

Santa Cruz Route 1 Drainage Improvement Project

On State Route 1 from post miles 0.0 to 7.94 in Santa Cruz County, and from post mile 101.50 in Monterey County to post mile 7.94 in Santa Cruz County

05-SCR-01-0.00/7.94 and 05-MON-01-101.50/102.00

Project EA: 05-1K640/Project ID: 0519000239

SCH Number: 2022060678

Initial Study with Mitigated Negative Declaration

Volume 1 of 2



Prepared by the
State of California Department of Transportation

November 2022



General Information About This Document

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The Initial Study with Proposed Mitigated Negative Declaration circulated to the public for 31 days between June 29, 2022 and July 30, 2022. Comments received during this period are included in Appendix D, which has been added since the circulation of the draft environmental document. Elsewhere, language has been added throughout the document to indicate where a change has been made since the circulation of the document. Minor editorial changes and clarifications have not been so indicated.

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State Clearinghouse Number 2022060678
05-SCR-01-0.0/7.94 MON-1-101.5/102
Project ID: 0518000239
Project EA: 05-1K640

Repair and replace existing culverts on State Route 1 from post mile 0.0 to post mile 7.94 in Santa Cruz County, and improve roadway lighting, traffic monitoring, and maintenance access on State Route 1 from post mile 101.50 in Monterey County to post mile 7.94 in Santa Cruz County

**INITIAL STUDY
with Mitigated Negative Declaration**

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

THE STATE OF CALIFORNIA
Department of Transportation

Responsible Agency: California Transportation Commission



John Luchetta
Deputy Director of Environmental District 5
California Department of Transportation
CEQA Lead Agency

December 1, 2022

Date

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Mitigated Negative Declaration

Pursuant to: Division 13, Public Resources Code

State Clearinghouse Number: 2022060678

District-County-Route-Post Mile: 05-SCR-01-0.00/7.94 and 05-MON-01-101.50/102.00

EA/Project Number: 05-1K640/0519000239

Project Description

The California Department of Transportation (Caltrans) proposes to improve existing drainage systems and culverts on State Route 1 in Santa Cruz County from post mile 0.0 to post mile 7.94. The project will repair or replace drainage systems at several locations where drainage structures already exist. The project will also improve roadway lighting, traffic monitoring, and maintenance access on State Route 1 from post mile 101.50 in Monterey County to post mile 7.94 in Santa Cruz County. Project activities will include vegetation clearing, vegetation replanting, temporary construction activities, temporary staging sites, temporary traffic control, pavement repaving, and pavement restriping. Within the project limits, State Route 1 is a conventional freeway with two lanes of travel in each direction. State Route 1 is a major north-south route that runs along most of California's coastline.

Determination

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

The project would have no effect on Agriculture and Forest Resources, Cultural Resources, Energy, Geology and Soils, Land Use and Planning, Mineral Resources, Noise, Population and Housing, Public Services, Recreation, Transportation, Tribal Cultural Resources, Utilities and Service Systems, and Wildfire.

In addition, the project would have less than significant effects to Aesthetics, Air Quality, Greenhouse Gas Emissions, Hazards and Hazardous Materials, and Hydrology and Water Quality.

With the following mitigation measures incorporated, the proposed project would have less than significant effects to Biological Resources:

- Mitigation measures intended to protect nesting birds include the implementation of work windows, exclusion zones, biological monitors and environmentally sensitive area fencing.
- Mitigation measures intended to protect California red-legged frog, Santa Cruz tarplant, and their associated critical habitat include but are not limited to work windows, biological monitors, environmentally sensitive area fencing, removal of exotic species, restoration of disturbed areas, training of construction personnel and coordination with U.S. Fish and Wildlife Service.

John Luchetta
Deputy Director of Environmental District 5
California Department of Transportation

December 1, 2022

Date

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Chapter 1 Proposed Project

1.1 Introduction

The California Department of Transportation (Caltrans), as assigned by the Federal Highway Administration, is the lead agency under the National Environmental Policy Act (known as NEPA). Caltrans is the lead agency under the California Environmental Quality Act (known as CEQA). As NEPA lead, Caltrans has prepared a separate Categorical Exclusion document for the project. As CEQA lead, Caltrans has prepared this Initial Study with Mitigated Negative Declaration document for the project.

Caltrans will improve existing drainage structures, add traffic lighting, add traffic monitoring systems, and add maintenance vehicle pullouts on State Route 1. Project activities will occur on State Route 1 between post mile 0.0 and post mile 7.94 in Santa Cruz County, and between post mile 101.5 and post mile 102.0 in Monterey County. The project limits are roughly between Trafton Road in Monterey County and Larkin Valley Road in Santa Cruz County. The project limits are within the Coastal Zone, and State Route 1 acts as the Coastal Zone boundary. State Route 1 is a conventional four-lane freeway, with two lanes of travel in each direction. Figure 1-1 shows the project vicinity, and Figure 1-2 shows the locations where improvements are proposed.

The project is included in the 2022 State Highway Operational Protection Program under the Asset Management guidelines to meet culvert goals. Other elements such as traffic monitoring systems and electrical work were assessed throughout the project limits and added to the project as feasible. Project construction is slated to begin in 2024 and span approximately one year. Current programmed cost for the construction of the Build Alternative is \$15,554,000.

1.2 Purpose and Need

1.2.1 Purpose

The purpose of the project is to improve assets in poor condition:

- Restore damaged culverts in poor condition to maintain and improve the drainage systems and protect embankments and the roadway from potential failure.
- Upgrade existing count stations to meet current standards and extend service life. Also, install a new changeable message sign to maintain an efficient Intelligent Transportation System and convey adequate traffic information to the traveling public.

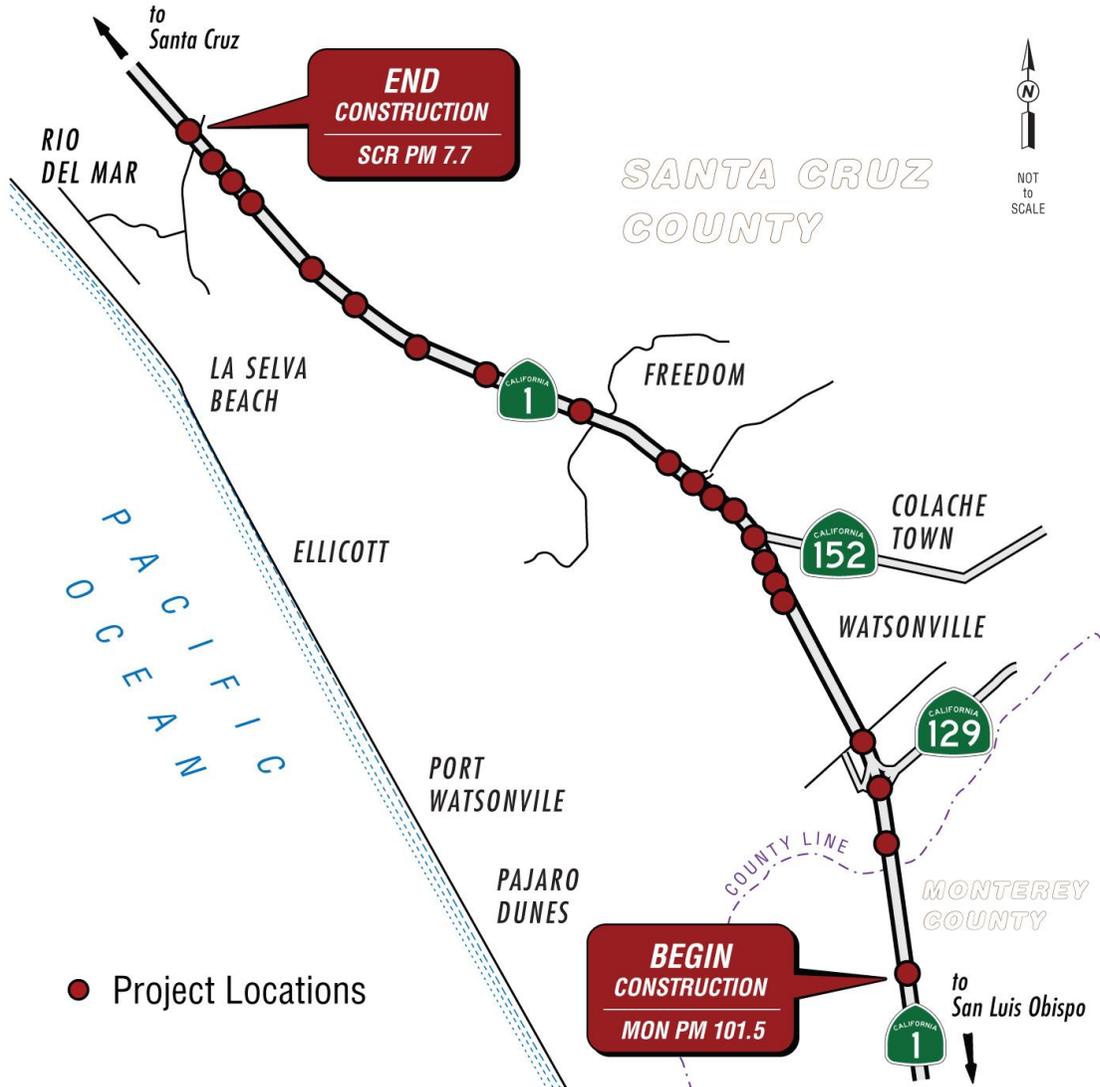
1.2.2 Need

A culvert inventory assessment performed in 2008 identified culverts within the project limits that are in various states of disrepair. Culverts that have been identified in poor condition show varying degrees of damage caused by corrosion, deformation, perforation, damaged inverts, shape loss, joint separation, undermined backfill, and overall deterioration. If the identified culverts are not repaired or replaced, the highway structure may be compromised, leading to the failure or damage of the roadway. Improving roadway lighting, traffic monitoring, and maintenance access will help reduce motorists' and maintenance crews' exposures to hazardous roadway conditions. The existing traffic data collection stations are outdated, and a changeable message sign will allow for better communication along the corridor.

Figure 1-1 Project Vicinity Map



Figure 1-2 Project Location Map



1.3 Project Description

Tables 1.1, 1.2 and 1.3 show the project work and work locations. In the first column of the tables, SCR stands for Santa Cruz County and MON stands for Monterey County. Minor changes to project design have occurred since the draft environmental document was circulated; as a result, the tables have been revised and updated. Changes consist of adjustments of less than 0.1 mile in post mile locations, removal of a work location due to fish passage concerns, and modifications to design strategy. There are no new areas of impact or disturbance included in the project and no changes that will result in increased impacts since circulation of the draft environmental document.

Table 1.1 Culvert Repairs

[The following table has been revised and updated since the draft environmental document was circulated.]

Location (County- Highway)	Post Mile	Planned Work
SCR-1	R0.33	Cut and cover median joint repair of one segment
SCR-1	R0.61	Cut and cover joint repair of one segment
SCR-1	R2.24	Cut and cover joint repair of one segment, replacement of headwall
SCR-1	R2.75	Replace one segment using cut and cover methods
SCR-1	R2.83	Replace one segment using cut and cover methods
SCR-1	R3.22	Repair three segments using Cured in Place Pipe Lining
SCR-1	R6.01	Replace one segment using cut and cover methods
SCR-1	R6.70	Cut and cover joint repair of one segment, move guardrail posts
SCR-1	R6.99	Replace one segment using cut and cover methods
SCR-1	R7.13	Replace two segments using cut and cover methods, replace one segment using Cured in Place Pipe Lining
SCR-1	R7.31	Replace one segment using cut and cover methods
SCR-1	R7.66	Replace one segment using cut and cover methods

Table 1.2 Electrical Work

[The following table has been revised and updated since the draft environmental document was circulated.]

Location (County- Highway)	Post Mile	Planned Work
MON-1	R101.53	Trenching for electrical; Install closed-circuit television, motor vehicle data system, and changeable message sign
SCR-1	R0.38	Remove luminaire
SCR-1	R0.42	Install luminaire
SCR-1	R0.47	Install luminaire and loop detector
SCR-1	R0.48	Install count station/electrical cabinet
SCR-1	R0.61	Install loop detector
SCR-1	R0.63	Install loop detector
SCR-1	R0.75	Install loop detector
SCR-1	R0.81	Install loop detector
SCR-1	R0.81	Install loop detector
SCR-1	R0.91	Install luminaire
SCR-1	R1.01	Remove luminaire
SCR-1	R2.19	Install loop detector
SCR-1	R2.22	Install loop detector
SCR-1	R3.04	Install loop detector and count station/electrical cabinet
SCR-1	R3.02	Install loop detector
SCR-1	R3.02	Install loop detector
SCR-1	R3.05	Remove electrical cabinet
SCR-1	R3.12	Install luminaire
SCR-1	R3.13	Install luminaire
SCR-1	R3.14	Install luminaire and trenching for electrical
SCR-1	R3.19	Install loop detector
SCR-1	R3.38	Install loop detector
SCR-1	R3.97	Install 2 loop detectors
SCR-1	R6.51	Install loop detector
SCR-1	R6.81	Install loop detector
SCR-1	R7.61	Install loop detector
SCR-1	R7.75	Install loop detector
SCR-1	R7.79	Install loop detector
SCR-1	R7.83	Install loop detector

Table 1.3 Paving

[The following table has been revised and updated since the draft environmental document was circulated.]

Location (County- Highway)	Post Mile	Planned Work
MON-1	R101.53	Install maintenance vehicle pullout
SCR-1	R3.22	Install maintenance vehicle pullout
SCR-1	R3.24	Install 2 maintenance vehicle pullouts
SCR-1	R6.81	Install 2 maintenance vehicle pullouts

1.3.1 Culvert Improvements

[The following text has been changed since the draft environmental document was circulated.] Culvert work will occur in Santa Cruz County between post mile 0.33 and post mile 7.66 on State Route 1 (revised from between post mile 0.0 and post mile 7.94 in the draft environmental document). Multiple culvert structures within the project limits are in various states of disrepair and if not addressed could lead to failure or damage of the roadway on State Route 1. The project will repair or replace culverts that have deteriorated due to age. The project will not construct new culverts at new locations.

[The following text has been changed since the draft environmental document was circulated.] There are 15 culvert segments within the project limits at 12 different post mile locations (revised from 18 culvert segments at 13 different post mile locations in the draft environmental document). Some post mile locations contain multiple culvert segments. [The following text has been changed since the draft environmental document was circulated.] The project will replace 8 culvert segments and repair 7 culvert segments (revised from replacing 11 culvert segments in the draft environmental document). Culvert sizes vary from 24 inches to 36 inches in diameter, and culvert lengths vary from 15 feet to 500 feet long.

[The following text has been added since the draft environmental document.] During a site visit on September 26, 2022, Caltrans biologists determined the culvert at post mile 2.68 to be a barrier to approximately one quarter of a mile of anadromous fish-rearing habitat. In accordance with Streets and Highways Code 156.3, if a project affects a crossing that is a fish passage barrier, the project is required to remediate that barrier. Remediation of the culvert at post mile 2.68 would require replacement of the culvert with a larger culvert or bridge. Also, since another culvert segment within the same drainage system that crosses under State Route 1 presents another fish passage barrier immediately downstream, replacement of the additional culvert segment would also need to be included in the project to improve fish passage. As a result, the culvert at post mile 2.68 was excluded from this project.

Culvert repairs will involve mostly joint repair and installation of lining inside existing pipes, but other culvert repairs deemed necessary could be done. Culvert replacement will involve either a cut and cover method or trenchless method. The existing culvert location and the surrounding site conditions will determine which culvert replacement method will be implemented at each culvert location. The cut and cover method involves digging a trench with an excavator to expose the existing culvert for repair or replacement. The trench width depends on the pipe diameter, and the depth and slope are determined by the engineer. The trenchless method includes the pipe jack method, which is accomplished by placing a sending pit on one side of the culvert, and a receiving pit on the other side. Drilling equipment is then used to drill out the existing culvert while pushing a new pipe through horizontally without disturbing the surface above.

The existing culverts sit within the Caltrans right-of-way. However, it is anticipated that some culvert replacement and repair activities will need to occur outside of the Caltrans right-of-way. Culvert replacement and repair work will require: the use of construction equipment, temporary construction easements, temporary access routes, temporary staging sites, pavement work, temporary traffic control, vegetation clearing, and vegetation restoration. Project construction will do culvert work one location at a time to minimize traffic disruptions.

1.3.2 Traffic Monitoring Systems

[The following text has been changed since the draft environmental document was circulated.] Traffic monitoring system work will occur in Santa Cruz County between post mile 0.47 and post mile 7.83 and in Monterey County between post mile 101.5 and post mile 102.0 on State Route 1 (revised from between post mile 0.0 and post mile 7.94 in the draft environmental document). To help improve collection of information for traffic monitoring, the project will install several new traffic detection loops. The traffic detection loops will be installed at 19 new locations. In addition, two existing traffic count stations will be relocated and placed behind existing guardrails. A new changeable message sign will also be installed to provide information to the traveling public. The new changeable message sign will be installed at post mile 101.53 in Monterey County, near Trafton Road. All new traffic monitoring systems will be installed within the existing Caltrans right-of-way, and it is anticipated that all related construction activities will occur within the existing Caltrans right-of-way. Project construction will install new traffic monitoring elements one location at a time to minimize traffic disruptions. Installation of new traffic monitoring elements will require: the use of construction equipment, temporary staging sites, pavement work, temporary traffic control, trenching, vegetation clearing and vegetation restoration.

1.3.3 Electrical Work

[The following text has been changed since the draft environmental document was circulated.] Electrical work will occur in Santa Cruz County between post mile 0.33 and post mile 7.83 and in Monterey County between post mile 101.5 and post mile 102.0 on State Route 1 (revised from between post mile 0.0 and post mile 7.94 in Santa Cruz County only, in the draft environmental document.) The project will install highway lighting at six new locations. The project will remove two existing highway luminaires. It is anticipated that the electrical work will occur without considerable disturbance to the traveling public. All new electrical installations will occur within the existing Caltrans right-of-way, and it is anticipated that all electrical-related work will occur within the existing Caltrans right-of-way. Electrical work will require: the use of construction equipment, temporary staging sites, temporary traffic control, trenching.

1.3.4 Maintenance Vehicle Pullouts

[The following text has been changed since the draft environmental document was circulated.] Six new maintenance vehicle pullouts will be installed in Santa Cruz and Monterey counties on State Route 1 (revised from locations only in Santa Cruz County in the draft environmental document). [The following text has been added since the draft environmental document was circulated.] One new maintenance vehicle pullout will be installed at the changeable message sign location on State Route 1 and Trafton Road. [The following text has been changed since the draft environmental document was circulated.] Three of the new maintenance vehicle pullouts will be installed at each of the off-ramps and the southbound on-ramp on Airport Boulevard (revised from four new maintenance vehicle pullouts at this location in the draft environmental document). Beyond-the-gore paving will also be installed at the on-ramp and off-ramp at Airport Boulevard. Two of the new maintenance vehicle pullouts will be installed at the northbound on-ramp at Mar Monte Avenue and at the southbound shoulder of State Route 1. The new maintenance vehicle pullouts will be installed within the existing Caltrans right-of-way, and all related work will occur within the existing Caltrans right-of-way. Work on the new maintenance vehicle pullouts will occur one location at a time to minimize traffic disturbances. Completion of each new maintenance vehicle pullout will require: the use of construction equipment, temporary staging sites, and temporary traffic control.

1.4 Project Alternatives

Two alternatives are under consideration for the project: a Build Alternative and a No-Build Alternative.

The alternatives were developed by an interdisciplinary team. Several criteria were taken into consideration when evaluating the various alternatives for the

project, including the project's purpose and need, cost, design, construction strategies, and environmental impacts.

1.4.1 Build Alternative

Under the Build Alternative, the project will result in temporary and permanent impacts to environmental resources. Temporary impacts will result from the various construction activities required to complete the project. Permanent impacts will result from the new highway features and elements that will be constructed.

The Build Alternative will meet the purpose and need of the project by addressing the repair issues of the existing culverts, while also providing additional improvements to roadway lighting, traffic monitoring, and maintenance access. The work will be done in stages, with construction occurring over a period of about one year.

Culvert Improvements

The Build Alternative will replace and repair existing culverts. Culverts segments will be replaced with new culverts of increased diameter and new materials. The repairs will fix existing culverts without altering existing culvert dimensions. No new culvert segments or structures will be installed at new locations.

Traffic Monitoring Systems

The Build Alternative will install a new overhead changeable message sign at a new location, in addition to installing several traffic monitoring system elements, including traffic detection loops and control boxes. All new traffic monitoring elements will meet current Caltrans design standards.

Electrical Work

The Build Alternative will install new roadway luminaires and remove existing roadway luminaires. All new electrical elements will meet current Caltrans design standards.

Maintenance Vehicle Pullouts

The Build Alternative will add maintenance vehicle pullouts along the route. All new maintenance vehicle pullouts will meet current Caltrans design standards.

The project contains a number of standardized project measures that are used on most, if not all, Caltrans projects and were not developed in response to any specific environmental impact resulting from the project. These measures are listed later in this chapter under "Standard Measures and Best Management Practices Included in all Build Alternatives."

1.4.2 No-Build (No-Action) Alternative

Under the No-Build Alternative, State Route 1 will stay as it is within the project limits. The work proposed in this project will not be done. The No-Build Alternative would not address the purpose and need of the project. The condition of the culverts and drainage systems would continue to deteriorate, which could lead to potential degradation of the roadway. Also, the No-Build Alternative would not improve existing roadway lighting, traffic monitoring capabilities or maintenance access, but routine maintenance would continue.

1.5 Identification of a Preferred Alternative

[The following text has been added since the draft environmental document.] The Build Alternative has been identified as the preferred project alternative. The Build Alternative was chosen because it will address the purpose and need of the project. With the Build Alternative, culvert condition and performance will improve, new traffic information will be provided to the traveling public, existing roadway lighting will be improved, and traffic monitoring will be improved.

1.6 Standard Measures and Best Management Practices Included in All Build Alternatives

This project includes Caltrans standard measures that are typically used on all Caltrans projects. Caltrans standard measures are considered features of the project and are evaluated as part of the project. Caltrans standard measures are not implemented to address any specific effects, impacts, or circumstances associated with the project, but are instead implemented as part of the project's design to address common issues encountered on project. Caltrans standard measures allow for little discretion regarding their implementation, just as other Caltrans standards requirements. The measures listed here are those related to environmental resources and are applicable to the project. These measures can be found in Caltrans 2018 Standard Specifications document.

- 7-1 Legal Relations and Responsibility to the Public
- 10-4 Water Usage
- 10-5 Dust Control
- 10-6 Watering
- 12-1 Temporary Traffic Control
- 12-3 Temporary Traffic Control Devices

- 12-4 Traffic Control Systems
- 13-1 Water Pollution Control
- 13-2 Water Pollution Control Program
- 13-3 Stormwater Pollution Prevention Plan
- 13-4 Job Site Management
- 13-6 Temporary Sediment Control
- 13-7 Temporary Tracking Control
- 13-10 Temporary Linear Sediment Barriers
- 14-1 Environmental Stewardship
- 14-2 Cultural Resources
- 14-6 Biological Resources
- 14-8 Noise and Vibration
- 14-9 Air Quality
- 14-10 Solid Waste Disposal and Recycling
- 14-11 Hazardous Waste and Contamination
- 14-12 Other Agency Regulatory Requirements
- 17-2 Clearing and Grubbing
- 18-1 Dust Palliatives
- 20-1 Landscape
- 20-3 Planting
- 20-4 Plant Establishment Work
- 21-2 Erosion Control Work
- 36-4 Residue Containing Lead from Paint and Thermoplastics
- 84-9 Removing Existing Marking

Additional measures will be added to the project as necessary or appropriate.

1.7 Discussion of the NEPA Categorical Exclusion

This document contains information regarding compliance with the California Environmental Quality Act (CEQA) and other state laws and regulations. Separate environmental documentation, supporting a Categorical Exclusion determination, has been prepared in accordance with the National Environmental Policy Act. When needed for clarity, or as required by CEQA, this document may contain references to federal laws and/or regulations (CEQA, for example, requires consideration of adverse effects on species identified as a candidate, sensitive, or special-status species by the U.S. National Marine Fisheries Service and the U.S. Fish and Wildlife Service—that is, species protected by the Federal Endangered Species Act).

1.8 Permits and Approvals Needed

The following permits, licenses, agreements, and certifications are required for project construction:

[The following table has been revised and updated since the draft environmental document was circulated. Coastal Development Permits were added for Monterey County and the City of Watsonville. The U.S. Fish and Wildlife Service Section 7 programmatic formal consultation and Biological Opinion was added for California red-legged frog critical habitat and Santa Cruz tarplant critical habitat.]

Agency	Permit/Approval	Status
Monterey County	Coastal Development Permit	Will be obtained prior to project construction
Santa Cruz County	Coastal Development Permit	Will be obtained prior to project construction
City of Watsonville	Coastal Development Permit	Will be obtained prior to project construction
U.S. Fish and Wildlife Service	Section 7 programmatic formal consultation and a Biological Opinion for California red-legged frog critical habitat	Will be obtained prior to project construction
U.S. Fish and Wildlife Service	Section 7 programmatic formal consultation for Santa Cruz tarplant critical habitat	Will be obtained prior to project construction

Chapter 2 CEQA Evaluation

2.1 CEQA Environmental Checklist

This checklist identifies physical, biological, social, and economic factors that might be affected by the project. Potential impact determinations include Significant and Unavoidable Impact, Less Than Significant Impact With Mitigation Incorporated, Less Than Significant Impact, and No Impact. In many cases, background studies performed in connection with a project will indicate that there are no impacts to a particular resource. A “No Impact” answer reflects this determination. The questions in this checklist are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

Project features, which can include both design elements of the project and standardized measures that are applied to all or most Caltrans projects such as Best Management Practices and measures included in the Standard Plans and 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 below.

“No Impact” determinations in each section are based on the scope, description, and location of the project as well as the appropriate technical report (bound separately in Volume 2), and no further discussion is included in this document.

2.1.1 Aesthetics

Considering the information in the Visual Impact Assessment dated June 22, 2021, the following significance determinations have been made:

Except as provided in Public Resources Code Section 21099:

Question—Would the project:	CEQA Significance Determinations for Aesthetics
a) Have a substantial adverse effect on a scenic vista?	No Impact
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	No impact

Question—Would the project:	CEQA Significance Determinations for Aesthetics
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?	Less Than Significant Impact
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	No Impact

Affected Environment

The landform of the region is characterized as a valley floor surrounded by mostly agricultural uses, with distant views of the hills to the north. Though the Pacific Ocean is not visible from the project area, the visual character of the region is influenced by its proximity to coastal resources and natural areas. State Route 1 within the project limits passes through a variety of plant communities and vegetative types. Creeks and drainages hold stands of sycamore, cottonwood, and willows. Oaks, pines, and other native trees are found closer to the roadside in the northern portion of the project limits. Occasional stands of eucalyptus trees occur within the project limits. The highway structure and its related features, occasional roadside homes sites, and business complexes are the main signs of development within the project limits. In general, built amenities in the project area do not dominate the visual character of the landscape.

Environmental Consequences

The new paved surfaces and traffic monitoring systems, including the changeable message sign, will be the most visually noticeable aspect of the project. While these new project features will not be out of place for the area, they will contribute to the increased visual scale of the highway facility. Although most project elements will not be uncharacteristic for the existing visual setting, viewer sensitivity of the area may be heightened because of the project’s location within the Coastal Zone. The project will be consistent with the aesthetic and visual protection goals for State Route 1 and will include measures to minimize the noticeability of new highway features.

Avoidance, Minimization, and/or Mitigation Measures

With implementation of the following minimization measures, the project will be consistent with the aesthetic and visual resource protection goals along State Route 1, and potential visual impacts will be reduced:

VIS 1: Preserve as much existing vegetation as possible. Prescriptive clearing and grubbing and grading techniques which save the most existing vegetation possible shall be employed.

VIS 2: Revegetate all disturbed areas with native plant species appropriate to each specific work location.

VIS 3: Replacement planting shall include aesthetic considerations as well as the inherent biological goals. Revegetation shall include native trees and plants as determined by the Caltrans Biologist and Caltrans District 5 Landscape Architect.

VIS 4: Paving beyond the gore shall include aesthetic treatments to be determined and approved by District 5 Landscape Architect.

VIS 5: Traffic monitoring systems elements shall be aesthetically treated, such as painting, and will be determined and approved by the District 5 Landscape Architect.

VIS 6: The changeable message sign elements, including but not limited to frames, poles, trusses, catwalks, ladders, and associated hardware, should be painted or otherwise colored to visually recede into the setting. Coloring should also include the front and side frames, and back panel of the electronic sign panel itself. The color shall be determined and approved in conjunction with the District 5 Landscape Architect.

VIS 7: All streetlights shall be directed downward and shall include cut-off lens fixtures such that no point source lighting is visible from adjacent parcels.

VIS 8: Following construction, re-grade, and re-contour all construction staging areas and any other temporary use areas as necessary to match the surrounding pre-project topography.

2.1.2 Agriculture and Forest Resources

Based on the Santa Cruz County Planning Department Geographic Information Systems online tool, segments of the project limits are adjacent to properties zoned for agricultural uses. Although agricultural properties are found next to State Route 1, the project is not anticipated to affect adjacent agricultural properties or affect the existing functions of adjacent agricultural properties. No prime farmland exists within the project limits, and no parcels

are held by a Williamson Act contract. Based on the Cal Fire Hub online tool, no timber operations are identified in proximity of the project limits.

Question—Would the project:	CEQA Significance Determinations for Agriculture and Forest Resources
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?	No Impact
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	No Impact
c) Conflict with existing zoning, 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?	No Impact

2.1.3 Air Quality

Considering the information in the Air Quality, Greenhouse Gas and Noise Assessment Memo dated November 18, 2021, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Air Quality
a) Conflict with or obstruct implementation of the applicable air quality plan?	No Impact

Question—Would the project:	CEQA Significance Determinations for Air Quality
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?	No 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

Affected Environment

Within the project limits, State Route 1 crosses through a partially urbanized environment, with a mix of developed, agricultural, and open spaces.

Santa Cruz County is within the North Central Coast Air Basin. The Monterey Bay Air Resources District regulates the air quality in the North Central Coast Air Basin. Santa Cruz County is in non-attainment for state ambient air quality standards for ozone and non-attainment for airborne particulates less than 10 microns in diameter. Santa Cruz County is in attainment for all federal ambient air quality standards.

Environmental Consequences

The project will not result in long-term impacts to air quality because the project will not alter the existing capacity of State Route 1.

Temporary construction-related activities are expected to generate aerial pollutants, emissions and/or odors that can be noticeable or cause inconveniences to sensitive receptors and/or people in proximity of the work site. It is anticipated that temporary construction activities and temporary operation of construction equipment will be the main contributor to the increase in aerial pollutants, emissions and/or odors. Based on the relatively small scale of project activities at each work site, temporary construction-related activities are anticipated to generate minor amounts of dust, aerial pollutants, odors, and/or disturbances to sensitive receptors. In addition, the project will include Caltrans standard measures associated with minimizing impacts to air quality. The project is expected to help reduce future vehicle and equipment emissions by reducing the frequency of preventive and scheduled maintenance operations on the culverts.

Avoidance, Minimization, and/or Mitigation Measures

The potential for air quality impacts generated by project construction will be minimized with the implementation of the following measure:

AIR 1: All applicable Caltrans standard measures and strategies for Air Quality, Emissions Reductions, Air Pollution Control, Dust Control and Dust Palliative will be implemented during project construction.

2.1.4 Biological Resources

Considering the information in the Natural Environment Study dated April 15, 2022 and the Addendum to the Natural Environment Study dated November 9, 2022, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Biological Resources
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife, U.S. Fish and Wildlife Service, or National Oceanic and Atmospheric Administration Fisheries?	Less Than Significant Impact with Mitigation
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 with Mitigation
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?	Less Than Significant Impact
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	Less than Significant Impact

Question—Would the project:	CEQA Significance Determinations for Biological Resources
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

Affected Environment

The Natural Environment Study establishes a Biological Study Area for the project. The Biological Study Area is the area investigated for biological resources and includes areas that may be directly, indirectly, temporarily, or permanently impacted by project construction and construction-related activities. The Biological Study Area also includes some adjoining habitats to ensure adequate area has been investigated for potential impacts as a result of the project. [The following text has been changed since the draft environmental document was circulated.] For this project, the Biological Study Area is the overall project footprint, which includes each separate culvert work site, electrical installations, paving locations and staging/access areas along the 8.4-mile stretch of State Route 1 within the project limits. There are 46 separate project work sites within the Biological Study Area (revised from 52 locations in the draft environmental document).

The Biological Study Area occurs along State Route 1 along the Santa Cruz coast, from post mile 101.5 in Monterey County to post mile 7.9 in Santa Cruz County. The Biological Study Area is situated amongst coastal terraces, sloughs, and steep hillsides. Several watersheds cross the Biological Study Area, and most of the associated streams and drainages connect with the Pacific Ocean. No tidally influenced or brackish areas are present within the Biological Study Area.

The Biological Study Area is confined to areas within or immediately adjacent to highway facilities and consists mostly of urban developed areas and ruderal (weedy) habitats. Land use types in the Biological Study Area are a mix of agricultural, business, residential and open space areas.

Queries and official species lists were used to develop a list of special-status species and natural communities that have the potential to occur within the Biological Study Area. Sensitive species and habitats with potential to be present in the project impact area were further researched and prioritized for identification during field surveys.

[The following text has been changed since the draft environmental document was circulated.] Field surveys were conducted in February, April, May, June, August, September, and October 2021, and September and October 2022 (revised to add September and October 2022). Floristic surveys were

conducted within a range of months when target special-status species were flowering and identifiable, following the guidelines of the U.S. Fish and Wildlife Service and California Department of Fish and Wildlife. General reconnaissance-level wildlife surveys coincided with the botanical, wildlife species, and habitat surveys and were documented.

Natural Communities

Natural communities identified within the Biological Study Area include coast live oak woodlands, willow woodlands, coastal scrub, and ruderal communities.

Coast live oak woodlands are dominated by coast live oaks, which grow in varying densities and occur in scattered pockets throughout the Biological Study Area next to the highway. Approximately 0.32 acre is found within the Biological Study Area.

Willow woodlands are a riparian community often found near water, with a mix of willow tree varieties being the common dominant plant. Approximately 0.51 acre is found within the Biological Study Area.

[The following text has been changed since the draft environmental document was circulated.] Coyote brush scrub communities within the Biological Study Area are dominated by poison oak, coyote brush and poison hemlock (revised from Coastal scrub communities in the draft environmental document). Approximately 0.07 acre is found within the Biological Study Area.

Ruderal communities are often found in areas regularly disturbed by maintenance activities, residential landscaping, or other human activities. Ruderal communities are dominated by weedy plants that are often non-native. Approximately 3.43 acres are found within the Biological Study Area.

[The following section has been added since the draft environmental document was circulated.]

Jurisdictional Wetlands, Other Waters, and Riparian Habitat

[Since the draft environmental document was published, a sentence about jurisdictional waters, wetlands or riparian habitat was deleted from this document because it no longer applied to the project.] [The following text has been added since the draft environmental document was circulated.] Potential jurisdictional areas were assessed within the Biological Study Area, both in the field and from desktop review of existing published datasets, including aerial photos and elevation datasets. Updated constraints-level mapping completed in 2022 was based on readily visible indicators of streams, riparian areas and wetlands, including coastal streams and wetlands, particularly vegetation and hydrologic patterns. Jurisdictional resources are present near some project locations, including willow riparian, streambank, and a ditch at post mile 101.5 in Monterey County, as well as a channelized (concrete-lined) stream near post mile 2.8, a willow coastal wetland near post mile 3.2, and a

blackberry coastal wetland at post mile 7.13 in Santa Cruz County. These resources were found to be outside the limits of work for the project but, due to their proximity and the need to ensure full avoidance, they were mapped conservatively in 2022.

Migration and Travel Corridors

[Since the draft environmental document was published, a sentence about Migration and Travel Corridors was deleted from this paragraph because it no longer applied to the project.] Wildlife connectivity is very limited throughout the Biological Study Area due to the urban and residential land uses and the presence of the highway facility. The culverts involved in this project are considered too small to provide any significant opportunities for wildlife movement under the highway. [The following text has been added since the draft environmental document was circulated.] A portion of this project falls within a California Department of Fish and Wildlife Movement Barrier Priority for the Santa Cruz long-toed salamander, which occurs along State Route 1 in Santa Cruz County from post mile 3.8 to post mile 9.0. Culvert repair activities that fall within this range consist of joint maintenance or segment repairs and are not in areas considered to be Santa Cruz long-toed salamander habitat. This project will not be adding features that would impede movement to terrestrial wildlife. All culvert locations within the project limits were assessed for fish passage barriers using the Fish Passage Assessment Database. No culverts are listed as being a barrier to fish passage.

Designated Critical Habitat

[The following text has been changed since the draft environmental document was circulated.] Critical habitat for the Santa Cruz tarplant (*Holocarpha macradenia*) is found at seven locations within the Biological Study Area—near post miles 2.75, 2.83, 3.05, 3.13, 3.22, 3.24, 3.38 (revised from four locations in the draft environmental document). These seven locations are within the federally designated Santa Cruz tarplant Critical Habitat Unit I – Watsonville, which covers approximately 1,205 acres. The locations consist of grasslands on alluvial fans and marine terraces west of the City of Watsonville in Santa Cruz County.

[The following text has been changed since the draft environmental document was circulated.] Critical habitat for the California red-legged frog (*Rana draytonii*) is found at three locations within the Biological Study Area—near post miles 2.22, 3.24, and 6.01 (revised from six locations in the draft environmental document). These three locations are within the federal designated California red-legged frog Critical Habitat Unit 2 – Santa Cruz County, which covers approximately 4,057 acres. The designated critical habitat includes the Watsonville Slough System, portions of the Corralitos Lagoon, and the mouth of the Pajaro River watersheds.

Invasive Species

A total of 43 invasive plant species were found within the Biological Study Area. Of these, 7 have an invasive rating of “high,” 20 have an invasive rating of “moderate,” and 16 have an invasive rating of “limited” based on the California Invasive Plant Council Database. The distribution of most invasive plant species is sparsely scattered throughout the Biological Study Area and most commonly located in ruderal/disturbed areas along the edges of the highway facility.

Regional Plant Species of Concern

Within the project area are 18 documented special-status plant species that include federal and state listed plants. Twelve of these special-status plant species are not expected to occur within the Biological Study Area due to a lack of potential habitat; therefore, they are not discussed any further in this document.

The remaining six federal and state listed special-status plant species that have potential habitat present within the Biological Study Area were not detected during appropriately timed surveys. These special-status plant species are not expected to be affected by the project and are not discussed further in this document: marsh sandwort (*Arenaria paludicola*), robust spineflower (*Chorizanthe robusta* var. *robusta*), seaside bird’s beak (*Cordylanthus rigidus* ssp. *littoralis*), Kellogg’s horkelia (*Horkelia cuneata* var. *sericea*), and Choris’ popcornflower (*Plagiobothrys chorisianus* var. *chorisianus*).

Regional Animal Species of Concern

Within the project area are 37 documented special-status animal species that include federal and state listed species. Table 2.1 shows the 32 federal and state listed special-status animal species that are not expected to be encountered within the Biological Study Area due to lack of potential habitat. They are not expected to occur within the project area; therefore, they are not discussed any further in this document.

Table 2.1 Federal and State Listed Special-Status Animal Species Not Expected to Occur Within the Project Area

Common Name	Scientific Name
Vernal pool fairy shrimp	<i>Branchinecta lynchi</i>
Globose dune beetle	<i>Coelus globosus</i>
Tidewater goby	<i>Eucyclogobius newberryi</i>
Monterey hitch	<i>Lavinia exilicauda harengus</i>
Central California Coast steelhead	<i>Oncorhynchus mykiss irideus population 8</i>
South-Central California Coast steelhead	<i>Oncorhynchus mykiss irideus population 9</i>
Longfin smelt	<i>Spirinchus thaleichthys</i>
Foothill yellow-legged frog	<i>Rana boylei</i>
California tiger salamander	<i>Ambystoma californiense</i>
Santa Cruz long-toed salamander	<i>Ambystoma macrodactylum croceum</i>
Santa Cruz black salamander	<i>Aneides niger</i>
California giant salamander	<i>Dicamptodon ensatus</i>
Legless lizard	<i>Anniella pulchra</i>
San Francisco garter snake	<i>Thamnophis sirtalis tetrataenia</i>
Western pond turtle	<i>Emys marmorata</i>
Copper's hawk	<i>Accipiter cooperii</i>
Tricolored blackbird	<i>Agelaius tricolor</i>
Short-eared owl	<i>Asio flammeus</i>
Burrowing owl	<i>Athene cunicularia</i>
Marbled murrelet	<i>Brachyramphus marmoratus</i>
Western snowy plover	<i>Charadrius alexandrinus nivosus</i>
Southwestern willow flycatcher	<i>Empidonax traillii extimus</i>
American peregrine falcon	<i>Falco peregrinus anatum</i>
Bank swallow	<i>Riparia riparia</i>
California least tern	<i>Sternula antillarum browni</i>
California clapper rail	<i>Rallus longirostris obsoletus</i>
Least Bell's vireo	<i>Vireo bellii pusillus</i>
Santa Cruz kangaroo rat	<i>Dipodomys venustus venustus</i>
San Joaquin kit fox	<i>Vulpes macrotis mutica</i>
Salinas harvest mouse	<i>Reithrodontomys megalotis distichlis</i>
Monterey shrew	<i>Sorex ornatus salaries</i>
American badger	<i>Taxidea taxus</i>

In addition, other marine or anadromous fish, other marine animals and other nesting birds that are federal or state listed are also not expected to be encountered within the Biological Study Area.

Three federal and state listed special-status animal species have potential habitat present within the Biological Study Area but were not detected during appropriately timed surveys. These special-status animal species are not expected to occur within the project area and are not expected to be affected by the project, so they are not discussed any further in this document: obscure bumble bee (*Bombus caliginosus*), Crotch bumble bee (*Bombus crotchii*), and western bumble bee (*Bombus occidentalis*).

[The following text has been changed since the draft environmental document was circulated.] Three federal and state listed special-status animal species have potential habitat present within the Biological Study Area but were not

detected during appropriately timed surveys. However, these special-status animal species have the potential to occur within the project area and could potentially be affected by the project: monarch butterfly—California overwintering population (*Danaus plexippus* pop. 1), California red-legged frog (*Rana draytonii*) and Santa Cruz long-toed salamander (*Ambystoma macrodactylum croceum*) (revised from 2 special-status species in the draft environmental document).

Monarch Butterfly

The monarch butterfly is included in the California Natural Diversity Database Special Animal List. The western monarch butterfly population migrates to overwintering sites along the California coast. Potential overwintering sites are often present between Mendocino County and Baja California. Typical migrating season occurs from September to November. The Biological Study Area is within the known range of overwintering monarch butterfly populations, and marginally suitable habitat is present at the northern end of the project limits. However, the California Natural Diversity Database shows no occurrence records of the species within 2 miles of the Biological Study Area.

California Red-Legged Frog

The California red-legged frog is federal threatened and considered a species of special concern by the California Department of Fish and Wildlife. This frog historically ranged from Marin County southward to northern Baja California. Currently, Monterey, San Luis Obispo, and Santa Barbara counties support the largest remaining California red-legged frog populations in California. No protocol surveys were conducted for the California red-legged frog, and the species was not seen during biological reconnaissance surveys. There are known occurrence records for the California red-legged frog within 1 mile of the Biological Study Area, and the presence of the species in the Biological Study Area is inferred.

[The following section has been added since the draft environmental document was circulated.]

Santa Cruz Long-Toed Salamander

The Santa Cruz long-toed salamander is a federal and state endangered species. The Santa Cruz long-toed salamander inhabits temporary ponds for breeding and adjacent riparian, scrub, and woodland areas during the non-breeding season. These ponds occur in southern Santa Cruz and northern Monterey counties. Three metapopulations of the Santa Cruz long-toed salamander occur in the vicinity of State Route 1 within the post mile limits of this project (the Ellicott-Buena Vista, Valencia-Seascape, and Freedom and Larkin Valley populations). The Biological Study Area is within the known range of the Santa Cruz long-toed salamander; however, suitable breeding habitat for the species is not present at any of the work locations. Santa Cruz

long-toed salamanders were not found during biological surveys of the Biological Study Area.

Least Bell's Vireo, Southwestern Willow Flycatcher and Other Nesting Birds

Nesting bird species are addressed here as a group because they have similar habitat requirements, project-related impacts, and project measures.

The least Bell's vireo is a federal and state endangered species. Federal critical habitat has been designated for the species, but not within the Biological Study Area. Historically, the least Bell's vireo was a common to locally abundant species in lowland riparian habitat, ranging from coastal Southern California through the Sacramento and San Joaquin valleys. The least Bell's vireo is typically found in a variety of riparian habitats.

The southwestern willow flycatcher is a federal and state endangered species. Federal critical habitat has been designated for the species but not within the Biological Study Area. The historical range of the southwestern willow flycatcher included Southern California, southern Nevada, southern Utah, Arizona, New Mexico, western Texas, southwestern Colorado, and extreme northwestern Mexico. The current range is similar to the historical range, but the quantity of suitable habitat is heavily reduced from historical levels. The southwestern willow flycatcher typically inhabits areas of dense vegetation, interspersed with small openings and open water.

Numerous other nesting bird species protected under the federal Migratory Bird Treaty Act and California Fish and Game Code Section 3503 have the potential to nest in habitats found within the Biological Study Area.

Environmental Consequences

Natural Communities

[The following text has been changed since the draft environmental document was circulated.] The project would result in permanent and temporary impacts to the following natural communities found within the Biological Study Area: coyote bush scrub and ruderal communities (revised from coast live oak woodland, willow woodland, coastal scrub, and ruderal communities in the draft environmental document).

Permanent impacts will result from the paving of maintenance vehicle pullouts, and installation of new electrical boxes and signs. [The following text has been changed since the draft environmental document was circulated.] Permanent impacts will affect only ruderal communities and disturb approximately 0.61 acre (revised from 0.76 acre in the draft environmental document).

Temporary impacts will result from vegetation clearing, staging areas, storage areas, temporary construction access, and the jacking and receiving pits for culvert installation. Temporary impacts will also be the result of construction-related activities such as the operation of construction equipment and construction worker

traffic. Equipment and materials storage sites will be temporarily located along ruderal and previously disturbed areas within the project limits.

[The following text has been changed since the draft environmental document was circulated.] The project would temporarily affect approximately 2.38 acres of ruderal communities and approximately 0.06 acre of coyote brush scrub within the project limits (revised from approximately 2.66 acres of ruderal communities, approximately 0.32 acre of coast live oak woodland, approximately 0.51 acre of willow woodland, and approximately 0.07 acre of coastal scrub in the draft environmental document). [Since the draft environmental document was published, a sentence about tree removal was deleted from this paragraph because it no longer applied to the project.] [The following text has been added since the draft environmental document was circulated.] Tree removal for this project is not anticipated, and impacts to oak and riparian trees will be avoided and minimized to the greatest extent feasible. Oak and riparian trees outside of the project impact areas will be denoted on project plans and will be protected with temporary Environmentally Sensitive Area fencing. If oak tree removal were to be required based on unforeseen design changes, coast live oaks will be replaced at a 10-to-1 ratio. The location of replacement plantings will be on-site and associated with existing coast live oak woodland areas to provide continuity with existing habitat. The project is not anticipated to significantly affect natural communities, and no further considerations or specific measures are required.

[The following section has been added since the draft environmental document was circulated.]

Jurisdictional Wetlands, Other Waters, and Riparian Habitat

The project will not impact any jurisdictional areas, associated vegetation, or water quality. However, riparian areas, streams, and wetlands, including 1-paramter coastal Environmentally Sensitive Habitat Area wetlands, are present near work areas for some project locations. The project will include avoidance and minimization measures that will be implemented to ensure impacts are fully avoided.

Designated Critical Habitat

Santa Cruz Tarplant Critical Habitat

[The following text has been changed since the draft environmental document was circulated.] The project will result in approximately 0.26 acre of permanent impacts and approximately 0.03 acre of temporary impacts to Santa Cruz tarplant critical habitat within the Biological Study Area (revised from approximately 0.29 acre of permanent impacts and approximately 0.08 acre of temporary impacts in the draft environmental document). The Federal Endangered Species Act Section 7 effects determination is that the project may affect, and is likely to adversely affect, Santa Cruz tarplant critical

habitat. The basis for this determination is that the project is within the Santa Cruz tarplant Critical Habitat Unit I-Watsonville and present are key physical conditions that have the potential to support the critical habitat within the Biological Study Area.

California Red-legged Frog Critical Habitat

[The following text has been changed since the draft environmental document was circulated.] The project will result in approximately 0.06 acre of permanent impacts and no temporary impacts for California red-legged frog critical habitat within the Biological Study Area (revised from approximately 0.06 acre of permanent impacts and approximately 0.20 acre of temporary impacts in the draft environmental document). The Federal Endangered Species Act Section 7 effects determination is that the project may affect, and is likely to adversely affect, California red-legged frog critical habitat. The basis for this determination is that the project is within the California red-legged frog Critical Habitat Unit 2 – Santa Cruz County and present are key physical conditions that have the potential to support the critical habitat within the Biological Study Area.

Invasive Species

Ground disturbance and other construction-related activities associated with the project could potentially spread or introduce invasive species within the Biological Study Area. The project will include avoidance and minimization measures that will help reduce the spread or introduction of invasive species within the areas disturbed by the project.

Regional Plant Species of Concern

The project is not expected to impact any special-status plant species. Although the Biological Study Area has the potential to support habitats for several special-status plant species, these habitats are mostly marginal. Also, special-status plant species were not found during appropriately timed surveys, and none are expected to occur within the Biological Study Area.

Of the federal listed plant species for the region, the Federal Endangered Species Act Section 7 effects determination is that the project will have no effect on the marsh sandwort, Monterey spineflower, yobust spineflower, Menzies' wallflower, Monterey gilia, and Yadon's rein orchid.

No project-specific measures are anticipated for regional plant species of concern.

Regional Animal Species of Concern

Of the federal listed animal species for the region, the Federal Endangered Species Act Section 7 effects determination is that the project will have no effect on the vernal pool fairy shrimp, tidewater goby, steelhead – Central California Coast distinct population, steelhead – South-Central California Coast distinct population, longfin smelt, California tiger salamander, Santa

Cruz long-toed salamander, monarch butterfly, San Francisco garter snake, marbled murrelet, western snowy plover, southwestern willow flycatcher, American peregrine falcon, California least tern, California clapper rail, least Bell's vireo, and San Joaquin kit fox. There will be no impacts to federally designated critical habitats for any of these federally listed animal species.

California Red-Legged Frog

Project activities have the potential to either directly or indirectly result in the injury or death of California red-legged frogs if they are present in the upland and aquatic habitats within the project area. The potential need to capture and relocate California red-legged frogs found in work sites will subject these animals to stresses that could result in adverse effects, injury, or death. Any California red-legged frogs that may be present within the work site could accidentally be injured or killed as a result of construction operations. Construction-related impacts to individual species is anticipated to be low due to the lack of observed species within the Biological Study Area. However, the presence of individual species could change over time as the species increases its population or expands its range.

The Federal Endangered Species Act Section 7 effects determination is that the project may affect, and is likely to adversely affect, the California red-legged frog and its critical habitat. The basis of this determination is that the California red-legged frog has been inferred in the upland and aquatic habitat within the Biological Study Area, there is the potential for take of the species during project construction, and most of the project footprint lies within the Critical Habitat Unit 2 – Santa Cruz County for the California red-legged frog.

[The following section has been added since the draft environmental document was circulated.]

Santa Cruz Long-Toed Salamander

[The following text has been added since the draft environmental document was circulated.] No Santa Cruz long-toed salamanders were observed within the Biological Study Area during biological surveys. Suitable breeding habitat for the species is not present at any of the work locations included in the project. While the Santa Cruz long-toed salamander has the potential to disperse through the area in suitable upland habitat, no project-related construction activities will occur within aquatic or upland habitat areas suitable for the Santa Cruz long-toed salamander and no impacts are anticipated.

Nesting Birds

Removal of vegetation could directly impact active bird nests and any eggs or young residing in the nest. Indirect impacts could also result from noise and disturbance associated with construction, which could alter perching, foraging, and/or nesting behaviors. Any nesting birds present within 500 feet of work sites could be disturbed by construction activities and operations.

Avoidance, Minimization, and/or Mitigation Measures

Federally Designated Critical Habitat

Numerous measures outlined in this section that apply to the California red-legged frog, nesting birds, and invasive species are also applicable to federally designated critical habitat. These measures have been assessed as sufficient to minimize impacts to Santa Cruz tarplant critical habitat and California red-legged frog critical habitat. No additional compensatory mitigation for critical habitat is proposed.

Natural Communities

The following avoidance and minimization measures will be implemented to reduce potential impacts to natural communities within the Biological Study Area as a result of project-related activities:

BIO 1: Prior to any ground-disturbing activities, Environmentally Sensitive Area fencing shall be installed along the maximum disturbance limits at each work site to minimize disturbance to adjacent habitats and/or vegetations. Special Provisions for the installation of Environmentally Sensitive Area fencing and silt fencing shall be included in the Construction Contract and identified on the project plans.

[The following text has been changed since the draft environmental document was circulated.] BIO 2: Impacts to native vegetation shall be offset by replacement plantings within the project limits, at replacement ratios that meet or exceed those required by the Coastal Development Permits that will be issued by the City of Watsonville, Monterey County and Santa Cruz County (revised to add the City of Watsonville and Monterey County).

[The following section has been added since the draft environmental document was circulated.]

Jurisdictional Wetlands, Other Waters, and Riparian Habitat

The following avoidance and minimization measures will be implemented to ensure there are no potential impacts associated with jurisdictional wetlands, other waters, and riparian habitat:

[The following text has been added since the draft environmental document was circulated.] BIO 3: Streams, riparian areas, and wetlands, including coastal Environmentally Sensitive Habitat Areas, that are present near work areas will be shown on plan sets as Environmentally Sensitive Areas, and the project specifications will indicate that they will be avoided at all times.

[The following text has been added since the draft environmental document was circulated.] BIO 4: Areas with riparian vegetation, including coastal Environmentally Sensitive Habitat Areas, near electrical work or grading will be flagged for avoidance before any ground-disturbing activities occur.

[The following text has been added since the draft environmental document was circulated.] BIO 5: Culvert segment replacement, joint repairs, and lining work at post miles 2.75, 2.83, 3.22, 7.13, and 7.66 shall be conducted when the system is dry, and dry weather is expected for at least 14 days.

Invasive Species

The following avoidance and minimization measures will be implemented to reduce potential impacts associated with invasive species:

BIO 6: During construction, Caltrans shall ensure that the spread or introduction of invasive plant species shall be avoided to the maximum extent possible.

BIO 7: Only clean fill shall be imported. When practicable, invasive exotic plants in the project site shall be removed and properly disposed of. Any plant species rated as “High” on the Cal-IPC Invasive Plant Inventory that are removed from the construction site shall be taken to a landfill to prevent the spread of invasive species. Inclusion of any species that occurs on the Cal-IPC Invasive Plant Inventory in the Caltrans erosion control seed mix or landscaping plans for the project shall be avoided.

BIO 8: Construction equipment shall be inspected to verify it is clean and weed-free by Caltrans before entering the construction site. If necessary, wash stations on-site shall be established for construction equipment under the guidance of Caltrans in order to avoid/minimize the spread of invasive plants and/or seed within the construction area. If wash stations on-site are infeasible due to the site’s space constraints, construction equipment shall be cleaned off-site and then driven only on paved roads to the site.

Regional Animal Species of Concern

California Red-Legged Frog

Caltrans anticipates the project will qualify for Federal Endangered Species Act incidental take coverage under the Programmatic Biological Opinion for Projects Funded or Approved under the Federal Highway Administration’s Federal Aid Program (U.S. Fish and Wildlife Service 2011). The following measures are applicable measures from the Programmatic Biological Opinion that will be implemented for this project to reduce potential impacts to the California red-legged frog:

BIO 9: Only U.S. Fish and Wildlife Service-approved biologists shall participate in activities associated with the capture, handling, and monitoring of California red-legged frogs.

BIO 10: Ground disturbance shall not begin until written approval is received from the U.S. Fish and Wildlife Service that the biologist is qualified to conduct the work.

BIO 11: A U.S. Fish and Wildlife Service-approved biologist shall survey the project area no more than 48 hours before the onset of work activities. If any life stage of the California red-legged frog is found and these individuals are likely to be killed or injured by work activities, the approved biologist shall be allowed sufficient time to move them from the site before work begins. The U.S. Fish and Wildlife Service-approved biologist shall relocate the California red-legged frogs the shortest distance possible to a location that contains suitable habitat and will not be affected by the activities associated with the project. The relocation site shall be in the same drainage to the extent practicable. Caltrans shall coordinate with the U.S. Fish and Wildlife Service on the relocation site prior to the capture of any California red-legged frogs.

BIO 12: Before any activities begin on a project, a U.S. Fish and Wildlife Service-approved biologist shall conduct a training session for all construction personnel. At a minimum, the training shall include a description of the California red-legged frog and its habitat, the specific measures that are being implemented to conserve the California red-legged frog for the current project, and the boundaries within which the project may be accomplished. Brochures, books, and briefings may be used in the training session, provided that a qualified person is on hand to answer any questions.

BIO 13: A U.S. Fish and Wildlife Service-approved biologist shall be present at the work site until all California red-legged frogs have been removed, workers have been instructed, and disturbance of the habitat has been completed. After this time, Caltrans shall designate a person to monitor on-site compliance with all minimization measures. The U.S. Fish and Wildlife Service-approved biologist shall ensure that this monitor receives the training outlined in measure 4 above and in the identification of California red-legged frogs. If the monitor or the U.S. Fish and Wildlife Service-approved biologist recommends that work be stopped because California red-legged frogs will be affected in a manner not anticipated by Caltrans and the U.S. Fish and Wildlife Service during review of the proposed action, he or she shall notify the resident engineer immediately. The resident engineer shall resolve the situation by requiring that all actions that are causing these effects be halted. When work is stopped, the U.S. Fish and Wildlife Service shall be notified as soon as possible.

BIO 14: During project activities, all trash that may attract predators or scavengers shall be properly contained, removed from the work site, and disposed of regularly. Following construction, all trash and construction debris shall be removed from work areas.

BIO 15: Without the express permission of the U.S. Fish and Wildlife Service, all refueling, maintenance and staging of equipment and vehicles shall occur at least 60 feet from the riparian habitat or water bodies and not in a location from where a spill will drain directly toward aquatic habitat. The monitor shall ensure contamination of habitat does not occur during such operations. Prior

to the onset of work, Caltrans shall ensure that a plan is in place for prompt and effective response to any accidental spills. All workers shall be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur.

BIO 16: Habitat contours shall be returned to a natural configuration at the end of the project activities. This measure shall be implemented in all areas disturbed by activities associated with the project, unless the U.S. Fish and Wildlife Service and Caltrans determine that it is not feasible or modification of original contours will benefit the California red-legged frog.

BIO 17: The number of access routes, size of staging areas, and the total area of activity shall be limited to the minimum necessary to achieve the project. Environmentally Sensitive Areas shall be established to confine access routes and construction areas to the minimum area necessary to complete construction, and minimize the impact to California red-legged frog habitat; this goal includes locating access routes and construction areas outside of wetlands and riparian areas to the maximum extent practicable.

BIO 18: Caltrans shall attempt to schedule work for times of the year when impacts to the California red-legged frog will be minimal. For example, work that will affect large pools that may support breeding will be avoided, to the maximum degree practicable, during the breeding season (November through May). Isolated pools that are important to maintain California red-legged frogs through the driest portions of the year will be avoided, to the maximum degree practicable, during the late summer and early fall. Habitat assessments, surveys, and technical assistance between Caltrans and the U.S. Fish and Wildlife Service during project planning shall be used to assist in scheduling work activities to avoid sensitive habitats during key times of year.

BIO 19: To control sedimentation during and after project completion, Caltrans shall implement Best Management Practices outlined in any authorizations or permits, issued under the authorities of the Clean Water Act received for the project. If Best Management Practices are ineffective, Caltrans shall attempt to remedy the situation immediately, in coordination with the U.S. Fish and Wildlife Service.

BIO 20: If a work site is to be temporarily dewatered by pumping, intakes shall be completely screened with wire mesh not larger than 0.2 inch to prevent California red-legged frogs from entering the pump system. Water shall be released or pumped downstream at an appropriate rate to maintain downstream flows during construction. Upon completion of construction activities, any diversions or barriers to flow shall be removed in a manner that will allow flow to resume with the least disturbance to the substrate. Alteration of the streambed shall be minimized to the maximum extent possible; any imported material shall be removed from the streambed upon completion of the project.

BIO 21: Unless approved by the U.S. Fish and Wildlife Service, water shall not be impounded in a manner that may attract California red-legged frogs.

BIO 22: A U.S. Fish and Wildlife Service-approved biologist shall permanently remove any individuals of exotic species, such as bullfrogs (*Rana catesbeiana*), signal and red swamp crayfish (*Pacifasticus leniusculus*; *Procambarus clarkia*), and centrarchid fishes from the project area, to the maximum extent possible. The U.S. Fish and Wildlife Service-approved biologist shall be responsible for ensuring his or her activities are in compliance with the California Fish and Game Code.

BIO 23: If Caltrans demonstrates that disturbed areas have been restored to conditions that allow them to function as habitat for the California red-legged frog, these areas will not be included in the amount of total habitat permanently disturbed.

BIO 24: To ensure that diseases are not conveyed between work sites by the U.S. Fish and Wildlife Service-approved biologist, the fieldwork code of practice developed by the Declining Amphibian Task Force shall be followed at all times.

BIO 25: Project sites shall be revegetated with an assemblage of native riparian, wetland, and upland vegetation suitable for the area. Locally collected plant materials shall be used to the extent practicable. Invasive, exotic plants shall be controlled to the maximum extent practicable. This measure shall be implemented in all areas disturbed by activities associated with the project, unless the U.S. Fish and Wildlife Service and Caltrans determine that it is not feasible or practical.

BIO 26: Caltrans shall not use herbicides as the primary method to control invasive, exotic plants. However, if it is determined that the use of herbicides is the only feasible method for controlling invasive plants at a specific project site, it will implement the following additional protective measures for the California red-legged frog:

- a. Caltrans shall not use herbicides during the breeding season for the California red-legged frog;
- b. Caltrans shall conduct surveys for the California red-legged frog immediately prior to the start of herbicide use. If found, California red-legged frogs shall be relocated to suitable habitat far enough from the project area that no direct contact with herbicide will occur;
- c. Giant reed and other invasive plants shall be cut and hauled out by hand and painted with glyphosate-based products, such as Aquamaster® or Rodeo®;
- d. Licensed and experienced Caltrans staff or a licensed and experienced contractor shall use a hand-held sprayer for foliar application of Aquamaster® or Rodeo® where large monoculture stands occur at an individual project site;

- e. All precautions shall be taken to ensure that no herbicide is applied to native vegetation;
- f. Herbicides shall not be applied on or near open water surfaces (no closer than 60 feet from open water);
- g. Foliar applications of herbicide shall not occur when wind speeds are in excess of 3 miles per hour;
- h. No herbicides shall be applied within 24 hours of forecasted rain;
- i. Application of all herbicides shall be done by qualified Caltrans staff or contractors to ensure that overspray is minimized, that all applications are made in accordance with the label recommendations, and with implementation of all required and reasonable safety measures. A safe dye shall be added to the mixture to visually denote treated sites. Application of herbicides shall be consistent with the U.S Environmental Protection Agency's Office of Pesticide Programs, Endangered Species Protection Program county bulletins;
- j. All herbicides, fuels, lubricants, and equipment shall be stored, poured, or refilled at least 60 feet from riparian habitat or water bodies in a location where a spill will not drain directly toward aquatic habitat. Prior to the onset of work, Caltrans shall ensure that a plan is in place for a prompt and effective response to accidental spills. All workers shall be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur.

BIO 27: Upon completion of the project, Caltrans shall ensure that a Project Completion Report is completed and provided to the U.S. Fish and Wildlife Service, following the template provided with the Programmatic Biological Opinion. Caltrans shall include recommended modifications of the protective measures if alternative measures will facilitate compliance with the provisions of this consultation.

[The following section has been added since the draft environmental document was circulated.]

Santa Cruz Long-Toed Salamander

The following avoidance and minimization measure will be implemented to ensure there are no potential impacts associated with the Santa Cruz long-toed salamander:

[The following text has been added since the draft environmental document was circulated.] BIO 28: All work at post mile 7.31 shall be conducted between June 1 and October 31, when the system is dry, and dry weather is expected for at least 14 days.

Nesting Birds

The following measures apply to all birds protected by the Migratory Bird Treaty Act and California Fish and Game Code. The list of birds protected by these regulatory laws is extensive, and not all birds protected by these laws are likely to occur within the Biological Study Area. There are no formal survey protocols for most of these bird species, but the California Department of Fish and Wildlife typically requires projects to conduct pre-construction nesting bird surveys and avoidance of impacts to active bird nests.

BIO 29: Prior to construction, vegetation removal shall be scheduled to occur from September 2 to February 14, outside of the typical nesting bird season if possible, to avoid potential impacts to nesting birds. If tree removal or other construction activities are proposed to occur within 100 feet of potential habitat during the nesting season (February 15 to September 1), a nesting bird survey shall be conducted by a biologist determined to be qualified by Caltrans no more than 3 days prior to construction. If an active nest is found, Caltrans shall coordinate with the California Department of Fish and Wildlife to determine an appropriate buffer based on the habits and needs of the species. The buffer area shall be avoided until a qualified biologist has determined that juveniles have fledged.

BIO 30: During construction, active bird nests shall not be disturbed and eggs or young of birds covered by the Migratory Bird Treaty Act and California Fish and Game Code shall not be killed, destroyed, injured, or harassed at any time. Readily visible exclusion zones where nests must be avoided within 100 feet of disturbance shall be established by a qualified biologist using Environmentally Sensitive Area fencing. Work in exclusion zones shall be avoided until young birds have fledged (permanently left the nest) or the qualified biologist has determined that nesting activity has otherwise ceased.

BIO 31: Trees to be removed shall be noted on design plans. Prior to any ground-disturbing activities, Environmentally Sensitive Area fencing shall be installed around the dripline of trees to be protected within the project limits.

BIO 32: All clearing/grubbing and vegetation removal shall be monitored and documented by the biological monitor(s) regardless of time of year.

2.1.5 Cultural Resources

Considering the information in the Cultural Resources Screened Undertaking Memo dated December 15, 2021, the following significance determinations have been made:

It is determined that the project does not have the potential to affect cultural resources within the project limits. The project will involve work on the State Route 1 corridor, which has been studied multiple times for many highway maintenance and upgrade projects. The project work locations are areas that

have been previously disturbed and/or have been maintained over the years. Because the project’s activities will be limited to within the State Route 1 corridor, no additional cultural studies are required at this time.

Question—Would the project:	CEQA Significance Determinations for Cultural Resources
a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	No Impact
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	No Impact
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	No Impact

2.1.6 Energy

Caltrans incorporates energy efficiency, conservation and climate change measures into transportation planning, project development, design, operations, maintenance of transportation facilities, fleet, equipment, and buildings to minimize the use of fuel supplies and energy resources as well as to reduce greenhouse gas emissions.

The project will not alter existing vehicle capacity on State Route 1 or alter the existing alignment of State Route 1. Therefore, the project will not alter existing energy use on the State Highway System. Some energy use will be required during project construction, but will be minimized whenever possible through the implementation of greenhouse gas reduction strategies during project construction. The amount of energy that will be used to construct this project will help reduce future energy use by decreasing the number of required preventive and scheduled maintenance operations.

The project will not alter or conflict with any existing local, regional, or state plans for energy management.

Question—Would the project:	CEQA Significance Determinations for Energy
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation?	No Impact
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	No Impact

2.1.7 Geology and Soils

Considering the information in the Preliminary Geotechnical Report dated May 11, 2022, and the Paleontology Identification Report dated November 30, 2021, the following significance determinations have been made.

Geotechnical site investigations have not been completed. Geotechnical site investigations will be completed after the project has been approved, and results from the geotechnical site investigations will be used to guide the final engineering design of the project. All geotechnical investigations will be completed prior to project construction.

Project activities that are associated with geological and soil disturbance are limited to culvert replacement activities and electrical line hook-ups, which will require excavations and trenching. The scale of excavations and trenching required for culvert and electrical work is expected to be small and is not expected to disturb the existing geologic or soil integrity.

Based on preliminary geotechnical review of the project area and work, the project is not anticipated to alter existing geologic or soil conditions, and is also not anticipated to encounter or generate environmental concerns related to geology and/or soils.

However, California is prone to geologic events, and there is the constant potential that an unforeseen geologic event or change in the existing geologic condition could affect the project’s design, construction or longevity. If there are any changes to the geologic or soil conditions that could affect the project, additional geotechnical review will need to be conducted for the project.

Question—Would the project:	CEQA Significance Determinations for Geology and Soils
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: <ul style="list-style-type: none"> 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

Question—Would the project:	CEQA Significance Determinations for Geology and Soils
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-site 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 risks to life or property?	No Impact
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	No Impact
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	No Impact

2.1.8 Greenhouse Gas Emissions

Considering the information in the Air Quality, Greenhouse Gas, and Noise Assessment Memo dated November 18, 2021, and the Climate Change technical report dated December 6, 2021, the following significance determinations have been made.

Question—Would the project:	CEQA Significance Determinations for Greenhouse Gas Emissions
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

Affected Environment

The U.S. Environmental Protection Agency is responsible for documenting greenhouse gas emissions nationwide, and the California Air Resources Board does so for the state.

The Santa Cruz County Regional Transportation Commission's 2040 Regional Transportation Plan guides transportation development for the county and identifies State Route 1 as a major roadway for the county. State Route 1 connects most of the heavily populated areas in the county and is considered the main thoroughfare due to the lack of alternative routes. Within the county, State Route 1 has the highest average daily traffic volumes. The route provides access for residents, goods movement, and tourist traffic in the region. Several traffic improvement projects have been completed in the past to improve traffic flow on State Route 1 in Santa Cruz County, and the local regional transportation plan has set goals to reduce single-passenger vehicle traffic in the region.

The 2018 Monterey County Regional Transportation Plan identifies State Route 1 as an integral north-south access for the county as this route is the only form of access for many of coastal communities within Monterey County and is considered the main coastal corridor for the region. State Route 1 interconnects with other east-west routes and provides access for residents, goods movement, and tourist traffic in the region. Several regional projects have been conducted and are being planned to improve traffic conditions along State Route 1 in Monterey County.

Santa Cruz County is in attainment for all federal air quality standards. The project is exempt from federal air quality conformity determination because the project qualifies under "Highway Safety Improvement Program implementation." The project is within the North Central Coast Air Basin, and air quality is regulated by the Monterey Bay Air Resources District. The North Central Coast Air Basin is in non-attainment transitional for state ambient air quality standards for ozone and is in non-attainment for airborne particles less than 10 microns in diameter. In addition, the project is consistent with the Monterey Bay Air Resources District state air quality attainment goals, which are presented in the 2012-2015 Air Quality Management Plan.

Environmental Consequences

The purpose of the project is to restore the conditions of existing culverts along a segment of State Route 1. The project will not alter the existing vehicle capacity or alter the existing vehicle miles traveled on State Route 1. Therefore, the project is not anticipated to alter existing operational greenhouse gas emissions for the region. The project does not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing greenhouse gas emissions in the region.

The total estimated greenhouse gas emissions for project construction is about 123 tons of carbon dioxide equivalent emissions over a period of 110 working days. This estimate is based on assumptions made during the environmental planning phase of the project and is considered a "ballpark" estimate of carbon dioxide equivalent emissions, based on limited data input and default modeling values for a stormwater and drainage project.

While the project will result in greenhouse gas emissions as a result of construction activities, it is anticipated that the project will not have any effect on facility operations greenhouse gas emissions.

In addition, the following project features will also help reduce greenhouse gas emissions generated by the project:

- *Transportation Management Plan*: The plan will keep the traveling public informed about the construction schedule and anticipated traffic delays, the dates and duration of any temporary closures on State Route 1, and other pertinent travel information, to minimize unnecessary delays and emissions.
- *Staged Construction*: The project has been designed to limit the length of lane closures to minimize delays to travelers and adopt appropriate construction schedules to minimize construction mobilization efforts, which will help reduce construction emissions.
- *Vegetation Replanting*: The project will replant vegetation after project construction is completed. Vegetation replanting will help sequester carbon.

Avoidance, Minimization, and/or Mitigation Measures

The potential for greenhouse gas impacts generated by project construction will be reduced to less than significant under CEQA with the implementation of the following minimization measure:

GHG 1: All construction activities will comply with all district rules, regulation and ordinances, and statutes of the California Air Resources Board to reduce and minimize construction greenhouse gas emissions (i.e., restrictions on idling equipment, properly maintained equipment, and appropriate point sources for materials, etc.). All applicable Caltrans standard measures and strategies for emissions reductions will be implemented to reduce construction-generated greenhouse gas emissions. Additional strategies and techniques for the reduction of construction emission will be implemented where feasible and appropriate.

2.1.9 Hazards and Hazardous Materials

Considering the information in the Hazardous Waste Initial Site Assessment dated November 18, 2021, the following significance determinations have been made.

The Hazardous Waste memo indicated that there are potentially hazardous waste materials that could be encountered during project construction which include treated wood waste from guardrails, lead paint found in traffic striping, and aerially deposited lead on roadway surfaces. These anticipated hazardous waste materials if present are likely to be disturbed during construction-related activities. More detailed hazardous waste investigations will be conducted during the project's design phase to determine presence

and concentrations of these potentially hazardous waste materials. If hazardous waste materials were identified during project construction, the materials will be appropriately handled, transported and disposed of in accordance with Caltrans Standard Specifications. The project is not anticipated to encounter or use quantities of hazardous waste materials that have the potential to create substantial or considerable hazards to the public or the environment.

Project construction activities will occur at several work sites along State Route 1, but none of the construction locations are within 0.25 mile of an existing or proposed school.

Based on the California Department of Toxic Substances Control – Hazardous Waste and Substance Site List online database, there are no known hazardous waste issue or hazardous materials sites pursuant to Government Code Section 65962.5 within the project limits.

During project construction, State Route 1 within the project limits will remain open, and access for emergency responses and/or evacuations will not be affected.

Question—Would the project:	CEQA Significance Determinations for Hazards and Hazardous Materials
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	No 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?	No 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

Question—Would the project:	CEQA Significance Determinations for Hazards and Hazardous Materials
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?	Less Than Significant Impact
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	No 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

Affected Environment

Airports

The project is within 2 miles of the Watsonville Municipal Airport, which is classified as a general aviation airport.

Based on the Watsonville Municipal Airport Master Plan 2001-2020, there are several work sites on the project that are within the 2020 airport noise exposure map. Noise levels indicated by the noise exposure map range from 55 to 65 decibels on annual average conditions. Based on 2020 data, more than 85 percent of all air traffic involves single-propellor aircrafts, with most aircraft operating during the day.

Wildland Fires

[The following text has been changed since the draft environmental document was circulated.] Based on the 2007 CAL FIRE – Fire Hazard Severity Zone Map in State Responsibility Areas for Santa Cruz County, the project limits from approximately post mile 4.1 to post mile 7.9 are adjacent to areas that are considered a High Fire Hazard Severity Zone in a State Responsibility Area (revised to include post mile limits for areas adjacent to High Fire Hazard Severity Zone). [The following text has been added since the draft environmental document was circulated.] The project limits from approximately post mile 1.5 to post mile 7.9 are adjacent to areas that are considered High and Moderate Fire Hazard Severity Zones in a Local Responsibility Area, according to the 2007 CAL FIRE – Draft Fire Hazard Severity Zone Map in Local Responsibility Areas for Santa Cruz County. The 2008 Very High Fire Hazard Severity Zone Map in Local Responsibility Areas for Monterey County as recommended by CAL FIRE shows that the work location in Monterey County located between post miles 101.5 and 102.0 is

within a Non-Very High Fire Hazard Severity Zone within the Local Responsibility Area. No portion of the project is located in a Very High Fire Hazard Severity Zone within State or Local Responsibility Areas.

Environmental Consequences

Airports

Project construction near the Watsonville Municipal Airport is not expected to expose workers to excessive or hazardous noise levels. The maximum anticipated noise level originating from aircraft operations is approximately 55 to 65 decibels, which is similar to the noise level of normal human conversations. No additional project-related mitigation is anticipated to address exposure to airport-related noise.

Wildland Fires

Construction activities have the potential to unintentionally ignite nearby vegetation. However, the project will incorporate precautions to prevent fire-related incidents during construction as part of the code of safety practices in accordance with the California Division of Safety and Health – Fire Protections and Prevention Guidance.

Avoidance, Minimization, and/or Mitigation Measures

Wildland Fires

HAZ 1: The project will include Caltrans Standard Specification related to fire prevention and fire safety in order to minimize the potential for igniting nearby vegetation during construction activities along with implementing the California Division of Safety and Health – Fire Protection and Prevention Guidance.

2.1.10 Hydrology and Water Quality

Considering the information in the Location Hydraulic Study dated June 30, 2021, and the Water Quality Study received on April 27, 2022, the following significance determinations have been made.

The project will not alter existing drainage patterns in the area because the project will repair existing drainage features and will not add or remove drainage features within the project limits.

The project will not involve the use or storage of materials that could become pollutants if the culverts are inundated during a flood.

The project is not anticipated to conflict with any existing or planned water management plan in the region because the project will be limited to improving existing drainage features.

The project is not anticipated to decrease existing water quality conditions in the project vicinity as effective combinations of temporary and permanent

erosion and sediment control will be implemented as a component of the project. In addition, the project will include Caltrans standard measures and Best Management Practices will be implemented during construction to avoid and minimize potential impacts to water quality.

Question—Would the project:	CEQA Significance Determinations for Hydrology and Water Quality
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface water or groundwater quality?	Less Than Significant Impact
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that 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 onsite or offsite;	No Impact
(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding onsite or offsite;	No 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	No Impact
(iv) impede or redirect flood flows?	No 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

Affected Environment

The project is in an undefined Hydrologic Sub-Area (#305.10) and Watsonville Hydrologic Area within the Pajaro River Hydrologic Unit. The seven receiving water bodies for this project are McGowan Ditch, Pajaro River, Beach Road Ditch, Watsonville Slough, Struve Slough, Harkins Slough, and Gallighan Slough.

Highway storm water contains a variety of pollutants that are sourced from both naturally occurring processes (natural erosion, decomposition of fallen tree leaves) and human activities (combustion products from fossil fuels, wearing of brake pads and tires). In some cases, the pollutants in highway storm water can cause impairment of the water bodies that storm water drains into or worsen an existing impairment. A body of water is considered “impaired” if it fails to meet water quality standards. On the recent (2014/2016) 303(d) list of impaired water bodies, the Pajaro River is listed as impaired for Chlorpyrifos (2013), Diazinon (2013), Fecal Coliform (2010), and Nitrate (2006); the Watsonville and Struve sloughs are listed as impaired for Fecal Coliform (2007); and the Harkins and Gallighan sloughs are listed as impaired by Indicator Bacteria (2007).

There are no drinking water or water recharge facilities within the project limits. The project lies in the Corralitos-Pajaro Valley groundwater basin. Groundwater was encountered and measured during the subsurface investigation in boring A-22-001 at post mile 2.7 at an elevation of 13.8 feet. At boring A-22-002 at post mile 101.53, groundwater was found in the thin interbeds of clayey sand with gravel between elevation 43.3 feet and 35.8 feet.

Environmental Consequences

The project could result in short-term water quality impacts during construction. Grading, excavation, and the removal of vegetation could cause an increase in erosion and sedimentation.

Rehabilitation of the culverts and installation of roadway lighting, traffic monitoring and maintenance access improvements will be a large operation, creating waste, debris, and dust. Storm water runoff from the project site and State Route 1 storm drains may transport pollutants to one of the seven receiving water bodies from construction activities if best management practices are not properly implemented. Storm water runoff drains into the Pajaro River and eventually discharges to the Pacific Ocean at Monterey Bay.

Generally, as the disturbed soil area increases, the potential for temporary water quality impacts also increases. Currently, the total disturbed soil area across the project area is estimated to be 5.43 acres, which will be used for the Construction General Permit compliance.

Avoidance, Minimization, and/or Mitigation Measures

No permanent impacts are anticipated to storm water, groundwater and water resources with the current project scope. No further minimization measures beyond WQ 1 are necessary for this project.

WQ 1: Implement a robust Qualified Storm Water Pollution Prevention Plan (SWPPP) to minimize any temporary impacts to storm water during construction and use construction best management practices, as specified in the Storm Water Data Report. Also implement any Caltrans Standard Specifications for erosion and storm water control during construction.

2.1.11 Land Use and Planning

Project activities will occur mostly on the existing Caltrans right-of-way and on highway easements on State Route 1. Therefore, the project will not result in any divisions of an established or planned community.

Within the project limits, the alignment of the Coastal Zone boundary abuts the alignment of State Route 1. Project work sites to the west of State Route 1 are in the Coastal Zone, while projects work sites to the east of State Route 1 are outside of the Coastal Zone. The project is not anticipated to conflict or effect any existing Coastal Zone-related plans, policies, or regulations. Applicable California Coastal Act, Watsonville Local Coastal Plan and Santa Cruz Local Coastal Plan policies and consistency analysis are provided in Appendix B.

The project is not anticipated to conflict with any other existing land use plan, policy, or regulation in the region.

Question—Would the project:	CEQA Significance Determinations for Land Use and Planning
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?	No Impact

2.1.12 Mineral Resources

Project activities would involve work on highway features already located on the existing highway alignment on State Route 1. The project will have no involvement in the removal or extraction of mineral resources.

Question—Would the project:	CEQA Significance Determinations for Mineral Resources
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

2.1.13 Noise

Considering the information in the Air Quality, Greenhouse Gas and Noise Assessment Memo dated November 18, 2021, the following significance determinations have been made.

The project will not permanently change existing local noise levels because it will not modify the capacity or alignment of State Route 1. Noise levels in proximity of project construction activities will likely increase. However, the increase in noise levels as a result of construction activities is not considered substantial because construction activities are temporary and intermittent. In addition, the project will include Caltrans Standard Specifications related to noise control to minimize potential noise-related disturbances caused by construction activities.

Question—Would the project result in:	CEQA Significance Determinations for Noise
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?	No 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?	No Impact

2.1.14 Population and Housing

The project will not change the capacity or alignment of State Route 1, so the project will not change the population or housing needs in the region.

Question—Would the project:	CEQA Significance Determinations for Population and Housing
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

2.1.15 Public Services

Project activities will be limited to the existing alignment of State Route 1. The project will not be involved with any planned or existing governmental facilities and is not anticipated to have any effect on any planned or existing governmental facilities in proximity of the project. The project will maintain public access on State Route 1 during project construction, and access to any existing governmental facilities near the project sites will be maintained.

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

2.1.16 Recreation

Project activities will be limited to the existing alignment of State Route 1. The project will not have a considerable effect on existing recreational patterns in the region. The project will not be involved in the construction, removal, or alteration of access points or routes used for recreation. Also, the project will not create, expand, alter, or remove recreational facilities. Public access on State Route 1 will be maintained during project construction.

Question—Would the project:	CEQA Significance Determinations for Recreation
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	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

2.1.17 Transportation

The project will not change the existing alignment or capacity of State Route 1 and will not conflict with any existing or planned transportation-related programs or facilities in the region. The project will not change existing vehicle miles traveled on State Route 1. Emergency access on State Route 1 will be maintained during project construction and will not change once the project is done.

Question—Would the project:	CEQA Significance Determinations for Transportation
a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	No Impact
b) Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?	No 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?	No Impact

2.1.18 Tribal Cultural Resources

Considering the information in the Cultural Resources Screened Undertaking Memo dated December 15, 2021, the following significance determinations have been made:

Will 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, or cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

Question:	CEQA Significance Determinations for Tribal Cultural Resources
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 Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	No Impact

2.1.19 Utilities and Service Systems

The project will repair existing culvert pipes along State Route 1. Culvert work will focus on improving existing drainage structures and conditions. The project will not install new culvert structures at new locations or relocate any existing culvert alignment. Also, the project will not change existing water supplies, wastewater treatment or drainage patterns in the region. The project will not change the existing functions of electrical, natural gas or telecommunications facilities in the region.

The project will not generate excessive amounts of solid wastes that will overwhelm capacities of existing waste management facilities. Waste materials generated by project construction will be collected and disposed of properly to meet all state and federal requirements.

Question—Would the project:	CEQA Significance Determinations for Utilities and Service Systems
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water 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

2.1.20 Wildfire

The project will not affect any planned or existing emergency response plans or emergency evacuation plans for the region. The project will not be involved with any infrastructure work that will alter the existing fire risk in the region. The project will not alter existing drainage patterns and will implement stormwater best management practices as part of the Caltrans Standard Specifications that will be carried out during project construction.

Question—Would the project:	CEQA Significance Determinations for Wildfire
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	No 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?	No Impact

Question—Would the project:	CEQA Significance Determinations for Wildfire
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	No 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?	No Impact

2.1.21 Mandatory Findings of Significance

Question:	CEQA Significance Determinations for Mandatory Findings of Significance
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

Affected Environment

Project work will occur at numerous spots along State Route 1 in Monterey and Santa Cruz counties. Construction activities will occur mostly within the Caltrans right-of-way, aside from some locations where culvert work will occur

on immediately adjacent land. Within the project limits, State Route 1 is a conventional four-lane freeway, with two lanes of travel in each direction, that crosses through a mildly urban environment with a mix of developed, agricultural, and open spaces.

Though the biological environment of the area is highly disturbed, numerous biological communities exist within the project area, as explained in Section 2.1.4 Biological Resources. As explained in Section 2.1.5 Cultural Resources and Section 2.1.18 Tribal Cultural Resources, project work will occur outside of culturally significant areas. As explained in Section 2.1.7 Geology and Soils, paleontological resources will not be impacted by the project.

Environmental Consequences

In response to checklist item a) above: The project was evaluated for potential impacts to biological resources, as explained in Section 2.1.4 Biological Resources. Five land cover types and vegetation communities occur in the Biological Study Area: ruderal/disturbed; coast live oak woodland; willow woodland; and coastal scrub. The Biological Study Area covers areas within or right next to the highway facilities; it is composed of developed and ruderal/disturbed habitats, which include the road surface and shoulders. Much of the Biological Study Area is developed, including paved highway, gravel shoulders, streets, and urban areas. While the project may affect the California red-legged frog and Santa Cruz tarplant and their respective critical habitats, the impact is considered less than significant with the implementation of the avoidance, minimization and mitigation measures outlined in Section 2.1.4 Biological Resources. The project will not 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, or substantially reduce the number or restrict the range of a rare or endangered plant or animal.

In addition, the project was evaluated for potential impacts to cultural resources, tribal cultural resources, and paleontological resources in Section 2.1.5 Cultural Resources, Section 2.1.18 Tribal Cultural Resources, and Section 2.1.7 Geology and Soils. It was determined that the project will have no impact on cultural or paleontological resources and therefore will not eliminate important examples of the major periods of California history or prehistory.

In response to item b) above: The project was evaluated for potential cumulative impacts to the California red-legged frog, Santa Cruz tarplant, and the State Route 1 viewshed in the project Cumulative Impact Report. The Cumulative Impact Report follows the eight-step process for evaluating potential cumulative impacts. As part of this process, a resource study area was defined for each of the three resources. The current health of the three resources was evaluated, and the current and reasonably foreseeable projects that could contribute to impacts to the biological resources were considered. It was determined that, although the project will contribute to an

existing adverse cumulative impact, the project's contribution will not be cumulatively considerable. Implementation of all avoidance, minimization, and mitigation measures outlined in Section 2.1.1 Aesthetics and Section 2.1.4 Biological Resources will help to ensure the project's impact is less than significant and not cumulatively considerable.

In response to item c) above: The intent of the project is to improve existing culvert and drainage features and additional highway elements essential for maintaining a quality transportation corridor for use by the traveling public. The project provides avoidance and minimization measures for aesthetics, as well as Standard Specifications for hazardous waste and noise. No significant impacts will result to the human environment.

The project will include Caltrans standard measures for hazardous waste testing and monitoring to protect the general public from hazards that could arise from the project's construction activities. The project will not generate hazards, or expose the general public to hazards, that could result in substantial adverse effects. Therefore, the project will not result in considerable impacts to the general public due to hazardous waste.

The project includes avoidance and minimization measures to reduce the impact the project may have on the aesthetic environment. The culvert improvements, additional paved surfaces and Transportation Management System elements such as the changeable message sign included in the project will permanently add built features that are not unusual to see in the highway corridor. Construction will also require removal of vegetation in some areas. With implementation of measures listed in Section 2.1.1 Aesthetics to minimize the noticeability of new highway features, the project will marginally affect scenic vistas in the area and will be consistent with the aesthetic and visual protection goals for State Route 1. Therefore, these visual changes will cause a minor reduction of visual quality to the immediate project area.

Finally, the project will inevitably generate noise during the construction process. The increase in noise levels as a result of construction activities will not be substantial because construction activities will be temporary and intermittent. In addition, the project includes Caltrans Standard Specifications for noise control to minimize potential noise-related disturbances caused by construction activities.

Avoidance, Minimization, and/or Mitigation Measures

A complete list of Standard Specifications and avoidance, minimization, and mitigation measures for the project can be found in Section 1.5 Standard Measures Included in All Alternatives, Section 2.1 CEQA Environmental Checklist, and Appendix C Avoidance, Minimization and/or Mitigation Measures Summary.

Appendix A Title VI Policy Statement

STATE OF CALIFORNIA—CALIFORNIA STATE TRANSPORTATION AGENCY

Gavin Newsom, Governor

DEPARTMENT OF TRANSPORTATION

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September 2021

NON-DISCRIMINATION POLICY STATEMENT

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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) 324-8379 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 1823 14th Street, MS-79, Sacramento, CA 95811; PO Box 942874, MS-79, Sacramento, CA 94274-0001; (916) 324-8379 (TTY 711); or at Title.VI@dot.ca.gov.

A handwritten signature in blue ink, appearing to read 'Toks Omishakin'.

Toks Omishakin
Director

"Provide a safe and reliable transportation network that serves all people and respects the environment."

Appendix B Coastal Policy Analysis

The project is consistent with the following relevant policies included in Chapter 3 of the California Coastal Act:

Article 4: Marine Environment

Section 30231 Biological productivity; water quality

The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.

Consistency Analysis:

The project is not anticipated to decrease existing water quality conditions in the project vicinity as effective combinations of temporary and permanent erosion and sediment control will be implemented as a component of the project to avoid and minimize potential impacts to water quality. [The following text has been added since the draft environmental document was circulated.] With implementation of these measures, the project will be consistent with this policy.

Article 5 Land Resources

Section 30240 Environmentally sensitive habitat areas; adjacent developments

(a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.

(b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas and shall be compatible with the continuance of those habitat and recreation areas.

Consistency Analysis:

[The following text has been added since the draft environmental document was circulated.] Wetlands meeting the one-parameter definition under Cowardin et al., 1979, including streams and riparian habitat (willow woodland); oak woodland; and habitat for sensitive species are all considered Environmentally

Sensitive Habitat Areas and are located in close proximity to project components. A Natural Environment Study and Natural Environment Study Addendum were prepared to evaluate project impacts on these resources.

[The following text has been added since the draft environmental document was circulated.] However, no tree removal is planned for this project, and no wetlands, including streams and riparian habitat, or oak woodland will be impacted by the project. All Environmentally Sensitive Habitat Areas present near work areas will be shown on plans and flagged for avoidance before ground disturbing activities occur. In addition, given their proximity to West Struve Slough and other Environmentally Sensitive Habitat Areas, culvert segment replacements, joint repairs, and lining work at post miles 2.75, 2.83, 3.22, 7.13, and 7.66 will be conducted when the drainage system is dry, and in dry weather expected for at least 14 days, to ensure that there will be no indirect impacts on these habitat areas. Portions of the project in Monterey County may encroach within the fifty-foot buffer of riparian habitat, however, activities will involve installation of an electrical line for the new traffic monitoring system which will involve minimal disturbance and will not be expected to significantly adversely impact the adjacent riparian habitat.

[The following text has been added since the draft environmental document was circulated.] The Biological Study Area is in the known range of the State Fully Protected Santa Cruz long-toed salamander, however, suitable breeding habitat for the species is not present at any of the work locations. Because no project-related construction activities will occur in aquatic or upland habitat areas suitable for this species, no impacts are anticipated.

[The following text has been added since the draft environmental document was circulated.] Finally, designated critical habitat for the Santa Cruz tarplant and California red-legged frog occurs in the project area. Approximately 0.06 acre of California red-legged frog critical habitat and 0.26 acre of Santa Cruz tarplant critical habitat will be permanently impacted by the project; 0.03 acre of Santa Cruz tarplant critical habitat will be temporarily impacted. The Federal Endangered Species Act Section 7 effects determination concludes a “may affect, and is likely to adversely affect” for both species. However, pre-construction surveys and the presence of a biological monitor during construction, in addition to several avoidance and minimization measures listed in Section 2.1.4 and Natural Environment Study Addendum, will ensure that impacts on these species are minimized. With implementation of these measures, the project will be consistent with this policy.

Article 6: Development

Section 30251 Scenic and visual qualities

The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be

sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural landforms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas such as those designated in the California Coastline Preservation and Recreation Plan prepared by the Department of Parks and Recreation and by local government shall be subordinate to the character of its setting.

Consistency Analysis:

With implementation of visual minimization measures included in Section 2.1.1 Aesthetics, the potential for visual impacts will be reduced to less than significant levels. These minimization measures include, but are not limited to, preservation of existing vegetation, revegetation with native plant species and aesthetic treatments for paving beyond the gore, and painting of traffic monitoring systems and the one changeable message sign. [The following text has been added since the draft environmental document was circulated.] Lighting will be directed downward and will include cut-off lens fixtures such that no point source lighting is visible from adjacent parcels. With implementation of these measures, the project will be consistent with this policy.

[The following section has been added since the draft environmental document was circulated.]

Monterey County:

One work location is within the Coastal Zone in the jurisdiction of Monterey County in the North County Coastal Land Use Plan area. The work planned for this location includes trenching for electrical work and installation of a closed-circuit television, motor vehicle data system, changeable message sign, and maintenance vehicle pullout.

The project is consistent with the following relevant policies from the Monterey County North County Coastal Land Use Plan:

Chapter 2 Resource Management

Objective 2.2 Visual Resources

2.2.1 Key Policy

In order to protect the visual resources of North County, development should be prohibited to the fullest extent possible in beach, dune, estuary, and wetland areas. Only low intensity development that can be sited, screened, or designed to minimize visual impacts, shall be allowed on scenic hills, slopes, and ridgelines.

2.2.2. General Policy

1. Views to and along the ocean shoreline from Highway One, Molera Road, Struve Road and public beaches, and to and along the shoreline of Elkhorn Slough from public vantage points shall be protected.
2. The coastal dunes and beaches, estuaries, and wetlands, should be designated for recreation or environmental conservation land uses that are compatible with protection of scenic resources. Facilities that are provided to accompany such uses shall be designed and sited to be unobtrusive and compatible with the visual character of the area.
5. Structures should be located to minimize tree removal, and grading for the building site and access road. Disturbed slopes should be restored to their previous visual quality. Landscape screening and restoration should consist of plant and tree species complementing the native growth of the area.

2.2.3. Specific Policies

3. Structures shall generally be sited so as not to block public views of the shoreline; development proposals shall be revised if necessary to accomplish this goal. Necessary structures in public view between the road and shoreline (such as agricultural buildings) shall be functionally designed, and sited so as to protect the maximum possible open views. Other development in public view between the road and shoreline (such as residential or commercial structures) shall be designed with materials, colors, landscaping and fencing appropriate to the rural setting.
6. Existing native trees and other significant vegetation shall be retained to the maximum extent possible, as an essential element of the scenic beauty and character of the North County coastal area. Removal of native trees and vegetation and landmark trees shall be permitted in accordance with Sections 2.3.2, 2.3.3, 2.6.2 and 2.6.3 of this plan and other policies that may apply. In addition, a Tree Ordinance shall be developed and rigorously enforced that will regulate removal of trees and other significant vegetation throughout the North County Coastal Zone.
7. Outdoor advertising signs shall be restricted and, where present, removed as soon as possible in conformance to existing County regulations. Highway direction and other public signs should be minimized and designed to complement the visual character of the area.

2.2.4 Recommended Actions

4. Highway 1 from Marina to the County line at the Pajaro River should be officially designated as a State Scenic Highway and the visual character of the adjacent scenic corridor should be preserved, and where feasible restored.

Consistency Analysis:

There are no public views of the ocean from the project location on State Route 1 in Monterey County. The changeable message sign and the sign's elements, including but not limited to frames, poles, trusses, catwalks, ladders, and associated hardware, will be painted or otherwise colored to visually recede into the setting. The traffic monitoring systems will also be painted to ensure that they will recede into the setting.

No tree removal is planned for this project, and vegetation removal will be minimized. Where vegetation is removed, revegetation with native plant species will be implemented. In addition, aesthetic treatments for paving beyond the gore will be implemented. With implementation of these visual minimization measures included in Section 2.1.1 Aesthetics, the potential for visual impacts will be reduced to less than significant and the project will be consistent with these policies.

Objective 2.3 Environmentally Sensitive Habitats

2.3.2 General Policies

1. With the exception of resource dependent uses, all development, including vegetation removal, excavation, grading, filling, and the construction of roads and structures, shall be prohibited in the following environmentally sensitive habitat areas: riparian corridors, wetlands, dunes, sites of known rare and endangered species of plants and animals, rookeries, major roosting and haulout sites, and other wildlife breeding or nursery areas identified as environmentally sensitive. Resource dependent uses, including nature education and research hunting, fishing and aquaculture, where allowed by the plan, shall be allowed within environmentally sensitive habitats only if such uses will not cause significant disruption of habitat values.
2. Land uses adjacent to locations of environmentally sensitive habitats shall be compatible with the long-term maintenance of the resource. New land uses shall be considered compatible only where they incorporate all site planning and design features needed to prevent habitat impacts, upon habitat values and where they do not establish a precedent for continued land development which, on a cumulative basis, could degrade the resource.
3. New development adjacent to locations of environmentally sensitive habitats shall be compatible with the long-term maintenance of the resource. New subdivisions shall be approved only where significant impacts to environmentally sensitive habitats from development of proposed parcels will not occur.
5. Where private or public development is proposed in documented or potential locations of environmentally sensitive habitats - particularly those habitats identified in General Policy No. 1 - field surveys by qualified individuals or agencies shall be required in order to determine precise

locations and to recommend mitigating measures to ensure protection of any sensitive habitat present. The required survey shall document that the proposed development complies with all applicable environmentally sensitive habitat policies.

9. The County shall require the use of non-invasive plant species in proposed landscaping and should encourage the use of appropriate native species or species that are compatible with native plants.

10. Construction activities, industrial, and public and commercial recreational uses which would affect rare and endangered birds shall be regulated to protect habitats of rare, endangered, and threatened birds during breeding and nesting seasons. Regulations may include restriction of access, noise abatement, and restriction of hours of operation of public or private facilities. Regulations shall not prohibit emergency operation of service and public utility equipment.

2.3.3 Specific Policies

B. Riparian, Wetland, and Aquatic Habitats

1. Riparian plant communities shall be protected by establishing setback requirements consisting of 150 feet on each side of the bank of perennial streams, and 50 feet on each side of the bank of intermittent streams, or the extent of riparian vegetation, whichever is greater. In all cases, the setback must be sufficient to prevent significant degradation of the habitat area. The setback requirement may be modified if it can be conclusively demonstrated by a qualified biologist that a narrower corridor is sufficient or a wider corridor is necessary to protect existing riparian vegetation from the impacts of adjacent use.

C. Terrestrial Wildlife

2. Critical wildlife habitat areas (refer to General Policy 2) shall be protected and an adequate distance based on a site-by-site analysis between such habitat and disturbed areas (e.g., building sites and roads) shall be maintained.

Consistency Analysis:

Wetlands meeting the one-parameter definition under Cowardin et al., 1979, including streams and riparian habitat (willow woodland); oak woodland; and habitat for sensitive species are all considered Environmentally Sensitive Habitat Areas and are located in close proximity to project components. A Natural Environment Study and Natural Environment Study Addendum were prepared to evaluate project impacts on these resources.

However, no tree removal is planned for this project, and no wetlands, including streams and riparian habitat, or oak woodland will be impacted by the project. All Environmentally Sensitive Habitat Areas present near work areas will be shown on plans and flagged for avoidance before ground

disturbing activities occur. Portions of the project in Monterey County may encroach within the 50-foot buffer of riparian habitat, however, activities will involve installation of an electrical line for the new traffic monitoring system which will involve minimal disturbance and will not be expected to significantly adversely impact the adjacent riparian habitat.

The Biological Study area is in the known range of the State Fully Protected Santa Cruz long-toed salamander, however, suitable breeding habitat for the species is not present at any of the work locations. Because no project-related construction activities will occur in aquatic or upland habitat areas suitable for this species, no impacts are anticipated.

Finally, designated critical habitat for the Santa Cruz tarplant and California red-legged frog occur in the project area. Approximately 0.06 acre of California red-legged frog critical habitat and 0.26 acre of Santa Cruz tarplant critical habitat will be permanently impacted by the project; 0.03 acre of Santa Cruz tarplant critical habitat will be temporarily impacted. The Federal Endangered Species Act Section 7 effects determination concludes a “may affect, and is likely to adversely affect” for both species. However, pre-construction surveys and the presence of a biological monitor during construction, in addition to several avoidance and minimization measures listed in Section 2.1.4 and Natural Environment Study Addendum, will ensure that impacts on these species are minimized. With implementation of these measures, the project will be consistent with this policy.

Objective 2.4 Diking, Dredging, Filling and Shoreline Structures

2.4.1 Key Policy

Diking, dredging, and filling activities play a valuable protective and constructive role along the North County coast. However, unnecessary or ill planned activities of this nature could seriously alter the natural environment and adversely impact important biological habitats, drainage patterns, and the scenic character of coastal, river, and estuarine shorelines. Therefore, the County shall preserve and protect the coastal estuaries and wetlands in as natural a state as possible while providing for appropriate expansion of Moss Landing Harbor facilities and other limited, compatible wetland uses.

Consistency Analysis:

No diking, dredging, or filling activities are planned at any work locations included in this project. The work location in Monterey County is adjacent to a riparian Environmentally Sensitive Habitat Area, but Environmentally Sensitive Area fencing shall be installed along the maximum disturbance limits at the site to minimize disturbance to adjacent habitat and vegetation. Therefore, the project is consistent with this policy.

Objective 2.5 Water Resources

2.5.2 General Policies

1. The County shall limit the kinds, locations and intensities of new development, including agriculture to minimize further erosion in the watersheds of Elkhorn and Moro Cojo Sloughs and sedimentation of the Sloughs. All development shall incorporate all available mitigation measures to meet these goals, including, at a minimum, the measures identified in Policy 2.5.3.C.(6).

Consistency Analysis:

The project is not anticipated to decrease existing water quality conditions in the project vicinity as effective Caltrans standard measures and Best Management Practices will be implemented during construction to avoid and minimize potential impacts to water quality. As previously stated, vegetation removal will be minimized to the greatest degree possible. Therefore, the project will be consistent with this policy.

Objective 2.6 Agriculture:

2.6.1 Key Policy

The County shall support the permanent preservation of prime agricultural soils exclusively for agricultural use. The County shall also protect productive farmland not on prime soils if it meets State productivity criteria and does not contribute to degradation of water quality. Development adjacent to prime and productive farmland shall be planned to be compatible with agriculture.

Consistency Analysis:

The work location in Monterey County is adjacent to prime and productive farmland. The work planned for this location includes trenching for electrical work and installation of a closed-circuit television, motor vehicle data system, a maintenance vehicle pullout, and a changeable message sign. All project work will occur within the roadway prism and disturbed ruderal areas, and no farmland will be converted as a result of project activities. Therefore, the project will be consistent with this policy.

Objective 2.8 Hazards

2.8.1 Key Policy

Land uses and development in areas of high geologic, flood, tsunami, and fire hazard shall be carefully regulated through the best available planning practices in order to minimize risks to life and property and damage to the natural environment.

Consistency Analysis:

A Preliminary Geotechnical Report was prepared by the project Geotechnical Specialist, Joseph Klamecki, which identified potential geologic hazards within the area of potential impact associated with the project. Based on these findings, the project is not anticipated to alter existing geologic or soil conditions and is also not anticipated to encounter or generate environmental concerns related to geology and/or soils. This Preliminary Geotechnical Report was used to aid in design and siting of project elements to minimize grading and other site preparation activities.

The work location in Monterey County is adjacent to the 100-year flood plain but lies outside of the boundary. The 2008 Very High Fire Hazard Severity Zone Map in Local Responsibility Areas for Monterey County as recommended by CAL FIRE shows that the Monterey County work location is within a Non-Very High Fire Hazard Severity Zone within the Local Responsibility Area. No portion of the project is located in a Very High Fire Hazard Severity Zone within State or Local Responsibility Areas. The Monterey County work location is located outside of the Tsunami Hazard Area, as defined by the California Governor's Office of Emergency Services. The project activities will not pose risks to life and property and damage to the natural environment as a result of geologic, flood, tsunami, or fire hazards. Therefore, the project is consistent with this policy.

Objective 2.9 Archaeological Resources

2.9.1 Key Policy

North County's archaeological resources, including those areas considered to be archaeologically sensitive but not yet surveyed and mapped, shall be maintained and protected for their scientific and cultural heritage values. New land uses, both public and private, should be considered compatible with this objective only where they incorporate all site planning and design features necessary to minimize or avoid impacts to archaeological resources.

Consistency Analysis:

It is determined that the project does not have the potential to affect cultural resources within the project limits. The project will involve work on the State Route 1 corridor, which has been studied multiple times for many highway maintenance and upgrade projects. The project work locations are areas that have been previously disturbed and/or have been maintained over the years. Because the project's activities will be limited to within the State Route 1 corridor, no additional cultural studies are required at this time. Therefore, the project is consistent with this policy.

Chapter 3. Public Service System

Objective 3.1 Transportation

3.1.1 Key Policy

State highways within the North County coastal area should be upgraded to provide for a safe and uncongested flow of traffic. Major County roads should be expanded or managed to accommodate traffic volumes at Level of Service C. Public transit should be expanded to provide a viable transportation alternative.

Consistency Analysis:

Improving roadway lighting, traffic monitoring, and maintenance access will help reduce motorists' and maintenance crews' exposures to hazardous roadway conditions. The existing traffic data collection stations are outdated, and a changeable message sign will allow for better communication along the corridor. These improvements will help contribute to making State Highway 1 safer and more efficient within the Monterey North County coastal area. Therefore, the project is consistent with this policy.

Santa Cruz County:

The project is also partially located within the Coastal Zone in Santa Cruz County and Santa Cruz County maintains jurisdiction in the region through their Local Coastal Program. The majority of project activities will be located within Santa Cruz County and will likely to require temporary and permanent easements for completion.

The project is consistent with the following relevant policies from the Santa Cruz County Local Coastal Program:

Chapter 5 Conservation and Open Space

Objective 5.1 Biological Diversity

5.1.3 Environmentally Sensitive Habitats

Designate the areas described in 5.1.2 (d) through (j) as Environmentally Sensitive Habitats per the California Coastal Act and allow only uses dependent on such resources in these habitats within the Coastal Zone unless other uses are: (a) consistent with sensitive habitat protection policies and serve a specific purpose beneficial to the public; (b) it is determined through environmental review that any adverse impacts on the resource will be completely mitigated and that there is no feasible less-damaging alternative; and (c) legally necessary to allow a reasonable economic use of the land, and there is no feasible less damaging alternative.

5.1.6 Development Within Sensitive Habitats

Sensitive habitats shall be protected against any significant disruption of habitat values; and any proposed development within or adjacent to these areas must maintain or enhance the functional capacity of the habitat. Reduce in scale, redesign, or, if no other alternative exists, deny any project which cannot sufficiently mitigate significant adverse impacts on sensitive habitats unless approval of a project is legally necessary to allow a reasonable use of the land.

5.1.8 Chemicals within Sensitive Habitats

Prohibit the use of insecticides, herbicides, or any toxic chemical substance in sensitive habitats, except when an emergency has been declared, when the habitat itself is threatened, when a substantial risk to public health and safety exists, including maintenance for flood control by Public Works, or when such use is authorized pursuant to a permit issued by the Agricultural Commissioner.

5.1.9 Biotic Assessments

Within the following areas, require a biotic assessment as part of normal project review to determine whether a full biotic report should be prepared by a qualified biologist: (a) Areas of biotic concern, mapped; (b) Sensitive habitats, mapped & unmapped.

Objective 5.2 Riparian Corridors and Wetlands

5.2.3 Activities Within Riparian Corridors and Wetlands

Development activities, land alteration and vegetation disturbance within riparian corridors and wetlands and required buffers shall be prohibited unless an exception is granted per the Riparian Corridor and Wetlands Protection ordinance. As a condition of riparian exception, require evidence of approval for development from the US Army Corps of Engineers, California Department of Fish and Game, and other federal or state agencies that may have regulatory authority over activities within riparian corridors and wetlands.

5.2.4 Riparian Corridor Buffer Setback

Require a buffer setback from riparian corridors in addition to the specified distances found in the definition of riparian corridor. This setback shall be identified in the Riparian Corridor and Wetland Protection ordinance and established based on stream characteristics, vegetation and slope. Allow reductions to the buffer setback only upon approval of a riparian exception. Require a 10 foot separation from the edge of the riparian corridor buffer to any structure.

5.2.5 Setbacks From Wetlands

Prohibit development within the 100 foot riparian corridor of all wetlands. Allow exceptions to this setback only where consistent with the Riparian Corridor and Wetlands Protection ordinance, and in all cases, maximize distance between proposed structures and wetlands. Require measures to prevent water quality degradation from adjacent land uses, as outlined in the Water Resources section.

5.2.10 Development in Wetland Drainage Basins

Require development projects in wetland drainage basins to include drainage facilities or Best Management Practices (BMPs) which will maintain surface runoff patterns and water quality, unless a wetland management plan specifies otherwise, and minimize erosion, sedimentation, and introduction of pollutants.

Consistency Analysis:

[The following text has been added since the draft environmental document was circulated.] Wetlands meeting the one-parameter definition under Cowardin et al., 1979, including streams and riparian habitat (willow woodland); oak woodland; and habitat for sensitive species are all considered Environmentally Sensitive Habitat Areas and are located in close proximity to project components. A Natural Environment Study and Natural Environment Study Addendum were prepared to evaluate project impacts on these resources.

However, no tree removal is planned for this project, and no wetlands, including streams and riparian habitat, or oak woodland will be impacted by the project. All Environmentally Sensitive Areas present near work areas will be shown on plans and flagged for avoidance before ground disturbing activities occur. In addition, given their proximity to Environmentally Sensitive Habitat Areas at post miles 7.13 and 7.66, work will be conducted when the drainage system is dry, and in dry weather expected for at least 14 days, to ensure that there would be no indirect impacts on these habitat areas.

While elements of this project are located within 100 feet of a riparian corridor, it is eligible for an exemption from the Santa Cruz County Code Riparian Corridor and Wetlands Protection Ordinance, per Chapter 16.30.050 Exemptions:

“The following activities shall be exempt from the provisions of this chapter.

(A) The continuance of any preexisting nonagricultural use, provided such use has not lapsed for a period of one year or more. This shall include change of uses which do not significantly increase the degree of encroachment into or impact on the riparian corridor as determined by the Planning Director.”

The purpose of this project is to maintain the efficiency and serviceability of existing roadway by improving the existing deteriorating drainage infrastructure, and thus is considered a “continuance of any preexisting nonagricultural use” to which setback requirements do not apply.

[The following text has been added since the draft environmental document was circulated.] The Biological Study area is in the known range of the State Fully Protected Santa Cruz long-toed salamander; however, suitable breeding habitat for the species is not present at any of the work locations. Because no project-related construction activities will occur in aquatic or upland habitat areas suitable for this species, no impacts are anticipated.

[The following text has been added since the draft environmental document was circulated.] Finally, designated critical habitat for the Santa Cruz tarplant and California red-legged frog occurs in the project area. Approximately 0.06 acre of California red-legged frog critical habitat and 0.26 acre of Santa Cruz tarplant critical habitat would be permanently impacted by the project; 0.03 acre of Santa Cruz tarplant critical habitat would be temporarily impacted. The Federal Endangered Species Act Section 7 effects determination concludes a “may affect, and is likely to adversely affect” for both species. However, pre-construction surveys and the presence of a biological monitor during construction, in addition to several avoidance and minimization measures listed in Section 2.1.4 and Natural Environment Study Addendum, would ensure that impacts on these species are minimized. With implementation of these measures, the project would be consistent with this policy.

Objective 5.4 Monterey Bay and Coastal Water Quality

5.4.14 Water Pollution from Urban Runoff

Review proposed development projects for their potential to contribute to water pollution via increased storm water runoff. Utilize erosion control measures, on-site detention and other appropriate storm water best management practices to reduce pollution from urban runoff.

Consistency Analysis:

The project is not anticipated to decrease existing water quality conditions in the project vicinity as effective Caltrans standard measures and Best Management Practices will be implemented during construction to avoid and minimize potential impacts to water quality. [The following text has been added since the draft environmental document was circulated.] Therefore, the project is consistent with this policy.

Objective 5.10 Visual Resources

5.10.2 Development Within Visual Resource Areas

Recognize that visual resources of Santa Cruz County possess diverse characteristics and that the resources worthy of protection may include, but are not limited to, ocean views, agricultural fields, wooded forests, open meadows, and mountain hillside views. Require projects to be evaluated against the context of their unique environment and regulate structure height, setbacks, and design to protect these resources consistent with the objectives and policies of this section. Require discretionary review for all development within the visual resource area of Highway One, outside of the Urban/Rural boundary, as designated on the GP/LCP Visual Resources Map and apply the design criteria of Section 13.20.130 of the County's zoning ordinance to such development.

5.10.3 Protection of Public Vistas

Protect significant public vistas as described in policy 5.10.2 from all publicly used roads and vista points by minimizing disruption of landform and aesthetic character caused by grading operations, timber harvests, utility wires and poles, signs, inappropriate landscaping and structure design. Provide necessary landscaping to screen development which is unavoidably sited within these vistas.

5.10.9 Restoration of Scenic Areas

Require on-site restoration of visually blighted conditions as a mitigating condition of permit approval for new development. The type and amount of restoration shall be commensurate with the size of the project for which the permit is issued. Provide technical assistance for restoration of blighted areas.

Consistency Analysis:

With implementation of visual minimization measures included in Section 2.1.1 Aesthetics, the potential for visual impacts would be reduced to less than significant levels. These minimization measures include but are not limited to preservation of existing vegetation, revegetation with native plant species, aesthetic treatments for paving beyond the gore, and painting of traffic monitoring systems. [The following text has been added since the draft environmental document was circulated.] Lighting will be directed downward and will include cut-off lens fixtures such that no point source lighting is visible from adjacent parcels. With implementation of these measures, the project would be consistent with these policies.

Chapter 6

Objective 6.2 Slope Stability

6.2.10 Site Development to Minimize Hazards

Require all developments to be sited and designed to avoid or minimize hazards as determined by the geologic hazards assessment or geologic and engineering investigations.

Objective 6.3 Erosion

6.3.3 Abatement of Grading and Drainage Problems

Require, as a condition of development approval, abatement of any grading or drainage condition on the property which gives rise to existing or potential erosion problems.

6.3.4 Erosion Control Plan Approval

Required for Development Require approval of an erosion control plan for all development, as specified in the Erosion Control ordinance. Vegetation removal shall be minimized and limited to that amount indicated on the approved development plans, but shall be consistent with fire safety requirements.

6.3.8 On-Site Sediment Containment

Require containment of all sediment on the site during construction and require drainage improvements for the completed development that will provide runoff control, including onsite retention or detention where downstream drainage facilities have limited capacity. Runoff control systems or Best Management Practices shall be adequate to prevent any significant increase in site runoff over pre-existing volumes and velocities and to maximize on-site collection of non-point source pollutants.

6.3.9 Site Design to Minimize Grading

"Require site design in all areas to minimize grading activities and reduce vegetation removal based on the following guidelines:

- (a) Structures should be clustered;
- (b) Access roads and driveways shall not cross slopes greater than 30 percent; cuts and fills should not exceed 10 feet, unless they are wholly underneath the footprint and adequately retained;
- (c) Foundation designs should minimize excavation or fill;
- (d) Building and access envelopes should be designated on the basis of site inspection to avoid particularly erodable areas;
- (e) Require all fill and sidecast material to be recompacted to engineered standards, reseeded, and mulched and/ or burlap covered."

Consistency Analysis:

The purpose of this project is to maintain the efficiency and serviceability of existing roadway by improving the existing deteriorating drainage infrastructure, so any existing subpar grading or drainage conditions will be improved.

The project is not anticipated to decrease existing water quality conditions in the project vicinity as effective combinations of temporary and permanent erosion and sediment control will be implemented as a component of the project to avoid and minimize potential impacts to water quality. With implementation of these measures, the project would be consistent with this policy.

A Preliminary Geotechnical Report was prepared by the project Geotechnical Specialist, Joseph Klamecki, which identified potential geologic hazards within the area of potential impact associated with the project. [The following text has been added since the draft environmental document was circulated.] Based these findings, the project is not anticipated to alter existing geologic or soil conditions and is also not anticipated to encounter or generate environmental concerns related to geology and/or soils. This Preliminary Geotechnical Report was used to aid in design and siting of project elements to minimize grading and other site preparation activities. Therefore, the project is consistent with these policies.

[The following section has been added since the draft environmental document was circulated.]

City of Watsonville:

Finally, small portions of the project are also partially located within the Coastal Zone in City of Watsonville and subject to the City's Coastal Land Use Plan. Specifically, portions of the project are within Area R, Highway 1 and Local Street Right-of-Ways, a designated area of the Coastal Land Use Plan.

The project is consistent with the following relevant policies from the City of Watsonville's Local Coastal Program:

R.3 Performance Standards for All Development

d. Except for the Environmentally Sensitive Habitat Area east of the farm road on Area C, all development shall be set back a minimum of 100 feet from any environmentally sensitive habitat area. Appropriate native trees, shrubs, and grasses shall be planted in the required setback area, consistent with a landscape plan prepared by a qualified wetland biologist, wherever development is adjacent to an environmentally sensitive habitat area, in such a manner as to provide a visual screen, impede human access and enhance bird roosting and nesting. Adjacent to running water, native riparian species are appropriate. In other areas native upland species are appropriate.

e. All development shall be sited and designed to minimize the amount of noise, lights, glare, and activity visible and/or audible within environmentally sensitive habitat areas and their required buffers. Adequate screening (through plantings, soil berms, and/or solid wood fences) located outside of the environmentally sensitive habitat areas and their buffers shall be required to limit degradation of habitat and buffer areas, and to ensure that the amount of noise, lights, glare, and activity visible and/or audible in these areas are minimized.

f. All environmentally sensitive habitat areas and environmentally sensitive habitat area buffers shall be permanently maintained and protected. Deed restrictions or open space/conservation easements shall be required for all such buffer areas.

Consistency Analysis:

Wetlands meeting the one-parameter definition under Cowardin et al., 1979, including streams and riparian habitat (willow woodland); oak woodland; and habitat for sensitive species are all considered Environmentally Sensitive Habitat Areas and are located in close proximity to project components. A Natural Environment Study and Natural Environment Study Addendum were prepared to evaluate project impacts on these resources.

However, no tree removal is planned for this project, and no wetlands, including streams and riparian habitat, or oak woodland would be impacted by the project. All Environmentally Sensitive Habitat Areas present near work areas will be shown on plans and flagged for avoidance before ground disturbing activities occur. In addition, given their proximity to West Struve Slough and other Environmentally Sensitive Habitat Areas, culvert segment replacements, joint repairs, and lining work at post miles 2.75, 2.83, and 3.22 would be conducted when the drainage system is dry, and in dry weather expected for at least 14 days, to ensure that there would be no indirect impacts on these habitat areas.

The Biological Study area is in the known range of the State Fully Protected Santa Cruz long-toed salamander, however, suitable breeding habitat for the species is not present at any of the work locations. Because no project-related construction activities will occur in aquatic or upland habitat areas suitable for this species, no impacts are anticipated.

Finally, designated critical habitat for the Santa Cruz tarplant and California red-legged frog occur in the project area. Approximately 0.06 acre of California red-legged frog critical habitat and 0.26 acre of Santa Cruz tarplant critical habitat would be permanently impacted by the project; 0.03 acre of Santa Cruz tarplant critical habitat would be temporarily impacted. The Federal Endangered Species Act Section 7 effects determination concludes a “may affect, and is likely to adversely affect” for both species. However, pre-construction surveys and the presence of a biological monitor during

construction, in addition to several avoidance and minimization measures listed in Section 2.1.4 and Natural Environment Study Addendum, would ensure that impacts on these species are minimized. With implementation of these measures, the project would be consistent with this policy.

Appendix C Avoidance, Minimization, and/or Mitigation Summary

Aesthetics (2.1.1)

With implementation of the following minimization measures, the project will be consistent with the aesthetic and visual resource protection goals along State Route 1, and potential visual impacts will be reduced:

VIS 1: Preserve as much existing vegetation as possible. Prescriptive clearing and grubbing and grading techniques which save the most existing vegetation possible will be employed.

VIS 2: Revegetate all disturbed areas with native plant species appropriate to each specific work location.

VIS 3: Replacement planting shall include aesthetic considerations as well as the inherent biological goals. Revegetation shall include native trees and plants as determined by the Caltrans Biologist and Caltrans District 5 Landscape Architect.

VIS 4: Paving beyond the gore shall include aesthetic treatments to be determined and approved by the District 5 Landscape Architect.

VIS 5: Traffic monitoring systems elements shall be aesthetically treated, such as painting, and will be determined and approved by the District 5 Landscape Architect.

VIS 6: The changeable message sign elements, including but not limited to frames, poles, trusses, catwalks, ladders, and associated hardware, should be painted or otherwise colored to visually recede into the setting. Coloring should also include the front and side frames, and back panel of the electronic sign panel itself. The color shall be determined and approved in conjunction with the District 5 Landscape Architect.

VIS 7: All streetlights shall be directed downward and shall include cut-off lens fixtures such that no point source lighting is visible from adjacent parcels.

VIS 8: Following construction, re-grade, and re-contour all construction staging areas and any other temporary use areas as necessary to match the surrounding pre-project topography.

Air Quality (2.1.3)

The potential for air quality impacts generated by project construction will be reduced to less than significant under CEQA with the implementation of the following minimization measure:

AIR 1: All applicable Caltrans standard measures and strategies for Air Quality, Emissions Reductions, Dust Control and Dust Palliative will be implemented during project construction.

Biological Resources (2.1.4)

Potential impacts to biological resources as a result of the project will be reduced to less than significant under CEQA with implementation of the following measures:

BIO 1: Prior to any ground-disturbing activities, Environmentally Sensitive Area fencing shall be installed along the maximum disturbance limits at each work site to minimize disturbance to adjacent habitats and/or vegetations. Special Provisions for the installation of Environmentally Sensitive Area fencing and silt fencing shall be included in the Construction Contract and identified on the project plans.

[The following text has been changed since the draft environmental document was circulated.] BIO 2: Impacts to native vegetation shall be offset by replacement plantings within the project limits, at replacement ratios that meet or exceed those required by the Coastal Development Permits that will be issued by the City of Watsonville, Monterey County and Santa Cruz County (revised to add the City of Watsonville and Monterey County).

[The following text has been added since the draft environmental document was circulated.] BIO 3: Streams, riparian areas, and wetlands, including coastal Environmentally Sensitive Habitat Areas, that are present near work areas will be shown on plan sets as Environmentally Sensitive Areas, and the project specifications will indicate that they will be avoided at all times.

[The following text has been added since the draft environmental document was circulated.] BIO 4: Areas with riparian vegetation, including coastal Environmentally Sensitive Habitat Areas, near electrical work or grading will be flagged for avoidance before any ground disturbing activities occur.

[The following text has been added since the draft environmental document was circulated.] BIO 5: Culvert segment replacement, joint repairs, and lining work at post miles 2.75, 2.83, 3.22, 7.13, and 7.66 shall be conducted when the system is dry, and dry weather is expected for at least 14 days.

BIO 6: During construction, Caltrans shall ensure that the spread or introduction of invasive plant species shall be avoided to the maximum extent possible.

BIO 7: Only clean fill shall be imported. When practicable, invasive exotic plants in the project site shall be removed and properly disposed of. Any plant species rated as “High” on the Cal-IPC Invasive Plant Inventory that are removed from the construction site shall be taken to a landfill to prevent the spread of invasive species. Inclusion of any species that occurs on the Cal-

IPC Invasive Plant Inventory in the Caltrans erosion control seed mix or landscaping plans for the project shall be avoided.

BIO 8: Construction equipment shall be inspected to verify it is clean and weed-free by Caltrans before entering the construction site. If necessary, wash stations on-site shall be established for construction equipment under the guidance of Caltrans in order to avoid/minimize the spread of invasive plants and/or seed within the construction area. If wash stations on-site are infeasible due to the site's space constraints, construction equipment shall be cleaned off-site and then driven only on paved roads to the site.

BIO 9: Only U.S. Fish and Wildlife Service-approved biologists shall participate in activities associated with the capture, handling, and monitoring of California red-legged frogs.

BIO 10: Ground disturbance shall not begin until written approval is received from the U.S. Fish and Wildlife Service that the biologist is qualified to conduct the work.

BIO 11: A U.S. Fish and Wildlife Service-approved biologist shall survey the project area no more than 48 hours before the onset of work activities. If any life stage of the California red-legged frog is found and these individuals are likely to be killed or injured by work activities, the approved biologist shall be allowed sufficient time to move them from the site before work begins. The U.S. Fish and Wildlife Service-approved biologist shall relocate the California red-legged frogs the shortest distance possible to a location that contains suitable habitat and will not be affected by the activities associated with the project. The relocation site shall be in the same drainage to the extent practicable. Caltrans shall coordinate with the U.S. Fish and Wildlife Service on the relocation site prior to the capture of any California red-legged frogs.

BIO 12: Before any activities begin on a project, a U.S. Fish and Wildlife Service-approved biologist shall conduct a training session for all construction personnel. At a minimum, the training shall include a description of the California red-legged frog and its habitat, the specific measures that are being implemented to conserve the California red-legged frog for the current project, and the boundaries within which the project may be accomplished. Brochures, books, and briefings may be used in the training session, provided that a qualified person is on hand to answer any questions.

BIO 13: A U.S. Fish and Wildlife Service-approved biologist shall be present at the work site until all California red-legged frogs have been removed, workers have been instructed, and disturbance of the habitat has been completed. After this time, Caltrans shall designate a person to monitor on-site compliance with all minimization measures. The U.S. Fish and Wildlife Service-approved biologist shall ensure that this monitor receives the training outlined in measure 4 above and in the identification of California red-legged

frogs. If the monitor or the U.S. Fish and Wildlife Service-approved biologist recommends that work be stopped because California red-legged frogs will be affected in a manner not anticipated by Caltrans and the U.S. Fish and Wildlife Service during review of the proposed action, he or she shall notify the resident engineer immediately. The resident engineer shall resolve the situation by requiring that all actions that are causing these effects be halted. When work is stopped, the U.S. Fish and Wildlife Service shall be notified as soon as possible.

BIO 14: During project activities, all trash that may attract predators or scavengers shall be properly contained, removed from the work site, and disposed of regularly. Following construction, all trash and construction debris shall be removed from work areas.

BIO 15: Without the express permission of the U.S. Fish and Wildlife Service, all refueling, maintenance and staging of equipment and vehicles shall occur at least 60 feet from the riparian habitat or water bodies and not in a location from where a spill will drain directly toward aquatic habitat. The monitor shall ensure contamination of habitat does not occur during such operations. Prior to the onset of work, Caltrans shall ensure that a plan is in place for prompt and effective response to any accidental spills. All workers shall be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur.

BIO 16: Habitat contours shall be returned to a natural configuration at the end of the project activities. This measure shall be implemented in all areas disturbed by activities associated with the project, unless the U.S. Fish and Wildlife Service and Caltrans determine that it is not feasible or modification of original contours will benefit the California red-legged frog.

BIO 17: The number of access routes, size of staging areas, and the total area of activity shall be limited to the minimum necessary to achieve the project. Environmentally Sensitive Areas shall be established to confine access routes and construction areas to the minimum area necessary to complete construction, and minimize the impact to California red-legged frog habitat; this goal includes locating access routes and construction areas outside of wetlands and riparian areas to the maximum extent practicable.

BIO 18: Caltrans shall attempt to schedule work for times of the year when impacts to the California red-legged frog will be minimal. For example, work that will affect large pools that may support breeding will be avoided, to the maximum degree practicable, during the breeding season (November through May). Isolated pools that are important to maintain California red-legged frogs through the driest portions of the year will be avoided, to the maximum degree practicable, during the late summer and early fall. Habitat assessments, surveys, and technical assistance between Caltrans and the U.S. Fish and

Wildlife Service during project planning shall be used to assist in scheduling work activities to avoid sensitive habitats during key times of year.

BIO 19: To control sedimentation during and after project completion, Caltrans shall implement Best Management Practices outlined in any authorizations or permits, issued under the authorities of the Clean Water Act received for the project. If Best Management Practices are ineffective, Caltrans shall attempt to remedy the situation immediately, in coordination with the U.S. Fish and Wildlife Service.

BIO 20: If a work site is to be temporarily dewatered by pumping, intakes shall be completely screened with wire mesh not larger than 0.2 inch to prevent California red-legged frogs from entering the pump system. Water shall be released or pumped downstream at an appropriate rate to maintain downstream flows during construction. Upon completion of construction activities, any diversions or barriers to flow shall be removed in a manner that will allow flow to resume with the least disturbance to the substrate. Alteration of the streambed shall be minimized to the maximum extent possible; any imported material shall be removed from the streambed upon completion of the project.

BIO 21: Unless approved by the U.S. Fish and Wildlife Service, water shall not be impounded in a manner that may attract California red-legged frogs.

BIO 22: A U.S. Fish and Wildlife Service-approved biologist shall permanently remove any individuals of exotic species, such as bullfrogs (*Rana catesbeiana*), signal and red swamp crayfish (*Pacifasticus leniusculus*; *Procambarus clarkia*), and centrarchid fishes from the project area, to the maximum extent possible. The U.S. Fish and Wildlife Service-approved biologist shall be responsible for ensuring his or her activities are in compliance with the California Fish and Game Code.

BIO 23: If Caltrans demonstrates that disturbed areas have been restored to conditions that allow them to function as habitat for the California red-legged frog, these areas will not be included in the amount of total habitat permanently disturbed.

BIO 24: To ensure that diseases are not conveyed between work sites by the U.S. Fish and Wildlife Service-approved biologist, the fieldwork code of practice developed by the Declining Amphibian Task Force shall be followed at all times.

BIO 25: Project sites shall be revegetated with an assemblage of native riparian, wetland, and upland vegetation suitable for the area. Locally collected plant materials shall be used to the extent practicable. Invasive, exotic plants shall be controlled to the maximum extent practicable. This measure shall be implemented in all areas disturbed by activities associated

with the project, unless the U.S. Fish and Wildlife Service and Caltrans determine that it is not feasible or practical.

BIO 26: Caltrans shall not use herbicides as the primary method to control invasive, exotic plants. However, if it is determined that the use of herbicides is the only feasible method for controlling invasive plants at a specific project site, it will implement the following additional protective measures for the California red-legged frog:

- a. Caltrans shall not use herbicides during the breeding season for the California red-legged frog;
- b. Caltrans shall conduct surveys for the California red-legged frog immediately prior to the start of herbicide use. If found, California red-legged frogs shall be relocated to suitable habitat far enough from the project area that no direct contact with herbicide will occur;
- c. Giant reed and other invasive plants shall be cut and hauled out by hand and painted with glyphosate-based products, such as Aquamaster® or Rodeo®;
- d. Licensed and experienced Caltrans staff or a licensed and experienced contractor shall use a hand-held sprayer for foliar application of Aquamaster® or Rodeo® where large monoculture stands occur at an individual project site;
- e. All precautions shall be taken to ensure that no herbicide is applied to native vegetation;
- f. Herbicides shall not be applied on or near open water surfaces (no closer than 60 feet from open water);
- g. Foliar applications of herbicide shall not occur when wind speeds are in excess of 3 miles per hour;
- h. No herbicides shall be applied within 24 hours of forecasted rain;
- i. Application of all herbicides shall be done by qualified Caltrans staff or contractors to ensure that overspray is minimized, that all applications are made in accordance with the label recommendations, and with implementation of all required and reasonable safety measures. A safe dye shall be added to the mixture to visually denote treated sites. Application of herbicides shall be consistent with the U.S Environmental Protection Agency's Office of Pesticide Programs, Endangered Species Protection Program county bulletins;
- j. All herbicides, fuels, lubricants, and equipment shall be stored, poured, or refilled at least 60 feet from riparian habitat or water bodies in a location where a spill will not drain directly toward aquatic habitat. Prior to the onset of work, Caltrans shall ensure that a plan is in place for a prompt and effective response

to accidental spills. All workers shall be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur.

BIO 27: Upon completion of the project, Caltrans shall ensure that a Project Completion Report is completed and provided to the U.S. Fish and Wildlife Service, following the template provided with the Programmatic Biological Opinion. Caltrans shall include recommended modifications of the protective measures if alternative measures will facilitate compliance with the provisions of this consultation.

[The following text has been added since the draft environmental document was circulated.] BIO 28: All work at post mile 7.31 shall be conducted between June 1 and October 31, when the system is dry, and dry weather is expected for at least 14 days.

BIO 29: Prior to construction, vegetation removal shall be scheduled to occur from September 2 to February 14, outside of the typical nesting bird season if possible, to avoid potential impacts to nesting birds. If tree removal or other construction activities are proposed to occur within 100 feet of potential habitat during the nesting season (February 15 to September 1), a nesting bird survey shall be conducted by a biologist determined qualified by Caltrans no more than 3 days prior to construction. If an active nest is found, Caltrans shall coordinate with the California Department of Fish and Wildlife to determine an appropriate buffer based on the habits and needs of the species. The buffer area shall be avoided until a qualified biologist has determined that juveniles have fledged.

BIO 30: During construction, active bird nests shall not be disturbed and eggs or young of birds covered by the Migratory Bird Treaty Act and California Fish and Game Code shall not be killed, destroyed, injured, or harassed at any time. Readily visible exclusion zones where nests must be avoided within 100 feet of disturbance shall be established by a qualified biologist using Environmentally Sensitive Area fencing. Work in exclusion zones shall be avoided until young birds have fledged (permanently left the nest) or the qualified biologist has determined that nesting activity has otherwise ceased.

BIO 31: Trees to be removed shall be noted on design plans. Prior to any ground-disturbing activities, Environmentally Sensitive Area fencing shall be installed around the dripline of trees to be protected within the project limits.

BIO 32: All clearing/grubbing and vegetation removal shall be monitored and documented by the biological monitor(s) regardless of time of year.

Greenhouse Gas Emissions (2.1.8)

The potential for greenhouse gas impacts generated by project construction will be reduced to less than significant under CEQA with the implementation of the following minimization measure:

GHG 1: All construction activities will comply with all district rules, regulations and ordinances, and statutes of the California Air Resources Board to reduce and minimize construction greenhouse gas emissions (i.e., restrictions on idling equipment, properly maintained equipment, and appropriate point sources for materials, etc.). All applicable Caltrans standard measures and strategies for emissions reductions will be implemented to reduce construction-generated greenhouse gas emissions. Additional strategies and techniques for the reduction of construction emission will be implemented where feasible and appropriate.

Hazards and Hazardous Materials (2.1.9)

The potential for impacts due to wildland fires generated by project construction will be reduced to less than significant under CEQA with the implementation of the following minimization measure.

Wildland Fires

HAZ 1: The project will include Caltrans Standard Specifications related to fire prevention and fire safety in order to minimize the potential for igniting nearby vegetation during construction activities, along with implementing the California Division of Safety and Health – Fire Protection and Prevention Guidance.

Hydrology and Water Quality (2.1.10)

The potential for impacts to water quality caused by project construction will be reduced to less than significant under CEQA with the implementation of the following minimization measure:

WQ 1: Implement a robust Qualified Storm Water Pollution Prevention Plan (SWPPP) to minimize any temporary impacts to the storm water during construction and use construction best management practices, as specified in the Stormwater Data Report. Also implement any Caltrans Standard Specifications for erosion and stormwater control during construction.

Appendix D Comment Letters and Responses

[This appendix has been added since the draft environmental document was circulated.]

The Initial Study with Proposed Mitigated Negative Declaration circulated to the public for review and comment for 31 days between June 29, 2022 and July 30, 2022. This appendix contains the comments received during the circulation period, retyped for readability. The comment letters are stated verbatim as submitted, with acronyms, abbreviations, and any original grammatical or typographical errors included. A Caltrans response follows each comment presented. Copies of the original comment letters and documents can be found in Volume 2 of this document.

A notice was published in two local newspapers—*The Santa Cruz Sentinel* and *The Monterey Herald*—and on the Caltrans website informing the public of the environmental document’s availability for review and comment and to advertise an opportunity for a virtual public meeting. No public meeting was requested.

Comments from the California Department of Fish and Wildlife

COMMENT 1: Project Design Analysis and Coordination

Issue: The MND does not sufficiently disclose or analyze potentially significant impacts to some fish and wildlife resources. In addition, the MND notes that unidentified culverts may also be modified as a result of Project completion. Site specific locations are needed to ensure culverts are designed to meet the flow capacity of a given system, protect fish passage in fish bearing systems and to ensure potential barriers are remediated.

Recommendation: The updated MND should disclose all potential locations where Project work may occur.

Recommendation 1 – Design Coordination: Early coordination with CDFW Habitat Conservation staff and the CDFW Conservation Engineering Branch is recommended to provide review and analysis of any proposed structures or Project elements with the potential to impact fish and wildlife resources. CDFW Conservation Engineering Branch should be provided engineered drawings and design specification planning sheets during the initial design process, prior to design selection and re-initiating design consultation at 30% design at minimum and through the permitting process for review and comment as identified in the Interagency Agreement (Agreement Number 43A0398).

Caltrans response to Comment 1: Caltrans has identified and assessed all culvert locations and segments that will be included in the project as

described in Tables 1.1, 1.2, and 1.3 in the environmental document. No additional locations are proposed.

Caltrans will engage in early coordination with the California Department of Fish and Wildlife during the project's subsequent design phase (also referred to as the Plans, Specifications, and Estimates phase). Caltrans will share design drawings and specification planning sheets with California Department of Fish and Wildlife staff to coordinate with the appropriate branches as described during the design and permitting process for review and comment.

COMMENT 2: Coastal Oak Woodlands, Heritage Oak Trees and Riparian Trees

Issue: The MND has not sufficiently disclosed or adequately analyzed the potentially significant impacts to coastal oak woodlands, individual oak trees and individual riparian trees that may be impacted by the Project. Specifically, the potential age and irreplaceable nature of old-growth and heritage trees proposed for removal within the Project limits have not been adequately described. Page 32 of the MND notes; "The project would temporarily affect approximately 2.66 acres of ruderal communities, approximately 0.32 acre of coast live oak woodland, approximately 0.51 acre of willow woodland, and approximately 0.07 acre of coastal scrub...". In addition, the lead agency describes the acres of impacts to oak woodlands and riparian habitat but the diameter at breast height (DBH) of individual trees has not been described.

The incorporation of the currently proposed avoidance and minimization measures do not adequately address the potentially significant impacts to oak woodlands, old-growth oak trees and riparian trees because under favorable conditions, oak trees grow fairly slowly and have low crown ratios. The proposed measures to replant sapling trees to offset significant impacts to heritage trees that may exist is not sufficient. The lead agency does not propose permanent protection or long-term management of replacement trees. In addition, the proposed avoidance and minimization measures MM BIO-1: Tree Replacement, MM BIO-2: Landscape Revegetation and MM BIO-3: Invasive Species Abatement do not adequately address the potentially significant impacts to oak woodlands, heritage oak trees and riparian trees. The proposal by the lead agency to remove 0.32 acre of coast live oak woodland trees and 0.51 acre of willow woodland of undisclosed DBH represents a potentially immitigable significant impact to heritage oak trees and large riparian trees.

Evidence the impact would be significant: Oak woodlands provide important ecosystem functions including habitat for numerous species of wildlife, reductions in soil erosion rates and preservation of water quality. The rapid and extensive land conversions in oak woodlands, and riparian areas within Santa Cruz and Monterey County, coupled with an apparent lack of regeneration of several species draws concern about the long-term survival of native oaks. Fragmentation of oak habitats reduces their ability to provide the

full range of ecological benefits, including maintenance of species diversity, as well as soil and watershed protection. Coast live oak (*Quercus agrifolia*) and old-growth oak trees (native oak tree that is greater than 15 inches in diameter) are of particular importance due to increased biological values and increased temporal loss (Tyler et. al., 2002). Loss of old-growth oak trees can have potentially immitigable impacts but also can result in cumulatively significant impacts on fish and wildlife resources that rely on those habitat types to sustain their populations.

Furthermore, the loss of oaks can significantly reduce the restoration potential of a stand as a great deal of time is required to replace them (Tyler et. al., 2002). Therefore, the removal of heritage trees will result in potentially immitigable significant impacts to fish and wildlife resources if additional project avoidance measures are not incorporated into the Project as conditions of approval.

Recommendation 1: The individual DBH of each tree proposed for removal should be disclosed to the natural resource agencies and general public.

Recommendation 2: On-Site Preservation of Oak and Riparian Trees On-Site: The lead agency shall develop additional design alternatives to avoid permanent impacts and removals of large trees within the project limits to preserve on-site. Those alternatives should be incorporated into a revised MND.

Caltrans response to Comment 2: After coordination with the Caltrans design team and recent site visits, it has been determined that oak tree removal will be avoided. Caltrans will continue to avoid and minimize impacts to oak and riparian trees to the greatest degree feasible through the design phase of the project. While no tree removal is anticipated at this time, Avoidance and Minimization Measure BIO 31 specifies that any trees to be removed will be denoted on design plans, and that Environmentally Sensitive Area fencing will be installed around the dripline of trees to be protected in place within the project limits. Oak and riparian trees outside the project impact area will be denoted on plans and will be protected with temporary Environmentally Sensitive Area fencing. If future design changes require removal of any native oak or riparian trees, a 10-to-1 replacement ratio will be applied. Replacement plantings will be coordinated by the Caltrans Landscape Architect Division and included in the project plans and specifications. The location of replacement plantings will be on-site and associated with existing coast live oak woodland or willow riparian areas for the purposes of providing continuity with the existing habitat. Caltrans has included information about replacement planting in Section 2.1.4 Biological Resources of this final environmental document.

COMMENT 3: Project Design Analysis and Coordination

Recommendation Mitigation Measure 1 – Design Coordination. The Project Development Team (PDT) shall incorporate principles to significantly reduce the number of trees removed and maximize protecting trees in place. Once trees are selected for preservation on-site the lead agency shall prepare a tree preservation plan that contains specific tree preservation methods. The plan shall set contractor guidelines for tree protection including; prominently marking protected areas, erecting barricades around designated trees, tree bumpers; avoidance of vehicular traffic or parking in these restricted areas; and prohibit material storage, grading, and dumping of chemicals and other materials in restricted areas. To ensure compliance, contractors should have tree preservation bonds to cover potential noncompliance issues, damage or loss of trees.

Recommendation Measure 2: Off-Site Conservation of Oak and Riparian Trees: If impacts cannot avoid or be avoided to heritage Oak and riparian trees (15 DBH or greater) the lead agency shall permanently preserve oak and riparian tree at an off-site location. The off-site location may be lands with habitats that may be rehabilitated, restored, or preserved and maintained to fully mitigate for the potentially significant impacts. The lands must be protected through fee title, transfer or conservation easement to an appropriate conservation entity to ensure long term preservation and successful implementation of the mitigation. The fish and wildlife resources or environments replaced or substituted for those impacted must be maintained in perpetuity.

Recommendation 3: Individual Tree Inventory Report: The updated MND shall include a tree inventory that includes map key information, species name, common name, diameter at breast height and overall health status for each individual tree on-site.

Recommendation 4: On-Site and Off-Site Restoration Plan: CEQA Guidelines §15126.4 (a) requires lead agencies to consider feasible mitigation measures to avoid or substantially reduce a project's significant environmental impacts. The lead agency shall develop a more in-depth restoration plan in consultation with the natural resource agencies to replace MM-BIO-29, MM-VIS-3 and be included in the MND as a condition of approval. The lead agency shall incorporate details that (1) commits itself to the mitigation, (2) adopts specific performance standards the mitigation will achieve, and (3) identifies the type(s) of potential action(s) that can feasibly achieve that performance standard. The lead agency shall specifically discuss permanent land protection in perpetuity, mitigation/restoration bank credit purchase and more specific acreage restoration areas and requirements in regard to Oak Woodlands and riparian habitat.

Caltrans response to Comment 3: No tree removal is currently anticipated. Appendix F of the Natural Environment Study shows representative pictures of

the culvert locations, including those with oak woodland and riparian habitat in the vicinity, such as photos #9, #11, #13, and #14. A tree inventory will be included on design plans and provided with the anticipated permit applications.

COMMENT 4: Santa Cruz Long-Toed Salamander

Issue: The MND states that there will be no effect to Santa Cruz long-toed salamander (*Ambystoma macrodactylum croceum*; SCLTS). The Project is located within a half mile dispersal distance of documented SCLTS occurrences and has the potential to cause impacts to the species. The Project is set to occur within the vicinity of known breeding ponds for SCLTS that include Seascape 1, Seascape 2, Seascape 3, Racehorse Lane, Calabasas, Seuss, Xantus, Olives, Buena Vista 1, and Buena Vista 1.

The Santa Cruz long-toed salamander is an endangered species under CESA (Fish & G. Code, § 2050 et seq.) and a Fully Protected species (Fish & G. Code § 5050). A fully protected species may not be taken or possessed at any time and no authorizations or permits may be issued for their take except for collecting these species for necessary scientific research, those exceptions do not apply to a linear transportation project.

Evidence the impact would be significant: Santa Cruz long-toed salamander has the potential to disperse through the area in suitable upland habitat, such as riparian woodland (U.S. Fish and Wildlife Service (USFWS) 2009). If SCLTS disperse into the area, the Project has the potential cause direct take of SCLTS through ground excavation, use of heavy machinery, and clearing habitat.

Recommendation 1 – Protocol Survey and SCLTS Impact Assessment: CDFW recommends protocol level surveys be performed as part of the Project to help inform SCLTS avoidance. CDFW also recommends Caltrans includes a discussion on the potential for presence of SCLTS in the MND and maps of that illustrate the locations of breeding ponds and suitable upland habitat in relation to the Project site. To determine the likelihood of SCLTS presence on-site, CDFW recommends conducting a full habitat assessment by gathering information from multiple sources including aerial imagery and topographic lidar maps, historical and recent survey data, field reconnaissance, scientific literature and “positive occurrence” databases such as California Natural Diversity Database (CNDDDB). Survey and monitoring protocols and guidelines for the SCLTS are available at: <https://www.fws.gov/media/guidance-site-assessment-and-field-surveys-detect-presence-or-report-negative-finding-santa>

Recommended Measure 2 - Avoidance of Impacts: The Project shall completely avoid impacts to SCLTS and its potential suitable habitat.

Caltrans response to Comment 4: The Natural Environment Study and Natural Environment Study Addendum include a discussion of the Santa Cruz

long-toed salamander that acknowledges the Biological Study Area for this project lies within the Santa Cruz long-toed salamander range (Ellicot-Buenavista and Valencia-Seascape metapopulations). Caltrans has included additional discussion of metapopulations and breeding ponds in the vicinity of the project in Section 2.1.4 Biological Resources of this final environmental document. There were no Santa Cruz long-toed salamanders observed within the Biological Study Area during biological surveys, and no project-related construction activities will occur within aquatic or upland habitat areas suitable for the Santa Cruz long-toed salamander. The project will fully avoid impacts to the Santa Cruz long-toed salamander and its potential suitable habitat. Avoidance of impacts to the Santa Cruz long-toed salamander and its habitat due to project activities was confirmed on October 20, 2022 by U.S. Fish and Wildlife Service Biologist Chad Mitcham in a meeting with Caltrans Biologists AnnMarie Blackburn and Morgan Robertson.

COMMENT 5: Fish Passage Assessment

Issue: Multiple potential fish passage barriers and unassessed locations exist within the identified Project limits, as described in the recommendations section below. Senate Bill 857 (SB-857), which amended Fish and Game Code § 5901 and added § 156 to the Streets and Highways Code states in § 156.3, “For any project using state or federal transportation funds programmed after January 1, 2006, [Caltrans] shall ensure that, if the project affects a stream crossing on a stream where anadromous fish are, or historically were found, an assessment of potential barriers to fish passage is done prior to commencing project design. [Caltrans] shall submit the assessment to the [CDFW] and add it to the CALFISH database. If any structural barrier to passage exists, remediation of the problem shall be designed into the project by the implementing agency. New projects shall be constructed so that they do not present a barrier to fish passage. When barriers to fish passage are being addressed, plans and projects shall be developed in consultation with the [CDFW].

Evidence the impact would be significant: The Project contains stream crossings within areas mapped as historic or current watersheds where anadromous fish are, or historically were found. The species include but are not limited to Riffle Sculpin, Pacific Lamprey, Tidewater Goby, Monterey Hitch, South Central California Coast Steelhead (BIOS; DS-1353). The decline of naturally spawning salmon and steelhead trout is primarily a result of the loss of appropriate stream habitat and the inability of fish to get access to habitat, according to reports to the Fish and Game Commission and by the CDFW (CDFW, 1996). Restoration of access to historical spawning and rearing areas should be incorporated into the Project design through barrier modification, fishway installation, or other means (CDFW, 1996).

Recommendations: If barriers or unassessed barriers noted within the Project limits identified below are found to be a barrier to fish passage, remediation of

the problem should be designed into the Project by the implementing agency as a Project feature in consultation with CDFW and other natural resource agencies. CDFW recommends discussing the following locations as they pertain to fish passage:

Location 1, Larkins Creek, PM 7.73; SR-1, (Latitude: 36.96125; Longitude: -121.86341; Santa Cruz County), Fish Passage Assessment Database ID# 55530, fish barrier status: unknown, requires a detailed survey per results of reconnaissance survey (First Pass).

Location 2, Unnamed tributary to Pacific Ocean, PM 7.46, SR-1, (Latitude: 36.95858; Longitude: -121.8598; Santa Cruz County), Fish Passage Assessment Database ID# 55529, fish barrier status: unknown, requires a detail survey per results of reconnaissance survey (First Pass).

Location 3, Unnamed tributary to Pacific Ocean, PM 6.9; SR-1, (Latitude: 36.95204; Longitude: -121.8524; Santa Cruz County), Fish Passage Assessment Database ID# 55527, fish barrier status: unknown, requires a detail survey per results of reconnaissance survey (First Pass).

Location 4, Unnamed tributary to the Pacific Ocean, PM 6.37; SR-1, (Latitude: 36.94647; Longitude: -121.8466; Santa Cruz County), Fish Passage Assessment Database ID# 734794, fish barrier status: unknown, requires a detail survey per results of reconnaissance survey (First Pass).

Location 5, Unnamed tributary to the Pacific Ocean, PM 5.91; SR-1, (Latitude: 36.94279; Longitude: -121.8403; Santa Cruz County), Fish Passage Assessment Database ID# 734792, fish barrier status: unknown, requires a detail survey per results of reconnaissance survey (First Pass).

Location 6, Unnamed tributary to the Harkins Slough, PM 3.6; SR-1, (Latitude: 36.92884; Longitude: -121.803; Santa Cruz County), Fish Passage Assessment Database ID# 762564, fish barrier status: unknown, requires a detail survey per results of reconnaissance survey (First Pass).

Location 7, Harkins Slough, PM 3.5; SR-1, (Latitude: 36.927504; Longitude: -121.80220; Santa Cruz County), Fish Passage Assessment Database ID# 731806, fish barrier status: unknown, requires a detail survey per results of reconnaissance survey (First Pass).

Location 8, Unnamed tributary to Harkins Slough, PM 3.4; SR-1, (Latitude: 36.9266; Longitude: -121.8007; Santa Cruz County), Fish Passage Assessment Database ID# 731966, fish barrier status: unknown, requires a detail survey per results of reconnaissance survey (First Pass).

Location 9, Unnamed tributary to the West Branch Sluvs Slough, PM 0; SR-1, (Latitude: 36.92068; Longitude: -121.78963; Santa Cruz County), Fish

Passage Assessment Database ID# 731864, fish barrier status: unknown, requires a detail survey per results of reconnaissance survey (First Pass).

Location 10, Struve Slough, PM 1.59; SR-1, (Latitude: 36.90731; Longitude: -121.78242; Santa Cruz County), Fish Passage Assessment Database ID# 731729, fish barrier status: unassessed. Survey conducted on 8/31/2021 determined this crossing warrants a detailed second pass survey.

Location 11, Watsonville Slough, PM 1.34; SR-1, (Latitude: 36.9026; Longitude: -121.7792; Santa Cruz County), Fish Passage Assessment Database ID# 731624, fish barrier status: unassessed. Survey conducted on 8/31/2021 and determined this crossing warrants a second pass detailed survey.

Location 12, Unnamed tributary to the Pajaro River, PM 101.7; SR-1, (Latitude: 36.8783; Longitude: -121.7715; Monterey County), Fish Passage Assessment Database ID# 731626, fish barrier status: unknown, requires a detail survey per results of reconnaissance survey (First Pass).

The fish passage section should discuss the current status of the crossing location noted in the California Fish Passage Assessment Database, conduct first pass and or second pass fish assessments, as necessary, as well as provide images of the upstream and downstream ends of water conveyance structure. CDFW requests a fish passage discussion section is included to address this potentially significant impact through the following avoidance and minimization measures, which should be made conditions of approval by the lead agency. Additional actions should be included in the MND as conditions of approval. Examples may include installation of artificial wood rat boxes, bat boxes, essential fish habitat rearing structures and spawning gravel importation to reduce potentially significant impacts to fish and wildlife resources.

Recommended Mitigation Measure 1: Fish Passage Assessment: To evaluate potential impacts to native fish species and fisheries resources, Caltrans shall conduct fish passage assessments as described above and provide the results to CDFW and the CALFISH database. If any structural barrier to passage exists, remediation of the problem shall be designed into the Project by the implementing agency. New projects shall be constructed so that they do not present a barrier to fish passage. When barriers to fish passage are being addressed, plans and projects shall be developed in consultation with the CDFW. CDFW shall be engaged prior to design in early coordination and at 30% design at minimum and through the permitting process for review and comment as identified in the Interagency Agreement (Agreement Number 43A0398).

Caltrans response to Comment 5: Please refer to Table 1.1 for a complete list of project culverts. No project work will occur in locations that have been determined to be a barrier to fish passage. Remediation and repairs will not present a barrier to fish passage.

During a site visit on September 26, 2022, Caltrans biologists determined the culvert at post mile 2.68 to be a barrier to approximately one quarter of a mile of anadromous fish-rearing habitat. Remediation of the culvert at post mile 2.68 would require replacement of the culvert with a larger culvert or bridge. Also, since another culvert segment within the same drainage system that crosses under State Route 1 presents another fish passage barrier immediately downstream, replacement of the additional culvert segment would also be needed in the project to improve fish passage. Therefore, the culvert at post mile 2.68 was excluded from this project. The latitude and longitude coordinates provided for Location 9 correspond to the drainage system at post mile 2.68.

No culvert work is proposed at Location 1, Location 2, Location 4, Location 6, Location 7, Location 8, Location 10, Location 11, or Location 12. Electrical work and paving work that will take place near these locations will not impact fish passage. Also, the Fish Passage Assessment Database notes that Locations 2 and 4 are not a barrier to fish passage because of the absence of an upstream defined stream channel for salmonid passage.

Location 3 is approximately 700 feet southeast of the culvert work at post mile 6.99 and will not be affected. This location is not considered a barrier to fish passage, according to the Fish Passage Assessment Database: “This roadway storm water drainage structure does not meet the criteria defined by the Caltrans reconnaissance fish passage assessment protocol to be considered for salmonid passage and therefore has been assigned a non-barrier status.” No jurisdictional features are affected at this location.

Location 5 is approximately 500 feet east of the culvert work at post mile 6.01 and will not be affected. This location is not considered a barrier to fish passage, according to the Fish Passage Assessment Database: “This culvert structure does not meet the criteria defined by the Caltrans reconnaissance fish passage assessment protocol to be considered for salmonid passage due to the absence of an upstream defined stream channel.” No jurisdictional features are affected at this location.

COMMENT 6: Wildlife Connectivity

Issue: California wildlife is losing the ability to move and migrate as habitat conversion and built infrastructure disrupt species habitat and cut off migration corridors (Senate Bill 790; SB-790). This Project location occurs within an irreplaceable and essential connectivity corridor. The current baseline condition of the SR-1 corridor represents a semi-permeable to permeable location for terrestrial wildlife connectivity. The proposal to construct alternatives that result in highway lane expansions have the potential to create a non-permeable barrier to terrestrial wildlife connectivity. The proposed increase in the number of travel lanes, proposal for extensive

median barriers, edge of pavement barriers, vehicle pullouts and access roads will all significantly expand the width and complexity of the corridor.

Recommendations: CDFW recommends the lead agency utilize terrestrial connectivity elements such as wildlife friendly culverts, directional fencing, strategically placed median barriers, under-crossings, over-crossings and elevated causeways into the Project as design features or conditions of approval. CDFW recommends the following considerations and information be incorporated into the Project MND based on CDFW's 2020 wildlife movement barrier priorities:

Wildlife Movement Barrier: Location 1: Highway 1, segment name; Hwy 1 SCLTS Rio Del Mar/Buena Vista, target species; Santa Cruz long-toed salamander, length miles; 5.214 miles, barrier ID W021.

Recommendation 1 - Wildlife Connectivity: The MND should include the results of a wildlife movement study. CDFW recommends the study occur over a period of at least 12 months prior to the development of designs so terrestrial connectivity structures can be programmed into the Project. The study should occur within the limits of the proposed Project to develop a baseline understanding of the areas where wildlife movement, crossings and mortalities are most prevalent. The study should also be utilized to develop Project design to identify areas where wildlife crossing structure(s) installation(s) would result in the largest benefit to rare, threatened and endangered species as well as special-status species and non-special-status species for wildlife connectivity. Analysis during the 12-month study should be utilized to determine the type, size and number of structures that would be most beneficial to facilitate wildlife connectivity (new wildlife crossing culverts, modification of existing culverts, elevated causeways, etc.). Upon completion of the Project, wildlife connectivity structures and movement corridors should be studied for an additional 6 to 12 month period, at minimum, to determine the effectiveness of the designs. The protocol for the baseline survey, post-construction surveys, site selection criteria and design criteria for the development of the wildlife connectivity structures should follow the protocols outlined in *The California Department of Transportation (Caltrans), Wildlife Crossings Design Manual* (Caltrans, 2009) and the *Federal Highway Administration Wildlife Crossing Structure Handbook – Design and Evaluation in North America, Publication No. FHWA-CFL/TD-11-003* (FHWA, 2011).

Caltrans response to Comment 6: This project will not add travel lanes or install median barriers or otherwise add features that will impede wildlife movement. Section 3.1.4 of the Natural Environment Study acknowledges that the project falls within the Wildlife Movement Barrier Priority for the Santa Cruz long-toed salamander. Culvert repair activities that fall within this range consist of joint maintenance or segment repairs and are not in areas considered to be Santa Cruz long-toed salamander habitat.

COMMENT 7: Special-Status Plants

Issue: State threatened, endangered or rare plant species may occur within the Project area. Without appropriate mitigation measures, the Project could significantly impact these species. Potential impacts to special-status plants include disrupting reproduction, mortality to individuals and/or populations. Unauthorized take of plant species listed as threatened, endangered, or rare pursuant to CESA or the Native Plant Protection Act is a violation of Fish and Game Code. Special-status plants are typically narrowly distributed endemic species. These species are susceptible to habitat loss and habitat fragmentation resulting from development, vehicle and foot traffic, and introduction of non-native plant species.

Recommendation 1 – Focused Plant Surveys: CNDDDB strongly encourages the use of CDFW protocols and guidelines. CDFW believes the link below to be the best available methodology for the intended purpose.
<https://wildlife.ca.gov/Conservation/Survey-Protocols#377281280-plants>.

Recommendation 2 - Plant Avoidance and Buffers: Special-status plant species should be avoided through delineation and establishment of a no disturbance buffer of at least 50 feet from the outer edge of the plant population or specific habitat type required by special-status plant species. If State-listed plant species are identified during surveys and full avoidance of take is not feasible, take authorization through CDFW issuance of an ITP would be required.

Caltrans response to Comment 7: Section 2.1.4 Biological Resources discusses regional plant species of concern and describes which species have the potential to occur in the study areas and that none were found during appropriately timed surveys. The Natural Environment Study also includes a special-status plant discussion, which includes survey results for sensitive plant species, and states no special-status plants were found at the project locations. If state-listed species are identified during construction, measures will be included to ensure full avoidance.

COMMENT 8: Light Impact Analysis and Discussion

Issue: A significant portion of the proposed Project within the SR-1 corridor does not contain any overhead or artificial light sources. The Project proposes a new changeable message sign that would be installed at post mile 101.54 in Monterey County. The Project also proposes to install highway lighting at six new locations between post mile 0.0 and post mile 7.94 on State Route 1. Artificial light spillage beyond the prism of the roadway into natural areas may result in a potentially significant impacts through substantial degradation of the quality of the environment. Artificial light pollution also has the potential to significantly and adversely affect biological resources and the habitat that supports them. Unlike the natural brightness created by the monthly cycle of

the moon, the permanent and continuously powered lighting fixtures create an unnatural light regime that produces a constant light output. Continuous light output for 365 days a year can also have cumulatively significant impacts on fish and wildlife populations.

Evidence the impact would be significant: Artificial night lighting can disrupt the circadian rhythms of many wildlife species. Many species use photoperiod cues for communication (e.g., bird song; Miller 2006), determining when to begin foraging (Stone et al. 2009), behavior thermoregulation (Beiswenger 1977), and migration (Longcore and Rich 2004). Artificial night lighting has also been found to impact juvenile salmonid overwintering success by delaying the emergence of salmonids from benthic refugia and reducing their ability to feed during the winter (Contor and Griffith 1995). For nocturnally migrating birds, direct mortality as a result of collisions with anthropogenic structures due to attraction to light (Gauthreux, 2006) is another direct effect of artificial light pollution. There are also more subtle effects, such as disrupted orientation (Poot et al. 2008) and changes in habitat selection (McLaren et al. 2018). There is also growing evidence that light pollution alters behavior at regional scales, with migrants occupying urban centers at higher-than-expected rates as a function of urban illumination (La Sorte et al. 2021). While artificial light pollution can act as an attractant at both regional (La Sorte et al. 2021) and local (Van Doren et al. 2017) scales, there is also evidence of migrating birds avoiding strongly lit areas when selecting critical resting sites needed to rebuild energy stores (McLaren et al. 2018).

Recommendation: Due to the high potential for songbirds, migratory birds, salmonids and nocturnally active State listed and special-status species, CDFW recommends no lighting is installed as part of or as a result of Project in order to avoid potentially significant impacts to biological resources from artificial lighting.

Recommended Measure 1 – Habitat Compensation: For Project elements that require artificial lighting, compensatory mitigation shall be provided for all areas supporting fish and wildlife affected by new or increased light output.

Recommended Measure 2 – Light Output Analysis: Isolux Diagrams that note current light levels present during pre-Project conditions and the predicted Project light levels that will be created upon completion of the Project shall be included in the MND. If an increase in light output from current levels to the projected future levels is evident additional avoidance, minimization or mitigation shall be developed in coordination with the natural resource agencies to offset indirect impacts to special-status species and those measures included in the Project MND. Within 60 days of Project completion the lead agency shall conduct a ground survey that compares projected future light levels with actual light levels achieved upon completion of the Project through comparison of Isolux diagrams. If an increase from the projected levels to the actual levels is discovered additional avoidance, minimization or

mitigation measures may also be required in coordination with the natural resource agencies. This analysis should be conducted across all potential alternatives and compared in table and map format.

Recommended Measure 3 – Light Output Limits: All LED's or bulbs installed as a result of the Project shall be rated to emit or produce light at or under 2700 kelvin that results in the output of a warm white color spectrum.

Recommended Measure 4 – Vehicle Light Barriers: Solid barriers at a minimum height of 3.5 feet should be installed in areas where they have the potential to reduce illumination from overhead lights and from vehicle lights into areas outside of the roadway. Barriers should only be utilized as a light pollution minimization measure if they do not create a significant barrier to wildlife movement. Additional barrier types should be employed when feasible, such as privacy slats into the spacing of cyclone fencing to create light barriers for areas outside the roadway.

Recommended Measure 5 – Reflective Signs and Road Striping: Retro-reflectivity of signs and road striping should be implemented throughout the Project to reduce the need for electrical lighting.

Recommended Measure 6 – Light Pole Modifications and Shielding: All new or replacement light poles or sources of illumination shall be installed with the appropriate shielding to avoid excessive light pollution into natural landscapes or aquatic habitat within the Project corridor in coordination with CDFW. In addition, the light pole arm length and mast heights should be modified to site specific conditions to reduce excessive light spillage into natural landscapes or aquatic habitat within the Project corridor. In areas with sensitive natural landscapes or aquatic habitat the lead agency should also analyze and determine if placing the light poles at non-standard intervals has the potential to further reduce the potential for excessive light pollution caused by decreasing the number of light output sources in sensitive areas.

Caltrans response to Comment 8: Caltrans will evaluate where light reduction design measures may be appropriate and feasible for the project during the design phase, taking into consideration highway safety standards. Proposed measures will be identified in the relevant permit applications.

COMMENT 9: Mitigation Planning for Stream Impacts

Issue: It is unclear if the Project will defer mitigation planning to a later time for Project impacts to stream resources subject to the LSA permitting process.

Recommendation 1 – Mitigation Planning: CDFW strongly recommends that the lead agency develop a mitigation plan in coordination with CDFW for any Project impacts that cannot be avoided that will be subject to LSA permitting and include that plan as part of the updated IS/ND. The mitigation plan should include in detail any proposed on and/or off-site mitigation needs necessary

to compensate for net-loss of stream resources including but not limited to hardscape materials and geo-textile fabric within the bed, bank or channel of a stream, loss of riparian vegetation and mature trees and expansion of existing infrastructure footprint(s). CDFW recommends proposed mitigation plan(s) include details such as mitigation location(s), proposed actions, monitoring, success criteria and any corrective actions.

Caltrans response to Comment 9: No culvert locations were identified to be jurisdictional, and no impacts are expected to jurisdictional areas. Caltrans will restore temporary impacts on-site as indicated in Measures VIS 2, VIS 3, VIS 8, BIO 2, BIO 16, and BIO 25 in the final environmental document. Caltrans will continue to avoid and minimize impacts to native vegetation through the design phase of the project through an inter-disciplinary approach.

Appendix E Required Consultation/ Concurrence Documentation

[This appendix has been added since the draft environmental document was circulated.]

Agency consultation for this project has been accomplished through a variety of formal and informal methods, including Project Development Team meetings, interagency coordination meetings, phone calls and emails, etc. Public participation was sought through the release and review of the Initial Study with Proposed Mitigated Negative Declaration. This chapter summarizes the results of Caltrans' efforts to identify, address and resolve project-related issues through early and continuing coordination.

Biology Coordination

- On August 11, 2020, Paul Andreano submitted online requests through the U.S. Fish and Wildlife Service Information for Planning and Consultation website (IPaC 2020) and via email to the National Marine Fisheries Service for updated official species lists for the project area. The official U.S. Fish and Wildlife Service and National Oceanic and Atmospheric Administration/National Marine Fisheries Service species lists were received that day.
- On February 24, 2021, Paul Andreano submitted online requests through the U.S. Fish and Wildlife Service Information for Planning and Consultation website (IPaC 2021) and via email to the National Marine Fisheries Service for updated official species lists for the project area. The official U.S. Fish and Wildlife Service and National Oceanic and Atmospheric Administration/National Marine Fisheries Service species lists were received that day.
- On August 31, 2021, Paul Andreano submitted online requests through the U.S. Fish and Wildlife Service Information for Planning and Consultation website (IPaC 2021) and via email to the National Marine Fisheries Service for updated official species lists for the project area. The official U.S. Fish and Wildlife Service and National Oceanic and Atmospheric Administration/National Marine Fisheries Service species lists were received that day.
- On October 19, 2021, Paul Andreano submitted an online request via email to the National Oceanic and Atmospheric Administration/National Marine Fisheries Service for updated official species lists for the project area. The official National Oceanic and Atmospheric Administration/National Marine Fisheries Service species list was received that day.

- On March 29, 2022, AnnMarie Blackburn submitted an online request via email to the National Oceanic and Atmospheric Administration/National Marine Fisheries Service for updated official species lists for the project area. The official National Oceanic and Atmospheric Administration/National Marine Fisheries Service species list was received that day.
- On October 20, 2022, Caltrans Biologists AnnMarie Blackburn and Morgan Robertson met with U.S. Fish and Wildlife Service Biologist Chad Mitcham to discuss the Section 7 effects determination for the California red-legged frog and Santa Cruz tarplant, as well as the Santa Cruz long-toed salamander. Chad Mitcham agreed that downgrading the effects determination for Santa Cruz tarplant critical habitat from “likely to adversely affect” to “not likely to adversely affect” could be appropriate if primary constituent elements for the species are not present in the project work areas.
- On November 9, 2022, Caltrans Biologist AnnMarie Blackburn submitted online requests through the U.S. Fish and Wildlife Service Information for Planning and Consultation website (IPaC 2022) and via email to the National Marine Fisheries Service for updated official species lists for the project area. The official U.S. Fish and Wildlife Service and National Oceanic and Atmospheric Administration/National Marine Fisheries Service species lists were received that day.
- On November 10, 2022, AnnMarie Blackburn sent Chad Mitcham an addendum to the Natural Environment Study that included updates to the project description and species impacts. On November 14, Chad Mitcham verified that he approved of Caltrans’ Federal Endangered Species Act determinations.

List of Technical Studies Bound Separately (Volume 2)

- Air Quality, Greenhouse Gas and Noise Assessment Memo (November 18, 2021)
- Climate Change Technical Report (December 6, 2021)
- Cultural Resources Screened Undertaking Memo (December 15, 2021)
- Hazardous Waste Initial Site Assessment Memo (November 18, 2021)
- Location Hydraulic Study (June 30, 2021)
- Natural Environment Study (April 15, 2022)
- Paleontological Memo (November 30, 2021)
- Preliminary Geotech Report (May 11, 2022)
- Visual Impact Assessment (June 22, 2021)
- Water Quality Assessment (May 23, 2022)
- Cumulative Impact Report (June 7, 2022)
- [The following text has been added since the draft environmental document was circulated.] Addendum to the Natural Environment Study (November 9, 2022)

To obtain a copy of one or more of these technical studies/reports or the Initial Study, please send your request to:

Lara Bertaina
California Department of Transportation – District 5
50 Higuera Street
San Luis Obispo, California 93401

Or send your request via email to: lara.bertaina@dot.ca.gov
Or call: 805-779-0792

Please provide the following information in your request:

Project title: Santa Cruz Route 1 Drainage Improvement Project

General location information: Multiple culvert improvements on State Route 1 in Santa Cruz County

District number-county code-route-post mile: 05-SCR-01-0.00/7.94 and 05-MON-01-101.50/102.00

Project ID number: 0519000239; Project EA: 05-1K640