State Route 1 Drainage System Restoration Project



Initial Study with Negative Declaration

SONOMA COUNTY, CALIFORNIA
DISTRICT 4 – SON – 1 (PM 0.97-28.73)
04-1K720/0416000306

Prepared by the
State of California, Department of Transportation

June 2023

Caltrans

General Information about this Document

What's in this document: The California Department of Transportation (Caltrans) would replace culverts at 15 locations and improve drainage at two additional locations for the State Route (SR) 1 Drainage System Restoration Project (Project). The Project is located along SR 1 and extends from approximately 1.7 miles south of Freestone-Valley Ford Road to approximately 2.4 miles north of Meyers Grade Road in Sonoma County. The Project is located between post miles (PMs) 0.97 and 28.73.

Caltrans is the lead agency under the California Environmental Quality Act (CEQA). This IS/ND describes why Caltrans proposes the Project, how the existing environment could be affected by the Project, potential environmental impacts, and the Project features and avoidance and minimization measures that would reduce, avoid, and/or minimize Project impacts.

The IS/ND was circulated to the public for 40 days beginning on May 4, 2023, and ending on June 12, 2023. No comments were received during the public comment period.

The Project has been granted environmental approval and funding will be obtained. Caltrans will proceed to the Project Design Phase and construct all or part of the Project.

Alternative Formats:

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An accessible electronic copy of this IS/ND is available to download at the District 4 Environmental Documents by County website (https://dot.ca.gov/caltrans-near-me/district-4/d4-popular-links/d4-environmental-docs).

Initial Study with Negative Declaration

SCH: 2023050142

04-SON-1	0.97-28.73	04-1K720
Dist. – Co. – Rte.	PM	E.A.

Project title:	State Route 1 Drainage System Restoration Project
Lead agency name and address:	California Department of Transportation 111 Grand Avenue, Oakland, CA 94612
Contact person and phone number:	Maxwell Lammert, Acting Office Chief (510) 506-9862
Project location:	Sonoma County
General plan description:	Highway
Zoning:	Transportation Corridor
Other public agencies whose approval is required (e.g., permits, financial approval, or participation agreements)	Bay Area Air Quality Management District California Coastal Commission or Sonoma County California Department of Fish and Wildlife California Department of Parks and Recreation California Transportation Commission National Marine Fisheries Service North Coast Regional Water Quality Control Board U.S. Army Corps of Engineers U.S. Fish and Wildlife Service

The IS/ND, maps, and Project information are available to download at the District 4 Environmental Documents by County website (https://dot.ca.gov/caltrans-near-me/district-4/d4-popular-links/d4-environmental-docs).

Maxwell Lammert

Maxwell Lammert
Acting Chief, Office of Environmental Analysis
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6/23/2023
Date

To obtain a copy in Braille, in large print, on audiocassette, or on computer disk, please mail Caltrans, District 4, ATTN: Arnica MacCarthy, Senior Environmental Planner, P.O. Box 23660, MS-8B, Oakland, CA 94623-0660; email Arnica.MacCarthy@dot.ca.gov or call **California Relay Service** at **(800) 735-2929 (TTY)**, **(800) 735-2922 (Voice)**, or **711**.

Negative Declaration

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Project Description

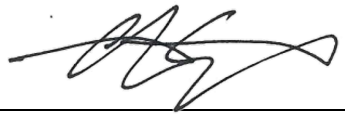
The California Department of Transportation (Caltrans) would replace culverts at 15 locations and improve drainage at two additional locations for the State Route (SR) 1 Drainage System Restoration Project (Project). The Project is located along SR 1 and extends from approximately 1.7 miles south of Freestone-Valley Ford Road to approximately 2.4 miles north of Meyers Grade Road in Sonoma County. The Project is located between post miles 0.97 and 28.73. The Project would also include installing rock slope protection, flared end sections, and drainage inlets, as well as constructing concrete headwalls and excavating and regrading slopes and ditches. Additional Project information is provided in Chapter 2.

Determination

Caltrans has prepared this IS/ND for the Project and, following public review, Caltrans has determined from this study that the Project would not have a significant effect on the environment for the following reasons:

- The Project will have no impacts on geology and soils, mineral resources, population and housing, recreation, tribal cultural resources and utilities and service systems.

- The Project will have less than significant impacts on aesthetics, agriculture and forest resources, air quality, biological resources, cultural resources, energy, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, land use and planning, noise, public services, transportation, and wildfire.



June 23, 2023

Christopher Caputo
Acting Deputy District Director
Division of Environmental Planning and Engineering
California Department of Transportation, District 4

Date

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List of Abbreviated Terms

Abbreviation	Definition
ABAG	Association of Bay Area Governments
AES	aesthetics
AMM	avoidance and minimization measure
APE	area of potential effects
AQ	air quality
BIO	biology
BMP	best management practice
Caltrans	California Department of Transportation
CEQA	California Environmental Quality Act
CH_4	methane
CO_2	carbon dioxide
CRLF	California red-legged frog
CULT	cultural
dBA	A-weighted decibel
DI	drainage inlet
DP	Director's Policy
DSA	disturbed soil area
DTSC	California Department of Toxic Substances Control
ESA	environmentally sensitive area
EIR	environmental impact report
FES	flared end section
FIGR	Federated Indians of Graton Rancheria
FYLF	foothill yellow-legged frog
GHG	greenhouse gas
IS/ND	Initial Study with Negative Declaration

Abbreviation	Definition
L_{max}	maximum hourly noise level
MAMU	marbled murrelet
MTC	Metropolitan Transportation Commission
N_2O	nitrous oxide
NAHC	Native American Heritage Commission
NB	northbound
NIS	new impervious surface
NNI	net new impervious
NPDES	National Pollutant Discharge Elimination System
NSO	northern spotted owl
PDE	permanent drainage easement
PF	Project feature
PM	post mile
PQS	Professionally Qualified Staff
ROW	right of way
RSP	rock slope protection
RWQCB	Regional Water Quality Control Board
SCTA	Sonoma County Transportation Authority
SHOPP	State Highway Operation and Protection Program
SNPL	snowy plover
SR	State Route
SSP	standard special provision
SWRCB	State Water Resources Control Board
TCDS	temporary creek diversion system
TCE	temporary construction easement
TMP	Traffic Management Plan

Abbreviation	Definition
TRANS	transportation and traffic
USEPA	United States Environmental Protection Agency
VMT	vehicle miles traveled
WPCP	Water Pollution Control Program
WQ	water quality

Chapter 1 Proposed Project

1.1 Introduction

The California Department of Transportation (Caltrans) is the lead agency under the California Environmental Quality Act (CEQA) for the State Route (SR) 1 Drainage System Restoration Project (Project) and has prepared this Initial Study with Negative Declaration (IS/ND). The Project is located along SR 1 and extends from approximately 1.7 miles south of Freestone-Valley Ford Road to approximately 2.4 miles north of Meyers Grade Road, in Sonoma County (Figures 1-1 through 1-3; figures are presented in Appendix A). The Project is located between post miles (PMs) 0.97 and 28.73. The approximately 27.76-mile stretch along SR 1 encompassing the culverts and staging areas is referred to herein as the "Project corridor."

Caltrans would replace aging and degrading culverts at 15 locations within the Project limits. The Project would also include improving drainage at two additional locations; installing rock slope protection (RSP), flared end sections (FESs), and drainage inlets (DIs); as well as constructing concrete headwalls and excavating and regrading slopes and ditches as needed. To construct this Project, Caltrans would use eight staging areas within the Project corridor.

The Project would be funded by the State Highway Operation and Protection Program (SHOPP) under program code 201.151 (Drainage System Restoration) for the 2023/2024 construction fiscal year. The Project total cost estimate, including capital and support costs, is $6,481,000.00.

1.2 Purpose and Need

The purpose of the Project is to replace aging and degrading culverts, thus restoring drainage flow and preventing culvert failure.

The Project is needed due to the existing culverts exhibiting structural deficiency due to corrosion, deformation, and/or abrasion damage. Additionally, the culverts have exceeded their service life. If not addressed, these conditions would lead to lack of hydraulic capacity on SR 1 that could threaten the integrity of SR 1, and thereby safety of the traveling public on, and the ongoing usability of, SR 1.

SR 1 is an important coastal connector between local residents and businesses in unincorporated Sonoma County (and the only road connecting several coastal communities). The loss of hydraulic capacity could affect access of travelling public, visitors, local residents, emergency services, etc., to these destinations and communities throughout Sonoma County if not addressed.

1.3 Existing Project Components

Caltrans Maintenance staff conducted routine inspections and evaluations of culverts at 18 locations within the Project limits (PM 0.97 to PM 28.73) to help track the condition/functionality of the culverts. Caltrans Maintenance staff determined that the culverts exhibited structural deficiencies, and as a result of this analysis, the Caltrans Office of Hydraulic Engineering recommended that the Project replace the culverts within the Project limits.

The culvert at Location 16 (PM 23.42) was replaced under another project (Expense Authorization [EA] 04-0Q700) and was therefore removed from this Project's scope of work; there is no further discussion in this IS/ND of the culvert at Location 16 (PM 23.42). Location 16 will now refer to the culvert at PM 27.75.

Table 1-1. Existing Project Components

Location	Location Name	Post Mile	Existing Culvert Length (feet)	Existing Culvert Diameter (inches)	Existing Culvert Type	RSP	Headwall	Flared End Section	Drainage Inlet
1	1	0.97	52	18	CSP	None	None	None	None
2	2	1.23	46	24	CSP	None	None	None	None
3	3	1.44	48	18	CSP	None	None	None	None
4	4	1.48	47	18	CSP	None	East of NB Lane	None	None
5	5	1.60	47	18	CSP	None	None	None	None
6	6	1.65	49	18	CSP	None	None	None	None
7	7	1.69	56	24	CSP	None	None	None	None
8	8	3.46	57	24	CSP	None	East of NB Lane	None	None
9	9	11.67	48	18	CSP	None	None	None	None
10	10	12.75	44	18	CSP	None	East of NB Lane	None	None
11	11	13.35	40	18	CSP/CSPDD	None	East of NB Lane	None	None
12	12	14.82	83	36	CSP	None	None	None	East of NB Lane
13	13	20.71	68	24	CSP	None	West of SB Lane	East of NB Lane	None
14	14	20.76	43	18	CSP	None	None	None	None
15	15	23.08	40	18	CSP	None	None	None	None
16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
17	16	27.65	15	18	Longitudinal CSP	None	None	None	East of NB Lane
18	17	28.73	30	18	CSP/RPC	None	None	West of SB Lane	East of NB Lane

Notes:
APC = alternative pipe culvert
CSP = corrugated steel pipe
CSPDD = corrugated steel pipe down drain
N/A = not applicable
NB = northbound
PSC = polymeric sheet coating
RCP = reinforced concrete pipe
RSP = rock slope protection
SB = southbound

Chapter 2 Project Description

2.1 Introduction

Caltrans would replace culverts at 15 locations on SR 1 in Sonoma County. The Project would also include improving drainage systems at two additional locations, installing rock slope protection (RSP), flared end sections (FESs), and drainage inlets (DIs), as well as constructing concrete headwalls and excavating and regrading slopes and ditches. The Project footprint would encompass the maximum extent of construction-related activities, including staging (at eight locations) and disturbed areas, and would be approximately 0.35 acre (Figure 1-3).

2.2 Project Components

The following subsections describe the Project components, which are also shown in Figure 1-3.

2.2.1 Culvert Work

The Project would remove and replace the existing culverts at 15 locations, and improve drainage systems at two additional locations, as detailed in Table 2-1 and shown in Figure 1-3. The culverts at Locations 1 through 15 would be replaced in kind, or upgraded to provide adequate drainage capacity. The Project would remove the existing inlet and longitudinal pipe east of the northbound (NB) lane of SR 1 at Location 16 (PM 27.65) and replace it with either a concrete lined ditch or a longitudinal pipe system. The Project would install a new roadside culvert east of the NB lane of SR 1 at Location 17 (PM 27.83). Replacement culvert lengths would be finalized during the Project design phase.

Table 2-1. Culverts

Location	Location Name	Post Mile	Culvert Length (feet)	Culvert Diameter (inches)	Culvert Type	Culvert Work
1	1	0.97	45	24	APC	Construct headwall east of NB lane; Install FES west of the SB lane; Remove and replace culvert
2	2	1.23	44	24	APC	Construct headwall east of NB lane; Install FES west of the SB lane; Remove and replace culvert
3	3	1.44	45	30	APC	Construct headwall east of NB lane; Install FES west of the SB lane; Remove and replace culvert
4	4	1.48	46	24	APC	Install FES west of the SB lane; Remove and replace culvert
5	5	1.60	45	18	APC	Install FES east of the NB lane and west of the SB lane; Remove and replace culvert
6	6	1.65	45	30	APC	Install FES east of the NB lane and west of the SB lane; Remove and replace culvert
7	7	1.69	50	24	APC	Install RSP east of NB lane; Construct headwall east of the NB lane; Install FES west of the SB lane; Remove and replace culvert
8	8	3.70	43	24	APC	Install RSP east of NB lane; Install FES west of the SB lane; Remove and replace culvert
9	9	11.67	44	24	APC	Install FES east of the NB lane and west of the SB lane; Remove and replace culvert
10	10	12.75	47/75	24	APC/CSPDD	Install RSP west of SB lane; Remove and replace headwall east of NB lane; Remove and replace culvert
11	11	13.35	39	18	APC	Install RSP west of SB lane; Remove headwall; Install DI west of SB lane and east of the NB lane; Remove and replace culvert

Location	Location Name	Post Mile	Culvert Length (feet)	Culvert Diameter (inches)	Culvert Type	Culvert Work
12	12	14.82	87	36	CSP with PSC	Install RSP west of SB lane; Install FES west of the SB lane; Remove and replace DI east of the NB lane; Remove and replace culvert
13	13	20.71	64	36	CSP	Install RSP west of SB lane; Install DI west of SB lane; Remove and replace FES east of the NB lane; Remove and replace culvert
14	14	20.76	42	24	APC	Install RSP west of SB lane; Remove and replace culvert
15	15	23.08	35	18	APC	Install RSP west of SB lane; Install DI east of the NB lane; Remove and replace culvert
16	N/A	N/A	N/A	N/A	N/A	N/A
17	16	27.65	242	N/A	Concrete Lined Ditch	Remove and replace DI; Remove culvert and install longitudinal piping system
18	17	28.73	100	18	Longitudinal Pipe	Install DI East of NB lane; Install culvert

Notes:
APC = alternative pipe culvert
CSP = corrugated steel pipe
CSPDD = corrugated steel pipe down drain
N/A = not applicable
PSC = polymeric sheet coating

2.2.2 Rock Slope Protection

RSP consists of a layer of rocks used to stabilize slopes and prevent erosion. RSP would be installed east of the NB lane of SR 1 at Location 16 and west of the SB lane of SR 1 at Locations 7, 8, and 10 through 15 (Figure 1-3). This will be the minimum necessary RSP required to address slope stability concerns post-construction.

2.2.3 Headwalls

Concrete headwalls are precast concrete structures with wings and a bottom to deflect water away from the soil. Concrete headwalls would be removed and replaced east of the NB lane of SR 1 at Locations 4 and 10 (Figure 1-3). The existing headwall at Location 11 would be removed. New headwalls would be constructed east of the NB lane of SR 1 at Locations 1, 2, 3, and 7.

2.2.4 Flared End Sections

FESs are a type of treatment used to improve the hydraulic efficiency of the culverts and retention of the surrounding embankment by preventing scouring and undercutting. The Project would remove and replace FESs east of the NB lane of SR 1 at Location 13 (Figure 1-3). The Project would install new FESs east of the NB lane of SR 1 at Locations 5, 6, and 9 and west of the SB lane at Locations 1 through 9 as well as Location 12.

2.2.5 Drainage Inlets

A DI is a structure that intercepts runoff from roadways and ditches and conveys it to the culvert. An existing DI would be removed and replaced within the shoulder east of the NB lane of SR 1 at Location 12 and west of the SB lane of SR 1 (Figure 1-3). New DIs would be installed within the shoulder east of the NB lane of SR 1 at Locations 11 and 15. The existing DI at Location 17 would remain.

2.2.6 Earthwork

Excavation and regrading of the ditches would occur west of the SB lane of SR 1 at Locations 4, 5, 6, 7, and 9, and east of the NB lane of SR 1 at Locations 6 and 9 (Figure 1-3). Excavation and regrading, as detailed in Table 2-2, would allow positive water flow and reduce potential erosion.

Table 2-2. Earthwork

Location	Location Name	Post Mile	Earthwork
4	4	1.48	Excavate/regrade (up to 2 feet below ground surface) west of the SB lane of SR 1.
5	5	1.60	Excavate/regrade (up to 2 feet below ground surface) west of the SB lane of SR 1.
6	6	1.65	Excavate/regrade (up to 2 feet below ground surface) west of the SB lane and east of the NB lane of SR 1.
7	7	1.69	Excavate/regrade (up to 2 feet below ground surface) west of the SB lane of SR 1.
9	9	11.67	Excavate/regrade (up to 2 feet below ground surface) west of the SB lane and east of the NB lane of SR 1.
11	11	13.35	Excavate/regrade (up to 2 feet below ground surface) west of the SB lane of SR 1.

2.2.7 Temporary Creek Diversion Systems

The Project is anticipated to require the installation of temporary creek diversion system (TCDS) at some of the culvert locations to convey water through the Project footprint during construction while maintaining dry work area for construction activities. TCDS design options may include, but are not limited to, the following:

- Gravel bag berms east and west of SR 1, connected by a conduit to convey the creek flow (i.e., plastic pipe)
- Gravel bag berm east of SR 1, and aqua dam west of SR 1, connected by a conduit to convey the creek flow

Prior to installing the TCDS conduit, a pump would be temporarily placed east of SR 1 to manage existing water within the unnamed stream. The TCDS would allow flow to continue along the same alignment as its pre-construction condition.

The TCDS design strategy would be recommended during the Project design phase and in consultation with the appropriate agencies. The contractor would prepare the TCDS design, which would be reviewed and approved by Caltrans prior to construction-related activities to ensure adherence with specific design criteria.

2.3 Construction Methodology

The scope of work for the Project includes construction, and staging of equipment and materials. Culverts would be replaced using open cut construction; the particular methodology at each location would be finalized prior to the beginning of construction. Prior to the beginning of ground-disturbing activities, construction area signs, environmentally sensitive area (ESA) fencing, and best management practices (BMPs) would be installed. To maintain the use of SR 1 for the driving public, the culvert replacements would be constructed one lane at a time, with one-way alternating traffic control keeping the other lane open to traffic in both directions.

The Project would be built in three stages at each culvert location. The first stage would include vegetation clearing and grubbing, as well as setting up temporary one-way traffic control. The second stage would include installing the TCDS, excavating a trench across the closed lane and removing the first segment of the existing culvert located within the closed lane. The first segment of the culvert would be installed within the closed lane. The trench would be backfilled, potentially with a rapid-setting slurry cement, paved and restriped. This construction methodology would then be repeated on the other side of SR 1 with the reopening of the newly repaved lane. The second segment of the existing culvert would be removed, and the second segment of the culvert would be installed. The segments would be joined together in the trench. Excess soil would be reused or off hauled. Work within open trenches not completed in a single working day would be covered with steel plates until the next working day.

The third stage would include off-pavement work, such as installing permanent erosion control measures and highway planting.

2.3.1 Staging Areas

Overnight storage of construction equipment and materials would occur within the Caltrans right of way (ROW), such as within the closed lane adjacent to the culverts being removed and replaced or in existing motor vehicle pull-outs (Staging Areas A through I) and are not anticipated to require vegetation and/or tree removal. Staging area F was removed from the scope of work for the Project due to concerns regarding tribal and cultural resources, and there is no further discussion in this IS/ND of Staging Area F. Staging areas are shown on the figures in Appendix A and would be finalized during the Project design phase.

2.3.2 Traffic Management

A Traffic Management Plan (TMP) would be prepared prior to the beginning of construction to minimize impacts to, and ensure the safety of, the public traveling on SR 1. One-way alternating traffic control would be used to maintain traffic through the Project footprint using the lane not currently under construction. Flaggers would be used to stop traffic at either end of the Project footprint, while traffic cones would be used to separate the open and closed lanes.

2.3.3 Utilities

The Project would require utility verification; potholing would occur during the Project design phase. If required, utility relocations would occur prior to the beginning of construction.

2.3.4 Construction Equipment

Construction equipment would include, but not be limited to: utility trucks, backhoes, excavators, dump trucks, jackhammers, saw cutters, generators, vacuums, water trucks, street sweepers, air compressors, asphalt pavers, augers, compactors, concrete pumps, and hydraulic pumps.

2.3.5 Construction Schedule

Construction would take approximately 15 months, or two construction seasons, to complete. The Project would require approximately 350 working days and would occur between October 2024 and January 2026. Construction-related activities are anticipated to be limited to daytime hours.

2.3.6 Vegetation and Tree Removal

Vegetation clearing and grubbing would occur in the Project footprint adjacent to construction-related activities. High visibility fencing, flagging, or other methods would be utilized to delineate the Project footprint and protect vegetation and trees outside the Project footprint from construction-related activities. It is anticipated that fewer than 5 trees will need to be removed. A tree survey will be conducted prior to the beginning of construction-related activities to determine the need for tree removal.

If feasible, vegetation removal would not occur within the typical bird nesting season (which occurs between February 1 and September 30). If not feasible, nesting bird surveys will be conducted prior to vegetation removal activities to prevent impacts to nesting birds.

2.3.7 Right of Way

Construction would occur within, and outside of, Caltrans ROW. The Project would require 23 temporary construction easements (TCEs) and 8 permanent drainage easements (PDEs) from nineteen Sonoma County assessor's parcel numbers (APNs) and one Marin County APN for the purposes of conducting construction-related activities outside the Caltrans ROW. TCEs and PDEs would be finalized during the Project design phase.

Table 2-3. Right of Way Acquisition

Location	Location Name	County	Assessor Parcel Number	SR 1	Type
1	1	Sonoma	026-060-006	E of NB Lane	TCE, PDE
1	1	Marin	100-030-14	W of SB Lane	TCE
2	2	Sonoma	026-060-003	E of NB Lane	TCE
3	3	Sonoma	026-060-001	W of SB Lane	TCE
3	3	Sonoma	026-060-009	E of NB Lane	TCE, PDE
4	4	Sonoma	026-060-001	W of SB Lane	TCE
5	5	Sonoma	026-010-063	W of SB Lane	TCE
6	6	Sonoma	026-010-063	W of SB Lane	TCE
7	7	Sonoma	026-010-017	W of SB Lane	TCE
7	7	Sonoma	026-010-061	W of SB Lane	TCE
7	7	Sonoma	026-010-062	W of SB Lane	TCE
8	8	Sonoma	026-030-013	W of SB Lane	TCE
9	9	Sonoma	100-020-019	W of SB Lane	TCE
9	9	Sonoma	100-220-008	W of SB Lane	TCE
9	9	Sonoma	100-220-023	E of NB Lane	TCE
10	10	Sonoma	101-040-003	W of SB Lane	TCE, PDE
11	11	Sonoma	101-040-003	W of SB Lane	TCE, PDE
12	12	Sonoma	101-110-004	W of SB Lane	TCE, PDE
12	12	Sonoma	101-172-001	E of NB Lane	PDE
13	13	Sonoma	099-090-001	W of SB Lane	TCE, PDE
13	13	Sonoma	099-090-017	E of NB Lane	TCE
14	14	Sonoma	099-090-017	E of NB Lane	TCE
15	15	Sonoma	099-030-003	E of NB Lane	TCE, PDE

Caltrans is a recipient of Federal Highway Administration federal-aid highway funds. Recipients of federal funds are required to comply with various non-discrimination laws and regulations, including Title VI of the Civil Rights Act of 1964 (Title VI). Title VI forbids discrimination against anyone in the United States on the basis of race, color, or national origin, in the programs and activities of an agency receiving federal financial assistance. Caltrans commitment to upholding the mandates of Title VI is summarized in the Non-Discrimination Policy Statement (Appendix B).

Chapter 3 California Environmental Quality Act Evaluation

The following discussions evaluate potential environmental impacts related to the CEQA checklist to comply with State CEQA Guidelines (Title 14 California Code of Regulations, Division 6, Chapter 3, Section 15091). The environmental analysis considers potential impacts of the Project, as detailed in Chapter 2.

3.1 Environmental Factors Potentially Affected

As part of the scoping and environmental analysis carried out for the Project, the following environmental issues were considered, but no impacts were identified: geology and soils, mineral resources, population and housing, recreation, tribal cultural resources, and utilities and service systems. The environmental factors marked with an "X" in the following table would be potentially affected by the Project. Further analysis of these environmental factors is presented in this chapter.

X	Aesthetics	X	Agriculture and Forest Resources	X	Air Quality
X	Biological Resources	X	Cultural Resources	X	Energy
	Geology and Soils	X	Greenhouse Gas Emissions	X	Hazards and Hazardous Materials
X	Hydrology and Water Quality	X	Land Use and Planning		Mineral Resources
X	Noise		Population and Housing	X	Public Services
	Recreation	X	Transportation		Tribal Cultural Resources
	Utilities and Service Systems	X	Wildfire	X	Mandatory Findings of Significance

3.2 Determination

On the basis of this initial evaluation:

X	I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
	I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
	I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
	I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
	I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature:	**Date:**
Maxwell Lammert	06/23/2023
Printed Name: Maxwell Lammert	**For:**

3.3 CEQA Environmental Checklist

The CEQA Environmental Checklist identifies physical, biological, social, and economic factors that might be affected by the Project. In many cases, background studies performed in connection with projects will indicate that there are no impacts to a particular resource. A “No Impact” answer in the “CEQA Determination” column of the impact summary tables at the beginning of each resource category section in this chapter reflects this determination. The words "significant" and "significance" used throughout this IS/ND are related to CEQA, not National Environmental Policy Act, impacts. The questions in each impact summary table are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

Project Features (PFs), which can include both design components of the Project and standardized measures that are applied to most if not all Caltrans projects, such as construction site BMPs and measures included in the Standard Plans and Standard Specifications or as Standard Special Provisions, are considered to be an integral part of the Project and have been considered prior to any significance determinations documented in this section. Avoidance and minimization measures (AMMs) are additional measures to avoid and/or minimize a project’s environmental impacts but are more specifically tailored to a given project’s particular impacts. The PFs and AMMs incorporated into the Project are described in this chapter and are compiled in Appendix C.

Sections 3.3.1 through 3.3.20 present the CEQA determinations under Appendix G of the CEQA Guidelines. The CEQA determinations depend on the level of potential environmental impact that would result from the Project. The level of significance determinations are defined as follows:

- No Impact: Indicates no physical environmental change from existing conditions.
- Less than Significant Impact: Indicates the potential for an environmental impact that is not significant with or without the implementation of PFs/AMMs.
- Less than Significant Impact with Mitigation Incorporated: Indicates the potential for a significant environmental impact that would be mitigated with the implementation of mitigation measures to a level of less than significant.
- Potentially Significant Impact: Indicates the potential for a significant and unavoidable environmental impact.

3.3.1 Aesthetics

Except as provided in Public Resources Code Section 21099, would the project:

Question	CEQA Determination
a) Have a substantial adverse effect on a scenic vista?	Less Than Significant Impact
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	Less Than Significant Impact
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?	No Impact
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	Less Than Significant Impact

CEQA Significance Determinations for Aesthetics

A Visual Impact Assessment for the Project was prepared by the Caltrans Office of Landscape Architecture (Caltrans 2022a). A summary of the findings is presented here.

The entirety of SR 1 in Sonoma County is listed as eligible for designation as a State Scenic Highway, from U.S. 101 near Marin City at PM 0 to the south, to U.S. 101 near Leggett at PM 105.5 to the north.

Within the Project corridor, SR 1 traverses an area of extremely high scenic value, with few components detracting from that high-quality visual landscape. The regional landscape within the Project limits is characterized by rolling hillsides of open grasses, rocky outcroppings and wooded groves that, when along the coastline, meet dramatic bluffs providing vistas of the Pacific Ocean to the west. The linear and curvilinear stretches of the highway are bordered by sporadic commercial and residential developments on both sides of the highway (Locations 1 through 9), and areas with no development (Locations 10 through 17). The adjacent land uses have a primarily rural character. Existing mature trees, shrubs and native grasses border the highway. The Russian River, Salmon Creek, and other small streams cross the highway, adding to its scenic quality.

Location 10 is adjacent to Salmon Creek State Park; Locations 13 and 14 are adjacent to Russian River State Marine Recreational Management Area and Location 15 is adjacent to Sonoma Coast State Park. All locations of the Project are within the California Coastal Zone.

The Project is subject to the provisions of the Final Sonoma State Route 1 Repair Guidelines (Guidelines; Caltrans 2019). These Guidelines were produced by Caltrans with local and state agencies and other collaborating stakeholders. The Guidelines stress the value and importance of the use of specific design features for inclusion in highway projects along Sonoma SR 1. These include the use of design features that contribute to visual consistency and continuity, and constructed features that are visually appropriate to the regional area. Additionally, the Project would comply with Director's Policy (DP) 22 "Context Sensitive Solutions" (Caltrans 2001). The solutions set forth in DP 22 use innovative and inclusive approaches that integrate and balance community, aesthetic, historic, and environmental values with transportation safety, maintenance, and performance goals. Further, the Guidelines and DP 22 encourage the use of project components often not included on highway construction projects elsewhere, including nonstandard design features requiring special approval. These design features reflect the recognition of the importance of the visual quality of the highway and are reflected in the early-stage design of the Project. Context-sensitive Project components would be finalized in the Project design phase and in consultation with applicable agencies.

If the need for tree removal becomes apparent, potentially at Locations 1, 10, 12, and 17, minor changes to culvert alignment or similar design revisions shall be considered to reduce and/or eliminate tree removal in the Project design phase. Reseeding with a locally appropriate, commercially available, native seed mix, applied to disturbed soil areas (DSAs), would be required. This would ensure that vegetation established following construction is biologically appropriate and that the visual nature of the planting would be consistent with the surrounding native vegetation as existed pre-construction. Post-construction seeding with a regionally appropriate native seed mix, coupled with the moist coastal environment, would help ensure that native plants are quickly reestablished, thereby largely and quickly erasing the minor and temporary visual impacts of the Project. Opportunities to use materials and design features consistent with those noted in the Guidelines would be pursued as appropriate to further reduce Project impacts. Additionally, the AMMs presented at the end of this section would help limit impacts to vegetation and other visual resources would be implemented to the greatest extent practicable.

Post-construction permanent impacts would be insignificant or minor and based largely on the construction of components where they did not currently exist. This applies at locations where constructed components are added rather than simply replacing those previously existing, primarily RSP, concrete headwalls, and DIs. Due

to roadside topography and the nature of these interventions, the constructed components would be largely hidden from view in most locations. Additionally, no components unfamiliar to SR 1 travelers are proposed and none are extensive, meaning they often escape the attention of highway users. Visual impacts during construction would be limited, including those associated with staging areas and one-way alternating traffic control. Staging areas identified during the early stages of design have been selected to minimize their number and ensure that they are located at existing paved or gravel pull-outs, or where the highway shoulders are sufficiently wide to accommodate the work without additional environmental disturbance. Because visual impacts are expected to be relatively minor and the duration of work at each culvert would be of short duration, screening of staging areas would not be necessary.

a, b, and d) Less Than Significant Impact

During construction, the scenic quality of SR 1 would change temporarily with the visibility of equipment storage and construction vehicles within the staging areas. This would be a noticeable change to the traveling users of SR 1 but would not be permanent since equipment would be removed and the staging areas would return to their previous condition following construction.

The Project during construction and after Project completion would not adversely affect any Designated Scenic Resource (such as a rock outcropping, tree grouping, historic property, etc.) as defined by CEQA statues or guidelines, or by Caltrans' policy. Existing vegetation removal is expected to be minimal, and no adverse visual impacts are anticipated. Existing scenic vistas are expected to remain as per current conditions. The Project components would not substantially affect the appearance of the highway corridor and would be visually consistent with the character of the surrounding area.

The Project would not result in new substantial light or glare that would adversely affect nighttime views. Construction lighting would be limited to occur within the Project footprint for construction-related activities, and light trespass to adjacent residences and to the traveling public would be minimized with the use of directional lighting, shielding, and other measures as needed.

Upon completion of construction-related activities, the character of SR 1 would be unchanged and visual impacts would not be substantial. The primary item of work, the upgrading of culverts, would result in minor permanent visual changes. Other

items of work would result in negligible to minor visual changes. Impacts to scenic resources in the Project corridor would be less than significant.

c) No Impact

The Project would not conflict with applicable zoning and other regulations governing scenic quality; therefore, there would be no impact.

AVOIDANCE AND/OR MINIMIZATION MEASURES

AMM-AES-1 through AMM-AES-9 would be incorporated into the Project to avoid and/or minimize potential impacts to visual resources.

- **AMM-AES-1: Protect Vegetation with Fencing.** Impacts to vegetation would be minimized to the greatest extent possible. Vegetation to remain would be protected from construction-related activities by temporary fencing when vegetation is close to construction work or staging areas.
- **AMM-AES-2: Staging Areas to Avoid Substantial Vegetation Removal.** Confirm that locations preliminarily identified as staging areas would not require the removal of any but weedy vegetation or cause the compaction of any tree roots.
- **AMM-AES-3: Certified Arborist for Tree Removal.** Where the pruning of trees is required to accommodate construction operations, pruning would be under the supervision of a certified arborist.
- **AMM-AES-4: Minimizing Lighting Impacts.** For any night work, limit construction lighting to the Project footprint and use directional lighting and/or shielding to minimize light trespass to areas outside the Project footprint.
- **AMM-AES-5: Avoid Tree Impacts by Culvert Realignment.** Opportunities to avoid impacts to trees through minor design modifications, such as revising the alignment of culverts, would be examined as design advances.
- **AMM-AES-6: Comply with Sonoma State Route 1 Repair Guidelines.** Design and construction would comply with all applicable provisions of the Guidelines, as confirmed by the Office of Landscape Architecture and the Office of Environmental Analysis.

- **AMM-AES-7: Visually Appropriate Materials and Design Features.** Appropriate materials and Project components would be selected to maintain the visual character of the location and corridor consistency.

- **AMM-AES-8: Consult with Landscape Architecture Department.** During the Project design phase, the PDT shall ensure that RSP is the minimum necessary to achieve Project objectives. Necessary RSP may be soil-fill, and vegetated, and/or stained to minimize the visual appearance of the RSP, under direction of the Caltrans Landscape Architecture Department.

- **AMM-AES-9: Erosion Control Seeding.** Apply erosion control seeding using locally appropriate, commercially available, native seed mix, and similar measures to DSAs following construction.

3.3.2 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 Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:

Question	CEQA Determination
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?	Less Than Significant Impact
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	Less Than Significant Impact
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	No Impact
d) Result in the loss of forest land or conversion of forest land to non-forest use?	No Impact
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?	Less Than Significant Impact

CEQA Significance Determinations for Agriculture and Forest Resources

Construction-related activities which would occur outside of Caltrans ROW and require a TCE and/or PDE are not located within, or adjacent to, any forestland or timberland, but are located within or adjacent to Grazing Land at Locations 1 through 11, 15, and 16; Urban/Built-Up Land at Location 12; Farmland of Local Importance at Locations 13 and 14; and Other Land at Location 17. The Project TCEs and/or PDEs located within four Sonoma County parcels which are under a Williamson Act Contract (Sonoma County APNs 026-060-003, 026-030-013, 099-090-001, and 099-090-017) (California Department of Conservation 2016 and 2022; Sonoma County 2021).

a, b, and e) Less Than Significant Impact

Although TCE and PDEs required for the Project are located within parcels designated as Farmland of Statewide Importance, construction-related activities would not affect agricultural land and would not convert Farmland to a non-agricultural use. The Project would require TCEs and PDEs located within parcels under a Williamson Act contract, but construction-related activities would not conflict with these contracts nor with existing zoning for agricultural use. The Project would not 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. Therefore, there would be a less than significant impact.

c and d) No Impact

The Project would not convert forest land to non-forest use land, as there are no forest lands or timberlands within the Project footprint. The Project would not involve other changes in the existing environment that would result in conversion of forest or agricultural land. Therefore, there would be no impact.

3.3.3 Air Quality

Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:

Question	CEQA Determination
a) Conflict with or obstruct implementation of the applicable air quality plan?	No Impact
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?	Less Than Significant Impact
c) Expose sensitive receptors to substantial pollutant concentrations?	Less Than Significant Impact
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	Less Than Significant Impact

CEQA SIGNIFICANCE DETERMINATIONS FOR AIR QUALITY

The Project is located in Sonoma County within the San Francisco Bay Area Air Basin under the jurisdiction of the Bay Area Air Quality Management District. Sonoma County is designated as in nonattainment for ozone and particulate matter with aerodynamic diameter equal to or less than 2.5 micrometers ($PM_{2.5}$) under federal air quality standards (U.S. Environmental Protection Agency [USEPA] 2022), and in nonattainment for ozone, $PM_{2.5}$, and particulate matter with aerodynamic diameter equal to or less than 10 micrometers (PM_{10}) under state air quality standards (California Air Resources Board 2019). It is in attainment or unclassified for other federal and state air quality standards.

a) No Impact

The Project would have temporary construction emissions and construction-related activities would comply with state and local regulations and policies. Emission reduction measures would be implemented as discussed under Project Features PF-AQ-1 through PF-AQ-3 to reduce construction emissions. The Project would not increase highway capacity and would not increase vehicle operations on SR 1 or nearby roadways when construction is complete. Long-term emission increases and adverse impacts from the Project are not anticipated. Therefore, the Project would not conflict with the region's air quality plan. There would be no impact.

b, c, and d) Less Than Significant Impact

Construction-related activities would not alter characteristics of SR 1 and local roadways, increase operational capacity, or change the horizontal or vertical alignments of SR 1. No long-term impacts to air quality would occur.

Construction-generated air pollutants are expected to be short-term. Construction-generated air pollutants include emissions resulting from operation of construction equipment, workers commuting to and from the Project, and traffic delays due to construction. The emissions would be produced at different rates throughout the Project depending on the construction-related activities occurring in the various phases of construction. Potential impacts to air quality, including emissions of air pollutants, odors affecting nearby sensitive receptors, and exposure of sensitive receptors to pollutants, would be less than significant based on the temporary nature of the construction-related activities.

During construction, the Project would comply with Caltrans Standard Specification 14-9, Air Quality, which requires compliance with applicable air-pollution control rules, regulations, ordinances, and statutes. In addition, the Project would implement construction site BMPs and PF-AQ-1 through PF-AQ-3 to further reduce air quality impacts.

The Project would have no long-term impacts on air quality and temporary construction-related impacts would be less than significant.

PROJECT FEATURES

Caltrans would incorporate the following PFs into the Project to reduce potential impacts to air quality:

- **PF-AQ-1: Dust Control Measures.** Implement dust control measures to minimize airborne dust and soil particles generated from construction-related activities, including watering or applying dust palliative to DSAs, preventing and promptly removing trackouts on SR 1 created by construction traffic, and covering soils or materials with tarps or providing adequate freeboard (space from the top of the material to the top of the truck) during transport.
- **PF-AQ-2: Construction Vehicles and Equipment**. Maintain and tune the construction vehicles and equipment in accordance with manufacturer's specifications.

- **PF-AQ-3: Limit Idling.** Limit idling times by shutting construction equipment off when not in use and reducing the maximum idling time to 5 minutes.

3.3.4 Biological Resources

Would the project:

Question	CEQA Determination
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service, or NOAA Fisheries?	Less Than Significant Impact
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?	Less Than Significant Impact
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?	Less Than Significant Impact
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?	No Impact
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	Less Than Significant Impact
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	No Impact

CEQA Significance Determinations for Biological Resources

A Natural Environmental Study (NES) was prepared by the Caltrans Office of Biological Sciences and Permits to evaluate the effects of the Project on biological resources, including sensitive plants and wildlife species (Caltrans 2022b). A summary of the findings is presented here.

The Biological Study Area (BSA) is the area evaluated in the field for potential effects to natural resources from the Project. The BSA includes a 50-foot radius around the Project footprint, which contains portions of the highway prism, potential waters of the U.S., and the following vegetation types: Chamise Chaparral Alliance, Coyote Brush Alliance, California Annual and Perennial Grassland, California Coastal Evergreen Bluff and Dune Scrub Group, Eucalyptus Semi-natural Alliance, Western Cypress Alliance, *Mesembryanthemum* spp.-*Carpobrotus* spp. Provisional Alliance, Native and Non-native Perennial Coastal Grassland, Non-native Shrub, North American Pacific Coastal Salt Marsh Macrogroup, Douglas Fir Alliance, Southwestern North American Riparian Evergreen and Deciduous, Southwestern

North American Riparian/Wash Scrub Group, Vancouverian Coastal Riparian Scrub Group, Western North American Freshwater Macrogroup, and Barren and Sparsely Vegetated. The BSA is 16.89 acres.

A regional list of special-status wildlife and plant species was compiled using databases to evaluate the potential impacts that could occur to sensitive biological resources as a result of the Project. The database search included the California Natural Diversity Database (CNDDB) (CDFW 2022), the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation Database (USFWS 2022), the California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants of California (CNPS 2022), and the National Marine Fisheries Service (NMFS) database (NMFS 2022). The special-status wildlife and plant species on the regional lists were evaluated to determine their potential to occur within the BSA.

Various field studies were conducted within the BSA to assess existing natural resources. Field studies used in the preparation of the NES include:

- Biological reconnaissance-level survey and habitat assessments for foothill yellow-legged frogs (*Rana boylii*) (FYLF), California red-legged frog (*Rana draytonii*) (CRLF), northern spotted owl (*Strix occidentalis caurina*) (NSO), marbled murrelet (*Brachyramphus marmoratus*) (MAMU), and bats;
- Fish passage assessment;
- Aquatic resource delineation; and
- Rare plant and *Viola adunca* survey.

a) <u>Less Than Significant Impact</u>

Special-status species that are potentially present within or adjacent to the BSA are discussed here.

Plants

The potential for special-status plant species to occur in the BSA was assessed based on the vegetation types present, the degree of disturbance, the results of the database queries, and whether suitable habitat for each special-status plant species was observed within the BSA. One rare plant survey (which also included surveying for *Viola adunca,* which, although not a rare plant, is the host plant for the federally endangered Myrtle's silverspot butterfly [MSB]) was conducted in March 2022 for

this Project. Additionally, 2022 rare plant surveys in support of the Sonoma 1 Centerline Rumble Strip Project (EA 04-4G780/ID 0413000178) (Caltrans 2022c), which overlaps the BSA for this Project, found coastal-bluff morning glory (*Calystegia purpurata* ssp. *Saxicola,* List 1B.2), harlequin lotus (*Hosackia gracilis,* List 4.2), and purple-stemmed checkerbloom (*Sidalcea malviflora* ssp. *purpurea,* List 1B.2) along the SR 1 corridor. A total of 48 special-status plants have at least low potential for occurrence, and several species have CNDDB occurrence buffers that overlap with portions of the BSA. No special-status plant species were identified within the BSA during the March rare plant survey.

Protocol-level surveys in areas where natural vegetation is present within the BSA will be conducted in accordance with special-status plant survey protocols (CDFW 2018; USFWS 1996) prior to the beginning of construction.

Additionally, Staging Areas B, C, and D all fall within mapped USFWS-jurisdictional critical habitat for golden larkspur (*Delphinium luteum*). The USFWS specifies in their designation of critical habitat for this species that critical habitat consists of four primary constituent elements:

- Plant communities, such as north coastal scrub or coastal prairie communities;
- Relatively steep sloped soils (30 percent or greater) derived from sandstone or shale, with rapid runoff and high erosion potential, such as Kneeland or Yorkville series soils;
- Generally north facing slopes; and
- Habitat upslope and downslope from known populations to maintain disturbance such as occasional rockslides or soil slumping that the species appears to require (USFWS 2003).

None of the above primary constituent elements exist within the Project footprint. Additionally, the USFWS specifies that critical habitat does not include existing features and structures made by people, such as buildings, roads and other paved areas, lawns, and other developed areas not containing one or more of the primary constituent elements (USFWS 2003). Because the Project footprint at these three staging areas is confined to graveled shoulders, these locations do not contain the primary constituent elements of golden larkspur critical habitat.

Implementation of PF-BIO-8, PF-BIO-9, and AMM-BIO-1 through AMM-BIO-3 would reduce, avoid, or minimize impacts to special-status plant species and their habitat. The impact would be less than significant.

Wildlife

California Red-Legged Frog: California red-legged frog (*Rana draytonii*) is a federally threatened species and a California Species of Special Concern (SSC). Critical Habitat Unit MRN-1 does not overlap with the BSA, but is located along the border of Marin and Sonoma counties about 1 mile west of Valley Ford. The northern edge of this critical habitat unit is confined by Estero Americano, which is 0.9 mile southwest of PM 3.46 at its closest point to the BSA. Further upstream, the culvert at Location 1 drains directly into Estero Americano 2.26 miles east-northeast from SON-1, and the culverts at Locations 2 through 7 drain into ephemeral roadside ditches associated with Estero Americano. Estero Americano has documented CRLF breeding populations within 0.8 mile from the BSA, and there is suitable breeding, non-breeding aquatic, and upland habitat within the BSA. The BSA is within the current known range of CRLF, and there are 26 CNDDB occurrences within approximately 5 miles of the BSA.

Potential Project impacts include loss of individuals and all habitat types during vegetational removal, culvert replacement, and construction of the RSP, concrete headwalls, DIs, and graded ditches. Approximately 0.006 acre (permanent less than 0.0001 acre; temporary 0.006 acre) of potential CRLF aquatic breeding habitat would be affected during construction. Approximately 0.085 acre (permanent 0.001 acre; temporary 0.084 acre) of potential CRLF aquatic, non-breeding habitat would be affected during construction. Approximately 0.748 acre (permanent 0.095 acre; temporary 0.653 acre) of upland habitat would be affected during vegetation clearing, culvert rehabilitation, and construction of the RSP, concrete headwalls, DIs, and graded ditches. However, impacts to suitable habitat are not anticipated to affect the habitat's long-term suitability to support CRLF, should they occur in the BSA in the future.

Implementation of PF-BIO-3, PF-BIO-4, PF-BIO-5, PF-BIO-6, PF-BIO-9, PF-BIO-11, PF-BIO-12, PF-BIO-13, as well as AMM-BIO-3 through AMM-BIO-6 and AMM-BIO-18, would avoid or minimize impacts to CRLF and its habitat. The impact would be less than significant.

Northern Spotted Owl: Northern spotted owl (*Strix occidentalis caurina*) is a federally threatened and state threatened species. The BSA is located outside of

critical habitat and any designated recovery units, however, suitable nesting and foraging habitat for NSO is present within the BSA. The BSA is within the current known range of NSO, and there are 31 Activity Centers in the CNDDB SPOW Observations Database within approximately 5 miles of the BSA. Three of these Activity Centers are located within 1.3 miles of the BSA, the assumed home range of NSO in the Coast Range (USFWS 2011a). At the northern extent of the BSA, particularly around Location 16 and Staging Area I, suitable forest habitat with multi-layered canopy is present within the BSA.

Potential Project impacts include loss of foraging habitat during vegetational removal; however, removal of vegetation at Project locations would cause negligible effects to NSO foraging habitat. Removal of large diameter at breast height (DBH) (>30") trees suitable for NSO nesting is likely not required for Project construction. Potential effects to NSO are limited to auditory and visual disturbances associated with Project construction. No suitable NSO habitat would be temporarily affected.

Implementation of PF-BIO-3, PF-BIO-7, PF-BIO-9, and PF-BIO-13, as well as AMM-BIO-7 and AMM-BIO-8, would avoid, or minimize impacts to NSO and its habitat. The impact would be less than significant.

Marbled Murrelet: Marbled murrelet (*Brachyramphus marmoratus*) is a federally threatened and state endangered species. The BSA is located outside of critical habitat and any designated recovery units however, suitable nesting habitat for MAMU is present within the BSA. The BSA is within the current known range of MAMU, but there are no CNDDB occurrences of this species within 5 miles of the BSA. MAMU survey data are minimal, and the species' cryptic nature and nesting preferences make the species hard to locate.

Potential Project impacts to MAMU are limited to auditory and visual disturbances associated with Project construction. No suitable MAMU habitat would be temporarily affected.

Implementation of PF-BIO-3, PF-BIO-7, PF-BIO-9, and PF-BIO-13, as well as AMM-BIO-3 and AMM-BIO-11 through AMM-BIO-13, would avoid, or minimize impacts to MAMU and its habitat. The impact would be less than significant.

Western Snowy Plover: Western snowy plover (*Charadrius nivosus nivosus*) (SNPL) is a federally threatened and state SSC. The BSA is located outside of critical habitat and any designated recovery units. The BSA is within the current known

range of SNPL, and there are 2 CNDDB occurrences of this species within 5 miles of the BSA, with additional e-Bird and USFWS occurrences at Salmon Creek State Beach, overlapping the BSA at Staging Area E and Location 10 (Sullivan 2009; USFWS 2007).

Potential Project impacts to SNPL habitat would be limited to a small area at Location 10, where the action area overlaps suitable habitat. Any additional impacts are limited to auditory and visual disturbances associated with Project construction.

Implementation of PF-BIO-3, PF-BIO-7, PF-BIO-9, and PF-BIO-13, as well as AMM-BIO-3, AMM-BIO-12, and AMM-BIO-13, would reduce, avoid, or minimize impacts to SNPL and its habitat. The impact would be less than significant.

Myrtle's Silverspot Butterfly: Myrtle's silverspot butterfly (*Speyeria zerene myrtleae*) is a federally endangered species, and there is no designated critical habitat for MSB within the BSA. Suitable habitat for western dog violet (*Viola adunca*), the larval host plant for MSB, occurs both east and west of SR 1. However, western dog violet was not observed within the BSA during rare plant surveys, and therefore it is anticipated that the BSA does not contain suitable breeding habitat for MSB, but additional surveys may need to be conducted to confirm absence of western dog violet during construction. The BSA does provide suitable foraging habitat for adult MSB. There are 10 CNDDB occurrences of MSB within the BSA, all of which are located south of the Russian River. The area between Valley Ford and Bodega Bay had the highest concentrations of MSB occurrences. These include a 1992 sighting 0.43 mile southwest of Staging Area C, a 2009 sighting 0.72 mile southeast of the culvert at Location 9, and a 1991 sighting at Portuguese Beach, 0.18 mile north of the culvert at Location 12.

Potential Project impacts to MSB impacts include loss of individuals and foraging habitat during vegetational removal, culvert replacement, and construction of the FESs and graded ditches. Approximately 0.193 acre (permanent 0.028 acre; temporary 0.165 acre) of suitable MSB foraging habitat would be affected during construction.

Implementation of PF-BIO-3, PF-BIO-5, PF-BIO-9, PF-BIO-13, as well as AMM-BIO-1 through AMM-BIO-3, AMM-BIO-14, and AMM-BIO-15, would avoid, or minimize impacts to MSB and its habitat. The impact would be less than significant.

Foothill Yellow-legged Frog: Foothill yellow-legged frogs (*Rana boylii*) within the BSA are a part of the North Coast Distinct Population Segment (DPS), which is a California SSC. FYLF have the potential to occur within the riparian corridors of intermittent and perennial streams throughout the BSA. While FYLF are typically found in partially shaded pebble or cobble river bars, they are occasionally found in other riparian habitats, including moderately vegetated backwaters, isolated pools (Hayes and Jennings 1988), and slow-moving rivers with muddy substrate. FYLF are most likely to occur within the BSA north of the Russian River. There are 14 CNDDB occurrences within 5 miles of the BSA, most of which are within drainages of the Russian River.

Potential Project impacts include loss of individuals and both aquatic non-breeding and dispersal habitat during vegetational removal, culvert replacement, installation of RSP, construction of DIs, and removal and replacement of FESs. Approximately 0.091 acre (permanent 0.001 acre; temporary 0.09 acre) of potential FYLF aquatic non-breeding habitat would be affected during construction. Approximately 0.014 acre (permanent 0.009 acre; temporary 0.005 acre) of upland habitat would be affected during construction. However, impacts to suitable habitat are not anticipated to affect the habitat's long-term suitability to support FYLF, should they occur in the BSA in the future.

Implementation of PF-BIO-3, PF-BIO-4, PF-BIO-5, PF-BIO-6, PF-BIO-9, PF-BIO-11, PF-BIO-12, PF-BIO-13, as well as AMM-BIO-3, AMM-BIO-5, and AMM-BIO-18, would avoid, or minimize impacts to FYLF and its habitat. The impact would be less than significant.

California Giant Salamander: The California giant salamander (*Dicamptodon ensatus*) (CGS) is a California SSC. CGS has the potential to occur on-site in the *Pseudotsuga menziesii* Alliance vegetation type within the BSA. In addition, the proximity to other wetlands, waters, and other aquatic features near the BSA has the potential to provide habitat for CGS. There are 17 recorded occurrences of CGS within 5 miles of the BSA (CDFW 2022).

Potential Project impacts include loss of individuals and temporary loss of terrestrial habitat during vegetational removal, culvert replacement, installation of RSP, and construction of the FESs and DIs. Approximately 0.096 acre (all temporary impact) of potential CGS upland habitat would be affected during construction.

Implementation PF-BIO-3, PF-BIO-4, PF-BIO-5, PF-BIO-6, PF-BIO-9, PF-BIO-11, PF-BIO-12, PF-BIO-13, as well as AMM-BIO-3, AMM-BIO-5, and AMM-BIO-18, would avoid, or minimize impacts to CGS and its habitat. The impact would be less than significant.

Red-bellied Newt: Red-bellied newt (*taricha rivularis*) (RBN) is a California SSC. RBN has the potential to occur on-site in the *Pseudotsuga menziesii* Alliance vegetation type within the BSA. In addition, the proximity to other wetlands, waters, and other aquatic features near the BSA has the potential to provide habitat for RBN. There is 1 recorded occurrence of RBN within 5 miles of the BSA (CDFW 2022). Because of RBN's close phenotypical similarities to California newt (*Taricha torosa*) and rough-skinned newt (*Taricha granulosa*), additional occurrences could have been overlooked.

Potential Project impacts include loss of individuals and temporary loss of terrestrial habitat during vegetational removal, culvert replacement, installation of RSP, and construction of the FESs, concrete headwalls, and DIs. Approximately 0.096 acre (temporary) of potential RBN upland habitat would be affected during construction.

Implementation PF-BIO-3, PF-BIO-4, PF-BIO-5, PF-BIO-6, PF-BIO-9, PF-BIO-11, PF-BIO-12, PF-BIO-13, as well as AMM-BIO-3, AMM-BIO-5, and AMM-BIO-18, would avoid, or minimize impacts to RBN and its habitat. The impact would be less than significant.

Western Pond Turtle: The Western pond turtle (*Emys marmorata*) (WPT) is a California SSC. WPT has the potential to occur in the grasslands, wetlands, waters, and riparian areas within the BSA. There are 16 CNDDB occurrences of WPT within 5 miles of the BSA, most of which are concentrated at the southern end of the BSA at locations adjacent to Estero Americano.

Potential Project impacts include loss of individuals and both aquatic and terrestrial habitat during vegetational removal, culvert replacement, and construction of the concrete headwalls, DIs, FES, and graded ditches. Approximately 0.091 acre (permanent 0.001 acre; temporary 0.09 acre) of potential WPT aquatic non-breeding habitat would be affected during construction. Approximately 0.748 acre (permanent 0.095 acre; temporary 0.653 acre) of upland habitat would be affected during construction. However, impacts to suitable habitat are not anticipated to affect the habitat's long-term suitability to support WPT, should they occur in the BSA in the future.

Implementation PF-BIO-3, PF-BIO-4, PF-BIO-5, PF-BIO-6, PF-BIO-9, PF-BIO-11, PF-BIO-12, PF-BIO-13, as well as AMM-BIO-3, AMM-BIO-5, and AMM-BIO-18, would avoid, or minimize impacts to WPT and its habitat. The impact would be less than significant.

Sonoma Tree Vole: Sonoma tree vole (*Arborimus pomo*) (STV) is a California SSC. STV has the potential to occur on-site in the *Pseudotsuga menziesii* Alliance vegetation type within the BSA. Location 17 is the only location within the BSA with potential to support this species. There are 13 occurrences of STV within 5 miles of the BSA, 12 of which are located between the Russian River and Fort Ross Creek.

Potential Project impacts include loss of individuals and temporary loss of terrestrial habitat during vegetational removal, culvert replacement, installation of RSP, and construction of the FESs, concrete headwalls and DIs. Approximately 0.096 acre (all temporary impact) of potential STV habitat would be affected by Project activities. However, impacts to suitable habitat are not anticipated to affect the habitat's long-term suitability to support STV, should they occur in the BSA in the future.

Implementation of PF-BIO-3, PF-BIO-5, PF-BIO-6, PF-BIO-9, and PF-BIO-13, as well as AMM-BIO-18, would avoid, or minimize impacts to STV and its habitat. The impact would be less than significant.

Townsend's Big-eared Bat: The Townsend's big-eared bat (*Corynorhinus townsendii*) is a California SSC. Townsend's big-eared bats are known to roost within caves and cave-analogs, such as mines. However, they have also been noted roosting in large hollows of redwood trees, abandoned structures, and under bridges (Fellers and Pierson 2002). Farm structures adjacent to the BSA at the southern end of the Project and large DBH trees at the northern extent of the Project have the potential to support Townsend's big-eared bat roosting. There are 3 occurrences of Townsend's big-eared bat within 5 miles of the BSA; all are located around the town of Bodega Bay (between PMs 9.34 and 13.35). Although conditions within the BSA are generally unsuitable or provide only marginally suitable habitat for special-status bat species, there is some potential for individuals to roost on-site, possibly originating from more suitable roost sites in nearby areas.

Implementation of PF-BIO-3, PF-BIO-5, PF-BIO-9, and PF-BIO-13, as well as AMM-BIO-17 and AMM-BIO-18, would avoid, or minimize impacts to Townsend's big-eared bat and its habitat. The impact would be less than significant.

Pallid Bat: The pallid bat (*Antrozous pallidus*) is a California SSC. Common roost sites are rock crevices, old buildings, bridges, caves, mines, and hollow trees (Barbour and Davis 1969; Hermanson and O'Shea 1983). Recent radiotracking efforts in the west, including California, suggest that pallid bats are far more dependent on tree roosts than was previously thought; pallid bast have been found in tree cavities in oak (*Quercus* spp.), Ponderosa pine (*Pinus ponderosa*), coast redwood, and giant Sequoia (*Sequoiadendron giganteum*) (Pierson and Rainey 1998; Pierson and Heady 1996). There is 1 occurrence of the pallid bat within 5 miles of the BSA. Although conditions within the BSA are generally unsuitable or provide only marginally suitable habitat for special-status bat species, there is some potential for individuals to roost on-site, possibly originating from more suitable roost sites in nearby areas.

Implementation of PF-BIO-3, PF-BIO-5, PF-BIO-9, and PF-BIO-13, as well as AMM-BIO-17 and AMM-BIO-18, would avoid, or minimize impacts to pallid bat and its habitat. The impact would be less than significant.

Western Red Bat: The Western red bat (*Lasiurus blossevillii*) is listed as a California SSC. Western red bats are usually solitary, roosting in the foliage of large shrubs and trees, usually taking shelter on the underside of leaves. However, they may also be found in rock crevices adjacent to riparian corridors. Western red bats roost along woodland borders, including oak riparian habitats, and urban areas with large-leafed trees. There is 1 CNDDB occurrence of the western red bat within 5 miles of the BSA. Riparian areas within the BSA, particularly around locations associated with the riparian corridor of Estero Americano have potential to support Western red bat roosting. Potential Project impacts include loss of individuals and roosting habitat during vegetational removal.

Implementation of PF-BIO-3, PF-BIO-5, PF-BIO-9, and PF-BIO-13, as well as AMM-BIO-17 and AMM-BIO-18, would avoid, or minimize impacts to Western red bat and its habitat. The impact would be less than significant.

Steelhead – Central California Coast DPS: Steelhead – Central California Coast DPS (*Oncorhynchus mykiss irideus*) (CCCS) is a federally threatened species. Critical habitat for this species overlaps with the BSA and Project footprint. The culverts at Locations 13 and 14 enter below the OHWM of the Russian River at the downstream end, which is critical habitat for CCCS because of its upstream and downstream migratory pathways. Additionally, a PDE at the outlet of the culvert at Location 10

would be below the OHWM of Salmon Creek, which is also designated critical habitat for CCCS. CCCS have the potential to be encountered at the previously mentioned locations. There are 5 CNDDB occurrences of CCCS within 5 miles of the BSA, all of which were observed in tributaries to the Russian River, Salmon Creek, and Estero Americano. The most recent occurrence is from 2011, where 3 adults were discovered in a pool of Nolan Creek, which is a tributary to Salmon Creek.

Potential Project impacts include loss of habitat during vegetational removal, culvert replacement, installation of RSP, and construction of the concrete headwalls, DIs, FESs, and graded ditches. Approximately 0.017 acre (all temporary impact) of potential CCCS habitat and 0.017 acre (all temporary impact) of CCCS critical habitat would be affected by Project activities. However, impacts to suitable habitat and critical habitat are not anticipated to affect the habitat's long-term suitability to support CCCS, should they occur in the BSA in the future.

Implementation of PF-BIO-3, PF-BIO-4, PF-BIO-12, and PF-BIO-13, as well as AMM-BIO-19 through AMM-BIO-21, would avoid, or minimize impacts to CCCS and its habitat. The impact would be less than significant.

Coho Salmon – Central California Coast Evolutionary Significant Unit (ESU): Coho Salmon – Central California Coast ESU (*Oncorhynchus kisutch*) (CCC coho) is a federally endangered and state endangered species. Critical habitat for this species overlaps with the BSA and Project footprint. Critical habitat is defined as the water, substrate, and adjacent riparian zone of estuarine and riverine reaches, including off-channel habitats, in hydrologic units that support the species (NMFS 1999). The following are identified as primary constituent elements for CCC coho in the NMFS critical habitat designation:

- Water
- Substrate
- Riparian zone

The culverts at Locations 13 and 14 enter below the OHWM of the Russian River at the downstream end, which is critical habitat for this species because of its upstream and downstream migratory pathways. Additionally, a PDE at the outlet of the culvert at Location 10 is below the OHWM of Salmon Creek, which is also designated critical habitat for CCC coho. There are 5 CNDDB occurrences of CCC coho within 5 miles of the BSA, all of which were observed in tributaries to the Russian River, Salmon Creek, and Estero Americano (CDFW 2022). In 2011, 25 CCC coho were

caught during a seining survey of Nolan Creek, a tributary to Salmon Creek. Additionally, hundreds of juveniles were discovered as recently as 2015, during snorkel surveys in tributaries to the Russian River.

Potential Project impacts include loss of habitat during vegetational removal, culvert replacement, installation of RSP, and construction of the concrete headwalls, DIs, FESs, and graded ditches. Approximately 0.017 acre (all temporary impact) of potential CCC coho habitat and 0.017 acre (all temporary impact) of CCC coho critical habitat would be affected by Project activities. However, impacts to suitable habitat and critical habitat are not anticipated to affect the habitat's long-term suitability to support CCC coho, should they occur in the BSA in the future.

Implementation of PF-BIO-3, PF-BIO-4, PF-BIO-12, and PF-BIO-13, as well as AMM-BIO-19 through AMM-BIO-21, would avoid, or minimize impacts to CCC coho and its habitat. The impact would be less than significant.

Chinook Salmon – California Coast ESU: Chinook Salmon – California Coast ESU (*Oncorhynchus tshawytscha*) (CC Chinook) is a federally threatened species. Critical habitat for this species overlaps with the BSA and Project footprint. The culverts at Locations 13 and 14 enter below the OHWM of the Russian River at the downstream end, which is critical habitat for this species because of its upstream and downstream migratory pathways. There are no CNDDB occurrences within 5 miles of the BSA for this species; however, camera traps at the Mirabel Dam upstream of the BSA in the Russian River near Forestville, California, captured 1,432 occurrences of CC Chinook in 2014 and 6,713 occurrences in 2012.

Potential Project impacts include loss of habitat during vegetational removal, culvert replacement, installation of RSP, and construction of the concrete headwalls, DIs, FES, and graded ditches. Approximately 0.015 acre (all temporary impact) of potential CC Chinook habitat and 0.015 acre (all temporary impact) of CC Chinook critical habitat would be affected by Project activities. However, impacts to suitable habitat and critical habitat are not anticipated to affect the habitat's long-term suitability to support CC Chinook, should they occur in the BSA in the future.

Implementation of PF-BIO-3, PF-BIO-4, PF-BIO-12, and PF-BIO-13, as well as AMM-BIO-19 through AMM-BIO-21, would avoid, or minimize impacts to CC Chinook and its habitat. The impact would be less than significant.

b) Less Than Significant Impact

Section 30107.5 of the California Coastal Act (CCA) defines environmentally sensitive natural communities as "any land in which plant or animal life or their habitats are either rare or especially valuable because of their nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments" (e.g., riparian and upland habitats, and essential fish habitat [EFH]). Section 30240(a) of the CCA calls for the protection of environmentally sensitive habitat areas (ESHAs) and states that "ESHAs shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas."

ESHAs: There is one type of ESHA within the BSA: riparian habitat. The Project would temporarily and permanently impact approximately 0.925 acre, respectively, of riparian habitat (North American Pacific Coastal Salt Marsh Macrogroup, Southwestern North American Riparian Evergreen and Deciduous, Southwestern North American Riparian/Wash Scrub Group, Vancouverian Coastal Riparian Scrub Group, and Western North American Freshwater Macrogroup) by vegetational removal, culvert replacement, and construction of the RSP, concrete headwalls, DIs, FES, and graded ditches.

Impacted riparian and upland habitats would be revegetated with locally appropriate, commercially available, native species and restored within one year. Riparian trees may be removed as part of Project construction. A tree survey, which will be completed during the Project design phase, will determine whether trees will need to be removed and if so, how many and what species.

Implementation of PF-BIO-4, PF-BIO-5, PF-BIO-8, PF-BIO-9, PF-BIO-12, and PF-BIO-13, as well as AMM-BIO-21 through AMM-BIO-23, would reduce or mitigate impacts to ESHAs.

Critical Habitat: Critical habitat is defined in FESA Section 3(5)(A) as the specific areas within the geographic area occupied by the species on which are found those physical or biological features that are essential to the conservation of the species, and that may require special management considerations or protection.

The USFWS specifies in their designation of critical habitat for this species that critical habitat consists of four primary constituent elements:

- Plant communities, such as north coastal scrub or coastal prairie communities;
- Relatively steep sloped soils (30 percent or greater) derived from sandstone or shale, with rapid runoff and high erosion potential, such as Kneeland or Yorkville series soils;
- Generally north-facing areas; and
- Habitat upslope and downslope from known populations to maintain disturbance such as occasional rockslides or soil slumping that the species appears to require (USFWS 2003).

None of the above primary constituent elements exist within the Project footprint. Additionally, the USFWS specifies that critical habitat does not include existing features and structures made by people, such as buildings, roads and other paved areas, lawns, and other developed areas not containing one or more of the primary constituent elements (USFWS 2003). Because the Project footprint at these three staging areas is confined to graveled road shoulders, these locations do not fit the criteria for golden larkspur critical habitat. As a result, there will be no adverse effects to golden larkspur critical habitat.

Designated critical habitat for CCCS, CC coho, and CC Chinook overlaps the BSA. These critical habitats and impacts from the Project are discussed in their respective species subsections above.

Implementation of PF-BIO-4, PF-BIO-5, PF-BIO-8, PF-BIO-9, PF-BIO-12, and PF-BIO-13, as well as AMM-BIO-22 through AMM-BIO-24, would reduce impacts to critical habitat.

Essential Fish Habitat: The Project is located in the Valley Ford, Bodega Head, Duncan Mills, and Arched Rock U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle, which has designated EFH (i.e., an environmentally sensitive natural community) for Chinook and coho salmon, groundfish, coastal pelagics, and highly migratory species (NMFS 2022). The BSA at the culvert outfall of Location 10 is located in Salmon Creek, within EFH for Chinook salmon, coho salmon, groundfish, and highly migratory species. The BSA at the culvert outfalls of Locations 13 and 14 is located in the Russian River, within EFH for Chinook salmon, coho salmon, groundfish, and coastal pelagics.

Freshwater EFH for Chinook and coho salmon consists of four major components:

- spawning and incubation;
- juvenile rearing;
- juvenile migration corridors; and
- adult migration corridors and holding habitat (Pacific Fisheries Management Council 2014).

Of the four major components of freshwater EFH for Chinook and coho salmon, only the third and fourth components, juvenile migration corridors and adult migration corridors, are present within the waterways that overlap with the Project footprint.

The potential for fish species to be impacted is low, as only a small amount of aquatic habitat occurs within the BSA at Locations 10, 13, and 14. Construction-related activities, such as vegetational removal, culvert replacement, and construction of the RSP, concrete headwalls, DIs, FES, and graded ditches, may result in temporary increases in turbidity, sediment mobilization, or water quality degradation within the BSA; however, these effects are anticipated to subside quickly. In addition, fish species are mobile and could rapidly swim out of the BSA. Potential impacts to EFH include approximately 0.017 acre of temporary impacts.

Although the Project is located within designated EFH, with implementation of PF-BIO-3, PF-BIO-4, PF-BIO-5, PF-BIO-12, and AMM-BIO-22, no permanent or adverse modifications to EFH would result from the Project; therefore, the impact would be less than significant impact.

c) Less Than Significant Impact

The Project would have a less than significant impact on federally protected wetlands, as defined by Section 404 of the Clean Water Act (CWA) (including, but not limited to, marsh, vernal pool, and coastal areas), through direct removal, filling, hydrological interruption, or other means. The Project would also have a less than significant impact on state protected wetlands, defined under Section 30121 of the CCA as “lands within the coastal zone which may be covered periodically or permanently with shallow water and include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, and fens.” Section 30233(a)(4) of the CCA analyzes wetlands “for incidental public service purposes,

including, but not limited to burying… pipes" (i.e., culverts) and "maintenance of existing… outfall lines."

A U.S. Army Corps of Engineers (USACE) aquatic resource delineation was conducted for federally protected wetlands and other waters as defined by Section 404 of the CWA. Within the Project footprint, there are 0.67 acre of wetlands, as defined by Section 404 of the CWA. Additionally, there is a total of approximately 0.474 acre of potentially jurisdictional other waters and 550 linear feet of culverted waters which would be temporarily impacted by construction. These impacts would be verified by the USACE during the permitting process. A California Coastal Commission (CCC) aquatic resources delineation report would be prepared, and verified by the CCC, during the permitting process. The temporarily impacted areas would be restored and revegetated to minimize impacts to habitat functionality.

Implementation of PF-BIO-4, PF-BIO-5, PF-BIO-8, PF-BIO-9, PF-BIO-10, PF-BIO-12, PF-BIO-13, and AMM-BIO-22 through AMM-BIO-24, would minimize impacts to aquatic resources. The impact would be less than significant.

d) No Impact

The Project would not construct any new permanent barriers to wildlife movement, or otherwise interfere with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites. Based on field assessments, all of the culverts associated with the Project are inaccessible to anadromous fish species because of the culverts' elevation above adjacent water bodies, inaccessibility either downstream or upstream of the culvert due to steep terrain, or because the adjacent grassy bottomed drainages that flow into the culverts channelize roadside drainage and only flow after rains. Wildlife crossing improvements would be included as part of this Project and would likely result in a net benefit to wildlife movement across SR 1. Wildlife crossings would be determined and finalized during the Project design phase. There would be no impact.

e) Less Than Significant Impact

The Project would not conflict with any local policies or ordinances protecting biological resources.

The Sonoma County General Plan (General Plan) (Sonoma County 2008) is the comprehensive, long-range general plan that guides land use and development in the

unincorporated areas of Sonoma County. The General Plan states, "Protect and enhance Riparian Corridors and functions along streams, balancing the need for agricultural production, urban development, timber and mining operations, and other land uses with the preservation of riparian vegetation, protection of water resources, flood control, bank stabilization, and other riparian functions and values." Implementation of PF-BIO-4, PF-BIO-5, PF-BIO-8, PF-BIO-9, PF-BIO-10, PF-BIO-12, PF-BIO-13, as well as AMM-BIO-22 through AMM-BIO-24, is consistent with the General Plan. Therefore, the Project would not conflict with the General Plan to restore damaged portions of Stream Conservation Areas. The impact would be less than significant.

f) No Impact

The Project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

PROJECT FEATURES

Caltrans would incorporate the following standard PFs into the:

- **PF-BIO-1: Permit Compliance Binder.** An on-site Permit Compliance Binder would be maintained by the Caltrans resident engineer at all times and presented to agency (CCC, CDFW, NMFS, San Francisco Bay Regional Water Quality Control Board [RWQCB], USACE, and/or USFWS) personnel upon request. The Permit Compliance Binder would include a copy of all original permits, licenses, agreements, and certifications (PLACs), as well as any extensions and/or amendments to PLACs.

- **PF-BIO-2: Work According to Documents.** Except as they are contradicted by measures within the PLACs, all construction-related activities would be conducted in conformance with the Project description, AMMs in the PLACs and CDP, as well as the PFs and AMMs in this IS/ND.

- **PF-BIO-3: Environmental Training.** Prior to the start of construction, a Caltrans biologist would provide a training session for all work personnel to identify any sensitive species that may be in the area, their basic habits, how they may be encountered in their work area, and procedures to follow when they are encountered. Any personnel joining the work crew later would receive the same training before beginning work on-site. Upon completion of the education

program, employees would sign a form stating they attended the program and understand all protection measures. A pamphlet that contains images of sensitive species that may occur within the Project footprint, lists ESAs within the Project footprint, and notes key avoidance measures, as well as employee guidance, would be given to each person who completes the training program. These forms would be made available to the resource agencies upon request.

- **PF-BIO-4: Work During Periods of Dry Weather.** Construction-related activities in the bed, bank, channel, and any associated riparian habitat would occur during periods of dry weather. Forecasted precipitation would be monitored by the Resident Engineer (RE) or designee. When approximately 0.25 inch or more of precipitation (qualifying rain event) is forecasted to occur, construction-related activities would stop and erosion control BMPs would be installed prior to the onset of precipitation. After qualifying rain events, the BSA would be inspected for erosion and sediment problems and corrective action would be taken as needed; 72-hour weather forecasts from the National Weather Service would be consulted and work would not resume until surface runoff ceases and there is less than a 50 percent forecast for a qualifying rain event in the next 24-hour period.

- **PF-BIO-5: Delineate Environmentally Sensitive Areas.** Prior to the beginning of construction, ESAs within the Project footprint would be clearly delineated by a Caltrans approved biological monitor and installed by the contractor using high visibility orange fencing, flagging, or similar markings. ESA fencing would remain in place throughout construction, though it may be removed during the wet season (and subsequently re-installed) if needed to prevent construction materials from being washed away. The final Project plans would depict all locations where ESA fencing would be installed. The final Project standard special provision (SSPs) would clearly describe acceptable fencing and prohibited construction-related activities, vehicles, equipment, and materials storage within ESAs. ESA fencing would be maintained in good repair throughout the duration of construction.

- **PF-BIO-6: Wildlife Exclusion Fencing.** Prior to the beginning of construction, at the discretion of the Caltrans biologist, wildlife exclusion fencing (WEF) would be installed within the BSA in areas where wildlife could enter the BSA. At the discretion of the biological monitor, WEF may be removed at times when

construction is no longer active in the area. All WEF would be removed following completion of construction-related activities.

- **PF-BIO-7: Nesting Bird Surveys.** During the nesting season (typically February 1 through September 30), pre-construction surveys for nesting birds will be conducted by the Caltrans Biologist no more than 72 hours prior to the start of construction activities. If work is to occur within 300 feet of active raptor nests or 50 feet of active non-game bird nests, a non-disturbance buffer will be established at a distance sufficient to minimize disturbance based on the nest location, topography, cover, the species' sensitivity to disturbance, and the intensity/type of potential disturbance. To minimize and avoid take of migratory birds, their nests, and their young, Caltrans will conduct vegetation and tree trimming outside of the bird nesting season, prior to construction. This work will be limited to vegetation and trees that are within the Project footprint. Additional bird nesting surveys will be required if work must occur during the nesting season. If construction-related activities occur during nesting season, a Caltrans biologist would conduct preconstruction surveys for nesting birds. All nest avoidance requirements of the Migratory Bird Treaty Act, USFWS, and CDFW would be observed. If an active nest is found, a perimeter buffer of approximately 50 feet for non-game native birds and approximately 300 feet for raptors would be adhered to. appropriate protection buffer would be established until the young fledge. USFWS and/or CDFW would be contacted within 24 hours if a special-status species is discovered within the BSA.

- **PF-BIO-8: Invasive Weed Control.** To reduce the spread of invasive, non-native plant species and the potential decrease of palatable vegetation for wildlife species, Caltrans would comply with Executive Order (EO) 13112. The purpose of EO 13112 is to prevent the introduction of invasive species and provide for their control to reduce the economic, ecological, and human health effects. If invasive species are disturbed or removed during construction-related activities, the contractor would be required to contain the plant material associated with these invasive species and dispose of them in a manner that would not promote the spread of the species. The contractor would be responsible for obtaining all PLACs, and environmental clearances for proper disposal. Areas subject to noxious weed removal or disturbance would be hydroseeded with fast growing locally appropriate, commercially available native grasses or an erosion control mixture of locally appropriate, commercially available native seed species. Where

seeding is not practical, the target areas within the BSA would be covered to the extent practicable with heavy black plastic solarization material.

If work occurs in ESHAs, construction vehicles and equipment would be thoroughly cleaned prior to arriving on the construction site to prevent the spread of invasive species from other locations.

- **PF-BIO-9: Vegetation Removal and Tree Trimming.** Vegetation would be removed, and trees trimmed, only where necessary, and vegetation would be cut above soil level, except where excavations and permanent impacts would occur, to allow plants that reproduce vegetatively to resprout after construction.

- **PF-BIO-10: Restore Disturbed Areas.** Temporarily disturbed areas would be restored. Exposed slopes and bare ground would be reseeded with locally appropriate, commercially available native species to stabilize bare soil and prevent erosion.

- **PF-BIO-11: Prevent Inadvertent Entrapment.** To prevent inadvertent entrapment of wildlife species during construction, all excavated, steep-walled holes or trenches dug more than approximately 1-foot below ground surface would be covered at the close of each working day by plywood or similar materials or provided with one or more escape ramps constructed of earthen fill or wooden planks at an angle no greater than approximately 30 degrees. Holes and trenches would be thoroughly inspected for trapped wildlife species prior to filling. Pipes, culverts, or similar structures stored in the BSA would be inspected before they are moved, capped, or buried.

- **PF-BIO-12: Stormwater Best Management Practices.** Water pollution control and erosion control BMPs would be developed and implemented to minimize wind- or water-related erosion. They would follow the requirements of the RWQCB and standards outlined in construction site BMPs manual (Caltrans 2017).

- **PF-BIO-13: Construction Site Management Practices.** The following site restrictions would be implemented to avoid or minimize potential impacts on sensitive biological resources:

    a. Enforce a speed limit of 15 miles per hour for project vehicles in unpaved portions of the site to reduce dust and excessive soil disturbance.

b. Locate construction access, staging, storage, and parking areas within the Caltrans ROW and outside of any designated ESA to the extent practicable. Access routes, staging and storage areas, and contractor parking would be limited to the minimum necessary to construct the Project. Routes and boundaries of roadwork would be clearly marked before initiating construction.

c. Certify, to the maximum extent practicable, borrow material is nontoxic and weed free.

d. Enclose food and food-related trash items in sealed trash containers and remove them from the site at the end of each day.

e. Prohibit pets from entering the Project area during construction.

f. Prohibit firearms within the Project site, except for those carried by authorized security personnel or local, state, or federal law enforcement officials.

AVOIDANCE AND MINIMIZATION MEASURES

Caltrans would incorporate the following standard AMMs to avoid or minimize potential impacts to biological resources:

- **AMM-BIO-1: Rare Plant Surveys.** Prior to the beginning of construction, botanical surveys would be conducted by Caltrans Biologist in areas of suitable habitat for rare plant species during the appropriate blooming season(s).

- **AMM-BIO-2: Rare Plant Salvage and Transportation Plan.** If any rare plants are detected in the Project footprint during surveys, a Rare Plant Salvage and Transplantation Plan will be prepared and submitted to appropriate agencies for approval, at least 60 days prior to the beginning of construction. This plan will include the location of ESAs and avoidance measures, the establishment of photo points, salvage and replanting methods, replanting success criteria, and monitoring methods. Special-status plants will be avoided where feasible through implementation of ESAs, as described in the plan. Where avoidance is not feasible, rare plants in the Project footprint will be transplanted and replanted to suitable adjacent habitat in the Caltrans ROW, as described in the plan.

  If avoiding rare plant species is not feasible, measures may be implemented to minimize impacts. AMMs may include one or more of the following: (1) collection of rare plants seeds, bulbs, other propagules, or topsoil prior to

construction for use in future on-site restoration or enhancement actions; (2) restoration of enhancement of suitable on-site rare plant habitat; or (3) restoration or enhancement of suitable off-site rare plant habitat.

- **AMM-BIO-3: Biological Monitoring.** A biological monitor will be present during construction activities where take of a listed species could occur. Through communication with the Resident Engineer or designee, the biological monitor may stop work if deemed necessary for any reason to protect listed species; the biological monitor will advise the Resident Engineer or designee on how to proceed accordingly.

  During construction in potential and/or suitable CRLF habitat, the following monitoring protocols would be observed by a USFWS-approved biological monitor:

  a. Within 24 hours prior to initial ground-disturbing activities, potential and/or suitable CRLF habitat identified within the BSA would be surveyed by a USFWS-approved biological monitor to clear the site of CRLF moving above ground or taking refuge in burrow openings or under construction materials that could provide cover.

  b. A USFWS-approved biological monitor would be present during ground-disturbing activities and vegetation/tree removal in suitable CRLF habitat to monitor the removal of the top 12 inches of soil.

  c. If potential aestivation burrows are discovered, the burrows would be flagged for avoidance when feasible.

  d. After a qualifying rain event, and prior to resuming construction activities, a USFWS-approved biological monitor would inspect the BSA and all construction equipment and materials for the presence of CRLF.

  e. Upon discovery of a CRLF individual(s) within the BSA, all construction-related activities would cease within a 50-foot radius of the frog. The frog would be allowed to leave the BSA on its own; or if the CRLF does not leave on its own, it would be relocated as close to the BSA as feasible and with permission from the adjacent property owner and placed in a natural burrow by a USFWS-approved biological monitor with the appropriate USFWS 10(a)1(A) handling permit.

f. USFWS would be notified by phone and email within 1 working day of any CRLF discovery within the BSA.

- **AMM-BIO-4: Preconstruction Surveys for California Red-Legged Frog.** Preconstruction surveys for CRLF would be conducted by a USFWS-approved biological monitor within 14 calendar days of the beginning of construction-related activities in suitable upland dispersal and aquatic habitat prior to the beginning of ground-disturbing activities, vegetation removal, and WEF installation. Surveys would be conducted as outlined in the USFWS (2005) species survey guidelines (USFWS Guidelines) for CRLF. Access to CRLF habitat may be limited by appropriate safety measures and protocols discussed in the USFWS Guidelines.

- **AMM-BIO-5: Proper Use of Erosion Control Devices**. To prevent CRLF from becoming entangled or trapped in erosion control materials, plastic monofilament netting, such as erosion control matting or similar material, will not be used. Acceptable substitutes will include coconut coir matting or tackifying hydroseeding compounds.

- **AMM-BIO-6: Protocol for Species Observation.** If a CRLF is encountered in the Project footprint, work within 50 feet of the animal will cease immediately and the Resident Engineer and USFWS approved biological monitor will be notified. Based on the professional judgment of the biological monitor, if Project activities can be conducted without harming or injuring the animal, then it may be left at the location of discovery and monitored by the biological monitor. Project personnel will be notified of the finding, and, at no time, will work occur within 50 feet of the animal without a biological monitor present.

- **AMM-BIO-7: Occupied Habitat.** If NSO surveys (using the USFWS's 2012 survey protocol [USFWS 2014]) determine that the Project footprint is occupied, or Caltrans biologist presumes NSO occupancy without conducting surveys, Caltrans will adhere to the following measures:

  - Vegetation Removal or Alteration
    - No suitable NSO nest trees will be removed during the nesting season (typically February 1 to September 30).
    - Suitable habitat may be removed or altered outside the nesting season (typically October 1 to January 31) provided "no take" guidelines for

USFWS are adhered to for all known NSO home ranges within 1.3 miles of the work areas in interior forests or within 0.7 mile of the work areas in coastal (redwood) forests (USFWS 2014).

- Auditory or Visual Disturbance
  - No activity generating sound levels 20 or more decibels (dB) above ambient sound levels or with maximum sound levels (ambient sound level plus activity-generated sound level) above 90 dB (excluding vehicle backup alarms) may occur within suitable spotted owl nesting or roosting habitat during most of the nesting season (typically February 1 to July 9) (USFWS 2014). These above-ambient, sound-level restrictions will be lifted after July 31, after which the USFWS considers the above-ambient sound levels as having "no effect" on nesting spotted owls and dependent young.
  - No human activities will occur within a visual line of sight of 131 feet or less from any known nest locations within the Project footprint (USFWS 2014).

- **AMM-BIO-8: Unoccupied Habitat.** If NSO surveys (using the USFWS's 2012 survey protocol) determine that all suitable spotted owl habitat within 0.7 mile of the work areas in coastal (redwood) forests or within 1.3 miles of the work areas in interior forests, is unoccupied, then suitable habitat may be removed or altered without seasonal restrictions, provided "no take" guidelines are adhered to for all known spotted owl home ranges within 0.7 mile of the work areas in coastal (redwood) forests or within 1.3 miles of the work areas in interior forests (USFWS 2014). The USFWS considers previously occupied habitat as essentially "occupied" in perpetuity. Therefore, adequate (based on the "no take" guidelines) suitable nesting or roosting and foraging habitat must be maintained within all historical NSO territories within the Project footprint.

- **AMM-BIO-9: Suitable MAMU Vegetation Removal or Alteration**
  - No potential MAMU nest trees will be removed during the nesting season (typically February 1 to September 30).
  - Potential suitable habitat may be removed or altered outside the nesting season (typically October 1 to January 31).

  - Through coordination with USFWS, Caltrans must ensure that there are no adverse effects on designated MAMU critical habitat within the Project footprint.

- **AMM-BIO-10: Auditory and Visual Disturbance.**

  - No activity generating sound levels 20 dB or more above ambient sound levels, or with maximum sound levels (ambient sound level plus activity-generated sound level) above 90 dB (excluding vehicle backup alarms), may occur within suitable MAMU nesting habitat during most of the MAMU nesting season (typically March 24 to August 5) (USFWS 2014).
  - Outside of MAMU nesting season (typically between August 6 and September 30) of any year, Project activities adjacent to suitable nesting habitat that will generate sound levels equal to or greater than 10 dB above ambient sound levels will observe a daily work window beginning 2 hours after sunrise and ending 2 hours before sunset. However, preparation work that does not generate noise above ambient sound levels, including street sweeping and manual removal of pavement markers, can occur during all hours. The need for this daily work window depends on the distance between suitable nesting habitat and the above-ambient sound generating activity following the USFWS's guidelines (USFWS 2014).
  - No human activities will occur within the visual line of sight of 131 feet or less from an active nest (USFWS 2014).

- **AMM-BIO-11: Unoccupied MAMU Habitat.** If protocol surveys determine that all suitable MAMU nesting habitat within the Project footprint is considered unoccupied, then suitable nesting habitat may be removed or altered without seasonal restrictions.

- **AMM-BIO-12: Seasonal Avoidance for Snowy Plover.** At Location 10 and at Staging Area D no construction, maintenance, or inspections will be performed during the SNPL breeding season, (typically March 1 through September 14). Project activities adjacent to suitable SNPL habitat will only be performed during the non-breeding season. A no-disturbance buffer of 130 feet will be implemented during this season.

- **AMM-BIO-13: Preconstruction Surveys for Snowy Plover.** In addition, a service-approved biologist will conduct pre-construction clearance surveys for the species prior to work at Location 10 and Staging area D. At least two surveys will

be conducted at those locations: one survey will be between 3 and 14 calendar days prior to work starting, and another will be within 3 calendar days prior to work starting. These surveys may be conducted concurrently with other nesting bird surveys, as required. Caltrans biologists will be familiar with the species and able to distinguish between male and female SNPL. Surveys will be conducted along the beach area (on foot within accessible areas or using binoculars) within a 500-foot radius of the Project footprint. Tidal phase, weather, wind speeds, and visibility will be recorded during each survey. Surveyors will document observations and banded birds but will not approach a bird on a nest or an adult with chicks, or female head-bobbing, a male tail-dragging, birds copulating, nest scraping, birds performing a broken wing display, or an adult with chicks. Positive identifications should be reported to USFWS within 24 hours.

- **AMM-BIO-14: Preconstruction Survey for *Viola adunca*.** A preconstruction survey for *Viola adunca* would be conducted prior to the beginning of construction by a Caltrans biologist, referencing phenology trends observed at nearby reference populations. If *Viola adunca* is not found within the BSA, then the BSA does not contain suitable breeding habitat for MSB.

- **AMM-BIO-15: Minimize Impacts to *Viola adunca* and Myrtle's Silverspot Butterfly.** *Viola adunca* would be flagged and fenced for avoidance if found within the BSA during preconstruction surveys. Host plants would be surveyed by a USFWS-approved biologist for evidence of MSB larval feeding or damage. If host plants are considered potentially occupied by MSB, then construction-related activities would occur during MSB larval period and outside of MSB flight season. If host plants cannot be avoided, then work would occur during the MSB flight season with a USFWS-approved biological monitor present to survey for adult MSB. If MSB is observed within the BSA, the USFWS-approved biological monitor, through communication with the RE or designee, may stop work if deemed necessary for any reason to protect MSB and would advise the RE or designee on how to proceed accordingly.

- **AMM-BIO-16: Pre-construction Surveys for Sonoma Tree Vole.** Before the start of construction, a Caltrans biologist will conduct a survey of the Project footprint and a 30-foot buffer beyond the Project footprint boundaries to determine the location of active and inactive STV nests. Any nests detected during the surveys will be recorded and mapped in relation to the Project footprint. In addition, the biologist will evaluate any signs of current activity. A

30-foot equipment exclusion buffer will be established around active and inactive nests that can be avoided. Within such buffers, all vegetation will be retained, and nests will remain undisturbed.

- **AMM-BIO-17: Preconstruction Bat Surveys.** Prior to the start of any tree removal activities, a pre-construction bat survey will be performed by an agency approved biologist in the event that any commonly occurring, non-listed, tree-roosting bat species are present and to determine if two-phase tree removal methods or other bat tree-roost avoidance measures are appropriate for any trees scheduled for removal. Surveys should be conducted at work locations determined to have moderately to highly suitable tree roost habitat. The biologist will use visual confirmation to determine the presence of any bat roosts, and acoustic recognition equipment to identify species to the greatest extent possible. If detected, all appropriate avoidance and minimization measure will be put in place.

  If the habitat assessment reveals suitable bat habitat in trees and tree removal is scheduled during nesting season (typically April 16 through August 30 and/or October 16 through February 28), then presence/absence surveys shall be conducted two to three days prior to any tree removal or trimming. If presence/absence surveys are negative, then tree removal may be conducted by following a two phased tree removal system. If presence/absence surveys indicate bat occupancy, then the occupied tree removal/trimming shall only occur during (typically March 1 through April 15 and/or August 31 through October 15) by following the two phased tree removal system. The two phase system shall be conducted over 2 consecutive days. On the first day, (in the afternoon) limbs and branches are removed by a tree cutter using chainsaws or other hand tools. Limbs with cavities, crevices, or deep bark fissures are avoided and only branches or limbs without those features are removed. On the second day the entire tree shall be removed.

- **AMM-BIO-18: Inspect Pipes and Culverts.** All construction-related pipes, culverts, or similar structures within the Project area will be thoroughly inspected for the presence of wildlife, including roosting bats, prior to being moved or buried.

- **AMM-BIO-19**: **In-water Work Window.** In-water activities at Locations 10, 13, and 14 will occur during the dry season (typically between June 15 and October

15) to the maximum extent possible to avoid migratory periods of anadromous fish. If necessary, in-water O&M activities that do not involve impact pile driving or cofferdam installation will be allowed to occur between September 1 and January 15, provided the activities are initiated prior to November 30. No new in-water impacts will be initiated outside of the seasonal work window, and work activities will be concluded as soon as logistically possible based on site-specific construction conditions.

- **AMM-BIO-20: In-water Activities.** When working in areas near waterways or wetlands, the duration of in-water activity will be limited to the minimum amount of time necessary to construct the Project scope.
- **AMM-BIO-21: Block-off Net Installation.** Block-off nets will be installed and closed during low tide to the extent feasible to prevent fish from entering the work area at Locations 10, 13, and 14, and will be overseen by the Caltrans biologist.
- **AMM-BIO-22: Impacts to ESHAs.** Temporary impacts to ESHAs (i.e., riparian habitat) would be mitigated at a ratio of 1:1. Permanent impacts to ESHAs and aquatic resources would be mitigated at ratios of 3:1 and 4:1, respectively. Impacts to ESHAs, mitigation ratios, and mitigation monitoring would be confirmed with the CCC and Sonoma County during the permitting process.
- **AMM-BIO-23: Tree Replacement**. Any trees that may be removed and replaced at a ratio of 3:1, or compensated via an in lieu fee. Appropriate replacement locations would be determined during the permitting process and in consultation with the appropriate agencies, and replaced according to the agencies required ratios.
- **AMM-BIO-24: Impacts to Waters**. Approximately 0.01 acre of potentially jurisdictional other waters would be temporarily impacted by the installation of the TCDS. The temporarily impacted areas would be restored to minimize impacts to habitat functionality. Approximately 0.01 acre of potentially jurisdictional estuarine intertidal waters would be permanently impacted by the installation of the RSP. In addition, less than 0.01 acre of potentially jurisdictional other waters would be permanently impacted by the construction of the two headwalls. Temporary impacts would be mitigated at a ratio of at least 1:1 and permanent impacts would be mitigated at a ratio of at least 3:1 or 4:1, depending on the appropriate agencies requirements. Impacts to waters, mitigation ratios, and mitigation monitoring would be confirmed with the appropriate agencies during the permitting process.

3.3.5 Cultural Resources

Would the project:

Question	CEQA Determination
a) Cause a substantial adverse change in the significance of a historical resource pursuant to in §15064.5?	No Impact
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	No Impact
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	Less Than Significant Impact

CEQA SIGNIFICANCE DETERMINATIONS FOR CULTURAL RESOURCES

A Section 106 Closeout Memorandum was prepared by the Caltrans Office of Cultural Resource Studies (OCRS) (Caltrans 2022d). The investigation was performed by a Caltrans archaeologist and architectural historian who are Professionally Qualified Staff (PQS) for prehistoric archaeology and architectural history. A summary of the findings is presented here.

The archaeological and architectural history areas of potential effects (APEs) for the Project were established to include all areas of direct impact and the maximum extent of construction-related activities, TCEs, PDEs, staging, and areas within Caltrans ROW where Project activities will occur along SR 1 at the 17 Project locations.

The vertical APE/Area of Direct Impact is the maximum extent of ground-disturbing work required for Project activities and would encompass 7 feet below ground surface to account for removing and constructing headwalls and culvert removal and replacement work.

Caltrans PQS staff conducted a literature review of the Caltrans Cultural Resource Database, as-built plans, aerial photographs, and maps. There were no identified cultural resources in the Project footprints.

Caltrans PQS staff contacted the Native American Heritage Commission (NAHC) and requested a Sacred Lands File search. NAHC stated that the Sacred Lands File search was negative and provided contact information to consult with Tribal representatives affiliated with the Project region. To comply with Section 106 of the National Historic Preservation Act and Assembly Bill 52, Caltrans initiated consultation with all contacts provided by the NAHC on April 19, 2022. Two Tribal contacts responded with a request for consultation: the Federated Indians of Graton

Rancheria (FIGR) on May 3, 2022, and the Kashia Pomo Band of Pomo Indians of the Stewarts Point Rancheria (Kashia Pomo) on April 22, 2022.

Coordination with FIGR and Kashia Pomo area ongoing and will continue as warranted through the life of the Project (Caltrans 2022d).

No archaeological or built resources were identified within the APE. Based on the literature review and the archaeological survey, Caltrans determined that the Project has no potential to affect cultural resources.

a and b) No Impact

There are no cultural resources in the Project APE. Therefore, there would be no impact.

c) Less Than Significant Impact

California law recognizes the need to protect interred human remains, particularly Native American burial sites and associated items of patrimony, from vandalism and inadvertent destruction. While there are no known cultural resources within the Project footprint, there is a small possibility that cultural resources could be discovered during Project construction activities; however, implementation of PF-CULT-1 and PF-CULT-2 would reduce the impact to less than significant.

PROJECT FEATURES

Caltrans would incorporate the following standard PFs to reduce potential impacts to cultural resources:

- **PF-CULT-1: Inadvertent Archaeological Discoveries.** If buried archaeological resources are discovered during ground-disturbing activities, work would cease until a Caltrans qualified archaeologist can assess the nature and significance of the resource and appropriate AMMs are implemented. The need for monitoring during the remainder of the Project would be reevaluated. The Caltrans qualified archaeologist would consult with appropriate Native American tribes in determining suitable treatment for inadvertent archaeological discoveries if the resource is Native American in nature.

- **PF-CULT-2: Discovery of Human Remains.** If human remains are discovered during ground-disturbing activities, construction-related activities within a 100-foot radius of the find would be halted immediately and the Caltrans qualified

archaeologist would be notified within 24 hours. The Caltrans qualified archaeologist would immediately notify the Sonoma County coroner. The Sonoma County coroner is required to examine the find within 48 hours of receiving notification of such a discovery. If the Sonoma County coroner determines that the human remains are those of a Native American, the NAHC would be contacted by phone within 24 hours of making the determination (California Health and Safety Code Section 7050.5[c]). The Caltrans qualified archaeologist would also notify local Native American tribes of discovered human remains. The NAHC would determine and contact the Most Likely Descendent (MLD) regarding the discovered human remains. The MLD, in cooperation with the adjacent property owner and the Caltrans qualified archaeologist, would determine the ultimate disposition of the human remains.

3.3.6 Energy

Would the project:

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

CEQA SIGNIFICANCE DETERMINATIONS FOR ENERGY

An Energy Analysis Report was prepared by the Caltrans Office of Environmental Engineering (Caltrans 2022e). A summary of the findings is presented here.

a) Less Than Significant Impact

Construction-related activities that consume energy generate byproducts. Greenhouse gases (GHGs) are the most extensively studied byproducts of energy consumption because they are linked to climate change. To assess energy consumed by construction vehicles and equipment, the Caltrans-developed Construction Emissions Tool 2020 (CAL-CET 2020), version 1.0, was used to quantify carbon dioxide (CO_2) emissions. The USEPA's GHG equivalencies formulas were used to convert CO_2 emissions to fuel volumes. It was assumed diesel would be used for all construction vehicles and equipment. Construction vehicles and equipment are anticipated to consume approximately 17,387.03 gallons during construction of the Project (Caltrans 2022e).

During construction, PF-ENERGY-1 and PF-ENERGY-2, presented at the end of this section, would be implemented to improve energy efficiency of construction equipment. In addition, implementation of PF-AQ-2 and PF-AQ-3, as discussed in Section 3.3.3, would also improve energy efficiency and reduce energy consumption by construction of the Project.

Construction-related activities would be short term and would not increase SR 1 transportation capacity or otherwise alter long-term vehicle traffic that have the potential to affect energy use. During Project operation, energy consumption would be limited to routine maintenance activities that are anticipated to be similar to existing conditions. Therefore, the Project would not result in wasteful, inefficient, or unnecessary consumption of energy resources during construction and operation. The Project would have a less than significant impact.

b) No Impact

The purpose of the Project is to replace aging and degrading culverts, thus restoring drainage flow and preventing culvert failure. As such, the Project would not result in change in traffic volumes, vehicle mix, or other factors that would cause an increase in energy consumption of the Project. The Project would not result in wasteful, inefficient, or unnecessary consumption of energy resources or conflict with a state or local plan for renewable energy or energy efficiency. Therefore, the Project would not conflict with the regional/statewide goals on renewable energy or energy efficiency. There would be no impact.

PROJECT FEATURES

Caltrans would incorporate the following PFs into the Project to reduce potential impacts to energy:

- **PF-ENERGY-1: Recycle Non-Hazardous Waste and Excess Construction Materials.** If feasible, recycle non-hazardous waste and excess materials to reduce disposal off-site.
- **PF-ENERGY-2: Solar Energy.** Use solar energy as the energy source for construction equipment, such as, but not limited to, signal boards, if feasible.

3.3.7 Geology and Soils

Would the project:

Question	CEQA Determination
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.	No Impact
(ii) Strong seismic ground shaking?	No Impact
(iii) Seismic-related ground failure, including liquefaction?	No Impact
(iv) Landslides?	No Impact
b) Result in substantial soil erosion or the loss of topsoil?	No Impact
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?	No Impact
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	No Impact
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	No Impact
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	No Impact

CEQA Significance Determinations for Geology and Soils

A Geotechnical Design Report was prepared by the Caltrans Office of Geotechnical Design—West (Caltrans 2022f). A summary of the findings is presented here.

The dominant feature of the province is the San Andreas Fault, an approximately 800-mile-long fault zone that forms the dividing line between major tectonic plates, with the Pacific Plate situated west of the San Andreas Fault and the North American Plate situated east of the San Andreas Fault. Several traces of the Holocene-active San Andreas fault cross SR 1 between PM 1.0 and 28.7. These traces are not mapped in the immediate vicinity of the planned culvert improvements (Caltrans 2022f).

Geologic mapping of the Project corridor performed for the U.S. Geological Survey (Blake et al. 2002) indicates that Locations 1 through 8 are underlain by the Wilson Grove formation, a unit predominantly composed of unconsolidated sand. Locations 9

through 12 are underlain by alluvial and marine terrace deposits. Locations 13 through 15 are underlain by Franciscan Complex greywacke and mélange and Locations 17 and 18 are underlain by Franciscan Complex sandstone. At Locations 1, 2, 13, and 14, Alluvium is shown to overlie the aforementioned mapped units. SR 1 at Location 2, 13, and 14 is constructed on fill, and excavations required to replace existing trenches would also be performed in existing fill.

a, b, c, d, e, and f) No Impact

The Project would be subject to strong ground shaking from nearby faults. The Project would restore the culverts within previously disturbed ground. The Project does not lie within an Alquist-Priolo Special Studies Zone and would not experience hazards from fault rupture, nor would the Project expose the public to other seismic hazards, such as liquefaction or seismically induced landslides.

Ground-disturbing activities would occur in previously disturbed areas and minor immediate settlement would occur during backfill placement for the culverts. No long-term settlement is anticipated. Project components would not be constructed in soft, erodible, expansive, or collapsible soils, and temporary and permanent erosion control BMPs would be used to minimize erosion during construction-related activities.

The Project is not located on a geologic or soil unit that is unstable, and no septic tanks or alternative wastewater delivery systems would be constructed or affected by the Project. In addition, it is anticipated that the Project would not encounter sensitive paleontological resources. Therefore, no impact would occur.

3.3.8 Greenhouse Gas Emissions

Would the project:

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

CEQA SIGNIFICANCE DETERMINATIONS FOR GREENHOUSE GAS EMISSIONS

A Construction Greenhouse Gas Emissions Analysis was prepared by the Caltrans Office of Environmental Engineering (Caltrans 2022g). A summary of the findings is presented here.

a) Less Than Significant Impact

Construction-generated GHGs include emissions resulting from operation of on-site construction equipment, workers commuting to and from the Project, and traffic delays due to construction of the Project. The emissions would be produced at different rates throughout the Project, depending on the construction-related activities occurring in the various phases of construction. CO_2 is a more important GHG pollutant due to its abundance when compared with other GHGs emitted from construction vehicles and equipment, including methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbon, and black carbon.

The construction-related GHG emissions were calculated using the Caltrans CAL-CET 2020 tool. The Project is anticipated to emit approximately 177 tons of CO_2, 0.005 ton of CH_4, 0.009 ton of N_2O, and 163.16 metric tons of carbon dioxide equivalent during construction (Caltrans 2022g). The Project would not increase SR 1 transportation capacity and therefore would not generate long-term GHG emissions.

The Project would implement Caltrans Standard Specifications such as complying with air pollution control rules, regulations, ordinances, and statutes that apply to work performed under the contract and the use of construction site BMPs to minimize or reduce short-term GHG emissions from construction-related activities. Project Features PF-AQ-2, PF-AQ-3, PF-ENERGY-1, and PF-ENERGY-2, as discussed in Sections 3.3.3 and 3.3.6, would reduce air emissions, energy consumption, and GHG emissions to the maximum feasible extent.

Therefore, the Project would not generate GHG emissions that may have a significant impact (i.e., long-term adverse effects) on the environment. The impacts would be less than significant.

b) No Impact

Plans and policies adopted for the purposes of reducing GHG emissions in California include multiple Senate and Assembly Bills and Executive Orders. These policies establish GHG emissions reduction goals, set low-carbon fuel standards, support rapid commercialization of zero-emission vehicles, fund clean vehicle programs, and require climate adaptation planning. The Association of Bay Area Governments (ABAG) and Metropolitan Transportation Commission (MTC) developed the Plan Bay Area 2050, a Regional Transportation Plan and Sustainable Communities Strategy for the Bay Area, which includes strategies and policies for reducing GHG emissions (ABAG and MTC 2021).

The Project would comply with applicable state and regional GHG reduction policies and implement emission control measures to minimize or reduce GHG emissions. The Project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. The Project would not contribute to a long-term increase in GHG emissions. There would be no impact.

3.3.9 Hazards and Hazardous Materials

Would the project:

Question	CEQA Determination
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	Less Than Significant Impact
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?	Less Than Significant Impact
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	No Impact
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	No Impact
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?	No Impact
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	Less Than Significant Impact
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	Less Than Significant Impact

CEQA Significance Determinations for Hazards and Hazardous Materials

The Valley Ford schoolhouse is located approximately 0.15 mile southwest of Location 7, the Bodega Bay Elementary School is located approximately 0.85 miles southeast of Location 9, the Jenner School is located approximately 0.5 miles northwest of Location 14. There are no airports within a 2-mile radius of any of the Project Locations.

a and b) Less Than Significant Impact

Construction-related activities would not involve the routine transport or use of hazardous materials when the Project becomes operational. During construction, Caltrans' Standard Specifications would be implemented to prevent spills or leaks from construction equipment and from storage of fuels, lubricants, and solvents. All aspects of construction of the Project associated with removal, storage, transportation, and disposal of hazardous materials would be done in accordance with the appropriate

California Health and Safety Code. Handling of hazardous materials would comply with Caltrans Standard Specification 14-11, Hazardous Waste and Contamination, which outlines handling, storage, and disposal of hazardous waste.

The lack of operational impacts from hazardous materials, along with compliance with Caltrans' Standard Specifications, SSPs, and PF-HAZ-1 and PF-HAZ-2, would reduce the potential construction impacts caused by the transportation, use, and disposal of hazardous materials or an accidental release of hazardous materials to a less than significant level.

c) No Impact

Although the nearest existing school, the Valley Ford schoolhouse, is located approximately 0.15 mile southwest of Location 7, the Project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste during operation. No impact to schools would result from the Project.

d) No Impact

Screening of environmental regulatory databases, including the State Water Resources Control Board's (SWRCB's) GeoTracker and California Department of Toxic Substances Control's (DTSC's) EnviroStor, revealed no known hazardous materials or hazardous waste sites in the immediate vicinity of any Project Locations (SWRCB 2022; DTSC 2022).

The Project is not located on any sites that are included on hazardous materials sites compiled pursuant to Government Code Section 65962.5. Therefore, no impact would result from the Project.

e) No Impact

There are no airports within 2 miles of any Project locations. No Project components, including construction equipment, would reach heights or have components that have the potential to pose a safety hazard to airport operations. Further, the Project would not generate excessive noise that would impact people residing or working in the Project footprint, as discussed in Section 3.3.13. No impact on airports would result from the Project.

f) Less Than Significant Impact

The Project would require the temporary closure of traffic lanes along SR 1. Potential localized delays to traffic along SR 1 would result from the temporary lane closures and one-way alternating traffic control during construction. A TMP, as discussed in Section 3.3.17, would be prepared prior to the beginning of construction, and would identify potential traffic delays. Emergency service response times are not anticipated to change during construction because the TMP would provide priority to emergency vehicles during traffic control. The TMP would include instructions for response or evacuation in the event of an emergency, such as an earthquake or wildfire. In addition, the Project would not conflict with the Sonoma County Emergency Operations Plan (Sonoma County 2022) or other emergency response or evacuation plans. The impact on adopted emergency response plans or emergency evacuation plans caused by the Project would be less than significant.

g) Less Than Significant Impact

None of the Project locations are located within a designated Fire Hazard Severity Zone.

The Sonoma County Fire District, which serves the Project corridor, is responsible for emergency services and the management of fire operations during emergency response efforts. The nearest Sonoma County Fire District station is the Bodega Bay Fire Station, located at 510 CA-1, Bodega Bay, CA 94923, approximately 1.5 miles south of Location 9.

During construction, equipment may be used that has the potential to increase the risk of wildfire. Construction crews would be equipped with standard incipient stage fire suppression equipment such as fire extinguishers and shovels. Professional fire services are stationed nearby and would be contacted immediately in the event of a fire. The Project does not have permanent components that would expose people or structures to risk of loss, injury, or death involving wildland fires. Impacts from the Project that would expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires, would be less than significant.

PROJECT FEATURES

Caltrans would incorporate the following PFs into the Project to reduce potential impacts to hazards and hazardous materials:

- **PF-HAZ-1: Site Investigations.** The Caltrans Office of Environmental Engineering requires the Project to conduct site investigation surveys during the Project design phase to characterize the contamination of aerially deposited lead.
- **PF-HAZ-2: Notification Requirements.** If elevated levels of hazardous materials are identified during surveys, the appropriate standard special provisions (SSPs) would be taken, including required notification of the Bay Area Air Quality Management District, to safely and thoroughly remove, transport, and dispose of the materials at an appropriate off-site waste facility.

3.3.10 Hydrology and Water Quality

Would the project:

Question	CEQA Determination
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	Less Than Significant Impact
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such the project may impede sustainable groundwater management of the basin?	No Impact
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;	Less Than Significant Impact
(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;	Less Than Significant Impact
(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	Less Than Significant Impact
(iv) impede or redirect flood flows?	Less Than Significant Impact
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	No Impact
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	No Impact

CEQA Significance Determinations for Hydrology and Water Quality

A Water Quality Study was prepared by the Caltrans Office of Water Quality (Caltrans 2022h) and a Preliminary Drainage Study was prepared by the Office of Hydraulic Engineering (Caltrans 2022i). A summary of the findings is presented below.

The Project is located within the jurisdiction of Region 1 of the North Coast Regional Water Quality Control Board (RWQCB), which is responsible for the implementation and enforcement of state laws and regulations concerning water quality. The Project is within the Bodega Hydrologic Unit, Salmon Creek Watershed, and Bodega Harbor subwatershed (Caltrans 2022h). The receiving water bodies are the Russian River and Bodega Bay, which are included as beneficial uses as part of the Region 1 RWQCB Basin Plan. These water bodies are not classified as impaired under the 2014-16 California Clean Water Act Section 303(d) List (SWRCB 2017) nor do they have Total Maximum Daily Loads for any pollutants.

The new impervious surface (NIS) of a project is the sum of the net new impervious (NNI) surface and the replaced impervious surface (RIS). The NNI for the Project would be 0 acre and the RIS would be approximately 0.3 acre. Since the NIS would be less than 1 acre, the Project is not anticipated to require post-construction storm water treatment measures for new impervious surfaces.

Nine locations (Locations 1 through 8, and 17) are located within the Federal Emergency Management Agency (FEMA) Flood Map Zone D, which indicates areas of possible but undetermined flood hazards (Caltrans 2022h). The portion of SR 1 from PM 0.1 near the junction at Shoreline Highway and Valley Ford to PM 1.8 near the intersection with School Road, identified as Zone D, is known to flood periodically. This portion of SR 1 includes locations 1 through 7. Based on highway elevations, Location 17 does not flood. Six locations are within a Zone X floodplain (Locations 9 through 12, 15 and 16). Zone X indicates areas outside of the 0.2 percent annual chance floodplain (500-year). The downstream ends of two culverts (Locations 13 and 14) are near the Zone AE floodplain of the Russian River. Zone AE indicates areas subject to flooding in a 1% annual chance flood (100-year).

Some locations within the project limits may be subject to tidal influence from current and/or future sea-level rise as provided in the State of California Sea-Level Rise Guidance, 2018 Update (California Ocean Protection Council 2018). However, a discussion of climate change, including potential sea-level rise, was not considered for the purposes of this IS/ND due to the limited nature of the work related to the Project, the purpose of which is to replace aging and degrading culverts, thus restoring drainage flow and preventing culvert failure. Climate change and future sea-level rise would be considered through the environmental evaluation process of future Projects scoped to address these issues on SR 1 in the Project limits.

a) <u>Less Than Significant Impact</u>

The Project has the potential to contribute stormwater runoff and pollutants to the Russian River and Bodega Bay during construction-related activities. Implementation of water pollution control BMPs, listed under PF-HYD-1, presented at the end of this section, would prevent and minimize temporary impacts to water quality.

In addition, the DSA does not exceed 1 acre and therefore the Project is not subject to the Construction General Permit and is not expected to result in long-term impacts to water quality standards or exceed waste discharge requirements. To comply with the conditions of the Caltrans National Pollutant Discharge Elimination System (NPDES)

permit and to further reduce impacts associated with water quality and hydrology, a Water Pollution Control Program (WPCP) would be completed and implemented prior to the beginning of construction, as described in PF-HYD-2 at the end of this section. Potential water quality impacts would be reduced to the maximum extent practicable through proper implementation of the WPCP and inclusion of the SSPs for water pollution control BMPs in the Project. As a result, Project impacts would be less than significant.

b) No Impact

Water would be used temporarily during construction, potentially at staging area entrances and exits. Water for construction-related activities would be brought in via water trucks by the contractor and groundwater would not be used. Therefore, the Project would not affect groundwater supplies or groundwater recharger areas and there would be no impact.

c(i), (ii), (iii), and (iv) Less Than Significant Impact

The Project would not alter the drainage pattern and no permanent increases in erosion or siltation is anticipated (Caltrans 2022i). Implementation of water pollution control BMPs under PF-HYD-1, and of a WPCP under PF-HYD-2, would minimize temporary, construction related erosion, siltation, and the discharge of polluted runoff on- or off-site. The Project would not result in an increase in permanent runoff as there would be no NIS. Therefore, the impact would be less than significant.

d) No Impact

The Project is not located within a FEMA base floodplain or floodway, and as discussed under items a) and c), the Project would not contribute new substantial sources of runoff or pollutants, or result in increased flooding. Because of the nature of the work at the culverts, no floodplain impacts are anticipated. The Project corridor is located in a tsunami zone (CGS 2022a); however, should an earthquake occur during the Project that triggers a tsunami that inundates a Project footprint, the release of substantial pollutants is not anticipated. There would be no impact.

e) No Impact

With implementation of standard water pollution control BMPs, PF-HYD-1, and PF-HYD-2, the Project would not conflict with, or obstruct, implementation of a water quality control plan or suitable groundwater management plan.

PROJECT FEATURES

Caltrans would incorporate the following standard PFs into the Project to reduce potential impacts to hydrology and water quality:

- **PF-HYD-1: Implementation of Construction Site Best Management Practices.** BMPs would be included in the final Project plans and SSPs would be included in the final construction package to comply with the conditions of the Caltrans NPDES permit. The Caltrans Best Management Practice Guidance Handbook would provide guidance for provisions to be included in the construction contract for measures to protect ESAs and avoid or minimize stormwater and non-stormwater discharges. Construction site BMPs for stormwater may include, but are not limited to, the following:
    - Construction tracking control practices
    - Job site management
    - Sediment control (fiber rolls and silt fencing)
    - Waste management and materials pollution control
    - Materials stockpile management
    - Dust and wind erosion controls
    - Drainage inlet protection
    - Non-stormwater management
- **PF-HYD-2: Water Pollution Control Program.** A WPCP would be prepared by the contractor and approved by Caltrans, pursuant to the 2018 Caltrans Standard Specifications Section 13, Water Pollution Control, and the Caltrans WPCP Preparation Manual, and implemented prior to the beginning of construction.

3.3.11 Land Use and Planning

Would the project:

Question	CEQA Determination
a) Physically divide an established community?	No Impact
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?	Less Than Significant Impact

CEQA SIGNIFICANCE DETERMINATIONS FOR LAND USE AND PLANNING

The Project is located along SR 1 and extends from approximately 1.7 miles south of Freestone-Valley Ford Road to approximately 2.4 miles north of Meyers Grade Road, in Sonoma County, between PMs 0.97 and 28.73. The Project is located within the Sonoma Coast/Gualala Basin and Russian River Planning Areas of the Sonoma County General Plan (Sonoma County 2008). The Project is also located within the California Coastal zone.

a) No Impact

Within the Project corridor, several scattered coastal communities exist. Due to the nature of the work, the Project would not physically divide an established community; therefore, there would be no impact.

b) Less Than Significant Impact

Plans, policies, and regulations adopted to avoid or mitigate effects to environmental resources include the Sonoma County General Plan, the Coastal Zone Management Act (CZMA), the CCA, the Sonoma County Local Coastal Plan (LCP), and Sonoma County State Route 1 Repair Guidelines.

Sonoma County General Plan 2020

The Sonoma County General Plan was originally adopted in 1989 to develop decision-making policies in Sonoma County, in a manner consistent with the goals and quality of life desired by the County's residents. Since 1989, the General Plan has been updated to the Sonoma County General Plan 2020, which includes revised planning elements including future growth, development, and conservation of resources (Sonoma County 2008).

The Project would be consistent with the overall goals and policy framework for the different categories established within the Sonoma County General Plan and includes Project Features as necessary to protect resources established as valuable by the General Plan. The Project would comply with the below goal from the Land Use section of the Sonoma County General Plan:

- **Goal LU-4:** Protect lands currently in agricultural production and lands with soils and other characteristics that make them potentially suitable for agricultural use. Retain large parcel sizes and avoid incompatible non-agricultural uses.

Although SR 1 is not officially designated as a State Scenic Highway, it is eligible and therefore, Caltrans treats it as if it is designated, so as not to preclude a future designation of the highway. In accordance with this practice the Project would be built to preserve the visual quality of the area.

Coastal Zone Management Act

The Project lies within the California Coastal Zone and resources within this zone are protected by the Coastal Zone Management Act of 1972 (CZMA). States with an approved coastal management plan are able to review federal permits and activities to determine if they are consistent with the state's management plan.

California has developed a coastal zone management plan and has enacted its own law, the California Coastal Act of 1976 (CCA), to protect the coastal zone. The policies established by the CCA include the protection and expansion of public access and recreation; the protection, enhancement, and restoration of environmentally sensitive areas; the protection of agricultural lands; the protection of scenic beauty; and the protection of property and life from coastal hazards. The California Coastal Commission (CCC) is responsible for implementation and oversight under the CCA.

The CCA delegates power to local governments to enact their own local coastal plans (LCPs); in this case, the Sonoma County LCP (Sonoma County 2001). The State-certified LCP is a portion of the Sonoma County General Plan and includes visual resources policies and recommendations under the "Development" section of the CCA. The Sonoma County LCP determines the short- and long-term use of coastal resources in their jurisdiction consistent with the CCA goals.

Under the Sonoma County LCP, the coast is divided by the Russian River into north and south coast sections. The Project resides within the Sonoma County South Coast Planning Area at Locations 1 through 12, and the North Coast Planning Area at

Locations 13 through 17. The Project area is then located in the "Highcliffs/Muniz-Jenner" and "Timber Cove/Fort Ross" sub-areas of the Sonoma County LCP (Sonoma County 2001).

The Project is entirely within the permitting jurisdiction of Sonoma County, and would require a local coastal permit for construction. However, development permits issued in accordance with the Sonoma County LCP could be appealable to the CCC.

The California Coastal Trail (CCT), within the Project corridor, generally follows the alignment of SR 1, or where shoulders exist, is confined to the shoulder of the highway. Improvements to the CCT will be considered for incorporation into this Project during the Design Phase.

The policies of the CCA (PRC Division 20) give the highest priority to the preservation and protection of Prime Agricultural Land and Timber Lands. On lands not needed for the above, the next priority goes to public recreation and visitor serving facilities.

Key provisions of the CCA and the Sonoma County LCP are provided below along with an evaluation of permitting activities of the Project (Tables 3-1 and 3-2).

Table 3-1. Key Provisions of the California Coastal Act

Policy Number	Subject of Policy	Coastal Zone Assessment
Section 30210	Maximum public access and recreational opportunities shall be provided.	The Project would improve coastal public access by maintaining the safety and reliability of SR 1.
Section 30211	Development shall not interfere with public access to the sea.	The Project would maintain roadway safety and reliability and continue to provide public access to the ocean as described above.
Section 30212	New development projects shall provide for public access to the shoreline and along the coast.	The Project would not be considered new development.
Section 30252	Public Access	The Project would maintain roadway reliability and public access to the ocean as described above. The CCT would not be affected by the Project.
Section 30221	Recreation: Protect suitable oceanfront land for recreational use.	The Project would not impact public access to recreation facilities or oceanfront land.
Section 30233	Diking, filling, dredging of wetlands	The Project has been designed to avoid wetland impacts as much as possible. Potential wetland

Policy Number	Subject of Policy	Coastal Zone Assessment
		impacts would be mitigated to a no net loss level during the permitting phase.
Section 30235	Construction altering natural shoreline	The Project would not alter the natural shoreline of the Pacific Ocean. By replacing culverts and improving drainage, the Project would reduce erosion and sedimentation of downstream waters and the Pacific Ocean.
Section 30244	Archaeological/ paleontological resources	The Project would not result in an adverse effect to archaeological and historical resources. No affects to paleontological resources are anticipated.
Section 30251	Scenic and visual qualities	The Project would not result in adverse effects to scenic vistas/resources in the Project study area. The Project was designed such that scenic and visual qualities of coastal areas would be protected as a resource of public importance. The Project would not alter natural landforms.
Section 30254	Public works facilities	With the Project, SR 1 would remain a two-lane coastal scenic roadway.
Section 30604	Coastal development permits shall include a finding that the development is in conformity with public access and public recreation policies.	The Project would be in conformity with public access and public recreation policies.
Section 30609.5	State lands between the first and public roadway to the ocean	Caltrans would maintain the land devoted to the existing SR 1 highway and its use for public access to the ocean.
Section 30706	Coastal hazards	The purpose of the Project is to replace aging and degrading culverts, thus restoring drainage flow and preventing culvert failure.

Table 3-2. Key Provisions of the Sonoma County Local Coastal Program

Policy Subject	Coastal Zone Assessment
Shoreline Access	The Project would improve coastal public access by increasing roadway safety and reliability by minimizing emergency road closures to SR 1 which would interfere with shoreline access to parks, beaches and oceanfront land.
Recreation and Visitor-Serving Facilities	The Project would not interfere with public access to the ocean and the beach. Coastal recreation and visitor-serving facilities would be protected and maintained.
Transportation	The Project would improve coastal public access by increasing roadway safety and reliability.
Public Works	The Project would not adversely affect public works in the Project study area. Caltrans would submit the Project to Sonoma County for review, comment and findings as to its conformity with the LCP during the coastal development permit process.

Policy Subject	Coastal Zone Assessment
Coastal Watersheds	The Project would be consistent with Sonoma County's LCP since it would improve highway reliability with culvert replacements that would minimize erosion and sedimentation that could harm coastal resources.
Visual and Scenic Resources	The Project would not result in adverse effects to scenic vistas/resources. The Project was designed such that scenic and visual qualities of coastal areas would be protected as a resource of public importance. The Project would not alter natural landforms.
Hazards	The purpose of the Project is to maintain continued connectivity for SR 1 and to protect the highway from geologic hazards in the form of coastal erosion.
Archaeology	The Project would not result in an adverse effect to archaeological and/or historical resources. A Finding of No Historic Properties was determined for this Project under Section 106.
Air Quality	No air quality impacts are anticipated to result from the Project.

Sonoma County State Route 1 Repair Guidelines

Caltrans in coordination with CCC, State Parks, and Sonoma County, prepared the Sonoma County State Route 1 Repair Guidelines (Caltrans 2019) to promote stewardship and sustainability of state transportation resources through a shared vision with respect to coastal resources within the Coastal zone. The Guidelines are not a policy plan but instead provide a framework to enable more timely repairs that are not only functional but are also consistent with the landscape, uses, and regulatory and land management policies associated with SR 1.

The relevant guidelines to the Project are listed in Table 3-3.

Table 3-3. Key Provisions of the Sonoma County State Route 1 Repair Guidelines

Design Guideline	SR 1 Repair Recommendation
Parking, Pullouts, Unpaved Shoulders, and Turnouts	No net loss of parking, pullouts, or turnouts. Non-pavement treatments should be used where feasible. Other roadway uses or development of the area beyond the shoulder should be minimized and fit in with the natural environment. The Project would have no effect on existing parking, pullouts, or turnouts.
Drainage Features	Drainage pipes should be hidden from view where feasible. Pipes that cannot be hidden should be colored with earth-tone coating to conceal them. Concrete drainage features should be colored to match adjacent earth tones. Drainage rock used as dissipaters should be colored earth tone to reduce visual impacts. Inlets should be sited outside of where bicyclists are most likely to ride, if feasible, and shall use bicycle-proof grates.

Design Guideline	SR 1 Repair Recommendation
Ditches	Ditches should be designed to blend into the surrounding landscape. Concrete and metal facilities should be treated to match the surrounding terrain. Where appropriate, drainage ditches should be designed in conjunction with the shoulder to reduce the amount of pavement and widening needed, following the guidelines in Chapter 830 of the Highway Design Manual.
Bicycles and Pedestrians	Pedestrians and bicyclists should be accommodated in all projects. Dedicated pedestrian facilities should be incorporated into projects on a case-by-case basis where there is an identified need and in coordination with local stakeholders.

The Project would be designed to be consistent with the Sonoma 1 Guidelines. Where the culvert replacements occur coincident with or along the existing CCT, the Project would accommodate pedestrian and bicycle users during construction. No permanent impacts to the CCT would occur with the Project.

As discussed above, the Project would be consistent with the State Scenic Highway Program, Sonoma County General Plan 2020, Sonoma County Local Coastal Program, the Coastal Zone Management Act, and the Sonoma 1 Guidelines. There would be less than significant impacts.

3.3.12 Mineral Resources

Would the project:

Question	CEQA Determination
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?	No Impact
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

CEQA SIGNIFICANCE DETERMINATIONS FOR MINERAL RESOURCES

a and b) No Impact

The Project occurs within the Mineral Resource Zone (MRZ) category MRZ-3a, which Sonoma County designates as *"areas containing known mineral occurrences of undetermined mineral resource significance"* (Miller et al. 2013). The Project would not disturb mineral resources, if present, and would not result in the loss of availability of a known mineral resource or locally important mineral resource recovery site. Therefore, there would be no impact.

3.3.13 Noise

Would the project result in:

Question	CEQA Determination
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?	Less Than Significant Impact
b) Generation of excessive groundborne vibration or groundborne noise levels?	No Impact
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?	Less Than Significant Impact

CEQA Significance Determinations for Noise

A Construction Noise Analysis was completed by Caltrans Office of Environmental Engineering, Noise (Caltrans 2022j). A summary of the findings is presented here.

There is one private residence 70 feet away from Location 4; three private residences between 40 and 110 feet from locations 5, 6, and 7; and one private residence 110 feet from Location 12 (Caltrans 2022j).

a) Less Than Significant Impact

The Project would not permanently increase ambient noise levels in the vicinity of the culverts. The Project footprint is within SR 1, which creates background noise levels for nearby residents. The Project would not change SR 1 transportation capacity or increase long-term ambient noise levels.

The Project would potentially expose noise-sensitive receptors to a short-term increase in noise levels during construction, but the increase would be temporary. While most construction-related activities would occur during daytime hours, construction noise would be experienced for short durations during nighttime hours.

Removing pavement involves saw cutting and would be the noisiest phase where the noise level would exceed 86 A-weighted decibels (dBA) for three of the private residences due to the proximity of the receptors to the work at locations 5, 6, and 7.

Noise associated with construction is controlled by Caltrans Standard Specification Section 14-8.02, Noise Control, which limits maximum hourly noise levels (L_{max}) to

86 dBA at 50 feet from a project from 9:00 p.m. to 6:00 a.m. AMM-NOISE-1, described at the end of this section, includes the requirements of Caltrans Standard Specification Section 14-8.02, Noise Control.

In addition, AMM-NOISE-2 and AMM-NOISE-3, also presented at the end of this section, would be implemented to further minimize noise impacts; therefore, there would be a less than significant impact.

b) No Impact

Construction of the Project would not require vibratory or impact pile driving. There would be no impact from excessive groundborne vibration**.**

c) Less Than Significant Impact

As described in Section 3.3.9, there are no airports within 2 miles of the Project. Noise associated with construction is controlled by Caltrans Standard Specification Section 14-8.02, Noise Control, which limits L_{max} to 86 dBA at 50 feet from a project from 9 p.m. to 6 a.m. (AMM-NOISE-1).

The Project would not permanently expose people residing or working within 2 miles of the Project footprint to excessive noise levels. Further, the Project would not generate excessive noise that would permanently impact people residing or working within 2 miles of the Project footprint. The lack of permanent operational impacts from noise, along with compliance with Caltrans' Standard Specifications, would reduce the potential construction noise impacts to a less than significant level.

AVOIDANCE AND/OR MINIMIZATION MEASURES

Caltrans would incorporate AMM-NOISE-1 through AMM-NOISE-3 into the Project to avoid and/or minimize potential impacts from noise.

- **AMM-NOISE-1: Nighttime Construction.** Construction noise levels are not to exceed 86 dBA L_{max} at 50 feet from the Project footprint from 9:00 p.m. to 6:00 a.m. per 2018 Caltrans Standard Specifications, Section 14-8.02.

- **AMM-NOISE-2: Public Outreach.** Public outreach would be required before construction of the Project and throughout construction of the Project to update residents, businesses, and others about upcoming construction-related activities and schedules. Public outreach has the potential to entail sending notices to

nearby residents, notifying the city and/or county, and posting a notice on the Project website.

- **AMM-NOISE-3: Construction Noise Levels.** The following measures would be implemented to reduce noise levels during construction where feasible:
    - Avoid unnecessary idling of internal combustion engines within 100 feet of sensitive receptors.
    - Locate all stationary noise-generating construction equipment as far as practical from noise-sensitive receptors or provide baffled housing or sound aprons to construction equipment when sensitive receptors adjoin or are near the Project.
    - Equip all internal combustion engine driven construction equipment with manufacturer recommended intake and exhaust mufflers that are in good condition and appropriate for the construction equipment.
    - Utilize “quiet” air compressors and other “quiet” construction equipment where such technology exists.
    - No construction equipment would be delivered and dropped off before 6:00 a.m.
    - Maintain all internal combustion engines properly to minimize noise generation.

3.3.14 Population and Housing

Would the project:

Question	CEQA Determination
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)?	No Impact
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	No Impact

CEQA Significance Determinations for Population and Housing

a and b) No Impact

The Project would replace aging and degrading culverts, thus restoring drainage flow and preventing culvert failure, and would not induce population growth directly or indirectly, displace existing people or housing, or necessitate the construction of replacement housing elsewhere. The Project would not build commercial or residential establishments. The Project would not increase SR 1 transportation capacity, as additional travel lanes would not be constructed.

3.3.15 Public Services

Question	CEQA Determination
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?	Less Than Significant Impact
Police protection?	Less Than Significant Impact
Schools?	Less Than Significant Impact
Parks?	Less Than Significant Impact
Other public facilities?	Less Than Significant Impact

CEQA SIGNIFICANCE DETERMINATIONS FOR PUBLIC SERVICES

The following agencies provide public services for the Project:

- City of Sonoma Sheriff – Guerneville Substation (16225 First St., Guerneville, CA 95446)
- Bodega Bay Fire Protection District (510 CA-1, Bodega Bay, CA 94923)
- Bodega Volunteer Fire Department (17240 Bodega Hwy, Bodega, CA 94922)
- Monte Rio Fire Protection District (9870 Main St, Monte Rio, CA 95462)
- Timber Cove Fire Protection District (30800 Seaview Rd, Cazadero, CA 95421)
- Valley Ford Volunteer Fire Department (14440 Highway 1. Valley Ford, CA 94972)
- Shoreline Unified School District (10 John St., Tomales, CA 94971)

a) Less Than Significant Impact

Construction of the Project would not result in the provision of new or physically altered governmental facilities, or result in a need for new or physically altered governmental facilities, the construction of which has the potential to cause significant environmental impacts.

To maintain the use of SR 1 for the traveling public and emergency service providers, a Traffic Management Plan, as discussed in Section 3.3.17, would be prepared prior to the beginning of construction to minimize impacts to service ratios, response times, and other performance objectives for public services. Traffic impacts would be temporary during construction; therefore, impacts to public services are anticipated to be less than significant.

3.3.16 Recreation

Question	CEQA Determination
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?	No Impact
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

CEQA SIGNIFICANCE DETERMINATIONS FOR RECREATION

The Project would require TCEs and PDEs at three locations within the Sonoma Coast State Park (Locations 10 through 12), and one location within the Jenner Headlands Preserve (Location 15). Table 3-1 below describes the locations which would require TCEs and PDEs within park/recreation properties, and the work associated with those easements.

Table 3-1. Easements within Park/Recreation Properties

Recreational Resource	Responsible Agency	Location	Easement Type– Construction-related Activities (Acre)
Sonoma Coast State Park	California Department of Parks and Recreation	10	TCE – Construction access to remove and replace culvert (0.005) PDE – Install DI, remove and replace headwall (0.03)
Sonoma Coast State Park	California Department of Parks and Recreation	11	TCE – Construction access to remove and replace culvert (0.005) PDE – Install DI (0.013)
Sonoma Coast State Park	California Department of Parks and Recreation	12	TCE – Construction access to remove and replace culvert (0.027) PDE – Install DI and FES (0.04)
Jenner Headlands Preserve	The Wildlands Conservancy	15	TCE – Construction access to remove and replace culvert (0.005) PDE – Install DI and FES (0.003)

Although the Project would require TCEs and PDEs within park/recreation properties, there are no recreational resources (i.e., beaches, public trails, overlooks, etc.) located within the easements, and construction-related activities would not alter the appearance nor use of these properties.

a and b) No Impact

The Project would not directly or indirectly increase the demand of existing recreational facilities such that substantial deterioration of the facilities would occur. In addition, the Project would not require the construction of additional recreational facilities. Therefore, there would be no impact.

3.3.17 Transportation

Would the project:

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

CEQA Significance Determinations for Transportation

SR 1 is a two-lane undivided highway within the Project limits. Existing shoulders vary from less than 1 foot wide to up to 8 feet wide, the wider shoulder typically being at locations where highway repairs have been previously made. Metal beam guardrail exists at limited locations, as does cable safety railing. There are no traffic signals or stop signs, and speed limits range from 25 to 55 miles per hour. There are no bicycle lanes, although bicyclists frequently use the highway and pedestrians cross the highway at various locations, although the highway is not commonly used as a walking route (Caltrans 2022a). The Project would not increase SR 1 transportation capacity, nor would it permanently alter the circulation system, and would have no temporary or permanent impact on vehicle miles traveled (VMT).

a) Less Than Significant Impact

The Project would conflict with the *District 4 Pedestrian Plan for the Bay Area* (Pedestrian Plan) (Caltrans 2021a), which analyzed existing pedestrian travel and potential future improvements on SR 1. The Pedestrian Plan identified SR 1 within the Project Corridor as a Tier 3 priority, which is the lowest intensity of need. The Project would not improve pedestrian facilities within the Project limits and therefore would not address needs identified in the Pedestrian Plan.

The Project would also conflict with the *Caltrans District 4 Bike Plan for the San Francisco Bay Area* (Bike Plan) (Caltrans 2018), which analyzed existing bicycle travel and potential future improvements on SR 1, and the Sonoma County Transportation Authority's *SCTA Countywide Bicycle and Pedestrian Master Plan* (SCTA Bike and Pedestrian Plan) (SCTA 2014). The Project would not improve

bicycle facilities within the Project limits, and therefore would not address the policies identified in the Bike Plan and the SCTA Bike and Pedestrian Plan.

The Project would also conflict with Director's Policy (DP) 37, Complete Streets (Caltrans 2021b). DP 37 requires that the Project, which is a capital project, provide "complete streets" facilities[1] for pedestrians walking and bicyclists biking within the Project footprint. The Project would not provide complete streets facilities, and justification would be documented with final approval by the Caltrans District 4 Director.

The Project would not conflict with other programs, plans, ordinances, or policies regarding the circulation system, public transit, and bicycle or pedestrian facilities. As described in Section 1.2, the purpose of the Project is to replace aging and degrading culverts, thus restoring drainage flow and preventing culvert failure.

To protect construction workers and the traveling public, traffic control would be in place while construction-related activities are underway. A detailed Traffic Management Plan (AMM-TRANS-1, presented at the end of this section) would be developed prior to the beginning of construction to aid in coordinating and providing further safety measures for those accessing the Project corridor during construction. Therefore, impacts would be less than significant.

b) Less Than Significant Impact

The Project would not conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b), which establishes that transportation projects that reduce, or have no impact on, VMT would be presumed to cause a less than significant transportation impact. The Project would have a less than significant impact on VMT.

c) No Impact

The Project would not increase hazards because of a geometric design feature. The Project does not include design features or Project components that would substantially increase hazards. There would be no impact.

[1] A complete street is a transportation facility that is planned, designed, constructed, operated, and maintained to provide comfortable and convenient mobility, and improve accessibility and connectivity to essential community destinations for all users, regardless of whether they are travelling as pedestrians, bicyclists, public transportation riders, or drivers (Caltrans 2021b).

d) Less Than Significant Impact

The Project would not result in inadequate emergency access. With implementation of AMM-TRANS-1, medical and emergency vehicles would be able to continue to use SR 1 for fire, medical, emergency, and law enforcement purposes. The Project has the potential to cause short-term, localized traffic congestion and delays, resulting from one-way alternating traffic control during construction. Detours would not be required during construction. The impact would be less than significant.

AVOIDANCE AND/OR MINIMIZATION MEASURES

AMM-TRANS-1 and AMM-TRANS-2would be incorporated into the Project to avoid and/or minimize potential impacts to transportation.

- **AMM-TRANS-1: Transportation Management Plan.** A TMP would be prepared prior to the beginning of construction to aid in coordinating and providing further safety measures for those accessing the Project corridor during construction. The TMP would identify traffic delays for emergency and medical vehicles associated with essential services, and would minimize impacts to service ratios, response times, and other performance objectives for public services. The TMP would provide priority to emergency vehicles during traffic control, as well as include instructions for response or evacuation in the event of an emergency.

- **AMM-TRANS-2: Multimodal Improvements Consultation.** Caltrans would continue to coordinate with local bicycle and pedestrian advocates, including Sonoma County and CCC, to further implementation of multimodal improvements through such things as ROW acquisition and/or funding contribution to a local agency to address conflicts with the Bike Plan, Pedestrian Plan, SCTA Bike and Pedestrian Plan, and DP 37 during the Project Design Phase.

3.3.18 Tribal Cultural Resources

Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, 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:

Question	CEQA Determination
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 section 5020.1(k), or	No Impact
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 Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	No Impact

CEQA Significance Determinations for Tribal Cultural Resources

a and b) No Impact

To comply with Section 106 of the National Historic Preservation Act and Assembly Bill (AB) 52, Caltrans initiated consultation with all contacts provided by the NAHC on April 19, 2022. Two Tribal contacts responded with a request for consultation: the Federated Indians of Graton Rancheria (FIGR) on May 3, 2022, and the Kashia Pomo Band of Pomo Indians of the Stewarts Point Rancheria (Kashia Pomo). Consultation is ongoing with both Tribes throughout the life of the Project and Caltrans ORCS determined that no cultural resources were identified within the APE (Caltrans 2022d). Therefore, the Project would have no impact on tribal cultural resources.

3.3.19 Utilities and Service Systems

Would the project:

Question	CEQA Determination
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?	No Impact
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	No Impact
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?	No Impact
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?	No Impact
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	No Impact

CEQA Significance Determinations for Utilities and Service Systems

The nearest landfill to the Project corridor is the Republic Services of Sonoma County Guerneville Transfer Station (13450 Pocket Dr, Guerneville, CA 95446). Electricity along the Project corridor is provided by the Pacific Gas and Electric Company, and wastewater is treated by Sonoma Water (404 Aviation Boulevard Santa Rosa, CA 95403).

a, b, c, d, and e) No Impact

The Project would not require or result in the construction of new or expanded water, wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunications facilities. The Project is not anticipated to require utility (e.g., gas, electric, telephone, cable, water, and sewer) relocations. Utility verification (i.e., potholing) would occur during the Project design phase to confirm the need for utility relocations, and if needed, utility relocations would occur prior to the beginning of construction and in consultation with utility providers (e.g., Pacific Gas and Electric Company, AT&T, and/or Verizon).

The Project would require the services of a landfill, the closest being the Republic Services of Sonoma County Guerneville Transfer Station (13450 Pocket Dr

Guerneville, CA 95446), but would not impact its capacity. Excess soil would be reused for construction purposes or recycled off-site, where feasible. The Project would not affect wastewater treatment requirements. The Project would not require water supplies to serve the Project from existing entitlements or where the Project would impact new or expanded entitlements. The Project would not require the services of a wastewater treatment provider where the Project would impact the provider's capacity. All construction-related waste would be properly disposed of, or recycled, at an approved facility in compliance with both Caltrans Standard Specification 14-11, Hazardous Waste and Contamination, and the requirements of the facility to which the waste is hauled. Construction-related activities would comply with all federal, state, and local management and reduction statutes and regulations related to solid waste. Therefore, the Project would have no impacts related to utilities and service systems.

3.3.20 Wildfire

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:

Question	CEQA Determination
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	Less Than Significant Impact
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?	Less Than Significant Impact
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 that may result in temporary or ongoing impacts to the environment?	Less Than Significant Impact
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?	Less Than Significant Impact

CEQA Significance Determinations for Wildfire

The Project is located within a State Responsibility Area and is not within a high severity fire area (CAL FIRE 2022). The Bodega Bay Fire Protection District, Monte Rio Fire Protection District, Timber Cove Fire Protection District, and volunteer fire companies operating through the County of Sonoma Emergency Readiness Response and Recovery, as well as CAL FIRE, provide fire suppression, rescue, and emergency services within the Project corridor.

a, b, c, and d) Less Than Significant Impact

A Traffic Management Plan, as discussed in Section 3.3.17 and Appendix C, would be prepared prior to the beginning of construction to identify staging. Emergency response times may increase during construction; however, with implementation of the TMP during construction, measures would provide priority for emergency vehicles during lane closures and traffic control. The TMP would include coordination with emergency service providers and include instructions for response and evacuation in the event of an emergency such as a wildfire. In the event of a wildfire, the TMP would be implemented. The Project would not exacerbate wildfire risks or expose people or structures to significant risks. The Project would have a less than significant impact.

3.3.21 Mandatory Findings of Significance

Question	CEQA Determination
a) Does the project 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?	Less Than Significant Impact
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	Less Than Significant Impact
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	Less Than Significant Impact

CEQA SIGNIFICANCE DETERMINATIONS FOR MANDATORY FINDINGS OF SIGNIFICANCE

a) Less Than Significant Impact

As determined in Section 3.3.4, the Project is not anticipated to have adverse direct or indirect impacts to federally and state listed special-status species. The Project is not anticipated to have substantial adverse effects on state or federally protected wetlands, riparian habitat or environmentally sensitive natural communities, or to conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. Direct and indirect impacts to plants and wildlife species would be reduced, avoided, or minimized though the implementation of PFs and AMMs.

No cultural resources or major periods of California history or prehistory are located within the Project footprint. Therefore, the impact would be less than significant.

b) Less Than Significant Impact

A review of projects in the vicinity (e.g., Sonoma 1 Centerline Rumble Strip Project, Sonoma 1 Culvert Rehabilitation Project – North, and Sonoma 1 Culvert Rehabilitation Project) of the Project determined that no past, present, or future projects would pose a cumulative effect together with implementation of the Project. For biological resources, no cumulative impacts are anticipated due to the implementation of the PFs and AMMs. With respect to population and housing, the

Project would not be growth inducing. With respect to land use and planning, the Project is aligned with the goals of the Sonoma County General Plan. With respect to transportation, the Project would not address or accommodate the policies identified in the Pedestrian Plan, Bike Plan, nor SCTA Bike and Pedestrian Plan, and would conflict with DP 37 Complete Streets. With these considerations, the Project would not have cumulatively considerable impacts; the impact would be less than significant.

c) Less Than Significant Impact

The Project would have no impact on geology and soils, mineral resources, population and housing, recreation, tribal cultural resources, and utilities and service systems. The Project would potentially affect aesthetics, agriculture and forest resources, air quality, biology, cultural, energy, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, land use and planning, noise, public services, transportation, and wildfire; however, these potential impacts would be less than significant. The Project would implement PFs and AMMs to reduce, avoid, or minimize adverse impacts to these resources. Construction-related activities would temporarily increase criteria air pollutant emissions, ambient noise levels, and emergency response times and the Project would incorporate PFs and AMMs to reduce, avoid, or minimize potentially adverse effects to humans. Therefore, the Project would not have a substantial direct or indirect impact on the human environment, and impacts would be less than significant.

Chapter 4 Comments and Coordination

To date, public and agency coordination consists of the following:

4.1 Public Involvement Process for the Draft Initial Study with Proposed Negative Declaration

The general public was engaged in the Project development process through solicitation for feedback on the Draft IS with Proposed ND during a 40-day comment period, which began on May 4, 2023, and ended on June 12, 2023. A Notice of Completion was published by the State Clearinghouse (SCH #2023050142), and a Notice of Availability was published in the Sonoma Press Democrat on May 4, 2023.

Hardcopies of the Sonoma SR 1 Drainage System Restoration Project Draft IS/ND were made available to the public at the Guerneville Regional Library and Occidental Library and electronically ed at the District 4 Environmental Documents by County website (https://dot.ca.gov/caltrans-near-me/district-4/d4-popular-links/d4-environmental-docs).

The Project was assigned State Clearinghouse #2023050142. The State Clearinghouse distributed copies of the Draft IS/ND to agencies for comments.

Caltrans received no comment during the 40-day comment period.

4.2 Consultation and Coordination with Public Agencies

Consultation with the NAHC, California Department of Parks and Recreation, and Sonoma County occurred during the Project Approval and Environmental Document phase. A summary of the coordination is provided in Table 4-1.

Table 4-1. Agency Coordination Meetings and Contacts

Organization(s)	Date	Topic
NAHC	April 19, 2022	Caltrans received an email from the NAHC stating that the Sacred Lands File search request was negative and was provided contact information for interested Native American Parties in the Project corridor to consult.
California Department of Parks and Recreation	12/22/2022	Erik Lauritzen sent an email to Jackie Dixon discussing potential Project impacts on State Parks near the Project. Jackie responded indicating receipt of the email and that State Parks would provide comment on the IS/ND.

Organization(s)	Date	Topic
Sonoma County	5/16/2023	Erik Lauritzen provided Cecily Condon with Sonoma County with the Draft IS/ND of May 4, 2023. On May 16, 2023, Cecily Condon responded with a request to extend the Public Comment Period to June 19, 2023. The Public Comment Period was extended until June 12, 2023, in order to provide Sonoma County with additional time to provide comment.

Chapter 5 List of Preparers and Reviewers

The primary people responsible for contributing to, preparing, and reviewing this IS/ND are listed in Table 5-1.

Table 5-1. List of Preparers and Reviewers

Organization	Name	Role
Caltrans	Christopher Caputo	Acting Deputy District Director, Division of Environmental Planning and Engineering
Caltrans	Max Lammert	Acting Office Chief , Office of Environmental Analysis
Caltrans	Arnica MacCarthy	Senior Environmental Planner, Office of Environmental Analysis
Caltrans	Rebecca Carson	Branch Chief, Office of Biological Sciences and Permits – West Counties
Caltrans	Gregory Pera	Branch Chief, Office of biological sciences
Caltrans	Alicia Sanhueza	Acting Branch Chief (Built Resources), Office of Cultural Resource Studies
Caltrans	Brian Gassner	Acting Branch Chief (Archaeology), Office of Cultural Resource Studies
Caltrans	Althea Asaro	Environmental Scientist (Archaeology), Office of Cultural Resource Studies
Caltrans	Shilpa Mareddy	Branch Chief, Office of Environmental Engineering – Air Quality/Noise
Caltrans	Va Lee	Transportation Engineer, Office of Environmental Engineering – Air Quality/Noise
Caltrans	Chris Wilson	District Branch Chief, Office of Environmental Engineering – Hazardous Waste
Caltrans	Chris Risden	Branch Chief, Office of Geotechnical Design – West
Caltrans	Chris McMahon	Engineering Geologist, Office of Geotechnical Design – West
Caltrans	Nick Briffa	Transportation Engineer, Office of Geotechnical Design – West
Caltrans	Kathleen Reilly	District Branch Chief, Office of Hydraulic Engineering
Caltrans	Andy Do	Transportation Engineer, Office of Hydraulic Engineering
Caltrans	Joaquin Pedrin	Branch Chief, Office of Landscape Architecture – North Counties
Caltrans	Chris Else	Landscape Architecture Associate, Office of Landscape Architecture
Caltrans	Mojgan Osooli	Branch Chief, Office of Water Quality
Caltrans	Brian Rowley	Branch Chief, Office of Water Quality
Caltrans	Lawrence Loi	Project Manager, Project Management North – Sonoma County
Caltrans	Jonathan Lee	Project Design Engineer
Jacobs	Erik Lauritzen	Environmental Planner
Jacobs	Sam Schoevaars	Environmental Planner

Organization	Name	Role
Jacobs	David Carlson	Senior Environmental Planner
Jacobs	Loretta Meyer	Senior Environmental Planner
Jacobs	Chris Archer	Geospatial Professional
Jacobs	Clarice Ericsson	Senior Publications Technician
Jacobs	Bryan Bell	Senior Technical Editor

Chapter 6 Distribution List

This Final IS/ND will be sent to the following agencies and government officials.

Agencies

- Bay Area Air Quality Management District
  375 Beale Street, Suite 600
  San Francisco, CA 94105

- California Coastal Commission
  455 Market Street, Suite 300
  San Francisco, CA 94105

- California Department of Fish and Wildlife
  2825 Cordelia Road, Suite 100
  Fairfield, CA 94534

- California Department of Parks and Recreation
  P.O. Box 123
  Duncan Mills, CA 95430-0123

- California Transportation Commissions
  1120 N Street, MS 52
  Sacramento, CA 95814

- Governor's Office of Planning and Research
  1400 Tenth Street
  Sacramento, CA 95814

- National Marine Fisheries Service
  1201 Northeast Lloyd Boulevard, Suite 1100
  Portland, OR 97232

- North Coast Regional Water Quality Control Board
  5550 Skylane Boulevard, Suite A
  Santa Rosa, CA 95403-1072

- Sonoma County Planning Division
  2550 Ventura Avenue

Santa Rosa, CA 95403

- U.S. Army Corps of Engineers
  450 Golden Gate Ave, 4th Floor
  San Francisco, CA 94102

- U.S. Fish and Wildlife Service
  2800 Cottage Way, Suite W-2605
  Sacramento, CA 95825

Elected Officials

- The Honorable Dianne Feinstein
- The Honorable Alex Padilla
- The Honorable Mike Thompson (CA-5)
- The Honorable Mike McGuire (SD 2)
- The Honorable Jim Wood (AD 2)
- The Honorable Supervisor Susan Gorin (District 1)

Appendix A Figures

Staging Area I
Staging Area H
Staging Area G
Staging Area E
Staging Area D
Staging Area C
Staging Area B
Staging Area A
Location 17-PM 27.83
Location 16-PM 27.65
Location 15-PM 23.08
Location 14-PM 20.76
Location 13-PM 20.71
Location 12- PM 14.82
Location 11-PM 13.35
Location 10-PM 12.75
Location 09-PM 11.67
Location 08-PM 3.46
Location 07-PM 1.69
Location 06-PM 1.65
Location 05-PM 1.60
Location 04-PM 1.48
Location 03-PM 1.44
Location 02-PM 1.23
Location 01-PM 0.97



Legend

Project Footprint

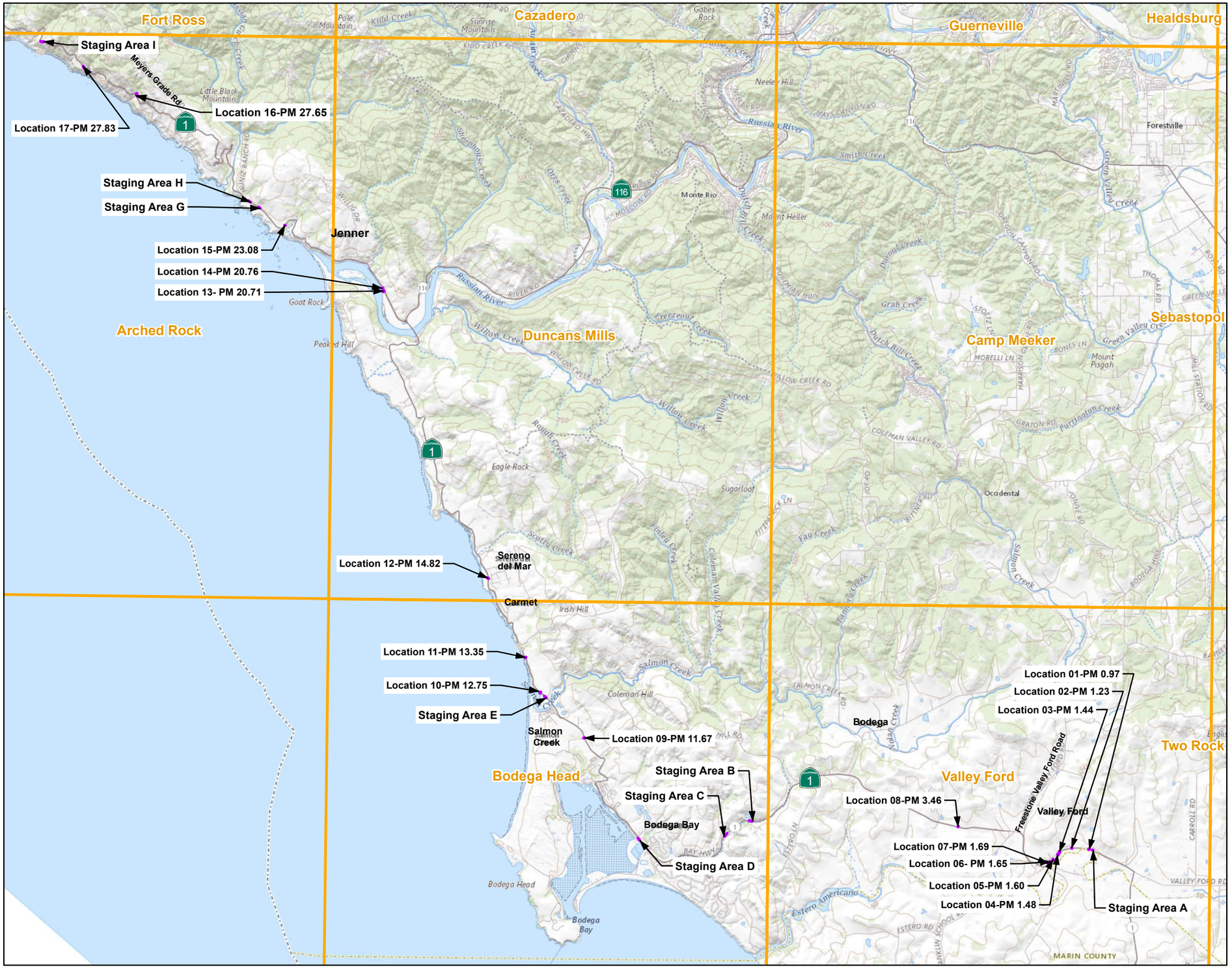
N

0 6 12

Miles

FIGURE 1-1
Regional Location
State Route 1 Drainage System Restoration Project
EA 04-1K720, SON-1-0.97/28.73
Sonoma County, California

\\DC1VS01\GISPROJ\C\CALTRANS\1K720_SON1_DRAINAGE_SYSTEM_RESTORATION\MAPFILES\REPORT\2022\DED\OCT\FIG1-1_REGIONAL_LOCATION_1K720.MXD





Legend

- Project Footprint
- USGS 7.5 Minute Quadrangle

N

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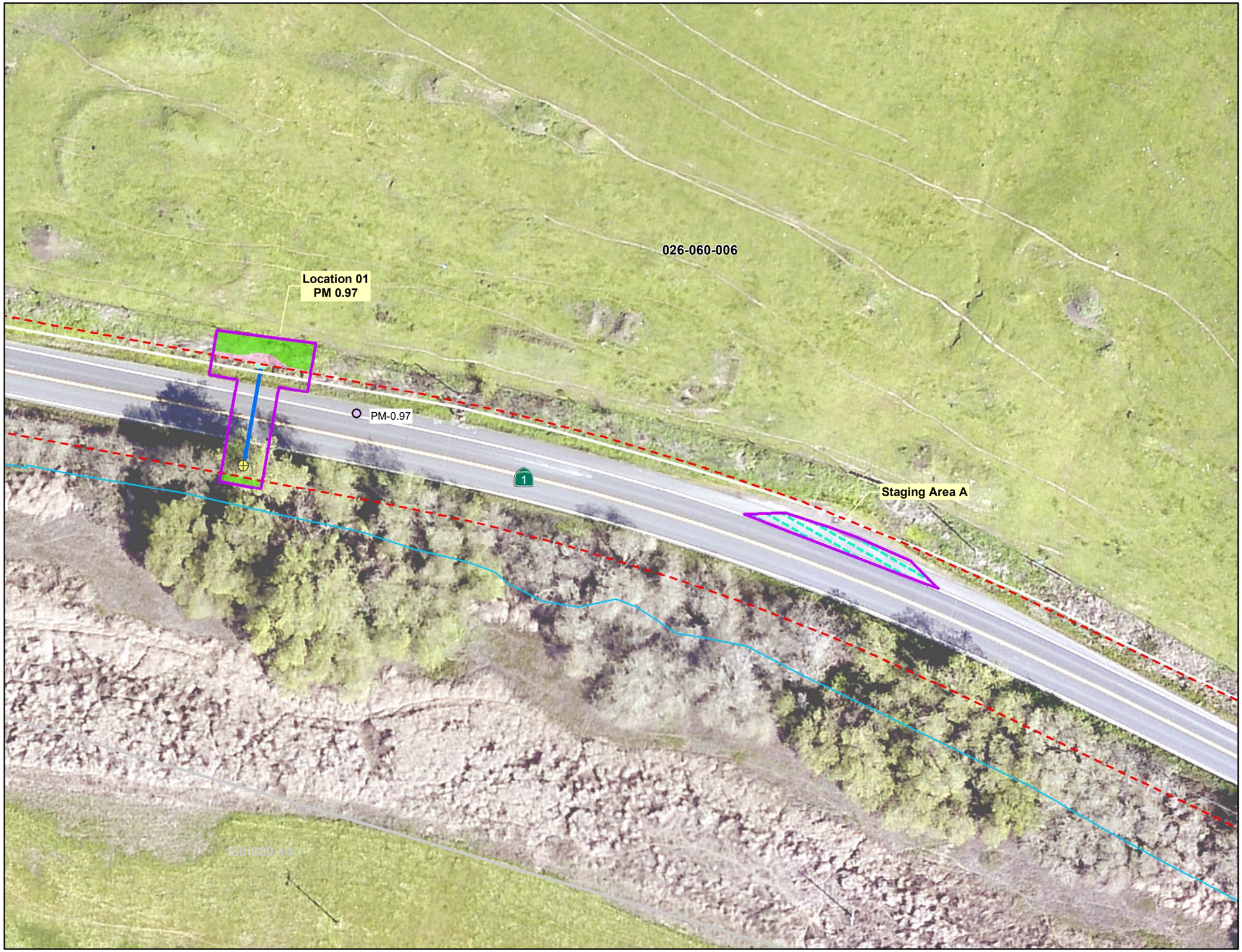
Feet

Caltrans

FIGURE 1-2
Project Location
State Route 1 Drainage System Restoration Project
EA 04-1K720, SON-1-0.97/28.73
Sonoma County, California

\\DC1VS01\GISPROJ\C\CALTRANS\1K720_SON1_DRAINAGE_SYSTEM_RESTORATION\MAPFILES\REPORT\2022\DED\OCT\FIG1-2_PROJECT_LOCATION_1K720.MXD





LEGEND

- Post Mile
- Caltrans Right of Way
- Sonoma County Parcels
- Marin County Parcels
- Project Footprint
- Remove / Replace Culvert
- Construct Headwall
- Install Flared End Section
- Right of Way Acquisition / Temporary Construction Easement
- Right of Way Acquisition / Permanent Drainage Easement
- Staging Area
- Sonoma County Stream Centerlines

Notes:
Streams from Sonoma County Vegetation Mapping and Lidar Program.

Imagery Source:
Sonoma County 2021

N

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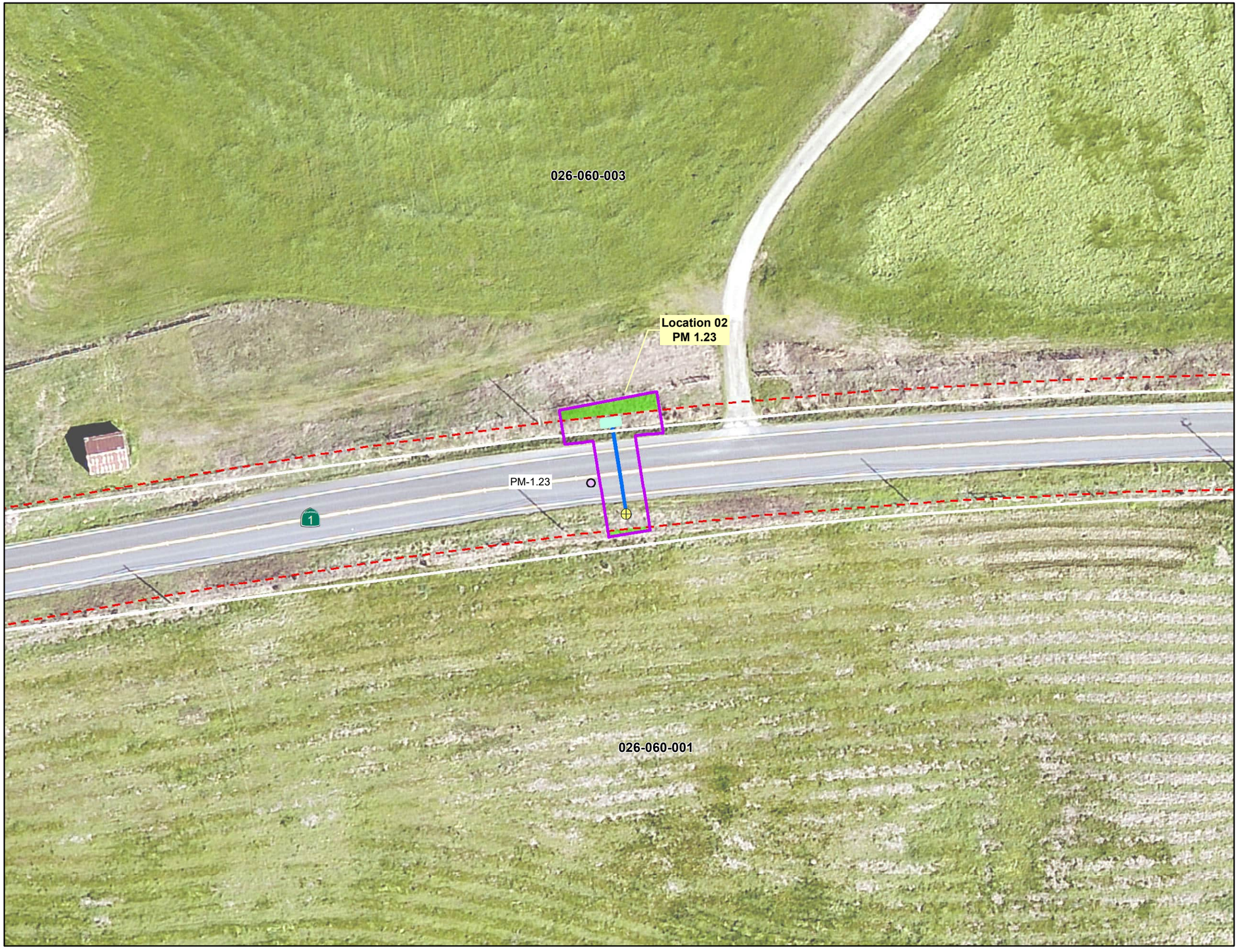
Feet

Caltrans

Figure 1-3
Map 01 of 20
Project Components
State Route 1 Drainage System Restoration Project
EA 04-1K720, SON-1-0.97/28.73
Sonoma County, California

\\DC1VS01\GISPROJ\C\CALTRANS\1K720_SON1_DRAINAGE_SYSTEM_RESTORATION\MAPFILES\REPORT\2023\DED\APRIL\FIG1-3_PROJECT_COMPONENETS_1K720.MXD CARCHER 4/24/2023 9:08:05 AM





LEGEND

- Post Mile
- Caltrans Right of Way
- Sonoma County Parcels
- Project Footprint
- Remove / Replace Culvert
- Construct Headwall
- Install Flared End Section
- Right of Way Acquisition / Temporary Construction Easement

Notes:
Streams from Sonoma County Vegetation Mapping and Lidar Program.

Imagery Source:
Sonoma County 2021

N

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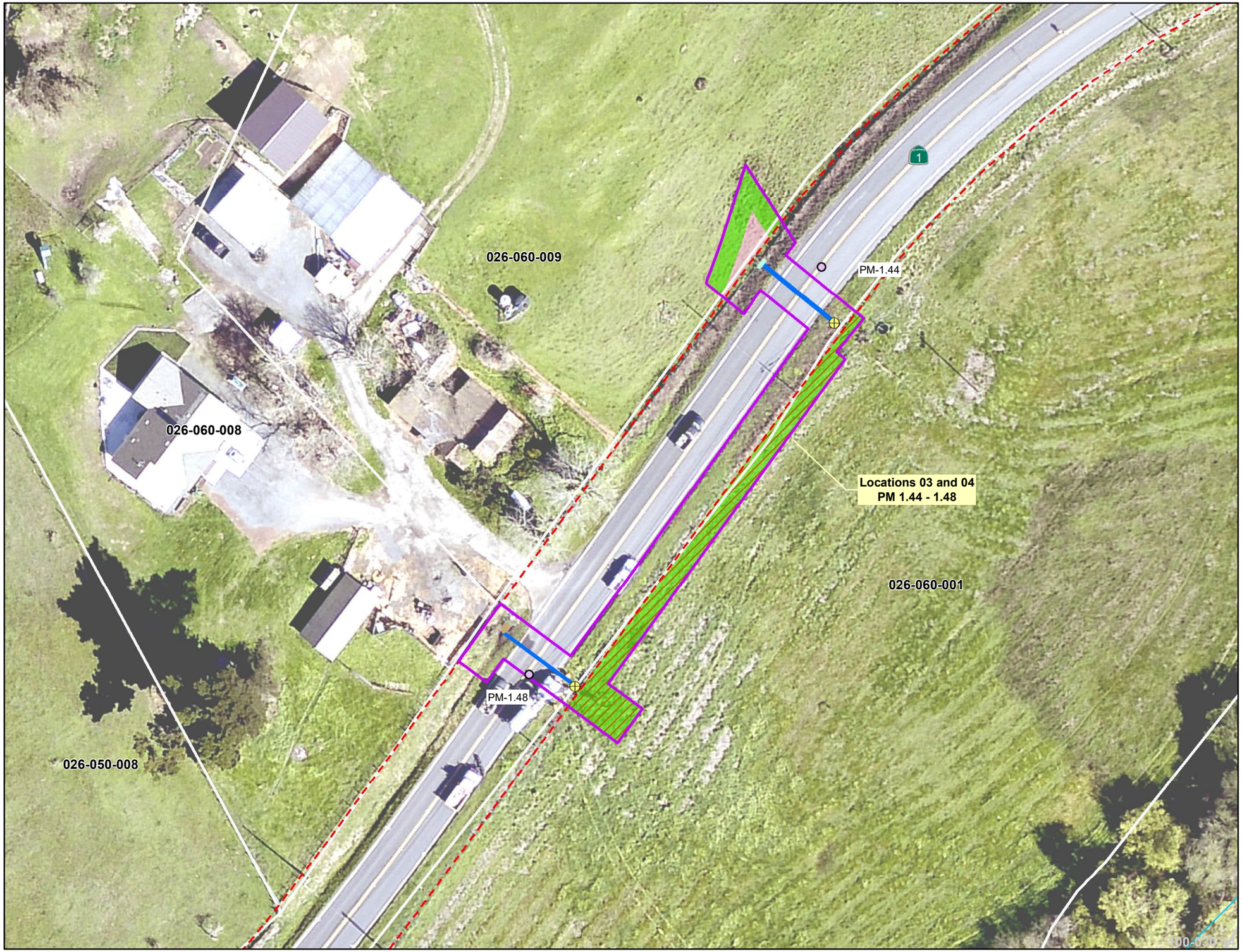
Feet

Figure 1-3
Map 02 of 20
Project Components
State Route 1 Drainage System Restoration Project
EA 04-1K720, SON-1-0.97/28.73
Sonoma County, California

\\DC1VS01\GISPROJ\C\CALTRANS\1K720_SON1_DRAINAGE_SYSTEM_RESTORATION\MAPFILES\REPORT\2023\DED\APRIL\FIG1-3_PROJECT_COMPONENETS_1K720.MXD CARCHER 4/24/2023 9:08:05 AM





LEGEND

- Post Mile
- Caltrans Right of Way
- Sonoma County Parcels
- Marin County Parcels
- Project Footprint
- Remove / Replace Culvert
- Construct Headwall
- Remove / Replace Headwall
- Install Flared End Section
- Excavate / Regrade
- Right of Way Acquisition / Temporary Construction Easement
- Right of Way Acquisition / Permanent Drainage Easement
- Sonoma County Stream Centerlines

Notes:
Streams from Sonoma County Vegetation Mapping and Lidar Program.

Imagery Source:
Sonoma County 2021

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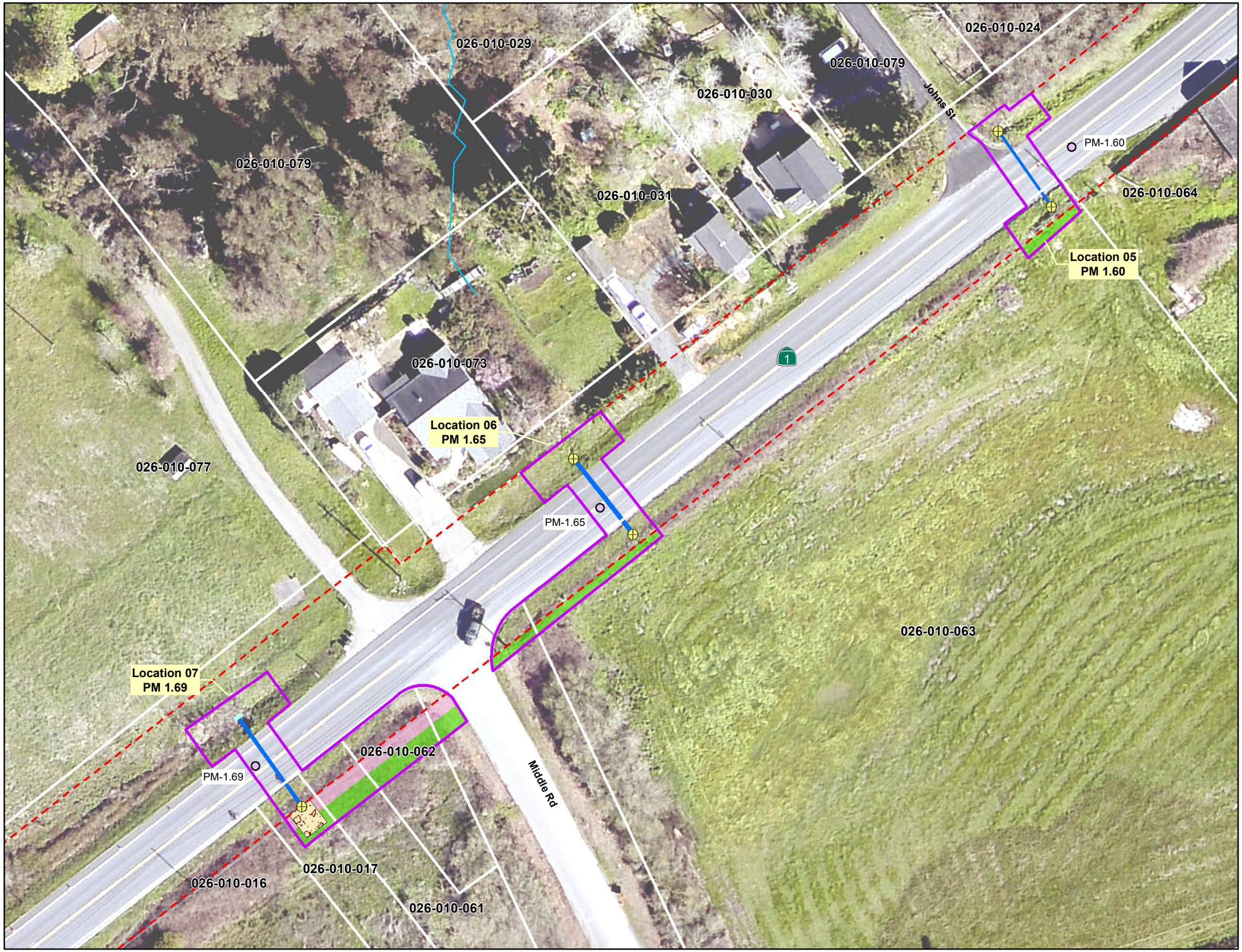
Feet

Caltrans

Figure 1-3
Map 03 of 20
Project Components
State Route 1 Drainage System Restoration Project
EA 04-1K720, SON-1-0.97/28.73
Sonoma County, California

\\DC1VS01\GISPROJ\C\CALTRANS\1K720_SON1_DRAINAGE_SYSTEM_RESTORATION\MAPFILES\REPORT\2023\DED\APRIL\FIG1-3_PROJECT_COMPONENETS_1K720.MXD CARCHER 4/24/2023 9:08:05 AM





LEGEND

- Post Mile
- Caltrans Right of Way
- Sonoma County Parcels
- Project Footprint
- Remove / Replace Culvert
- Install Rock Slope Protection
- Construct Headwall
- Install Flared End Section
- Right of Way Acquisition / Temporary Construction Easement
- Right of Way Acquisition / Permanent Drainage Easement
- Sonoma County Stream Centerlines

Notes:
Streams from Sonoma County Vegetation Mapping and Lidar Program.

Imagery Source:
Sonoma County 2021

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Figure 1-3
Map 04 of 20
Project Components
State Route 1 Drainage System Restoration Project
EA 04-1K720, SON-1-0.97/28.73
Sonoma County, California

\\DC1VS01\GISPROJ\C\CALTRANS\1K720_SON1_DRAINAGE_SYSTEM_RESTORATION\MAPFILES\REPORT\2023\DED\APRIL\FIG1-3_PROJECT_COMPONENETS_1K720.MXD CARCHER 4/24/2023 9:08:05 AM





LEGEND

- Post Mile
- Caltrans Right of Way
- Sonoma County Parcels
- Project Footprint
- Remove / Replace Culvert
- Install Rock Slope Protection
- Install Flared End Section
- Right of Way Acquisition / Temporary Construction Easement

Notes:
Streams from Sonoma County Vegetation Mapping and Lidar Program.

Imagery Source:
Sonoma County 2021

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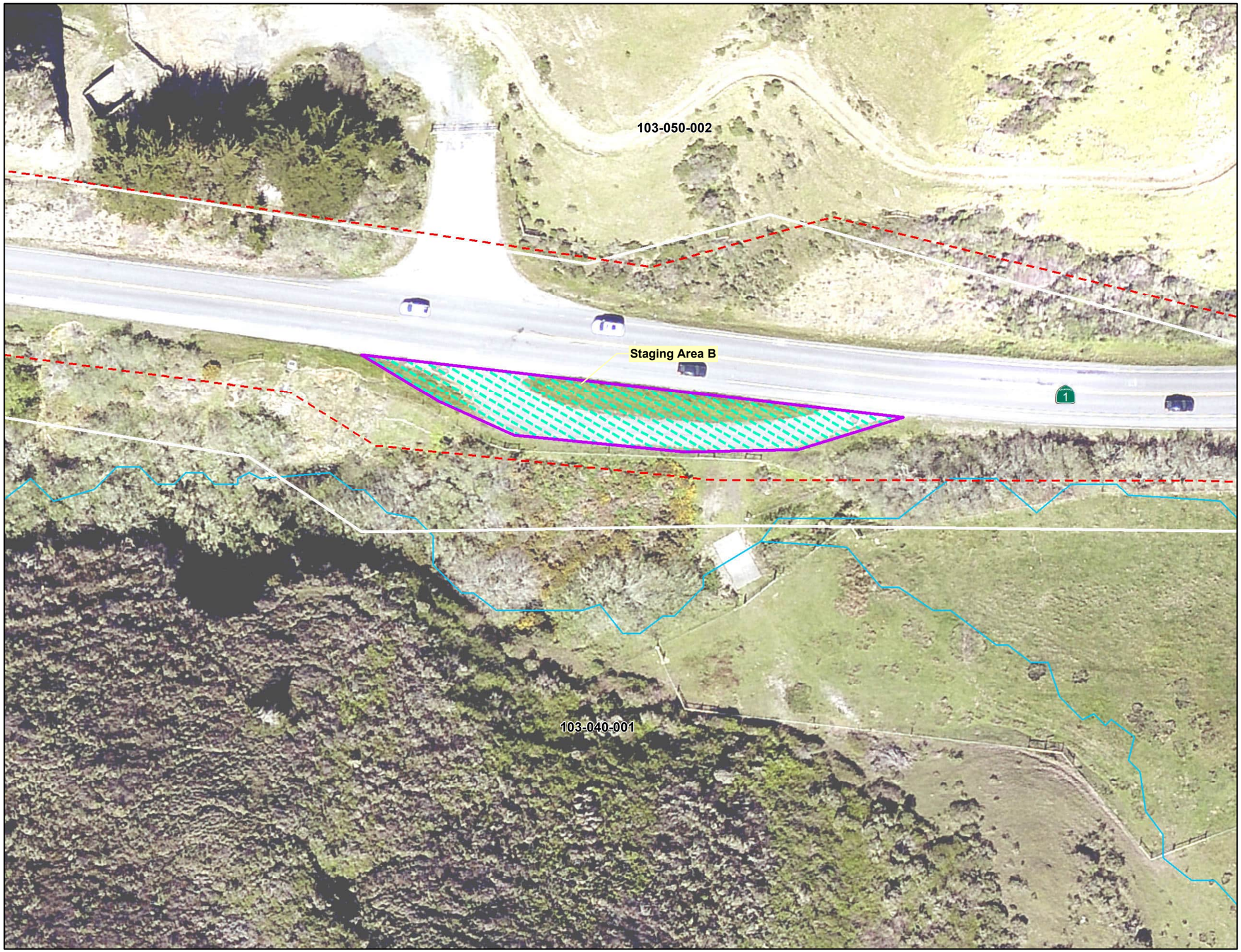
Feet

Figure 1-3
Map 05 of 20
Project Components
State Route 1 Drainage System Restoration Project
EA 04-1K720, SON-1-0.97/28.73
Sonoma County, California

\\DC1VS01\GISPROJ\C\CALTRANS\1K720_SON1_DRAINAGE_SYSTEM_RESTORATION\MAPFILES\REPORT\2023\DED\APRIL\FIG1-3_PROJECT_COMPONENETS_1K720.MXD CARCHER 4/24/2023 9:08:05 AM





LEGEND

- Caltrans Right of Way
- Sonoma County Parcels
- Project Footprint
- Staging Area
- Sonoma County Stream Centerlines

Notes:
Streams from Sonoma County Vegetation Mapping and Lidar Program.

Imagery Source:
Sonoma County 2021

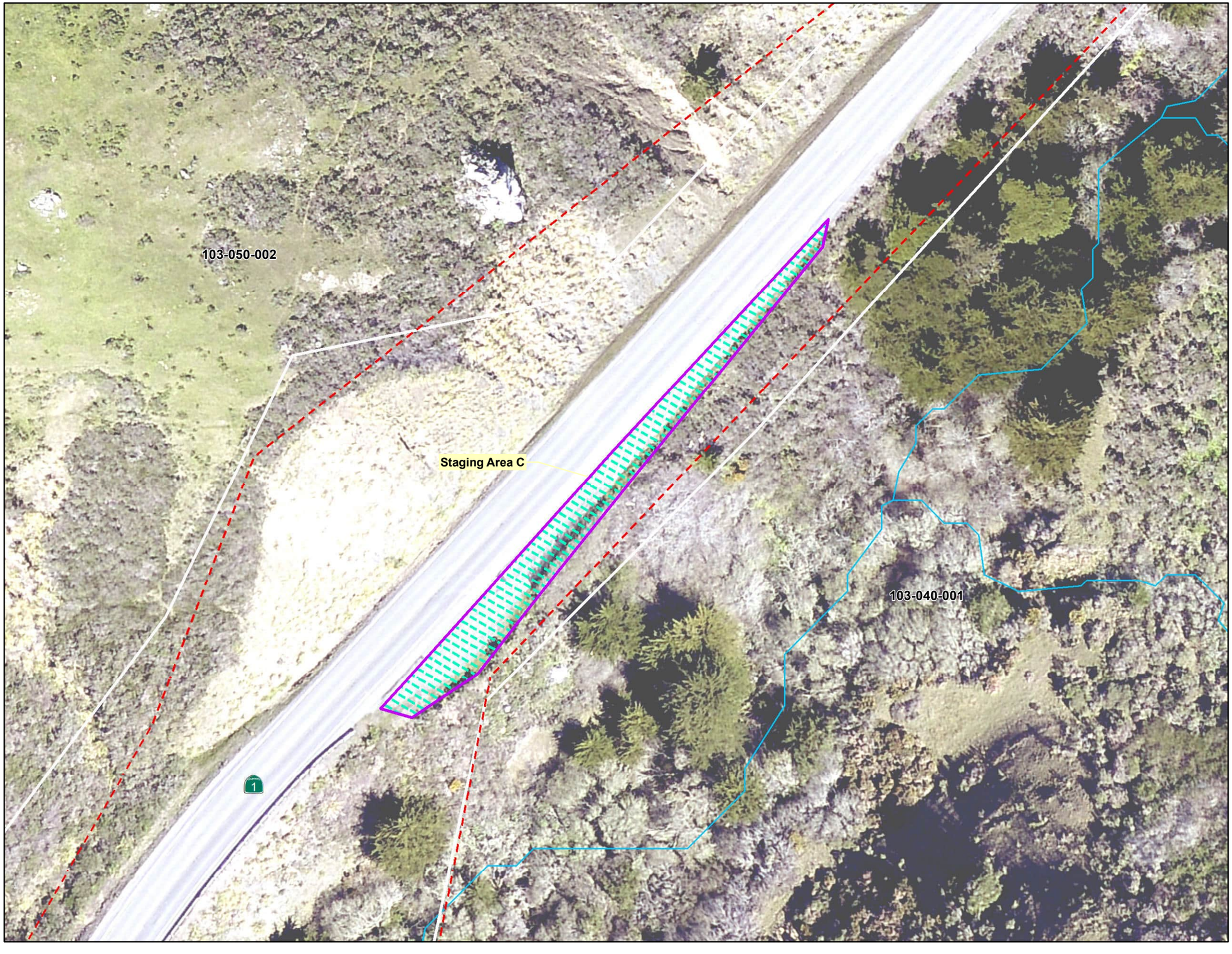
N

0 50 100
Feet

Caltrans

Figure 1-3
Map 06 of 20
Project Components
State Route 1 Drainage System Restoration Project
EA 04-1K720, SON-1-0.97/28.73
Sonoma County, California

\\DC1VS01\GISPROJ\C\CALTRANS\1K720_SON1_DRAINAGE_SYSTEM_RESTORATION\MAPFILES\REPORT\2023\DED\APRIL\FIG1-3_PROJECT_COMPONENETS_1K720.MXD CARCHER 4/24/2023 9:08:05 AM





LEGEND

- Caltrans Right of Way
- Sonoma County Parcels
- Project Footprint
- Staging Area
- Sonoma County Stream Centerlines

Notes:
Streams from Sonoma County
Vegetation Mapping and Lidar Program.

Imagery Source:
Sonoma County 2021

N

0 50 100
Feet

Caltrans

Figure 1-3
Map 07 of 20
Project Components
State Route 1 Drainage System Restoration Project
EA 04-1K720, SON-1-0.97/28.73
Sonoma County, California

\\DC1VS01\GISPROJ\C\CALTRANS\1K720_SON1_DRAINAGE_SYSTEM_RESTORATION\MAPFILES\REPORT\2023\DED\APRIL\FIG1-3_PROJECT_COMPONENETS_1K720.MXD CARCHER 4/24/2023 9:08:05 AM





LEGEND

- Caltrans Right of Way
- Sonoma County Parcels
- Project Footprint
- Staging Area

Notes:
Streams from Sonoma County Vegetation Mapping and Lidar Program.

Imagery Source:
Sonoma County 2021

N

0 50 100
Feet

Caltrans

Figure 1-3
Map 08 of 20
Project Components
State Route 1 Drainage System Restoration Project
EA 04-1K720, SON-1-0.97/28.73
Sonoma County, California

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LEGEND

- Post Mile
- Caltrans Right of Way
- Sonoma County Parcels
- Project Footprint
- Remove / Replace Culvert
- Install Flared End Section
- Excavate / Regrade
- Right of Way Acquisition / Temporary Construction Easement
- Right of Way Acquisition / Permanent Drainage Easement

Notes:
Streams from Sonoma County Vegetation Mapping and Lidar Program.

Imagery Source:
Sonoma County 2021

N

0 50 100
Feet

Caltrans

Figure 1-3
Map 09 of 20
Project Components
State Route 1 Drainage System Restoration Project
EA 04-1K720, SON-1-0.97/28.73
Sonoma County, California

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LEGEND

- Caltrans Right of Way
- Sonoma County Parcels
- Project Footprint
- Staging Area

Notes:
Streams from Sonoma County Vegetation Mapping and Lidar Program.
Imagery Source:
Sonoma County 2021

N

0 50 100
Feet

Figure 1-3
Map 10 of 20
Project Components
State Route 1 Drainage System Restoration Project
EA 04-1K720, SON-1-0.97/28.73
Sonoma County, California

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LEGEND

- Post Mile
- Caltrans Right of Way
- Sonoma County Parcels
- Project Footprint
- Remove / Replace Culvert
- Install Rock Slope Protection
- Remove / Replace Headwall
- Right of Way Acquisition / Temporary Construction Easement
- Right of Way Acquisition / Permanent Drainage Easement
- Sonoma County Stream Centerlines

Notes:
Streams from Sonoma County Vegetation Mapping and Lidar Program.

Imagery Source:
Sonoma County 2021

N

0 50 100
Feet

Caltrans

Figure 1-3
Map 11 of 20
Project Components
State Route 1 Drainage System Restoration Project
EA 04-1K720, SON-1-0.97/28.73
Sonoma County, California

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LEGEND

- Post Mile
- Caltrans Right of Way
- Sonoma County Parcels
- Project Footprint
- Remove / Replace Culvert
- Install Rock Slope Protection
- Remove Headwall / Install Drainage Inlet
- Install Flared End Section
- Excavate / Regrade
- Right of Way Acquisition / Temporary Construction Easement
- Right of Way Acquisition / Permanent Drainage Easement

Notes:
Streams from Sonoma County Vegetation Mapping and Lidar Program.

Imagery Source:
Sonoma County 2021

N

0 50 100

Feet

Caltrans

Figure 1-3
Map 12 of 20
Project Components
State Route 1 Drainage System Restoration Project
EA 04-1K720, SON-1-0.97/28.73
Sonoma County, California

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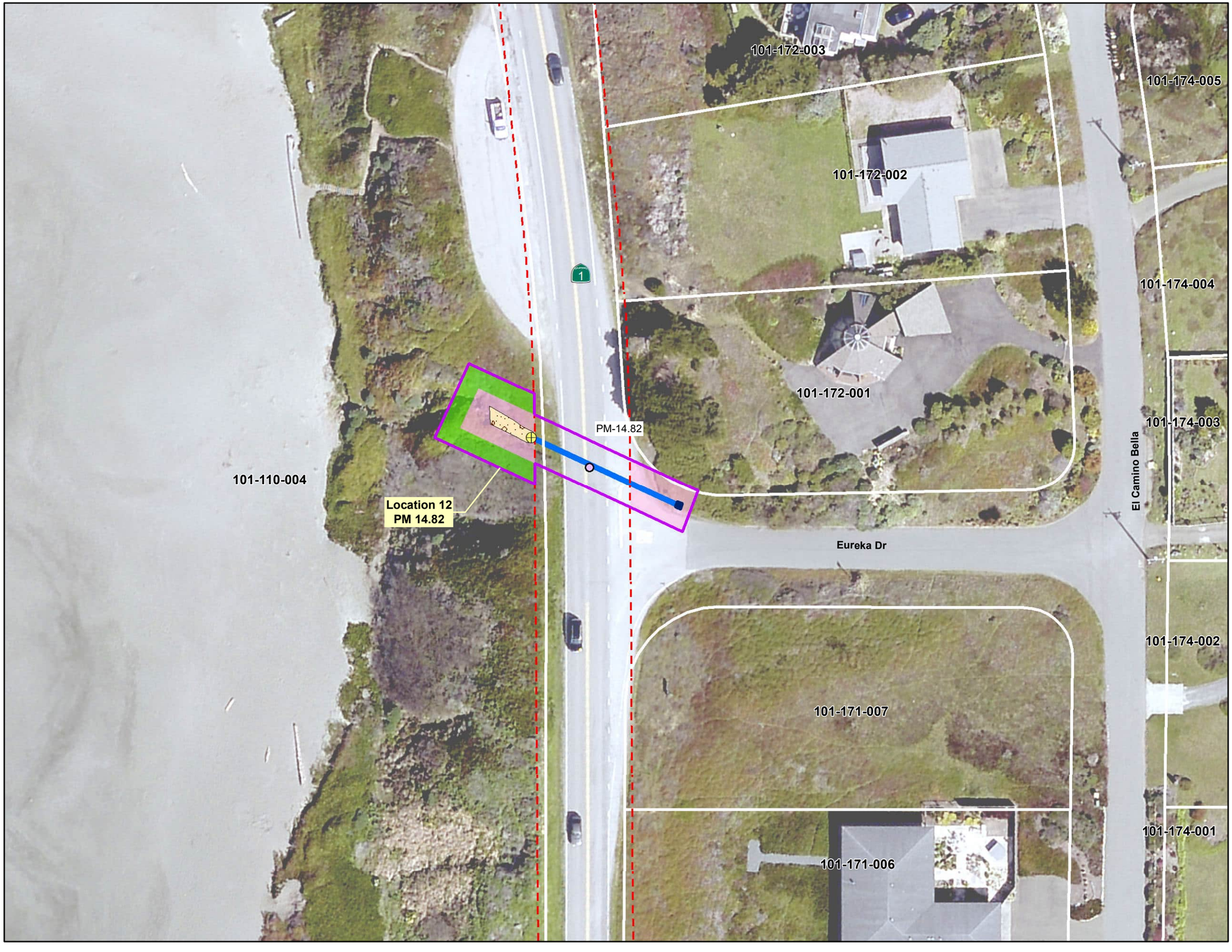

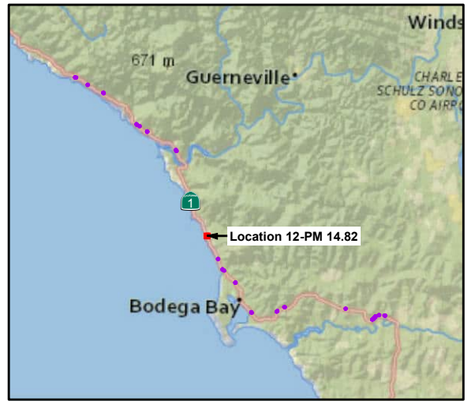

LEGEND

- Post Mile
- Caltrans Right of Way
- Sonoma County Parcels
- Project Footprint
- Remove / Replace Culvert
- Remove / Replace Drainage Inlet
- Install Rock Slope Protection
- Install Flared End Section
- Right of Way Acquisition / Temporary Construction Easement
- Right of Way Acquisition / Permanent Drainage Easement

Notes:
Streams from Sonoma County Vegetation Mapping and Lidar Program.

Imagery Source:
Sonoma County 2021

N

0 50 100
Feet

Figure 1-3
Map 13 of 20
Project Components
State Route 1 Drainage System Restoration Project
EA 04-1K720, SON-1-0.97/28.73
Sonoma County, California

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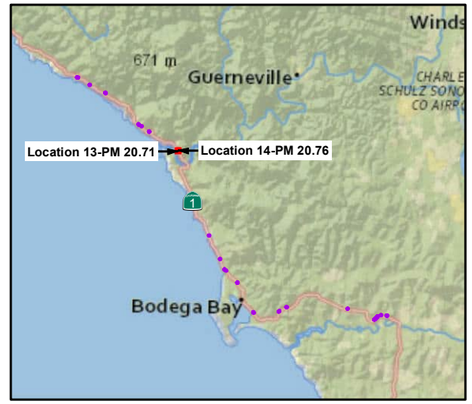

LEGEND

- Post Mile
- Caltrans Right of Way
- Sonoma County Parcels
- Project Footprint
- Remove / Replace Culvert
- Install Drainage Inlet
- Install Rock Slope Protection
- Remove / Replace Flared End Section
- Right of Way Acquisition / Temporary Construction Easement
- Right of Way Acquisition / Permanent Drainage Easement
- Sonoma County Stream Centerlines

Notes:
Streams from Sonoma County Vegetation Mapping and Lidar Program.

Imagery Source:
Sonoma County 2021

N

0 50 100
Feet

Figure 1-3
Map 14 of 20
Project Components
State Route 1 Drainage System Restoration Project
EA 04-1K720, SON-1-0.97/28.73
Sonoma County, California

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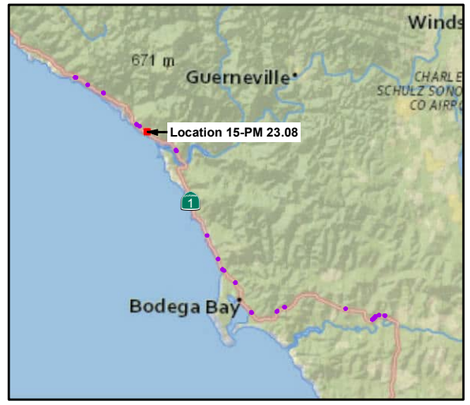

LEGEND

- Post Mile
- Caltrans Right of Way
- Sonoma County Parcels
- Project Footprint
- Remove / Replace Culvert
- Install Drainage Inlet
- Install Rock Slope Protection
- Right of Way Acquisition / Temporary Construction Easement
- Right of Way Acquisition / Permanent Drainage Easement
- Sonoma County Stream Centerlines

Notes:
Streams from Sonoma County Vegetation Mapping and Lidar Program.

Imagery Source:
Sonoma County 2021

N

0 50 100
Feet

Caltrans

Figure 1-3
Map 15 of 20
Project Components
State Route 1 Drainage System Restoration Project
EA 04-1K720, SON-1-0.97/28.73
Sonoma County, California

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LEGEND

- Caltrans Right of Way
- Sonoma County Parcels
- Project Footprint
- Staging Area

Notes:
Streams from Sonoma County Vegetation Mapping and Lidar Program.

Imagery Source:
Sonoma County 2021

N

0 50 100
Feet

Figure 1-3
Map 16 of 20
Project Components
State Route 1 Drainage System Restoration Project
EA 04-1K720, SON-1-0.97/28.73
Sonoma County, California

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LEGEND

- Caltrans Right of Way
- Sonoma County Parcels
- Project Footprint
- Staging Area
- Sonoma County Stream Centerlines

Notes:
Streams from Sonoma County Vegetation Mapping and Lidar Program.

Imagery Source:
Sonoma County 2021

N

0 50 100
Feet

Caltrans

Figure 1-3
Map 17 of 20
Project Components
State Route 1 Drainage System Restoration Project
EA 04-1K720, SON-1-0.97/28.73
Sonoma County, California

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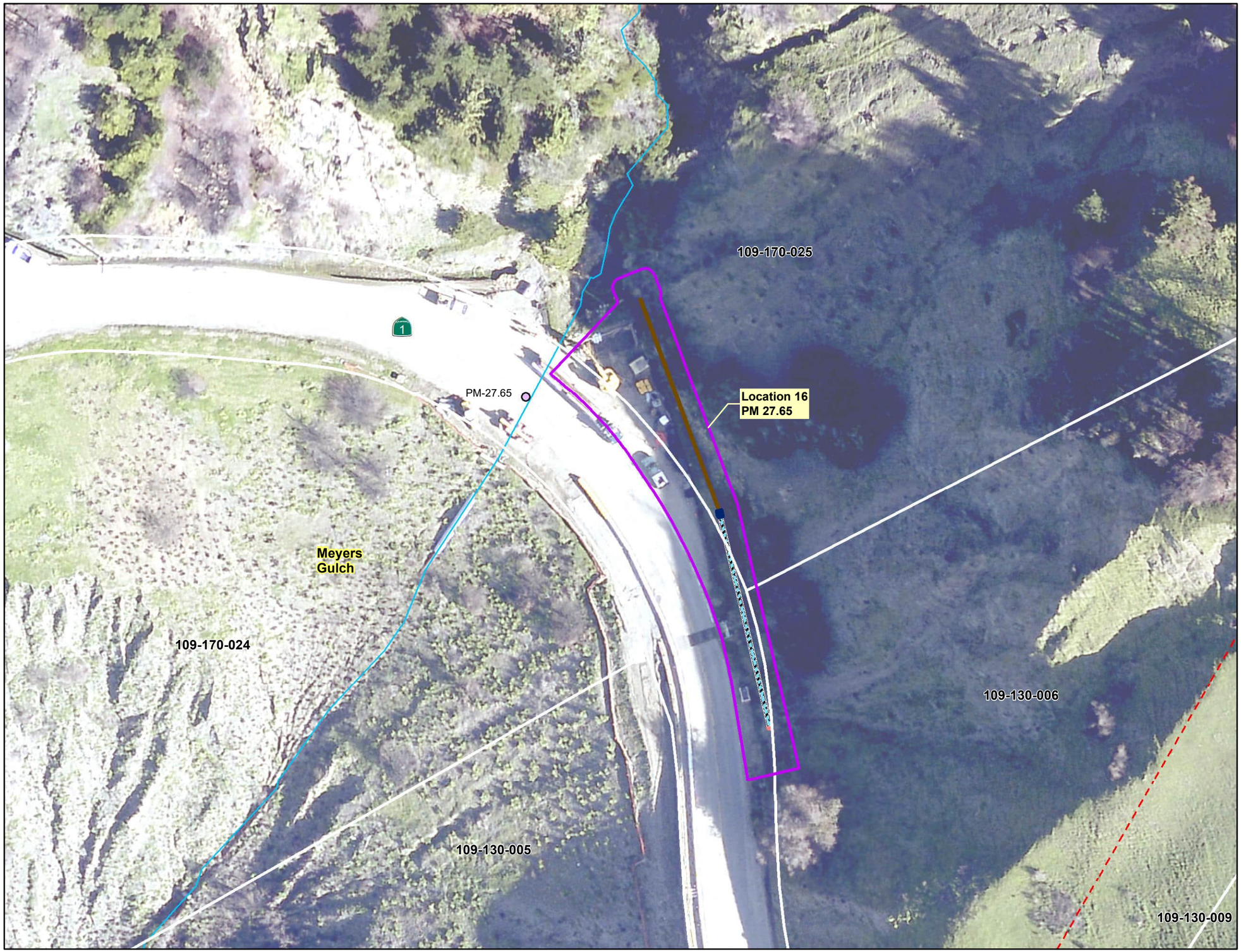



LEGEND

- Post Mile
- Caltrans Right of Way
- Sonoma County Parcels
- Project Footprint
- Remove Culvert
- Remove Drainage Inlet
- Remove / Replace Drainage Inlet
- Remove Culvert / Install Longitudinal Piping System
- Sonoma County Stream Centerlines

Notes:
Streams from Sonoma County
Vegetation Mapping and Lidar Program.

Imagery Source:
Sonoma County 2021

N

0 50 100
Feet

Caltrans

Figure 3
Map 18 of 20
Project Components
State Route 1 Drainage System Restoration Project
EA 04-1K720, SON-1-0.97/28.73
Sonoma County, California

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LEGEND

- Post Mile
- Caltrans Right of Way
- Sonoma County Parcels
- Project Footprint
- Install Culvert
- Install Drainage Inlet

Notes:
Streams from Sonoma County Vegetation Mapping and Lidar Program.

Imagery Source:
Sonoma County 2021

N

0 50 100
Feet

Figure 1-3
Map 19 of 20
Project Components
State Route 1 Drainage System Restoration Project
EA 04-1K720, SON-1-0.97/28.73
Sonoma County, California

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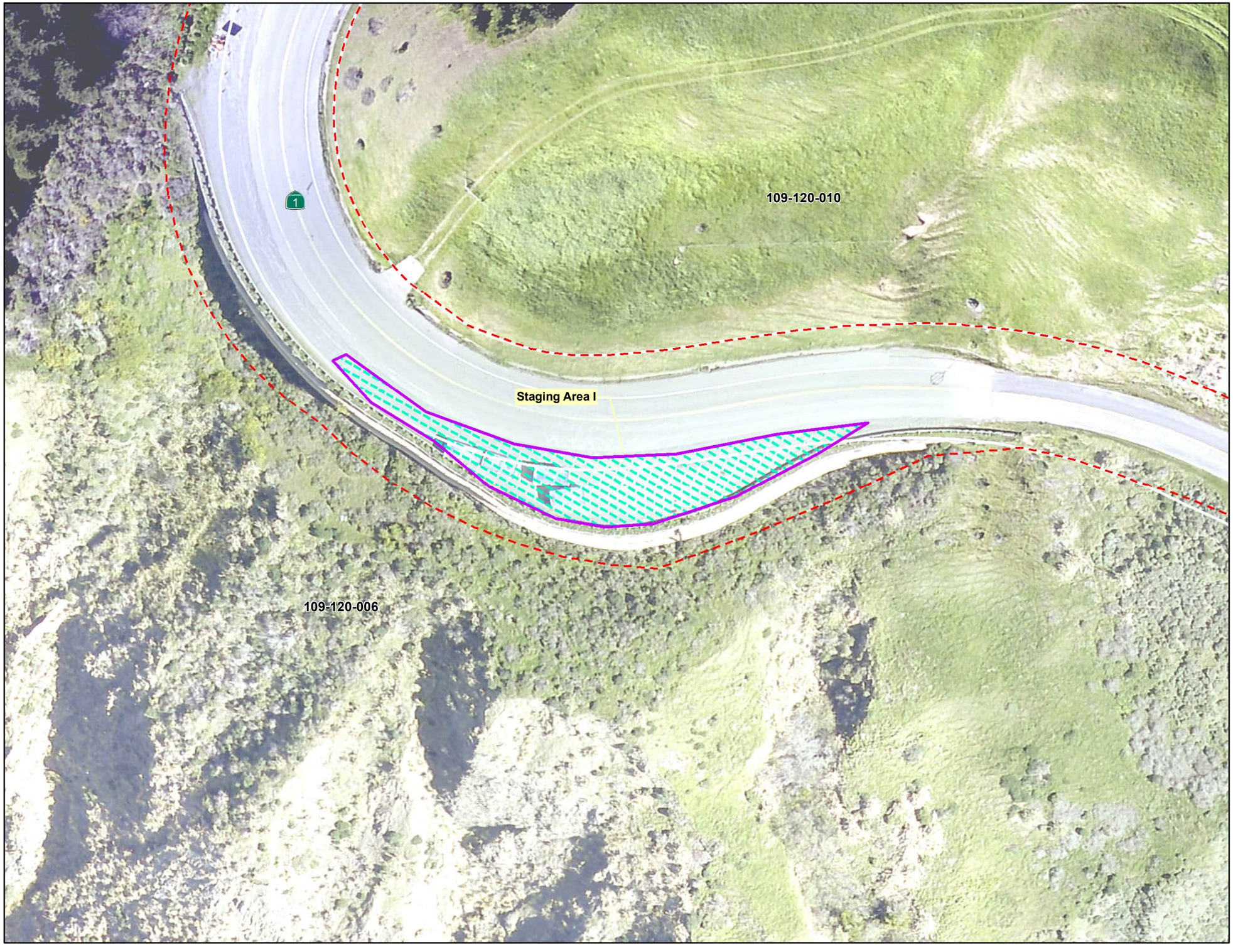



LEGEND

- Caltrans Right of Way
- Sonoma County Parcels
- Project Footprint
- Staging Area

Notes:
Streams from Sonoma County
Vegetation Mapping and Lidar Program.

Imagery Source:
Sonoma County 2021

N

0 50 100
Feet

Figure 1-3
Map 20 of 20
Project Components
State Route 1 Drainage System Restoration Project
EA 04-1K720, SON-1-0.97/28.73
Sonoma County, California

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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
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September 2022

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 Summary of Project Features and Avoidance and Minimization Measures

Project Features

- **PF-AQ-1: Dust Control Measures.** Implement dust control measures to minimize airborne dust and soil particles generated from construction-related activities, including watering or applying dust palliative to DSAs, preventing and promptly removing trackouts on SR 1 created by construction traffic, and covering soils or materials with tarps or providing adequate freeboard (space from the top of the material to the top of the truck) during transport.

- **PF-AQ-2: Construction Vehicles and Equipment**. Maintain and tune the construction vehicles and equipment in accordance with manufacturer's specifications.

- **PF-AQ-3: Limit Idling.** Limit idling times by shutting construction equipment off when not in use and reducing the maximum idling time to 5 minutes.

- **PF-BIO-1: Permit Compliance Binder.** An on-site Permit Compliance Binder would be maintained by the Caltrans resident engineer at all times and presented to agency (CCC, CDFW, NMFS, San Francisco Bay Regional Water Quality Control Board [RWQCB], USACE, and/or USFWS) personnel upon request. The Permit Compliance Binder would include a copy of all original permits, licenses, agreements, and certifications (PLACs), as well as any extensions and/or amendments to PLACs.

- **PF-BIO-2: Work According to Documents.** Except as they are contradicted by measures within the PLACs, all construction-related activities would be conducted in conformance with the Project description, AMMs in the PLACs and CDP, as well as the PFs and AMMs in this IS/ND.

- **PF-BIO-3: Environmental Training.** Prior to the start of construction, a Caltrans biologist would provide a training session for all work personnel to identify any sensitive species that may be in the area, their basic habits, how they may be encountered in their work area, and procedures to follow when they are encountered. Any personnel joining the work crew later would receive the same

training before beginning work on-site. Upon completion of the education program, employees would sign a form stating they attended the program and understand all protection measures. A pamphlet that contains images of sensitive species that may occur within the Project footprint, lists ESAs within the Project footprint, and notes key avoidance measures, as well as employee guidance, would be given to each person who completes the training program. These forms would be made available to the resource agencies upon request.

- **PF-BIO-4: Work During Periods of Dry Weather.** Construction-related activities in the bed, bank, channel, and any associated riparian habitat would occur during periods of dry weather. Forecasted precipitation would be monitored by the Resident Engineer (RE) or designee. When approximately 0.25 inch or more of precipitation (qualifying rain event) is forecasted to occur, construction-related activities would stop and erosion control BMPs would be installed prior to the onset of precipitation. After qualifying rain events, the BSA would be inspected for erosion and sediment problems and corrective action would be taken as needed; 72-hour weather forecasts from the National Weather Service would be consulted and work would not resume until surface runoff ceases and there is less than a 50 percent forecast for a qualifying rain event in the next 24-hour period.

- **PF-BIO-5: Delineate Environmentally Sensitive Areas.** Prior to the beginning of construction, ESAs within the Project footprint would be clearly delineated by a Caltrans approved biological monitor and installed by the contractor using high visibility orange fencing, flagging, or similar markings. ESA fencing would remain in place throughout construction, though it may be removed during the wet season (and subsequently re-installed) if needed to prevent construction materials from being washed away. The final Project plans would depict all locations where ESA fencing would be installed. The final Project standard special provision (SSPs) would clearly describe acceptable fencing and prohibited construction-related activities, vehicles, equipment, and materials storage within ESAs. ESA fencing would be maintained in good repair throughout the duration of construction.

- **PF-BIO-6: Wildlife Exclusion Fencing.** Prior to the beginning of construction, at the discretion of the Caltrans biologist, wildlife exclusion fencing (WEF) would be installed within the BSA in areas where wildlife could enter the BSA. At the discretion of the biological monitor, WEF may be removed at times when

construction is no longer active in the area. All WEF would be removed following completion of construction-related activities.

- **PF-BIO-7: Nesting Bird Surveys.** During the nesting season (typically February 1 through September 30), pre-construction surveys for nesting birds will be conducted by the Caltrans Biologist no more than 72 hours prior to the start of construction activities. If work is to occur within 300 feet of active raptor nests or 50 feet of active non-game bird nests, a non-disturbance buffer will be established at a distance sufficient to minimize disturbance based on the nest location, topography, cover, the species' sensitivity to disturbance, and the intensity/type of potential disturbance. To minimize and avoid take of migratory birds, their nests, and their young, Caltrans will conduct vegetation and tree trimming outside of the bird nesting season, prior to construction. This work will be limited to vegetation and trees that are within the Project footprint. Additional bird nesting surveys will be required if work must occur during the nesting season. If construction-related activities occur during nesting season, a Caltrans biologist would conduct preconstruction surveys for nesting birds. All nest avoidance requirements of the Migratory Bird Treaty Act, USFWS, and CDFW would be observed. If an active nest is found, a perimeter buffer of approximately 50 feet for non-game native birds and approximately 300 feet for raptors would be adhered to. appropriate protection buffer would be established until the young fledge. USFWS and/or CDFW would be contacted within 24 hours if a special-status species is discovered within the BSA.

- **PF-BIO-8: Invasive Weed Control.** To reduce the spread of invasive, non-native plant species and the potential decrease of palatable vegetation for wildlife species, Caltrans would comply with Executive Order (EO) 13112. The purpose of EO 13112 is to prevent the introduction of invasive species and provide for their control to reduce the economic, ecological, and human health effects. If invasive species are disturbed or removed during construction-related activities, the contractor would be required to contain the plant material associated with these invasive species and dispose of them in a manner that would not promote the spread of the species. The contractor would be responsible for obtaining all PLACs, and environmental clearances for proper disposal. Areas subject to noxious weed removal or disturbance would be hydroseeded with fast growing locally appropriate, commercially available native grasses or an erosion control mixture of locally appropriate, commercially available native seed species. Where

seeding is not practical, the target areas within the BSA would be covered to the extent practicable with heavy black plastic solarization material.

If work occurs in ESHAs, construction vehicles and equipment would be thoroughly cleaned prior to arriving on the construction site to prevent the spread of invasive species from other locations.

- **PF-BIO-9: Vegetation Removal and Tree Trimming.** Vegetation would be removed, and trees trimmed, only where necessary, and vegetation would be cut above soil level, except where excavations and permanent impacts would occur, to allow plants that reproduce vegetatively to resprout after construction.

- **PF-BIO-10: Restore Disturbed Areas.** Temporarily disturbed areas would be restored. Exposed slopes and bare ground would be reseeded with locally appropriate, commercially available native species to stabilize bare soil and prevent erosion.

- **PF-BIO-11: Prevent Inadvertent Entrapment.** To prevent inadvertent entrapment of wildlife species during construction, all excavated, steep-walled holes or trenches dug more than approximately 1-foot below ground surface would be covered at the close of each working day by plywood or similar materials or provided with one or more escape ramps constructed of earthen fill or wooden planks at an angle no greater than approximately 30 degrees. Holes and trenches would be thoroughly inspected for trapped wildlife species prior to filling. Pipes, culverts, or similar structures stored in the BSA would be inspected before they are moved, capped, or buried.

- **PF-BIO-12: Stormwater Best Management Practices.** Water pollution control and erosion control BMPs would be developed and implemented to minimize wind- or water-related erosion. They would follow the requirements of the RWQCB and standards outlined in construction site BMPs manual (Caltrans 2017).

- **PF-BIO-13: Construction Site Management Practices.** The following site restrictions would be implemented to avoid or minimize potential impacts on sensitive biological resources:

    a. Enforce a speed limit of 15 miles per hour for project vehicles in unpaved portions of the site to reduce dust and excessive soil disturbance.

b. Locate construction access, staging, storage, and parking areas within the Caltrans ROW and outside of any designated ESA to the extent practicable. Access routes, staging and storage areas, and contractor parking would be limited to the minimum necessary to construct the Project. Routes and boundaries of roadwork would be clearly marked before initiating construction.

c. Certify, to the maximum extent practicable, borrow material is nontoxic and weed free.

d. Enclose food and food-related trash items in sealed trash containers and remove them from the site at the end of each day.

e. Prohibit pets from entering the Project area during construction.

f. Prohibit firearms within the Project site, except for those carried by authorized security personnel or local, state, or federal law enforcement officials.

- **PF-CULT-1: Inadvertent Archaeological Discoveries.** If buried archaeological resources are discovered during ground-disturbing activities, work would cease until a Caltrans qualified archaeologist can assess the nature and significance of the resource and appropriate AMMs are implemented. The need for monitoring during the remainder of the Project would be reevaluated. The Caltrans qualified archaeologist would consult with appropriate Native American tribes in determining suitable treatment for inadvertent archaeological discoveries if the resource is Native American in nature.

- **PF-CULT-2: Discovery of Human Remains.** If human remains are discovered during ground-disturbing activities, construction-related activities within a 100-foot radius of the find would be halted immediately and the Caltrans qualified archaeologist would be notified within 24 hours. The Caltrans qualified archaeologist would immediately notify the Sonoma County coroner. The Sonoma County coroner is required to examine the find within 48 hours of receiving notification of such a discovery. If the Sonoma County coroner determines that the human remains are those of a Native American, the NAHC would be contacted by phone within 24 hours of making the determination (California Health and Safety Code Section 7050.5[c]). The Caltrans qualified archaeologist would also notify local Native American tribes of discovered human remains. The NAHC would determine and contact the Most Likely Descendent

(MLD regarding the discovered human remains. The MLD, in cooperation with the adjacent property owner and the Caltrans qualified archaeologist, would determine the ultimate disposition of the human remains.

- **PF-ENERGY-1: Recycle Non-Hazardous Waste and Excess Construction Materials.** If feasible, recycle non-hazardous waste and excess materials to reduce disposal off-site.

- **PF-ENERGY-2: Solar Energy.** Use solar energy as the energy source for construction equipment, such as, but not limited to, signal boards, if feasible.

- **PF-HAZ-1: Site Investigations.** The Caltrans Office of Environmental Engineering requires the Project to conduct site investigation surveys during the Project design phase to characterize the contamination of aerially deposited lead.

- **PF-HAZ-2: Notification Requirements.** If elevated levels of hazardous materials are identified during surveys, the appropriate standard special provisions (SSPs) would be taken, including required notification of the Bay Area Air Quality Management District, to safely and thoroughly remove, transport, and dispose of the materials at an appropriate off-site waste facility.

- **PF-HYD-1: Implementation of Construction Site Best Management Practices.** BMPs would be included in the final Project plans and SSPs would be included in the final construction package to comply with the conditions of the Caltrans NPDES permit. The Caltrans Best Management Practice Guidance Handbook would provide guidance for provisions to be included in the construction contract for measures to protect ESAs and avoid or minimize stormwater and non-stormwater discharges. Construction site BMPs for stormwater may include, but are not limited to, the following:

    - Construction tracking control practices
    - Job site management
    - Sediment control (fiber rolls and silt fencing)
    - Waste management and materials pollution control
    - Materials stockpile management
    - Dust and wind erosion controls
    - Drainage inlet protection
    - Non-stormwater management

- **PF-HYD-2: Water Pollution Control Program.** A WPCP would be prepared by the contractor and approved by Caltrans, pursuant to the 2018 Caltrans Standard Specifications Section 13, Water Pollution Control, and the Caltrans WPCP Preparation Manual, and implemented prior to the beginning of construction.

Avoidance and Minimization Measures

- **AMM-AES-1: Protect Vegetation with Fencing.** Impacts to vegetation would be minimized to the greatest extent possible. Vegetation to remain would be protected from construction-related activities by temporary fencing when vegetation is close to construction work or staging areas.

- **AMM-AES-2: Staging Areas to Avoid Substantial Vegetation Removal.** Confirm that locations preliminarily identified as staging areas would not require the removal of any but weedy vegetation or cause the compaction of any tree roots.

- **AMM-AES-3: Certified Arborist for Tree Removal.** Where the pruning of trees is required to accommodate construction operations, pruning would be under the supervision of a certified arborist.

- **AMM-AES-4: Minimizing Lighting Impacts.** For any night work, limit construction lighting to the Project footprint and use directional lighting and/or shielding to minimize light trespass to areas outside the Project footprint.

- **AMM-AES-5: Avoid Tree Impacts by Culvert Realignment.** Opportunities to avoid impacts to trees through minor design modifications, such as revising the alignment of culverts, would be examined as design advances.

- **AMM-AES-6: Comply with Sonoma State Route 1 Repair Guidelines.** Design and construction would comply with all applicable provisions of the Guidelines, as confirmed by the Office of Landscape Architecture and the Office of Environmental Analysis.

- **AMM-AES-7: Visually Appropriate Materials and Design Features.** Appropriate materials and Project components would be selected to maintain the visual character of the location and corridor consistency.

- **AMM-AES-8: Consult with Landscape Architecture Department.** During the Project design phase, the PDT shall ensure that RSP is the minimum necessary to

achieve Project objectives. Necessary RSP may be soil-fill, and vegetated, and/or stained to minimize the visual appearance of the RSP, under direction of the Caltrans Landscape Architecture Department.

- **AMM-AES-9: Erosion Control Seeding.** Apply erosion control seeding using locally appropriate, commercially available, native seed mix, and similar measures to DSAs following construction.

- **AMM-BIO-1: Rare Plant Surveys.** Prior to the beginning of construction, botanical surveys would be conducted by Caltrans Biologist in areas of suitable habitat for rare plant species during the appropriate blooming season(s).

- **AMM-BIO-2: Rare Plant Salvage and Transportation Plan.** If any rare plants are detected in the Project footprint during surveys, a Rare Plant Salvage and Transplantation Plan will be prepared and submitted to appropriate agencies for approval, at least 60 days prior to the beginning of construction. This plan will include the location of ESAs and avoidance measures, the establishment of photo points, salvage and replanting methods, replanting success criteria, and monitoring methods. Special-status plants will be avoided where feasible through implementation of ESAs, as described in the plan. Where avoidance is not feasible, rare plants in the Project footprint will be transplanted and replanted to suitable adjacent habitat in the Caltrans ROW, as described in the plan.

  If avoiding rare plant species is not feasible, measures may be implemented to minimize impacts. AMMs may include one or more of the following: (1) collection of rare plants seeds, bulbs, other propagules, or topsoil prior to construction for use in future on-site restoration or enhancement actions; (2) restoration of enhancement of suitable on-site rare plant habitat; or (3) restoration or enhancement of suitable off-site rare plant habitat.

- **AMM-BIO-3: Biological Monitoring.** A biological monitor will be present during construction activities where take of a listed species could occur. Through communication with the Resident Engineer or designee, the biological monitor may stop work if deemed necessary for any reason to protect listed species; the biological monitor will advise the Resident Engineer or designee on how to proceed accordingly.

During construction in potential and/or suitable CRLF habitat, the following monitoring protocols would be observed by a USFWS-approved biological monitor:

a. Within 24 hours prior to initial ground-disturbing activities, potential and/or suitable CRLF habitat identified within the BSA would be surveyed by a USFWS-approved biological monitor to clear the site of CRLF moving above ground or taking refuge in burrow openings or under construction materials that could provide cover.

b. A USFWS-approved biological monitor would be present during ground-disturbing activities and vegetation/tree removal in suitable CRLF habitat to monitor the removal of the top 12 inches of soil.

c. If potential aestivation burrows are discovered, the burrows would be flagged for avoidance when feasible.

d. After a qualifying rain event, and prior to resuming construction activities, a USFWS-approved biological monitor would inspect the BSA and all construction equipment and materials for the presence of CRLF.

e. Upon discovery of a CRLF individual(s) within the BSA, all construction-related activities would cease within a 50-foot radius of the frog. The frog would be allowed to leave the BSA on its own; or if the CRLF does not leave on its own, it would be relocated as close to the BSA as feasible and with permission from the adjacent property owner and placed in a natural burrow by a USFWS-approved biological monitor with the appropriate USFWS 10(a)1(A) handling permit.

f. USFWS would be notified by phone and email within 1 working day of any CRLF discovery within the BSA.

- **AMM-BIO-4: Preconstruction Surveys for California Red-Legged Frog.** Preconstruction surveys for CRLF would be conducted by a USFWS-approved biological monitor within 14 calendar days of the beginning of construction-related activities in suitable upland dispersal and aquatic habitat prior to the beginning of ground-disturbing activities, vegetation removal, and WEF installation. Surveys would be conducted as outlined in the USFWS (2005) species survey guidelines (USFWS Guidelines) for CRLF. Access to CRLF

habitat may be limited by appropriate safety measures and protocols discussed in the USFWS Guidelines.

- **AMM-BIO-5: Proper Use of Erosion Control Devices**. To prevent CRLF from becoming entangled or trapped in erosion control materials, plastic monofilament netting, such as erosion control matting or similar material, will not be used. Acceptable substitutes will include coconut coir matting or tackifying hydroseeding compounds.

- **AMM-BIO-6: Protocol for Species Observation.** If a CRLF is encountered in the Project footprint, work within 50 feet of the animal will cease immediately and the Resident Engineer and USFWS approved biological monitor will be notified. Based on the professional judgment of the biological monitor, if Project activities can be conducted without harming or injuring the animal, then it may be left at the location of discovery and monitored by the biological monitor. Project personnel will be notified of the finding, and, at no time, will work occur within 50 feet of the animal without a biological monitor present.

- **AMM-BIO-7: Occupied Habitat.** If NSO surveys (using the USFWS's 2012 survey protocol [USFWS 2014]) determine that the Project footprint is occupied, or Caltrans biologist presumes NSO occupancy without conducting surveys, Caltrans will adhere to the following measures:

    - Vegetation Removal or Alteration
        - No suitable NSO nest trees will be removed during the nesting season (typically February 1 to September 30).
        - Suitable habitat may be removed or altered outside the nesting season (typically October 1 to January 31) provided "no take" guidelines for USFWS are adhered to for all known NSO home ranges within 1.3 miles of the work areas in interior forests or within 0.7 mile of the work areas in coastal (redwood) forests (USFWS 2014).
    - Auditory or Visual Disturbance
        - No activity generating sound levels 20 or more decibels (dB) above ambient sound levels or with maximum sound levels (ambient sound level plus activity-generated sound level) above 90 dB (excluding vehicle backup alarms) may occur within suitable spotted owl nesting or roosting habitat during most of the nesting season (typically February 1 to July 9)

(USFWS 2014). These above-ambient, sound-level restrictions will be lifted after July 31, after which the USFWS considers the above-ambient sound levels as having "no effect" on nesting spotted owls and dependent young.

  - No human activities will occur within a visual line of sight of 131 feet or less from any known nest locations within the Project footprint (USFWS 2014).

- **AMM-BIO-8: Unoccupied Habitat.** If NSO surveys (using the USFWS's 2012 survey protocol) determine that all suitable spotted owl habitat within 0.7 mile of the work areas in coastal (redwood) forests or within 1.3 miles of the work areas in interior forests, is unoccupied, then suitable habitat may be removed or altered without seasonal restrictions, provided "no take" guidelines are adhered to for all known spotted owl home ranges within 0.7 mile of the work areas in coastal (redwood) forests or within 1.3 miles of the work areas in interior forests (USFWS 2014). The USFWS considers previously occupied habitat as essentially "occupied" in perpetuity. Therefore, adequate (based on the "no take" guidelines) suitable nesting or roosting and foraging habitat must be maintained within all historical NSO territories within the Project footprint.

- **AMM-BIO-9: Suitable MAMU Vegetation Removal or Alteration**

  - No potential MAMU nest trees will be removed during the nesting season (typically February 1 to September 30).
  - Potential suitable habitat may be removed or altered outside the nesting season (typically October 1 to January 31).
  - Through coordination with USFWS, Caltrans must ensure that there are no adverse effects on designated MAMU critical habitat within the Project footprint.

- **AMM-BIO-10: Auditory and Visual Disturbance.**

  - No activity generating sound levels 20 dB or more above ambient sound levels, or with maximum sound levels (ambient sound level plus activity-generated sound level) above 90 dB (excluding vehicle backup alarms), may occur within suitable MAMU nesting habitat during most of the MAMU nesting season (typically March 24 to August 5) (USFWS 2014).

  - Outside of MAMU nesting season (typically between August 6 and September 30) of any year, Project activities adjacent to suitable nesting habitat that will generate sound levels equal to or greater than 10 dB above ambient sound levels will observe a daily work window beginning 2 hours after sunrise and ending 2 hours before sunset. However, preparation work that does not generate noise above ambient sound levels, including street sweeping and manual removal of pavement markers, can occur during all hours. The need for this daily work window depends on the distance between suitable nesting habitat and the above-ambient sound generating activity following the USFWS's guidelines (USFWS 2014).
  - No human activities will occur within the visual line of sight of 131 feet or less from an active nest (USFWS 2014).

- **AMM-BIO-11: Unoccupied MAMU Habitat.** If protocol surveys determine that all suitable MAMU nesting habitat within the Project footprint is considered unoccupied, then suitable nesting habitat may be removed or altered without seasonal restrictions.

- **AMM-BIO-12: Seasonal Avoidance for Snowy Plover.** At Location 10 and at Staging Area D no construction, maintenance, or inspections will be performed during the SNPL breeding season, (typically March 1 through September 14). Project activities adjacent to suitable SNPL habitat will only be performed during the non-breeding season. A no-disturbance buffer of 130 feet will be implemented during this season.

- **AMM-BIO-13: Preconstruction Surveys for Snowy Plover.** In addition, a service-approved biologist will conduct pre-construction clearance surveys for the species prior to work at Location 10 and Staging area D. At least two surveys will be conducted at those locations: one survey will be between 3 and 14 calendar days prior to work starting, and another will be within 3 calendar days prior to work starting. These surveys may be conducted concurrently with other nesting bird surveys, as required. Caltrans biologists will be familiar with the species and able to distinguish between male and female SNPL. Surveys will be conducted along the beach area (on foot within accessible areas or using binoculars) within a 500-foot radius of the Project footprint. Tidal phase, weather, wind speeds, and visibility will be recorded during each survey. Surveyors will document observations and banded birds but will not approach a bird on a nest or an adult with chicks, or female head-bobbing, a male tail-dragging, birds copulating, nest

scraping, birds performing a broken wing display, or an adult with chicks. Positive identifications should be reported to USFWS within 24 hours.

- **AMM-BIO-14: Preconstruction Survey for *Viola adunca*.** A preconstruction survey for *Viola adunca* would be conducted prior to the beginning of construction by a Caltrans biologist, referencing phenology trends observed at nearby reference populations. If *Viola adunca* is not found within the BSA, then the BSA does not contain suitable breeding habitat for MSB.

- **AMM-BIO-15: Minimize Impacts to *Viola adunca* and Myrtle's Silverspot Butterfly.** *Viola adunca* would be flagged and fenced for avoidance if found within the BSA during preconstruction surveys. Host plants would be surveyed by a USFWS-approved biologist for evidence of MSB larval feeding or damage. If host plants are considered potentially occupied by MSB, then construction-related activities would occur during MSB larval period and outside of MSB flight season. If host plants cannot be avoided, then work would occur during the MSB flight season with a USFWS-approved biological monitor present to survey for adult MSB. If MSB is observed within the BSA, the USFWS-approved biological monitor, through communication with the RE or designee, may stop work if deemed necessary for any reason to protect MSB and would advise the RE or designee on how to proceed accordingly.

- **AMM-BIO-16: Pre-construction Surveys for Sonoma Tree Vole.** Before the start of construction, a Caltrans biologist will conduct a survey of the Project footprint and a 30-foot buffer beyond the Project footprint boundaries to determine the location of active and inactive STV nests. Any nests detected during the surveys will be recorded and mapped in relation to the Project footprint. In addition, the biologist will evaluate any signs of current activity. A 30-foot equipment exclusion buffer will be established around active and inactive nests that can be avoided. Within such buffers, all vegetation will be retained, and nests will remain undisturbed.

- **AMM-BIO-17: Preconstruction Bat Surveys.** Prior to the start of any tree removal activities, a pre-construction bat survey will be performed by an agency approved biologist in the event that any commonly occurring, non-listed, tree-roosting bat species are present and to determine if two-phase tree removal methods or other bat tree-roost avoidance measures are appropriate for any trees scheduled for removal. Surveys should be conducted at work locations

determined to have moderately to highly suitable tree roost habitat. The biologist will use visual confirmation to determine the presence of any bat roosts, and acoustic recognition equipment to identify species to the greatest extent possible. If detected, all appropriate avoidance and minimization measure will be put in place.

If the habitat assessment reveals suitable bat habitat in trees and tree removal is scheduled during nesting season (typically April 16 through August 30 and/or October 16 through February 28), then presence/absence surveys shall be conducted two to three days prior to any tree removal or trimming. If presence/absence surveys are negative, then tree removal may be conducted by following a two phased tree removal system. If presence/absence surveys indicate bat occupancy, then the occupied tree removal/trimming shall only occur during (typically March 1 through April 15 and/or August 31 through October 15) by following the two phased tree removal system. The two phase system shall be conducted over 2 consecutive days. On the first day, (in the afternoon) limbs and branches are removed by a tree cutter using chainsaws or other hand tools. Limbs with cavities, crevices, or deep bark fissures are avoided and only branches or limbs without those features are removed. On the second day the entire tree shall be removed.

- **AMM-BIO-18: Inspect Pipes and Culverts.** All construction-related pipes, culverts, or similar structures within the Project area will be thoroughly inspected for the presence of wildlife, including roosting bats, prior to being moved or buried.

- **AMM-BIO-19**: **In-water Work Window.** In-water activities at Locations 10, 13, and 14 will occur during the dry season (typically between June 15 and October 15) to the maximum extent possible to avoid migratory periods of anadromous fish. If necessary, in-water O&M activities that do not involve impact pile driving or cofferdam installation will be allowed to occur between September 1 and January 15, provided the activities are initiated prior to November 30. No new in-water impacts will be initiated outside of the seasonal work window, and work activities will be concluded as soon as logistically possible based on site-specific construction conditions.

- **AMM-BIO-20: In-water Activities.** When working in areas near waterways or wetlands, the duration of in-water activity will be limited to the minimum amount of time necessary to construct the Project scope.

- **AMM-BIO-21: Block-off Net Installation.** Block-off nets will be installed and closed during low tide to the extent feasible to prevent fish from entering the work area at Locations 10, 13, and 14, and will be overseen by the Caltrans biologist.

- **AMM-BIO-22: Impacts to ESHAs.** Temporary impacts to ESHAs (i.e., riparian habitat) would be mitigated at a ratio of 1:1. Permanent impacts to ESHAs and aquatic resources would be mitigated at ratios of 3:1 and 4:1, respectively. Impacts to ESHAs, mitigation ratios, and mitigation monitoring would be confirmed with the CCC and Sonoma County during the permitting process.

- **AMM-BIO-23: Tree Replacement**. Any trees that may be removed and replaced at a ratio of 3:1, or compensated via an in lieu fee. Appropriate replacement locations would be determined during the permitting process and in consultation with the appropriate agencies, and replaced according to the agencies required ratios.

- **AMM-BIO-24: Impacts to Waters**. Approximately 0.01 acre of potentially jurisdictional other waters would be temporarily impacted by the installation of the TCDS. The temporarily impacted areas would be restored to minimize impacts to habitat functionality. Approximately 0.01 acre of potentially jurisdictional estuarine intertidal waters would be permanently impacted by the installation of the RSP. In addition, less than 0.01 acre of potentially jurisdictional other waters would be permanently impacted by the construction of the two headwalls. Temporary impacts would be mitigated at a ratio of at least 1:1 and permanent impacts would be mitigated at a ratio of at least 3:1 or 4:1, depending on the appropriate agencies requirements. Impacts to waters, mitigation ratios, and mitigation monitoring would be confirmed with the appropriate agencies during the permitting process.

- **AMM-NOISE-1: Nighttime Construction.** Construction noise levels are not to exceed 86 dBA L_{max} at 50 feet from the Project footprint from 9:00 p.m. to 6:00 a.m. per 2018 Caltrans Standard Specifications, Section 14-8.02.

- **AMM-NOISE-2: Public Outreach.** Public outreach would be required before construction of the Project and throughout construction of the Project to update

residents, businesses, and others about upcoming construction-related activities and schedules. Public outreach has the potential to entail sending notices to nearby residents, notifying the city and/or county, and posting a notice on the Project website.

- **AMM-NOISE-3: Construction Noise Levels.** The following measures would be implemented to reduce noise levels during construction where feasible:
    - Avoid unnecessary idling of internal combustion engines within 100 feet of sensitive receptors.
    - Locate all stationary noise-generating construction equipment as far as practical from noise-sensitive receptors or provide baffled housing or sound aprons to construction equipment when sensitive receptors adjoin or are near the Project.
    - Equip all internal combustion engine driven construction equipment with manufacturer recommended intake and exhaust mufflers that are in good condition and appropriate for the construction equipment.
    - Utilize "quiet" air compressors and other "quiet" construction equipment where such technology exists.
    - No construction equipment would be delivered and dropped off before 6:00 a.m.
    - Maintain all internal combustion engines properly to minimize noise generation.
- **AMM-TRANS-1: Transportation Management Plan.** A TMP would be prepared prior to the beginning of construction to aid in coordinating and providing further safety measures for those accessing the Project corridor during construction. The TMP would identify traffic delays for emergency and medical vehicles associated with essential services, and would minimize impacts to service ratios, response times, and other performance objectives for public services. The TMP would provide priority to emergency vehicles during traffic control, as well as include instructions for response or evacuation in the event of an emergency.
- **AMM-TRANS-2: Multimodal Improvements Consultation.** Caltrans would continue to coordinate with local bicycle and pedestrian advocates, including Sonoma County and CCC, to further implementation of multimodal

improvements through such things as ROW acquisition and/or funding contribution to a local agency to address conflicts with the Bike Plan, Pedestrian Plan, SCTA Bike and Pedestrian Plan, and DP 37 during the Project Design Phase.

Appendix D List of Technical Studies and References

Association of Bay Area Governments and Metropolitan Transportation Commission (ABAG and MTC). 2021. *Plan Bay Area 2050*. October. https://www.planbayarea.org/sites/default/files/documents/Plan_Bay_Area_2050_October_2021.pdf. Accessed October 21, 2022.

Blake, et.al. 2002. "Geologic map and map database of Northeastern San Francisco Bay Region, California. Most of Solano County and Parts of Napa, Marin, Contra Costa, San Joaquin, Sacramento, Yolo, and Sonoma Counties, California." U.S. Geological Survey Miscellaneous Field Studies Map MF-2403, version 1.0, 30 p., 1 sheet, scale 1:100,000, 20 Arc/Info coverages, resolution 1:62,500. https://pubs.usgs.gov/mf/2002/2403/. Accessed October 21, 2022.

California Department of Forestry and Fire Protection (CAL FIRE). 2022. Fire Hazard Severity Zone Maps. https://osfm.fire.ca.gov/divisions/community-wildfire-preparedness-and-mitigation/wildland-hazards-building-codes/fire-hazard-severity-zones-maps/. Accessed October 21, 2022.

California Department of Fish and Wildlife (CDFW). 2018. Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities. California Natural Resources Agency. Wildlife Branch - Nongame Wildlife Program. Sacramento, California. Available online at: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=18959&inline.

California Department of Fish and Wildlife (CDFW). 2022. California Natural Diversity Database. Rarefind 5. https://wildlife.ca.gov/Data/CNDDB/Maps-and-Data. Accessed November 2022.

California Air Resources Board (CARB). 2019. Summaries of Historical Area Designations for State Standards. https://ww2.arb.ca.gov/our-work/programs/state-and-federal-area-designations/state-area-designations/summary-tables. Accessed October 21, 2022

California Department of Conservation. 2019. Farmland Mapping and Monitoring Program (FMMP) of the California Resources Agency. https://www.conservation.ca.gov/dlrp/fmmp/Pages/Sonoma.aspx. Accessed October 21, 2022.

California Department of Conservation. 2022. California Important Farmland Finder. https://maps.conservation.ca.gov/dlrp/ciff/. Accessed October 21, 2022.

California State Water Resources Control Board (SWRCB). 2022. Geotacker. https://geotracker.waterboards.ca.gov/. Accesses October 21, 2022.

California Department of Toxic Substances Control (DTSC). 2022. Envirostor. https://www.envirostor.dtsc.ca.gov/public/. Accessed October 21, 2022.

California Department of Transportation (Caltrans). 2001. *Director's Policy 22 Context Sensitive Solutions*. November.

California Department of Transportation (Caltrans). 2017. Construction Site Best Management Practices Manual CTSW-RT-17-314.18.1. https://dot.ca.gov/-/media/dot-media/programs/construction/documents/environmental-compliance/csbmp-may-2017-final.pdf.

California Department of Transportation (Caltrans). 2018. *Caltrans District 4 Bike Plan for the San Francisco Bay Area*. https://dot.ca.gov/-/media/dot-media/district-4/documents/d4-bike-plan/caltransd4bikeplan_report_lowres-r6.pdf. Accessed October 21, 2022.

California Department of Transportation (Caltrans). 2019. Final Sonoma State Route 1 Repair Guidelines. March.

California Department of Transportation (Caltrans). 2021a. *District 4 Pedestrian Plan for the Bay Area*. https://www.catplan.org/files/managed/Document/1149/Caltrans%20District%204%20Pedestrian%20Plan%20for%20the%20Bay%20Area%20(final).pdf. Accessed October 21, 2022.

California Department of Transportation (Caltrans). 2021b. *Director's Policy DP-37, Complete Streets*. https://dot.ca.gov/-/media/dot-media/programs/sustainability/documents/dp-37-complete-streets-a11y.pdf. Accessed October 21, 2022.

California Department of Transportation (Caltrans). 2022a. EA 04-1K720, EFIS ID 0416000306, 04-Son-1-0.97/27.83, Culvert Rehabilitation Project. Visual Impact Assessment. Caltrans Office of Landscape Architecture. May 25.

California Department of Transportation (Caltrans). 2022b. EA 04-1K720, EFIS ID 0416000306, 04-Son-1-0.97/27.83, Culvert Rehabilitation Project. Natural Environment Study. December 2022.

California Department of Transportation (Caltrans). 2022c. EA-04-4G780, EFIS ID-0413000178, 04-Son-1-0.00/58.58, Centerline Rumble-Strip Installation Project. Natural Environment Study. November 2022.

California Department of Transportation (Caltrans). 2022d. EA 04-1K720, EFIS ID 0416000306, 04-Son-1-0.97/27.83, Culvert Rehabilitation Project. Section 106 Closeout Memo. Office of Cultural Resource Studies (OCRS). October 18.

California Department of Transportation (Caltrans). 2022e. EA 04-1K720, EFIS ID 0416000306, 04-Son-1-0.97/27.83, Culvert Rehabilitation Project. Energy Analysis Report. Memorandum. Office of Environmental Engineering. June 6.

California Department of Transportation (Caltrans). 2022f. EA 04-1K720, EFIS ID 0416000306, 04-Son-1-0.97/27.83, Culvert Rehabilitation Project. Geotechnical Design Report. Office of Geotechnical Design. October 17.

California Department of Transportation (Caltrans). 2022g. EA 04-1K720, EFIS ID 0416000306, 04-Son-1-0.97/27.83, Construction Greenhouse Gas Emissions Analysis. Memorandum. June 6.

California Department of Transportation (Caltrans). 2022h. EA 04-1K720, EFIS ID 0416000306, 04-Son-1-0.97/27.83, Water Quality Study. October 14.

California Department of Transportation (Caltrans). 2022i. EA 04-1K720, EFIS ID 0416000306, 04-Son-1-0.97/27.83, Preliminary Drainage Study. October 20.

California Department of Transportation (Caltrans). 2022j. EA 04-1K720, EFIS ID 0416000306, 04-Son-1-0.97/27.83, Construction Related Noise Analysis. Memorandum. June 6.

California Native Plant Society (CNPS). 2022. Inventory of Rare and Endangered Plants (Online Edition, v7-08d). https://www.cnps.org/rare-plants/cnps-inventory-of-rare-plants. Accessed November 2022.

Miller, et. al. 2005. Mineral Land Classification of Aggregate Materials in Sonoma County, California. California Geological Survey (formerly Division of Mines and Geology) Special Report 175.

National Marine Fisheries Service (NMFS). 1999. Designated Critical Habitat; Central California Coast and Southern Oregon/ Northern California Coasts Coho Salmon; final rule and correction. Federal Register 64(86):24049-24062.

National Marine Fisheries Service (NMFS). 2022. Species List - Intersection of USGS Topographic Quadrangles with NOAA Fisheries ESU/DPS, Critical Habitat, Species Distribution, and Essential Fish Habitat. Accessed November 2022.

Occidental Arts and Ecology Center's WATER Institute and Prunuske Chatham Inc. 2006. "Habitat Enhancement in the Salmon Creek Estuary." https://oaec.org/wp-content/uploads/2014/12/Habitat-Enhancement-Salmon-Creek-Estuary-Final-Report.pdf.

Pacific Fisheries Management Council (PFMC). 2014. Appendix A to The Pacific Coast Salmon Fishery Management Plan: Identification and Description of Essential Fish Habitat, Adverse Impacts, and Recommended Conservation Measures for Salmon.

Sonoma County. 2001. Sonoma County Local Coastal Plan. Adopted December 12, 2001. https://permitsonoma.org/longrangeplans/adoptedlong-rangeplans/currentlocalcoastalplan.

Sonoma County. 2008. Sonoma County General Plan 2020. Adopted September 23, 2008; amended on August 2, 2016.

Sonoma County. 2021. Parcel Search. https://parcelsearch.permitsonoma.org/ParcelSearch. Accessed October 21, 2022.

Sonoma County. 2022. Emergency Operations Plan, Sonoma County Operational Area. March.

Sonoma County Transportation Authority (SCTA). 2014. SCTA Countywide Bicycle and Pedestrian Master Plan. Adopted May 2008, updated 2014.

Sullivan, B.L., C.L. Wood, M.J. Iliff, R.E. Bonney, D. Fink, and S. Kelling. 2009. "eBird: A Citizen-based Bird Observation Network in the Biological Sciences." Biological Conservation 142: 2282-2292. Accessed February 2, 2022. https://ebird.org/map.

U.S. Environmental Protection Agency (USEPA). 2022. Non-attainment Areas for Criteria Pollutants (Green Book). https://www3.epa.gov/airquality/greenbook/anayo_ca.html. Accessed October 21, 2022.

U.S. Fish and Wildlife Service (USFWS). 1996. Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed Plants on the Santa Rosa Plain. Sacramento, CA.

U.S. Fish and Wildlife Service (USFWS). 2003. "Endangered and Threatened Wildlife and Plants; Final Designation of Critical Habitat for Two Larkspurs from Coastal Northern California." Vol. 68, No. 52. 50 CFR Part 17. 12834-12862.

U.S. Fish and Wildlife Service (USFWS). 2005. *Revised Guidance on Site Assessments and Field Surveys for the California Red-legged Frog*. https://ipac.ecosphere.fws.gov/. August.

U.S. Fish and Wildlife Service (USFWS). 2007. Western Snowy Plover (*Charadrius alexandrinus nivosus*) Pacific Coast Population Recovery Plan. https://www.fws.gov/carlsbad/SpeciesStatusList/RP/20070813_RP_WSP.pdf.

U.S. Fish and Wildlife Service (USFWS). 2014. Programmatic Informal Consultation for the California Department of Transportation's Routine Maintenance and Repair Activities, and Small Projects Program for Districts 1 and 2. Programmatic Letter of Concurrence (PLOC) between Caltrans and U.S. Fish and Wildlife Service. AFWO-12B0001-12I0001. https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/ser/arcata-fws-concurltr-a11y.pdf.

U.S. Fish and Wildlife Service (USFWS). 2022. Information for Planning and Consultation (IPaC) System. https://ipac.ecosphere.fws.gov/. Accessed November 2022.