salix hookeriana-Salix-sitchensis-Spiraea Douglasii (Coastal Dune Willow) Thicket Alliance

The proposed project has the potential to result in permanent and temporary impacts on Coastal Dune Willow Thickets SNC, which is also considered riparian habitat. Additional indirect temporary impacts caused by sedimentation or modification of hydrology could affect this habitat. Temporary impacts may result from construction of access roads, work areas, containment systems, clear water diversions and excavation work for culvert placement. Permanent impacts due to culvert realignment, restoration of flow lines, installation of headwalls, flared end sections (FES), and rock slope protection (RSP), and the extension of culvert systems would result in permanent impacts.

The project would result in up to 0.201 acre of temporary impacts (Table 3) to Coastal Dune Willow Thickets at the culverts located at PMs 76.20, 76.52, and 76.81 due to clearing and grubbing for site access and construction work.

Coastal willow trees greater than 4-inches diameter-at-breast-height (DBH) are protected under CDFW Section 1600 jurisdiction. These trees would be removed adjacent to the drainages at PMs 76.20, 76.52, and 76.81. These trees would be inventoried and classified by size at the time of applying for the 1602 permit (CDFW staff personal communication, December 2023) and would be replanted on-site where feasible upon completion of construction.

The project would result in permanent impacts up to 0.009 acre of this riparian habitat alliance due to removal of shrubs and trees, as well as soil grading for the purposes of extending existing culverts and installation of erosion control structures, including DDs, RSP, gravel or structural fill under portions of the DDs, metal flared end sections at inlets and outlets, headwalls and wingwalls, concrete box drainage inlets, and cable anchorage systems. Section 1.2 provides details of the proposed structures that would result in permanent impacts for riparian habitat at each culvert.

Permanent displacement of the small area of riparian vegetation in the project ESL is not anticipated to have an adverse impact on the quality or function of the adjacent wetland or riverine systems or affect wildlife corridors, particularly with implementation of the Standard Measures and BMPs (Section 1.4) for water quality, aquatic habitat, aquatic species, and invasive species.

Estimated impacts by acreage are intended to provide worst-case scenarios; actual impacts are expected to be less because trees and other vegetation within temporary work areas would be avoided to the greatest extent practicable through the implementation of construction Standard Measures and Best Management Practices (BMPs) (Section 1.4) designed to avoid or minimize impacts to biological resources.

The proposed project would have no substantial impact on Coastal Dune Willow Thicket SNC because the areas along the road and ESLs are already fragmented by roads and development and resulting impacts would be limited by the duration of the project. These forest and vegetation types are typically much less than half of an acre in extent within the ESLs. Permanent impacts, due to installation of permanent drainage structures, would be extremely small.

The SNC habitat within the ESLs range from approximately 0.8% to 10% of the available contiguous SNC habitat. Thus, Caltrans anticipates these proposed actions would have a "*Less than Significant Impact with Mitigation Incorporated*" on the Coastal Dune Willow SNC.

Invasive Species

Invasive species may be introduced to new areas or spread through the work sites by the tires and tracks of construction equipment. They may also recruit naturally and robustly, outcompeting native species, following soil disturbance. To reduce the spread of invasive species, construction equipment would be inspected and cleaned during construction to remove invasive species and/or pathogens. Additionally, all disturbed areas would be seeded with native herbaceous species and weed-free mulch would be applied post construction. It is expected that the potential for colonization of the area by invasive species would be greatly reduced and native vegetation would be better able to colonize along with other native species. Caltrans Standard Measures and Best Management Practices (Section 1.4) would be implemented to ensure invasive species would not proliferate and would not present adverse impacts to natural communities.

Mitigation Measures

Permanent impacts to Coastal Dune Willow Thicket Alliance SNC as a result of vegetation clearing required for equipment access and installation of culvert structures would be restored on-site where possible. Remaining acreage of impacted SNC habitat would be offset through in-kind restoration and off-site at a mitigation bank within the same watershed and geographic region. Caltrans anticipates a mitigation ratio of 3:1 for impacts to this SNC. Exact location and type of mitigation and enhancement would be determined in the permitting phase and the final combination of mitigation strategies would be determined after additional conversations with resource agencies.

Given the above, it was determined the project would have a "*Less Than Significant Impact with Mitigation*" in response to CEQA Environmental Checklist Question 2.4 b).

Discussion of CEQA Environmental Checklist Question 2.4c)—Biological Resources

c) Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Wetlands and Other Waters

The proposed project would have temporary and permanent impacts to potentially jurisdictional Waters of the U.S. and State. Temporary and permanent impacts within the Environmental Study Limits, including a summary of aquatic feature type and impacts by culvert location, are identified in Table 6 below. Temporary impacts refer to those areas that would be restored on-site and in-kind upon completion of construction. Impacts expected to last longer than one year were considered permanent by means of temporal loss.

Table 6. Anticipated Impacts to Wetland and Non-wetland Waters of the U.S. and State and Associated Riparian Habitat.

Feature Type and ID	Feature Location (Culvert PM)	Temporary Impact (linear feet)	Temporary Impact (acres)	Permanent Impact (linear feet)	Permanent Impact (acres)
3-parameter wetland (W-1)	76.81	N/A	0.0020	N/A	0
Perennial Stream (RPW-2)	76.20	82	0.0060	17	0.0030
Perennial Stream (RPW-3)	76.52	48	0.0030	11	0.0020
Intermittent Stream/ Other Water (OW-1)	76.81	40	0.0010	15	0.0010
Ephemeral Stream (OW-2)	84.10	15	0.0010	10	0.0001
Total Wetlands and Waters		**185**	**0.0130**	**53**	**0.0061**
Riparian Habitat/ Coastal Dune Willow Thicket Alliance	76.20 76.52 76.81	N/A	0.2010	N/A	0.0090

*Note PM 75.47 (RPW-1) is outside of the Environmental Study Limits; so there would be no impacts to this feature.

Wetlands

No permanent loss of jurisdictional wetlands protected under Section 404 of the Clean Water Act would occur, therefore no compensatory mitigation would be required for the proposed project. Approximately 0.0020 acre of 3-parameter wetland at PM 76.81 would be temporarily impacted as a result of vegetation removal and grubbing needed for construction equipment access (Table 6). No impacts are anticipated to occur for wetland habitat at the other site locations.

Non-Wetland Waters of the U.S. and State

Temporary and permanent impacts to Other Waters of the U.S. and State would also occur from project activities (Table 6). Approximately 0.011 acre of these waters (perennial streams, intermittent stream, and ephemeral drainage) at the culverts at PMs 76.20, 76.52, 76.81, and 84.10 would be temporarily impacted due to construction activities (such as vegetation removal and excavation) to replace culverts (Table 6).

Additionally, approximately 0.0061 acre of these waters at the same culverts (PMs 76.20, 76.52, 76.81, and 84.10) (Table 6) would incur permanent impacts as a result of extending existing culverts and installation of erosion control structures such as downdrains, rock slope protection, gravel or structural fill under portions of the downdrains, metal flared end sections at inlets and outlets, headwalls and wingwalls, concrete box drainage inlets, and cable anchorage systems. Section 1.2 provides details of the proposed permanent structures that would result in permanent impacts at each of the culverts listed above.

Mitigation Measures

The project would have both temporary and permanent impacts to jurisdictional Waters of the U.S. and State due to culvert replacement, culvert extensions, downdrains, and placement of drainage inlets, headwalls, and rock slope protection. In total, there would be approximately 0.0013 acre of temporary and 0.0061 acre of permanent impacts to Waters of the U.S. and State (Table 6), which consists of approximate impact estimates of the following:

- 0.0020 acre of temporary and 0 acre of permanent impacts to wetlands
- 0.0090 acre of temporary and 0.0050 acre of permanent impacts to relatively permanent waters/streams

- 0.0010 acre of temporary and 0.0010 acre of permanent impacts to other waters/intermittent streams
- 0.0010 acre of temporary and 0.0001 acre of permanent impacts to ephemeral streams

Temporary wetland impacts would be restored on-site post-construction. Additional enhancement or mitigation would be implemented both on-site and off-site to offset permanent impacts as pending permits dictate. Caltrans would coordinate with USACE, CDFW, NCRWQCB, and the County of Mendocino regarding wetlands and other waters affected by the project. Given this, it was determined the project would have a "*Less Than Significant Impact with Mitigation*" regarding CEQA Environmental Checklist Question 2.4 c).

2.5 Cultural Resources

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project: a) Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?				✓
Would the project: b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?				✓
Would the project: c) Disturb any human remains, including those interred outside of dedicated cemeteries?				✓

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project, as well as the *Cultural Memo for the Westport Culverts Project* dated June 18, 2024 (Caltrans 2024e). Potential impacts to Cultural Resources are not anticipated because no cultural materials were found to be present and no known cultural resources are recorded within the project's Area of Potential Effects. Caltrans has determined the project has no potential to affect historic properties.

Avoidance, Minimization and Mitigation Measures

No mitigation is required.

2.6 Energy

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project: a) Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation?				✓
Would the project: b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?				✓

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project, as well as the *Air Quality and Noise Analysis for the Westport Culverts Project* dated February 8, 2024 (Caltrans 2024a). Potential impacts to energy are not anticipated because the proposed project would not increase highway capacity or provide congestion relief when compared to the No-Build Alternative. The project would not result in an operational change in energy consumption. Construction-related energy consumption would be temporary and would represent a small demand on local and regional fuel supplies. Demand for fuel would have no noticeable effect on peak or baseline demands for energy. Therefore, the project would not result in an inefficient, wasteful, and unnecessary consumption of energy or conflict with a plan for renewable energy or energy efficiency.

Avoidance, Minimization and Mitigation Measures

No mitigation is required.

2.7 Geology and Soils

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project: a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.				✓
ii) Strong seismic ground shaking?				✓
iii) Seismic-related ground failure, including liquefaction?				✓
iv) Landslides?				✓
Would the project: b) Result in substantial soil erosion or the loss of topsoil?				✓
Would the project: 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?				✓
Would the project: 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?				✓

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project: e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?				✓
Would the project: f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?				✓

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project, as well as the *Paleontology Resource Assessment* dated January 9, 2024 (Caltrans 2024b). According to the geologic maps, the project locations are underlain by Quaternary Marine Terrace Deposits and Tertiary-Cretaceous Coastal Belt Franciscan Formation bedrock. Landslide activity is mapped throughout the SR 1 corridor and within the project area (Caltrans 2024b). The Paleontological database search did not indicate the presence of fossils within the project limits. The culvert work would occur within previously disturbed materials (constructed roadway), largely as fill prisms. Given the existing footprint of the drainage facilities, impacts to Geology and Soils are not anticipated and no mitigation measures are proposed for this project.

Avoidance, Minimization and Mitigation Measures

No mitigation is required.

2.8 Greenhouse Gas Emissions

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project: a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			✓	
Would the project: b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?				✓

Climate Change

Climate change refers to long-term changes in temperature, precipitation, wind patterns, and other elements of the Earth's climate system. The Intergovernmental Panel on Climate Change, established by the United Nations and World Meteorological Organization in 1988, is devoted to greenhouse gas (GHG) emissions reduction and climate change research and policy. Climate change in the past has generally occurred gradually over millennia, or more suddenly in response to cataclysmic natural disruptions. The research of the Intergovernmental Panel on Climate Change and other scientists over recent decades, however, has unequivocally attributed an accelerated rate of climatological changes over the past 150 years to GHG emissions generated from the production and use of fossil fuels.

Human activities generate GHGs consisting primarily of carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), tetrafluoromethane, hexafluoroethane, sulfur hexafluoride (SF_6), and various hydrofluorocarbons (HFCs). CO_2 is the most abundant GHG. While CO_2 is a naturally occurring and necessary component of Earth's atmosphere, fossil-fuel combustion is the main source of additional, human-generated CO_2 that is the main driver of climate change. In the U.S. and in California, transportation is the largest source of GHG emissions, mostly CO_2.

The impacts of climate change are already being observed in the form of sea level rise, drought, more intense heat, extended and severe fire seasons, and historic flooding from changing storm patterns. Both mitigation and adaptation strategies are necessary to address these impacts. The most important mitigation strategy is to reduce GHG emissions. In the context of climate change (as distinct from CEQA and NEPA), "mitigation" involves actions to reduce GHG emissions or to enhance the "sinks" that store them (such as forests and soils) to lessen adverse impacts. "Adaptation" is planning for and responding to impacts to reduce vulnerability to harm, such as by adjusting transportation design standards to withstand more intense storms, heat, and higher sea levels. This analysis will include a discussion of both in the context of this transportation project.

Regulatory Setting

This section outlines federal and state efforts to comprehensively reduce greenhouse gas emissions from transportation sources.

FEDERAL

To date, no national standards have been established for nationwide mobile-source GHG reduction targets, nor have any regulations or legislation been enacted specifically to address climate change and GHG emissions reduction at the project level.

The National Environmental Policy Act (NEPA) (42 United States Code [USC] Part 4332) requires federal agencies to assess the environmental effects of their proposed actions prior to making a decision on the action or project. In January 2023, the White House Council on Environmental Quality (CEQ) issued updated and expanded interim National Environmental Policy Act Guidance on Consideration of Greenhouse Gas Emissions and Climate Change (88 Fed. Reg. 1196) (CEQ NEPA GHG Guidance), in accordance with EO 14057, *Catalyzing Clean Energy Industries and Jobs Through Federal Sustainability*, 86 FR 70935 (December 13, 2021), and EO 14008, *Tackling the Climate Crisis at Home and Abroad*. The CEQ guidance does not establish numeric thresholds of significance, but emphasizes quantifying reasonably foreseeable lifetime direct and indirect emissions whenever possible. This guidance also emphasizes resilience and environmental justice in project-level climate change and GHG analyses.

The Federal Highway Administration (FHWA) recognizes the threats that extreme weather, sea level change, and other changes in environmental conditions pose to valuable transportation infrastructure and those who depend on it. FHWA therefore supports a sustainability approach that assesses vulnerability to climate risks and incorporates resilience

into planning, asset management, project development and design, and operations and maintenance practices (FHWA 2022). This approach encourages planning for sustainable highways by addressing climate risks while balancing environmental, economic, and social values—"the triple bottom line of sustainability" (FHWA n.d.). Program and project elements that foster sustainability and resilience also support economic vitality and global efficiency, increase safety and mobility, enhance the environment, promote energy conservation, and improve the quality of life.

Early efforts by the federal government to improve fuel economy and energy efficiency to address climate change and its associated effects include *The Energy Policy and Conservation Act of 1975* (42 USC Section 6201); and *Corporate Average Fuel Economy (CAFE) Standards*. The U.S. Department of Transportation's National Highway Traffic and Safety Administration (NHTSA) sets and enforces corporate average fuel economy (CAFE) standards for on-road motor vehicles sold in the United States. The Environmental Protection Agency (U.S. EPA) calculates average fuel economy levels for manufacturers, and also sets related GHG emissions standards for vehicles under the Clean Air Act. Raising CAFE standards leads automakers to create a more fuel-efficient fleet, which improves our nation's energy security, saves consumers money at the pump, and reduces GHG emissions (USDOT 2014). These standards are periodically updated and published through the federal rulemaking process.

STATE

California has been innovative and proactive in addressing GHG emissions and climate change by passing multiple Senate and Assembly bills and executive orders (EOs).

In 2005, EO S-3-05 initially set a goal to reduce California's GHG emissions to 80 percent below year 1990 levels by 2050, with interim reduction targets. Later EOs and Assembly and Senate bills refined interim targets and codified the emissions reduction goals and strategies. The California Air Resources Board (CARB) was directed to create a climate change scoping plan and implement rules to achieve "real, quantifiable, cost-effective reductions of greenhouse gases." Ongoing GHG emissions reduction was also mandated in Health and Safety Code (H&SC) Section 38551(b). In 2022, the California Climate Crisis Act was passed, establishing state policy to reduce statewide human- caused GHG emissions by 85 percent below 1990 levels, achieve net zero GHG emissions by 2045, and achieve and maintain negative emissions thereafter.

Beyond GHG reduction, the State maintains a climate adaptation strategy to address the full range of climate change stressors, and passed legislation requiring state agencies to consider protection and management of natural and working lands as an important strategy in meeting the state's GHG reduction goals.

Environmental Setting

The proposed project is in a rural area, with a primarily natural-resources based agriculture, forestry and tourism economy. SR 1 is the main transportation route to and through the area for both passenger and commercial vehicles. The nearest alternate route is U.S. 101, located approximately 17 miles to the east, which can be reached via Branscomb Road, just east of Westport, or SR 20, located just south of Fort Bragg. The project is situated at the northern end of the Mendocino Coast, a popular tourist destination, and the vast majority of visitors access the location by vehicle. Local attractions include camping, and beach access just north of Westport at Abalone Point Campground and the Westport Beach RV Park and Campground, as well as Westport Landing State Beach. The Westport Volunteer Fire Department is located in the town and services an area that spans 190 square miles, including some of the most remote and rugged parts of the Mendocino Coast. Traffic counts are low and SR 1 is rarely congested; however, the summer season does have higher traffic volumes due to recreational tourism.

The Mendocino Council of Governments' (MCOG) Regional Transportation Plan (RTP) guides transportation development in Mendocino County (Mendocino Council of Governments 2022). The 2022 RTP promulgates policies and goals intended to reduce GHGs, including encouraging and expanding opportunities for active transportation. The Mendocino County General Plan was adopted in 2009 and does not specifically address GHGs or climate change.

GHG INVENTORIES

A GHG emissions inventory estimates the amount of GHGs discharged into the atmosphere by specific sources over a period of time, such as a calendar year. Tracking annual GHG emissions allows countries, states, and smaller jurisdictions to understand how emissions are changing and what actions may be needed to attain emission reduction goals. U.S. EPA is responsible for documenting GHG emissions nationwide, and the CARB does so for the state, as required by H&SC Section 39607.4. Cities and other local jurisdictions may also conduct local GHG inventories to inform their GHG reduction or climate action plans.

NATIONAL GHG INVENTORY

The annual GHG inventory submitted by the U.S. EPA to the United Nations provides a comprehensive accounting of all human-produced sources of GHGs in the United States. Total national GHG emissions from all sectors in 2021 were 5,586 million metric tons (MMT), factoring in deductions for carbon sequestration in the land sector. (Land Use, Land Use Change, and Forestry provided a carbon sink equivalent to 12% of total U.S. emissions in 2021 [U.S. EPA 2023a].) While total GHG emissions in 2021 were 17% below 2005 levels, they increased by 6% over 2020 levels. Of these, 79.4% were CO_2, 11.5% were CH_4, and 6.2% were N_2O; the balance consisted of fluorinated gases. From 1990 to 2021, CO_2 emissions decreased by only 2% (U.S. EPA 2023b).

The transportation sector's share of total GHG emissions increased to 28% in 2021 and remains the largest contributing sector (Figure 7). Transportation fossil fuel combustion accounted for 92% of all CO_2 emissions in 2021. This is an increase of 7% over 2020, largely due to the rebound in economic activity following the COVID-19 pandemic (U.S. EPA 2023a, 2023b)).

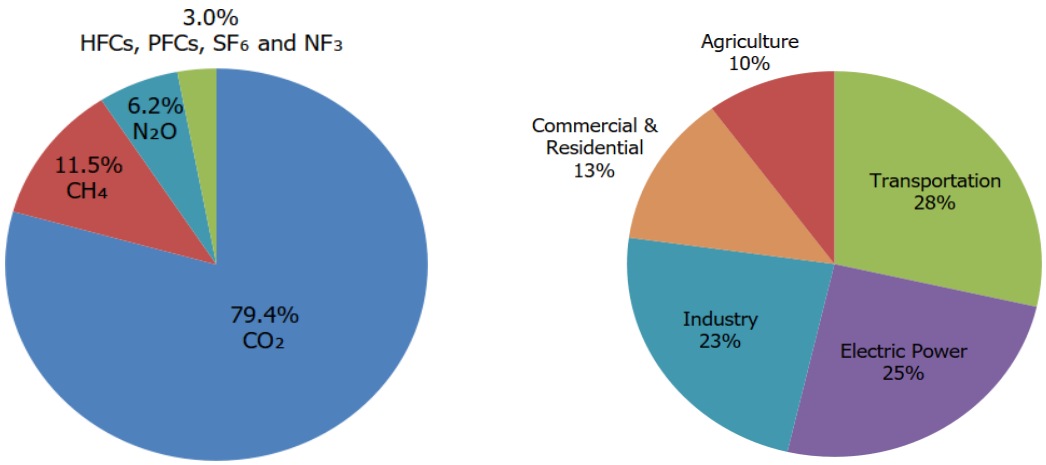


Figure 7. U.S. 2022 Greenhouse Gas Emissions

(Source: U.S. EPA 2023a)

STATE GHG INVENTORY

The CARB collects GHG emissions data for transportation, electricity, commercial and residential, industrial, agricultural, and waste management sectors each year. It then summarizes and highlights major annual changes and trends to demonstrate the state's progress in meeting its GHG reduction goals. The 2022 edition of the GHG emissions inventory reported emissions trends from 2000 to 2020. Total California GHG emissions in 2020 were 369.2 million metric tons of carbon dioxide equivalent ($MMTCO_2e$), a reduction of 35.3 $MMTCO_2e$ from 2019 and 61.8 $MMTCO_2e$ below the 2020 statewide limit of 431 $MMTCO_2e$. Much of the decrease from 2019 to 2020, however, is likely due to the effects of the COVID-19 pandemic on the transportation sector, during which vehicle miles traveled declined under stay-at-home orders and reductions in goods movement. Nevertheless, transportation remained the largest source of GHG emissions, accounting for 38% of statewide emissions (Figure 8). (Including upstream emissions from oil extraction, petroleum refining, and oil pipelines in California, transportation was responsible for about 47% of statewide emissions in 2020; however, those emissions are accounted for in the industrial sector.) California's gross domestic product (GDP) and GHG intensity (GHG emissions per unit of GDP) both declined from 2019 to 2020 (Figure 9). It is expected that total GHG emissions will increase as the economy recovers over the next few years (CARB 2022a).

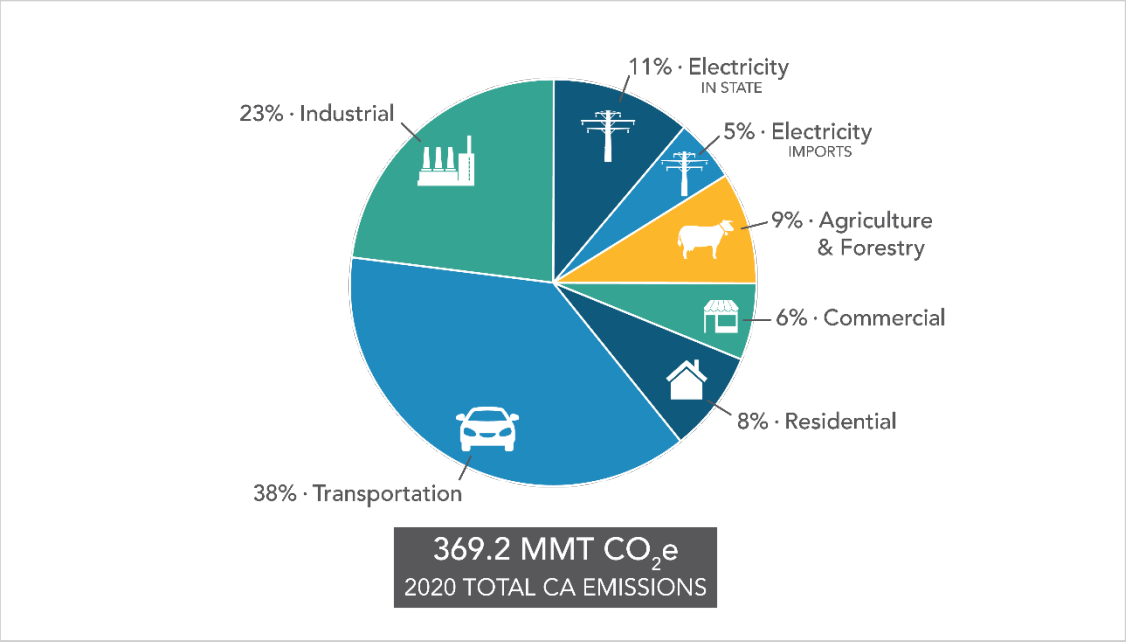


Figure 8. California 2020 Greenhouse Gas Emissions by Scoping Plan Category

(Source: CARB 2022a)

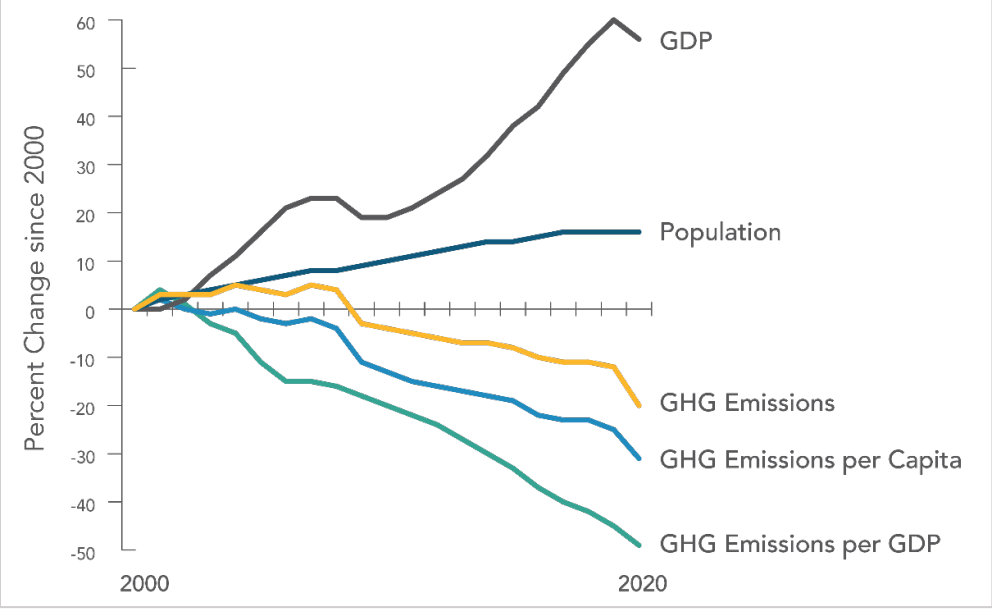


Figure 9. Change in California GDP, Population, and GHG Emissions since 2000

(Source: CARB 2022a)

AB 32 required the CARB to develop a Scoping Plan that describes the approach California will take to achieve the goal of reducing GHG emissions to 1990 levels by 2020, and to update it every 5 years. The AB 32 Scoping Plan and the subsequent updates contain the main strategies California will use to reduce GHG emissions. The CARB adopted the first scoping plan in 2008 (CARB 2008). The second updated plan, *California's 2017 Climate Change Scoping Plan*, adopted on December 14, 2017, reflects the 2030 target established in EO B-30-15 and SB 32. The *2022 Scoping Plan for Achieving Carbon Neutrality*, adopted September 2022, assesses progress toward the statutory 2030 reduction goal and defines a path to reduce human-caused emissions to 85 percent below 1990 levels and achieve carbon neutrality no later than 2045, in accordance with AB 1279 (CARB 2022b).

REGIONAL PLANS

As required by The Sustainable Communities and Climate Protection Act of 2008, the CARB sets regional GHG reduction targets for California's 18 metropolitan planning organizations (MPOs) to achieve through planning future projects that will cumulatively achieve those goals, and reporting how they will be met in the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). Targets are set at a percent reduction of passenger vehicle GHG emissions per person from 2005 levels. Mendocino County does not have an MPO and therefore CARB does not establish a GHG reduction target for the county. However, Mendocino Council of Governments (MCOG) serves as the responsible Regional Transportation Planning Agency (RTPA) for Mendocino County cities and unincorporated areas. Mendocino Council of Governments prepared a Regional Transportation Plan which was adopted February 25, 2022 (Mendocino County Regional Transportation Plan 2022). The 2022 RTP outlines policies and goals intended to reduce GHGs.

The climate change objectives for the 2022 RTP include:

- Coordinate transportation planning with air quality planning.
- Invest in transportation projects that participate in regional planning efforts that will help Mendocino County residents to proportionately contribute to the California greenhouse gas reduction targets established by Assembly Bill 32 and SB 375, as well as support Governor's Executive Orders EO N-19-19 and EO-79-20.
- Ensure transportation improvements are subject to adequate environmental review and standards.
- Improve resiliency of the region's transportation system to climate related impacts. (MCOG 2022).

Mendocino County does not have a climate action plan that specifically addresses transportation projects. In 2019, the County formed a Mendocino County Climate Action Advisory Committee to make recommendations to the Board of Supervisors regarding implementation of a Mendocino County Sustainability and Climate Action Program.

Project Analysis

GHG emissions from transportation projects can be divided into those produced during operation of the State Highway System (SHS) (operational emissions) and those produced during construction. The primary GHGs produced by the transportation sector are CO_2, CH_4, N_2O, and HFCs. CO_2 emissions are a product of burning gasoline or diesel fuel in internal combustion engines, along with relatively small amounts of CH_4 and N_2O. A small amount of HFC emissions related to refrigeration is also included in the transportation sector. (GHGs differ in how much heat each traps in the atmosphere, called global warming potential, or GWP. CO_2 is the most important GHG, so amounts of other gases are expressed relative to CO_2, using a metric called "carbon dioxide equivalent", or CO_2e. The global warming potential of CO_2 is assigned a value of 1, and the GWP of other gases is assessed as multiples of CO_2.)

The CEQA Guidelines generally address greenhouse gas emissions as a cumulative impact due to the global nature of climate change (Public Resources Code § 21083(b)(2)). As the California Supreme Court explained, "because of the global scale of climate change, any one project's contribution is unlikely to be significant by itself." (Cleveland National Forest Foundation *v.* San Diego Assn. of Governments (2017) 3 Cal. 5th 497, 512). 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. Although climate change is ultimately a cumulative impact, not every individual project that emits greenhouse gases must necessarily be found to contribute to a significant cumulative impact on the environment.

Operational Emissions

The purpose of the proposed project is to replace existing drainage systems and will not increase the vehicle capacity of the roadway. This type of project generally causes minimal or no increase in operational GHG emissions. Total anticipated emissions from this project are shown in Table 7. Because the project would not increase the number of travel lanes on SR 1, no increase in vehicle miles traveled (VMT) would occur. While some GHG emissions during the construction period would be unavoidable, no increase in operational GHG emissions is expected.

Construction Emissions

Construction GHG emissions would result from material processing and transportation, on-site construction equipment, and traffic delays due to construction. These emissions would be produced at different levels throughout the construction phase; their frequency and occurrence can be reduced through innovations in plans and specifications and by implementing better traffic management during construction phases. While construction GHG emissions are only produced for a short time, they have long-term effects in the atmosphere, so cannot be considered "temporary" in the same way as criteria pollutants that subside after construction is completed.

Use of long-life pavement, improved Transportation Management Plans, and changes in materials can also help offset emissions produced during construction by allowing longer intervals between maintenance and rehabilitation activities.

The Caltrans Construction Emissions Tool (CAL-CET2021 v1.0.2) was used to quantify the expected construction-related GHG emissions related to the proposed project. Table 7 summarizes estimates of GHG emissions generated during construction by onsite equipment for the proposed project. The total estimated construction time is 55 working days. It is estimated that it will produce 29.937 metric tons of CO_2e.

Table 7. Estimated Construction Emissions in Metric Tons

Construction Duration	CO_2	CH_4	N_2O	BC	HFC-134a	CO_2e*
55 working days	**27.216**	**0.001**	**0.002**	**.001**	**.001**	**29.937**

* A quantity of GHG is expressed as carbon dioxide equivalent (CO_2e) that can be estimated by the sum after multiplying each amount of CO_2, CH_4, N_2O, and HFC134a by its global warming potential (GWP). Each GWP of CO_2, CH_4, N_2O, BC and HFC-134a is 1, 25, 298, 460 and 1,430, respectively.

All construction contracts include Caltrans Standard Specifications related to air quality. Sections 7-1.02A and 7 1.02C, Emissions Reduction, require contractors comply with all laws applicable to the project and to certify they are aware of and will comply with all CARB emission reduction regulations. Section 14-9.02, Air Pollution Control, requires contractors comply with all air pollution control rules, regulations, ordinances, and statutes. Certain common regulations (such as equipment idling restrictions) that reduce construction vehicle emissions also help reduce GHG emissions.

CEQA Conclusion

While the proposed project would result in GHG emissions during construction, it is anticipated the project would not result in any increase in operational GHG emissions. The proposed project does not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases. With implementation of construction GHG reduction measures, the impact would be less than significant.

Caltrans is firmly committed to implementing measures to help reduce GHG emissions. These measures are outlined in the following section.

Greenhouse Gas Reduction Strategies

STATEWIDE EFFORTS

In response to AB 32, California is implementing measures to achieve emission reductions of GHGs that cause climate change. Climate change programs in California are effectively reducing GHG emissions from all sectors of the economy. These programs include regulations, market programs, and incentives that will transform transportation, industry, fuels, and other sectors to take California into a sustainable, cleaner, low-carbon future, while maintaining a robust economy (CARB 2022c).

Major sectors of the California economy, including transportation, will need to reduce emissions to meet 2030 and 2050 GHG emissions targets. The California Governor's Office of Planning and Research (OPR) identified five sustainability pillars in a 2015 report:

(1) increasing the share of renewable energy in the State's energy mix to at least 50 percent by 2030;

(2) reducing petroleum use by up to 50 percent by 2030;

(3) increasing the energy efficiency of existing buildings by 50 percent by 2030;

(4) reducing emissions of short-lived climate pollutants; and

(5) stewarding natural resources, including forests, working lands, and wetlands, to ensure they store carbon, are resilient, and enhance other environmental benefits (California Governor's OPR 2015).

The transportation sector is integral to the people and economy of California. To achieve GHG emission reduction goals, it is vital the state build on past successes in reducing criteria and toxic air pollutants from transportation and goods movement. GHG emission reductions will come from cleaner vehicle technologies, lower-carbon fuels, and reduction of vehicle miles traveled (VMT). Reducing today's petroleum use in cars and trucks is a key state goal for reducing greenhouse gas emissions by 2030 (California Environmental Protection Agency 2015).

In addition, SB 1386 (Wolk 2016) established as state policy the protection and management of natural and working lands and requires state agencies to consider that policy in their own decision making. Trees and vegetation on forests, rangelands, farms, and wetlands remove carbon dioxide from the atmosphere through biological processes and sequester the carbon in above- and below-ground matter.

Subsequently, Governor Gavin Newsom issued Executive Order N-82-20 to combat the crises in climate change and biodiversity. It instructs state agencies to use existing authorities and resources to identify and implement near- and long-term actions to accelerate natural removal of carbon and build climate resilience in our forests, wetlands, urban greenspaces, agricultural soils, and land conservation activities in ways that serve all communities and in particular low-income, disadvantaged, and vulnerable communities. To support this order, the California Natural Resources Agency released *Natural and Working Lands Climate Smart Strategy* (California Natural Resources Agency 2022a).

CALTRANS ACTIVITIES

Caltrans continues to be involved on the Governor's Climate Action Team as the CARB works to implement EOs S-3-05 and S-01-07 and help achieve the targets set forth in AB 32. EO B-30-15, issued in April 2015, and SB 32 (2016) set an interim target to cut GHG emissions to 40% below 1990 levels by 2030. The following major initiatives are underway at Caltrans to help meet these targets.

Climate Action Plan For Transportation Infrastructure

The *California Action Plan for Transportation Infrastructure* (CAPTI) builds on executive orders signed by Governor Newsom in 2019 and 2020 targeted at reducing GHG emissions in transportation, which account for more than 40% of all polluting emissions, to reach the state's climate goals. Under CAPTI, where feasible and within existing funding program structures, the state will invest discretionary transportation funds in sustainable infrastructure projects that align with its climate, health, and social equity goals (California State Transportation Agency 2021).

California Transportation Plan

The *California Transportation Plan* (CTP) is a statewide, long-range transportation plan to meet our future mobility needs and reduce GHG emissions. It serves as an umbrella document for all the other statewide transportation planning documents. The *CTP 2050* presents a vision of a safe, resilient, and universally accessible transportation system that supports vibrant communities, advances racial and economic justice, and improves public and environmental health. The plan's climate goal is to achieve statewide GHG emissions reduction targets and increase resilience to climate change. It demonstrates how GHG emissions from the transportation sector can be reduced through advancements in clean fuel technologies; continued shifts toward active travel, transit, and shared mobility; more efficient land use and development practices; and continued shifts to telework (Caltrans 2021a).

Caltrans Strategic Plan

The *Caltrans 2020–2024 Strategic Plan* includes goals of stewardship, climate action, and equity. Climate action strategies include developing and implementing a Caltrans Climate Action Plan; a robust program of climate action education, training, and outreach; partnership and collaboration; a VMT monitoring and reduction program; and engaging with the most vulnerable communities in developing and implementing Caltrans climate action activities (Caltrans 2021b).

Caltrans Policy Directives And Other Initiates

Caltrans Director's Policy 30 (DP-30) Climate Change (June 22, 2012) established a Department policy to ensure coordinated efforts to incorporate climate change into Departmental decisions and activities. *Caltrans Greenhouse Gas Emissions and Mitigation Report* (Caltrans 2020) provides a comprehensive overview of Caltrans' emissions.

The report documents and evaluates current Caltrans procedures and activities that track and reduce GHG emissions and identifies additional opportunities for further reducing GHG emissions from Department-controlled emission sources, in support of Departmental and State goals.

Project-Level Greenhouse Gas Reduction Strategies

The following measures will also be implemented to reduce greenhouse gas emissions and potential climate change impacts from the project.

- Caltrans Standard Specifications for "Air Quality" requires compliance by the contractor with all applicable laws and regulations related to air quality.
- Compliance with Title 13 of the California Code of Regulations, which includes restricting idling of diesel-fueled commercial motor vehicles and equipment with gross weight ratings of greater than 10,000 pounds to no more than 5 minutes.
- Caltrans Standard Specifications for “Emissions Reduction” ensures construction activities adhere to the most recent emissions reduction regulations mandated by the California Air Resource Board (CARB).
- Use of a Transportation Management Plan (TMP) to minimize vehicle delays and idling emissions. As part of this, construction traffic would be scheduled to reduce congestion and related air quality impacts caused by idling vehicles along the highway during peak travel times.
- All areas temporarily disturbed during construction would be revegetated with appropriate native species. Landscaping reduces surface warming and, through photosynthesis, decreases CO_2. This replanting would help offset any potential CO_2 emissions increase.
- Pedestrian and bicycle access would be maintained on State Route 1 during project activities.
- Earthwork would be balanced as much as possible to reduce the need for transport of cut and fill materials.

Adaptation Strategies

Reducing GHG emissions is only one part of an approach to addressing climate change. Caltrans must 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 their intensity, and in the frequency and intensity of wildfires. Flooding and erosion can damage or wash out roads; longer periods of intense heat can buckle pavement and railroad tracks; storm surges, combined with a rising sea level, can inundate highways. Wildfire can directly burn facilities and indirectly cause damage when rain falls on denuded slopes that landslide after a fire. Effects will vary by location and may, in the most extreme cases, require a facility be relocated or redesigned. Furthermore, the combined effects of transportation projects and climate stressors can exacerbate the impacts of both on vulnerable communities in a project area. Accordingly, Caltrans must consider these types of climate stressors in how highways are planned, designed, built, operated, and maintained.

FEDERAL EFFORTS

Under NEPA Assignment, Caltrans is obligated to comply with all applicable federal environmental laws and FHWA NEPA regulations, policies, and guidance. Caltrans practices generally align with the *2023 CEQ Interim Guidance on Consideration of Greenhouse Gas Emissions and Climate Change*, which offers recommendations for additional ways of evaluating project effects related to GHG emissions and climate change. These recommendations are not regulatory requirements.

The *Fifth National Climate Assessment*, published in 2023, presents the most recent science and "analyzes the effects of global change on the natural environment, agriculture, energy production and use, land and water resources, transportation, human health and welfare, human social systems, and biological diversity; [It] analyzes current trends in global change, both human-induced and natural, and projects major trends for the subsequent 25 to 100 years … to support informed decision-making across the United States." Building on previous assessments, it continues to advance "an inclusive, diverse, and sustained process for assessing and communicating scientific knowledge on the impacts, risks, and vulnerabilities associated with a changing global climate" (U.S. Global Change Research Program 2023).

The U.S. Department of Transportation recognizes the transportation sector's major contribution of GHGs that cause climate change and has made climate action one of the department's top priorities (USDOT 2023). FHWA's policy is to strive to identify the risks of climate change and extreme weather events to current and planned transportation systems. FHWA has developed guidance and tools for transportation planning that fosters resilience to climate effects and sustainability at the federal, state, and local levels (FHWA 2022).

The National Oceanic and Atmospheric Administration provides sea level rise projections for all U.S. coastal waters to help communities and decision makers assess their risk from sea level rise. Updated projections through 2150 were released in 2022 in a report and online tool (NOAA 2022).

STATE EFFORTS

Climate change adaptation for transportation infrastructure involves long-term planning and risk management to address vulnerabilities in the transportation system. A number of state policies and tools have been developed to guide adaptation efforts.

California's Fourth Climate Change Assessment (Fourth Assessment 2018) provides information to help decision makers across sectors and at state, regional, and local scales protect and build the resilience of the state's people, infrastructure, natural systems, working lands, and waters. The Fourth Assessment reported that if no measures are taken to reduce GHG emissions by 2021 or sooner, the state is projected to experience an up to 8.8 degrees Fahrenheit increase in average annual maximum daily temperatures; a two-thirds decline in water supply from snowpack resulting in water shortages; a 77% increase in average area burned by wildfire; and large-scale erosion of up to 67% of Southern California beaches due to sea level rise. These effects will have profound impacts on infrastructure, agriculture, energy demand, natural systems, communities, and public health (State of California 2018).

Sea level rise is a particular concern for transportation infrastructure within the Coastal Zone. Major urban airports will be at risk of flooding from sea level rise combined with storm surge as early as 2040; San Francisco airport is already at risk. Miles of coastal highways vulnerable to flooding in a 100-year storm event will triple to 370 by 2100, and 3,750 miles will be exposed to temporary flooding. The Fourth Assessment's findings highlight the need for proactive action to address these current and future impacts of climate change.

To help actors throughout the state address the findings of California's Fourth Climate Change Assessment, AB 2800's multidisciplinary Climate-Safe Infrastructure Working Group published *Paying it Forward: The Path Toward Climate-Safe Infrastructure in*

California. This report provides guidance on assessing risk in the face of inherent uncertainties still posed by the best available climate change science. It also examines how state agencies can use infrastructure planning, design, and implementation processes to respond to the observed and anticipated climate change impacts (Climate-Safe Infrastructure Working Group 2018).

EO S-13-08, issued in 2008, directed state agencies to consider sea level rise scenarios for 2050 and 2100 during planning to assess project vulnerabilities, reduce risks, and increase resilience to sea level rise. It gave rise to the 2009 *California Climate Adaptation Strategy*, the Safeguarding California Plan, and a series of technical reports on statewide sea level rise projections and risks, including the *State of California Sea-Level Rise Guidance Update* in 2018. The reports addressed the full range of climate change impacts and recommended adaptation strategies. The current *California Climate Adaptation Strategy* incorporates key elements of the latest sector-specific plans such as the *Natural and Working Lands Climate Smart Strategy*, *Wildfire and Forest Resilience Action Plan*, *Water Resilience Portfolio,* and the CAPTI (described above). Priorities in the 2023 *California Climate Adaptation Strategy* include acting in partnership with California Native American tribes, strengthening protections for climate-vulnerable communities that lack capacity and resources, implementing nature-based climate solutions, using best available climate science, and partnering and collaboration to best leverage resources (California Natural Resources Agency 2023).

EO B-30-15 recognizes that effects of climate change threaten California's infrastructure and requires state agencies to factor climate change into all planning and investment decisions. Under this EO, the Office of Planning and Research published *Planning and Investing for a Resilient California: A Guidebook for State Agencies*, to encourage a uniform and systematic approach to building resilience.

SB 1 Coastal Resources: Sea Level Rise (Atkins 2021) established statewide goals to "anticipate, assess, plan for, and, to the extent feasible, avoid, minimize, and mitigate the adverse environmental and economic effects of sea level rise within the coastal zone." As the legislation directed, the Ocean Protection Council collaborated with 17 state planning and coastal management agencies to develop the State Agency Sea-Level Rise Action Plan for California in February 2022. This plan promotes coordinated actions by state agencies to enhance California's resilience to the impacts of sea level rise (California Ocean Protection Council 2022).

CALTRANS ADAPTATION EFFORTS

Caltrans Vulnerability Assessments

Caltrans completed climate change vulnerability assessments to identify segments of the State Highway System vulnerable to climate change effects of precipitation, temperature, wildfire, storm surge, and sea level rise. The climate change data in the assessments were developed in coordination with climate change scientists and experts at federal, state, and regional organizations at the forefront of climate science. The findings of the vulnerability assessments guide analysis of at-risk assets and development of Adaptation Priority Reports as a method to make capital programming decisions to address identified risks.

Caltrans Sustainability Programs

The Director's Office of Equity, Sustainability and Tribal Affairs supports implementation of sustainable practices at Caltrans. The *Sustainability Roadmap* is a periodic progress report and plan for meeting the Governor's sustainability goals related to EOs B-16-12, B-18-12, and B-30-15. The Roadmap includes designing new buildings for climate change resilience and zero-net energy, and replacing fleet vehicles with zero-emission vehicles (Caltrans 2023a).

Project Adaptation Efforts

Caltrans has considered the effects of climate change on the project. The project is not anticipated to exacerbate the effects of climate change related to flooding, hazards, and wildfire, discussed below (Caltrans 2019).

Sea Level Rise

A Sea-Level Rise analysis is required for projects in the Coastal Zone that require approval of a Coastal Development Permit or amendment. This project would require such clearance under the California Coastal Act.

This project is located adjacent to, but outside of, areas expected to be affected by predicted sea-level rise. The project's design life is 40-50 years. Using projects in the *State of California Sea-Level Rise Guidance 2018 Update*, the most likely (66 percent probability) range of sea-level rise by 2060 at these locations (based on the tide gage at Arena Cove, about 61 miles south of Westport) is projected to be from 0.6 to 1.3 feet under a high-emissions scenario (RCP 8.5). The 1-in-200 chance (0.5 percent) probability of sea-level rise by 2060 is 2.5 feet.

Under the highest potential emissions scenario (H++), sea-level could rise as much as 3.7 feet by 2060. However, the probability of sea-level rise reaching or exceeding 3 feet by 2060 is 0.2 percent (note this calculation does not consider the H++ scenario). Visualization using the NOAA Sea-Level Rise viewer indicates that the project location would not be inundated if sea-level rose by as much as 5 feet (Figures 10 and 11).



Figure 10. Sea Level Rise Impact Map for Westport, California



Figure 11. Sea Level Rise Impact Map for Hardy Creek (PM 84.1)

Precipitation and Flooding

The *Caltrans Climate Change Vulnerability Assessment for District 1* (Caltrans 2019) mapped potential changes in the 100-year storm precipitation event throughout the district. The 100-year storm event is a metric commonly used in the design of culverts. The projections are based on the Representative Concentration Pathways (RCP) 8.5 Emissions Scenario. The mapping indicates a percentage increase range from 0% to as much as 9.9% between 2025 and 2085 in the project area within Mendocino County. Heavier precipitation and extreme weather events, such as the 100-year flood (a 100-year flood is a flood event that has a 1 in 100 chance of being equaled or exceeded in any given year), may occur as a

result of climate change. Many location-specific variables make it difficult to calculate exactly how precipitation change would affect flood flows at a given site.

The proposed project would replace existing deteriorated culverts with larger pipe sizes, where needed according to current highway and culvert design standards. The rate and volume of stormwater discharged to adjacent waterbodies would be controlled by using rock energy dissipators (RED). The proposed project would improve the drainage facilities to better protect the roadways compared to existing conditions.

Wildfire

The project corridor is located within a State Responsibility Area (SRA). The project area is within lands classified as high fire hazard severity zones (CAL FIRE 2020) (Figure 12). The Caltrans *Climate Change Vulnerability Assessments for District 1* (Caltrans 2019) details mapped centerlines miles exposed to medium to very high wildfire concern on routes throughout the district. The projections are based on the Representative Concentration Pathways (RCP) 8.5 Emissions Scenario. By 2085, the project corridor is modeled at a *medium level* of Wildfire concern. While average temperatures on the coast are currently relatively mild, increased precipitation due to climate change could lead to an increase in fuel in already fire-prone locations.

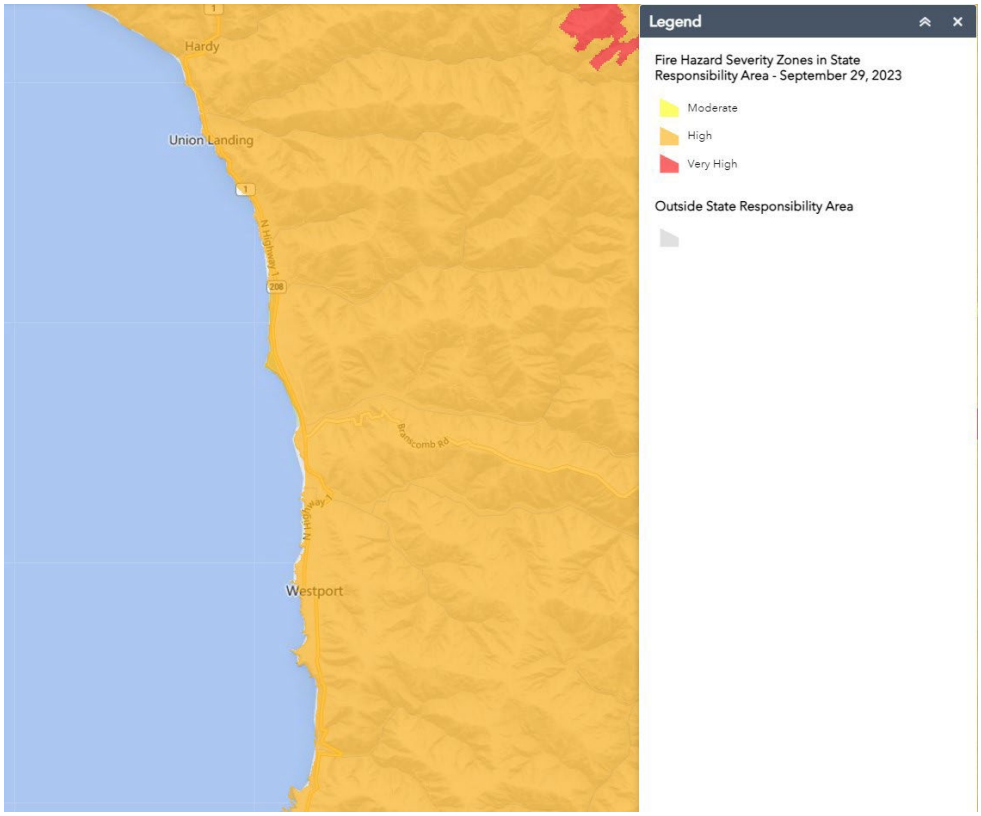


Figure 12. Fire Severity Map for Westport, California

Standard fire prevention measures would be implemented during construction, including:

- The names and emergency telephone numbers of the nearest fire suppression agencies would be posted at a prominent place at the job site.
- Fires occurring within and near the project limits would be immediately reported to the nearest fire suppression agency by using the emergency phone numbers retained at the job site and by dialing 911. Performance of the work would be in cooperation with fire prevention authorities.
- Project personnel would be prevented from setting open fires that are not part of the work.
- Fires caused directly or indirectly by job site activities would be extinguished and escape of fires would be prevented.
- Materials resulting from clearing and grubbing would be disposed of or managed to prevent accumulation of flammable material.

These measures would minimize wildfire risk during construction. It is the policy of District 1 to not expose plastic pipe to fire hazard; therefore, downdrains would be made of steel and would be constructed so that connections with any plastic pipe cross drain would be below ground. Culvert liners would be grouted and buried below fill. The project would replace or replace existing drainage structures and would not result in changes to the highway facilities or environment that could exacerbate fire risk.

Temperature

The District Climate Change Vulnerability Assessment does not indicate temperature changes during the project's design life that would require adaptive changes in pavement design or maintenance practices (*Climate Change Vulnerability Assessments for District 1* (Caltrans 2019)).

2.9 Hazards and Hazardous Materials

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project: a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?				✓
Would the project: 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?				✓
Would the project: c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				✓
Would the project: 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?				✓
Would the project: 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 or excessive noise for people residing or working in the project area?				✓

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project: f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				✓
Would the project: g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?				✓

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project and *Initial Site Assessment* (ISA) review for issues relating to hazardous materials dated November 27, 2023 (Caltrans 2023d). Aerially deposited lead (ADL), from the historical use of leaded gasoline, exists along roadways throughout California. If encountered, soil with elevated concentrations of lead as a result of ADL in the existing State right of way within the limits of the project will be managed under the July 1, 2016, ADL Agreement between Caltrans and the California Department of Toxic Substances Control. This ADL Agreement allows such soils to be safely reused within the project limits as long as all requirements of the ADL Agreement are met.

Potential hazards and hazardous materials impacts are not anticipated because the project would involve the rehabilitation or replacement of existing drainage facilities and would not create significant hazards involving hazardous materials or wildland fires. The project is not located within a site (pursuant to Government Code Section 65962.5) near an existing or proposed school, airport or airport land use plan. Although there would be temporary traffic delays during construction, all emergency response agencies in the project area would be notified of the project construction schedule and would have access to SR 1 throughout the construction period.

Avoidance, Minimization and Mitigation Measures

No mitigation is required.

2.10 Hydrology and Water Quality

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project: a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?			✓	
Would the project: b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?				✓
Would the project: c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: (i) result in substantial erosion or siltation on- or off-site;				✓
(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;				✓
(iii) 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; or				✓
(iv) impede or redirect flood flows?				✓

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project: d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?				✓
Would the project: e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?				✓

Regulatory Setting

The primary laws and regulations governing hydrology and water quality include:

- Federal: Clean Water Act (CWA)–33 USC 1344
- Federal: Executive Order for the Protection of Wetlands–EO 11990
- State: California Fish and Game Code (CFGC)–Sections 1600–1607
- State: Porter-Cologne Water Quality Control Act– Sections 13000 et seq.

Affected Environment

The project location lies within the Mendocino Coast Hydrologic Unit and Rockport Hydrologic Area (Table 8). The Mendocino Coast incorporates nine hydrologic areas (Water Quality Control Plan for the North Coast Region (Basin Plan 2018). The unit can be described as an area of coastal streams in Mendocino and northern Sonoma counties which drain into the Pacific Ocean. Drainage systems include the Usal Creek drainage in the north and Russian Gulch drainage in the south.

All five of the culverts are within the Big-Navarro-Garcia watershed. Topography varies for each culvert site, but generally comprises sloping and terraced hills, with erosion cut drainages that feed into Chadbourne Gulch, Hardy Creek, and directly into the Pacific Ocean. The elevation varies between locations from approximately 15 feet above mean sea level (MSL) at PM 75.47 to 200 feet MSL at PM 76.81.

Table 8. Hydrologic Information

Route	Post Miles	Hydrologic Unit	Hydrologic Area	Hydrologic Sub-Area	Total Maximum Daily Load (TMDL)
MEN 1	75.47-84.10	Mendocino Coast	Rockport	Wages Creek (113.12)	N/A

Environmental Consequences

Water quality objectives and beneficial uses are identified for water bodies in the North Coast Region in the Water Quality Control Plan for the North Coast Region (Basin Plan) (NCRWQCB 2018).

The waters associated with this project are not on the 303(d) list and do not have any Total Maximum Daily Loads (TMDLs).

Discussion of CEQA Environmental Checklist Question 2.10—Hydrology and Water Quality

A "No Impact" determination was made for Questions b), c), d), and e) listed within the CEQA Environmental Checklist-Hydrology and Water Quality section. Determinations were based on scope, description, and locations of the proposed project, as well as the *Water Quality Assessment Memorandum for Westport Culverts* and *Revised Water Quality Assessment Memorandum for Westport Culverts* (Caltrans 2023b and c).

a) Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Temporary Impacts to Water Quality

Temporary impacts to water quality could occur during the construction phase of the project. Soil disturbing work within and adjacent to drainage systems could result in the transport of sediment and other pollutants to adjacent waterways, wetlands, and/or riparian areas. The potential for turbidity impacts is specifically of concern from construction-related activities, especially on the culverts that may require a temporary stream diversion system and work areas. The amount of disturbed soil area (DSA) during construction is currently estimated to be 1.13 acres and will require coverage under the General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permitting [CGP]) Order 2022-0057-DWQ (State Water Resources Control Board

[SWRCB] 2022). The CGP requires that a project-specific Stormwater Pollution Prevention Plan (SWPPP) be prepared which identifies temporary construction site BMPs that will be implemented to protect water resources from both stormwater and non-stormwater discharges during construction.

The following BMPs from the *Caltrans Construction Site BMP Manual* (Caltrans 2017) are anticipated to be incorporated into the approved project-specific Stormwater Pollution Prevention Plan:

1. Construction sequencing will be scheduled to minimize land disturbance during the wetter months (SS-1).
2. Existing vegetation will be removed to the minimum extent necessary to facilitate the proposed work (SS-2).
3. Disturbed slopes will be stabilized with a combination of seed, biodegradable rolled erosion control products (RECP) such as fiber rolls, coir blankets, and geotextile fabrics (SS-7).
4. Rock slope protection (RSP) will be placed at appropriate pipe outlets to prevent scour and reduce the velocity and/or energy of stormwater flows (SS-10).
5. Perimeter control devices such as fiber rolls, compost socks, and silt fences will be utilized to prevent sediment transport from the project site (SC-1, SC-5, SC-6, SC-9).
6. Temporary check dams constructed of rock, gravel bags, compost socks, fiber rolls, or other proprietary product will be used to reduce scour and channel erosion by reducing flow velocity and encouraging sediment settlement (SC-4).
7. Slope sediment runoff control devices such as fiber rolls, gravel bags, and compost socks will be used to filter runoff, retain sediment, and reduce sheet flow (SC-5, SC-6, SC-11).
8. Drainage inlet protection methods such as gravel bags and fiber rolls will be deployed to prevent sediment and other pollutants from entering drainage systems (SC-10).
9. Temporary access road entrances and exits will be stabilized and maintained to prevent sediment erosion and transport from the work area (TC-1).
10. Temporary construction roadways will be stabilized and maintained to prevent sediment erosion and transport from the work area (TC-2).

11. Water conservation practices will be used to minimize the use of water on-site or use water in a manner that avoids causing runoff, erosion, and/or the discharge of pollutants into receiving waters (NS-1).
12. Dewatering operations will be implemented to manage the discharge of pollutants from the accumulation of groundwater associated with excavations, temporary stream crossings and clear water diversions (NS-2, NS-4, NS-5).
13. Paving and sealing operations will be conducted to avoid and minimize the discharge of pollutants to receiving waters (NS-3).
14. Illegal connection and illicit discharge detection and reporting is applicable anytime an illegal connection or illicit discharge is discovered, or illegally dumped material is found on the construction site (NS-6).
15. Vehicle and equipment cleaning, fueling, and maintenance procedures and practices will be used to minimize or eliminate the discharge of pollutants to storm drain systems or to watercourses (NS-8, NS-9, NS-10).
16. Proper concrete curing and finishing procedures will be used to minimize any potential for runoff (NS-12, NS-14).
17. Material delivery, storage, and use procedures and practices will be used to minimize or eliminate the discharge of these materials to the storm drain system or receiving waters (WM-1, WM-2).
18. Concrete washout facilities, re-fueling areas, as well as equipment and storage areas should be located away from drainage inlets and waterways to prevent both stormwater and non-stormwater discharges (WM-3, WM-8, NS-9).
19. Spill prevention and control practices and hazardous waste management (WM-4, WM- 6).
20. Concrete waste management procedures and practices should be used to minimize or eliminate the discharge of concrete waste materials to the storm drain systems or watercourses (WM-8).
21. Sanitary and septic waste management practices and procedures will be used to minimize or eliminate the discharge of sanitary and septic waste materials to the storm drain system or to receiving waters (WM-9).

Permanent Impacts to Water Quality

The currently proposed new impervious surface (NIS) is anticipated to be approximately 370 square feet (sf). Post-construction stormwater treatment will not be required by either the 401 Water Quality Certification (NIS ≥ 5,000 sf) or the Caltrans Permit (NIS ≥ 10,000 sf).

The project is not anticipated to result in long-term degradation of water quality. Proposed temporary and permanent fill to jurisdictional waterways would be subject to USACE CWA Section 404 and NCRWQCB Water Quality Certification regulations and permitting. Impacts to Waters of the U.S. and State are discussed in Section 2.4.

Increasing the diameter of culverts at some locations is anticipated to improve the channel condition by reducing the occurrence of flooding upstream of culverts and decreasing water velocities at the outlet of culverts. This would decrease erosion of the bed, bank, and channel, both upstream and downstream of the culverts. Permanent impacts to water quality would be prevented by adhering to the required permit conditions (Permits 404 and 401), and the incorporation of Design Pollution Prevention (DPP) BMP strategies, including prevention of downstream erosion, stabilization of disturbed soil areas, maximization of vegetated surfaces, and consideration of downstream effects related to potentially increased flow.

Given that potential impacts would be temporary and minimized with the implementation of the Standard Measures and Best Management Practices indicated in Section 1.4, the project is not anticipated to violate any water quality standards or discharge requirements or substantially degrade surface or ground water quality; therefore a *"Less Than Significant Impact"* determination was made for Question a).

Avoidance, Minimization and Mitigation Measures

No mitigation is required.

2.11 Land Use and Planning

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project: a) Physically divide an established community?				✓
Would the project: b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?				✓

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project. Potential impacts to land use and planning are not anticipated as the proposed project would not divide an established community or conflict with a land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. The project, which involves the rehabilitation and replacement of existing drainage systems, does not conflict with existing zoning, plans, and land use controls.

Avoidance, Minimization and Mitigation Measures

No mitigation is required.

2.12 Mineral Resources

Question:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?				✓
Would the project: 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?				✓

"No Impact" determinations in this section are based on the scope and location of the proposed project. Impacts to mineral resources are not anticipated because there are no known mineral resources present within the project area.

Avoidance, Minimization and Mitigation Measures

No mitigation is required.

2.13 Noise

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project result in: a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			✓	
Would the project result in: b) Generation of excessive groundborne vibration or groundborne noise levels?				✓
Would the project result in: c) For a project located within the vicinity of a private airstrip or 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?				✓

Regulatory Setting

CEQA requires a strictly baseline versus build analysis to assess whether a proposed project will result in a noise impact. If a proposed project is determined to cause a significant noise impact under CEQA, mitigation measures must be incorporated into the project unless those measures are not feasible.

Affected Environment

The project would occur on a segment of highway in a rural part of Mendocino County. The project area is surrounded by a mix of land uses in the greater surrounding area that include open space, agricultural, rural village, remote residential, and forest land. Two single-family residences were identified near the culvert at PM 76.52. The first residence is located over 250 feet west of the culvert area and the second is located over 450 feet northwest of the culvert area.

Environmental Consequences

During construction of the project, noise from construction activities may intermittently dominate the noise environment in the immediate area of construction. However, construction noise would be temporary.

Discussion of CEQA Environmental Checklist Question 2.13—Noise

"No Impact" determinations in this section were made for Questions b) and c) listed within the CEQA Environmental Checklist–Noise section and are based on the scope, description, and location of the proposed project, as well as the *Air Quality and Noise Analysis for the Westport Culvert Project* dated February 8, 2024 (Caltrans 2024a). The proposed project does not construct a new highway in a new location or substantially change the vertical or horizontal alignments. Traffic volumes, composition, and speeds would remain the same. Therefore, permanent noise impacts are not anticipated.

a) Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

During construction, noise would be generated from the operation of heavy construction equipment and arrival and departure of heavy-duty trucks (Table 9). Work that would produce noise over 86 dBA, such as the operation of heavy trucks and concrete saws, would be restricted to daytime work hours because the contractor would be required to conform to Caltrans Standard Specification, Section 14-8.02 which states:

"*Do not exceed 86 decibels (dBA) maximum sound level (Lmax) at 50 feet from the job site activities from 9:00 p.m. to 6:00 a.m. Equip an internal combustion engine with the manufacturer-recommended muffler. Do not operate an internal combustion engine on the job site without the appropriate muffler.*"

Table 9. Construction Equipment Noise

Equipment	Maximum Noise Level (dBA* at 50 feet)
Concrete Saw	90
Heavy Trucks	88
Excavator	85
Pneumatic Tools	85
Concrete Pump	82

*dBA – A-weighted decibels

In addition to implementation of the Standard Specifications and Best Management Practices, construction noise can be minimized through the following measures:

- Limit operation of pile driver, jackhammer, concrete saw, pneumatic tools and demolition equipment to daytime hours.
- Unnecessary idling of internal combustion engines should be prohibited.
- Stationary equipment, such as compressors and generators, should be shielded and located as far away from residential uses as practical.
- Locate equipment and materials storage sites as far away from residential uses as practicable.
- Notify residents within 100 feet of the project area at least two weeks prior to the start of nighttime construction.

With the implementation of Standard Measures and Best Management Practices, impacts, noise levels would not exceed established standards; therefore a "*Less than Significant Impact*" determination was made for Question a).

Avoidance, Minimization and Mitigation Measures

No mitigation is required.

2.14 Population and Housing

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project: a) Induce substantial unplanned 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)?				✓
Would the project: b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?				✓

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project. Potential impacts to population and housing are not anticipated because the project involves rehabilitation or replacement of existing drainage facilities and would not induce unplanned population growth in the area by constructing housing or creating new employment, nor would it induce population growth by providing new access or opening a new area to development. The proposed project would not involve acquisition of land occupied by homes or residences and would not result in displacement of people or housing.

Avoidance, Minimization and Mitigation Measures

Based on the determinations made in the CEQA Environmental Checklist, no mitigation measures are proposed for this project.

2.15 Public Services

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: Fire protection?				✓
Police protection?				✓
Schools?				✓
Parks?				✓
Other public facilities?				✓

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project. Although there would be temporary traffic delays during construction, all emergency response agencies in the project area would be notified of the project construction schedule and would have access to SR 1 throughout the construction period. The project would replace culverts and would not result in an increased demand for fire or police protection or increased demand for space in schools, parks, or public facilities in the area. Potential impacts on public services are not anticipated.

Avoidance, Minimization and Mitigation Measures

No mitigation is required.

2.16 Recreation

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				✓
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				✓

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project. The project would involve the rehabilitation or replacement of existing drainage facilities and would not result in an increased demand for park resources that could cause deterioration of existing parks or recreational facilities. Additionally, the proposed project does not include the construction of park resources or recreational facilities or the expansion of such facilities. Therefore, potential impacts on Recreation are not anticipated.

Avoidance, Minimization and Mitigation Measures

No mitigation is required.

2.17 Transportation

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project: a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?				✓
Would the project: b) Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b)?				✓
Would the project: c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				✓
Would the project: d) Result in inadequate emergency access?				✓

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project. Potential impacts to transportation and traffic are not anticipated because the proposed culvert replacement and rehabilitation would not represent a change to the layout or facility and the roadway would remain a two-lane rural highway. The project is not likely to lead to a substantial increase in vehicle miles traveled. Although there would be temporary traffic delays on SR 1 during construction, there would not be any permanent changes to transportation or traffic.

A Transportation Management Plan (TMP) would be developed and construction traffic would be scheduled to reduce congestion. There are no public transit facilities within one half-mile of the project. During construction, cyclists would be accommodated through the construction area. All emergency response agencies in the project area would be notified of the project construction schedule and would have access to SR 1 throughout the construction period.

Avoidance, Minimization and Mitigation Measures

No mitigation is required.

2.18 Tribal Cultural Resources

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code § 21074 as either a site, feature, place, or cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code § 5020.1(k), or				✓
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code § 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.				✓

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project, as well as the *Cultural Memo for the Westport Culverts Project* dated June 18, 2024 (Caltrans 2024e). No tribal cultural resources were observed during archaeological surveys and no known tribal cultural resources are recorded within the project area of potential effects.

No tribal cultural resources have been identified in the project area that are listed in the California Register of Historical Resources or in a local register and there are no known tribal cultural resources determined to be significant to a California Native American Tribe. Native American consultation was initiated by Caltrans archaeologist Jackie Farrington in 2023, with email notifications to local tribes. A request was sent to the Native American Heritage Commission's Sacred Lands Files. The NAHC responded with a list of contacts for the project area, as well as a negative Sacred Lands search. The following were contacted:

- Valerie Stanley, Tribal Historic Preservation Officer, Sherwood Valley Band of Pomo
- Hazel Ramirez, Chairwoman, Sherwood Valley Band of Pomo

Follow-up phone calls have been made, and information has been available at Mendocino County quarterly meetings when they have been held, and design updates have been provided. No further responses have been received as of June 1, 2024. Caltrans will continue to consult with interested tribes throughout the life of the project. Potential impacts to Tribal Cultural Resources are not anticipated.

Avoidance, Minimization and Mitigation Measures

No mitigation is required.

2.19 Utilities and Service Systems

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project: a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities—the construction or relocation of which could cause significant environmental effects?				✓
Would the project: b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?				✓
Would the project: c) 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?				✓
Would the project: d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?				✓
Would the project: e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?				✓

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project. The project would replace existing drainage facilities and would not result in a new source of wastewater or solid waste or create a new demand for water supplies. There would be temporary relocations of up to three utility poles and associated guy wires to accommodate culvert repairs and replacements, However, due to the short-term nature of the relocation, impacts to Utilities and Service Systems are not anticipated.

Avoidance, Minimization and Mitigation Measures

No mitigation is required.

2.20 Wildfire

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
If located in or near State Responsibility Areas (SRAs) or lands classified as *very high* Fire Hazard Severity Zones, would the project: a) Substantially impair an adopted emergency response plan or emergency evacuation plan?				✓
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?				✓
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or may result in temporary or ongoing impacts to the environment?				✓
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?				✓

Senate Bill 1241 required the Office of Planning and Research, the Natural Resources Agency, and the California Department of Forestry and Fire Protection (CAL FIRE) to develop amendments to the "CEQA Environmental Checklist" for the inclusion of questions related to fire hazard impacts for projects located on lands classified as *very high* Fire Hazard Severity Zones. The 2018 updates to the CEQA Guidelines expanded this to include projects "near" these very high Fire Hazard Severity Zones.

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project. The project corridor is located within a State Responsibility Area (SRA).

The project area is within lands classified as *high* Fire Hazard Severity Zones (California Department of Forestry and Fire Protection [CAL FIRE] Fire and Resource Assessment Program [FRAP] 2024) (Figure 12). However, the project proposes to replace existing drainage facilities and would not require new infrastructure that would exacerbate fire risks.

All emergency response agencies in the project area would be notified of the project construction schedule and would have access to SR 1 throughout the construction period. The proposed work would not impair an adopted emergency response plan or emergency evacuation plan, exacerbate wildfire risks, or expose people or structures to significant risks and no potential wildfire impacts are anticipated.

Avoidance, Minimization and Mitigation Measures

No mitigation is required.

2.21 Mandatory Findings of Significance

Does the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have the potential to substantially 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?				✓
b) Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means 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.)				✓
c) Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?				✓

Discussion of CEQA Environmental Checklist Question 2.21—Mandatory Findings of Significance

The California Environmental Quality Act of 1970 (CEQA) requires preparation of an Environmental Impact Report (EIR) when certain specific impacts may result from construction or implementation of a project. Project analyses indicated that potential impacts associated with this project would not require an EIR. Mandatory Findings of Significance are not required for projects where an EIR has not been prepared.

2.22 Cumulative Impacts

Cumulative impacts are those that result from past, present, and reasonably foreseeable future actions, combined with the potential impacts of this proposed project. A Cumulative Impact Assessment (CIA) looks at the collective impacts posed by individual land use plans and projects. Cumulative impacts can result from individually minor but collectively substantial impacts taking place over a period of time (CEQA § 15355).

Cumulative impacts to resources may result from residential, commercial, industrial, and highway development, as well as from agricultural development and the conversion to more intensive agricultural cultivation. These land use activities can degrade habitat and species diversity through consequences such as displacement and fragmentation of habitats and populations, alteration of hydrology, contamination, erosion, sedimentation, disruption of migration corridors, changes in water quality, and introduction or promotion of predators. They can also contribute to potential community impacts identified for the project, such as changes in community character, traffic patterns, housing availability, and employment.

Per Section 15130 of CEQA, a discussion of cumulative impacts is only required in "…situations where the cumulative effects are found to be significant." The analysis indicates the activities associated with the proposed project do not have the potential to have a "significant" direct, indirect, or cumulative impact on any resource. Given this, an EIR and CIA are not required for this project.

Chapter 3. Agency and Public Coordination

Early and continuing coordination with the general public and public agencies is an essential part of the environmental process. It helps planners determine the necessary scope of environmental documentation and the level of analysis required, and to identify potential impacts and avoidance, minimization and/or mitigation measures and related environmental requirements. Agency consultation and public participation for this project have been accomplished through a variety of formal and informal methods, including Project Development Team (PDT) meetings, interagency coordination meetings, and interagency coordination. This chapter summarizes the results of Caltrans' efforts to identify, address, and resolve project-related issues through early and continuing coordination.

The following agencies, organizations, and individuals were consulted in the preparation of this environmental document (Table 10).

Coordination with Resource Agencies

The following table indicates the resource agency coordination effort, date(s) and personnel involved.

Table 10. Agency Coordination and Professional Contacts

Coordination Effort	Date	Personnel
Meeting with USFWS to discuss federally listed species' potential to occur within the BSA; discuss use of PLOC for marbled murrelet and Northern spotted owl.	September 28, 2023	Greg Schmidt, USFWS Biologist; Tracy Walker, Environmental Scientist (ES), Caltrans Biologist; Dawn Graydon, ES, Caltrans Biologist.
Meeting with CDFW to discuss state protected species' potential to occur within the BSA including coho salmon–CCC ESU, Northern spotted owl, etc. Discuss impacts to SNCs, waters, and riparian habitat.	November 29, 2023	Greg O'Connell, CDFW Biologist; Tracy Walker, ES, Caltrans Biologist; Dawn Graydon, ES, Caltrans Biologist.
Email to NMFS to share Caltrans' determination of federally listed species' potential to occur within the BSA and proposed use of PBO for coho salmon–CCC ESU and steelhead–NC DPS.	December 1, 2023	Tracy Walker, ES, Caltrans Biologist, email to Bob Coey, Senior NMFS Biologist.

Coordination Effort	Date	Personnel
Site visit with CDFW to discuss impacts to SNCs, waters and riparian habitat and proposed offsets on-site and off-site.	December 8, 2023	Greg O'Connell, CDFW Biologist; Tracy Walker, ES, Caltrans Biologist; Gillian Levy, ES, Caltrans Env. Coordinator.
Email conversation with CDFW liaison Greg O'Connell to summarize online meeting and site visit details	December 19 and 22, 2023	Gillian Levy, ES, Caltrans Env. Coordinator.
Meeting with California Coastal Commission to discuss proposed alternatives for culvert repair/replacement at PM 76.20	March 11, 2024	Tracy Walker, ES, Caltrans Biologist; Gillian Levy, ES, Caltrans Env. Coordinator, Julia Krog, Director, Planning & Building Services, County of Mendocino

Coordination with Property Owners

Permits to enter were obtained in 2023 to access several properties within the project Environmental Study Limits to perform environmental studies.

A copy of the Initial Study/Proposed Mitigated Negative Declaration will be sent to owners and occupants of properties within and adjacent to the project area.

Circulation

A draft of this document will be circulated for public review from August 19, 2024, to September 18, 2024.

Chapter 4. List of Preparers

The following individuals performed the environmental work and contributed to the preparation of the Initial Study / Proposed Mitigated Negative Declaration for this project:

California Department of Transportation, District 1

André Guimaraes	Senior Transportation Engineer (Design)
Andrea Poteet	Restoration Specialist
Ben Lardiere	Environmental Scientist (Biologist)
Cari Williams	Environmental Scientist (Peer Reviewer)
Dana Rose	Environmental Scientist (Biologist)
Dawn Graydon	Environmental Scientist (Biologist)
Felicia Zimmerman	Environmental Scientist (GHG Specialist/Technical Editor)
Garrett Wendell	Project Engineer (Design)
Gillian Levy	Environmental Scientist (Coordinator)
Gwen Erickson	Engineering Geologist (Hydrology/Water Quality Specialist)
Jackie Farrington	Environmental Planner (Archaeologist)
Karen Radford	Associate Environmental Planner (Technical Editor)
Liza Walker	North Region Environmental Office Chief–D01
Paul Sundberg	Engineering Geologist (Hazardous Waste/Paleo Specialist)
Rachelle Estrada	Senior Environmental Scientist (Branch Chief)
Ryan Pommerenck	Transportation Engineer (Air Quality, Noise Specialist)
Stephen Umbertis	Environmental Scientist (Coordinator)
Tim Keefe	Senior Environmental Scientist (Archaeology)

Tim Nelson	Environmental Scientist (Mitigation Specialist)
Tracy Walker	Environmental Scientist (Biologist)
Valerie Jones	Landscape Associate (Visual Specialist)

Chapter 5. Distribution List

Federal and State Agencies

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PERSONAL COMMUNICATION

CDFW Sean Gallagher (July 18, 2016)

CDFW Staff December 2023

USFWS Gregory Schmidt 2023



Appendix A. Project Layouts



INDEX OF PLANS

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
01	Men	1	75.5/84.1		

STATE OF CALIFORNIA

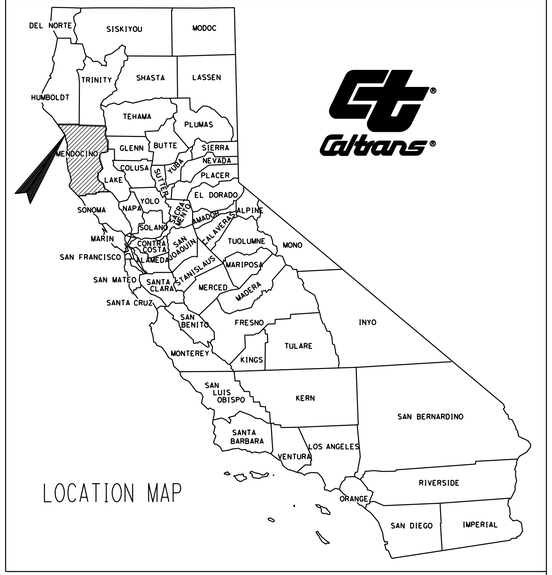
DEPARTMENT OF TRANSPORTATION

PROJECT PLANS FOR CONSTRUCTION ON

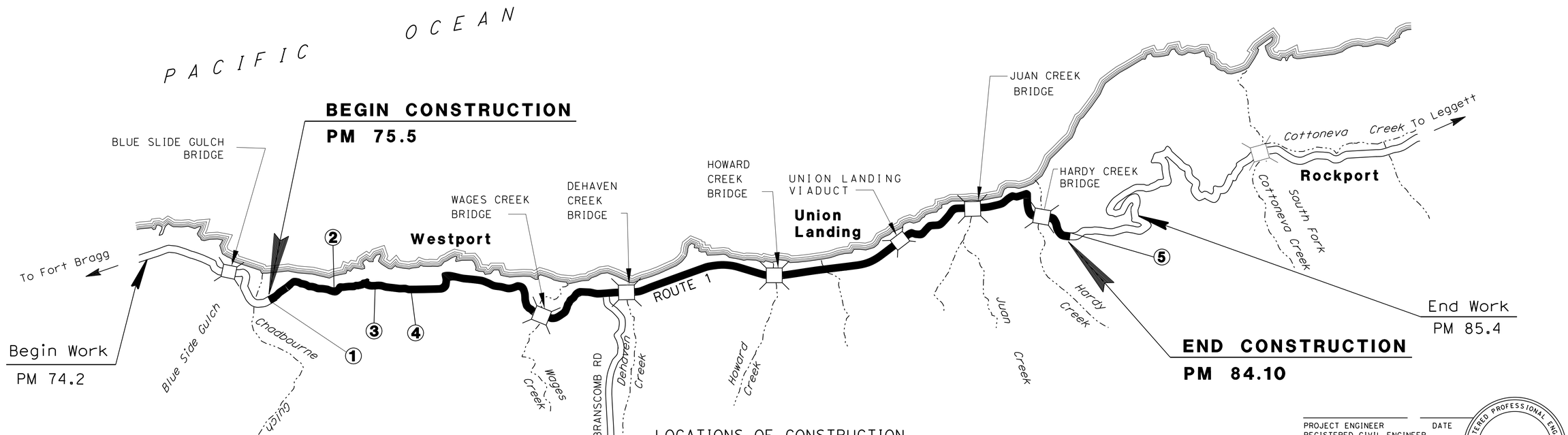
STATE HIGHWAY

IN MENDOCINO COUNTY NEAR WESTPORT FROM 0.5 MILE SOUTH OF BLUE SIDE GULCH BRIDGE TO 0.3 MI NORTH OF HARDY CREEK BRIDGE

TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2023



LOCATION MAP



LOCATIONS OF CONSTRUCTION

Loc No. ⓝ	COUNTY	ROUTE	PM	NOTES
1	MEN	1	75.47	DRAINAGE SYSTEM No. 1
2	MEN	1	76.20	DRAINAGE SYSTEM No. 2
3	MEN	1	76.52	DRAINAGE SYSTEM No. 3
4	MEN	1	76.81	DRAINAGE SYSTEM No. 4
5	MEN	1	84.10	DRAINAGE SYSTEM No. 5

NO SCALE

PROJECT ENGINEER — DATE
REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. — Exp. — CIVIL — STATE OF CALIFORNIA

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

CONTRACT No.	01-0K1704
PROJECT ID	0120000037

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

PROJECT MANAGER: KIM FLOYD
DESIGN MANAGER: ANDRE GUIMARAES

LAST REVISION: 10-04-23
DATE PLOTTED => 5/10/2024
TIME PLOTTED => 9:55:00 AM

BORDER LAST REVISED 8/1/2016 | CALTRANS WEB SITE IS: HTTP//WWW.DOT.CA.GOV/ | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | USERNAME => DGN FILE => ...\0-Phase\0120000037ab001.dgn | UNIT 0313 | PROJECT NUMBER & PHASE 01200000370

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
1	MEN	001	75.5/84.1		

REGISTERED CIVIL ENGINEER _____ DATE _____

PLANS APPROVAL DATE _____

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PRELIMINARY DESIGN FOR REVIEW ONLY

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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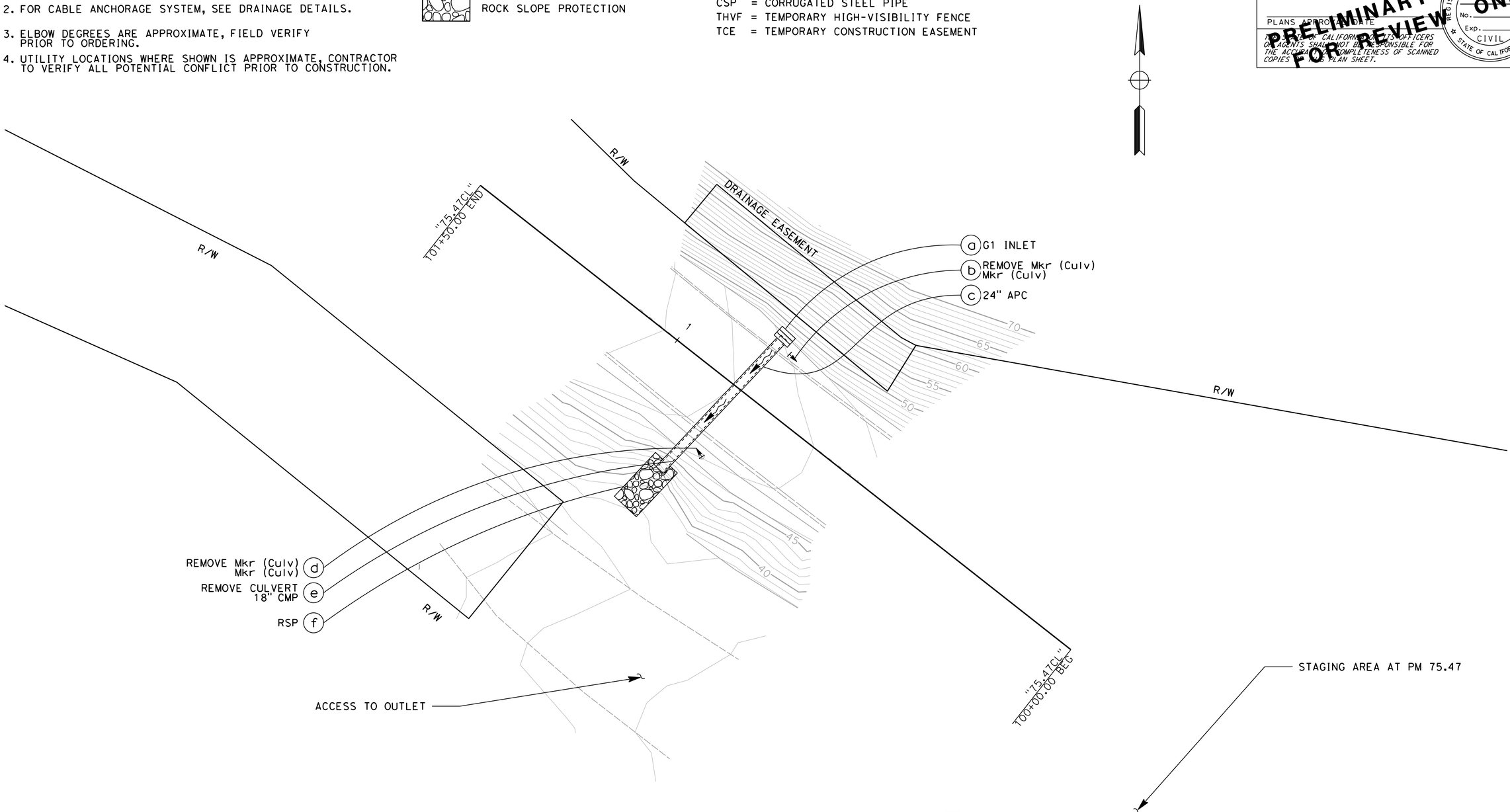
1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. FOR CABLE ANCHORAGE SYSTEM, SEE DRAINAGE DETAILS.
3. ELBOW DEGREES ARE APPROXIMATE, FIELD VERIFY PRIOR TO ORDERING.
4. UTILITY LOCATIONS WHERE SHOWN IS APPROXIMATE, CONTRACTOR TO VERIFY ALL POTENTIAL CONFLICT PRIOR TO CONSTRUCTION.

LEGEND:

ROCK SLOPE PROTECTION

ABREVIATIONS:

CSP = CORRUGATED STEEL PIPE
THVF = TEMPORARY HIGH-VISIBILITY FENCE
TCE = TEMPORARY CONSTRUCTION EASEMENT



DRAINAGE SYSTEM No. 1

Rte 001 - PM 75.47
"75.47 CL" 100+84.80
SKEW 94°58'11.84"
APPROVED FOR DRAINAGE WORK ONLY

DRAINAGE PLAN

SCALE: Horiz 1"=10'
Vert 1"=10'

D-1

LAST REVISION 10/12/23
DATE PLOTTED => 5/10/2024
TIME PLOTTED => 9:55:01 AM

REVISED BY	DATE REVISED
GARRETT WENDEL	
ANDRE GUIMARAES	
CALCULATED-DESIGNED BY	
CHECKED BY	
FUNCTIONAL SUPERVISOR	
ANDRE GUIMARAES	

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
1	MEN	001	75.5/84.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

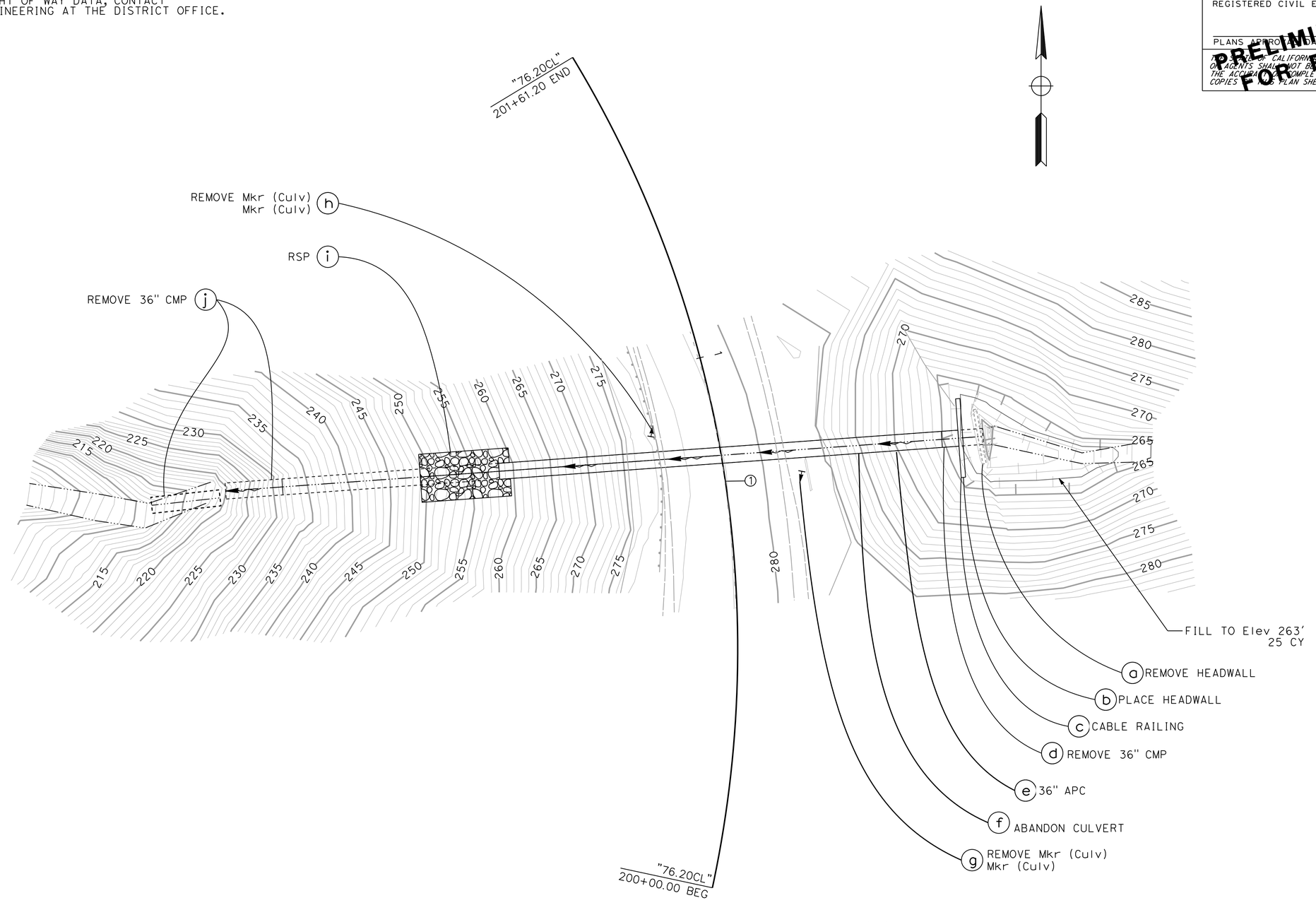
PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

PRELIMINARY DESIGN FOR REVIEW ONLY

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NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



CURVE DATA

No. ⊛	R	Δ	T	L
1	213.37	43°17'11"	84.67	161.20

DRAINAGE SYSTEM No. ⬡ 2

Rte 001 - PM 76.20
"76.20 CL" 100+80.01
SKEW 81°30'02.461"

APPROVED FOR DRAINAGE WORK ONLY

DRAINAGE PLAN

SCALE: Horiz 1"=10'
Vert 1"=10'

D-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN

CALCULATED-DESIGNED BY	CHECKED BY	FUNCTIONAL SUPERVISOR	REVISED BY	DATE REVISED
GARRETT WENDEL	ANDRE GUIMARAES	ANDRE GUIMARAES		

LAST REVISION 10/12/23
DATE PLOTTED => 5/10/2024
TIME PLOTTED => 9:55:01 AM

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
1	MEN	001	75.5/84.1		

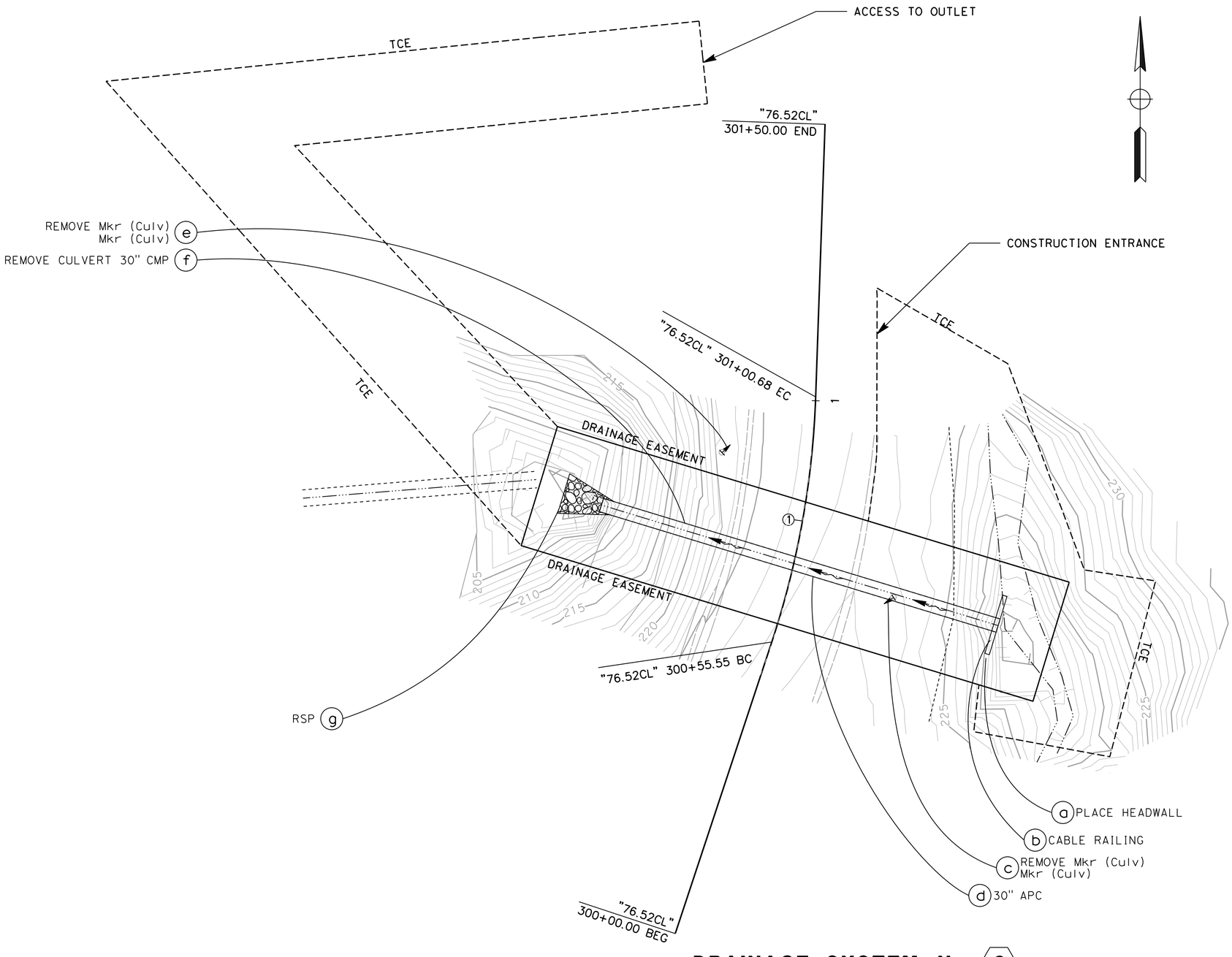
REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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PRELIMINARY DESIGN FOR REVIEW ONLY

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA



CURVE DATA

No. ⊛	R	Δ	T	L
1	158.13′	16°21′04"	22.72′	45.13′

DRAINAGE SYSTEM No. 3

Rte 001 - PM 76.52
"76.52 CL" 100+70.27
SKEW 85°00′33.50"

DRAINAGE PLAN

SCALE: Horiz 1"=10′
Vert 1"=10′

D-3

REVISED BY	DATE REVISED
GARRETT WENDEL	
ANDRE GUIMARAES	

CALCULATED-DESIGNED BY
CHECKED BY

FUNCTIONAL SUPERVISOR
ANDRE GUIMARAES

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN

LAST REVISION 10/12/23
DATE PLOTTED => 5/10/2024
TIME PLOTTED => 9:55:02 AM

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UNIT 0313
PROJECT NUMBER & PHASE 01200000370

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
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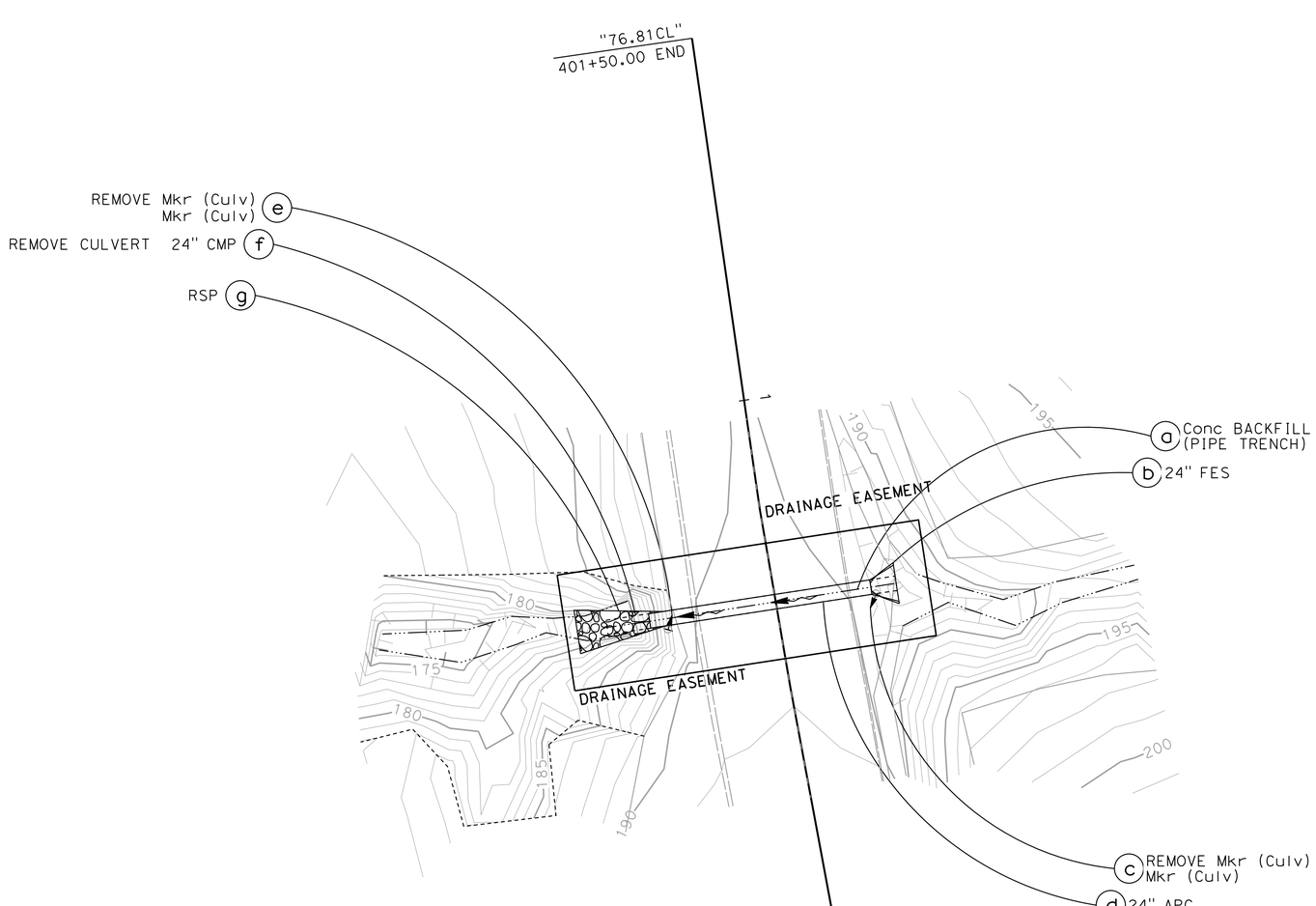
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PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

PRELIMINARY DESIGN FOR REVIEW ONLY



DRAINAGE SYSTEM No. 4

R+e 001 - PM 76.81
"76.81 CL" 100+72.14
SKEW 88°56'59.094"

DRAINAGE PLAN

SCALE: Horiz 1"=10'
Vert 1"=10'

D-4

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN

CALCULATED-DESIGNED BY
CHECKED BY
FUNCTIONAL SUPERVISOR
GARRETT WENDEL
ANDRE GUIMARAES
ANDRE GUIMARAES

REVISED BY
DATE REVISED

LAST REVISION 10/12/23
DATE PLOTTED => 5/10/2024
TIME PLOTTED => 9:55:03 AM

BORDER LAST REVISED 8/5/2020
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DGN FILE => ...\0-Phase\0120000037ia004.dgn
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UNIT 0313
PROJECT NUMBER & PHASE 01200000370

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
1	MEN	001	75.5/84.1		

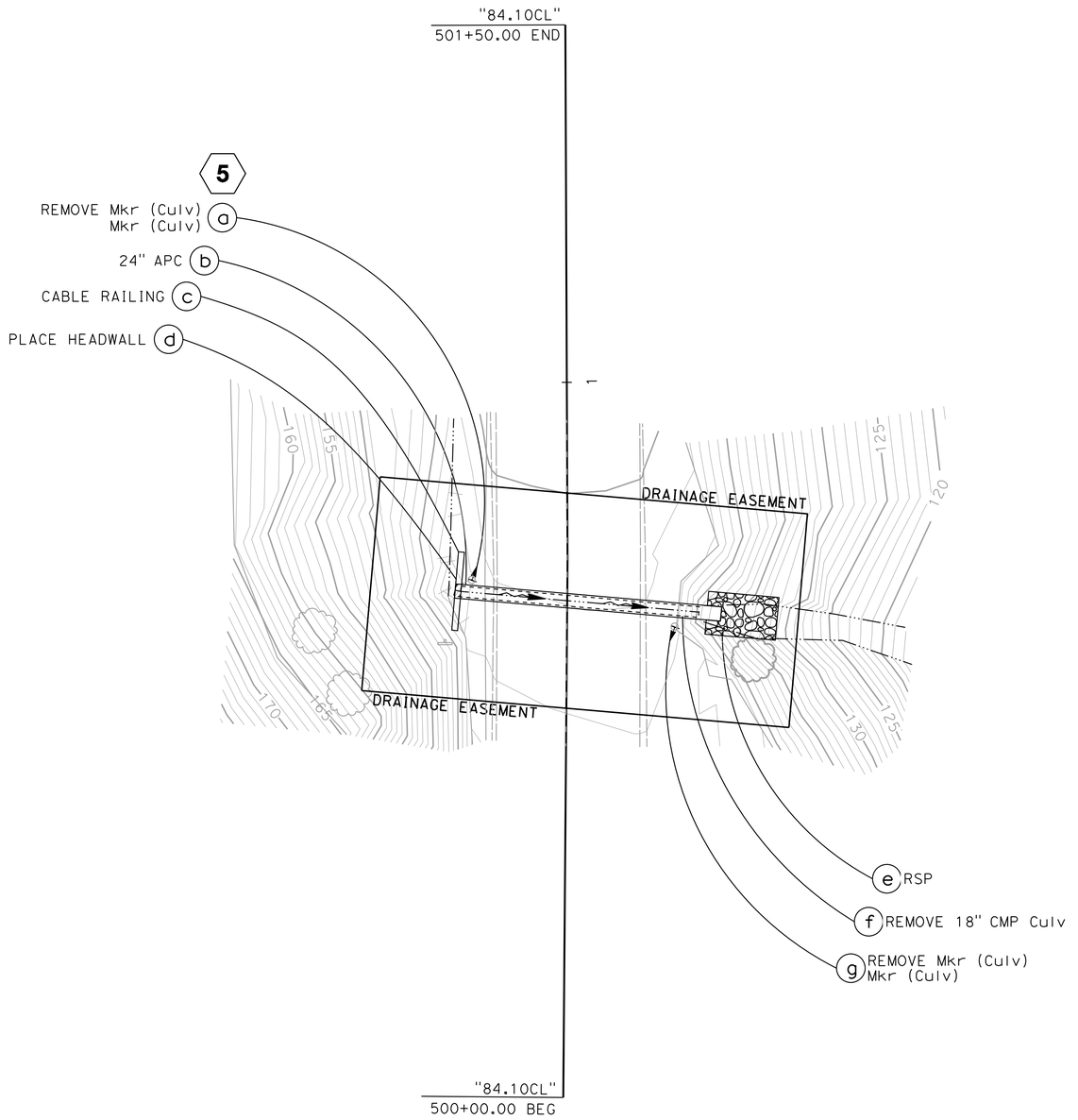
REGISTERED CIVIL ENGINEER _____ DATE _____

PLANS APPROVAL DATE _____

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REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

PRELIMINARY DESIGN FOR REVIEW ONLY



DRAINAGE SYSTEM No. 5

Rte 001 - PM 84.10
"84.10 CL" 100+84.80
SKEW 94°58'11.84"
APPROVED FOR DRAINAGE WORK ONLY

DRAINAGE PLAN

SCALE: Horiz 1"=10'
Vert 1"=10'

D-5

REVISED BY	DATE REVISED
GARRETT WENDEL	ANDRE GUIMARAES

CALCULATED-DESIGNED BY
CHECKED BY

FUNCTIONAL SUPERVISOR: ANDRE GUIMARAES

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN

LAST REVISION 10/12/23
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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
1	MEN	001	75.5/84.1		

REGISTERED CIVIL ENGINEER _____ DATE _____

PLANS APPROVAL DATE _____

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PRELIMINARY DESIGN FOR REVIEW ONLY

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. FOR CABLE ANCHORAGE SYSTEM, SEE DRAINAGE DETAILS.
3. ELBOW DEGREES ARE APPROXIMATE, FIELD VERIFY PRIOR TO ORDERING.

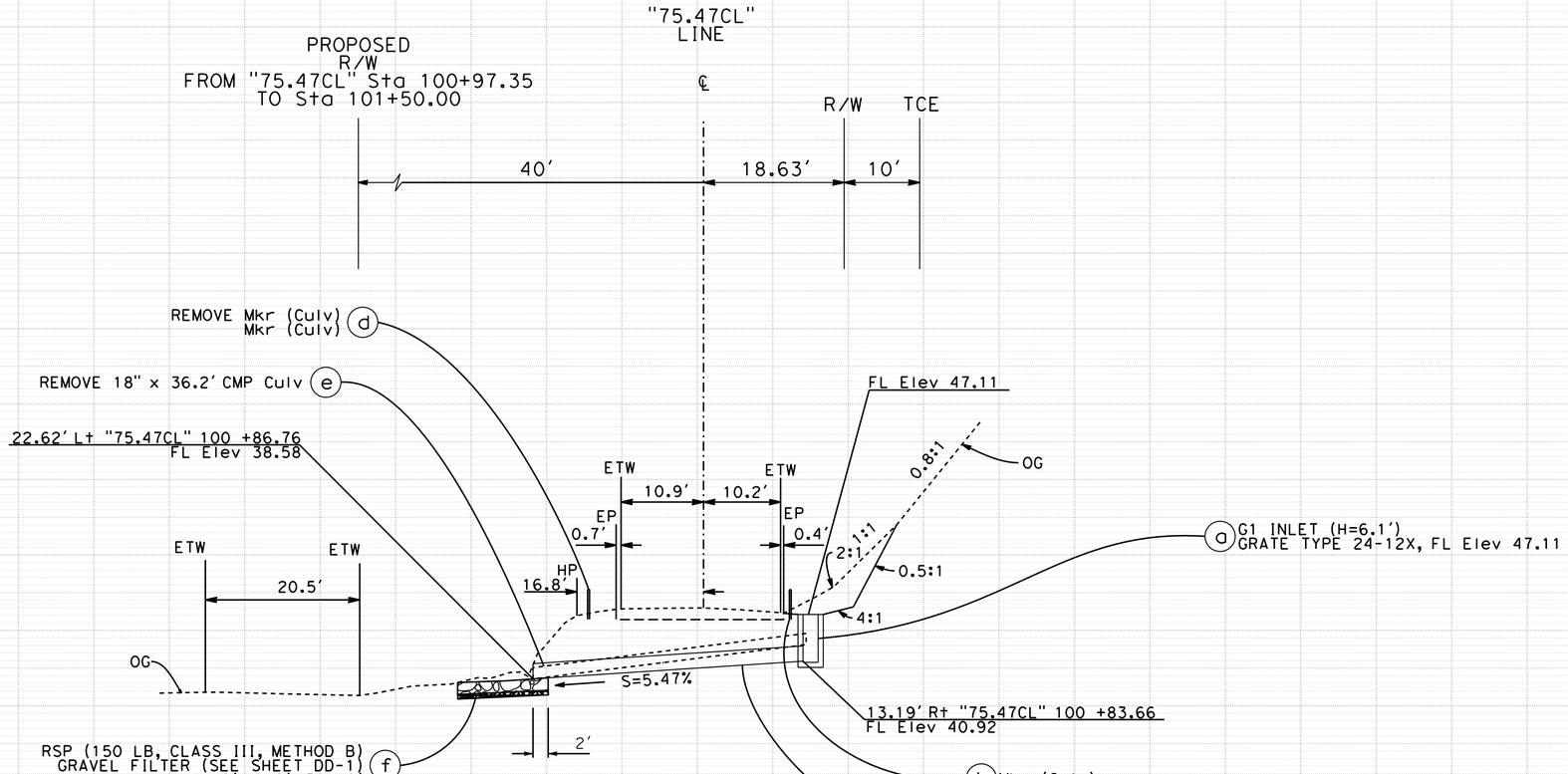
LEGEND:

ROCK SLOPE PROTECTION

ABREVIATIONS:

CSP = CORRUGATED STEEL PIPE

TCE = TEMPORARY CONSTRUCTION EASMENT



DRAINAGE SYSTEM No. 1

PM 75.47

DRAINAGE PROFILE

SCALE: Horiz 1"=10'
Vert 1"=10'

DP-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR: ANDRE GUIMARAES
CALCULATED-DESIGNED BY: GARRETT WENDEL
CHECKED BY: ANDRE GUIMARAES
REVISED BY
DATE REVISED

LAST REVISION | DATE PLOTTED => 5/10/2024
10/12/23 | TIME PLOTTED => 9:55:04 AM

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
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REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

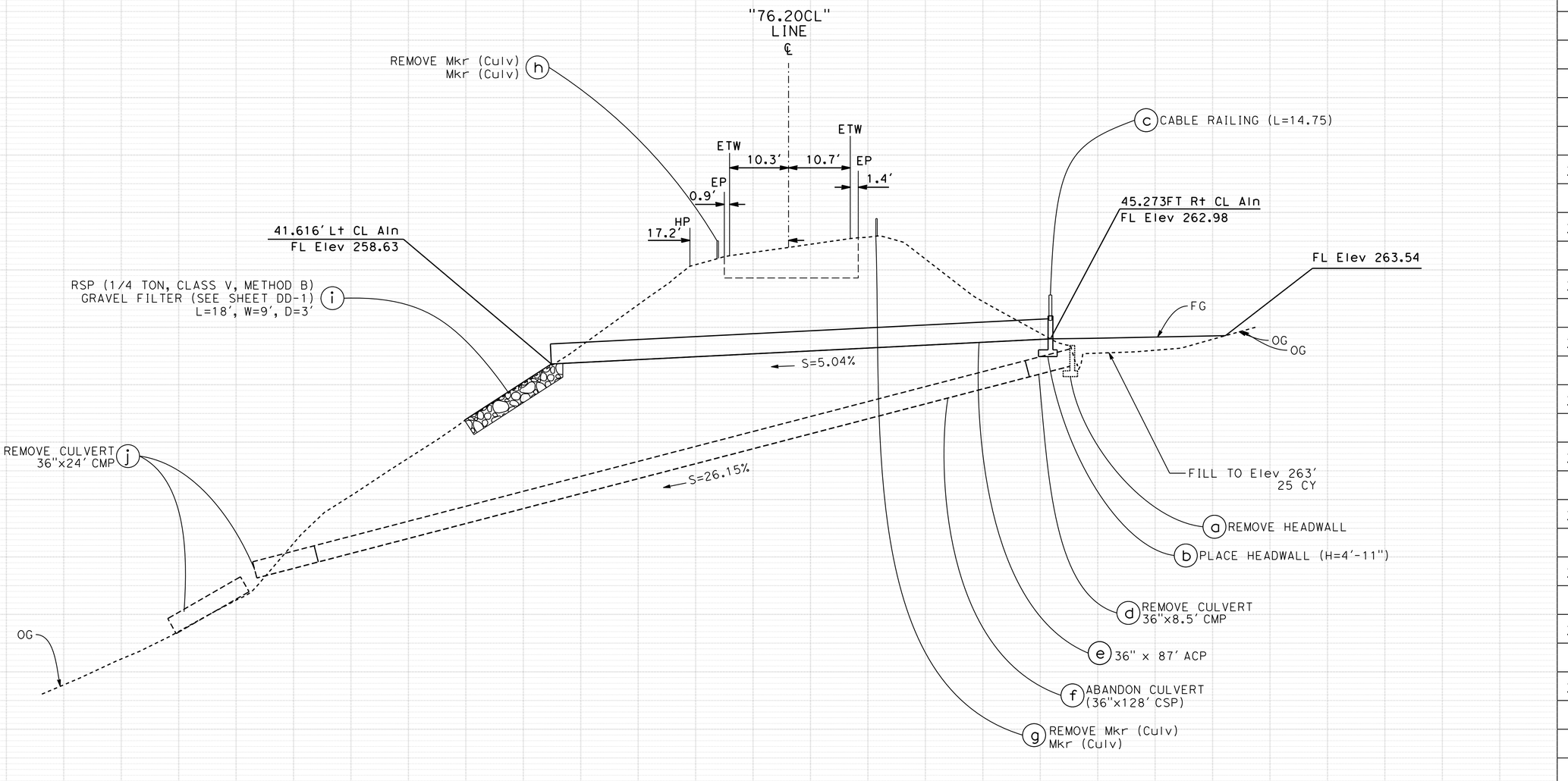
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PRELIMINARY DESIGN FOR REVIEW ONLY

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

LEGEND:

GRADING FILL



DRAINAGE SYSTEM No. 2

Rte 001 - PM 76.20
"76.20 CL" 200+81.35
SKEW 84°20′38.157"
APPROVED FOR DRAINAGE WORK ONLY

DRAINAGE PROFILE

SCALE: Horiz 1"=10′
Vert 1"=10′

DP-2

REVISED BY | DATE REVISED
GARRETT WENDEL | ANDRE GUIMARAES
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR: ANDRE GUIMARAES
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN

LAST REVISION DATE PLOTTED => 5/10/2024
TIME PLOTTED => 9:55:04 AM
10/12/23

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
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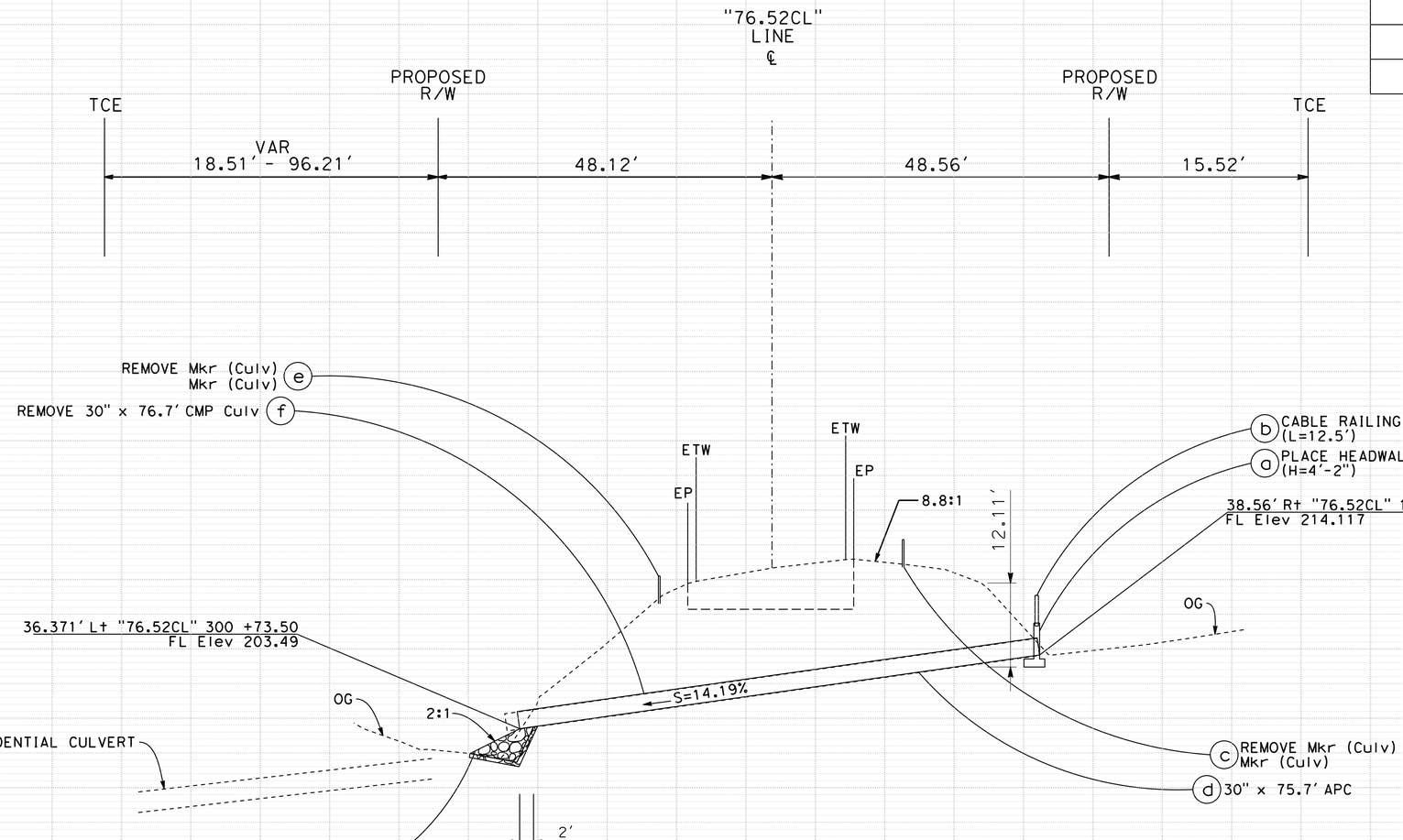
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PLANS APPROVAL DATE

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PRELIMINARY DESIGN FOR REVIEW ONLY

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA



DRAINAGE SYSTEM No. 3

PM 76.52

DRAINAGE PROFILE

SCALE: Horiz 1"=10'
Vert 1"=10'

DP-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR: ANDRE GUIMARAES
CALCULATED-DESIGNED BY: GARRETT WENDEL
CHECKED BY: ANDRE GUIMARAES
REVISED BY
DATE REVISED

LAST REVISION 10/12/23
DATE PLOTTED => 5/10/2024
TIME PLOTTED => 9:55:04 AM

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DGN FILE => ...\0-Phase\0120000037ib003.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 0313
PROJECT NUMBER & PHASE 01200000370

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
1	MEN	001	75.5/84.1		

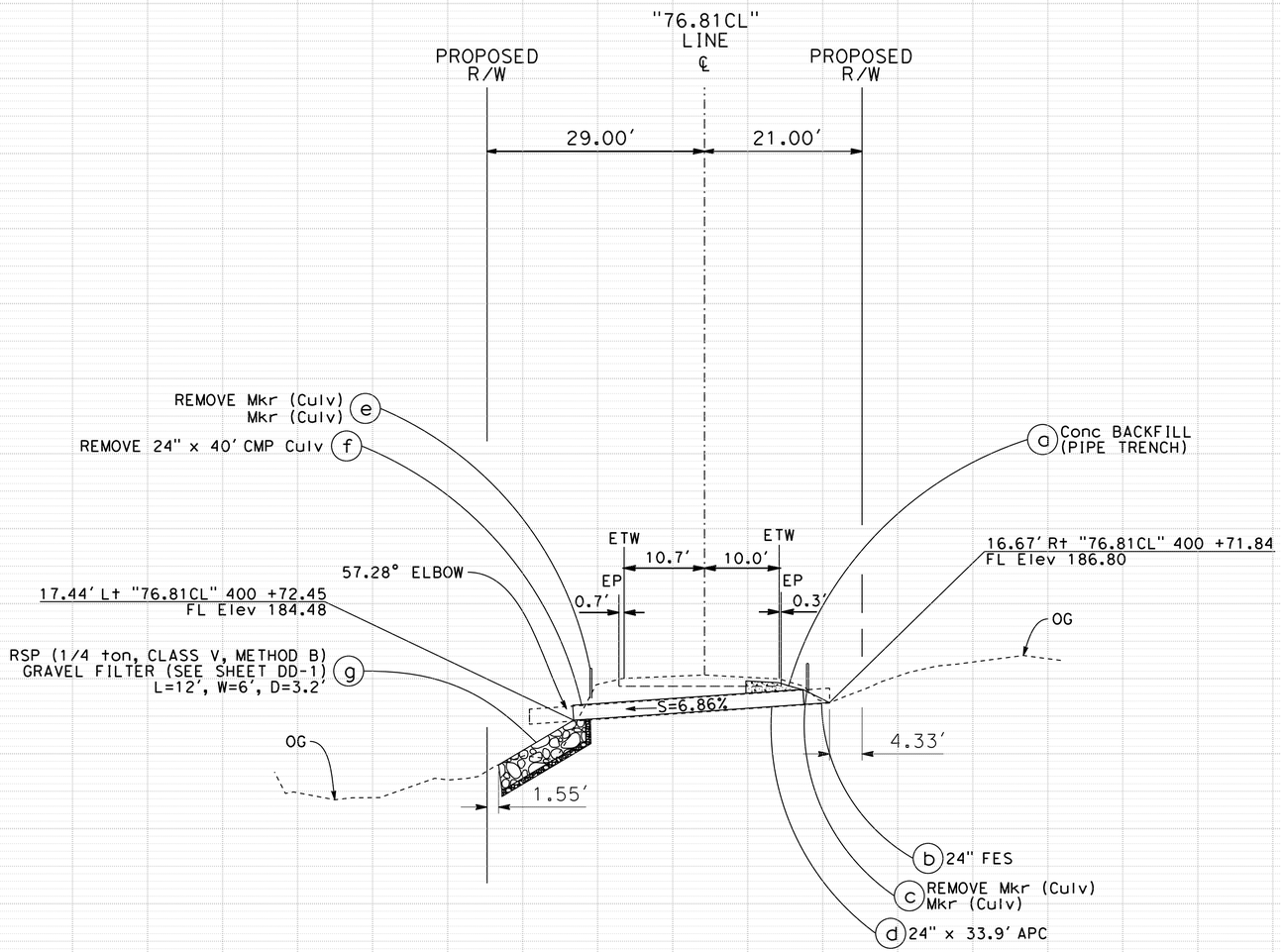
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PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

PRELIMINARY DESIGN FOR REVIEW ONLY



DRAINAGE SYSTEM No. 4

PM 76.81

DRAINAGE PROFILE

SCALE: Horiz 1"=10'
Vert 1"=10'

DP-4

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
Caltrans

CALCULATED-DESIGNED BY
CHECKED BY
GARRETT WENDEL
ANDRE GUIMARAES
FUNCTIONAL SUPERVISOR
ANDRE GUIMARAES
REVISED BY
DATE REVISED

LAST REVISION 10/12/23
DATE PLOTTED => 5/10/2024
TIME PLOTTED => 9:55:05 AM

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DGN FILE => ...\0-Phase\0120000037ib004.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 0313
PROJECT NUMBER & PHASE 01200000370

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
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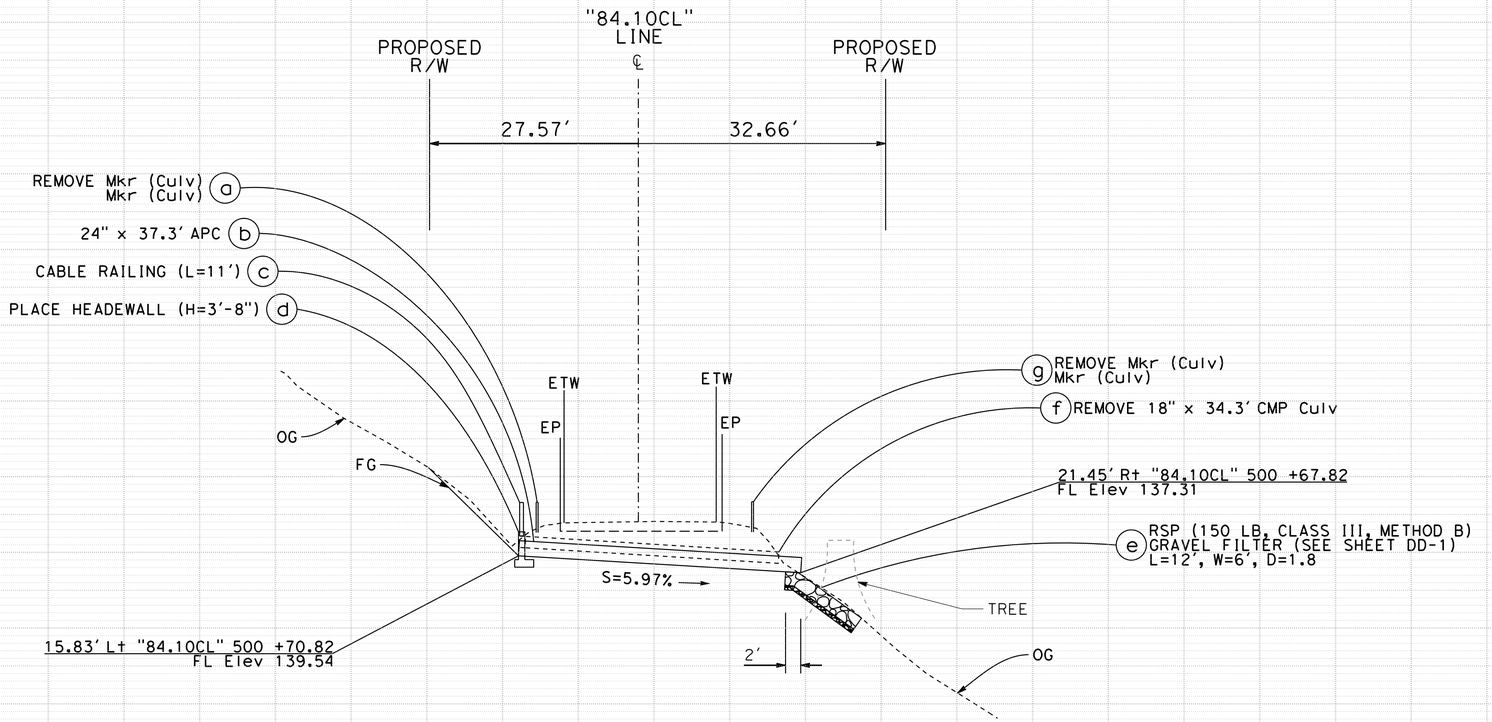
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DRAINAGE SYSTEM No. 5

PM 84.10

DRAINAGE PROFILE

SCALE: Horiz 1"=10'
Vert 1"=10'

DP-5

CALCULATED-DESIGNED BY
CHECKED BY

REVISED BY
DATE REVISED

GARRETT WENDEL
ANDRE GUIMARAES

FUNCTIONAL SUPERVISOR
ANDRE GUIMARAES

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USERNAME =>
DGN FILE => ...\0-Phase\0120000037ib005.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 0313
PROJECT NUMBER & PHASE 01200000370

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET	TOTAL SHEETS
01	MEN	001	75.47/84.[illegible]		

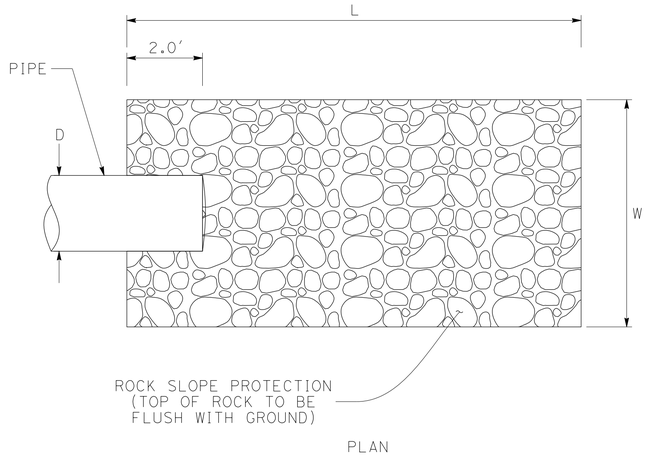
REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

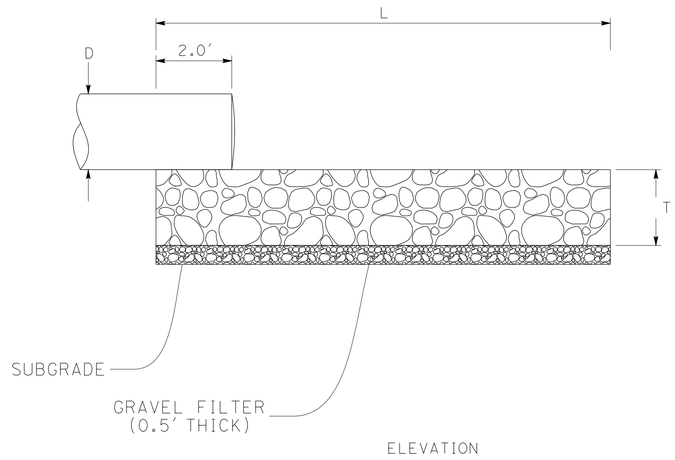
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PLAN



ELEVATION

RSP NOTES

1. PLACE GRAVEL FILTER OVER SUBGRADE.
2. PLACE RSP LAYER AT PROPER THICKNESS OVER GRAVEL FILTER.

ROCK SLOPE PROTECTION

DRAINAGE DETAIL

NO SCALE

DD-1

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FUNCTIONAL SUPERVISOR: ANDRE GUIMARAES
CALCULATED-DESIGNED BY: GARRETT WENDEL
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DATE REVISED

LAST REVISION | DATE PLOTTED => 10-MAY-2024 | 05/09/24 | TIME PLOTTED => 14:42

BORDER LAST REVISED 8/5/2020 | USERNAME => | DGN FILE => 0120000037ic001.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT | PROJECT NUMBER & PHASE

DRAINAGE QUANTITIES

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
01	MEN	001	75.5/84		

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DRAINAGE SHEET No.	DRAINAGE SYSTEM No. ⬡	DRAINAGE UNIT ○	REMOVE HEADWALL	REMOVE CULVERT	ABANDON CULVERT	STRUCTUAL CONCRETE HEADWALL	24" ALTERNATIVE FLARED END SECTION	APC 24"	APC 30"	APC 36"	CONCRETE BACKFILL (PIPE TRENCH)	MISCELLANEOUS IRON AND STEEL	REMOVE MARKER (CULVERT)	MARKER (CULVERT)	ROCK SLOPE PROTECTION (150 LB, CLASS III, METHOD B) (CY)	ROCK SLOPE PROTECTION (1/4 T, CLASS V, METHOD B) (CY)	ROCK SLOPE PROTECTION (1/2 T, CLASS VII, METHOD B) (CY)	GRAVEL FILTER	HEIGHT OF INLET (N)	MAXIMUM COVER (N)	CABLE RAILING	STRUCTURAL CONCRETE, DRAINAGE INLET	DESCRIPTION	DRAINAGE SHEET No.	DRAINAGE SYSTEM No. ⬡	DRAINAGE UNIT ○
			EA	LF	LF	CY	EA	LF	LF	LF	CY	LB	EA	EA	CY	CY	CY	CY	LF	LF	LF	CY				
D-1	1	a										326							6.1			1.6	G1 INLET, GRATE TYPE 24-12X	D-1	1	a
		b											1	1									REMOVE Mkr (Culv), Mkr (Culv)			b
		c						36.4																		c
		d											1	1									REMOVE Mkr (Culv) Mkr (Culv)			d
		e		36.2																			REMOVE 18" x 36.2′ CMP Culv			e
		f													4.3			1.6					RSP (150 LB, CLASS III, METHOD B)			f
D-2	2	a	1																					D-2	2	a
		b				5																	PLACE HEADWALL (H=4′-11")			b
		c																			14.75					c
		d		8.5																						d
		e								87																e
		f			128																					f
		g											1	1									REMOVE Mkr(Culv), Mkr (Culv)			g
		h											1	1									REMOVE Mkr(Culv), Mkr (Culv)			h
		i														18		4					RSP (1/4 T, CLASS V, METHOD B)			i
		j		24																						
D-3	3	a				4																	PLACE HEADWALL (H=4′ 2")	D-3	3	a
		b																			12.5		L=12.5′			b
		c											1	1									REMOVE Mkr (Culv), Mkr (Culv)			c
		d							75.7																	d
		e											1	1									REMOVE Mkr (Culv) MkR (Culv)			e
		f		76.7																						f
		g															13.3	1.9					RSP (1/2 ton, CLASS V, METHOD B)			g
D-4	4	a									2												Conc. BACKFILL (PIPE TRENCH)	D-4	4	a
		b					1																24" FES			b
		c											1	1									REMOVE Mkr (Culv) Mkr (Culv)			c
		d						33.9															24" APC			d
		e											1	1									REMOVE Mkr (Culv) Mkr (Culv)			e
		f		40																						f
		g														8.5		1.8					RSP (1/4 TON, CLASS V, METHOD B)			g
																										h
D-5	5	a											1	1									REMOVE Mkr (Culv) Mkr (Culv)	D-5	5	a
		b						37.3																		b
		c																			11.0		L=11′			c
		d				2.6																	PLACE HEADWALL (H=3′ 8")			d
		e													4.8			1.6					RSP (150 LB, CLASS III, METHOD B)			e
		f		34.3																						f
		g											1	1									REMOVE Mkr (culv) Mkr (Culv)			g
			1	220	128	11.6	1	108	76	87	2	326	10	10	9.1	26.5	13.3	10.9			49.25	1.6	GRAND TOTAL			

(N) - NOT A SEPARATE BID ITEM

DRAINAGE QUANTITIES
DQ-1

LAST REVISION 01-16-24 | DATE PLOTTED => 5/10/2024 TIME PLOTTED => 9:55:06 AM

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DESIGN
FUNCTIONAL SUPERVISOR: ANDRE GUIMARAES
CALCULATED-DESIGNED BY: GARRETT WENDEL
CHECKED BY: ANDRE GUIMARAES
REVISED BY
DATE REVISED

BORDER LAST REVISED 8/5/2020 | USERNAME => DGN FILE => ...\0-Phase\0120000037id001.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | 08/13 | PROJECT NUMBER & PHASE 0120000037

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET TOTAL SHEETS
01	MEN	001	75.5/84	

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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DRAINAGE QUANTITIES

ALLOWABLE CULVERT ALTERNATIVES

SYSTEM No.	DRAINAGE UNIT	CSP									PLASTIC			RCP	WSP
		.138" THICK (POLY COATED)	.138" THICK	.168" THICK							CORRUGATED HDPE TYPE S	CORRUGATED PVC PIPE	DUAL WALL POLYPRO-PYLENE PIPE		
1	c														
2	d														
3	d					X				X	X	X	X	X	
4	e			X					X		X	X	X	X	
5	b			X					X		X	X	X	X	

(N) - NOT A SEPARATE BID ITEM

DRAINAGE QUANTITIES
DQ-2

REVISED BY	GARRETT WENDEL
DATE REVISED	ANDRE GUIJMARAES
CALCULATED-DESIGNED BY	
CHECKED BY	
FUNCTIONAL SUPERVISOR	ANDRE GUIMARAES

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DATE PLOTTED => 5/10/2024
TIME PLOTTED => 9:55:07 AM

BORDER LAST REVISED 8/5/2020
USERNAME =>
DGN FILE => ...\0-Phase\0120000037id002.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 0313
PROJECT NUMBER & PHASE 0120000037

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
1	MEN	001	75.5/84.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

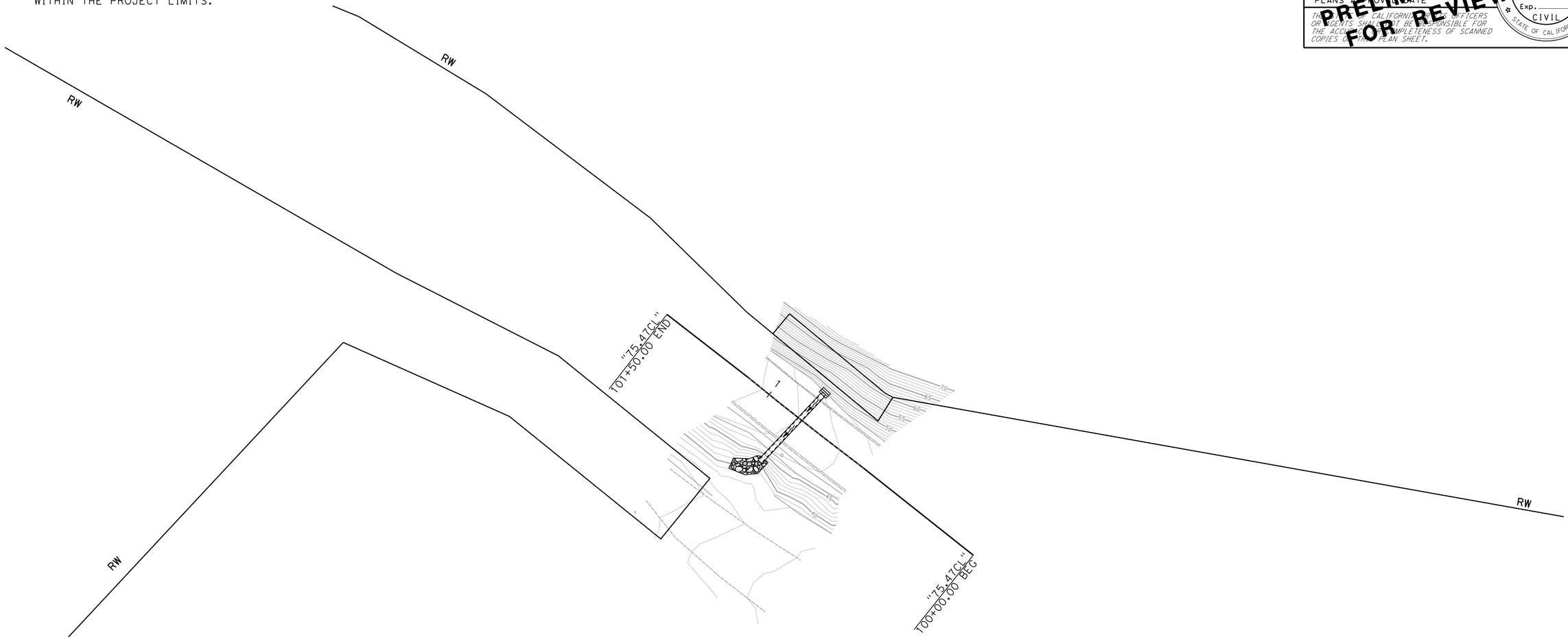
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2. A UTILITY INVESTIGATION WAS COMPLETED AND NO UTILITIES WERE FOUND WITHIN THE PROJECT LIMITS.



THIS PLAN TO BE USED FOR UTILITY INFORMATION ONLY

UTILITY PLAN

SCALE: 1" = 20'

U-1

REVISED BY	
DATE REVISED	
CALCULATED-DESIGNED BY	GARRETT WENDEL
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FUNCTIONAL SUPERVISOR	ANDRE GUIMARAES

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
1	MEN	001	75.5/84.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

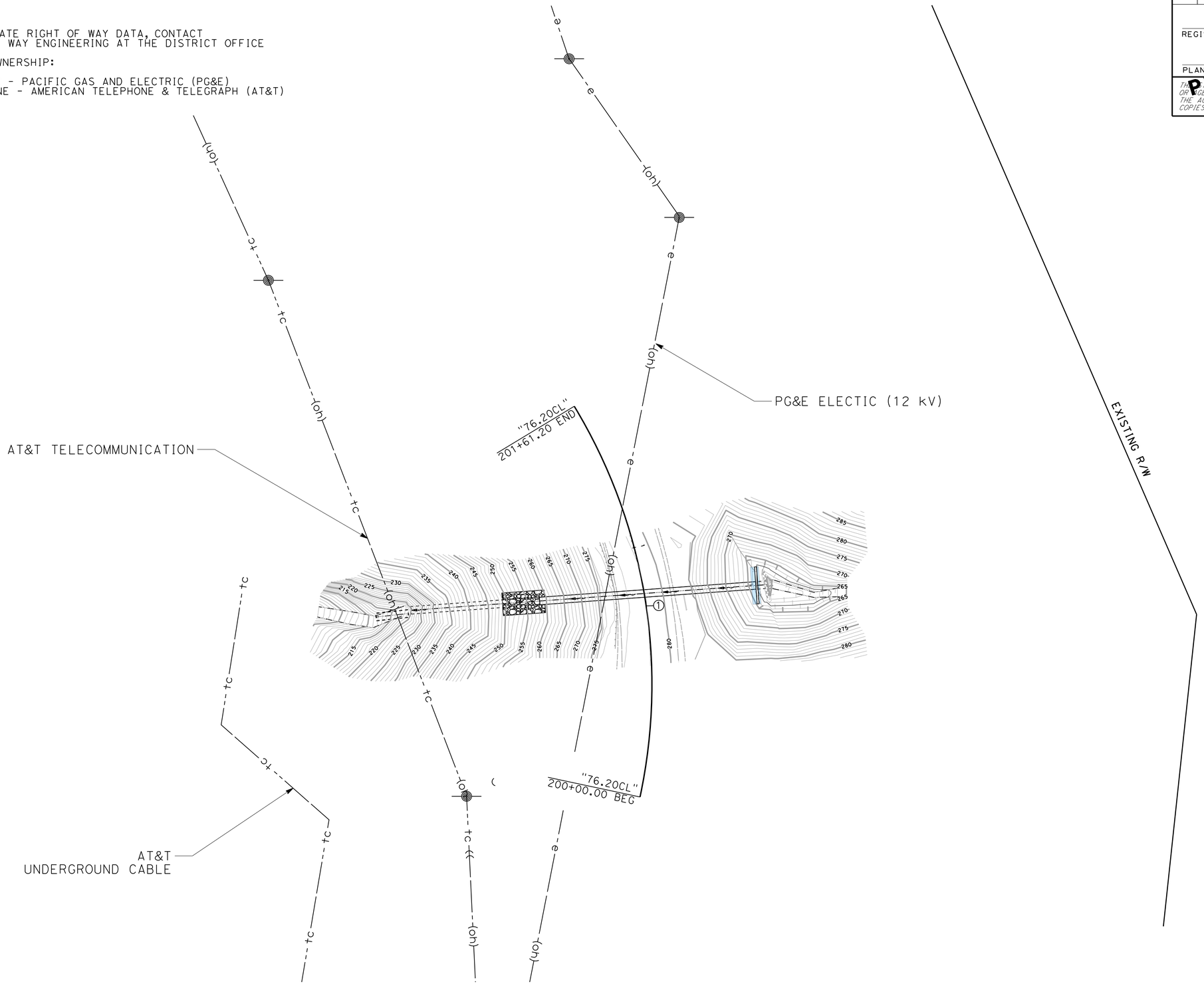
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   ELECTRIC - PACIFIC GAS AND ELECTRIC (PG&E)
   TELEPHONE - AMERICAN TELEPHONE & TELEGRAPH (AT&T)



THIS PLAN TO BE USED FOR UTILITY INFORMATION ONLY

UTILITY PLAN

SCALE: 1" = 20'

U-2

REVISED BY	GARRETT WENDEL
DATE REVISED	
CALCULATED-DESIGNED BY	
CHECKED BY	
FUNCTIONAL SUPERVISOR	ANDRE GUIMARAES
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
1	MEN	001	75.5/84.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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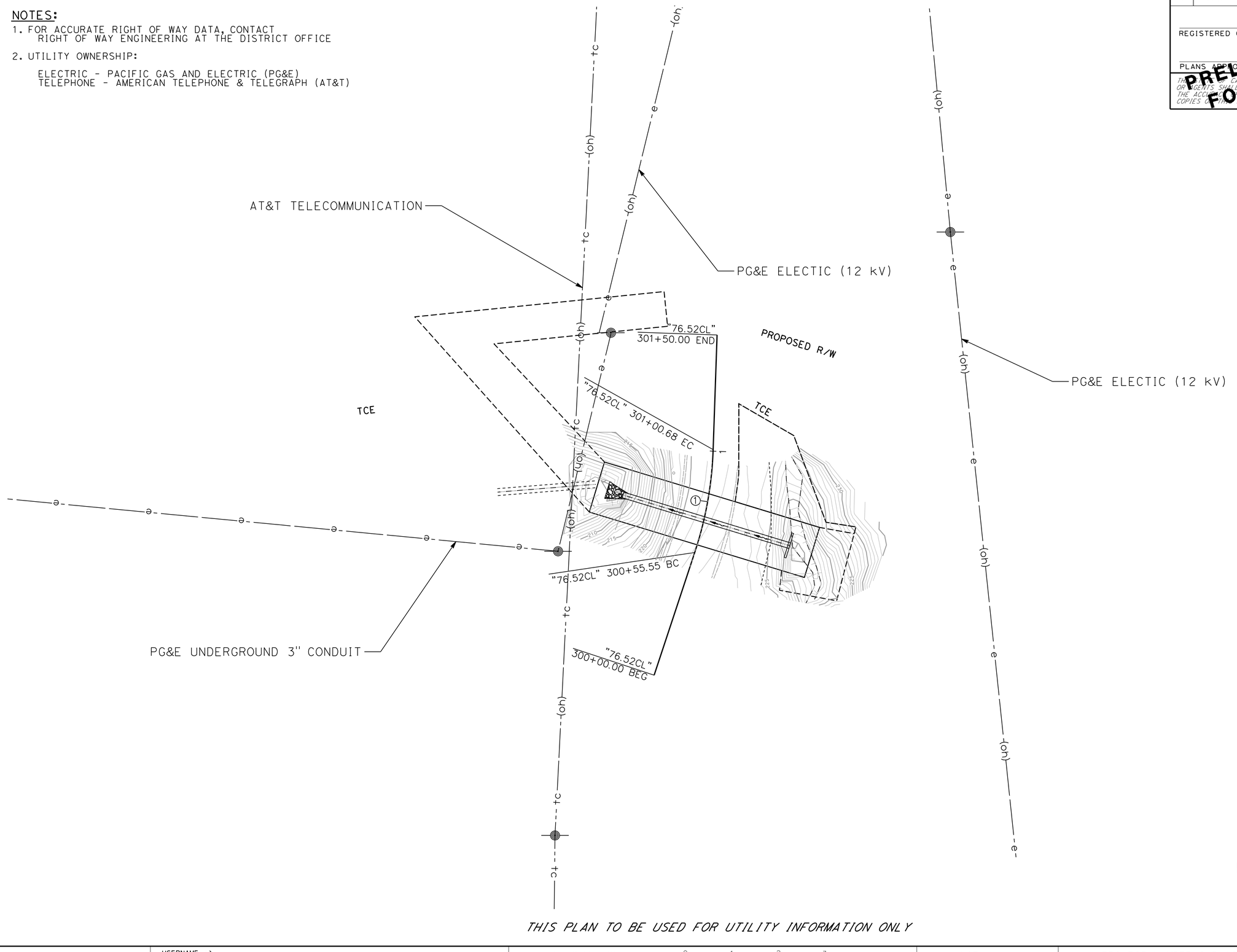
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UTILITY PLAN

SCALE: 1" = 20'

U-3

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CHECKED BY

FUNCTIONAL SUPERVISOR: ANDRE GUIMARAES

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
1	MEN	001	75.5/84.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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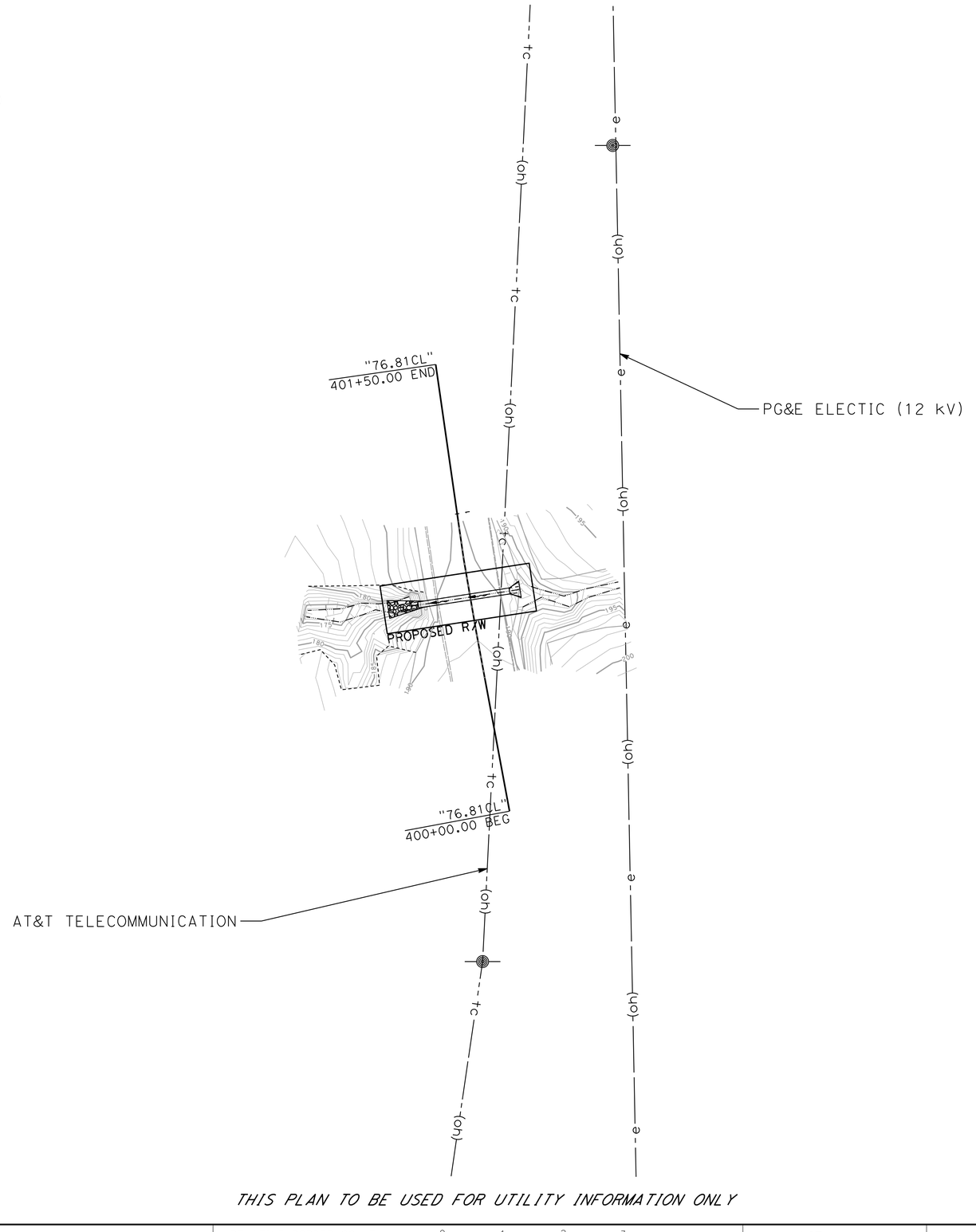
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UTILITY PLAN

SCALE: 1" = 20'

U-4

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REVISED BY	GARRETT WENDEL
DATE REVISED	
FUNCTIONAL SUPERVISOR	ANDRE GUIMARAES

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
1	MEN	001	75.5/84.1		

REGISTERED CIVIL ENGINEER _____ DATE _____

PLANS APPROVAL DATE _____

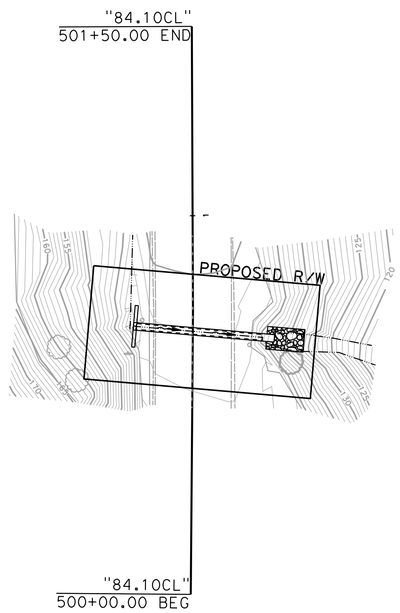
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UTILITY PLAN

SCALE: 1" = 20'

U-5

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FUNCTIONAL SUPERVISOR: ANDRE GUIMARAES

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RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0313

PROJECT NUMBER & PHASE 01200000370



Appendix B. Title VI Policy Statement



California Department of Transportation

OFFICE OF THE DIRECTOR
P.O. BOX 942873, MS–49 | SACRAMENTO, CA 94273–0001
(916) 654-6130 | FAX (916) 653-5776 TTY 711
www.dot.ca.gov

September 2023

NON-DISCRIMINATION POLICY STATEMENT

The California Department of Transportation, under Title VI of the Civil Rights Act of 1964, ensures "*No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance.*"

Caltrans will make every effort to ensure nondiscrimination in all of its services, programs and activities, whether they are federally funded or not, and that services and benefits are fairly distributed to all people, regardless of race, color, or national origin. In addition, Caltrans will facilitate meaningful participation in the transportation planning process in a non-discriminatory manner.

Related federal statutes, remedies, and state law further those protections to include sex, disability, religion, sexual orientation, and age.

For information or guidance on how to file a complaint, or obtain more information regarding Title VI, please contact the Title VI Branch Manager at (916) 639-6392 or visit the following web page: https://dot.ca.gov/programs/civil-rights/title-vi.

To obtain this information in an alternate format such as Braille or in a language other than English, please contact the California Department of Transportation, Office of Civil Rights, at PO Box 942874, MS-79, Sacramento, CA 94274-0001; (916) 879-6768 (TTY 711); or at Title.VI@dot.ca.gov.

TONY TAVARES
Director



Appendix C. USFWS, NMFS, CDFW-CNDDB, and CNPS Species Lists



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Arcata Fish And Wildlife Office
1655 Heindon Road
Arcata, CA 95521-4573
Phone: (707) 822-7201 Fax: (707) 822-8411

In Reply Refer To: 07/01/2024 20:21:34 UTC
Project Code: 2023-0081728
Project Name: Westport Culverts

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed, and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through IPaC by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological

evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at: https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see Migratory Bird Permit | What We Do | U.S. Fish & Wildlife Service (fws.gov).

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see https://www.fws.gov/library/collections/threats-birds.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/partner/council-conservation-migratory-birds.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Arcata Fish And Wildlife Office
1655 Heindon Road
Arcata, CA 95521-4573
(707) 822-7201

PROJECT SUMMARY

Project Code: 2023-0081728
Project Name: Westport Culverts
Project Type: Culvert Repair/Replacement/Maintenance
Project Description: Culvert repair project near Westport and Hardy on the northern coast of Mendocino County

Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@39.670117250000004,-123.7899396841338,14z



Counties: Mendocino County, California

ENDANGERED SPECIES ACT SPECIES

There is a total of 16 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

BIRDS

NAME	STATUS
Hawaiian Petrel *Pterodroma sandwichensis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6746	Endangered
Marbled Murrelet *Brachyramphus marmoratus* Population: U.S.A. (CA, OR, WA) There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/4467	Threatened
Northern Spotted Owl *Strix occidentalis caurina* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1123	Threatened
Western Snowy Plover *Charadrius nivosus nivosus* Population: Pacific Coast population DPS-U.S.A. (CA, OR, WA), Mexico (within 50 miles of Pacific coast) There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8035	Threatened
Yellow-billed Cuckoo *Coccyzus americanus* Population: Western U.S. DPS There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3911	Threatened

REPTILES

NAME	STATUS
Green Sea Turtle *Chelonia mydas* Population: East Pacific DPS No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6199	Threatened
Leatherback Sea Turtle *Dermochelys coriacea* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1493	Endangered
Northwestern Pond Turtle *Actinemys marmorata* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1111	Proposed Threatened

FISHES

NAME	STATUS
Tidewater Goby *Eucyclogobius newberryi* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/57	Endangered

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

FLOWERING PLANTS

NAME	STATUS
Burke's Goldfields *Lasthenia burkei* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4338	Endangered
Contra Costa Goldfields *Lasthenia conjugens* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/7058	Endangered
Lassics Lupine *Lupinus constancei* Population: There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/7976	Endangered
Marsh Sandwort *Arenaria paludicola* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2229	Endangered
Monterey Clover *Trifolium trichocalyx* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4282	Endangered
Showy Indian Clover *Trifolium amoenum* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6459	Endangered

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

IPAC USER CONTACT INFORMATION

Agency: California Department of Transportation District 1
Name: Tracy Walker
Address: 1656 Union St
City: Eureka
State: CA
Zip: 95501
Email tracy.walker@dot.ca.gov
Phone: 7078156503

Quad Name **Westport**
Quad Number **39123-F7**

ESA Anadromous Fish

SONCC Coho ESU (T) - **X**
CCC Coho ESU (E) - **X**
CC Chinook Salmon ESU (T) - **X**
CVSR Chinook Salmon ESU (T) -
SRWR Chinook Salmon ESU (E) -
NC Steelhead DPS (T) - **X**
CCC Steelhead DPS (T) -
SCCC Steelhead DPS (T) -
SC Steelhead DPS (E) -
CCV Steelhead DPS (T) -
Eulachon (T) -
sDPS Green Sturgeon (T) - **X**

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat - **X**
CCC Coho Critical Habitat - **X**
CC Chinook Salmon Critical Habitat - **X**
CVSR Chinook Salmon Critical Habitat -
SRWR Chinook Salmon Critical Habitat -
NC Steelhead Critical Habitat - **X**
CCC Steelhead Critical Habitat -
SCCC Steelhead Critical Habitat -
SC Steelhead Critical Habitat -
CCV Steelhead Critical Habitat -
Eulachon Critical Habitat -
sDPS Green Sturgeon Critical Habitat - **X**

ESA Marine Invertebrates

Range Black Abalone (E) -
Range White Abalone (E) -

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

ESA Sea Turtles

East Pacific Green Sea Turtle (T) - X
Olive Ridley Sea Turtle (T/E) - X
Leatherback Sea Turtle (E) - X
North Pacific Loggerhead Sea Turtle (E) -

ESA Whales

Blue Whale (E) - X
Fin Whale (E) - X
Humpback Whale (E) - X
Southern Resident Killer Whale (E) - X
North Pacific Right Whale (E) - X
Sei Whale (E) - X
Sperm Whale (E) - X

ESA Pinnipeds

Guadalupe Fur Seal (T) - X
Steller Sea Lion Critical Habitat -

Essential Fish Habitat

Coho EFH - X
Chinook Salmon EFH - X
Groundfish EFH - X
Coastal Pelagics EFH - X
Highly Migratory Species EFH - X

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds

See list at left and consult the NMFS Long Beach office 562-980-4000

MMPA Cetaceans - **X**

MMPA Pinnipeds - **X**

Quad Name **Inglenook**
Quad Number **39123-E7**

ESA Anadromous Fish

SONCC Coho ESU (T) -
CCC Coho ESU (E) - **X**
CC Chinook Salmon ESU (T) - **X**
CVSR Chinook Salmon ESU (T) -
SRWR Chinook Salmon ESU (E) -
NC Steelhead DPS (T) - **X**
CCC Steelhead DPS (T) -
SCCC Steelhead DPS (T) -
SC Steelhead DPS (E) -
CCV Steelhead DPS (T) -
Eulachon (T) -
sDPS Green Sturgeon (T) - **X**

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat -
CCC Coho Critical Habitat - **X**
CC Chinook Salmon Critical Habitat - **X**
CVSR Chinook Salmon Critical Habitat -
SRWR Chinook Salmon Critical Habitat -
NC Steelhead Critical Habitat - **X**
CCC Steelhead Critical Habitat -
SCCC Steelhead Critical Habitat -
SC Steelhead Critical Habitat -
CCV Steelhead Critical Habitat -
Eulachon Critical Habitat -
sDPS Green Sturgeon Critical Habitat - **X**

ESA Marine Invertebrates

Range Black Abalone (E) -
Range White Abalone (E) -

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

ESA Sea Turtles

East Pacific Green Sea Turtle (T) - X
Olive Ridley Sea Turtle (T/E) - X
Leatherback Sea Turtle (E) - X
North Pacific Loggerhead Sea Turtle (E) -

ESA Whales

Blue Whale (E) - X
Fin Whale (E) - X
Humpback Whale (E) - X
Southern Resident Killer Whale (E) - X
North Pacific Right Whale (E) - X
Sei Whale (E) - X
Sperm Whale (E) - X

ESA Pinnipeds

Guadalupe Fur Seal (T) - X
Steller Sea Lion Critical Habitat -

Essential Fish Habitat

Coho EFH - X
Chinook Salmon EFH - X
Groundfish EFH - X
Coastal Pelagics EFH - X
Highly Migratory Species EFH - X

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds

See list at left and consult the NMFS Long Beach office 562-980-4000

MMPA Cetaceans - **X**

MMPA Pinnipeds - **X**

Selected Elements by Common Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Noyo Hill (3912346) OR Westport (3912367) OR Inglenook (3912357) OR Fort Bragg (3912347) OR Mistake Point (3912378) OR Dutchmans Knoll (3912356) OR Leggett (3912376) OR Hales Grove (3912377) OR Lincoln Ridge (3912366))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
alpine marsh violet *Viola palustris*	PDVIO041G0	None	None	G5	S1S2	2B.2
American goshawk *Accipiter atricapillus*	ABNKC12061	None	None	G5	S3	SSC
angel's hair lichen *Ramalina thrausta*	NLLEC3S340	None	None	G5?	S2S3	2B.1
Baker's goldfields *Lasthenia californica ssp. bakeri*	PDAST5L0C4	None	None	G3T1	S1	1B.2
Blasdale's bent grass *Agrostis blasdalei*	PMPOA04060	None	None	G2G3	S2	1B.2
bluff wallflower *Erysimum concinnum*	PDBRA160E3	None	None	G3	S2	1B.2
Bolander's beach pine *Pinus contorta ssp. bolanderi*	PGPIN04081	None	None	G5T2	S2	1B.2
Bolander's catchfly *Silene bolanderi*	PDCAR0U2L0	None	None	G2	S2	1B.2
bunchberry *Cornus unalaschkensis*	PDCOR010F0	None	None	G5	S2	2B.2
California floater *Anodonta californiensis*	IMBIV04220	None	None	G3	S2?	
California sedge *Carex californica*	PMCYP032D0	None	None	G5	S2	2B.2
coast fawn lily *Erythronium revolutum*	PMLIL0U0F0	None	None	G4G5	S3	2B.2
coast lily *Lilium maritimum*	PMLIL1A0C0	None	None	G2	S2	1B.1
Coastal and Valley Freshwater Marsh *Coastal and Valley Freshwater Marsh*	CTT52410CA	None	None	G3	S2.1	
coastal bluff morning-glory *Calystegia purpurata ssp. saxicola*	PDCON040D2	None	None	G4T2T3	S2S3	1B.2
Coastal Brackish Marsh *Coastal Brackish Marsh*	CTT52200CA	None	None	G2	S2.1	
coastal triquetrella *Triquetrella californica*	NBMUS7S010	None	None	G2	S2	1B.2
coho salmon - central California coast ESU *Oncorhynchus kisutch pop. 4*	AFCHA02034	Endangered	Endangered	G5T2Q	S2	

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
congested-headed hayfield tarplant *Hemizonia congesta ssp. congesta*	PDAST4R0W1	None	None	G5T2	S2	1B.2
Crotch's bumble bee *Bombus crotchii*	IIHYM24480	None	Candidate Endangered	G2	S2	
dark-eyed gilia *Gilia millefoliata*	PDPLM04130	None	None	G2	S2	1B.2
deceiving sedge *Carex saliniformis*	PMCYP03BY0	None	None	G2	S2	1B.2
dwarf alkali grass *Puccinellia pumila*	PMPOA531L0	None	None	G5	SH	2B.2
Fen *Fen*	CTT51200CA	None	None	G2	S1.2	
Fisher *Pekania pennanti*	AMAJF01020	None	None	G5	S2S3	SSC
foothill yellow-legged frog - north coast DPS *Rana boylii pop. 1*	AAABH01051	None	None	G3T4	S4	SSC
globose dune beetle *Coelus globosus*	IICOL4A010	None	None	G1G2	S1S2	
Grand Fir Forest *Grand Fir Forest*	CTT82120CA	None	None	G1	S1.1	
great blue heron *Ardea herodias*	ABNGA04010	None	None	G5	S4	
great burnet *Sanguisorba officinalis*	PDROS1L060	None	None	G5?	S2	2B.2
green yellow sedge *Carex viridula ssp. viridula*	PMCYP03EM5	None	None	G5T5	S2	2B.3
hair-leaved rush *Juncus supiniformis*	PMJUN012R0	None	None	G5	S1	2B.2
hoary bat *Lasiurus cinereus*	AMACC05032	None	None	G3G4	S4	
Howell's spineflower *Chorizanthe howellii*	PDPGN040C0	Endangered	Threatened	G1	S1	1B.2
Humboldt County milk-vetch *Astragalus agnicidus*	PDFAB0F080	None	Endangered	G2	S2	1B.1
Kellogg's buckwheat *Eriogonum kelloggii*	PDPGN083A0	None	Endangered	G2	S2	1B.2
lagoon sedge *Carex lenticularis var. limnophila*	PMCYP037A7	None	None	G5T5	S1	2B.2
leafy reed grass *Calamagrostis foliosa*	PMPOA170C0	None	Rare	G3	S3	4.2
leafy-stemmed mitrewort *Mitellastra caulescens*	PDSAX0N020	None	None	G5	S4	4.2

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Lyngbye's sedge *Carex lyngbyei*	PMCYP037Y0	None	None	G5	S3	2B.2
maple-leaved checkerbloom *Sidalcea malachroides*	PDMAL110E0	None	None	G3	S3	4.2
Mendocino Coast paintbrush *Castilleja mendocinensis*	PDSCR0D3N0	None	None	G2	S2	1B.2
Mendocino dodder *Cuscuta pacifica var. papillata*	PDCUS011A2	None	None	G5T1	S1	1B.2
Mendocino Pygmy Cypress Forest *Mendocino Pygmy Cypress Forest*	CTT83161CA	None	None	G2	S2.1	
Menzies' wallflower *Erysimum menziesii*	PDBRA160R0	Endangered	Endangered	G1	S1	1B.1
Methuselah's beard lichen *Usnea longissima*	NLLEC5P420	None	None	G4	S4	4.2
North American porcupine *Erethizon dorsatum*	AMAFJ01010	None	None	G5	S3	
North Central Coast Fall-Run Steelhead Stream *North Central Coast Fall-Run Steelhead Stream*	CARA2631CA	None	None	GNR	SNR	
North Coast phacelia *Phacelia insularis var. continentis*	PDHYD0C2B1	None	None	G2T2	S2	1B.2
Northern Coastal Salt Marsh *Northern Coastal Salt Marsh*	CTT52110CA	None	None	G3	S3.2	
northern red-legged frog *Rana aurora*	AAABH01021	None	None	G4	S3	SSC
obscure bumble bee *Bombus caliginosus*	IIHYM24380	None	None	G2G3	S1S2	
Oregon coast paintbrush *Castilleja litoralis*	PDSCR0D012	None	None	G3	S3	2B.2
Oregon goldthread *Coptis laciniata*	PDRAN0A020	None	None	G4?	S3?	4.2
oval-leaved viburnum *Viburnum ellipticum*	PDCPR07080	None	None	G4G5	S3	2B.3
Pacific gilia *Gilia capitata ssp. pacifica*	PDPLM040B6	None	None	G5T3	S3	1B.2
Pacific lamprey *Entosphenus tridentatus*	AFBAA02100	None	None	G4	S3	SSC
Pacific tailed frog *Ascaphus truei*	AAABA01010	None	None	G4	S3S4	SSC
perennial goldfields *Lasthenia californica ssp. macrantha*	PDAST5L0C5	None	None	G3T2	S2	1B.2
pink sand-verbena *Abronia umbellata var. breviflora*	PDNYC010N4	None	None	G4G5T2	S2	1B.1

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Point Reyes blennosperma *Blennosperma nanum var. robustum*	PDAST1A022	None	Rare	G4T2	S2	1B.2
Point Reyes horkelia *Horkelia marinensis*	PDROS0W0B0	None	None	G2	S2	1B.2
purple martin *Progne subis*	ABPAU01010	None	None	G5	S3	SSC
purple-stemmed checkerbloom *Sidalcea malviflora ssp. purpurea*	PDMAL110FL	None	None	G5T1	S1	1B.2
pygmy cypress *Hesperocyparis pygmaea*	PGCUP04032	None	None	G1	S1	1B.2
pygmy manzanita *Arctostaphylos nummularia ssp. mendocinoensis*	PDERI04280	None	None	G3?T1	S1	1B.2
Raiche's manzanita *Arctostaphylos stanfordiana ssp. raichei*	PDERI041G2	None	None	G3T2	S2	1B.1
Red Mountain catchfly *Silene greenei ssp. angustifolia*	PDCAR0U0A2	None	Endangered	G5T1	S1	1B.2
red-bellied newt *Taricha rivularis*	AAAAF02020	None	None	G2	S2	SSC
robust false lupine *Thermopsis robusta*	PDFAB3Z0D0	None	None	G2	S2	1B.2
round-headed collinsia *Collinsia corymbosa*	PDSCR0H060	None	None	G1	S1	1B.2
running-pine *Lycopodium clavatum*	PPLYC01080	None	None	G5	S3	4.1
seacoast ragwort *Packera bolanderi var. bolanderi*	PDAST8H0H1	None	None	G4T4	S2S3	2B.2
seaside bittercress *Cardamine angulata*	PDBRA0K010	None	None	G4G5	S3	2B.1
short-leaved evax *Hesperevax sparsiflora var. brevifolia*	PDASTE5011	None	None	G4T3	S3	1B.2
Sonoma tree vole *Arborimus pomo*	AMAFF23030	None	None	G3	S3	SSC
southern torrent salamander *Rhyacotriton variegatus*	AAAAJ01020	None	None	G3?	S2S3	SSC
Sphagnum Bog *Sphagnum Bog*	CTT51110CA	None	None	G3	S1.2	
steelhead - northern California DPS summer-run *Oncorhynchus mykiss irideus pop. 48*	AFCHA0213P	Threatened	Endangered	G5T2Q	S2	
steelhead - northern California DPS winter-run *Oncorhynchus mykiss irideus pop. 49*	AFCHA0213Q	Threatened	None	G5T3Q	S3	SSC
Steller sea lion *Eumetopias jubatus*	AMAJC03010	Delisted	None	G3	S2	

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
swamp harebell *Eastwoodiella californica*	PDCAM02060	None	None	G3	S3	1B.2
Ten Mile shoulderband *Noyo intersessa*	IMGASC5070	None	None	G2	S1S2	
Thurber's reed grass *Calamagrostis crassiglumis*	PMPOA17070	None	None	G3Q	S2	2B.1
tidewater goby *Eucyclogobius newberryi*	AFCQN04010	Endangered	None	G3	S3	SSC
Townsend's big-eared bat *Corynorhinus townsendii*	AMACC08010	None	None	G4	S2	SSC
Upland Douglas Fir Forest *Upland Douglas Fir Forest*	CTT82420CA	None	None	G4	S3.1	
Vine Hill ceanothus *Ceanothus foliosus var. vineatus*	PDRHA040D6	None	None	G3T1	S1	1B.1
Wailaki lomatium *Lomatium kogholiini*	PDAPI1B310	None	None	G1	S1	1B.2
western bumble bee *Bombus occidentalis*	IIHYM24252	None	Candidate Endangered	G3	S1	
western pearlshell *Margaritifera falcata*	IMBIV27020	None	None	G5	S1S2	
western pond turtle *Emys marmorata*	ARAAD02030	Proposed Threatened	None	G3G4	S3	SSC
western snowy plover *Charadrius nivosus nivosus*	ABNNB03031	Threatened	None	G3T3	S3	SSC
white beaked-rush *Rhynchospora alba*	PMCYP0N010	None	None	G5	S2	2B.2
white-flowered rein orchid *Piperia candida*	PMORC1X050	None	None	G3?	S3	1B.2
Whitney's farewell-to-spring *Clarkia amoena ssp. whitneyi*	PDONA05025	None	None	G5T1	S1	1B.1
Wolf's evening-primrose *Oenothera wolfii*	PDONA0C1K0	None	None	G2	S1	1B.1

Record Count: 97

California Native Plant Society

CNPS Rare Plant Inventory

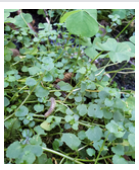
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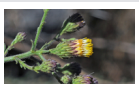
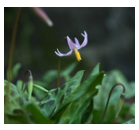
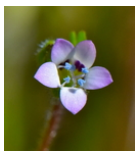
86 matches found. Click on scientific name for details

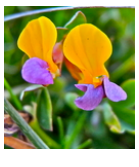
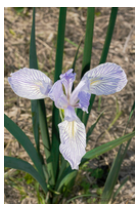
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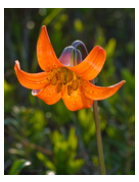
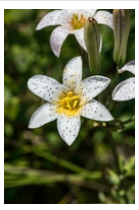
▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	GLOBAL RANK	STATE RANK	CA RARE PLANT RANK	CA ENDEMIC	DATE ADDED	PHOTO
Abronia umbellata var. *breviflora*	pink sand-verbena	Nyctaginaceae	annual herb	Jun-Oct	None	None	G4G5T2	S2	1B.1		1988-01-01	 ©2021 Scot Loring
Agrostis blasdalei	Blasdale's bent grass	Poaceae	perennial rhizomatous herb	May-Jul	None	None	G2G3	S2	1B.2	Yes	1974-01-01	 © 2001 Doreen L. Smith
Angelica lucida	sea-watch	Apiaceae	perennial herb	Apr-Sep	None	None	G5	S3	4.2		2001-01-01	 © 2022 Stillwater Sciences
Arctostaphylos nummularia ssp. *mendocinoensis*	pygmy manzanita	Ericaceae	perennial evergreen shrub	Jan	None	None	G3?T1	S1	1B.2	Yes	1994-01-01	No Photo Available
Arctostaphylos stanfordiana ssp. *raichei*	Raiche's manzanita	Ericaceae	perennial evergreen shrub	Feb-Apr	None	None	G3T2	S2	1B.1	Yes	1988-01-01	No Photo Available
Astragalus agnicidus	Humboldt County milk-vetch	Fabaceae	perennial herb	(Mar)Apr-Sep	None	CE	G2	S2	1B.1	Yes	1974-01-01	 ©2004 Dean Wm. Taylor
Astragalus rattanii var. *rattanii*	Rattan's milk-vetch	Fabaceae	perennial herb	Apr-Jul	None	None	G4T4	S4	4.3	Yes	1988-01-01	No Photo Available
Blennosperma nanum var. *robustum*	Point Reyes blennosperma	Asteraceae	annual herb	Feb-Apr	None	CR	G4T2	S2	1B.2	Yes	1974-01-01	No Photo Available

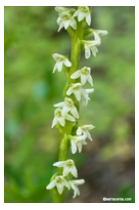
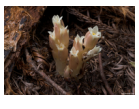
Calamagrostis bolanderi	Bolander's reed grass	Poaceae	perennial rhizomatous herb	May-Aug	None	None	G4	S4	4.2	Yes	1974-01-01	 ©2009 Zoya Akulova
Calamagrostis crassiglumis	Thurber's reed grass	Poaceae	perennial rhizomatous herb	May-Aug	None	None	G3Q	S2	2B.1		1980-01-01	No Photo Available
Calamagrostis foliosa	leafy reed grass	Poaceae	perennial herb	May-Sep	None	CR	G3	S3	4.2	Yes	1980-01-01	 ©2011 Zoya Akulova
Calystegia purpurata ssp. *saxicola*	coastal bluff morning-glory	Convolvulaceae	perennial herb	(Mar)Apr-Sep	None	None	G4T2T3	S2S3	1B.2	Yes	2001-01-01	No Photo Available
Cardamine angulata	seaside bittercress	Brassicaceae	perennial herb	(Jan)Mar-Jul	None	None	G4G5	S3	2B.2		2012-04-10	 © 2021 Scot Loring
Carex californica	California sedge	Cyperaceae	perennial rhizomatous herb	May-Aug	None	None	G5	S2	2B.2		1974-01-01	No Photo Available
Carex lenticularis var. *limnophila*	lagoon sedge	Cyperaceae	perennial herb	Jun-Aug	None	None	G5T5	S1	2B.2		2005-01-01	 ©2003 Steve Matson
Carex lyngbyei	Lyngbye's sedge	Cyperaceae	perennial rhizomatous herb	Apr-Aug	None	None	G5	S3	2B.2		2001-01-01	 ©2017 Steve Matson
Carex saliniformis	deceiving sedge	Cyperaceae	perennial rhizomatous herb	(May)Jun(Jul)	None	None	G2	S2	1B.2	Yes	2001-01-01	 ©2003 Steve Matson
Carex viridula ssp. *viridula*	green yellow sedge	Cyperaceae	perennial herb	(Jun)Jul-Sep(Nov)	None	None	G5T5	S2	2B.3		2001-01-01	 © 2015 Dana York
Castilleja ambigua var. *ambigua*	johnny-nip	Orobanchaceae	annual herb (hemiparasitic)	Mar-Aug	None	None	G4T4	S3S4	4.2		2009-02-04	 ©2011 Dylan Neubauer

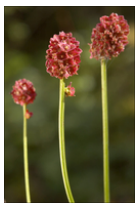
Castilleja latifolia	Monterey Coast paintbrush	Orobanchaceae	perennial herb (hemiparasitic)	Feb-Sep	None	None	G4	S4	4.3	Yes	1974-01-01	No Photo Available
Castilleja litoralis	Oregon coast paintbrush	Orobanchaceae	perennial herb (hemiparasitic)	Jun	None	None	G3	S3	2B.2		2001-01-01	 ©2010 Dana York
Castilleja mendocinensis	Mendocino Coast paintbrush	Orobanchaceae	perennial herb (hemiparasitic)	Apr-Aug	None	None	G2	S2	1B.2		1974-01-01	 ©2015 John Doyen
Ceanothus foliosus var. *vineatus*	Vine Hill ceanothus	Rhamnaceae	perennial evergreen shrub	Mar-May	None	None	G3T1	S1	1B.1	Yes	1988-01-01	 © 2013 Terry Gosliner
Ceanothus gloriosus var. *exaltatus*	glory brush	Rhamnaceae	perennial evergreen shrub	Mar-Jun(Aug)	None	None	G4T4	S4	4.3	Yes	2001-01-01	 ©2018 John Doyen
Ceanothus gloriosus var. *gloriosus*	Point Reyes ceanothus	Rhamnaceae	perennial evergreen shrub	Mar-May	None	None	G4T4	S4	4.3	Yes	1974-01-01	No Photo Available
Chorizanthe howellii	Howell's spineflower	Polygonaceae	annual herb	May-Jul	FE	CT	G1	S1	1B.2	Yes	1980-01-01	No Photo Available
Chrysosplenium glechomifolium	Pacific golden saxifrage	Saxifragaceae	perennial herb	Feb-Jun	None	None	G5?	S3	4.3		2015-10-15	 © 2021 Scot Loring
Clarkia amoena ssp. *whitneyi*	Whitney's farewell-to-spring	Onagraceae	annual herb	Jun-Aug	None	None	G5T1	S1	1B.1	Yes	1980-01-01	No Photo Available
Collinsia corymbosa	round-headed collinsia	Plantaginaceae	annual herb	Apr-Jun	None	None	G1	S1	1B.2	Yes	1994-01-01	 ©2007 Steve Matson
Coptis laciniata	Oregon goldthread	Ranunculaceae	perennial rhizomatous herb	(Feb)Mar-May(Sep-Nov)	None	None	G4?	S3?	4.2		2006-10-16	 © 2021 Scot Loring

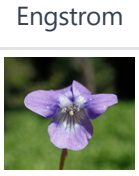
Cornus unalaschkensis	bunchberry	Cornaceae	perennial rhizomatous herb	May-Jul	None	None	G5	S2	2B.2		2012-12-11	 © 2021 Scot Loring
Cuscuta pacifica var. *papillata*	Mendocino dodder	Convolvulaceae	annual vine (parasitic)	(Jun)Jul-Oct	None	None	G5T1	S1	1B.2	Yes	2011-09-20	No Photo Available
Eastwoodiella californica	swamp harebell	Campanulaceae	perennial rhizomatous herb	Jun-Oct	None	None	G3	S3	1B.2	Yes	1974-01-01	No Photo Available
Epilobium septentrionale	Humboldt County fuchsia	Onagraceae	perennial herb	Jul-Sep	None	None	G4	S4	4.3	Yes	1974-01-01	 Image by BLM,Arcata Field Office
Erigeron biolettii	streamside daisy	Asteraceae	perennial herb	Jun-Oct	None	None	G3?	S3?	3	Yes	1994-01-01	 ©2015 Doug Wirtz
Eriogonum kelloggii	Kellogg's buckwheat	Polygonaceae	perennial herb	(May)Jun-Aug	None	CE	G2	S2	1B.2	Yes	1974-01-01	No Photo Available
Erysimum concinnum	bluff wallflower	Brassicaceae	annual/perennial herb	Feb-Jul	None	None	G3	S2	1B.2		2012-12-03	 ©2020 John Doyen
Erysimum menziesii	Menzies' wallflower	Brassicaceae	perennial herb	Mar-Sep	FE	CE	G1	S1	1B.1	Yes	1974-01-01	 ©2007 Steve Matson
Erythronium revolutum	coast fawn lily	Liliaceae	perennial bulbiferous herb	Mar-Jul(Aug)	None	None	G4G5	S3	2B.2		2001-01-01	 ©2007 Steve Matson
Gilia capitata ssp. *pacifica*	Pacific gilia	Polemoniaceae	annual herb	Apr-Aug	None	None	G5T3	S3	1B.2		2001-01-01	 © 2016 Steve Matson
Gilia millefoliata	dark-eyed gilia	Polemoniaceae	annual herb	Apr-Jul	None	None	G2	S2	1B.2		2001-01-01	 © 2017 John Doyen

Glehnia littoralis ssp. *leiocarpa*	American glehnia	Apiaceae	perennial herb	May-Aug	None	None	G5T5	S2S3	4.2		2001-01-01	 ©2017 Steve Matson
Hemizonia congesta ssp. *congesta*	congested-headed hayfield tarplant	Asteraceae	annual herb	Apr-Nov	None	None	G5T2	S2	1B.2	Yes	1988-01-01	 © 2015 Vernon Smith
Hemizonia congesta ssp. *tracyi*	Tracy's tarplant	Asteraceae	annual herb	(Mar-Apr)May-Oct	None	None	G5T4	S4	4.3	Yes	1974-01-01	 © 2016 Steve Matson
Hesperevax sparsiflora var. *brevifolia*	short-leaved evax	Asteraceae	annual herb	Mar-Jun	None	None	G4T3	S3	1B.2		1994-01-01	 © 2006 Doreen L. Smith
Hesperocyparis pygmaea	pygmy cypress	Cupressaceae	perennial evergreen tree		None	None	G1	S1	1B.2	Yes	1974-01-01	 © 2009 Neal Kramer
Horkelia marinensis	Point Reyes horkelia	Rosaceae	perennial herb	May-Sep	None	None	G2	S2	1B.2	Yes	1974-01-01	 © 2017 John Doyen
Hosackia gracilis	harlequin lotus	Fabaceae	perennial rhizomatous herb	Mar-Jul	None	None	G3G4	S3	4.2		2004-01-01	 © 2015 John Doyen
Iris longipetala	coast iris	Iridaceae	perennial rhizomatous herb	Mar-May(Jun)	None	None	G3	S3	4.2	Yes	2006-10-12	 © 2014 Aaron Schusteff
Juncus supiniformis	hair-leaved rush	Juncaceae	perennial rhizomatous herb	Apr-May(Jun-Jul)	None	None	G5	S1	2B.2		1974-01-01	 © 2013 Asa Spade

Kopsiopsis hookeri	small groundcone	Orobanchaceae	perennial rhizomatous herb (parasitic)	Apr-Aug	None	None	G4?	S1S2	2B.3		1994-01-01	 ©2016 Vernon Smith
Lasthenia californica ssp. *bakeri*	Baker's goldfields	Asteraceae	perennial herb	Apr-Oct	None	None	G3T1	S1	1B.2	Yes	2001-01-01	 ©2015 Asa Spade
Lasthenia californica ssp. *macrantha*	perennial goldfields	Asteraceae	perennial herb	Jan-Nov	None	None	G3T2	S2	1B.2	Yes	2001-01-01	 © 2013 John Doyen
Lathyrus glandulosus	sticky pea	Fabaceae	perennial rhizomatous herb	Apr-Jun	None	None	G3	S3	4.3	Yes	1988-01-01	 2015 Barrett Jeffery
Leptosiphon latisectus	broad-lobed leptosiphon	Polemoniaceae	annual herb	Apr-Jun	None	None	G4	S4	4.3	Yes	2001-01-01	 © 2015 Steve Matson
Lilium maritimum	coast lily	Liliaceae	perennial bulbiferous herb	May-Aug	None	None	G2	S2	1B.1	Yes	1974-01-01	 © 2020 Aaron Schusteff
Lilium rubescens	redwood lily	Liliaceae	perennial bulbiferous herb	(Mar)Apr-Aug(Sep)	None	None	G3	S3	4.2	Yes	1974-01-01	 Gerald and Buff Corsi © 2022 California Academy of Sciences
Listera cordata	heart-leaved twayblade	Orchidaceae	perennial herb	Feb-Jul	None	None	G5	S4	4.2		1974-01-01	 ©2013 Dr. Amadej Trnkoczy 0000 0000 0513 2468

Lomatium kogholiini	Wailaki lomatium	Apiaceae	perennial herb	Apr-Jun	None	None	G1	S1	1B.2		2023-06-13	No Photo Available
Lycopodium clavatum	running-pine	Lycopodiaceae	perennial rhizomatous herb	Jun-Aug(Sep)	None	None	G5	S3	4.1		1974-01-01	 © 2021 Scot Loring
Micranthes marshallii	Marshall's saxifrage	Saxifragaceae	perennial rhizomatous herb	Mar-Aug	None	None	G5	S3	4.3		2016-07-06	 2017 Barrett Jeffery
Mitellastra caulescens	leafy-stemmed mitrewort	Saxifragaceae	perennial rhizomatous herb	(Mar)Apr-Oct	None	None	G5	S4	4.2		2001-01-01	 © 2014 Dana York
Oenothera wolfii	Wolf's evening-primrose	Onagraceae	perennial herb	May-Oct	None	None	G2	S1	1B.1		1980-01-01	 ©2017 Dana York
Packera bolanderi var. *bolanderi*	seacoast ragwort	Asteraceae	perennial rhizomatous herb	(Jan-Apr)May-Jul(Aug)	None	None	G4T4	S2S3	2B.2		2001-01-01	 © 2021 Scot Loring
Phacelia insularis var. *continentis*	North Coast phacelia	Hydrophyllaceae	annual herb	Mar-May	None	None	G2T2	S2	1B.2	Yes	1980-01-01	No Photo Available
Pinus contorta ssp. *bolanderi*	Bolander's beach pine	Pinaceae	perennial evergreen tree		None	None	G5T2	S2	1B.2	Yes	1984-01-01	No Photo Available
Piperia candida	white-flowered rein orchid	Orchidaceae	perennial herb	(Mar-Apr)May-Sep	None	None	G3?	S3	1B.2		1994-01-01	 ©2016 Barry Rice
Pityopus californicus	California pinefoot	Ericaceae	perennial herb (achlorophyllous)	(Mar-Apr)May-Aug	None	None	G4G5	S4	4.2		1974-01-01	 ©2009 Barry Rice
Pleuropogon refractus	nodding semaphore grass	Poaceae	perennial rhizomatous herb	(Feb-Mar)Apr-Aug	None	None	G4	S4	4.2		1974-01-01	 ©2004 Dean Wm. Taylor

Puccinellia pumila	dwarf alkali grass	Poaceae	perennial herb	Jul	None	None	G5	SH	2B.2	1988-01-01	No Photo Available
Ramalina thrausta	angel's hair lichen	Ramalinaceae	fruticose lichen (epiphytic)		None	None	G5?	S2S3	2B.1	2014-03-01	 © 2013 Scot Loring
Rhynchospora alba	white beaked-rush	Cyperaceae	perennial rhizomatous herb	Jun-Aug	None	None	G5	S2	2B.2	1974-01-01	 © 2021 Scot Loring
Rhynchospora globularis	round-headed beaked-rush	Cyperaceae	perennial rhizomatous herb	Jul-Aug	None	None	G5	S1	2B.1	1974-01-01	No Photo Available
Sanguisorba officinalis	great burnet	Rosaceae	perennial rhizomatous herb	Jul-Oct	None	None	G5?	S2	2B.2	1994-01-01	 ©2006 Dr. Amadej Trnkoczy
Sedum eastwoodiae	Red Mountain stonecrop	Crassulaceae	perennial herb	May-Jul	None	None	G2	S2	1B.2	Yes	1980-01-01	No Photo Available
Sidalcea malachroides	maple-leaved checkerbloom	Malvaceae	perennial herb	(Mar)Apr-Aug	None	None	G3	S3	4.2		1994-01-01	 ©2005 Dean Wm. Taylor
Sidalcea malviflora ssp. *purpurea*	purple-stemmed checkerbloom	Malvaceae	perennial rhizomatous herb	May-Jun	None	None	G5T1	S1	1B.2	Yes	2001-01-01	No Photo Available
Silene bolanderi	Bolander's catchfly	Caryophyllaceae	perennial herb	May-Jun	None	None	G2	S2	1B.2		2021-07-30	No Photo Available
Silene greenei ssp. *angustifolia*	Red Mountain catchfly	Caryophyllaceae	perennial herb	May-Jun	None	CE	G5T1	S1	1B.2	Yes	1980-01-01	 © 2015 Cherilyn Burton
Thermopsis robusta	robust false lupine	Fabaceae	perennial rhizomatous herb	May-Jul	None	None	G2	S2	1B.2	Yes	1994-01-01	 ©2018 Hayley Ross
Tiarella trifoliata var. *trifoliata*	trifoliate laceflower	Saxifragaceae	perennial rhizomatous herb	(May)Jun-Aug	None	None	G5T5	S2S3	3.2		1980-01-01	 © 2021 Scot Loring

Triquetrella californica	coastal triquetrella	Pottiaceae	moss		None	None	G2	S2	1B.2		2001-01-01	No Photo Available
Usnea longissima	Methuselah's beard lichen	Parmeliaceae	fruticose lichen (epiphytic)		None	None	G4	S4	4.2		2014-03-01	 © 2021 Scot Loring
Veratrum fimbriatum	fringed false-hellebore	Melanthiaceae	perennial herb	Jul-Sep	None	None	G3	S3	4.3	Yes	1974-01-01	No Photo Available
Viburnum ellipticum	oval-leaved viburnum	Viburnaceae	perennial deciduous shrub	May-Jun	None	None	G4G5	S3	2B.3		1974-01-01	 © 2006 Tom Engstrom
Viola palustris	alpine marsh violet	Violaceae	perennial rhizomatous herb	Mar-Aug	None	None	G5	S1S2	2B.2		1994-01-01	 ©2021 Scot Loring

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Suggested Citation:
California Native Plant Society, Rare Plant Program. 2024. Rare Plant Inventory (online edition, v9.5). Website https://www.rareplants.cnps.org [accessed 1 July 2024].

Appendix D. Mitigation Summary for Westport Culverts



Mitigation Summary for Westport Culverts Project (01-0K170)

Temporary and permanent project impacts to aquatic and riparian resources that cannot be fully offset at the Westport Culverts (project) site will be mitigated at an appropriate off-site location. The California Department of Transportation (Caltrans) is currently evaluating off-site mitigation alternatives and will coordinate with resource and regulatory agencies to select the preferred mitigation option(s) to satisfy mitigation obligations for the project. Caltrans has identified several issues to complete mitigation for the project including, but not limited to, the extent of available right of way (R/W) at the project location and severely limited off-site mitigation options in the coastal zone of the Big-Navarro-Garcia Hydrological Unit Code (HUC) 8 (18010108) watershed. Caltrans is currently proposing to meet any required off-site compensatory mitigation for impacts to wetlands, non-wetland waters, and riparian habitats at the Mendocino Coast Mitigation Bank.

The Mendocino Coast Mitigation Bank is currently being established by Resource Environmental Solutions, LLC (RES) for the Big-Navarro-Garcia watershed to provide mitigation credits for impacts associated with transportation projects occurring in the coastal zone of this watershed. Due to delays in establishing the Mendocino Coast Mitigation Bank, RES is proposing two banks (Bank #1 and Bank #2) to align similar habitats, reduce service areas, and expedite the bank enabling process. Bank #1 consists of two parcels, one near Brush Creek and the other adjacent to the Garcia River (Attachment 1, Figure 1). Bank #2 will include parcels at locations adjacent to the Navarro River/estuary and Ten Mile River/estuary (Attachment 1, Figure 2). Details regarding the proposed off-site compensatory mitigation option is described in the following section.

Mendocino Coast Mitigation Bank Project

INTRODUCTION

In 2013, Caltrans' Environmental and Project Management teams initiated the process to program an advanced mitigation project to capture anticipated impacts associated with upcoming transportation projects on State Route (SR) 1, in the coastal zone of the Big-Navarro-Garcia HUC 8 watershed. This process projected a need for 11.1 credits to compensate for impacts to 3-parameter wetlands and 4.1 credits for other waters compensation (credits for Caltrans' Bridges Program Bank contract – 01A1999). In 2017, Caltrans North Region Environmental programmed a second project to capture additional future impacts to aquatic resources along SR-1 in the coastal Big-Navarro-Garcia watershed. This process projected an additional need for

15.1 credits to compensate for impacts to 3-parameter wetlands and 8.1 credit for other waters compensation (credits for Caltrans' Advanced Mitigation Program contract – 01A1998). To mitigate for impacts to resources under the jurisdiction of applicable regulatory agencies, Caltrans District 1 is routinely required to comply with regulatory permits including, but not limited to, United States Army Corps of Engineers (USACE) Clean Water Act (CWA) Section (§) 404, California State Water Resources Control Boards (SWRCB) CWA §401, California Department of Fish and Wildlife (CDFW) Lake and Streambed Alteration Agreement (LSAA), and California Coastal Commission (CCC) Coastal Development Permit (CDP). Due to the lack of mitigation banks and credits available for purchase, District 1 typically is required to mitigate at a higher ratio under a permittee-responsible mitigation (PRM) approach. Additionally, the timely issuance of permits and delivery of capital projects is challenging. At the time of programming projects in 2013, and as remains the case for present day, no mitigation banks currently exist in the Big-Navarro-Garcia HUC 8 watershed. Therefore, to lessen project costs through reduced off-site mitigation ratios, limit the need for staff resources, and to provide ecologically beneficial, landscape level mitigation as opposed to postage stamp PRM projects, Caltrans District 1 began the process to create a coastal Mendocino mitigation bank in the Big-Navarro-Garcia watershed.

In 2019, Caltrans District 1 created and circulated two (2) Request for Proposals (RFP) seeking a contractor(s) to procure the anticipated mitigation credits in coastal Mendocino County for impacts to jurisdictional wetlands and other waters protected under the California Coastal Act (CCA) and CWA. In addition to establishing a mitigation bank in coastal Mendocino County, Caltrans required the contractor to conduct all the necessary technical studies, obtain environmental approvals, and prepare all relevant documents necessary under the approval of state and federal regulatory agencies as part of the contract(s). After review of technical and cost proposals submitted by various mitigation banking organizations, Caltrans awarded RES both contracts in early 2020 to provide 26.2 credits of 3-parameter wetlands and 12.2 credits of other waters in the coastal zone of the Big-Navarro-Garcia HUC 8 watershed.

PROPOSED RESTORATION

As compensatory mitigation to offset project impacts to aquatic resources and riparian habitat, Caltrans proposes to purchase credits from the Mendocino Coast Mitigation Bank. Restoration acreage may vary based on changes to project design and/or additional input from resource/regulatory agencies. Typical mitigation ratios for permanent impacts to coastal resources compensated via PRM has historically been high (e.g., 3:1 riparian creation, 4:1 wetlands/non-wetland waters creation) however, Caltrans anticipates the Bank Enabling Instrument (BEI) to be finalized and credits to be available prior to project impacts therefore, temporal loss will be reduced and a lower mitigation ratio (1:1) is to be expected. Table 1 below

shows the anticipated establishment timeline for Bank #2 (2025) and availability of credits as to when project construction impacts are expected to occur (2027). Acres provided below pertain only to Caltrans' contracted credits though RES plans to restore, enhance, and/or create additional credits for aquatic, riparian, and upland SNC/ESHA resources.

Table 1. Mendocino Coast Mitigation Bank #2 Credit Release Timeline.

Milestones	Anticipated Year	Contract #1		Contract #2	
		15.1	8.1	11.1	4.1
		Wetlands	Other Waters	Wetlands	Other Waters
A (15% credits)	June 2025	2.265	1.215	1.665	0.615
B (40% credits)	January 2027	6.04	3.24	4.44	1.64
Caltrans Project: Westport Culverts (01-0K170) – Construction Anticipated summer 2027					
C (55% credits)	January 2029	8.305	4.455	6.105	2.255
D (70% credits)	January 2030	10.57	5.67	7.77	2.87
E (85% credits)	January 2031	12.835	6.885	9.435	3.485
F (100% credits)	January 2032	15.1	8.1	11.1	4.1

In addition to delivering the contracted aquatic resource credits for current and future transportation projects along the Mendocino coast, RES also plans to deliver other non-contracted credits including non-wetland riparian, upland SNC, and other ESHA. The bank will include a wide array of wetland habitat types and resources that may include seasonal wetlands, riparian floodplain wetlands, tidal marsh, fen, riparian non-wetland, and other waters. Final restoration designs plan to incorporate layered credits for contracted aquatic resources (e.g., wetland riparian) as well as other resources including non-wetland/upland riparian, ESHA, and SNC. Resources proposed for mitigation values (e.g., creation, restoration, enhancement, preservation) are detailed in the Final Prospectus for banks #1 and #2.

CONCLUSION

Caltrans has determined that the proposed Mendocino Coast Mitigation Bank will compensate for project impacts to wetlands, non-wetland waters, and riparian resources that cannot be fully mitigated at the project site. For the project, impacts are anticipated to occur following bank establishment/construction therefore, Caltrans anticipates a lower mitigation ratio (~1:1 – 2:1) to compensate for project impacts.

RES has made substantial progress towards the development of the Mendocino Coast Mitigation Bank, completing tasks including, but not limited to, the execution of land purchases and agreements, conducting field analyses and studies, organization of the IRT, completion of a Draft/Final Prospectus for banks #1 and #2, development of a DBEI for Bank #1, and coordination and consultation with resource/regulatory agencies to begin the permitting process. To date, the IRT has deemed the Final Prospectus complete for Bank #1 and is now in the DBEI phase of the bank establishment process. For Bank #2, RES has completed the Final Prospectus and is preparing to submit the DBEI to the IRT in summer/fall 2024. A Final Prospectus includes conceptual restoration designs and a crediting methodology for existing habitats and those proposed to be restored, enhanced, and/or created. Following submittal, review, and approval of the Final Prospectus, a DBEI is developed and submitted to the IRT which includes a Development Plan. The Development Plan includes a detailed description of the properties to be included in the bank, a description of the biological resources present, a vegetation map, proposed development activities to preserve, enhance, restore or establish habitats, and specific performance standards for the proposed development actions. Approval of the Final BEI for Bank #1 is anticipated to be early 2025 and Bank #2 is summer 2025.

Through the execution of the two (2) contracts in early 2020 (01A1998 and 01A1999), Caltrans is committed to completing mitigation for current and future transportation projects in the coastal zone of the Big-Navarro-Garcia HUC 8 watershed and intending to use the mitigation banks to compensate for project impacts. This action to contractually obligate Caltrans to RES, as well as RES' current progress, makes the development and creation of the Mendocino Coast Mitigation Bank as reasonably foreseeable mitigation for the Westport Culverts project. Additionally, prior to anticipated project impacts, Caltrans expects that the Mendocino Coast Mitigation Bank will be established/constructed and thus will have advanced mitigation in place prior to project impacts. Further information regarding conceptual and detailed restoration designs, site control, performance standards, and interim/long-term management plans will be presented to the IRT as required to complete the mitigation bank establishment process.

Caltrans is confident that the Mendocino Coast Mitigation Bank Final BEI will be approved by the IRT and permitted by all regulatory agencies prior to project construction. However, Caltrans acknowledges that the development of a mitigation bank within the coastal zone may be complicated by additional requirements by the regulatory agencies. For this matter, this mitigation option may not be a viable solution if the anticipated schedule to finalize the BEI and permit the bank is not met prior to project construction. As development of the Mendocino Coast Mitigation Bank progresses, Caltrans will closely coordinate with the permitting agencies to determine whether the bank #2 will be established (anticipated summer 2025) prior to the project's construction timeline (2027).

If the IRT fails to establish the mitigation bank and RES does not obtain the necessary regulatory permits prior to the construction for this project, Caltrans will consult with the regulatory agencies to determine an appropriate alternative mitigation strategy that compensates for project impacts. For aquatic and riparian resource mitigation, Caltrans will prioritize a watershed approach (within the Big-Navarro-Garcia HUC 8 watershed) with mitigation for the project's permanent impacts occurring at a 3:1 or 4:1 off-site mitigation ratio for in-kind, replacement mitigation or at higher ratios for out-of-kind mitigation. Out-of-kind mitigation examples include, but may not be limited to, enhancement activities including invasive species removal (typically ~6:1 ratio) and/or preservation of habitats (typically ~9:1 ratio). Attachment 1. Figures



Figure 1. Mendocino Coast Mitigation Bank (Bank #1) Locations.



Figure 2. Mendocino Coast Mitigation Bank (Bank #2) Locations.



Appendix E. Botanical Survey Results within the ESL



PM 75.47	PM 76.20	PM 76.57	PM 76.81	PM 84.10	Scientific Name	Name	lifeform	status	FAMILY
X	X	X	X	X	Galium aparine	Cleavers	Annual herb	native	RUBIACEAE
X	X	X	X	X	Marah oregana	Coast man-root	Perennial herb, Vine	native	CUCURBITACEAE
X	X	X	X	X	Rumex crispus	Curly dock	Perennial herb	invasive non-native	POLYGONACEAE
X	X	X	X	X	Stachys albens	Cobwebby hedge nettle	Perennial herb	native	LAMIACEAE
X	X	X	X	X	Geranium molle	Crane's bill geranium	Annual, Perennial herb	invasive non-native	GERANIACEAE
X	X	X	X	X	Vicia americana	American vetch	Perennial herb, Vine	native	FABACEAE
X	X	X		X	Brassica nigra	Black mustard	Annual herb	invasive non-native	BRASSICACEAE
X	X	X		X	Dactylis glomerata	Orchardgrass	Perennial grass	invasive non-native	POACEAE
X	X		X	X	Holcus lanatus	Common velvetgrass	Perennial grass	invasive non-native	POACEAE
X	X		X	X	Medicago polymorpha	California burclover	Annual herb	invasive non-native	FABACEAE
X	X		X	X	Plantago lanceolata	Ribwort	Perennial herb	invasive non-native	PLANTAGINACEAE
X		X	X	X	Briza maxima	Rattlesnake grass	Annual grass	invasive non-native	POACEAE
X		X	X	X	Rubus ursinus	California blackberry	Vine, Shrub	native	ROSACEAE
X		X		X	Fragaria vesca	Wild strawberry	Perennial herb	native	ROSACEAE

X		X		X	Raphanus sativus	Jointed charlock	Annual, Biennial herb	invasive non-native	BRASSICACEAE
X		X		X	Urtica dioica	Stinging nettle	Perennial herb	native	URTICACEAE
X				X	Abelia Xgrandiflora	Glossy abelia	Perennial herb	non-native	CAPRIFOLIACEAE
X				X	Abies concolor	White fir	Tree	native	PINACEAE
	X	X	X	X	Athyrium filix-femina	Common ladyfern	Fern	native	WOODSIACEAE
	X	X	X	X	Polystichum munitum	Western sword fern	Fern	native	DRYOPTERIDACEAE
	X	X		X	Sambucus nigra ssp. caerulea	Blue elderberry	Shrub	native	ADOXACEAE
	X	X		X	Tolmiea menziesii	Pig a back plant	Perennial herb	native	SAXIFRAGACEAE
		X		X	Adiantum aleuticum	Five finger fern	Fern	native	PTERIDACEAE
		X		X	Anthoxanthum odoratum	Sweet vernal grass	Annual, Perennial grass	invasive non-native	POACEAE
		X		X	Aquilegia formosa	Columbine	Perennial herb	native	RANUNCULACEAE
		X		X	Digitalis purpurea	Foxglove	Perennial herb	invasive non-native	PLANTAGINACEAE
		X		X	Frangula purshiana	Cascara sagrada	Tree, Shrub	native	RHAMNACEAE
		X		X	Luzula comosa	Hairy wood rush	Perennial grasslike herb	native	JUNCACEAE

		X		X	Rubus parviflorus	Thimbleberry	Vine, Shrub	native	ROSACEAE
		X		X	Stellaria media	Chickweed	Annual herb	non-native	CARYOPHYLLACEAE
			X	X	Lysimachia latifolia	Pacific starflower	Perennial herb	native	MYRSINACEAE
			X	X	Pteridium aquilinum	Western brackenfern	Fern	native	DENNSTAEDTIACEAE
			X	X	Sanicula crassicaulis	Pacific sanicle	Perennial herb	native	APIACEAE
				X	Alnus rubra	Red alder	Tree, Shrub	native	BETULACEAE
				X	Cardamine californica	Bitter cress	Perennial herb	native	BRASSICACEAE
				X	Claytonia sibirica	Candy flower	Perennial herb	native	MONTIACEAE
				X	Corylus cornuta	Beaked hazelnut	Shrub	native	BETULACEAE
				X	Cynoglossum occidentale	Hound's tongue	Perennial herb	native	BORAGINACEAE
				X	Gaultheria shallon	Salal	Shrub	native	ERICACEAE
				X	Hesperocnide tenella	Western stinging nettle	Annual herb	native	URTICACEAE
				X	Maianthemum racemosum	Feathery false lily of the valley	Perennial herb	native	RUSCACEAE
				X	Myosotis discolor	Forget me not	Annual herb	non-native	BORAGINACEAE

				X	Osmorhiza occidentalis	Western sweet cicely	Perennial herb	native	APIACEAE
				X	Oxalis oregana	Redwood sorrel	Perennial herb	native	OXALIDACEAE
				X	Petasites frigidus	Arctic sweet coltsfoot	Perennial herb	native	ASTERACEAE
				X	Scoliopus bigelovii	Slink pod	Perennial herb	native	LILIACEAE
				X	Sequoia sempervirens	Coast redwood	Tree	native	CUPRESSACEAE
				X	Trillium ovatum	Western wakerobin	Perennial herb	native	MELANTHIACEAE
				X	Vaccinium parvifolium	Red huckleberry	Shrub	native	ERICACEAE
				X	Vancouveria planipetala	Inside out flower	Perennial herb	native	BERBERIDACEAE
				X	Vicia villosa	Hairy vetch	Annual herb, Vine	invasive non-native	FABACEAE
				X	Viola sempervirens	Redwood violet	Perennial herb	native	VIOLACEAE
X	X	X	X		Baccharis pilularis	Coyote brush	Shrub	native	ASTERACEAE
X	X	X	X		Carduus pycnocephalus	Italian thistle	Annual herb	invasive non-native	ASTERACEAE
X	X	X	X		Equisetum hyemale ssp. affine	Giant scouring rush	Fern	native	EQUISETACEAE

X	X	X	X		Festuca arundinacea	Reed fescue	Perennial grass	invasive non-native	POACEAE
X	X	X	X		Heracleum maximum	Common cowparsnip	Perennial herb	native	APIACEAE
X	X	X			Bromus tectorum	Downy chess	Annual grass	invasive non-native	POACEAE
X	X	X			Toxicodendron diversilobum	Poison oak	Vine, Shrub	native	ANACARDIACEAE
X	X		X		Convolvulus arvensis	Field bindweed	Perennial herb, Vine	invasive non-native	CONVOLVULACEAE
X	X		X		Scrophularia californica	California bee plant	Perennial herb	native	SCROPHULARIACEAE
X	X		X		Taraxacum officinale	Red seeded dandelion	Perennial herb	invasive non-native	ASTERACEAE
X	X				Achillea millefolium	Yarrow	Perennial herb	native	ASTERACEAE
X	X				Cortaderia selloana	Pampas grass	Perennial grass	invasive non-native	POACEAE
X	X				Daucus carota	Carrot	Perennial herb	invasive non-native	APIACEAE
X	X				Diplacus aurantiacus	Sticky monkeyflower	Shrub	native	PHRYMACEAE
X	X				Festuca perennis	Italian rye grass	Annual, Perennial grass	invasive non-native	POACEAE
X		X	X		Anaphalis margaritacea	Pearly everlasting	Perennial herb	native	ASTERACEAE

X		X	X		Hedera helix	English ivy	Vine, Shrub	invasive non-native	ARALIACEAE
X		X			Artemisia douglasiana	California mugwort	Perennial herb	native	ASTERACEAE
X		X			Lupinus rivularis	Riverbank lupine	Perennial herb	native	FABACEAE
X		X			Vicia gigantea	Giant vetch	Perennial herb	native	FABACEAE
X		X			Vinca minor	Common periwinkle	Perennial herb	non-native	APOCYNACEAE
X			X		Angelica hendersonii	Henderson's angelica	Perennial herb	native	APIACEAE
X			X		Bromus diandrus	Ripgut brome	Annual grass	invasive non-native	POACEAE
X			X		Lonicera hispidula	Pink honeysuckle	Vine, Shrub	native	CAPRIFOLIACEAE
X					Acmispon americanus	American bird's foot trefoil	Annual herb	native	FABACEAE
X					Carex hendersonii	Henderson's sedge	Perennial grasslike herb	native	CYPERACEAE
X					Eriogonum latifolium	Coast buckwheat	Perennial herb	native	POLYGONACEAE
X					Erodium cicutarium	Coastal heron's bill	Annual herb	invasive non-native	GERANIACEAE
X					Eschscholzia californica	California poppy	Annual, Perennial herb	native	PAPAVERACEAE

X					Hordeum brachyantherum	Meadow barley	Perennial grass	native	POACEAE
X					Linum bienne	Flax	Annual herb	non-native	LINACEAE
X					Lysimachia arvensis	Scarlet pimpernel	Annual herb	non-native	MYRSINACEAE
X					Matricaria discoidea	Pineapple weed	Annual herb	native	ASTERACEAE
X					Phacelia egena	Rock phacelia	Perennial herb	native	BORAGINACEAE
X					Rosa sp.	Rose	Shrub	native	ROSACEAE
X					Salix lasiolepis	Arroyo willow	Tree, Shrub	native	SALICACEAE
X					Silene laciniata ssp. californica	California indian pink	Perennial herb	native	CARYOPHYLLACEAE
	X	X			Claytonia parviflora ssp. parviflora	Miner'slettuce	Annual herb	native	MONTIACEAE
	X		X		Morella californica	California wax myrtle	Shrub	native	MYRICACEAE
	X		X		Rubus armeniacus	Himalayan blackberry	Shrub	invasive non-native	ROSACEAE
	X		X		Avena fatua	Wildoats	Annual grass	invasive non-native	POACEAE
	X				Castilleja sp.	Paintbrush	Perrenial herb	native	OROBANCHACEAE

	X				Chlorogalum pomeridianum var. pomeridianum	Common soaproot	Perennial herb	native	AGAVACEAE
	X				Cirsium vulgare	Bullthistle	Perennial herb	invasive non-native	ASTERACEAE
	X				Garrya elliptica	Coast silk tassel	Tree, Shrub	native	GARRYACEAE
	X				Phleum pratense	Common timothy	Perennial grass	non-native	POACEAE
	X				Polygala californica	Milkwort	Perennial herb	native	POLYGALACEAE
	X				Pseudotsuga menziesii	Douglas fir	Tree	native	PINACEAE
	X				Salix sitchensis	Coulter willow	Tree, Shrub	native	SALICACEAE
	X				Silybum marianum	Milk thistle	Annual, Perennial herb	invasive non-native	ASTERACEAE
	X				Sisyrinchium bellum	Blue eyed grass	Perennial herb	native	IRIDACEAE
	X				Solanum umbelliferum	Blue witch	Shrub	native	SOLANACEAE
		X	X		Iris douglasiana	Douglas iris	Perennial herb	native	IRIDACEAE
		X	X		Juncus effusus	Common bog rush	Perennial grasslike herb	native	JUNCACEAE
		X	X		Pinus radiata	Monterey pine	Tree	native	PINACEAE

		X	X		Salix hookeriana	Coastal willow	Tree, Shrub	native	SALICACEAE
		X			Asarum hartwegii	Hartweg's wild ginger	Perennial herb	native	ARISTOLOCHIACEAE
		X			Carex sp.	sedge	Perennial grasslike herb	native	CYPERACEAE
		X			Hesperocyparis macrocarpa	Monterey cypress	Tree	native	CUPRESSACEAE
			X		Abies grandis	Grand fir	Tree	native	PINACEAE
			X		Erythranthe guttata	Yellow monkey flower	Annual, Perennial herb (rhizomatous)	native	PHRYMACEAE
			X		Hypochaeris glabra	Smooth cats ear	Annual herb	invasive non-native	ASTERACEAE
			X		Juncus patens	Rush	Perennial grasslike herb	native	JUNCACEAE
			X		Mentha pulegium	Pennyroyal	Perennial herb	invasive non-native	LAMIACEAE
			X		Notholithocarpus densiflorus	Tanoak	Tree, Shrub	native	FAGACEAE
			X		Oenanthe sarmentosa	Water parsley	Perennial herb	native	APIACEAE
			X		Prosartes smithii	Largeflower fairybells	Perennial herb	native	LILIACEAE

			X		Prunella vulgaris	Self heal	Perennial herb	native	LAMIACEAE
			X		Rumex acetosella	Sheep sorrel	Perennial herb	invasive non-native	POLYGONACEAE
			X		Scirpus microcarpus	Small fruited bulrush	Perennial grasslike herb	native	CYPERACEAE

Appendix F. Special Status Plant and Animal Species Tables



Table 1. Special Status Plants and Critical Habitat Potentially Occurring or Known to Occur within the Project Area

Common Name	*Scientific Name*	Status[1] Federal/ State/ CRPR	Habitat/ Elevational Range (feet)	Habitat[2] Present/ Absent	Critical[2] Habitat	Rationale
VASCULAR PLANTS						
alpine marsh violet	*Viola palustris*	--/--/2B.2	Coastal bogs and fens, and mesic coastal scrub. Found at elevations of 0 to 490 feet (0 to 150 meters).	**Present**	---	Potentially suitable habitat within the BSA; not detected during surveys.
American glehnia	*Glehnia littoralis* ssp. *leiocarpa*	--/--/4.2	Coastal dunes. Found at elevations of 0 to 65 feet (0 to 20 meters).	Absent	---	No suitable habitat within BSA; not detected during surveys.
Baker's goldfields	*Lasthenia californica* ssp. *bakeri*	--/--/1B.2	Closed-cone coniferous forest (openings), coastal scrub, meadows and seeps, marshes and swamp. Found at elevations of 195 to 1,705 feet (60 to 520 meters).	**Present**	---	Potentially suitable habitat within the BSA; not detected during surveys.
Blasdale's bent grass	*Agrostis blasdalei*	--/--/1B.2	Coastal bluff scrub, dunes and prairie. Found at elevations of 0 to 490 feet (0 to 150 meters).	**Present**	---	Potentially suitable habitat within the BSA; not detected during surveys.
bluff wallflower	*Erysimum concinnum*	--/--/1B.2	Coastal dunes. Found at elevations of 0 to 605 feet (0 to 185 meters).	Absent	---	No suitable habitat within BSA; not detected during surveys.
Bolander's beach pine	*Pinus contorta* ssp. *bolanderi*	--/--/1B.2	Closed-cone coniferous forest, only in coastal pygmy forests. Found at elevations of 245 to 820 feet (75 to 250 meters).	Absent	---	No suitable habitat within BSA; outside of known elevation range.

Common Name	*Scientific Name*	Status[1] Federal/ State/ CRPR	Habitat/ Elevational Range (feet)	Habitat[2] Present/ Absent	Critical[2] Habitat	Rationale
Bolander's catchfly	*Silene bolanderi*	--/--/1B.2	Edges of chaparral, cismontane woodland, lower montane coniferous forest, meadows and seeps, North Coast coniferous forest. Found at elevations of 1,380 to 3,775 feet (420 to 1,150 meters).	Absent	---	Outside of known elevation range; not detected during surveys.
Bolander's reed grass	*Calamagrostis bolanderi*	--/--/4.2	Bogs and fens, broadleafed upland forest, closed-cone coniferous forest, coastal scrub, freshwater marshes and swamps, mesic meadows and seeps, North Coast coniferous forest. Found at elevations of 0 to 1,495 feet (0 to 455 meters).	**Present**	---	Potentially suitable habitat within the BSA; not detected during surveys.
broad-lobed leptosiphon	*Leptosiphon latisectus*	--/--/4.3	Broadleaved upland forest, cismontane woodland. Found at elevations of 560 to 4,920 feet (170 to 1500 meters).	Absent	---	Outside of known elevation range; not detected during surveys.
bunchberry	*Cornus unalaschkensis*	--/--/2B.2	Shaded forests, bogs, fens. Found at elevations of 195 to 6,300 feet (60 to 1,920 meters).	**Present**	---	Potentially suitable habitat within the BSA; not detected during surveys.

Common Name	*Scientific Name*	Status[1] Federal/ State/ CRPR	Habitat/ Elevational Range (feet)	Habitat[2] Present/ Absent	Critical[2] Habitat	Rationale
Burke's goldfields	*Lasthenia burkei*	FE/SE/1B.1	Meadows, marshes, wetlands, vernal pools, valley grasslands and foothills. Found at elevations of 0 to 1,640 feet (0 to 500 meters).	Absent	---	Outside of known range; not detected during surveys.
California pinefoot	*Pityopus californicus*	--/--/4.2	Broadleafed upland forest, lower and upper montane coniferous forest, North Coast coniferous forest. Found at elevations of 50 to 7,300 feet (15 to 2,225 meters).	**Present**	---	Potentially suitable habitat within the BSA; not detected during surveys.
California sedge	*Carex californica*	--/--/2B.2	Coastal bogs and fens; presumed extinct in California. Found at elevations of 295 to 1,100 feet (90 to 335 meters).	Absent	---	Outside of known elevation range; not detected during surveys.
Coast fawn lily	*Erythronium revolutum*	--/--/2B.2	Bogs and fens, broadleafed upland forest, North Coast coniferous forest. Found at elevations of 0 to 5,250 feet (0 to 1,600 meters).	**Present**	---	Potentially suitable habitat within the BSA; not detected during surveys.
coast iris	*Iris longipetala*	--/--/4.2	Coastal prairie, lower montane coniferous forest, meadows and seeps. Found at elevations of 0 to 1,970 feet (0 to 600 meters).	**Present**	---	Potentially suitable habitat within the BSA; not detected during surveys.

Common Name	*Scientific Name*	Status[1] Federal/ State/ CRPR	Habitat/ Elevational Range (feet)	Habitat[2] Present/ Absent	Critical[2] Habitat	Rationale
coast lily	*Lilium maritimum*	--/--/1B.1	Coastal forests, prairie, scrub, freshwater marshes and swamps, sometimes roadsides. Found at elevations of 15 to 1,560 feet (5 to 475 meters).	**Present**	---	Potentially suitable habitat within the BSA; not detected during surveys.
coastal bluff morning-glory	*Calystegia purpurata* ssp. *saxicola*	--/--/1B.2	Coastal dunes and scrub, North Coast coniferous forest. Found at elevations of 0 to 345 feet (0 to 105 meters).	**Present**	---	Potentially suitable habitat within the BSA; not detected during surveys.
coastal triquetrella	*Triquetrella californica*	--/--/1B.2	Coastal scrub and coastal bluff scrub. Found at elevations of 35 to 330 feet (10 to 100 meters).	**Present**	---	Potentially suitable habitat within the BSA; not detected during surveys.
congested-headed hayfield tarplant	*Hemizonia congesta* ssp. *congesta*	--/--/1B.2	Valley and foothill grasslands, sometimes roadsides. Found at elevations of 65 to 1,835 feet (20 to 560 meters).	Absent	---	No suitable habitat within the BSA; not detected during surveys.
Contra Costa goldfields	*Lasthenia conjugens*	FE/--/1B.1	Meadows, marshes, wetlands in vernal pools, and valley grasslands and foothills. Found at elevations of 0 to 330 feet (0 to 100 meters).	Absent	---	No suitable habitat within the BSA; not detected during surveys.
dark-eyed gilia	*Gilia millefoliata*	--/--/1B.2	Coastal dunes. Found at elevations of 5 to 100 feet (2 to 30 meters).	Absent	---	No suitable habitat within the BSA; not detected during surveys.

Common Name	*Scientific Name*	Status[1] Federal/ State/ CRPR	Habitat/ Elevational Range (feet)	Habitat[2] Present/ Absent	Critical[2] Habitat	Rationale
deceiving sedge	*Carex saliniformis*	--/--/1B.2	Coastal marshes, wet meadows, sparsely vegetated area. Found at elevations of 10 to 755 feet (3 to 230 meters).	**Present**	---	Potentially suitable habitat within the BSA; not detected during surveys.
dwarf alkali grass	*Puccinellia pumila*	--/--/2B.2	Coastal salt marshes and swamps. Found at elevations of 5 to 35 feet (5 to 150 meters).	Absent	---	No suitable habitat within the BSA; not detected during surveys.
fringed false-hellebore	*Veratrum fimbriatum*	--/--/4.3	Bogs and fens, coastal scrub, meadows and seeps, North Coast coniferous forest. Found at elevations of 10 to 985 feet (3 to 300 meters).	**Present**	---	Potentially suitable habitat within the BSA; not detected during surveys.
glory brush	*Ceanothus gloriosus* var. *exaltatus*	--/--/4.3	Chaparral. Found at elevations of 100 to 2,000 feet (30 to 610 meters).	Absent	---	No suitable habitat within the BSA; not detected during surveys.
great burnet	*Sanguisorba officinalis*	--/--/2B.2	Variety of wetland and forested habitats often with serpentinite soil. Found at elevations of 195 to 4,595 feet (60 to 1,400 meters).	**Present**	---	Potentially suitable habitat within the BSA; not detected during surveys.
green yellow sedge	*Carex viridula* ssp. *viridula*	--/--/2B.3	Coastal marshes, swamps, bogs, fens. Found at elevations of 0 to 5,250 feet (0 to 1,600 meters).	**Present**	---	Potentially suitable habitat within the BSA; not detected during surveys.
hair-leaved rush	*Juncus supiniformis*	--/--/2B.2	Bogs, fens, freshwater marshes. Found at elevations of 65 to 330 feet (20 to 100 meters).	**Present**	---	Potentially suitable habitat within the BSA; not detected during surveys.

Common Name	*Scientific Name*	Status[1] Federal/ State/ CRPR	Habitat/ Elevational Range (feet)	Habitat[2] Present/ Absent	Critical[2] Habitat	Rationale
harlequin lotus	*Hosackia gracilis*	--/--/4.2	Broadleafed upland forest, cismontane woodland, closed-cone coniferous forest, coastal bluff scrub, coastal prairie, coastal scrub, marshes and swamps, meadows and seeps, North Coast coniferous forest, valley and foothill grassland. Found at elevations of 0 to 2,295 feet (0 to 700 meters).	**Present**	---	Potentially suitable habitat within the BSA; not detected during surveys.
heart-leaved twayblade	*Listera cordata*	--/--/4.2	Bogs and fens, lower montane coniferous forest, North Coast coniferous forest. Found at elevations of 15 to 4,495 feet (5 to 1,370 meters).	**Present**	---	Potentially suitable habitat within the BSA; not detected during surveys.
Howell's spineflower	*Chorizanthe howellii*	FE/ST/1B.2	Coastal dunes and prairie, roadsides on sandy soil. Found at elevations of 0 to 150 feet (0 to 45 meters).	Absent	---	No suitable habitat within the BSA; not detected during surveys.
Humboldt County fuchsia	*Epilobium septentrionale*	--/--/4.3	Broadleafed upland forest, North Coast coniferous forest. Found at elevations of 150 to 5,905 feet (45 to 1,800 meters).	**Present**	---	Potentially suitable habitat within the BSA; not detected during surveys.

Common Name	*Scientific Name*	Status[1] Federal/ State/ CRPR	Habitat/ Elevational Range (feet)	Habitat[2] Present/ Absent	Critical[2] Habitat	Rationale
Humboldt County milk vetch	*Astragalus agnicidus*	--/SE/1B.1	Upland and coniferous forest openings, disturbed areas and roadsides. Found at elevations of 395 to 2,625 feet (120 to 800 meters).	Absent	---	Outside of known elevation range; not detected during surveys.
johnny-nip	*Castilleja ambigua* var. *ambigua*	--/--/4.2	Coastal bluff scrub, coastal prairie, coastal scrub, marshes and swamps, valley and foothill grassland, margins of vernal pools. Found at elevations of 0 to 1,425 feet (0 to 435 meters).	**Present**	---	Potentially suitable habitat within the BSA; not detected during surveys.
Kellogg's buckwheat	*Eriogonum kelloggii*	--/SE/1B.2	Lower montane coniferous forest on rocky or serpentine soils. Found at elevations of 1,900 to 4,100 feet (579 to 1,250 meters).	Absent	---	Outside of known elevation range; not detected during surveys.
lagoon sedge	*Carex lenticularis* var. *limnophila*	--/--/2B.2	Coastal marshes, swamps, mostly tidal. Found at elevations of 0 to 20 feet (0 to 6 meters).	**Present**	---	Potentially suitable habitat within the BSA; not detected during surveys.
Lassics lupine	*Lupinus constancei*	FE/SE/1B.1	Lower montane coniferous forest on serpentine soils. Found at elevations of 4,920 to 6560 feet (1,500 to 2,000 m).	Absent	---	Outside of known elevation range; not detected during surveys.

Common Name	*Scientific Name*	Status[1] Federal/ State/ CRPR	Habitat/ Elevational Range (feet)	Habitat[2] Present/ Absent	Critical[2] Habitat	Rationale
leafy reed grass	*Calamagrostis foliosa*	--/SR/4.2	Coastal bluff scrub, North Coast coniferous forest. Found at elevations of 0 to 4,005 feet (0 to 1,220 meters).	**Present**	---	Potentially suitable habitat within the BSA; not detected during surveys.
leafy-stemmed mitrewort	*Mitellastra (=Mitella) caulescens*	--/--/4.2	Streambanks, riparian; typically along major streams. Found at elevations of 15 to 5,580 feet (5 to 1,700 meters).	**Present**	---	Potentially suitable habitat within the BSA; not detected during surveys.
Lyngbye's sedge	*Carex lyngbyei*	--/--/2B.2	Brackish or freshwater coastal marshes, swamps, sloughs. Found at elevations of 0 to 35 feet (0 to 10 meters).	**Present**	---	Potentially suitable habitat within the BSA; not detected during surveys.
maple-leaved checkerbloom	*Sidalcea malachroides*	--/--/4.2	Coastal forests, prairie, scrub, riparian woodland, often in disturbed areas. Found at elevations of 0 to 2,395 feet (0 to 730 meters).	**Present**	---	Potentially suitable habitat within the BSA; not detected during surveys.
marsh sandwort	*Arenaria paludicola*	FE/SE/1B.1	Freshwater marshes, wetlands, riparian forest. Found at elevations of 0 to 985 feet (0 to 300 meters).	**Present**	---	Potentially suitable habitat within the BSA; not detected during surveys.
Marshall's saxifrage	*Micranthes marshallii*	--/--/4.3	Riparian forest. Found at elevations of 295 to 6,990 feet (90 to 2,130 meters).	Absent	---	Outside of known elevation range; not detected during surveys.
Mendocino Coast paintbrush	*Castilleja mendocinensis*	--/--/1B.2	Coastal bluff scrub, dunes, prairie and scrub, closed-cone coniferous forest. Found at elevations of 0 to 525 feet (0 to 160 meters).	**Present**	---	Potentially suitable habitat within the BSA; not detected during surveys.

Common Name	*Scientific Name*	Status[1] Federal/ State/ CRPR	Habitat/ Elevational Range (feet)	Habitat[2] Present/ Absent	Critical[2] Habitat	Rationale
Mendocino dodder	*Cuscuta pacifica* var. *papillata*	--/--/1B.2	Dry coastal dunes, on *Lupinus, Gnaphalium, Silene*. Found at elevations of 0 to 165 feet (0 to 50 meters).	Absent	---	No suitable habitat within the BSA; not detected during surveys.
Menzies' wallflower	*Erysimum menziesii*	FE/SE/1B.1	Coastal dunes. Found at elevations of 0 to 115 feet (0 to 35 meters).	Absent	---	No suitable habitat within the BSA; not detected during surveys.
Monterey clover	*Trifolium trichocalyx*	FE/SE/1B.1	Closed-cone coniferous forest (sandy, openings, burned areas). Found at elevations of 0 to 330 feet (0 to 100 meters).	Absent	---	No suitable habitat within the BSA; not detected during surveys.
Monterey Coast paintbrush	*Castilleja latifolia*	--/--/4.3	Openings in cismontane woodlands, closed-cone coniferous forest, coastal dunes, coastal scrub. Found at elevations of 0 to 605 feet (0 to 185 meters).	**Present**	---	Potentially suitable habitat within the BSA; not detected during surveys.
nodding semaphore grass	*Pleuropogon refractus*	--/--/4.2	Lower montane coniferous forest, meadows and seeps, North Coast coniferous forest, riparian forest. Found at elevations of 0 to 5,250 feet (0 to 1,600 meters).	**Present**	---	Potentially suitable habitat within the BSA; not detected during surveys.
North Coast phacelia	*Phacelia insularis* var. *continentis*	--/--/1B.2	Sandy, coastal bluff scrub, prairie and dunes. Found at elevations of 35 to 560 feet (10 to 170 meters).	**Present**	---	Potentially suitable habitat within the BSA; not detected during surveys.

Common Name	*Scientific Name*	Status[1] Federal/ State/ CRPR	Habitat/ Elevational Range (feet)	Habitat[2] Present/ Absent	Critical[2] Habitat	Rationale
Oregon coast paintbrush	*Castilleja litoralis*	--/--/2B.2	Sandy soils in coastal bluff scrub, dunes and scrub. Found at elevations of 50 to 330 feet (15 to 100 meters).	**Present**	---	Potentially suitable habitat within the BSA; not detected during surveys.
Oregon goldthread	*Coptis laciniata*	--/--/4.2	Seeps/springs, forest understory. Found at elevations of 0 to 3,280 feet (0 to 1,000 meters).	**Present**	---	Potentially suitable habitat within the BSA; not detected during surveys.
oval-leaved viburnum	*Viburnum ellipticum*	--/--/2B.3	Chaparral, cismontane woodland, lower montane coniferous forest. Found at elevations of 705 to 4,595 feet (0 to 150 meters).	Absent	---	Outside of known elevation range; not detected during surveys.
Pacific gilia	*Gilia capitata* ssp. *pacifica*	--/--/1B.2	Coastal bluff scrub, chaparral (openings), coastal prairie, valley and foothill grassland. Found at elevations of 15 to 5,465 feet (5 to 1,665 meters).	**Present**	---	Potentially suitable habitat within the BSA; not detected during surveys.
Pacific golden saxifrage	*Chrysosplenium glechomifolium*	--/--/4.3	North Coast coniferous forest, riparian forest. Found at elevations of 35 to 1,770 feet (10 to 520 meters).	**Present**	---	Potentially suitable habitat within the BSA; not detected during surveys.
perennial goldfields	*Lasthenia californica* ssp. *macrantha*	--/--/1B.2	Coastal bluff scrub, coastal dunes, coastal scrub. Found at elevations of 15 to 1,705 feet (5 to 520 meters).	**Present**	---	Potentially suitable habitat within the BSA; not detected during surveys.

Common Name	*Scientific Name*	Status[1] Federal/ State/ CRPR	Habitat/ Elevational Range (feet)	Habitat[2] Present/ Absent	Critical[2] Habitat	Rationale
pink sand-verbena	*Abronia umbellate* var. *brevifolia*	--/--/1B.1	Coastal dune and strand. Found at elevations of 0 to 35 feet (0 to 10 meters).	Absent	---	No suitable habitat within the BSA; not detected during surveys.
Point Reyes blennosperma	*Blennosperma nanum* var. *robustum*	--/--/1B.2	Coastal prairie and scrub. Found at elevations of 35 to 475 feet (10 to 145 meters).	**Present**	---	Potentially suitable habitat within the BSA; not detected during surveys.
Point Reyes ceanothus	*Ceanothus gloriosus* var. *gloriosus*	--/--/4.3	Closed-cone coniferous forest, coastal bluff scrub, coastal dunes, coastal scrub. Found at elevations of 15 to 1,705 feet (5 to 520 meters).	**Present**	---	Potentially suitable habitat within the BSA; not detected during surveys.
Point Reyes horkelia	*Horkelia marinensis*	--/--/1B.2	Coastal dunes, prairies, scrub. Found at elevations of 15 to 2,475 feet (5 to 755 meters).	**Present**	---	Potentially suitable habitat within the BSA; not detected during surveys.
purple-stemmed checkerbloom	*Sidalcea malviflora* ssp. *purpurea*	--/--/1B.2	Coastal prairie, forest openings. Found at elevations of 50 to 280 feet (15 to 85 meters).	**Present**	---	Potentially suitable habitat within the BSA; not detected during surveys.
pygmy cypress	*Hesperocyparis pygmaea*	--/--/1B.2	Closed-cone coniferous forest, only in coastal pygmy forests. Found at elevations of 100 to 1,970 feet (30 to 600 meters).	Absent	---	No suitable habitat within BSA; not detected during surveys.
pygmy manzanita	*Arctostaphylos nummularia* ssp. *mendocinoensis*	--/--/1B.2	Closed-cone coniferous forest, only in coastal pygmy forests. Found at elevations of 295 to 655 feet (90 to 200 meters).	Absent	---	Outside of known elevation range; not detected during surveys.

Common Name	*Scientific Name*	Status[1] Federal/ State/ CRPR	Habitat/ Elevational Range (feet)	Habitat[2] Present/ Absent	Critical[2] Habitat	Rationale
Raiche's manzanita	*Arctostaphylos stanfordiana* ssp. *raichei*	--/--/1B.1	Chaparral, openings in lower montane coniferous forest. Found at elevations of 1,475 to 3,395 feet (450 to 1,035 meters).	Absent	---	Outside of known elevation range; not detected during surveys.
Rattan's milk-vetch	*Astragalus rattanii* var. *rattanii*	--/--/4.3	Chaparral, cismontane woodland, lower montane coniferous forest. Found at elevations of 100 to 2,705 feet (30 to 825 meters).	**Present**	---	Potentially suitable habitat within the BSA; not detected during surveys.
Red Mountain catchfly	*Silene greenei* ssp. *angustifolia*	--/SE/1B.2	Chaparral, lower montane coniferous forest. Found at elevations of 1,395 to 6,840 feet (425 to 2,085 meters).	Absent	---	Outside of known elevation range; not detected during surveys.
Red mountain stonecrop	*Sedum eastwoodiae*	--/--/1B.2	Serpentinite soils in lower montane coniferous forest. Found at elevations between 1,900 to 4,100 feet (579 to 1,250 meters).	Absent	---	No suitable habitat is present. Species not observed during protocol-level botanical surveys
redwood lily	*Lilium rubescens*	--/-4.2	Broadleafed upland forest, chaparral, lower and upper montane coniferous forest, North Coast coniferous forest. Found at elevations of 100 to 6,265 feet (30 to 1,910 meters).	**Present**	---	Potentially suitable habitat within the BSA; not detected during surveys.
robust false lupine	*Thermopsis robusta*	--/--/1B.2	Broadleafed upland forest, North Coast coniferous forest. Found at elevations of 490 to 4,920 feet (150 to 1,500 meters).	Absent	---	Outside of known elevation range; not detected during surveys.

Common Name	*Scientific Name*	Status[1] Federal/ State/ CRPR	Habitat/ Elevational Range (feet)	Habitat[2] Present/ Absent	Critical[2] Habitat	Rationale
round-headed beaked-rush	*Rhynchospora globularis*	--/--/2B.1	Freshwater marshes and swamps. Found at elevations of 150 to 195 feet (45 to 60 meters).	**Present**	---	Potentially suitable habitat within the BSA; not detected during surveys.
round-headed collinsia	*Collinsia corymbosa*	--/--/1B.2	Coastal dunes and prairie. Found at elevations of 0 to 65 feet (0 to 20 meters).	**Present**	---	Potentially suitable habitat within the BSA; not detected during surveys.
running-pine	*Lycopodium clavatum*	--/--/4.1	Forested swamps, roadside ditches in coniferous forests. Found at elevations of 150 to 4,020 feet (45 to 1,225 meters).	**Present**	---	Potentially suitable habitat within the BSA; not detected during surveys.
sea watch	*Angelica lucida*	--/--/4.2	Coastal bluff scrub, coastal dunes, coastal scrub, coastal salt marshes and swamps. Found at elevations of 0 to 490 feet (0 to 150 meters).	**Present**	---	Potentially suitable habitat within the BSA; not detected during surveys.
seacoast ragwort	*Packera bolanderi* var. *bolanderi*	--/--/2B.2	Coastal rocky/gravelly slopes, cliffs, in coastal scrub and coniferous forest habitats. Found at elevations of 100 to 2,135 feet (30 to 650 meters).	**Present**	---	Potentially suitable habitat within the BSA; not detected during surveys.
seaside bittercress	*Cardamine angulata*	--/--/2B.2	Lower montane coniferous forest, North Coast coniferous forest Found at elevations of 50 to 3,000 feet (15 to 915 meters).	**Present**	---	Potentially suitable habitat within the BSA; not detected during surveys.

Common Name	*Scientific Name*	Status[1] Federal/ State/ CRPR	Habitat/ Elevational Range (feet)	Habitat[2] Present/ Absent	Critical[2] Habitat	Rationale
short-leaved evax	*Hesperevax sparsiflora* var. *brevifolia*	--/--/1B.2	Coastal bluff scrub (sandy), coastal dunes. Found at elevations of 0 to 705 feet (0 to 215 meters).	**Present**	---	Potentially suitable habitat within the BSA; not detected during surveys.
showy Indian clover	*Trifolium amoenum*	FE/--/1B.1	Wetlands, valley grasslands, riparian forest. Found at elevations of 0 to 330 feet (0 to 100 meters).	**Present**	---	Potentially suitable habitat within the BSA; not detected during surveys.
small groundcone	*Kopsiopsis hookeri*	--/--/2B.3	Dry forest and chaparral habitats. Found at elevations of 295 to 2,905 feet (90 to 885 meters).	**Present**	---	Potentially suitable habitat within the BSA; not detected during surveys.
sticky pea	*Lathyrus glandulosus*	--/--/4.3	Cismontane woodland. Found at elevations of 985 to 2,625 feet (300 to 800 meters).	**Present**	---	Potentially suitable habitat within the BSA; not detected during surveys.
streamside daisy	*Erigeron biolettii*	--/--/3	Broadleafed upland forest, cismontane woodland, North Coast coniferous forest. Found at elevations of 100 to 3,610 feet (30 to 1,100 meters).	**Present**	---	Potentially suitable habitat within the BSA; not detected during surveys.
swamp harebell	*Eastwoodiella californica*	--/--/1B.2	Bogs and fens, mesic coniferous forest, meadows and seeps, freshwater marshes and swamps. Found at elevations of 5 to 1,330 feet (1 to 405 meters).	**Present**	---	Potentially suitable habitat within the BSA; not detected during surveys.

Common Name	*Scientific Name*	Status[1] Federal/ State/ CRPR	Habitat/ Elevational Range (feet)	Habitat[2] Present/ Absent	Critical[2] Habitat	Rationale
Thurber's reed grass	*Calamagrostis crassiglumis*	--/--/2B.1	Marshy swales, mesic coastal prairie and scrub. Found at elevations of 35 to 195 feet (10 to 60 meters).	**Present**	---	Potentially suitable habitat within the BSA; not detected during surveys.
Tracy's tarplant	*Hemizonia congesta* ssp. *tracyi*	--/--/4.3	Coastal prairie, lower montane coniferous forest, North Coast coniferous forest. Found at elevations of 395 to 3,935 feet (120 to 1,200 meters).	Absent	---	Outside of known elevation range; not detected during surveys.
trifoliate laceflower	*Tiarella trifoliata* var. *trifoliata*	--/--/3.2	Edges, moist shady streambanks in lower montane and North Coast coniferous forests. Found at elevations of 560 to 4,920 feet (170 to 1,500 meters).	Absent	---	Outside of known elevation range; not detected during surveys.
Vine Hill ceanothus	*Ceanothus foliosus* var. *vineatus*	--/--/1B.1	Chaparral. Found at elevations of 150 to 1,000 feet (45 to 305 meters).	Absent	---	No suitable habitat within the BSA; not detected during surveys.
Wailaki lomatium	*Lomatium kogholiini*	--/--/1B.2	Lower montane coniferous forest. Found at elevations of 1,475 to 4,100 ft (450 to 1,250 m).	Absent	---	Outside of known elevation range; not detected during surveys.
white beaked-rush	*Rhynchospora alba*	--/--/2B.2	Bogs, swamps, fens, forest wetlands. Found at elevations of 195 to 6,695 feet (60 to 2,040 meters).	**Present**	---	Potentially suitable habitat within the BSA; not detected during surveys.

Common Name	*Scientific Name*	Status[1] Federal/ State/ CRPR	Habitat/ Elevational Range (feet)	Habitat[2] Present/ Absent	Critical[2] Habitat	Rationale
white-flowered rein orchid	*Piperia candida*	--/--/1B.2	Coniferous forests in Northwest CA. Found at elevations of 100 to 4,300 feet (30 to 1,310 meters).	**Present**	---	Potentially suitable habitat within the BSA; not detected during surveys.
Whitney's farewell-to-spring	*Clarkia amoena* ssp. *whitneyi*	--/--/1B.1	Coastal bluff scrub and coastal scrub. Found at elevations of 35 to 330 feet (10 to 100 meters).	**Present**	---	Potentially suitable habitat within the BSA; not detected during surveys.
Wolf's evening-primrose	*Oenothera wolfii*	--/--/1B.1	Variety of coastal habitats that are sandy and mesic, such as coastal dunes, prairies, bluff scrub, and lower montane coniferous forest. Found at elevations of 10 to 2,625 feet (3 to 800 meters).	**Present**	---	Potentially suitable habitat within the BSA; not detected during surveys.
NON-VASCULAR PLANTS AND FUNGI						
angel's hair lichen	*Ramalina thrausta*	--/--/2B.1	Coniferous forests in Northwest CA. Found at elevations of 245 to 1,410 feet (75 to 430 meters).	Absent	---	Outside of known elevation range; not detected during surveys.
Methuselah's beard lichen	*Usnea longissima*	--/--/4.2	Old-growth Douglas-fir limbs in redwood forests along the Pacific coast. Found at elevations of 165 to 4,790 feet (50 to 1,460 meters).	**Present**	---	Potentially suitable habitat within the BSA; not detected during surveys.

[1]Status:

Federal status: FE = Endangered

State status: ST = State Threatened; SE = State Endangered; SR = State Rare

California Rare Plant Rank (CRPR): 1B = rare, threatened, or endangered in California and elsewhere; 2B = rare, threatened, or endangered in California but more common elsewhere; 3 = more information is needed (Review List); 4 = limited distribution (Watch List)

CRPR Threat Ranking: 0.1 = seriously endangered in California, 0.2 = fairly endangered in California, 0.3 = not very endangered in California.

[2]Habitat:

Absent = Absent: no habitat present and no further work needed.

Present = Present: the species is present.

CH = Critical Habitat: the project is located within a designated critical habitat unit, but does not necessarily mean that appropriate habitat is present.

Table 1. Special Status Animals and Critical Habitat Potentially Occurring within the Project Area

Common Name	*Scientific Name*	Status[1] Federal/ State	General Habitat Description	Suitable Habitat[2] Present/ Absent/	Critical Habitat[2]/ Essential Fish Habitat Present/ Absent	Rationale
AMPHIBIANS and REPTILES						
Foothill yellow-legged frog–North Coast DPS (pop. 1)	*Rana boylii*	--/SSC	In/near rocky streams with cool and ephemeral to permanent water, in a variety of habitats; may be found in isolated pools.	**Present**	---	Suitable habitat only present within BSA at PM 84.10 within and along tributary to Hardy Creek. Suitable habitat is absent within ESL at PM 84.10.
Green sea turtle–East Pacific DPS	*Chelonia mydas*	FT/-	Found in tropical and subtropical waters, shallows, bays and inlets; does not nest in mainland U.S. Pacific Coast.	Absent	---	No suitable habitat within BSA.
Leatherback sea turtle	*Dermochelys coriacea*	FE/-	Mainly pelagic, but also forages in coastal waters; does not nest in mainland U.S. Pacific Coast	Absent	CH Absent	No suitable habitat within BSA.
Northern red-legged frog	*Rana aurora*	--/SSC	Densely vegetated shorelines, quiet pools in streams and marshes, occasionally ponds, in North Coast below 400 feet.	**Present**	---	Suitable habitat present within BSA at all culvert systems in perennial streams. Suitable habitat present within ESL in perennial streams at PMs 76.20, 76.52, and 76.81.

Common Name	*Scientific Name*	Status[1] Federal/ State	General Habitat Description	Suitable Habitat[2] Present/ Absent/	Critical Habitat[2]/ Essential Fish Habitat Present/ Absent	Rationale
Western (aka Northwestern) pond turtle	*Actinemys [Emys] marmorata*	FPT/SSC	Found in a variety of aquatic habitats, preferring habitats with large areas for cover and basking sites. Overwinters terrestrially in burrows of leaf litter or soil.	**Present**	---	Suitable dispersal habitat present within BSA along banks and bed of Chadbourne Gulch at PM 75.47, but absent within ESL. Suitable dispersal habitat present within BSA and ESL at PMs 76.20, 76.52, and 76.81. Suitable dispersal habitat present within BSA along banks and bed of tributary to Hardy Creek at PM 84.10, but absent within ESL.
Olive Ridley sea turtle	*Lepidochelys olivacea*	FT/--	Open ocean, but has been known to inhabit coastal areas, including bays and estuaries.	Absent	---	No habitat within the BSA.
Pacific (Coastal) tailed frog	*Ascaphus truei*	--/SSC	Cool, perennial, swiftly flowing streams in redwood, Douglas-fir, and yellow pine forests.	**Present**	---	Suitable habitat only present within BSA at PM 84.10 within and along tributary to Hardy Creek. Suitable habitat is absent within ESL at PM 84.10.
Red-bellied newt	*Taricha rivularis*	--/SSC	Coastal drainages from Humboldt County south to Sonoma County, and inland to Lake County. Found in coastal woodlands and redwood forests; breed in streams with rocky substrate and fast flows.	**Present**	---	Suitable habitat only present within BSA at PM 84.10 within and along tributary to Hardy Creek. Suitable habitat is absent within ESL at PM 84.10.

Common Name	*Scientific Name*	Status[1] Federal/ State	General Habitat Description	Suitable Habitat[2] Present/ Absent/	Critical Habitat[2]/ Essential Fish Habitat Present/ Absent	Rationale
Southern torrent salamander	*Rhyacotriton variegatus*	--/SSC	Cold, well-shaded, permanent streams and seepages, or within splash zone or on moss-covered rock within trickling water.	**Present**	---	Suitable habitat only present within BSA at PM 84.10 within and along tributary to Hardy Creek. Suitable habitat is absent within ESL at PM 84.10.
BIRDS						
American (aka Northern) goshawk	*Accipiter atricapillus*	--/SSC	Nests and forages in mature coniferous forests with dense canopy and open understory.	Absent	---	No suitable habitat within BSA; outside of elevation range.
Bald eagle	*Haliaeetus leucocephalus*	FD/SE, FP	Ocean shore, lake margins, and rivers for both nesting and wintering. Typically nests within 1 mile of water, in large, old-growth, or dominant live trees with open branches. Roost communally in winter. This species is also protected under the Federal Bald and Golden Eagle Protection Act.	**Present**	---	Low potential for the species to nest in redwood and Douglas-fir snags and tops of trees within the BSA at PM 84.10.
Hawaiian petrel	*Pterodroma sandwichensis*	FE/-	Breeds exclusively on Hawaiian Islands in hillside burrows. Forages and migrates to waters in the east Pacific, occasionally on the shores of California.	Absent	---	No suitable habitat within BSA.

Common Name	*Scientific Name*	Status[1] Federal/ State	General Habitat Description	Suitable Habitat[2] Present/ Absent/	Critical Habitat[2]/ Essential Fish Habitat Present/ Absent	Rationale
Marbled murrelet	*Brachyramphus marmoratus*	FT/SE	Mature, coastal coniferous forests for nesting up to 35 miles inland; nearby coastal water for foraging; winters on subtidal and pelagic waters often well offshore.	**Present**	CH Absent	Roosting habitat present within visual and noise disturbance BSA. Nearest known occurrence is approximately 0.15 mile north-northwest of BSA at PM 84.10. Critical habitat is located approximately 7.4 miles southeast of BSA at PM 84.10.
Northern spotted owl	*Strix occidentalis caurina*	FT/ST	Nests and roosts in dense old-growth or mature forests dominated by conifers with topped trees or oaks available for nesting crevices.	**Present**	CH Absent	Roosting and nesting habitat present within visual and noise disturbance BSA at PM 84.10. Nearest known occurrence is approximately 11.31 miles east of BSA at PM 84.10. Critical habitat is located approximately 6 miles east of BSA at PM 84.10.
Purple martin	*Progne subis*	--/SSC	Nests in abandoned woodpecker holes in trees in a variety of wooded and riparian habitats, and vertical drainage holes under elevated freeways and highway bridges.	**Present**	---	Low potential for the species to nest within the BSA in snags or hollows of mature redwoods or Douglas-fir at PM 84.10.

Common Name	*Scientific Name*	Status[1] Federal/ State	General Habitat Description	Suitable Habitat[2] Present/ Absent/	Critical Habitat[2]/ Essential Fish Habitat Present/ Absent	Rationale
Vaux's swift	*Chaetura vauxi*	--/SSC	Forages over most terrains and habitats but shows a preference for foraging over rivers and lakes. Prefers redwood, Douglas-fir, and other coniferous forests where they nest in large hollow trees and snags. Often nest in flocks.	**Present**	---	Low potential for the species to nest within the BSA in snags or hollows of mature redwoods or Douglas-fir at PM 84.10
Western snowy plover–Pacific Coast DPS	*Charadrius nivosus nivosus*	FT/SSC	Coastal beaches above the normal high tide limit with wood or other debris for cover. Inland shores of salt ponds and alkali or brackish inland lakes.	Absent	CH Absent	No suitable foraging or breeding habitat within the BSA. Nearest critical habitat is approximately 4.2 miles southwest at MacKerricher State Beach.
Yellow-billed cuckoo–Western U.S. DPS	*Coccyzus americanus occidentalis*	FT/SE	Wide, dense riparian forests with a thick understory of willows for nesting; sites with a dominant cottonwood overstory are preferred for foraging; may avoid valley oak-riparian habitats where scrub jays are abundant.	Absent	CH Absent	No dense riparian multi-layered forests were detected for suitable nesting or foraging habitat within the BSA. Nearest critical habitat is approximately 92 miles east along the Sacramento River.

Common Name	*Scientific Name*	Status[1] Federal/ State	General Habitat Description	Suitable Habitat[2] Present/ Absent/	Critical Habitat[2]/ Essential Fish Habitat Present/ Absent	Rationale
White-tailed kite	*Elanus leucurus*	--/FP	Resident in the Central Valley and entire California coast in a variety of habitats with abundant prey. Nests in dense, relatively large stands of riparian, redwood, and Douglas-fir trees.	**Present**	---	Low potential for the species to nest within the BSA in snags or hollows of mature redwoods or Douglas-fir at PM 84.10
Yellow warbler	*Dendroica petechia*	--/SSC	Nests in riparian deciduous habitats containing cottonwoods, willows, alders, and other small trees and shrubs typical of low, open-canopy riparian woodland habitats. Territories often include tall trees for singing and foraging with a heavy brush understory for nesting.	**Present**	---	Low potential for this species to nest within the BSA in riparian habitat at Chadbourne Gulch, adjacent to PM 75.47.
Yellow-breasted chat	*Icteria virens*	--/SSC	Summer resident; inhabits riparian thickets of willow and other brushy tangles near watercourses. Nests in low, dense riparian, consisting of willow, blackberry, wild grape; forages and nests within 10 feet of ground.	**Present**	---	Low potential for this species to nest within the BSA in riparian habitat at Chadbourne Gulch, adjacent to PM 75.47.

Common Name	*Scientific Name*	Status[1] Federal/ State	General Habitat Description	Suitable Habitat[2] Present/ Absent/	Critical Habitat[2]/ Essential Fish Habitat Present/ Absent	Rationale
FISH						
Chinook salmon– California Coastal ESU	*Oncorhynchus tshawytscha*	FT/-	Ocean and coastal streams.	Absent	CH Absent EFH Absent	Not known to occur in any of the drainages within the BSA.
Coho salmon– Southern Oregon/Northern California Coast ESU	*Oncorhynchus kisutch*	FT/ST	Cool, freshwater streams and rivers; requires sand and gravel for spawning. Streams, rivers between Cape Blanco, OR, and Punta Gorda, Humboldt County, CA.	Absent	CH Absent EFH Absent	Not known to occur in any of the drainages within the BSA.
Coho salmon– Central California Coast ESU (pop. 4)	*Oncorhynchus kisutch*	FE/SE	Cool freshwater streams and rivers, requires sand and gravel for spawning.	Present	CH Present EFH Present	Suitable habitat is present within the salmonid BSA at two locations: Hardy Creek and its tributaries (approximately 30 feet downstream of the culvert at PM 84.10) and Chadbourne Gulch (within the ESL downstream of the culvert outlet at PM 75.47). Suitable foraging and rearing habitat are present, however spawning habitat is not present.

Common Name	*Scientific Name*	Status[1] Federal/ State	General Habitat Description	Suitable Habitat[2] Present/ Absent/	Critical Habitat[2]/ Essential Fish Habitat Present/ Absent	Rationale
North American green sturgeon–Southern DPS	*Acipenser medirostris*	FT/--	Found in Klamath River, Mad River, Redwood Creek, and in small numbers in Smith River and Humboldt Bay tributaries. Spawn in lower reaches of coastal rivers with moderate water velocities and bottom of pea-sized gravel, sand, and woody debris.	Absent	CH Absent	Not known to occur in any of the culverts or drainages within the BSA. The amount of sediment entering into critical habitat for sturgeon from construction in these drainages is discountable due to the relatively high project area elevation above the ocean high tide. “No effect” on this DPS of green sturgeon.
Pacific lamprey	*Entosphenus tridentatus*	--/SSC	Parasitic. Forages in marine waters; spawns in gravel bottomed streams at the upstream end of riffle habitat. Spawning occurs between March and July depending upon location within their range.	**Present**	---	Marginally suitable migration/dispersal habitat present within the BSA in Chadbourne Gulch. Not known to occur and no suitable habitat present within the ESL.
Steelhead-Northern California DPS–**summer-run** (pop. 48)	*Oncorhynchus mykiss irideus*	FT/SE	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.	Absent	CH Absent	The BSA is outside the range of this species.

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Steelhead-Northern California DPS– **winter-run** (pop. 49)	*Oncorhynchus mykiss irideus*	FT/--	Cool freshwater streams and rivers, requires sand and gravel for spawning.	Present	CH Present	Suitable habitat is present within the salmonid BSA at two locations: Hardy Creek and its tributaries (approximately 110 feet downstream of the culvert at PM 84.10) and Chadbourne Gulch (approximately 30 feet downstream of the culvert outlet at PM 75.47). Suitable foraging and rearing habitat are present, however spawning habitat is not present.
Tidewater goby	*Eucyclogobius newberryi*	FE/-	On bottom or existing on submerged plants in shallow weedy areas of coastal lagoons and estuaries.	Absent	CH Absent	No suitable foraging, rearing, or spawning habitat is present within the BSA. eDNA analysis indicated no presence in Chadbourne Gulch.
MARINE MAMMALS						
Blue whale	*Balaenoptera musculus*	FE/-	Frequently found on the continental shelf off the California coast in coastal and pelagic habitats.	Absent	--	There is no suitable habitat within the BSA for this species.
Fin whale	*Balaenoptera physalus*	FE/-	Deep, offshore waters of all major oceans, primarily in temperate to polar latitudes, and less commonly in the tropics. Fin whales are migratory, moving seasonally into and out of high-latitude feeding areas.	Absent	--	There is no suitable habitat within the BSA for this species.

Common Name	*Scientific Name*	Status[1] Federal/ State	General Habitat Description	Suitable Habitat[2] Present/ Absent/	Critical Habitat[2]/ Essential Fish Habitat Present/ Absent	Rationale
Guadalupe fur seal	*Arctocephalus townsendi*	FT/ST	Rocky insular shorelines and sheltered coves. Breeds primarily on Guadalupe Island, Mexico.	Absent	--	There is no suitable habitat within the BSA for this species.
Humpback whale	*Megaptera novaeangliae*	FE/-	Open waters, this species' feeding grounds are generally in cold, productive waters.	Absent	Absent	There is no suitable habitat within the BSA for this species.
Killer whale – Southern Resident DPS	*Orcinus orca*	FE/-	Cold, coastal waters in winter and spring from Monterey Bay to southeastern Alaska	Absent	Absent	There is no suitable habitat within the BSA for this species.
North Pacific right whale	*Eubalaena japonica*	FE/-	Open waters. Most known nursery areas are in shallow, coastal waters.	Absent	Absent	There is no suitable habitat within the BSA for this species.
Sei whale	*Balaenoptera borealis*	FE/-	Offshore waters of all major oceans, primarily in temperate to polar latitudes, and less commonly in the tropics. Migratory, moving seasonally into and out of high-latitude feeding areas.	Absent	Absent	There is no suitable habitat within the BSA for this species.

Common Name	*Scientific Name*	Status[1] Federal/ State	General Habitat Description	Suitable Habitat[2] Present/ Absent/	Critical Habitat[2]/ Essential Fish Habitat Present/ Absent	Rationale
Sperm whale	*Physeter catodon (=macrocephalus)*	FE/-	Deeper, offshore waters of all major oceans, primarily in temperate to polar latitudes, and less commonly in the tropics. Migratory, moving seasonally into and out of high-latitude feeding areas.	Absent	Absent	There is no suitable habitat within the BSA for this species.
MAMMALS						
Pacific fisher–West Coast DPS	*Pekania pennanti*	--/SSC	Intermediate to large-tree stages of coniferous forests and deciduous-riparian areas with high percent canopy closure. They utilize cavities, snags, logs and rocky areas for cover and denning.	**Present**	---	While the BSA at PM 84.10 is within the current range, there is no suitable denning or nesting habitat present, only dispersal habitat.
Pacific (Humboldt) marten	*Martes caurina*	FT/SE	Occurs only in the coastal redwood zone from the Oregon border south to Sonoma County. Associated with late-successional coniferous forests, prefers forests with low, overhead cover.	Absent	CH Absent	BSA is outside the current range of this species (personal communication, 2023, with Gregory Schmidt, USFWS).
Pallid bat	*Antrozous pallidus*	--/SSC	Day roost in caves, crevices, and mines, and occasionally in hollow trees and buildings throughout western California at lower and mid elevations.	**Present**	---	Low potential for the species to roost in basal hollows of redwoods within the BSA at PM 84.10. No roosting habitat in trees within the ESL.

Common Name	*Scientific Name*	Status[1] Federal/ State	General Habitat Description	Suitable Habitat[2] Present/ Absent/	Critical Habitat[2]/ Essential Fish Habitat Present/ Absent	Rationale
Ringtail	*Bassariscus astutus*	--/FP	A mixture of forest and shrubland in close association with rocky areas or riparian habitats. Dens in rock recesses, hollow trees, logs, snags, abandoned burrows, or woodrat nests at low to middle elevations. Usually not found more than 0.6 mile (1 km) from permanent water.	**Present**	---	Low potential for the species to den in downed logs or basal hollows of redwoods within the BSA at PM 84.10. No denning habitat within the ESL.
Sonoma tree vole	*Arborimus pomo*	--/SSC	Coastal forests in mature, old-growth forests of Douglas-fir, redwood, or montane hardwood-conifer species. Prefers larger trees with greater canopy cover and wide limbs to support nests.	**Present**	---	Low potential for the species to nest in broken treetops and base of limbs of Douglas-fir trees within the BSA at PM 84.10.
Townsend's big-eared bat	*Corynorhinus townsendii*	--/SSC	Caves, mines, tunnels, large old-growth trees with large cavities, bridges, buildings along coast.	**Present**	---	Low potential for the species to roost in basal hollows of redwoods within the BSA at PM 84.10. No roosting habitat in trees within the ESL.
Western red bat	*Lasiurus blossevillii*	--/SSC	Roosts primarily in trees, 2-40 feet above ground, from sea level up through mixed conifer forests. Prefers habitat edges and mosaics with trees that are protected from above and open below with open areas for foraging.	**Present**	---	Low potential for the species to roost in basal hollows of redwoods within the BSA at PM 84.10. No roosting habitat in trees within the ESL.

Common Name	*Scientific Name*	Status[1] Federal/ State	General Habitat Description	Suitable Habitat[2] Present/ Absent/	Critical Habitat[2]/ Essential Fish Habitat Present/ Absent	Rationale
INVERTEBRATES						
Crotch's bumble bee	*Bombus crotchii*	--/SCE	Open grasslands and meadows. Generalist foragers.	Absent	---	Outside of range established in current survey guidelines.
Western bumble bee	*Bombus occidentalis*	--/SCE	Generalist foragers. Nests in underground cavities and in open west-southwest slopes.	Absent	---	Outside of range established in current survey guidelines.
Monarch butterfly- overwintering population	*Danaus plexippus*	FC/-	Migratory species of butterfly known to overwinter in a variety of habitat types along coastal California, including Humboldt County. Overwintering habitat consists of a grove of trees with the necessary microclimate typically within 1.5 miles of the coast	Absent	--	The BSAs lack suitable overwintering habitat, and no larval host plants (*Asclepias* spp.) were observed within the BSAs.

[1] Federal Status: FE = Endangered; FPT = Proposed Threatened; FT = Threatened; FC = Candidate; DL = Delisted

State Status: SE = Endangered; ST = Threatened; SCT = State Candidate Threatened; SCE = State Candidate Endangered; FP = CDFW Fully Protected; SSC = CDFW Species of Special Concern; SR = State Rare

(*Source: USFWS 2024; NMFS-NOAA 2024, CDFW-CNDDB 2024)*

[2] Habitat:
Absent = Absent: no habitat present and no further work needed.
Present = Present: the species is present.
CH = Critical Habitat: the project is located within a designated critical habitat unit, but does not necessarily mean that appropriate habitat is present.
EFH = Essential Fish Habitat

