LITTLE RIVER TRAIL PROJECT

HUMBOLDT COUNTY, CALIFORNIA

DISTRICT 1 – HUM – 101 – PM 96.96-97.83

Federal Project No. 01-0J280

INITIAL STUDY

with Proposed Mitigated Negative Declaration

Prepared by the
State of California Department of Transportation

Caltrans

July 2022

General Information About This Document

What is in this document?

The California Department of Transportation (Caltrans) has prepared this Initial Study with proposed Mitigated Negative Declaration (IS/MND) which examines the potential environmental effects of a proposed project on Route 101 and the adjacent Caltrans right of way in Humboldt County, California. Caltrans is the lead agency under the California Environmental Quality Act (CEQA). This document tells you why the project is being proposed, how the existing environment could be affected by the project, the potential impacts of the project, and proposed avoidance, minimization, and/or mitigation measures.

What should you do?

- Please read this document.
- Additional copies of this document and related technical studies are available for review at the District 1 Office of Local Assistance, 1656 Union Street, Eureka, CA 95501.
- We'd like to hear what you think. If you have any comments about the proposed project, please send your written comments to Caltrans by the deadline.
- Please send comments via U.S. mail to:
  California Department of Transportation
  Attention: Coady Reynolds
  District 1 Office of Local Assistance
  1656 Union Street
  Eureka, CA 95501
- Send comments via e-mail to: coady.reynolds@dot.ca.gov
- Be sure to send comments by the deadline: September 16, 2022

What happens after this?

After comments are received from the public and reviewing agencies, Caltrans may (1) give environmental approval to the proposed project, (2) do additional environmental studies, or (3) abandon the project. If the project is given environmental approval and funding is obtained, Caltrans could complete the design and construct all or part of the project.

For individuals with sensory disabilities, this document is available in Braille, in large print, on audiocassette, or on computer disk. To obtain a copy in one of these alternate formats, please write to or call Caltrans, Attention: Coady Reynolds, North Region Environmental-District 1 Office of Local Assistance, 1656 Union Street, Eureka, CA 95501; (707) 684-6988 Voice, or use the California Relay Service TTY number, 711 or 1-800-735-2929.

LITTLE RIVER TRAIL PROJECT

Install a Class I Pathway Adjacent to Route 101 in Humboldt County, from Post Mile 96.96 to Post Mile 97.83 Between the Communities of McKinleyville and Trinidad

INITIAL STUDY

With Proposed Mitigated Negative Declaration

Submitted Pursuant to: Division 13, California Public Resources Code

THE STATE OF CALIFORNIA

Department of Transportation

August 5, 2022
Date of Approval

Darrell Cardiff, Branch Chief
District 1 Office of Local Assistance
California Department of Transportation
CEQA Lead Agency

The following person may be contacted for more information about this document:

Coady Reynolds, North Region Office of Local Assistance-District 1
1656 Union Street, Eureka, CA 95501
(707) 684-6988
or use the California Relay Service TTY number, 711 or 1-800-735-292

PROPOSED MITIGATED NEGATIVE DECLARATION

Pursuant to: Division 13, California Public Resources Code

SCH Number: Pending

Project Description

The California Department of Transportation (Caltrans) proposes to install a Class I pathway along Route 101 in Humboldt County from Post Mile 96.96 to 97.83 between the communities of McKinleyville and Trinidad.

Determination

This proposed Mitigated Negative Declaration (MND) is included to give notice to interested agencies and the public that it is Caltrans' intent to adopt a MND for this project. This does not mean that Caltrans' decision regarding the project is final. This MND is subject to change based on comments received by interested agencies and the public.

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

- The project would have *No Effect* on Agriculture and Forest Resources, Energy, Land Use and Planning, Minerals, Population and Housing, Public Services, and Tribal Cultural Resources.
- The project would have *Less than Significant Impacts* to Cultural Resources, Geology and Soils, Greenhouse Gas Emissions, Hydrology and Water Quality, Noise, Recreation, Transportation, Utilities and Public Service Systems, and Wildlife.
- With the following *mitigation measures* incorporated, the project would *Less than Significant Impacts* to Aesthetics, Air Quality, Biological Resources, and Hazards and Hazardous materials.
    - Mitigation Measure AR-1: Protection of Aesthetic Resources
    - Mitigation Measure AQ-1: Air Quality Protections
    - Mitigation Measure BIO-1: Protection of Special Status Amphibians and Reptiles
    - Mitigation Measure BIO-2: Protection of Birds from Debris Catchment
    - Mitigation Measure BIO-3: Protection of Sonoma Tree Vole
    - Mitigation Measure BIO-4A: Repurpose Large Wood for Salmonid Habitat

- Mitigation Measure BIO-4B: Replacement of Lost Riparian Habitat
- Mitigation Measure BIO-5: Replacement of Lost Sensitive Natural Communities and Upland ESHA
- Mitigation Measure BIO-6: Prevention of Spread of Invasive Species
- Mitigation Measure HAZ-1: Management of Potential Aerially Deposited Lead

Darrell Cardiff

August 5, 2022

Darrell Cardiff, Branch Chief
Office of Local Assistance–District 1
California Department of Transportation

Date

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List of Abbreviated Terms

Abbreviation	Description
AB	Assembly Bill
ACV	California Redwood Coast – Humboldt County Airport
ADL	Aerially Deposited Lead
AGR	Agriculture
AIA	Airport Influence Area
ALUCP	Airport Land Use Compatibility Plan
AQ	Air Quality
AQUA	Aquaculture
BAAQMD	Bay Area Air Quality Management District
BFE	Base Flood Elevation
BIO	Biology
BMPs	Best Management Practices
BSA	Biological Study Area
CAA	Clean Air Act
CAFE	Corporate Average Fuel Economy
Cal/EPA	California Environmental Protection Agency
Cal/OSHA	California Division of Occupational Safety and Health
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CC	California Coastal
CCC	California Coastal Commission
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CHP	California Highway Patrol
CIA	Cumulative Impact Analysis
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO_2	carbon dioxide
COLD	Cold water Freshwater Habitat
COMM	Commercial and Sport Fishing
CoNED	Coastal National Elevation Database
CR	Coastal Recreation
CSZ	Cascadia Subduction Zone
CTP	California Transportation Plan
CUPA's	Certified United Program Agencies
CWA	Clean Water Act

Abbreviation	Description
DAL	Dial-A-Lift
DAR	Dial-A-Ride
dB	decibels
dbh	Diameter at breast height
Department	Caltrans
DOT	Department of Transportation
DPS	Distinct Population Segment
DTSC	Department of Toxic Substances Control
EDR	Environmental Data Resources
EFH	Essential Fish Habitat
EIR	Environmental Impact Report
EO	Executive Order
EOC	Emergency Operations Center
EOP	Emergency Operations Plan
EPA	Environmental Protection Agency
ESHA	Environmentally Sensitive Habitat Area
EST	Estuarine Habitat
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
FRSH	Freshwater Replenishment
GHG	greenhouse gas
GS	Geology and Soils
GWR	Groundwater Recharge
HAZ	Hazards and Hazardous Resources
HCAOG	Humboldt County Association of Governments
HCDEH	Humboldt County Department of Environmental Health
HCGP	Humboldt County General Plan
HFCs	hydrofluorocarbons
HMP	Hazard Mitigation Plan
HU	Hydrologic Unit
HWMA	Humboldt Waste Management Authority
HWQ	Hydrology and Water Quality
IND	Industrial
IPCC	Intergovernmental Panel on Climate Change
IS	Initial Study
IS/MND	Initial Study/Mitigated Negative Declaration
ISA	Initial Site Assessment
LSAA	Lake and Streambed Alteration Agreement
MAR	Marine Habitat
MIGR	Migration of Aquatic Organisms

Abbreviation	Description
MLD	Most Likely Descendent
MMTC02e	million metric tons of carbon dioxide equivalent
MND	Mitigated Negative Declaration
MSE	Mechanically Stabilized Earth
N_2O	nitrous oxide
NAGPRA	Native American Graves Repatriation Act
NAHC	Native American Heritage Commission
NAV	Navigation
NC	North Coast
NCRWQCB	North Coast Regional Water Quality Control Board
NCUAQMD	North Coast Unified Air Quality Management District
ND	Negative Declaration
NEPA	National Environmental Policy Act
NES	Natural Environment Study
NHTSA	National Highway Traffic Safety Administration
NMFS	National Marine Fisheries Service
NPDES	National Pollutant Discharge Elimination System
PDT	Project Development Team
PF	Public Facility
PFMC	Pacific Fishery Management Council
PM	Particulate Matter
PM(s)	post mile(s)
POP	Population and Housing
PPV	Peak Particle Velocity
PRC	Public Resources Code
RARE	Preservation of Rare and Endangered Species
RCAA	Define
RCEM	Road Construction Emissions Model
REC-1	Contact Water Recreation
REC-2	Non-contact Water Recreation
ROW	Right of Way
RWQCB	Regional Water Quality Control Board
SHELL	Shellfish Harvesting
SHPO	State Historic Preservation Officer
SMAQMD	Sacramento Metropolitan Air Quality Management District
SNC	Sensitive Natural Community
SONCC	Southern Oregon/Northern California Coast
SPWN	Spawning, Reproduction, and Early Development
SRA	State Responsibility Area
SWEL	Still Water Elevations
SWMP	Storm Water Management Plan

Abbreviation	Description
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TACs	Toxic Air Contaminants
THVF	Temporary High Visibility Fencing
TMP	Transportation Management Plan
TWL	Total Water Levels
U	Unclassified
U.S. or US	United States
USACE	United States Army Corps of Engineers
USDOT	U.S. Department of Transportation
USFWS	U.S. Fish and Wildlife Service
USGCRP	U.S. Global Change Research Program
VIA	Visual Impact Assessment
VMT	Vehicle Miles Travelled
WILD	Wildlife Habitat
WPCP	Water Pollution Control Program
WQ	Water Quality

Chapter 1. Proposed Project

1.1. Project History

A feasibility study for the Little River Trail was previously completed in 2014 by Redwood Community Action Agency (RCAA) with support from the State Coastal Conservancy. RCAA is currently leading the Caltrans Project Approval and Environmental Document (PA&ED) phase with funding from the State Coastal Conservancy and support from the California Department of Transportation (Caltrans) Pending funding, Caltrans has agreed to finalize design, conduct environmental permitting, and construct the Little River Trail. Caltrans would own and maintain the Little River Trail as a Caltrans facility. Caltrans is the lead agency under the California Environmental Quality Act (CEQA).

1.2. Project Description

The project would construct an approximately 1-mile Class I Bike Path (pedestrian and bicycle trail) from Scenic Drive to Clam Beach. The trail would be a paved pathway on top of the undeveloped vegetated surface and along the Route 101 Crannell Road off-ramp.

To accommodate the trail on the Little River Bridge, the project includes modifications to the bridge and realignment of the southbound travel lanes.

The project is being designed in accordance with the Caltrans Highway Design Manual, 7th Edition (Caltrans 2020). In addition, the project would be designed in accordance with other specific applicable standards, including the California Manual on Uniform Traffic Control Devices (Caltrans 2021) and the Americans with Disabilities Act Standards for Accessible Design (Department of Justice 2010).

Project Objective

The California Coastal Trail is a non-motorized Class 1 public pedestrian and bicycle route along the state's coastline spanning from Mexico to Oregon. The project would close a critical gap in the California Coastal Trail, resulting in improved access to communities, recreational areas, and coastal resources. Installation of this 1-mile trail would improve access and safety for pedestrian and bicycle users as well as create opportunities for nature study and recreation. The Little River Trail would extend the existing California Coastal Trail to include the stretch between Scenic Drive and Clam Beach Drive, crossing the Little

River (Exhibit 1, Appendix A). Pedestrians and bicyclists traveling this stretch are currently limited to Route 101, which is dangerous for alternative modes of transport.

Proposed Project

The project would construct an approximately 1-mile Class I Bike from Scenic Drive to Clam Beach. Project elements are described below.

Geotechnical Investigations

A Preliminary Foundation Report has been prepared for the Project and includes a review of geologic literature for the area, site reconnaissance and geologic mapping, results from shallow hand-auger borings, review of historic photos of Route 101 construction, review of proposed retaining wall concepts, and preliminary geotechnical recommendations (SHN 2021a). The Preliminary Foundation Report finds that the proposed trail alignment comprises highway fill related to the late-1960s highway alignment: unconsolidated alluvium, floodplain alluvium, beach/dune deposits, Falor Formation, and Franciscan Complex mélange. The Preliminary Foundation Report notes trail development will require removal of unsuitable (unstable) soils and imported fill and/or engineered fill and may require the use of geotextiles.

Consistent with the recommendations of the Preliminary Foundation Report, additional geotechnical investigations are required during the project design phase to obtain necessary information to support the retaining wall type selection and design. The investigation would occur north of Little River, between the trailhead at Scenic Drive and Little River. The geotechnical investigations would employ drill rigs and ancillary equipment and would require tree and vegetation removal along the trail alignment for access. Any excess sediments that result from geological investigations are expected to be relatively small in quantity and would either be spread onsite in upland areas away from water bodies or hauled offsite by the contractor for legal disposal or reuse.

Retaining Walls

Two retaining walls would be necessary to maintain accessible slopes, minimize the construction footprint, and facilitate crossing an existing culvert over an unnamed perennial tributary along the northern trail alignment between the trailhead at Scenic Drive and the Little River.

The final retaining wall designs would follow further geotechnical investigations and recommendations. Potential retaining wall types are summarized below and include soldier pile wall with ground anchors, cantilever soldier pile walls, and mechanically stabilized earth (MSE) wall. More than one retaining wall construction scenario may be included in the final design, which would also determine the final number, length, and heights of required retaining wall structures. The retaining wall structures would not be easily visible since there is no access or use on the west side of the trail.

At the existing culvert over an unnamed perennial tributary, a retaining wall would be constructed to prevent the trail embankment from encroaching into the stream. The retaining wall would be located approximately 10-feet upslope and upstream of an unnamed tributary, on top of the existing buried culvert. One large Sitka spruce would be removed to construct the retaining wall. Tree removal if further detailed under Vegetation Removal below.

Retaining walls would not be necessary on the sand slopes adjacent to portions of the southern end of the proposed trail alignment at the southbound Route 101 off-ramp between the Little River and Crannell Road.

Soldier Pile Wall with Ground Anchors

The soldier pile wall construction scenario would include a retaining wall on the western edge of the trail only. Soldier piles would be installed in a drilled hole approximately 18-feet below grade and anchored into the ground with horizontal ground anchors. Horizontal lagging would extend above and below grade. A structural concrete waler beam and concrete cap would be installed on top of the lagging, resulting in a total above grade height of approximately 8-feet, although final structure heights would vary based on-site-specific conditions and final designs. A safety railing would be attached to the structural concrete gap. Temporary sheet piling would be installed on the western and eastern edge of the trail to facilitate the drilling process for the soldier piles and construction of the retaining wall.

Cantilever Soldier Pile Wall 14-Foot Design Height

The 14-foot maximum design height cantilever soldier pile wall includes retaining structures on both the western and eastern edge of the trail. On the western edge, soldier piles would be installed in a drilled hole approximately 30-feet below grade and anchored into the ground. Horizontal lagging would be installed above and below grade, with a maximum exposed height limit of 14-feet. A concrete cap and safety railing would be installed on top of the lagging. Temporary sheet piling would be installed on the western and eastern edge of the

trail to facilitate the drilling process for the soldier piles and construction of the retaining wall.

Cantilever Soldier Pile Wall 12-Foot Design Height

The 12-foot maximum design height cantilever soldier pile wall includes retaining structures on both the western and eastern edge of the trail. On the western edge, soldier piles would be installed in a drilled hole approximately 20-feet below grade and anchored into the ground. Lagging would be installed above and below grade, with a maximum height limit of 12-feet. A concrete cap and safety railing would be installed on top of the lagging. If necessary, a concrete retaining wall would also be constructed on the eastern edge of the trail with an above-grade height of approximately 6-feet. Temporary sheet piling would be installed on the western and eastern edge of the trail to facilitate the drilling process for the soldier piles and construction of the retaining wall.

Mechanically Stabilized Earth Wall

A MSE wall approximately 18-feet tall would be constructed on the eastern edge of the trail to retain the cut slope above and below grade. On the western edge of the trail, MSE wall panels approximately 16-feet tall would be installed to elevate and retain the trail. A safety railing would be installed at the top edge of the MSE wall.

Concrete Boardwalk Structure

Cast-in-drilled-holes piles approximately 16-feet tall would be installed below grade with a drill rig. The piles would be topped with bent caps approximately 2-feet tall to form the base of the trail. The bent caps would be topped with an 8-inch-thick concrete slab.

Grading and Fill

Grading would need to occur along the entire trail alignment to achieve accessible slopes and suitable trail width. Similarly, fill would be placed and compacted along the alignment to establish the trail prism.

Barrier Installation

South of the Little River, barriers would be installed to separate the trail from Route 101 or the Crannell Road off-ramp. End treatments or similar safety modifications would be installed at the end of the barriers.

Ancillary Trail Features Construction

Ancillary trail features, such as lookouts or other nature viewing areas, would be constructed adjacent to the primary alignment. Ancillary trail features may include benches, interpretive signage, and other features related to public access and education. Ancillary trail features would include up to three nature viewing areas that are anticipated for this project. The footprint of each nature viewing area, including the trail to access the area, would be approximately 1,000 square-feet. Each area would likely contain one to two benches, a picnic table, a trash/recycling receptacle, and interpretive signage.

US Route 101 Little River Crossing

The trail would cross the Little River via the existing Route 101 bridge. The existing travel lanes would be reconfigured to support the multi-use trail. Under the scenario with the greatest potential for environmental impacts under consideration, the bridge deck would be widened 2-feet on the western edge and travel lanes would be reconfigured. Other lane reconfiguration scenarios would not require bridge deck widening. Additional pilings or in-water work would not be required to support reconfiguring the travel lanes or widening the bridge deck. The existing lanes would be reconfigured to accommodate an 8- to 10-foot trail in addition to Caltrans standard shoulder and travel lane widths (Figure 1). As a result of the widening and lane shifts, the bridge, and portions of Route 101 immediately north and south of the bridge would need to be repaved and restriped. To accommodate lane shifts on the bridge, the existing vegetation in the median between the northbound and southbound lanes of Route 101 would be removed and replaced with pavement. The existing barrier between the travel lanes would be replaced and extended.

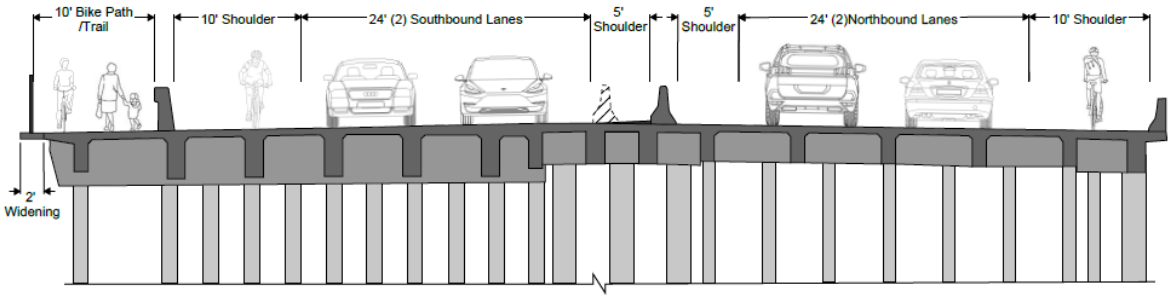

Figure 1. Conceptual Overview of Little River Bridge Design Approach

Bridge deck widening would include removing the existing concrete bridge barrier and installing additional concrete reinforcement and new barrier and railings to widen the bridge by approximately 2-feet. To widen the bridge, a temporary shoulder closure would be established with a k-rail for the duration of work. A temporary work platform and debris

containment system would be installed below the existing bridge deck using a snooper truck on the bridge deck, which would require lane closure. Overhanging brackets to support the platform and debris containment system would be installed on the face of the existing edge girder using drilled-in anchors. The existing concrete barrier and edge of the deck would be removed by chipping. Existing reinforcement bars would be extended with mechanical couplers. Formwork would be installed below the edge of the bridge deck. Bridge reinforcement would be completed, followed by pouring a widened deck. Forms would be stripped, and the railing would be installed. The temporary work platform would be removed, and drill holes would be patched using a snooper truck from the bridge deck.

Temporary lane closures on the Route 101 Little River Bridge would be required for bridge widening, barrier construction, and striping. Temporary lane closures would follow Caltrans requirements for temporary roadway closures, including signage and public noticing.

Drainage and Stormwater Improvements

The Class 1 facility will be exempt from municipal separate storm sewer system (MS4) requirements. The trail would be constructed to mimic the existing site topography and be outsloped to the maximum extent feasible. In localized areas where outsloping is not feasible, traditional drainage inlets and storm drainage piping would be deployed to convey stormwater through the trail prism. Stormwater would be discharged through energy dissipation devices such as riprap aprons and/or outlet basins to prevent scour, protect the outlet structure, and minimize the potential for downstream erosion. Existing drainage inlets located adjacent to the Route 101 off-ramp and just north of the Little River Bridge in the highway median would need to be modified to accommodate planned improvements for this project. Additionally, trenching for storm drainpipes and related infrastructure is proposed in the following locations:

- New drainage inlets along Route 101 southbound off-ramp
- New drainage piping along Route 101 southbound off-ramp
- The existing drainage inlet located just north of the Little River bridge would be moved north approximately 150-feet along the Route 101, which would also require the installation of approximately 150-feet of new storm drain piping
- Nine new drainage inlets with downdrains along the retaining wall along the northern trail segment

Utility Relocation

One Caltrans streetlight located south of the Little River along the Route 101 off-ramp would be relocated outside the trail footprint in coordination with Caltrans.

Striping and Signage

The trail would include required striping and signage in order to comply with the California Manual on Uniform Traffic Control Devices (Caltrans 2021). Striping and directional signage would indicate two travel directions.

Signage to direct southbound cyclists to exit northbound Route 101 in Westhaven to access the trail may also be incorporated. Interpretive signage along the trail would promote education of the coastal resources and surrounding environment.

Trail Lighting

The project would include streetlight installation at both trailheads to improve safety in key locations. Street lighting would be designed to protect wildlife and nighttime views, including views of the night sky. The project would be designed to be consistent with the recommendations of the International Dark-Sky Association, which includes standards for fixtures, shielding, wattage, placement, height, and illumination levels. To comply with these requirements, lighting for the project would use the minimum lumens necessary; and it would be directed downward, shielded, and at pedestrian level when feasible. This would help ensure lighting is contained within the site and does not cause significant lighting and glare impacts for surrounding land uses and sensitive habitat areas.

Trenching for the new streetlight pole at the southern end of the trail would include connecting the existing streetlight (at the California Highway Patrol weigh station to the proposed new streetlight pole location. The trench would be approximately 1-foot wide, 3-feet deep, and 310-feet long. The trench would be located under the trail before jogging to the east and cross through the southbound off ramp and then through an open vegetated area before connecting to the existing streetlight near the weigh station.

Trenching for the new streetlight at the northern end of the trail would connect the existing power pole to the proposed new streetlight pole location. The pathway of the trench is anticipated to be a straight line from the existing power pole to the proposed light. The trench would be approximately 1-foot wide, 3-feet deep, and 60-feet long.

Trailhead Development

Travel lanes at both trailheads would be divided to enhance user safety and discourage motorized vehicles from inadvertently entering the trail. Trailhead improvements would include signage, striping for parking, and additional trail amenities such as benches or picnic tables. At the Scenic Drive trailhead, parking spaces may be delineated within the existing cul-de-sac footprint. The existing Clam Beach parking area near the southern trailhead would continue to be used.

Additional parking at the southern trailhead is not proposed. Crosswalks and shoulder striping improvements may be installed along Clam Beach Road to improve safety between the existing parking area and the new trailhead in coordination with Caltrans and the County of Humboldt.

Mountable Apron at Southern Trailhead

A mountable apron would be constructed between the southern trailhead and the Route 101 southbound off-ramp at the southern terminus of the trail.

Construction Schedule

Construction could require up to two construction seasons. If feasible, vegetation clearing would occur first prior to construction, between September 16 and January 31 (outside of the bird nesting period). Construction would require up to 8 months (per year), beginning in March and concluding by October 15.

Construction Activities and Equipment

Equipment required for construction would include drill rigs, concrete mixer and pump trucks, all terrain forklifts, snooper truck, compressors, tracked excavators, loaders, backhoes, graders, bulldozers, dump trucks, skid steers, and pick-up trucks. Jackhammers or similar pieces of equipment may be necessary to support bridge widening. It is not anticipated that any temporary utility extensions, such as electric power or water, would be required for trail construction. Trenching and ground disturbance in support of utility connection for relocated and new lighting is anticipated. Sheet pile installation for retaining walls would occur via vibratory methods; pile driving would not occur. Water would be used for dust control, compaction, and revegetation.

Construction Access

The project would be accessed via Route 101, Scenic Drive, and Clam Beach Drive. No new access roads would need to be constructed in order to implement the project.

Establish Exclusion Areas and Erosion Control

Sensitive biological areas would be protected with protective fencing prior to construction, except for areas that would be unavoidably impacted during construction. Erosion control Best Management Practices (BMPs) would also be installed prior to construction.

Vegetation Removal

Clearing and grubbing of vegetation would occur within the construction footprint, including tree removal north and south of the Little River. During project design, contractors mapped trees 6-inches in diameter at breast height (dbh) or greater. One hundred seventeen (117) trees that are 6-inch dbh or greater would be removed to clear the proposed alignment for trail installation, many of which are Sitka spruce (*Picea sitchensis*) and other native species. One larger Sitka spruce located approximately 10-feet from the unnamed tributary would also be removed and is accounted for in Table 1. Otherwise, no additional trees (e.g., riparian habitat) would need to be removed near the unnamed tributary. Final tree removal numbers by species may be adjusted as the design progresses.

Table 1. Trees 6-inch or Greater Diameter at Breast Height Proposed for Removal

Diameter at Breast Height	Alder	Spruce	Fir	Pine	Willow	Elderberry
6-inch	5		1	1		
8-inch	4		6	2		
10-ich	13	2	7	3	4	
12-inch	5	1	2	3		1
14-inch	8		2	2		
16-inch	9		2	1		
18-inch	1	1	1	3		
20-inch		1				
22-inch	2		1			
24-inch		3	1	5		
30-inch		2	1			
34-inch		1				
36-inch		3	2			
40-inch		1				

Diameter at Breast Height	Alder	Spruce	Fir	Pine	Willow	Elderberry
48-inch		2	1			
72-inch cluster			1			
Total	47	17	28	20	4	1

Stockpiling and Staging

Stockpiling and staging would occur in an existing graveled area east of Route 101, near Clam Beach Drive at the south end of the project (Exhibit 2-1, Appendix A). Stockpiling and staging would also occur within the cul-de-sac at the terminus of Scenic Drive at the north end of the project (Exhibit 2-2, Appendix A). Stockpiling and staging areas are located within the existing project area boundary in disturbed areas and would not require grading. Within the stockpiling and staging areas, BMPs would be used to prevent construction materials and hazardous materials from impacting the environment. Stockpiling and staging is not planned to occur on State Parks property.

Excess soils, aggregate road base, and construction materials would be stored on-site within designated stockpiling and staging areas. Excess materials may be re-used on-site for backfill and finished grading. Excess materials would not be stockpiled on-site once the project is complete. The contractor would haul additional excess materials off-site for beneficial reuse, recycling, or legal disposal.

Groundwater Dewatering

Groundwater dewatering is generally not expected to be required. However, if needed, temporary groundwater dewatering would involve pumping water out of a trench or excavation area. Groundwater would typically be pumped to a settling pond, settling tanks, or into a dewatering bag. The water may also be percolated back into the ground in uplands. Discharge to regulated waters would not occur.

Site Restoration and Closure

Following construction, the contractor would demobilize and remove equipment, supplies, and construction wastes. The disturbed areas would be restored to pre-construction conditions or stabilized with a combination of grass seed (through broadcasting or hydroseeding), straw mulch, rolled erosion control fabric, and revegetation. Disturbed areas resulting from construction in the undeveloped area west of the Crannell Road off-ramp would be revegetated with appropriate species. Revegetation would include replanting and

compliance monitoring if mitigation is required by resource agencies for impacts to sensitive habitats.

No-Build Alternative

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

Alternatives Considered but Eliminated from Further Consideration

Alternative alignments were considered for the southern trail segment between the Little River Bridge and Crannell road. All considered alignments were located entirely within the Caltrans right of way. Considered alternatives varied only slightly from the proposed Project. One alternative alignment located the trail south of the Little River in the vegetated area west of the off-ramp. However, this alignment was not chosen to minimize potential impacts to cultural and biological resources and due to existing topography constraints (steep slopes) near the Crannell Road trailhead. A second alternative alignment located the trail entirely adjacent to the off-ramp but did not provide the desired separation between the highway and trail in support of the project's safety and user experience objectives. Ultimately, the trail alignment south of the Little River combined the two alternative alignments. Nearest the Little River, the trail would be located in the vegetated area west of the off-ramp where the Caltrans right of way is wider and slopes are less steep. Toward the Crannel Road trailhead, the trail would be located adjacent to the off-ramp.

General Plan Description, Zoning, and Surrounding Land Uses

The project and surrounding lands are within the Coastal Zone within Humboldt County (Exhibit 3, Appendix A). The majority of the proposed project is located within Caltrans right-of-way with the exception of the northern section. The northern section would be located within the McKinleyville Area Plan of the Humboldt County Local Coastal Program. The area is zoned "U" for unclassified and designated as "PF" Public Facilities. The project would not change the existing land use or zoning designations in the project area.

1.3. Permits and Approvals Needed

The following table (Table 2) indicates the permitting agency, permits/approvals and status of permits required for the project.

Table 2. Agency Approvals

Agency	Permit/Approval	Status
California Department of Fish and Wildlife (CDFW)	Lake and Streambed Alteration Agreement	Not submitted – to be prepared during PS&E
State Water Resources Control Board (SWRCB)	Construction General Permit	Not submitted – to be prepared during PS&E
Regional Water Quality Control Board (RWQCB)	Clean Water Act Section 401 Water Quality Certification	Not submitted – to be prepared during PS&E
U.S. Army Corps of Engineers (USACE)	Clean Water Act Section 404 Permit	Not submitted – to be prepared during PS&E
National Marine Fisheries Service	Endangered Species Act Section 7 Consultation	Letter of Concurrence issued July 14, 2022
California State Parks	Section 4(f)	Complete
California Coastal Commission	Coastal Development Permit	Not submitted – to be prepared during PS&E
North Coast Unified Air Quality Management District (NCUAQMD)	National Emissions Standards for Hazardous Air Pollutants (NESHAP) Notification	Not submitted – to be prepared during PS&E
Special County Permit	Tree Removal	Not submitted – to be prepared during PS&E if required

1.4. Standard Measures and Best Management Practices Included in All Alternatives

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

The following section provides a list of project features, standard practices (measures), and Best Management Practices (BMPs) that are included as part of the project description. These avoidance and minimization measures are prescriptive and sufficiently standardized to be generally applicable and do not require special tailoring to a project situation. These are generally measures that result from laws, permits, guidelines, and resource management plans that are relevant to the project. They contain refinements in planning policies and implementing actions. These practices predate the project's proposal and apply to all similar projects. For this reason, these measures and practices do not qualify as project mitigation, and the effects of the project are analyzed with these measures in place.

Standard Measures relevant to the protection of natural resources deemed applicable to the proposed project include the following:

Biological Resources

BR-1: General

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

BR-2: Animal Species

A. To protect migratory and nongame birds (occupied nests and eggs), if possible, vegetation removal would be limited to the period outside of the

bird breeding season (removal would occur between September 16 and January 31). If vegetation removal is required during the breeding season, a nesting bird survey would be conducted by a qualified biologist within one week prior to vegetation removal. If an active nest is located, the biologist would coordinate with CDFW to establish appropriate species-specific buffer(s) and any monitoring requirements. The buffer would be delineated around each active nest and construction activities would be excluded from these areas until birds have fledged, or the nest is determined to be unoccupied.

B. Bird Exclusion Plan would be prepared by a qualified biologist prior to construction. Exclusion devices would be limited to the Route 101 bridge and designed so they would not trap or entangle birds or bats. Exclusion devices would be installed outside of the breeding season (September 16 through January 31) to eliminate the re-occupancy of existing structures by migratory bird species that may attempt to nest on the structure during construction. On structures or parts of structure where it is not feasible to install bird exclusion devices, partially constructed and unoccupied nests within the construction area would be removed and disposed of on a regular basis throughout the breeding season (February 1 through September 15 with biologist discretion) to prevent their occupation. Nest removal would be repeated weekly under guidance of a qualified biologist to ensure nests are inactive prior to removal.

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

D. A qualified biologist would survey to assess conditions under and on the bridge for suitable bat habitat. The survey would be conducted in the year prior to construction. If conditions change and bats may use the bridge, additional avoidance and minimization measures would be applied, including but not limited to limited bridge work at night, installation of exclusion devices on bridge crevices suitable for roosting bats, and seasonal limitations for work conducted on the bridge. Additionally, a Bat Exclusion Plan would be prepared by a qualified biologist prior to construction. Exclusion devices would be designed so they would not trap or entangle bats or birds. The Plan would include guidelines for appropriate date of exclusion and temperature parameters based on bridge type, geographic location, and species present. At the direction of a qualified biologist, exclusion devices would be installed after the maternity season but before hibernation. If overlapping resources are present (e.g., nesting birds), coordination between the Bat Exclusion Plan and any other relevant plans would occur. Measures would be monitored by a qualified biologist.

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

BR-3: Invasive Species

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

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

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

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

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

B. Prior to the start of work, Temporary High Visibility Fencing (THVF) and/or flagging would be installed around sensitive natural communities, environmentally sensitive habitat areas, rare plant occurrences, intermittent streams, and wetlands and other waters, where appropriate, and as shown in Figures 5-7 of the NES (Appendix D). No work would occur within fenced/flagged areas.

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

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

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

BR-5: Wetlands and Other Waters

A. Construction activities performed above the ordinary high-water mark of a watercourse that could potentially directly impact surface waters (i.e., soil disturbance that could lead to turbidity) would be performed during the dry season, typically between June through October, or as weather permits per the authorized contractor-prepared Storm Water Pollution Prevention Plan

(SWPPP), Water Pollution Control Program (WPCP),) and/or project permit requirements.

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

Cultural Resources

CR-1: Caltrans would coordinate with the Wiyot Tribe and incorporate measures to protect tribal resources, including potential work windows associated with tribal ceremonies.

CR-2: An archeological monitor would be used during ground-disturbing activities. A tribal monitor would be used during ground-disturbing activities upon request by the Wiyot Tribe.

CR-3: If cultural materials are discovered during construction, work activity within a 60-foot radius of the discovery would be stopped and the area secured until a qualified archaeologist can assess the nature and significance of the find in consultation with the State Historic Preservation Officer (SHPO).

CR-4: If human remains and related items are discovered on private or State land, they would be treated in accordance with State Health and Safety Code § 7050.5. Further disturbances and activities would cease in any area or nearby area suspected to overlie remains, and the County Coroner contacted. Pursuant to California Public Resources Code (PRC) § 5097.98, if the remains are thought to be Native American, the coroner would notify the Native American Heritage Commission (NAHC) who would then notify the Most Likely Descendent (MLD).

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

Geology, Seismic/Topography, and Paleontology

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

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

Greenhouse Gas Emissions

GHG-1: Caltrans Standard Specification "Air Quality" requires compliance by the contractor with all applicable laws and regulations related to air quality.

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

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

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

GHG-5: All areas temporarily disturbed during construction would be revegetated with appropriate native species. Landscaping reduces surface warming and, through photosynthesis, decreases CO2. This replanting would help offset any potential CO2 emissions increase.

GHG-6: Pedestrian and bicycle access would be maintained on Route 101 during project activities.

Hazardous Waste and Material

HW-1: Per Caltrans requirements, the contractor(s) would prepare a project-specific Lead Compliance Plan (CCR Title 8, § 1532.1, the “Lead in Construction” standard) to reduce worker exposure to lead-impacted soil. The plan would include protocols

for environmental and personnel monitoring, requirements for personal protective equipment, and other health and safety protocols and procedures for the handling of lead-impacted soil.

HW-2: When identified as containing hazardous levels of lead, traffic stripes would be removed and disposed of in accordance with Caltrans Standard Special Provision "Residue Containing Lead from Paint and Thermoplastic."

HW-3: If treated wood waste (such as removal of signposts or guardrail) is generated during this project, it would be disposed of in accordance with Standard Specification "Treated Wood Waste."

Traffic and Transportation

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

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

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

Utilities and Emergency Services

UE-1: All emergency response agencies in the project area would be notified of the project construction schedule and would have access to Route 101 throughout the construction period.

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

Water Quality and Stormwater Runoff

WQ-1: The project would comply with the Provisions of the Caltrans Statewide National Pollutant Discharge Elimination System (NPDES) Permit (Order 2012-0011-DWQ) as amended by subsequent orders, which became effective July 1, 2013, for projects that result in a land disturbance of one acre or more, and the Construction General Permit (Order 2009-0009-DWQ).

Before any ground-disturbing activities, the contractor would prepare a Stormwater Pollution Prevention Plan (SWPPP) (per the Construction General Permit Order 2009-0009-DWQ) or Water Pollution Control Program (WPCP) (projects that result in a land disturbance of less than one acre), that includes erosion control measures and construction waste containment measures to protect waters of the State during project construction.

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

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

Construction may require one or more of the following temporary construction site BMPs:

- Erosion control measures for areas of ground disturbance in and adjacent to Waters of the U.S. and State. Erosion control measures shall be implemented to reduce potential water quality degradation, dust, or erosion to areas adjacent to construction activities.

- Equipment shall be cleaned of deleterious materials before being delivered to the job site.

- Any spills or leaks from construction equipment (i.e., fuel, oil, hydraulic fluid, and grease) would be cleaned up in accordance with applicable local, state, and/or federal regulations.

- Accumulated stormwater, groundwater, or surface water from excavations or temporary containment facilities would be removed by dewatering.

- Water generated from the dewatering operations would be discharged on-site for dust control and/or to an infiltration basin or disposed of offsite.
- Temporary sediment control and soil stabilization devices would be installed.
- Existing vegetated areas would be maintained to the maximum extent practicable.
- Clearing, grubbing, and excavation would be limited to specific locations, as delineated on the plans, to maximize the preservation of existing vegetation.
- Vegetation reestablishment or other stabilization measures would be implemented on disturbed soil areas, per the Erosion Control Plan.
- Soil disturbing work would be limited during the rainy season.

WQ-2: The proposed SWPPP will include a waste management section that provides procedural and structural BMPs for collecting, handling, storing, and disposing wastes generated by project construction and to prevent the accidental release of pollutants. The contractor would also be required to submit a demolition and debris containment and management plan to the Caltrans Resident Engineer for approval prior to bridge demolition. All construction will be completed according to the most recent Caltrans Site Best Management Practices Manual to protect water quality including the following measures:

- A site-specific spill prevention plan to be included in the SWPPP will be implemented for potentially hazardous materials. The plan will include the proper handling and storage of all potentially hazardous materials, as well as the proper procedures for cleaning up and reporting any spills. If necessary, containment berms will be constructed to prevent spilled materials from reaching surface water features.
- Equipment and hazardous materials will be stored in the staging area 500-feet to the west and away from surface water features.
- Vehicles and equipment used during construction will receive proper and timely maintenance to reduce the potential for mechanical breakdowns leading to a spill of materials. Maintenance and fueling will be conducted

within an adequate fueling containment area, at least 50-feet away from all streams and wetlands.

- Minimize sand and gravel (from new asphalt) entering storm drains, streets, and creeks by sweeping. Old or spilled asphalt must be recycled or disposed as approved by the resident engineer.

- All project materials will be prevented from entering streams. Silt fences will be installed until soils are stabilized or permanent controls are in place.

- Installment of netting or other similar method for debris catchment during bridgework will also be implemented to protect aquatic species. The debris catchment shall be implemented between September 16 and January 31 to avoid the nesting bird season.

WQ-3: The project would incorporate pollution prevention and design measures consistent with the 2016 Caltrans Storm Water Management Plan. This plan complies with the requirements of the Caltrans Statewide NPDES Permit (Order 2012-0011-DWQ) as amended by subsequent orders.

The project design may include one or more of the following:

- Vegetated surfaces would feature native plants, and revegetation would use the seed mixture, mulch, tackifier, and fertilizer recommended in the Erosion Control Plan prepared for the project.

- Where possible, stormwater would be directed in such a way as to sheet flow across vegetated slopes, thus providing filtration of any potential pollutants.

1.5. 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 will be 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 National Marine Fisheries Service and the United States Fish and Wildlife Service—in other words, species protected by the Federal Endangered Species Act).

Chapter 2. CEQA Environmental Checklist

Environmental Factors Potentially Affected

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

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

The CEQA Environmental Checklist identifies physical, biological, social, and economic factors that might be affected by the proposed project. In many cases, background studies performed in connection with the project will indicate there are no impacts to a particular resource. A "No Impact" answer in the last column of the checklist reflects this determination. The words "significant" and "significance" used throughout the checklist and this document are only related to potential impacts pursuant to CEQA. The questions in the CEQA Environmental Checklist

are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

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

Project Impact Analysis Under CEQA

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

CEQA requires the identification of each potentially "significant effect on the environment" resulting from the action, and ways to mitigate each significant effect. Significance is defined as "*Substantial or potentially substantial adverse change to any of the physical conditions within the area affected by the project*" (14 CCR § 15382). CEQA determinations are made prior to and separate from the development of mitigation measures for the project.

The legal standard for determining the significance of impacts is whether a "fair argument" can be made that a "substantial adverse change in physical conditions" would occur. The fair argument must be backed by substantial evidence including facts, reasonable assumption predicated upon fact, or expert opinion supported by facts. Generally, an environmental professional with specific training in an area of environmental review can make this determination.

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

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

Although the formulation of mitigation measures shall not be deferred until some future time, the specific details of a mitigation measure may be developed after project approval when it is impractical or infeasible to include those details during the project's environmental review. The lead agency must (1) commit itself to the mitigation, (2) adopt specific performance standards the mitigation will achieve, and (3) identify the type(s) of potential action(s) that can feasibly achieve that performance standard and that will be considered, analyzed, and potentially incorporated in the mitigation measure. Compliance with a regulatory permit or other similar processes may be identified as mitigation if compliance would result in implementation of measures that would be reasonably expected, based on substantial evidence in the record, to reduce the significant impact to the specified performance standards (§15126.4(a)(1)(B)).

Per CEQA, measures may also be adopted, but are not required, for environmental impacts that are not found to be significant (14 CCR § 15126.4(a)(3)). Under CEQA, mitigation is defined as avoiding, minimizing, rectifying, reducing, and compensating for any potential impacts (CEQA 15370). Regulatory agencies may require additional measures beyond those required for compliance with CEQA. Though not considered "mitigation" under CEQA, these measures are often referred to in an Initial Study as "mitigation", Good Stewardship or Best Management Practices. These measures can also be identified after the Initial Study/Negative Declaration is approved.

CEQA documents must consider direct and indirect impacts of a project (CAL. PUB. RES. CODE § 21065.3). They are to focus on significant impacts (14 CCR § 15126.2(a)). Impacts that are less than significant need only be briefly described (14 CCR § 15128). All potentially significant effects must be addressed.

No-Build Alternative

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

2.1. Aesthetics

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

Regulatory Setting

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

Environmental Setting

The proposed Project is located in Humboldt County, adjacent to US Route 101. The portion of Route 101 that is paralleling the Project alignment is a four-lane (two lanes going both directions) highway. Typical views along US Route 101 within the confines of the Project footprint are comprised of forested areas, adjacent hillsides, and the Little River at the crossing. Coastal views are generally screened from view due to existing vegetation, however, limited coastal views are available at the Little River Crossing.

Discussion of CEQA Environmental Checklist Question 2.1—Aesthetics

A "*No Impact*" determination was made for Question b) listed within the CEQA Environmental Checklist—Aesthetics section. Determinations were based on scope, description, and locations of the proposed project and the Minor Visual Impact Assessment (VIA) completed for the project (Stantec 2022a) and is attached as Appendix B. See below for further discussion of the "*Less Than Significant Impact*" determination made for Questions a), c), and d).

a) Would the project have a substantial adverse effect on a scenic vista?

Important scenic vistas and resources in Humboldt County include those that are visible from major public roadways and public areas, such as views of the coast, forests, open space or agricultural lands, historic districts, landmarks, and cultural sites. Coastal views are assumed scenic vistas even though, to date, scenic resources in Humboldt County have not been mapped (Humboldt County 2017). As previously stated, the project is generally bordered on either side by forest and hillsides, but also transects the Little River; therefore, views of the waterway and the Pacific Ocean would occur following project implementation at that location. No other coastal views or scenic vistas are readily available as they are screened from view due to existing vegetation. Operation of the project would not introduce elements that would constitute visual intrusions into nor obscure or change the coastal views.

A Minor VIA was prepared for the project to document potential visual impacts caused by the proposed project and propose measures to lessen any detrimental impacts that are identified (Stantec 2022a). The Minor VIA determined that views of dense tree lines would be slightly changed, and project signage, streetlight and bike path infrastructure would slightly alter the character of the existing foreground from a somewhat naturalized, vegetated view to a slightly more built-form view and would reduce the intactness and unity of the view of the dense mature tree line in the background (Stantec 2022a). In addition,

approximately 117 trees that are 6-inch dbh or greater would be removed to clear the proposed one-mile alignment for trail installation, many of which are Sitka spruce and other native species. The 117 trees to be removed would be located throughout the one-mile alignment, avoiding a significant visual change in any one area. Even though dense vegetation would remain, the removal of the mature trees would break the pattern of trees adjacent to the roadway and would result in more visibility of the sky, power lines, and potential ocean views. Because adjacent, similarly dense but differently sized vegetation would remain visible, this would not constitute substantial damage to scenic resources. These visual changes would not be significant, and lack of designation as a scenic vista do not constitute a significant visual concern.

Aside from the 2-foot widening of the Route 101 Little River Bridge, all proposed Project components would be located on relatively flat land and would typically be at ground level (e.g., the Class I trail itself) or at a relatively low height (e.g., retaining walls, barriers, and signage). Widening the Route 101 Little River Bridge deck would not result in a significant visual change Construction of the project would temporarily alter the visual character of the location, due to the presence of construction equipment and materials. To minimize disruption to visual character during construction and operation, Mitigation Measure AR-1 has been incorporated into the project, which includes consideration for construction materials, color palettes, plantings, and use of open safety barrier design to buffer the appearance of project features on the landscape and the effect on viewers, in particular, commuters on Route 101 who would have the greatest familiarity with the pre-project conditions. In addition, the use of cable safety barriers or rails as needed along the extent of the trail would be consistent with the existing safety features along Route 101. With the incorporation of Mitigation Measure AR-1, a less than significant impact with mitigation would occur.

c) Would the project, 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.)

The project is expected to improve the scenic quality/character of the area by installation of a Class I multi-purpose trail which would attract multiple trail user groups to the area, deterring littering and other potential nuisance activities along the Route 101 corridor.

Temporary adverse visual impacts may occur from construction activities associated with the project. This impact would be short-term (approximately six months of construction) and less than significant. Tree removal would have a moderate visual impact on the existing visual character, as the existing trees are mature and help to soften the view by offsetting the scale and visual dominance of the roadway (Stantec 2022a). The remaining vegetation would continue to do so, but to a lesser extent. In the long-term the existing visual character along the project alignment would improve for the reasons mentioned above.

Visibility of the project would be limited to the immediate area in which viewers are located and would be obscured from other locations by topography and vegetation. Analysis of the views toward the project from adjacent public viewing areas (e.g., Little River State Beach and Moonstone Beach County Park) show that there would be little to no change in the view from beach areas (Stantec 2022a). For visitors and recreational users at Little River State Beach, the bike path added to the bridge would be barely noticeable and would not appear out of character with the existing roadway corridor (Stantec 2022a). The project would be visible to the north and south of the bridge mainly as the removal of a relatively thin, horizontal band of trees to accommodate the trail (Stantec 2022a). Given the sloped location and adjacent vegetation that would remain in view, this removal would likely be difficult to discern in views from the west. The tree removal along the trail segment would not be prominent to discern in coastal views, given the density of adjacent forest. The canopy of the trees both up- and down-slope from the trail would generally mask or otherwise offset the removal of trees for the trail (Stantec 2022a).

The project would be compatible with the existing visual character of the proposed project alignment and its surroundings and would not introduce any elements that would degrade existing visual character or quality. The addition of project components such as a multi-use trail, barriers, and retaining walls would have a low profile and occur in a manner consistent with the existing aesthetic of the surrounding area. As such, the visual character and quality of the proposed project would be similar to the existing visual character and quality of the project area in its current state. The impact would be less than significant.

d) Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

The proposed project would include new streetlights at each trail head, which are not anticipated to result in substantial light and glare impacts. Lighting and glare associated with construction activities would be temporary and minimized with incorporation of minimization measures described below. New permanent sources of lighting would be

designed to protect wildlife and nighttime views, including views of the night sky. The project would be designed to be consistent with the recommendations of the International Dark-Sky Association, which includes standards for fixtures, shielding, wattage, placement, height, and illumination levels. To comply with these requirements, lighting for the project would use the minimum lumens necessary and it would be directed downward, shielded, and at pedestrian level when feasible. This would help ensure lighting is localized and would not cause significant lighting and glare impacts on adjacent land uses and sensitive habitat areas. Lighting along the bikeway is not anticipated to result in adverse effects to daytime or nighttime views in or adjacent to the project area. This potential impact would be less than significant.

Mitigation Measures

Mitigation Measure AR-1: Protection of Aesthetic Resources

The following activities shall be implemented during construction:

- Aesthetic treatment to the bridges/guardrails/retaining walls would be included, such as tribal patterns, to address context sensitivity.
- Temporary access roads, construction easements, and staging areas that were previously vegetated would be restored to a natural contour and revegetated with regionally appropriate native vegetation.
- Where feasible, guardrail terminals would be buried; otherwise, an appropriate terminal system would be used, if appropriate.
- Where feasible, construction lighting would be limited to within the area of work.
- Where feasible, the removal of established trees and vegetation would be minimized. Environmentally sensitive areas would have Temporary High Visibility Fencing (THVF) installed before start of construction to demarcate areas where vegetation would be preserved, and root systems of trees protected.
- Preserve existing trees, vegetation, and associated root systems to the maximum extent feasible.
- Protect existing trees outside of the clearing and grubbing limits from contractor's operations, equipment, and materials storage.
- Utilize staging areas that do not damage existing vegetation or require vegetation or tree removal.
- Revegetate disturbed soil areas with native and climatically appropriate species.

- Limit construction lighting to the area of work and avoid light trespass with the use of directional lighting, shielding, and other measures as needed. Artificial night lighting may be required. To reduce potential disturbance to sensitive resources, lighting would be temporary, and directed specifically on the portion of the work area actively under construction. Use of artificial lighting would be limited to Cal/OSHA work area lighting requirements.
- Minimize appearance of construction equipment and staging areas to the maximum extent feasible.
- Use contour grading and slope rounding to produce smooth, flowing contours consistent with site topography, to increase context sensitivity and reduce engineered appearance of slopes.
- Use construction materials that are visually compatible with the landscape (e.g., non-glare metal guard rails and low-chroma pavement consistent with colors found in the adjacent landscape).
- Use reflective road paint (if pavement is used) and highly reflective signs only as required by law.
- If applicable, make the barrier rails context sensitive with relief patterns and / or earth tone colors and apply architectural treatment.
- Use Caltrans Type 85 barriers on the bridge to maximize visibility of Little River, retain scenic views, and maintain consistency of new bridge rail design throughout the North Coast area.

2.2. Agriculture and Forest Resources

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project; the Forest Legacy Assessment Project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board (CARB).

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project: a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				✓
Would the project: b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				✓
Would the project: c) Conflict with existing zoning or cause rezoning of forest land (as defined by Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?				✓
Would the project: d) Result in the loss of forest land or conversion of forest land to non-forest use?				✓

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project: e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?				✓

"No Impact" determinations in this section are based on the scope, description, and location of the proposed Project. The Project area has no Important Farmlands as mapped by the Farmland Mapping and Monitoring Program of the California Department of Conservation (CDOC 2021). There is no land in agricultural production, land zoned for agricultural use, land designated (General Plan Land Use) for agriculture use, or land under Williamson Act contract within the project alignment (Humboldt County 2017). There is no forest land or timber harvesting in the Project vicinity, nor are there lands suitable for timber harvesting; therefore, the project would not encroach upon or affect timber harvesting or cause the rezoning of forest land. No impact to Agricultural or Forest Resources would occur.

2.3. Air Quality

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

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project: a) Conflict with or obstruct implementation of the applicable air quality plan?		✓		
Would the project: b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?		✓		
Would the project: c) Expose sensitive receptors to substantial pollutant concentrations?			✓	
Would the project: d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?			✓	

Regulatory Setting

The Federal Clean Air Act (CAA), as amended, is the primary federal law that governs air quality, while the California Clean Air Act is its corresponding state law. These laws, and related regulations by the United States Environmental Protection Agency (U.S. EPA) and California Air Resources Board (CARB), set standards for the concentration of pollutants in the air.

Federal air quality standards and regulations provide the basic scheme for project-level air quality analysis under NEPA. In addition to this analysis, a parallel "conformity" requirement under the CAA also applies.

The project is located within the North Coast Air Basin (Air Basin) which is managed by the North Coast Unified Air Quality Management District (NCUAQMD). The NCUAQMD monitors air quality, enforces local, State, and federal air quality regulations for counties within its jurisdiction, inventories and assesses the health risks of Toxic Air Contaminants (TACs), and adopts rules that limit pollution.

For construction emissions, the NCUAQMD has indicated that emissions are not considered regionally significant for projects whose construction would be relatively short in duration, lasting less than one year. For project construction lasting more than one year or involving above average construction intensity in volume of equipment or area disturbed, construction emissions may be compared to the stationary source thresholds (NCUAQMD 2019). As discussed in Section 3.2.1, construction of the project is expected to require approximately 16 months to complete (eight months per year beginning in March and concluding by October 15). Emissions related to construction were calculated using the Sacramento Metropolitan Air Quality Management District's (SMAQMD) Road Construction Emissions Model (RCEM) version 9.0 and are discussed below (also see Appendix C – RECM Modeling Information and Results).

Environmental Setting

The project is located in a rural part of northern California absent major emissions sources, adjacent to the Pacific Ocean. The largest existing source of emissions in the vicinity of the project area is traffic on Route 101, unpaved road dust, smoke from wood stoves, construction dust, open burning of vegetation, and airborne salts and other particulate matter naturally generated by ocean surf. The project is influenced by coastal fog throughout the year.

Discussion of CEQA Environmental Checklist Question 2.3—Air Quality

a) Would the project conflict with or obstruct implementation of the applicable air quality plan?

This impact relates to consistency with an adopted attainment plan. Humboldt County is designated 'attainment' for all National Ambient Air Quality Standards. With regard to the California Ambient Air Quality Standards, Humboldt County is designated attainment for all pollutants except PM_{10}. Humboldt County is designated as "non-attainment" for the state's PM_{10} standard.

PM_{10} refers to inhalable particulate matter with an aerodynamic diameter of less than 10 microns. PM_{10} includes emission of small particles that consist of dry solid fragments, droplets of water, or solid cores with liquid coatings. The particles vary in shape, size, and composition. PM_{10} emissions include unpaved road dust, smoke from wood stoves, construction dust, open burning of vegetation, and airborne salts and other particulate matter naturally generated by ocean surf. Therefore, any use or activity that generates airborne particulate matter may be of concern to the NCUAQMD. The proposed project would create PM_{10} emissions in part through vehicles coming and going to the project site and the construction activity associated with the project.

To address non-attainment for PM_{10}, the NCUAQMD adopted a Particulate Matter Attainment Plan in 1995. This plan presents available information about the nature and causes of PM_{10} standard exceedances and identifies cost-effective control measures to reduce PM_{10} emissions to levels necessary to meet California Ambient Air Quality Standards. However, the NCUAQMD states that the plan, "should be used cautiously as it is not a document that is required in order for the District to come into attainment for the state standard." (NCUAQMD 2022). Therefore, compliance with applicable NCUAQMD PM10 rules is applied as the threshold of significance for the purposes of analysis. NCUAQMD Rule 104 Section D, Fugitive Dust Emissions, is applicable to the project.

Rule 104, Section D – Fugitive Dust Emissions is used by the NCUAQMD to address non-attainment for PM10. Pursuant to Rule 104 Section D, the handling, transporting, or open storage of materials in such a manner, which allows or may allow unnecessary amounts of particulate matter to become airborne, shall not be permitted. Reasonable precautions shall be taken to prevent particulate matter from becoming airborne, including, but not limited to covering open bodied trucks when used for transporting materials likely to give rise to airborne dust and the use of water during the grading of roads or the clearing of land. During earth moving activities, fugitive dust (PM_{10}) would be generated. The amount of dust generated at any given time would be highly variable and is dependent on the size of the area disturbed at any given time, amount of activity, soil conditions, and meteorological conditions. Dust generation has the potential to cause a significant impact to the surrounding public if not properly managed. The project would implement Mitigation Measure AQ-1 which would limit dust generation and provide a pathway for the public to contact the NCUAQMD if dust was bothersome. With incorporation of Mitigation Measure AQ-1, potential air quality impacts would be less than significant.

Operation of the project would not include the handling, transporting or open storage of materials in which particulate matter may become airborne. Due to the absence of handling, transport or open storage of materials that would generate particulate matter, operation of the project is not expected to conflict with NCUAQMD's Rule 104 Section D. No impact from operation of the project would result.

b) Would the project 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?

This impact is related to regional criteria pollutant impacts. As identified in Section 9.3 a), Humboldt County is designated nonattainment of the State's PM_{10} standard. The County is designated attainment for all other state and federal standards. Potential impacts of concern will be exceedances of state or federal standards for PM10. Localized PM10 is of concern during construction because of the potential to emit fugitive dust during earth-disturbing activities.

Construction

Localized PM_{10}

The project would include clearing and grubbing, grading, barrier installation, asphalt paving, and paving activity. Generally, the most substantial air pollutant emissions would be dust generated from site clearing and grubbing and grading. If uncontrolled, these emissions could lead to both health and nuisance impacts. Construction activities would also temporarily generate emissions of equipment exhaust and other air contaminants. The project's potential impacts from equipment exhaust are assessed separately below.

The NCUAQMD does not have formally adopted thresholds of significance for fugitive, dust-related particulate matter emissions above and beyond Rule 104, Section D which does not provide quantitative standards. For the purposes of analysis, this document uses the Bay Area Air Quality Management District (BAAQMD) approach to determining significance for fugitive dust emissions from Project construction. The BAAQMD bases the determination of significance for fugitive dust on a consideration of the control measures to be implemented. If all appropriate emissions control measures recommended by BAAQMD are implemented for a project, then fugitive dust emissions during construction are not considered significant. BAAQMD recommends a specific set of "Basic Construction Measures" to reduce emissions of construction generated PM10 to less than significant. Without incorporation of these

Basic Construction Measures, the project's construction-generated fugitive PM10 (dust) would result in a potentially significant impact.

The Basic Construction Measure controls recommended by the BAAQMD are incorporated into Mitigation Measure AQ-1. These controls are consistent with NCUAQMD Rule 104 Section D, Fugitive Dust Emission and provide supplemental, additional control of fugitive dust emissions beyond that which would occur with Rule 104 Section D compliance alone. Therefore, with incorporation of Mitigation Measure AQ-1, the project would result in a less than significant impact for construction-period PM10 generation and would not violate or substantially contribute to an existing or projected air quality violation.

Construction Criteria Pollutants

For construction emissions, the NCUAQMD has indicated that emissions are not considered regionally significant for projects whose construction would be of relatively short duration, lasting less than one year. For project construction lasting more than one year or that involves above average construction intensity in volume of equipment or area disturbed, construction emissions may be compared to the stationary source thresholds.

The NCUAQMD does not have established CEQA significance criteria to determine the significance of impacts that would result from projects such as the proposed project; however, the NCUAQMD does have criteria pollutant significance thresholds for new or modified stationary source projects proposed within the NCUAQMD's jurisdiction. NCUAQMD has indicated that it is appropriate for lead agencies to compare proposed construction emissions that last more than one year to its stationary source significance thresholds, which are:

- Nitrogen oxides – 40 tons per year
- Reactive organic gases – 40 tons per year
- PM10 – 15 tons per year
- Carbon monoxide – 100 tons per year.

If an individual project's emission of a particular criteria pollutant is within the thresholds outlined above, the project's effects concerning that pollutant are considered to be less than significant.

The SMAQMD's RECM version 9.0 was used to estimate air pollutant emissions from project construction (Appendix C). Construction of the project would require approximately

16 months to complete (from March to October 15 over two years). Material hauling volumes were obtained via the project's 30% design

Table 4 summarizes construction-related emissions. As shown in the table, the project's construction emissions would not exceed the NCUAQMD's stationary sources emission thresholds. Therefore, the project's construction emissions are considered to have a less than significant impact.

Table 4. Construction Regional Pollutant Emissions

Parameter	Emissions (ton per year)			
	ROG	NO_X	CO	PM_{10}
Project Construction over two construction seasons	0.61	6.14	5.91	0.60
NCUAQMD Stationary Source Thresholds	40	40	100	15
Significant Impact?	No	No	No	No

Operation

Following construction, the project would not include any stationary sources of air emissions. Vehicle trips associated with operation and maintenance of the proposed trail would include annual inspections, repaving, painting, and repairs as needed. Operation and maintenance of the project would generate less than one traffic trip per week on average. However, larger repairs to the trail may take several weeks to complete depending on the extent of damage and other circumstances. The project would not result in substantial long-term operational emissions of criteria air pollutants. Therefore, project-generated operational emissions would not result in a cumulatively considerable net increase of any criteria pollutant for which the region is in non-attainment. The project's contribution to a cumulative impact would be less than significant.

c) Would the project expose sensitive receptors to substantial pollutant concentrations?

Activities occurring near sensitive receptors should receive a higher level of preventative planning. Sensitive receptors include school-aged children (schools, daycare, playgrounds),

the elderly (retirement community, nursing homes), the infirm (medical facilities/offices), and those who exercise outdoors regularly (public and private exercise facilities, parks).

Sensitive receptors near the project alignment include residential and recreational uses. There are no residences near the project; the nearest residence is located on the opposite side of Route 101. Moonstone beach, a popular county park, is located approximately 750-linear feet from the project boundary.

Project construction activities could occur over approximately 16 months (up to approximately eight months per year); however, the use of heavy-duty equipment is only estimated to occur over 79 working days in Year 1 and 79 working days in Year 2, based on default air quality modeling settings. Project construction is not expected to include intensive or prolonged construction equipment use for a long duration. Additionally, equipment use would be spread out over a linear project alignment, further reducing the duration of equipment use near individual receptor locations. Due to the short duration (no one area of prolonged or intense construction activity) the project would not result in the exposure of sensitive receptors to substantial pollutant concentrations. Therefore, the construction-related impact would be less than significant.

Following construction, the project would not include any stationary sources of air emissions or new mobile source emissions that would result in substantial long-term operational emissions of criteria air pollutants. In fact, project operation could potentially reduce vehicle-miles-traveled and therefore emissions. Therefore, project operation would not expose nearby sensitive receptors to substantial levels of pollutants. The operation-related impact would be less than significant.

d) Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

The project would create limited exhaust fumes from gas- and diesel-powered equipment during construction. The likelihood of these odors and emissions reaching nearby receptors is influenced by atmospheric conditions, specifically wind direction. Due to the relative short-term nature of construction, distribution of activities, emissions or odors caused by construction, the project would not adversely affect a substantial amount of people. Therefore, a less than significant impact would result

Following construction, operations would not result in any major sources of odor or emissions. Therefore, there would be a less than significant impact from project operations.

Mitigation Measures

Mitigation Measure AQ-1: Air Quality Protections

Caltrans will include provisions in the construction bid documents that the contractor will implement a dust control program to limit fugitive dust emissions. The dust control program will include the following elements as appropriate:

- Water inactive construction sites and exposed stockpile sites at least twice daily, including non-workdays, until soils are stable.
- Soil piles for backfill will be marked and flagged separately from native topsoil stockpiles. These soil piles will also be surrounded by silt fencing, straw wattles, or other sediment barriers or will be covered unless they are to be immediately used.
- Equipment or manual watering will be conducted on all stockpiles, dirt/gravel roads, and exposed or disturbed soil surfaces, as necessary, to reduce airborne dust.

2.4. Biological Resources

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project: a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife, U.S. Fish and Wildlife Service, or NOAA Fisheries?		✓		
Would the project: b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?			✓	
Would the project: c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?			✓	
Would the project: d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?			✓	

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project: e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?			✓	
Would the project: f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				✓

Regulatory Setting

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

Natural Communities

CDFW maintains records of sensitive natural communities (SNC) in the California Natural Diversity Database (CNDDB). SNC are those natural communities that are of limited distribution statewide or within a county or region and are often vulnerable to environmental effects of projects. These communities may or may not contain special-status taxa or their habitat.

Wetlands and Other Waters

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

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

Plant Species

The U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW) have regulatory responsibility for the protection of special-status plant species. The primary laws governing plant species include:

- Federal Endangered Species Act (FESA), United States Code 16 (USC), Section 1531, et seq. See also 50 CFR Part 402
- California Endangered Species Act (CESA), California Fish and Game Code, Section 2050, et seq.
- Native Plant Protection Act, California Fish and Game Code, Sections 1900–1913
- National Environmental Policy Act (NEPA), 40 C.F.R. Section 1500 through Section 1508
- California Environmental Quality Act (CEQA), California Public Resources Code, Sections 21000–2117

Animal Species

The USFWS, NMFS, and California Department of Fish and Wildlife (CDFW) have regulatory responsibility for the protection of special status animal species. The primary laws governing animal species include:

- NEPA, 40 C.F.R. Section 1500 through Section 1508
- CEQA, California Public Resources Code, Sections 21000–2117
- Migratory Bird Treaty Act, 16 U.S.C. Sections 703–712
- Fish and Wildlife Coordination Act, 16 U.S. Code Section 661
- Sections 1600–1603 of the California Fish and Game Code
- Sections 4150 and 4152 of the California Fish and Game Code

Threatened and Endangered Species

The primary laws governing threatened and endangered species include:

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

Section 9 of the Federal Endangered Species Act of 1973 (FESA) prohibits acts that result in the "take" of threatened or endangered species. As defined by the FESA, "endangered" refers to any species that is in danger of extinction throughout all or a significant portion of its current range. The term "threatened" is applied to any species likely to become endangered within the foreseeable future throughout all or a significant portion of its current range. "Take" is defined as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct." Sections 7 and 10 of the FESA provide methods for permitting otherwise lawful actions that may result in incidental take of a federally listed species. The term "incidental take" refers to take of a listed species that is incidental to, but not the primary purpose of, an otherwise lawful activity. Incidental take is permitted under Section 7 for projects involving a federal action; Section 10 provides a process for non-federal actions. The act is administered by the USFWS and NMFS.

The California Endangered Species Act (CESA) (Section 2800 of the Fish and Game Code) prohibits take of state-listed species and protects native species of fishes, amphibians, reptiles, birds, mammals, invertebrates, and plants, and their habitats, that are threatened with extinction or experiencing a significant decline, which if not halted, would lead to a threatened or endangered designation. CESA authorizes the California Department of Fish and Wildlife (CDFW) to issue incidental take permits for state-listed species, when specific criteria are met.

Invasive Species

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

Environmental Setting

A Natural Environment Study (NES) (Stantec 2022b) was prepared for the project to evaluate the project's potential effects on sensitive biological resources, and is attached to this IS/MND as Appendix D. To comply with the provisions of various state and federal environmental statutes and Executive Orders, potential impacts to regulated habitats and special status plants and animals were investigated. Field reviews were conducted to identify

existing habitat types and natural communities, potential jurisdictional waters and wetlands, rare species and/or factors indicating the potential for rare species (i.e., presence of suitable habitat), sensitive water quality receptors, and existing ambient noise levels. Airborne noise and water quality assessments were also examined to evaluate potential impacts to terrestrial and aquatic species from proposed construction activities.

The Biological Study Area (BSA) includes all areas that could be potentially impacted by the project plus a buffer to accommodate any changes to project limits and project design that may occur during project development. It includes the trail alignment, all areas associated with trail construction, and stockpiling and staging areas. The BSA is divided into two areas by the Little River, a wide and slow-moving estuarine perennial river bisecting the approximate center of the BSA. The northern upland terrace is forested and located adjacent to Route 101, occurring from Little River north to Scenic Drive. Estuarine-influenced vegetation and riparian wetlands are adjacent to the Little River and are downslope from the upland terrace. The section of the BSA south of Little River includes coastal scrub habitat located on a hillslope east of the active dunes at Little River Beach, which are outside (west) the BSA and project boundary.

Waters within the BSA include a perennial stream (Little River) and an unnamed perennial tributary to Little River. The Little River is a smaller watershed located between the Mad River and Redwood watersheds, and it flows approximately 19.6-river miles. The Little River within the BSA is along the Route 101 bridge corridor and has a wetted width of approximately 200-feet, depending on tidal influences and seasonal rains. From the BSA, the river bends to the north and continues to its confluence with the Pacific Ocean about 0.8-river mile away. Riparian wetlands and fresh emergent wetlands are located on either side of Little River, as well as in the extensive estuarine habitat on the west of the BSA.

An additional perennial creek (an unnamed tributary) flows into the estuarine area of the Little River north of the Route 101 bridge over Little River. Within the BSA, this unnamed tributary flows out of a Route 101 culvert which is approximately 48-inches diameter, constructed of concrete, and set at grade. Land uses in the immediate vicinity include Route 101 and a few lesser roads, and natural resources and recreation, including State Parks property on the adjacent public beaches that generally border the alignment to the west. Aside from Route 101, the area is generally undeveloped and does not include residential, commercial, or other public facilities.

RCAA conducted protocol-level botanical surveys in the BSA on April 14-15, May 20-21, August 27, and September 9, 2021, in general accordance with the *Protocols for Surveying*

and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities (CDFW 2018).

During September 1-3, 2020, Stantec biologists Sarah Tona and Jacqueline Phipps conducted a wetland delineation according to methodology described in the Corps of Engineers Wetlands Delineation Manual (Environmental Laboratory 1987) and Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (USACE 2010). Stantec biologists also evaluated features that may qualify as Coastal Act Waters. The biologists mapped vegetation following the technical approach and vegetation alliance classification system described in A Manual of California Vegetation, Second Edition (MCV) (Sawyer et al. 2009) and updated in the current online edition (CNPS 2021b). The biologists also performed a reconnaissance-level assessment for habitat for wildlife species during the field visit.

RCAA and Caltrans biologists conducted a survey for suitable habitat for special status bats and birds on July 6, 2021. The survey was conducted on foot and from the water in a kayak, and biologists used high-powered binoculars and flashlights to assess conditions of the bridge over Little River.

Resulting vegetation community mapping, wetland delineation, and special status plant mapping is including in Appendix A of this ISMND as follows:

- Vegetation mapping results – Exhibit 4-1 and 4-2
- Potential waters of the U.S. – Exhibit 5-1 through 5-4
- Potential Coastal Act waters – Exhibit 6-1 through 6-4
- Special status plant mapping – Exhibit 7-1 and 7-2

Plant Species

For this evaluation, special status plant species include plants that are (1) listed as threatened or endangered under the CESA or the ESA; (2) identified as state or federal candidate or proposed species for listing as threatened or endangered; (3) designated as rare by the CDFW; and/or (4) have a California Rare Plant Rank (CRPR) of 1, 2, or 3.

Regionally occurring special status plant species were identified based on a review of pertinent literature, the USFWS species list, California Natural Diversity Database (CNDDB) and California Native Plant Society database records, and the field survey results. The status

of each special status plant species was verified using the *Special Vascular Plants, Bryophytes, and Lichens List* (CDFW 2021a) and the *State and Federally Listed Endangered, Threatened and Rare Plants of California* (CDFW 2021b).

All of the special status plant species identified during biological scoping were evaluated for their potential to occur in the BSA based on the expected geographic range and the presence of suitable habitat requirements (e.g., substrate, hydrology, vegetation type, disturbance). All special status species were evaluated according to the following guidelines:

- **Not likely to occur:** Habitat within the biological study area (BSA) does not satisfy the species' requirements and/or the project is not within the known or expected range of the species. Known occurrences have not been reported from the region. The species was not detected during protocol-level surveys. The species' presence within the BSA is very unlikely.
- **Low Potential:** Habitat within the BSA satisfies few of the species' requirements. Known occurrences have not been reported from the BSA. The species' presence within the BSA is not likely.
- **Moderate Potential:** Habitat within the BSA meets some of the species' requirements and known locations for the species are found within 10-miles of the project. Presence of the species within the BSA is moderately possible.
- **High Potential:** Habitat within the BSA meets most or all of the species' requirements and known locations of the species are within 5-miles of the project. Presence of the species within the BSA is highly likely.

Based on the habitat assessment, the BSA provides potential habitat for 48 special status plant species (See Table 3 in Appendix D). The plants listed in Table 3 are special status based on (1) federal, state, or local laws regulating their development; (2) limited distributions; and/or (3) the presence of habitat required by the special status plants occurring on-site.

Protocol-level botanical surveys were conducted in April, May, August, and September of 2021 (Appendix E of the NES). Trailing black currant *(Ribes laxiflorum)* was found in the BSA but outside the area that would be impacted during construction; the species has a California Rare Plant Rank of 4.3 and is therefore not considered further in CEQA impact analysis. The surveys occurred during the identification period for special status plants species that have a low to high potential to be present in the BSA based on habitat and known records in the region. No other special status plants were found in the BSA and are not likely to occur.

Trailing black currant (*Ribes laxiflorum*)

Trailing black currant has a California Rare Plant Rank of 4.3 and is therefore not considered further in CEQA impact analysis. This species is normally found within north coast coniferous forest between 15- and 4,500-feet in elevation. This species blooms from March to July. This species occurs in the BSA. It was located during the 2021 botanical surveys. The occurrence consists of five individual plants in one location (Exhibit 7-1, Appendix A).

Animal Species

Record searches and habitat assessments were conducted to determine whether special status wildlife species have the potential to occur in the BSA. Species that were queried but do not have potential habitat in the project area are not discussed in this document because CEQA, FESA, and CESA only require analysis of species that could potentially be affected by a project. Of the 25 special status animal species that were queried to potentially occur within the BSA, habitat is present for 16 species (Stantec 2022b) excluding federally or state threatened or endangered species, which are discussed below. Special status wildlife species with the potential to occur in the BSA, based on queries and the rationale on whether or not there was potential habitat in the BSA, are discussed further below and include:

Fish or Lamprey

- Pacific lamprey (*Entosphenus tridentatus*) – Moderate potential
- Western brook lamprey (*Lampetra richardsoni)* – Present
- Coastal cutthroat trout (*Oncorhynchus clarkii)* – Present

Amphibians and Reptiles

- Northern red-legged Frog (*Rana aurora)* – Moderate potential
- Southern torrent salamander (*Rhyacotriton variegatus)* – Moderate potential
- Western pond turtle (*Actinemys marmorata)* – Moderate potential

Birds

- White-tailed kite (*Elanus leucurus*) – High potential
- Northern harrier (*Circus cyaneus*) – Moderate potential

- Vaux's swift (*Chaetura vauxi*) – Moderate potential
- Yellow warbler (*Setophaga petechia*) – Moderate potential
- Yellow-breasted chat (*Icteria virens*) – Moderate potential
- Purple martin (*Progne subis*) – Low potential

Bats and Other Mammals

- Townsend's big-eared bat (*Corynorhinus townsendii)* – Low potential
- Pallid bat (*Antrozous pallidus*) – Low potential
- White-footed vole (*Arborimus albipes*) – Moderate potential
- Sonoma red tree vole (*Arborimus pomo*) – Low potential

See Table 4 in Appendix D for a complete list of all special status animal species scoped to potentially occur in the BSA.

Threatened / Endangered Species

Record searches and habitat assessments were conducted to determine whether federally or state threatened, or endangered species have the potential to occur in the BSA. Species that were queried but do not have potential habitat in the project area are not discussed in this document because CEQA, FESA, and CESA only require analysis of species that could potentially be affected by a project. Of the 20 special status wildlife species with potential habitat in the BSA, habitat (or critical habitat) is present for four species. Threatened or endangered species with the potential to occur in the BSA, based on queries and the rationale on whether or not there was potential habitat in the BSA, are discussed further below and include:

Fish

- Southern Oregon/Northern California Coast (SONCC) Evolutionarily Significant Unit (ESU) coho salmon (*Oncorhynchus kisutch)* – High potential
- California Coastal (CC) ESU Chinook salmon (*Oncorhynchus tshawytscha)* – High potential

- Northern California (NC) Distinct Population Segment (DPS) steelhead (*Oncorhynchus mykiss)* – Present
- Eulachon (*Thaleichthys pacificus)* – Moderate Potential

Birds

- Tricolored blackbird (*Agelaius tricolor)* – Moderate potential

See Table 4 in Appendix D for a complete list of all federally and state listed threatened and endangered species scoped to potentially occur in the BSA.

Pacific Salmon Essential Fish Habitat

Essential Fish Habitat (EFH) is defined by the Magnuson-Stevens Fishery Conservation and Management Act (MSA) for federally managed species as "those waters and substrate necessary for fish for spawning, breeding, feeding, or growth to maturity." The Little River and associated tributaries support EFH for species regulated under the federal Pacific Coast Salmon Fishery Management Plan.

EFH for the Pacific Coast Salmon Fishery means those waters and substrate necessary for salmon production needed to support a long-term sustainable salmon fishery and salmon contributions to a healthy ecosystem. To achieve that level of production, EFH must include all those streams, lakes, ponds, wetlands, and other currently viable water bodies, and most of the habitat historically accessible to salmon in Washington, Oregon, Idaho, and California. In the estuarine and marine areas, salmon EFH extends from the nearshore and tidal submerged environments within state territorial waters out to the full extent of the Exclusive Economic Zone offshore of Washington, Oregon, and California north of Point Conception. Freshwater EFH for Pacific salmon includes all those streams, lakes, ponds, wetlands, and other water bodies currently or historically accessible to salmon in Washington, Oregon, Idaho, and California, except areas upstream of certain impassable man-made barriers (as identified by the Pacific Fishery Management Council [PFMC]), and longstanding, naturally impassable barriers (i.e., natural waterfalls in existence for several hundred years) (PFMC 2016).

Natural Communities

During the field visits vegetation mapping was conducted to identify which natural communities were present within the BSA. Several natural communities mapped in the BSA are considered sensitive by the CDFW (CDFW 2020). Sensitive natural communities in the

BSA includes coastal dune willow thickets, Pacific silverweed marshes, Sitka spruce forest, and slough sedge swards.

Riparian habitat is considered a sensitive natural community by CDFW and California Coastal Commission (CCC) and is present in the BSA. In addition to providing habitat for many wildlife species, riparian areas provide shade, sediment, nutrient or chemical regulation, stream bank stability, and input for large woody debris or organic matter to the channel, which are necessary habitat elements for fish and other aquatic species. Riparian habitat is present on either side of Little River in the BSA and include Pacific silverweed marshes, slough sedge swards, and coastal dune willow thickets. Descriptions of the communities are included below.

Forests and Woodlands: Sitka Spruce Forest Alliance

Sitka spruce forest alliance occurs above Little River beach south of the Little River, and as mature forest on an upland terrace north of Little River. This community is dominated by Sitka spruce with scattered Monterey pine (*Pinus radiata*) and Douglas fir (*Pseudotsuga menziesii*). The tree layer is sparse in the southern portion of the BSA, with only about 10 percent absolute tree cover. The shrub layer is dominated by about 8 percent absolute cover of coyote brush (*Baccharis pilularis*). The herbaceous layer is dense and dominated by European beachgrass (*Ammophila arenaria*), with yellow bush lupine (*Lupinus arboreus*) and sword fern (*Polystichum munitum*) common as well.

The Sitka spruce forest north of Little River occurs on an upland terrace and is a high-quality intact stand dominated by mature Sitka spruce trees at approximately 30 percent absolute cover. Red alder (*Alnus rubra*) and Hooker's willow (*Salix hookeriana*) occur to a small extent in the subcanopy. The herbaceous layer is dominated by sword fern, bracken fern (*Pteridium aquilinum*), slough sedge (*Carex obnupta*), English ivy (*Hedera helix*), and California blackberry (*Rubus ursinus*).

Forests and Woodlands: Red Alder Forest Alliance

Red alder forest alliance occurs on the north side of Little River. Red alder is the sole dominant tree in the upland areas of the BSA; while in the lower elevation areas, red alders are co-dominant with Hooker's willow. Shrubs in the understory include red elderberry (*Sambucus racemosa*), California blackberry, and Himalayan blackberry (*Rubus armeniacus*). The herbaceous layer contains sword fern and bracken fern in the upland areas

and skunk cabbage (*Lysichiton americanus*), slough sedge, and small-fruited bulrush (*Scirpus microcarpus*) in the wetland areas.

Shrublands: Coastal Dune Willow Thickets Alliance

Coastal dune willow thickets alliance occurs in small patches throughout the BSA. Hooker's willow is dominant in the shrub layer and moderate to dense at about 60 percent absolute cover. Scattered wax myrtle (*Morella californica*), coast twinberry (*Lonicera involucrata*), and cascara sagrada (*Frangula purshiana*) are present as well. Slough sedge and sword fern are common in the herbaceous layer.

Shrublands: Coyote Brush Scrub Alliance

Coyote brush scrub alliance occurs intermixed with Sitka spruce forest and coastal dune willow thickets south of Little River in coastal scrub habitat. The shrub layer is fairly sparse, with only 8-10 percent absolute cover of coyote brush. Himalayan blackberry and California blackberry are common in the shrub layer as well. The herbaceous layer is dominated by European beachgrass and sword fern.

Herbaceous Vegetation: Slough Sedge Swards Alliance

Slough sedge swards alliance occurs along the edge and within the ordinary high-water mark of Little River. Little River is an estuarine feature adjacent to the Pacific Ocean and is tidally influenced. The slough sedge community is partially inundated by the Little River when the tide is high. The alliance is dominated by slough sedge, and no other plant species occurs in the small area adjacent to the river.

Herbaceous Vegetation: Pacific Silverweed Marshes Alliance

Pacific silverweed (*Argentina egedii*[1]) marshes alliance occurs on the north bank of the Little River, located between the slough sedge community and the coastal dune willow community on the river terrace. The community is dominated by Pacific silverweed and redtop (*Agrostis stolonifera*). Other common plants in the herbaceous community include bird's foot trefoil (*Lotus corniculatus*), Pacific aster (*Symphyotrichum chilense*), and Baltic rush (*Juncus balticus*).

[1] Synonym to *Potentilla anserina* in Jepson eFlora (Jepson Flora Project 2021).

Herbaceous Vegetation: Non-Native Grassland

Non-native grassland occurs in small patches alongside Route 101 and side roads in the southern portion of the BSA. The vegetation was mowed, so plant identification was limited and is not categorized as a natural community. The community has a dense herbaceous cover dominated by fescue (*Festuca* sp.), carrot (*Daucus carota*), plantain (*Plantago* sp.), and bird's foot trefoil. This community also contains a narrow, vegetated ditch with hydrophytic vegetation, including rushes (*Juncus* spp.) and willow (*Salix* sp.) seedlings.

Wetlands and Other Waters

Waters within the BSA include a perennial stream (Little River) and an unnamed perennial tributary to Little River. The Little River is a smaller watershed located between the Mad River and Redwood watersheds, and it flows approximately 19.6-river miles. The Little River within the BSA is along the Route 101 bridge corridor and has a wetted width of approximately 200-feet, depending on tidal influences and seasonal rains. From the BSA, the river bends to the north and continues to its confluence with the Pacific Ocean about 0.8 river-mile away. Riparian wetlands and fresh emergent wetlands are located on either side of Little River, as well as in the extensive estuarine habitat on the west side of the BSA.

An additional perennial creek (an unnamed tributary) flows into the estuarine area of the Little River north of the Route 101 bridge over Little River. Within the BSA, this unnamed tributary flows out of a Route 101 culvert which is approximately 48 inches diameter, constructed of concrete, and set at grade.

Invasive Species

Invasive plants (including designated noxious weeds) are undesirable, non-native plants that commonly invade disturbed sites. Most species have been introduced from Europe and Asia and are known to degrade native wildlife habitat and plant communities. When disturbance results in the creation of habitat openings or in the loss of intact native vegetation, invasive plants may colonize the site and spread, often out-competing native species. Once established, they are very difficult to eradicate and could pose a threat to native species.

All non-native plant species observed in the BSA during the botanical survey were reviewed to determine their status as invasive plants according to the ratings in the California Invasive Plant Inventory produced by California Invasive Plant Council (Cal-IPC 2021). The California Invasive Plant Council categorizes non-native invasive plants into three categories of overall negative ecological impact in California: high, moderate, limited. The non-native

plants were also reviewed to determine if any plants are on the California Department of Food and Agriculture list of Noxious Weeds (California Department of Food and Agriculture 2021). Table 2 in Appendix D lists the invasive plant species observed in the BSA during the 2021 botanical survey, which includes pampas grass near the northern trailhead at the end of Scenic Drive.

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

"*No Impact*" determinations were made for Question e) and Question f) of the CEQA Environmental Checklist–Biological Resources section based on the scope, description, and location of the proposed project, as well as the NES prepared in 2022 (Stantec 2022b). The project would be constructed and operated entirely within the Caltrans right-of-way; therefore, local ordinances and policies pertaining to biological resources would not apply. The following discusses Questions a) through d) of the CEQA Environmental Checklist–Biological Resources section. Each question is discussed individually; however, it should be noted that some resources fall under more than one question. As such, where necessary, those resources are discussed multiple times throughout this section.

a) Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife, U.S. Fish and Wildlife Service, or NOAA Fisheries/NMFS?

Plant Species

Trailing Black Current

The trailing black current was observed outside the project disturbance boundary and is thus unlikely to be impacted by construction of the project. Additionally, trailing black current is California Rare Plant Rank 4.3. Only plant species with California Rare Plant Ranks of 1, 2, or 3 require mitigation under the CEQA guidelines, unless they are species of local significant. Thus, the trailing black current does not require mitigation as California Rare Plant Rank 4.3 species. The small population will be flagged for avoidance, which would be feasible given the planned project disturbance location. A less than significant impact would result.

Animal Species

Caltrans has determined that project activities would have "No Impact" on special status animal species that were queried but did not have potential habitat in the BSA (see Table 4 – Appendix D). Further discussion is provided below for special status wildlife species that could potentially occur in the project BSA.

Fish and Lamprey

Coastal cutthroat trout are found in coastal streams from the Eel River, Humboldt County, to Seward in southeastern Alaska. Some coastal cutthroat trout may spend their entire lives in freshwater, but most are anadromous, spending the summers in saltwater habitats. They prefer small, low gradient coastal streams and estuarine habitats. In California, coastal cutthroat trout begin to migrate up spawning streams from August to October, following the first substantial rainfall, and spawn in the late-winter to early-spring (Moyle 2002). Stream sections with small or moderate-sized gravel substrates are essential for spawning. The species was observed in the unnamed tributary during a site survey conducted in coordination with CDFW on June 1, 2021 (see Appendix F within Appendix D for the stream evaluation results).

Both the western brook lamprey and the Pacific lamprey are found in coastal streams and may seasonally use the BSA as a migratory corridor. Habitat requirements are similar to that of salmonids requiring clear, cold, water in little disturbed watersheds, as well as clean gravel near cover (e.g., boulders, riparian vegetation, logs) for spawning. Additionally, areas with low flow velocities and fine sediments are required for rearing juveniles called ammocoetes, which may take up to 5 years to mature before migrating to the ocean as adults. It has been observed that where western brook lamprey and Pacific lamprey co-occur, western brook lamprey may spawn within Pacific lamprey nests (superimposition), but western brook lamprey generally spawn further upstream than the Pacific lamprey (Moyle et al. 2015). Presence of either species within Little River was not verified by a survey but is likely. The western brook lamprey was observed in the unnamed tributary during the June 1, 2021, site survey (see Appendix F within Appendix D for the stream evaluation results). Presence of Pacific lamprey in the Unnamed Tributary was not verified but is likely given the habitat conditions present.

No in-water work would occur during project construction, and the existing culvert between Little River and the Unnamed Tributary would not be modified. Potential impacts on federally listed fish species caused by the proposed action include:

- Temporary increases in turbidity and suspended sediment from construction area stormwater runoff
- Exposure to hazardous chemicals/accidental spill of lubricants and fuels
- Alteration of riparian habitat
- Construction-related noise and visual effects

These impacts are discussed in greater detail in the salmonids section below. Impacts to coastal cutthroat trout, western brook lamprey, and Pacific lamprey would be equivalent to potential impacts to special status salmonids. Given the lack of in-water work and required Standard Measures for erosion and sedimentation control, prevention of accidental spills, and THVF (Standard Measures WQ-1, WQ-2, WQ-3, and BR-4B, potential impact to coastal cutthroat trout, western brook lamprey, and Pacific lamprey would be less than significant.

Amphibians and Reptiles

The streams and associated riparian habitat in and near the BSA provide potential habitat for three species of special concern: northern red-legged frog, southern torrent salamander, and western pond turtle. The riverine and upland habitat may also support breeding habitat for these species. Reconnaissance-level biological surveys did not locate these species in or adjacent to the BSA. According to CNDDB, the nearest known occurrence for northern red-legged frog is approximately 0.6-mile from the BSA. The nearest CNDDB occurrence for Southern torrent salamander is located approximately 3-miles from the BSA. A CNDDB occurrence for western pond turtle is located within the BSA.

The project could adversely affect special status amphibian and reptile species if individuals are present in the BSA during construction. Potential direct effects include harassment, injury, and mortality of individuals due to equipment and vehicle traffic. Indirect effects could occur if construction activities result in degradation of aquatic habitat and water quality due to erosion and sedimentation, accidental fuel leaks, and spills. Vegetation removal may degrade upland habitat for western pond turtle. Trail lighting and human disturbance from trail use may also decrease special status amphibian and reptile use of the area.

Standard Measures WQ-1, WQ-2, WQ-3, and BR-1 (see Section 1.4) would be implemented to protect special status amphibians and reptiles; however, the potential for a significant impact remains. Mitigation Measures BIO-1 would be implemented reduce the potential impact to a less than significant level. Mitigation Measure BIO-1 requires pre-construction

surveys and relocation of any observed individual special status amphibians and reptiles outside of the project disturbance boundary. With incorporation of the Standard Measures WQ-1, WQ-2, WQ-3 and BR-1 and Mitigation Measure BIO-1, a less than significant impact to amphibians and reptiles would result.

Special Status Birds and Other Migratory Birds

The forested, riparian, and shrubland habitats in the BSA and vicinity provide potential nesting habitat for special status birds and other migratory birds. The bridge supports nesting cliff swallows (*Petrochelidon pyrrhonota*), which are protected under the MBTA. Special status bird species that could use these habitats include northern harrier, Vaux's swift, purple martin, tricolored blackbird, white-tailed kite, yellow warbler, and yellow-breasted chat. RCAA and Stantec biologists did not incidentally observe any special status birds during reconnaissance level field surveys. According to the CNDDB, none of the bird species mentioned above have been recorded within 10-miles of the BSA. The online database, eBird, shows occurrences of every potential special status bird in or near the BSA, including northern Harrier 0.03-mile from the BSA (2021), Vaux's swift 0.10-mile from the BSA (2015), purple martin 0.03-mile from the BSA (2021), yellow warbler 0.09-mile from the BSA (2015), yellow-breasted chat 0.03-mile from the BSA (2018), and white-tailed kite within the BSA near the bridge over Little River (2020). Other protected birds including migratory birds may occur in the BSA.

Construction activities (e.g., vegetation removal, equipment noise, and bridge modifications) would occur during the bird breeding season (February 1 through September 15, as specified in Standard Measure BR-2(A)), depending on the species) and could disturb nesting birds in or adjacent to the BSA. Construction-related disturbance could result in the incidental loss of fertile eggs or nestlings or nest abandonment, which could affect local or regional populations of affected birds. Impacts on nesting birds could result from the following:

- Tree and shrub removal to accommodate the trail
- Ground disturbing activities (e.g., grubbing and grading) in woodlands that could affect ground-nesting birds
- Noise, vibrations, and presence of humans during construction activities
- Bridge modifications
- Debris catchment installation on bridge

- Trail lighting and disturbance from trail use after construction

Birds present in or adjacent to the BSA during non-breeding seasons would not be adversely impacted by construction activities due to their high mobility and available habitat outside of the BSA. They may be temporarily disturbed or precluded from using the area during construction. Additionally, the trail lighting and increased disturbance from trail use after construction may reduce protected bird use of the area.

Trail construction would result in a loss of approximately 0.14-acre of coastal dune willow thickets, 0.6-acre of coyote brush scrub, 0.47-acre of non-native grassland, 0.54-acre of red alder forest, and 1.21-acres of Sitka spruce forest. (Exhibit 4-1 and 4-2, Appendix A). Regulated vegetation communities would be replaced via required compensatory mitigation (see Section 4.2.4). Compensatory mitigation would occur on-site. Additional revegetation would occur along the trail margins as part of the project design. Thus, not all vegetation loss would be permanent. Abundant bird nesting and foraging habitat would be retained within the BSA, and similarly suitable habitat occurs in the project vicinity.

The project was designed to minimize removal of native vegetation to the greatest extent practicable. To minimize or avoid project-related effects on nesting birds, Standard Measure BR-2A, Standard Measure BR-2B, and Standard Measure BR-2C would be implemented. However, birds could still be caught in the debris catchment system on the Little River Bridge, resulting in a potentially significant impact. Mitigation Measure BR-2 has been incorporated into the project to reduce the potential impact to a less than significant level by requiring installation of debris catchment on the Little River Bridge outside of the nesting bird season to prevent nesting birds from getting entrapped in the debris catchment system while nesting.

Bats

Pallid Bat and Townsend's big-eared bat roost in crevices and cavities in a wide range of habitat types. The bridge over Little River does not contain suitable crevices or wood elements for day roosting bats or maternity colonies, and no significant sign of bat use (e.g., guano accumulation) was observed. There was minimal guano and urine staining on the pier walls, indicating that individual bats may use sections of the bridge as night roosts. It is recommended that an additional bat habitat survey should be performed the year prior to construction to verify that habitat elements and bridge use by bats have not changed. According to CNDDB, there are no known occurrences of pallid bat or Townsend's big-eared bat within 10-miles of the BSA.

Bats may roost individually in riparian vegetation or on the bridge at night. Due to the ability of individual bats to move away from disturbances, direct impacts on bats are not expected when the bats are not in a maternity colony. If bridge construction occurs at night, individual bats may be using the bridge as a night roost; however, individual bats will move to a new roost when disturbed, so impacts are not expected. Implementation of Standard Measure BR-2D would be implemented to ensure impacts on pallid bat and Townsend's big-eared bat remain less than significant (see Section 1.4). Standard Measure BR-2D requires pre-construction bat surveys, limited bridge work during nighttime hours, installation of bat exclusion devices on bridge crevices, and seasonal limitations. Additionally, implementation of Mitigation Measure AR-1 limits nighttime construction and night lighting. With the incorporation of Standard Measures BR-2D and Mitigation Measure AR-1, there would be a less than significant impact to special status bats with the incorporation of Mitigation Measure AR-1.

White-footed Vole and Sonoma Tree Vole

Deciduous vegetation in the red alder forests and riparian habitat in the BSA could provide potential habitat for the White-Footed Vole. Sonoma tree vole prefers redwood, grand fir, and Douglas fir dominated forests; however, they have been documented using Sitka spruce trees for nesting. Stantec biologists did not make any incidental observations of these species during the reconnaissance level survey. According to CNDDB, the nearest known occurrence for white-footed vole is 2.5-miles from the BSA, and the nearest CNDDB occurrence for Sonoma tree vole is approximately 7-miles from the BSA.

Direct impacts on these species could result from tree removal and vegetation removal. Temporary noise disturbance generated by construction could indirectly affect these species as well. Trail lighting and human disturbance from trail use may also decrease their use of the area, however abundant forested and riparian habitat would be available in the vicinity of the BSA. Avoidance and minimization measures provided below reduce the potential for adverse impacts on these species.

To avoid or minimize impacts to Sonoma tree vole, Mitigation Measure BIO-3 would be implemented. Mitigation Measure BIO-3 requires pre-construction survey and relocation of any observed active nests in coordination with CDFW. With the implementation of Mitigation Measure BIO-3, a less than significant impact to white-footed vole and Sonoma tree vole would occur.

Threatened and Endangered Species

Federally or state listed threatened or endangered species that could be potentially impacted by the project include three fish species and their critical habitats: SONCC ESU coho salmon, CC ESU Chinook salmon, and NC DPS steelhead ("salmonids"), and one bird species (Tricolored Blackbird). Eulachon were observed in the Little River in 2022 but are unlikely to be present in the unnamed tributary. The project area does not contain suitable habitats for all other federally or state threatened, or endangered species scoped within the project vicinity which include two insects, four species of fish, six bird species and one mammal and those species are not considered further (see Table 4 within Appendix D).

Special Status Fish - Salmonids and Eulachon

Construction of the proposed project could result in impacts to SONCC coho salmon, CC Chinook salmon, NC steelhead, eulachon, or their critical habitat. Impacts induce an adverse response in an organism due to physical, chemical, or biological alterations in the environment. The project does not include any in-water work in the Little River or the unnamed tributary. Channel or culvert modifications would not occur. Dewatering and fish relocation would not be required. However, the proposed action includes activities that potentially could result in impacts affecting federally listed fish species.

Potential impacts on federally listed fish species caused by the proposed action include

- Temporary increases in turbidity and suspended sediment from construction area stormwater runoff
- Exposure to hazardous chemicals/accidental spill of lubricants and fuels
- Alteration of riparian habitat
- Construction-related noise and visual effects

Turbidity Increases

Little River - The project does not involve any in-water work, but some ground disturbance would occur at the bridge ends at the top of the bank of the Little River. Construction along the bridge has the potential to result in debris falling into the Little River which could cause a potentially significant impact. Standard Measure WQ-2 would be implemented, requiring the installation of netting or other material for debris catchment. Additionally, loose ground materials have the potential to wash into receiving waters, which would be a potentially significant impact. With the installation of appropriate stormwater BMPs, and the

implementation of Standard Measure WQ-1 (see Section 1.4), which includes implementation of a SWPPP, any potential turbidity impacts to special status salmonids in the Little River would be reduced to an insignificant level.

Unnamed Tributary - Construction of trail components adjacent to the unnamed tributary could result in sediment releases and short turbidity plumes during rain events if they occur during construction, or immediately after construction but before complete stabilization of any disturbed areas occurs. Installation of ESA fencing near the unnamed tributary as indicated in Exhibit 5-2 through 5-4, Appendix A, would greatly limit the ground disturbance footprint within proximity of the waterway and reduce the potential for undesired sedimentation. Given the thick vegetation along the banks of the creek would be protected with THVF fencing, the upslope distance of the disturbed soil from the culvert outlet (10-feet), the installation of appropriate stormwater BMPs, and the implementation of Standard Measure WQ-1 (see Section 1.4), which includes implementation of a SWPPP, any potential turbidity impacts would be reduced to an insignificant level. With these measures in place and given the temporary nature of the impact, increased turbidity would have a less than significant effect on SONCC ESU coho salmon, CC ESU Chinook salmon, and NC DPS Steelhead or their critical habitats.

Exposure to Hazardous Chemicals/Accidental Spill of Lubricants and Fuels

Little River and Unnamed Tributary - Listed salmonids could seasonally occur in the BSA during construction. Installation of THVF fencing surrounding waterways and wetlands would minimize the potential for accidental spills of potentially hazardous chemical and materials from construction activities to expose federally listed salmonids and their critical habitat, along with and other species. The THVF fencing near the unnamed tributary will buffer the waterway from heavy equipment and accidental spills (see Standard Measure WQ-1, Section 1.4), and the installation of a debris catchment during bridgework would buffer the waterway from debris entering the Little River (see Standard Measure WQ-2, Section 1.4). The project includes Standard Measure WQ-1 (Section 1.4), which includes preparation of a SWPPP and requirements to prevent and contain any large accidental spills of hazardous materials and minimize sediment from entering receiving waters. With the implementation of Standard Measure WQ-1 the exposure to hazardous chemicals/accidental spill of lubricants and fuels may affect, but would not significantly impact SONCC ESU coho salmon, CC ESU Chinook salmon, and NC DPS Steelhead or their critical habitats. The potential impact would be less than significant.

Alteration of Riparian Habitat

Little River - The Little River is designated critical habitat for SONCC ESU coho salmon, CC ESU Chinook salmon, and NC DPS steelhead. Riparian vegetation would not be permanently altered within the BSA along the Little River as part of the action. The small amount (2-feet) of increase in width of the existing bridge would be an insignificant increase in shading relative to the existing structure and compared to the large area of sunlight-exposed; shallow habitat and riparian vegetation; the high level of tidal flux; and the exchange of water and prey organisms that occurs in the Little River within the BSA. While minimal, the additional shading could provide a minor thermal refugia or even provide cover for salmonids during low flow conditions in the summer and fall months, potentially resulting in a positive effect. A less than significant impact would result.

Unnamed Tributary - At the unnamed tributary, which is designated critical habitat for SONCC ESU coho salmon and NC DPS Steelhead, vegetation removal would occur on top of the culvert only (i.e., upslope of the culvert outlet) and not alongside natural habitat or the banks of the unnamed tributary. No work would occur within or below the ordinary high-water mark at either location, which is the extent of designated critical habitat for SONCC ESU coho salmon and NC DPS Steelhead. Within the grading footprint upslope of the culvert, vegetation is predominantly a fern and shrub understory. One nearby Sitka spruce located above the culvert at the unnamed tributary would need to be removed and could increase solar exposure. However, given the local western-facing aspect and steep slope in the BSA and overall vegetative cover at this location, the amount of shading provided by this tree is minimal relative to the thick riparian vegetation along the banks of the unnamed tributary. No additional trees would be removed near the unnamed tributary. Per the recommendation of NMFS in the July 14, 2022 Letter of Concurrence, the single Sitka spruce would be repurposed for instream habitat enhancement. Caltrans would coordinate with stream restoration partners to place this tree, or appropriate portions of the root mass, in appropriate locations within a stream to provide habitat for coho and/or Chinook salmon. To reduce the potential impact of the removing the Sitka Spruce tree, this recommendation has been incorporated into the project as Mitigation Measure Bio-4A.

In accordance with Standard Measure BR-4B, THVF fencing would be installed, as shown in Exhibit 5-1 through 5-4, Appendix A, which would protect riparian vegetation from inadvertent construction-related disturbance. In general, the vegetation along the banks of the unnamed tributary below the culvert would not be disturbed, and the full canopy would remain. Vegetation removal approximately 10-feet east of the unnamed tributary would be upland only.

Mitigation Measure BIO-4B has also been incorporated into the Project to require a Habitat Mitigation Monitoring and Reporting Plan, replacement of removed riparian vegetation, and monitoring. Additionally, Standard Measure BR-4B limits the disturbance of nearby riparian habitats. Therefore, no permanent adverse changes to waters, substrates, food production, or availability of cover conditions that are necessary for rearing, migration, feeding, and growth of federally listed salmonids present are anticipated. With implementation of Mitigation Measure BIO-4B and exclusionary fencing (Standard Measure BR-4B), minor alterations of riparian habitat near the unnamed tributary would result in a less than significant impact to SONCC ESU coho salmon, CC ESU Chinook salmon, NC DPS Steelhead, eulachon, or their critical habitats.

Noise and Visual Effects

Little River and Unnamed Tributary – No pile driving would occur as part of the proposed project. A list of equipment likely used is described in Section 1.2. The loudest equipment would likely be used during the bridge deck widening, which may include the use of jackhammers above the Little River. In most cases, any startled salmonids, if present, would simply relocate away from the BSA, with the ability to return once the stressor has gone or fish become habituated to the stressor. If startled, special status fish migrating through the area would continue through the area rapidly or return from where it came until after the stressor is gone. Any effect resulting in a brief delay in feeding behavior is unlikely to reduce growth or survival and would be less than significant.

Unnamed Tributary - Sheet piles would be installed near the unnamed tributary to construct the retaining wall via vibratory construction methods, not pile driving. Sheet piling would be approximately 100-feet in length and take up to approximately three days to completely install. Installation of the sheet piling would be approximately 30 feet upstream/upslope from the culvert opening. Installation of the sheet piling will not modify the channel or directly affect aquatic habitat; no in-water work will occur. Vibratory installation of the sheet piles could startle special status fish present in the culvert itself or the downstream habitat. The *Caltrans District 1, 2, and 4 NMFS Programmatic Biological Assessment for Routine Maintenance and Repair Activities* evaluated this activity under Project Action 20 – Install permanent temporary rock slop protection (RSP), sheet piles, and retaining walls (Caltrans 2010). The Biological Assessment and associated Biological Opinion address SONCC ESU coho salmon, CC ESU Chinook salmon, NC DPS Steelhead, and Eulachon.

The associated Biological Opinion (NMFS 2013) includes Additional Best Management Practices (ABMP) for Project Action 20. Construction of the project, including sheet pile

installation via vibratory methods, does not conflict with any of the applicable ABMPs in the Biological Opinion. The sheet pile will be limited to the minimum length necessary (AMBP 20.1), the sheet pile will not extend into the active channel (AMBP 20.5), and temporary storage materials will not be placed in the 100-year floodplain during the rainy season (AMBP 20.6). The Biological Opinion also includes Project Limits to ensure protection of special status fish. Installation of the sheet pile via vibratory methods is consistent with all applicable Project Limits, summarized as follows:

- Sheet piles will be installed upslope of the unnamed tributary and not in designated critical habitat or anadromous waters; and
- Erosion control materials will not be placed in the wetted channel.

While Caltrans will seek project-specific approval from NMFS for construction of the trail, installation of the sheet piling via vibratory methods does not conflict with the existing guidance between the two agencies specific to the installation of sheet piling and the effect of the activity on special status fish. Additionally, NMFS and Caltrans have agreed on hydroacoustic thresholds generated by impact pile driving, but there is no formal agreement on criteria to be applied to vibratory pile driving (Caltrans 2020b). Vibratory pile-driving is considered to be a mitigation approach for avoiding or reducing potential effects of impact driving on fish and is not assessed for physical injuries to fish (Caltrans 2020b). According to Caltrans (2020), in general, installation of sheet piles using vibratory methods has been found to have noise levels well below the current accepted injury threshold of 183 decibels (dB) for small fish (see Caltrans (2020) Section I.6 for various examples). However, noise levels could exceed the current accepted threshold for behavioral effects (150 dB root mean square). Recent studies investigating the physical and behavioral impacts of pile driving noise on coho salmon and steelhead suggest that the current accepted thresholds are very conservative, with sound levels as high as 207dB found to have no discernable physical effects and minimal behavioral effects, being limited to an initial surprise reaction with no avoidance noted (Stantec 2022b).

In most cases, any startled salmonids, if present, would simply relocate away from the BSA, with the ability to come back once the stressor has gone or it becomes habituated to the stressor. In the case of salmon migrating through the area, if startled, it would most likely either continue through the area rapidly or return from where it came until the stressor is gone. Any effect resulting in a brief delay in feeding behavior is unlikely to reduce growth or survival and would be insignificant. Therefore, the magnitude of this effect would be considered insignificant because any behavioral change as a result of vibratory installation of

sheet piles, or other elevated noise activities would likely be limited to the initial surprise reaction, temporarily seeking cover and avoidance. Additionally, given the potential for high-ambient noise levels with the adjacency of US 101, the lack of in-water work, the distance of work from the wetted channels (30 feet or more), and the types of equipment used, it is anticipated that the stressor of noise and visual effects would result in a less than significant effect to SONCC ESU Coho Salmon, California Coastal ESU Chinook Salmon, and Northern California DPS Steelhead or their critical habitats

Installation of the sheet piling would startle special status fish. Started special status fish would simply relocate away from the culvert until the temporary disturbance was complete. If startled, special status fish migrating through the area would continue through the area rapidly or return from where it came until after the stressor is gone. Any effect resulting in a brief delay in feeding behavior is unlikely to reduce growth or survival and would be less than significant.

Essential Fish Habitat

The project could affect essential fish habitat (EFH) for Pacific salmon managed under the Magnuson-Stevens Fishery Conservation and Management Act (MSA). Potential adverse effects of the proposed action on SONCC ESU coho salmon and CC ESU Chinook salmon EFH include a temporary increase in turbidity and suspended sediment from construction area stormwater runoff, accidental release of hazardous chemicals/accidental spill of lubricants and fuels, alteration of riparian habitat, and effects from construction-related noise and visual effects. These effects are described in detail in the section above.

Standard Measures described in Section 1.4 and mitigation measures presented in at the end of Section 2.4 would avoid and minimize the potential magnitude and duration of any identified impacts. Some construction activities could result in temporary and localized increases in turbidity and suspended sediment from stormwater runoff during and after construction, without causing significant long-term effects on salmonid habitat quality. All disturbed slopes would be re-vegetated to provide effective biofiltration treatment of stormwater runoff. No measurable, long-term adverse modification to waters, substrates, food production and availability, and changes in cover conditions from increased shading or vegetation removal are anticipated.

The effects of the project on the Pacific Coast salmon EFH would be the same as those discussed in the section above and may have minor, temporary effects on the EFH. Inclusion of standard measures and mitigation measures would reduce potentially effects to the EFH to

a discountable level. The project is designed to minimize adverse effects and restore condition and function after construction. The potential effect to EFH would be less than significant.

Tricolored Blackbird

Construction of the proposed project could result in impacts to state-listed Tricolored Blackbird due to tree removal. This species breeds near freshwater in stands of dense emergent vegetation but may utilize tree species for foraging. With implementation of Standard Measure BR-2A, Standard Measure BR-2B, and Standard Measure BR-2C, which includes removal of vegetation outside of the bird breeding season, generation of a Bird Exclusion Plan to limit nesting potential, and pre-construction surveys to locate potential birds nesting in the construction area or within one-quarter mile of the construction area, potential impacts to Tricolored blackbird would be less than significant.

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

b) Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Sensitive Natural Communities

Sensitive natural communities, including riparian habitat and upland Environmentally Sensitive Habitat Areas (ESHA) were surveyed and mapped by Stantec in 2021. Riparian habitat occurs on either side of Little River as the following vegetation communities: coastal dune willow thickets, Pacific silverweed marshes, and slough sedge swards (Exhibit 4-1 and 4-2, Appendix A). Coastal dune willow thickets also occur elsewhere in the BSA; however, only the community on the north bank of Little River functions as riparian habitat. Four of the seven vegetation communities mapped in the BSA are categorized as SNCs by CDFW: Sitka spruce forest, coastal dune willow thickets, Pacific silverweed marshes, slough sedge swards. Two of the SNCs, (Sitka spruce forest and coastal willow thickets) are further separated into high- and low- quality stands. Low-quality stands are not considered sensitive, and high-quality stands are considered SNCs (Table 3).

Table 3. Vegetation Communities in the Biological Study Area

Alliance	Total Area (acres)	SNCs (acres)	Upland ESHA (acres)
A Manual of California Vegetation Alliances[1]			
Forests and Woodlands			
Sitka spruce forest	4.42	3.19	3.19
Red alder forest	7.05	0	0
Shrublands			
Coastal dune willow thickets	0.96	0.71	0
Coyote brush scrub	1.36	0	0
Herbaceous Vegetation			
Slough sedge swards	0.08	0.08	0
Pacific silverweed marshes	0.11	0.11	0
Non-native grassland[2]	2.46	0	0

Notes:

1) A Manual of California Vegetation, available at: www.vegetation.cnps.org. (CNPS 2021)

2) Preliminary Descriptions of the Terrestrial Natural Communities of California (Holland 1986)

Sensitive natural communities mapped as CCC waters include coastal dune willow thickets, Pacific silverweed marshes, and slough sedge swards. Impacts and mitigation provided for CCC waters also apply to these SNCs. Impacts on SNCs that also qualify as CCC waters are considered in Question c) below and shown in Exhibits 6-1 through 6-4, Appendix A.

Impacts on riparian habitat (Exhibit 4-1 and 4-2, Appendix A) are included as impacts to CCC waters (which is described in Question c) below. No additional impacts on riparian habitat outside of the CCC waters boundaries would result.

Impacts on upland ESHAs include approximately 0.89-acre of permanent impacts and approximately 0.25-acre of temporary impacts (Exhibit 7-1 and 702, Appendix A). The SNC Sitka spruce forest is also considered an upland ESHA. Potential indirect impacts from construction include erosion, sedimentation, and accidental spills.

Standard Measure BR-4B would be implemented to avoid and/or minimize potential impacts to the identified SNC/upland ESHA (Sitka spruce), requiring THVF fencing to protect sensitive vegetation (see Section 1.4). However, impacts to SNCs/upland ESHA would result in a significant impact. Mitigation Measure BR-5 has been incorporated into the project to require on-site replacement of impacted SNCs/upland ESHA, reducing the impact to a less than significant level.

Invasive Species

All non-native plant species observed in the BSA during the botanical survey were reviewed to determine their status as invasive plants according to the ratings in the California Invasive Plant Inventory produced by California Invasive Plant Council (Cal-IPC). Nineteen species observed during the botanical surveys are considered to be invasive by Cal-IPC (see Table 2 in the NES, attached as Appendix D).

Project work, including but not limited to removal of vegetation, excavation, and grading, have the potential to inadvertently spread invasive vegetation. Spread of invasive vegetation can lead to new infestations which have the potential to outcompete established populations of native plant species and disrupt native ecosystem function. This would result in a potentially significant impact.

Mitigation Measure BIO-6 has been incorporated into the project to prevent the spread of invasive plants which includes requirements to clean equipment, utilize weed-free mulches or fill, and use of locally adapted native plant material and seed to the greatest extent practicable. With implementation of Mitigation Measure BIO-6, the project would not cause direct, indirect, or cumulative impacts to the spread of invasive species. A less than significant impact would occur.

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

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

Wetlands and Other Waters

A delineation of potential waters of the U.S. and state occurred between September 1-3, 2020 (Stantec 2020a). Potential USACE and RWQCB jurisdictional waters include riparian wetland, riparian/fresh emergent wetland complex, fresh emergent wetland, vegetated ditch, and an unnamed tributary occupying a total of 2.92-acres. Potential CCC jurisdictional waters include riparian/fresh emergent wetland complex and riparian wetland (which includes the SNCs identified in Question b)). Potential Waters are summarized in Table 4.

Table 4. Potential Waters of the United States and State Summary

Potential Waters of the United States and State	Total Acreage	Total Linear Feet
Wetlands		
Riparian Wetland	0.07	N/A
Riparian /Fresh Emergent Wetland Complex	1.89	N/A
Fresh Emergent Wetland	0.19	N/A
Vegetated Ditch	0.02	N/A
Other Waters		
Perennial Stream	0.75	367
Total Potential Waters of the United States and State	**2.92**	**367**
Potential CCC jurisdictional 1-parameter wetlands		
Riparian/Fresh Emergent Wetland Complex	0.54	N/A
Riparian Wetland	0.64	N/A
Total Potential CCC-jurisdictional 1-parameter wetlands	**4.10**	**367**

Estimates of potential impacts to wetlands and Water of United States and state are from the 30% design. Final areas of impact are likely to adjust as the design progresses; however, efforts to avoid and minimize potential impacts will continue throughout the remainder of the design process.

USACE and RWQCB-jurisdictional Waters of the U.S. and State

The project would result in less than approximately 0.01-acre of temporary impacts on riparian wetland/fresh emergent wetland complex and riparian wetland. Permanent impacts would total approximately 0.01-acre of riparian wetland. Temporary impacts would result from construction access on either side of the trail alignment. Permanent impacts would result from grading and fill and retaining wall installation (Stantec 2020a). Permanent and temporary impacts on potential waters of the U.S. and state are shown in Exhibit 5-1 through 5-4 and Exhibit 6-1 through 6-4 of Appendix A. Potential indirect impacts from construction include erosion, sedimentation, and accidental spills leading to pollution.

CCC-jurisdictional Waters

The project would result in approximately 0.08-acre of temporary impacts, including 0.07-acre of riparian wetland, and approximately 0.01-acre of riparian/fresh emergent wetland complex. Permanent impacts would total approximately 0.20-acre of riparian wetland. Impacts on CCC waters are equivalent to impacts on waters of the U.S., except for an additional approximately 0.07-acre of temporary impacts on riparian wetlands and an additional approximately 0.19-acre of permanent impacts on riparian wetlands (Stantec 2020b). Temporary impacts would result from construction access on either side of the trail alignment. Permanent impacts would result from cut and fill and retaining wall installation. Impacts on potential CCC waters are shown in Exhibit 6-1 through 6-4 of Appendix A. Potential indirect impacts from construction include erosion, sedimentation, and accidental spills leading to pollution.

The project was designed to minimize impacts on potential waters of the U.S. to the extent practicable. No work would occur in the Little River or unnamed tributary channels. All impacts would occur on the far edges of aquatic resources, where the features extend slightly into the trail alignment. Standard Measure WQ-1, Standard Measure WQ-2, and Standard Measure BR-4B (described in Section 1.4) would be used to reduce or avoid the potential for erosion and sedimentation, prevent accidental spills that could affect water quality, and clearly delineate the edge of work areas and thereby avoid wetlands and Waters of the U.S. outside the construction area. To the extent practicable, the discharge of dredged or fill material into Waters of the U.S. (including wetlands) would be avoided. All permits (Section 404, 401, Lake and Streambed Alteration Agreement (LSAA) and CDP) would be acquired prior to project implementation, and all monitoring would be conducted in accordance with permits and other compliance documents.

Compensatory mitigation would be completed for all federal and state wetland impacts, as required by jurisdictional resource agencies. Final ratios required for compensatory mitigation will depend on the area and quality of impacted resources. Final ratios will be determined during future consultation between Caltrans and each agency, to the satisfaction of jurisdictional resource agencies and consistent with review and approval of the project's Habitat Mitigation and Monitoring Plan. Permanent USACE/RWQCB impacts are small (approximately 0.01-acre). CCC wetland impacts are also small (approximately 0.20-acre). Given the small area of wetland impacts, incorporation of Standard Measure WQ-1, Standard Measure WQ-2, and Standard Measure BR-4B and requirement for compensatory mitigation for all wetland impacts, the potential impact to wetlands would be less than significant.

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

d) Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Habitat corridors are segments of land that provide linkages between different habitats while also providing cover. On a broader level, corridors also function as avenues along which wide-ranging animals can travel, plants can propagate, genetic interchange can occur, populations can move in response to environmental changes and natural disasters and threatened species can be replenished from other areas. Habitat corridors often consist of riparian areas along streams, rivers, or other natural features. Additionally, the rivers and streams themselves serve as migration corridors for anadromous fish.

Within the BSA, Little River and its associated riparian habitat provides a migration corridor for wildlife species, including anadromous fish traveling upstream from the ocean to their spawning ground. Similarly, the unnamed tributary within the BSA is also an anadromous migration corridor. Upland forest habitat within the BSA provides habitat and migration connectivity for wildlife and avian species.

Animal Species

Aquatic Species

No in-water work is proposed and therefore no temporary or permanent migration barrier would be created due to the project. Semi-aquatic species that utilize wetlands, such as amphibians, may be impacted by the project due to the proposed wetland fill. However, the area of permanent wetland impacts is small, and the project would not completely bisect a wetland or ditch feature to cause a barrier. Abundant wetlands exist within and adjacent to BSA. Therefore, suitable habitat would remain intact to enable movement and migration of semi-aquatic species. See Exhibit 5-1 through 5-4 of Appendix A for delineated Waters of the U.S., including wetlands. A less than significant impact would result.

Terrestrial Species

The project would remove approximately 117 trees along the one-mile Class I Bike Path, and thereby disrupt the contiguous forest in this location. Existing terrestrial wildlife in the

project area include (but are not limited to) common species such as deer, raccoons, rabbits, skunks, and rodents. Special-status terrestrial species which have large territories, and thus move consistently, such as fishers are not likely to occur in the project area due to absence of suitable habitat. Other special status terrestrial species that may occur in the project area include two species of vole, which have a relatively smaller migration range as these species typically live within tree habitat. As assessed in Section 1.2, the project is located parallel to Route 101 and would cross the Little River. The presence of Route 101 likely deters terrestrial species because species would need to cross Route 101 to access the project area.

Trees removal would not occur within the Little River riparian corridor. Terrestrial wildlife migration across the Little River is currently limited to crossings via Route 101 or swimming across the river. Although the project would remove trees, it would not modify wildlife movement access the project area, which is already limited. Furthermore, dense forest exists adjacent (to the west) of the proposed trail, which will remain available to terrestrial species. The project would have a less than significant impact on the migration of terrestrial wildlife species.

Threatened and Endangered Species

The project would not include any in-stream work or proposed infrastructure within the Little River or unnamed tributary channels. Therefore, no modifications to existing access or in-stream migration corridors would result. No impact to threatened or endangered salmonids would result. Standard Measure BR-2 would be implemented, which requires vegetation to be removed outside of the bird breeding season, implementation of a Bird Exclusion Plan, and pre-construction surveys for nesting birds. With inclusion of Standard Measure BR-2, no impact to state-listed tricolored blackbird would result.

Invasive Species

Construction of the project would not cause an increase or spread of invasive species due to incorporation of Standard Measure BR-3 which requires that all erosion control material shall be free of noxious weed seed and propagules, and that all equipment will be cleaned thoroughly prior to entering the job site. Operation of the project would not substantially interfere with native plant species ability to migrate. A less than significant impact would occur.

Mitigation Measures

Mitigation Measure BIO-1: Protection of Special Status Amphibians and Reptiles

The following activities shall be implemented during construction:

- A qualified biologist will provide environmental awareness training for construction personnel prior to onset of work. The training will instruct construction personnel on how to recognize potential special status species.
- Within 7 days prior to the start of construction, a qualified biologist will conduct a pre-construction survey for special status amphibians within the disturbance footprint. Any special status amphibians found will be relocated to nearby suitable habitat outside of the disturbance footprint.
- If special status species are encountered in the BSA during construction and could be harmed by construction activities, work will stop in the area. A qualified biologist may relocate the individual(s) the shortest distance possible to a location containing habitat outside of the work area.
- If a western pond turtle nest is discovered during construction activities, a qualified biologist will flag the site and determine if construction activities can avoid affecting the nest. If the nest cannot be avoided, it will be excavated and relocated to a suitable location outside of the construction impact zone by a qualified biologist in coordination with CDFW.

Mitigation Measure BIO-2: Protection of Birds from Debris Catchment

The debris catchment installation on the Route 101 Little River Bridge shall occur outside of the nesting bird season to prevent nesting birds from getting entrapped in the device while nesting.

Mitigation Measure BIO-3: Protection of Sonoma Tree Vole

The following activities shall be implemented during construction:

- A qualified biologist will conduct a pre-construction survey of the BSA to locate and identify potential presence of these species. The survey should occur no more than 14 days prior to the implementation of construction activities (including staging and equipment access). If a lapse in construction activities for 14 days or longer occurs between those dates, another pre-construction survey will be performed.

- Consultation with CDFW would occur prior to surveys to determine if seasonal restrictions are appropriate for either species if a nest is located in a tree proposed for removal.

- If an active nest is found, a qualified biologist, in consultation with CDFW, will determine the extent of a construction-free buffer zone to be established around the nest or if seasonal restrictions would reduce impacts to the species.

Mitigation Measure BIO-4A: Repurpose Large Wood for Salmonid Habitat

The single Sitka spruce to be removed near the unnamed tributary culvert shall be repurposed for instream habitat enhancement. Caltrans shall coordinate with stream restoration partners to place this tree, or appropriate portions of the root mass, in appropriate locations within a stream to provide habitat for coho and/or Chinook salmon.

Mitigation Measure BIO-4B: Replacement of Lost Riparian Habitat

The following measures will be implemented to reduce potential impacts to riparian habitat in the BSA:

- A Habitat Mitigation and Monitoring Plan will be developed at a later date, and will include a plant palette, establishment period, watering regimen, and pest control measures.

- The width of the construction disturbance zone within the riparian habitat will be minimized through careful pre-construction planning.

- Exclusionary fencing will be installed along the boundaries of all riparian areas to be avoided to minimize impacts to riparian vegetation outside of the construction area.

- On-site restoration will occur in areas that have been disturbed during project construction. All native woody riparian plants 6 inches or greater dbh removed will be replanted with new plantings at a minimum 3:1 ratio. This replanting ratio will help establish at least one vigorous plant for each plant removed.

- Plant spacing intervals will be determined as appropriate based on-site conditions following construction and will be similar to undisturbed riparian habitat in the local area.

- Revegetation monitoring will be implemented in compliance with regulatory permit conditions and be initiated immediately following completion of the planting. The monitoring surveys will consist of a general site walkover evaluating the survival and health of riparian plantings, signs of drought stress, weed or herbivory problems, and the presence of trash or other debris. Eighty-five percent or greater survival of the total number of trees and shrubs (i.e., woody species) needed to meet required mitigation ratios, including planted and volunteer native species, will be considered a success at the end of a five-year monitoring period. If monitoring results indicate that revegetation efforts are not meeting established success criteria, corrective measures will be used.

Mitigation Measure BIO-5: Replacement of Lost Sensitive Natural Communities and Upland ESHA

The following measures will be implemented to reduce potential impacts to SNCs/upland ESHA in the BSA:

- The mitigation ratio for impacted SNCs/upland ESHA will be no less than 1:1. Mitigation shall occur onsite. Final mitigation ratios will be determined with jurisdictional agencies during future consultation with Caltrans. Specific mitigation parameters will be decided in coordination with the CCC and CDFW.

- A Habitat Mitigation and Monitoring Plan will be developed at a later date, and will include a plant palette, establishment period, watering regimen, and pest control measures.

- The width of the construction disturbance zone within the mapped SNC/upland ESHA habitat will be minimized through careful pre-construction planning.

- Exclusionary fencing will be installed to avoid and minimize impacts to SNCs/upland ESHA outside of the construction area.

- Plant spacing intervals will be determined as appropriate based on-site conditions following construction and will be similar to undisturbed riparian habitat in the local area.

- Revegetation monitoring will be implemented in compliance with regulatory permit conditions and be initiated immediately following completion of the planting. The monitoring surveys will consist of a general site walkover evaluating the survival and

health of riparian plantings, signs of drought stress, weed or herbivory problems, and the presence of trash or other debris. Eighty-five percent or greater survival of the total number of trees and shrubs (i.e., woody species) needed to meet required mitigation ratios, including planted and volunteer native species, will be considered a success at the end of a five-year monitoring period. If monitoring results indicate that revegetation efforts are not meeting established success criteria, corrective measures will be used.

Mitigation Measure BIO-6: Prevention of Spread of Invasive Species

The following measures would be implemented to prevent the spread of invasive species:

- All equipment used for off-road construction activities will be cleaned prior to entering the BSA.
- Utilization of weed-free mulches.
- Seed mixes or other vegetative material used for revegetation of disturbed sites will consist of locally adapted native plant materials to the extent practicable, or sterile grass seed.
- Any construction equipment (including boots, waders, and hand tools) that may enter stream courses will be properly disinfected according to guidance provided by the State of California Aquatic Invasive Species Management Plan (CDFG 2008, U.S. Bureau of Reclamation 2012) prior to invasive work to prevent the spread of aquatic invasive species.

2.5. Cultural Resources

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

Regulatory Setting

The term "cultural resources", as used in this document, refers to the built environment (e.g. structures, bridges, railroads, water conveyance systems, etc.), places of traditional or cultural importance, and archaeological sites (both prehistoric and historic), regardless of significance. Under California state laws, cultural resources that meet certain criteria of significance are referred to by various terms including "archaeological resources," "historic resources," "historic districts," "historical landmarks," and "tribal cultural resources" as defined in PRC § 5020.1(j) and PRC § 21074(a). The primary state laws and regulations governing cultural resources include:

- California Historical Resources, PRC 5020 et seq.
- California Register of Historical Resources, PRC 5024 et seq. (codified 14 CCR § 4850 et seq.)
    - PRC 5024, Memorandum of Understanding: The MOU between Caltrans and the State Historic Preservation Officer streamlines the PRC 5024 process.
- California Environmental Quality Act, PRC § 21000 et seq. (codified 14 CCR § 15000 et seq.)

- Native American Historic Resource Protection Act, PRC § 5097 et seq.
- Assembly Bill (AB) 52, amends California Environmental Quality Act and the Native American Historic Resource Protection Act
    - An effect that may cause a substantial adverse change in the significance of a tribal cultural resource, as defined, is a project that may have a significant effect on the environment.
    - Additional consultation guidelines and timeframes
- California Native American Graves Protection and Repatriation Act, CA Health and Safety Code 8010-8011

Environmental Setting

The environmental setting for cultural resources is centered around the APE established for the project (Exhibit 8, Appendix A). The APE for the project was established as two discontinuous units. Situated west of Route 101, APE Area 1 represents the area designated for the trail alignment and for the staging of materials and construction equipment. APE Area 2, east of Route 101, is identified solely for the staging of equipment and materials. Beginning at Post Mile (P.M.) 97.83, APE Area 1 extends southward to P.M 96.96, and measures approximately one mile long (north/south) by 198-foot wide (east/west) at its widest point. The ancillary staging area, APE Area 2, is situated on the east side of the northbound off-ramp at P.M. 96.98 and measures 173-foot long (north/south) by 87-foot wide (east/west).

The vertical APE is associated with the engineering and visual elements of the Project. The vertical APE for the trail bed ranges from 12-inches below grade to 10-feet below grade if the Project is located adjacent to the existing Crannell Road off-ramp and up to 15-foot if the Project is situated atop the undeveloped surface immediately west of the off-ramp, within the Caltrans ROW. The retaining walls will require disturbances up to -18 -foot below grade to seat the soldier piles. The cultural resources study area was established by DZC (2022) and constitutes a 0.5-mile buffer around the APE.

The APE lies within the pre-European contact ethnographic territory of the Yurok Tribe to the north and the Wiyot Tribe to the south. The APE passes through property formerly owned by the Beach family. As part of developing the ASR, DZC (2022) conducted an oral history with a Beach family descendant.

Historically, early settlers from Moonstone Beach down to Clam Beach made use of the surrounding timber, pasture, and mineral resources, while later residents and visitors enjoyed the recreational opportunities of the beachfront at Clam Beach and the rocky coves of Moonstone Beach. Clam Beach is where first the county wagon road, and then the Redwood Highway, reached the beach and has always been a major transportation corridor (Rhode 2008 cited in DZC 2022).

Discussion of CEQA Environmental Checklist Question 2.5—Cultural Resources

a) Would the project cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?

The ASR included evaluation of Bridge No. 04-0026, which is identified as a Category 5 Bridge on the Caltrans Historic Bridge Inventory and was previously determined ineligible for inclusion in the National Register of Historic Places. The ASR also recorded the former highway alignment through the APE, State Route 101. Portions of the former highway asphalt are visible west of the present-day highway. However, per Attachment 4 of the Programmatic Agreement between Caltrans and the Federal Highway Administration, Advisory Council on Historic Preservation, and the California State Historic Preservation Office Regarding Compliance with Section 106 of the National Historic Preservation Act and Attachment 4 of the 5024 Memorandum of Understanding between Caltrans and the California State Historic Preservation Office Regarding Compliance with Public Resource Code Section 5024 and Governor's Executive Order W-26-92, addended 2019., the former State Route 101 meets the definition of a Type 1 Resource is therefore exempt from recordation and evaluation (DZC 2022). Four historic-era isolates were also found during field investigations, including bottle and glass fragments. Non-native landscape plants were also identified. The isolated artifacts are domestic, industrial, or commercial in nature with little or no contextual associations. As with the former State Route 101 alignment, the historic-era isolates and non-native landscape plants are also exempt from recordation and evaluation. The ASR did not identify any structural remnants of the former Little River Motor Court The HPSR therefore concluded that no historical resources are present in the APE (DZC 2022). As such, there would be no impact to historical resources.

b) Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?

Archaeological impact analysis is based on the ASR prepared for the project. The ASR included review of prior cultural resource studies within the APE and surround vicinity, a June 4, 2020, request to the Native American Heritage Commission, outreach to tribes identified by the Native American Heritage Commission, and a pedestrian field survey. The ASR did not identify any surface constituents associated with nearby known cultural resource sites (DZC 2022). The HPSR included a Finding of No Historic Properties Affected (DZC 2022). While archaeological resources were not identified, the APE is in a culturally sensitive area, and inadvertent discovery could occur during construction. Standard Measures CR-1, CR-2, and CR-3 have been incorporated into the project to require coordination with appropriate tribal representatives, archaeology monitoring during ground-disturbing activities, and standard protocols for inadvertent discovery (see Section 1.4). With the incorporation of Standard Measures to protect cultural resources, any potential impact would be less than significant.

c) Would the project disturb any human remains, including those interred outside of dedicated cemeteries?

While archaeological resources were not identified, the APE is in a culturally sensitive area, and inadvertent discovery of human remains could occur during construction. Standard Measure CR-4 has been incorporated into the project to address the potential inadvertent discovery of human remains (see Section 1.4). With the incorporation of Standard Measure CR-4, any potential impact would be less than significant.

Mitigation Measures

Based on the determinations made in the CEQA Environmental Checklist, mitigation measures have not been proposed for the project.

2.6. Energy

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

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project, as well as the RCEM analysis conducted for the project (Appendix C). The proposed project would not increase highway capacity or provide congestion relief when compared to the No-Build alternative. The project would relocate existing streetlights near the Crannell Road off-ramp, and one new streetlight would be installed at the northern trailhead. The one new streetlight would result in negligible energy consumption. Operation of the project does not require fuel or other energy sources. Construction-related energy consumption would be temporary and would not have a noticeable effect on local and regional fuel supplies. Given this, potential impacts to energy are not anticipated.

2.7. Geology and Soils

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project: a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.			✓	
ii) Strong seismic ground shaking?			✓	
iii) Seismic-related ground failure, including liquefaction?			✓	
iv) Landslides?			✓	
Would the project: b) Result in substantial soil erosion or the loss of topsoil?			✓	
Would the project: c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?			✓	
Would the project: d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?				✓

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

Regulatory Setting—Geology and Soils

The primary laws governing geology and soils include:

- Historic Sites Act of 1935, 16 U.S.C. 461 et seq.
- CEQA, California Public Resources Code (PRC) 21000

Environmental Setting—Geology and Soils

A *Preliminary Foundation Report*, dated September 21, 2021, was prepared for the project in order to provide a preliminary characterization of site geologic and geotechnical conditions (SHN 2021a). The project shall be designed and constructed in conformance with the site-specific recommendations contained Preliminary Foundation Report prepared for the project.

The project area is in coastal Humboldt County; the project setting is defined by the occurrence of dynamic coastal processes within an active tectonic environment. The trail alignment extends northward from the north end of Clam Beach, across the Little River, and then traverses the coastal bluff before reaching the rocky headland at Westhaven. Clam Beach is a long, straight beach extending several miles south from the Project Area; except along the active beach slope, Clam Beach is largely covered with Holocene age sand dunes. The entire project area south of the Little River is veneered by loose (windblown) dune sand. North of the Little River crossing, conditions change dramatically as the alignment approaches (and crosses) the Trinidad fault, which results in the exposure of older, uplifted marine deposits (Falor Formation) and Franciscan Complex bedrock. The ascent from the Little River, toward a significant bedrock outcrop ("Princess Rock") at the southern end of

Westhaven, provided a hearty challenge for early road builders; as such, the northern end of the project area has been extensively graded, paved, and ultimately buried by fill materials. Construction of the current iteration of Route 101 occurred in the mid-1960's and extensive earthwork was involved, including complete burial of significant portions of the old roadbed.

The trail alignment appears to be crossed by one, and possibly two, strands of the Trinidad fault. The Trinidad fault is an active fault within the Mad River fault zone. The fault is a northwest striking, northeast-dipping thrust fault that thrusts Franciscan Complex mélange over the Pleistocene age Falor Formation. Princess Rock represents a large bedrock block within the mélange, directly northeast of the inferred fault trace.

Discussion of CEQA Environmental Checklist Questions 2.7 (a-e)— Geology and Soils

A "*No Impact*" determination was made for Question d) and Question e) listed within the CEQA Environmental Checklist—Geology and Soils section. Determinations were based on scope, description, soils within the project area, and locations of the proposed project. See below for further discussion of the "*Less Than Significant Impact*" determination made for Questions a) through d).

a) Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

The Alquist-Priolo Act (Public Resources Code Sections 2621–2630) was passed in 1972 to mitigate the hazard of surface faulting to structures designed for human occupancy. The purpose of the Act is to prevent the construction of buildings used for human occupancy on the surface trace of active faults. The project does not include structures designed for human occupancy.

The project area is located within the Mad River fault zone and the alignment crosses a mapped trace (or traces) of the Trinidad fault. The Trinidad fault is mapped within an Alquist-Priolo Fault Hazard Zone through the Trinidad area northwest of the Project Site, and as such is considered an active fault by the state. The state's Alquist-Priolo Zone ends at the northern end of the Project Area (the border between the Trinidad and Crannell 7.5'

quadrangles) and the proposed trail is not within an Alquist-Priolo Zone. The rupture hazard, however, likely persists through the project area beyond the state mapping.

The project would be designed and constructed in conformance with the site-specific recommendations contained in the geotechnical report to be prepared for the project, and any subsequent project-related geotechnical reports. These recommendations would include, but not be limited to, pavement recommendations, site preparation, and retaining structures. The project's potential to cause or contribute to fault rupture related impacts would be less than significant as a result of both construction and operation.

ii) Strong seismic ground shaking?

The probability for the project site to experience strong ground shaking should be considered very high. Based on the record of historical earthquakes, coastal Humboldt County is one of the most seismically active regions in the continental United States. Over 60 earthquakes have produced discernable damage in the region since the mid-1800s.

The epicenters of at least 30 earthquakes with a magnitude greater than M5 have been recorded within a 60-mile radius of the site. The earthquake that would have had the greatest effect (closest distance/largest magnitude) on the project site occurred in 1992 and was an estimated M7.2 event centered near the town of Petrolia about 20-miles to the southwest.

Seismicity in the region is attributed primarily to the interaction between the Gorda and North American plates along the Cascadia subduction zone (CSZ) plate boundary. Rupture of the entire CSZ is expected to produce earthquakes with a maximum earthquake magnitude (MW) on the order of 9.0. A great subduction earthquake along the CSZ would generate long duration, very strong ground shaking at the project site.

The project would be designed and constructed in conformance with the site-specific recommendations contained in the geotechnical report to be prepared for the project, and any subsequent project-related geotechnical reports. These recommendations would include, but not be limited to, pavement recommendations, new embankment support, subgrade conditions, retaining structures, and bridge foundation recommendations, and corrosion protection. By following the recommendations contained in the geotechnical report, the construction and operation of the project would result in a less than significant impact.

iii) Seismic-related ground failure, including liquefaction?

Liquefaction occurs when strong earthquake ground motion produces excess pore pressures in loose, saturated soils resulting in the subsequent strength loss of affected sediments. Recently deposited and geologically young Holocene age sediments composed of non-cemented granular materials are most susceptible. Older materials or stiff fine-grained, cohesive sediments are generally not susceptible to liquefaction and its associated strength loss. Liquefaction potential increases with the strength and duration of seismic shaking events.

Low-lying areas along the Little River and adjacent floodplain and back-beach areas within the project area are inherently associated with a very high liquefaction potential during moderate or larger earthquakes. Geologically recent, loose, sandy alluvium and eolian material occurring along major rivers (where saturated conditions prevail) are the most susceptible materials to secondary seismic effects. The effects of liquefaction at the project site may include lateral spreading, fissuring, sand boils and irregular settlement patterns. Where the trail alignment gains elevation and reaches Falor Formation materials and engineered fill soils in the northern part of the alignment, the potential for liquefaction is reduced to a low level.

The project would be designed and constructed in conformance with the site-specific recommendations contained in the geotechnical report prepared for the project and any subsequent project-related geotechnical reports. Adherence to the recommendations in the geotechnical report during construction and operation would result in a less than significant impact with regard to seismic related liquefaction.

iv) Landslides?

The project is located between the communities of McKinleyville and Trinidad, paralleling Route 101 in Humboldt County and is generally flat. However, the project area does present limited potential for landslides because a portion of the project area is proposed to occur on land with a slope in excess of 15 percent. Project components would not present a landslide hazard nor increase landslide risk, and all constructed features would comply with the latest version of the California Building Code (CBC) and the site-specific recommendations contained in the geotechnical report prepared for the project. Retaining walls have been incorporated into the design to reduce erosion risk in areas with steep and unstable slopes. Adherence to the CBC and recommendations in the geotechnical report during construction and operation would result in a less than significant impact with regard to landslides.

b) Would the project result in substantial soil erosion or the loss of topsoil?

Construction activities, including excavation, grading, soil compaction, and operation of heavy machinery would disturb soil and, therefore, have the potential to cause erosion. Erosion and sediment control would adhere to the Standard Measures listed in Section 1.4, including Standard Measure WQ-1, which requires the preparation of a SWPPP. BMPs to be implemented under the SWPPP may include silt fences, straw wattles, soil stabilization controls, and site watering for controlling dust. BMPs are designed to stabilize soils and minimize the potential transport of sediment to receiving waters during and post construction. Therefore, the potential soil erosion impact from construction would be less than significant.

c) Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

The project would comply with the seismic requirements of the CBC. The project would be designed and constructed in conformance with the site-specific recommendations contained in the geotechnical report prepared for the project and any subsequent project-related geotechnical reports. Project adherence to the recommendations in the geotechnical report during construction and operation would result in a less than significant impact with regard to landslide, lateral spreading, subsidence, or collapse.

Mitigation Measures—Geology and Soils

Based on the determinations made in the CEQA Environmental Checklist, mitigation measures have not been proposed for the project.

Regulatory Setting—Paleontological Resources

Several sections of the California Public Resources Code protect paleontological resources, including Sections 5097.5 and 30244.

Environmental Setting—Paleontological Resources

Knowledge of the geological formations gleaned from the A *Preliminary Foundation Report*, dated September 21, 2021 (SHN 2021a), and cultural resources derived from the Archaeology Survey Report (DZC 2022), are the basis for determining the paleontological potential of projects.

This project lies within the Coast Ranges Geomorphic Province. The Coast Ranges are characterized by northwest-southeast trending mountains and valleys roughly parallel to the San Andreas Fault Zone. The cores of the mountains of the Coast Ranges are typically Mesozoic5 to Cenozoic6 in age (less than 250 million years old) and consist of metamorphic and sedimentary rocks.

The project area predominantly consists of artificial fill, alluvium (recent in age), beach/dune sand deposits, Falor formation from the early to middle Pleistocene age consisting of pebbly, conglomerate sandstone and silt marine sediments (predominantly in the middle part of the project area), and Fransiscan complex mélange, cretaceous-Jurassic in age consisting of individual blocks of graywacke sandstone, mudstone, conglomerate greenstone, chert and serpentinite (predominantly located in the northern portion of the project area) (SHN 2021a).

Paleontological resources are considered to be scientifically relevant if they provide new data on fossil animals, distribution, evolution, or other scientifically important information. Fill material is not considered sensitive and would not contain fossils. Alluvium is ranked low because these sediments are too young to contain fossils. The Falor formation and Franciscan complex mélange contain sedimentary rocks which may contain fossils.

A paleontological field survey of the project area was not conducted; however, it is anticipated that encountering fossils during project construction is of low potential due to the abundant fill material and alluvium. It is possible that fossils are within the project area.

Discussion of CEQA Environmental Checklist Question 2.9 (f)— Paleontological Resources

f) Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Paleontological resources are the remains or traces of prehistoric animals and plants. Paleontological resources, which include fossil remains and geologic sites with fossil-bearing strata, are non-renewable and scarce and are a sensitive resource afforded protection under environmental legislation in California. Under California PRC § 5097.5, unauthorized disturbance or removal of a fossil locality or remains on public land is a misdemeanor. State law also requires reasonable mitigation of adverse environmental impacts that result from development of public land and affect paleontological resources (PRC § 30244).

It is unlikely that project construction would impact potentially significant paleontological resources as, the area south of the Little River is entirely covered with loose eolian sand, the Little River contains recent alluvial deposits, and associated with the veneer of recent sand dunes, and the area north of Little River contains loose sand, suggesting reworked dune or nearshore sands. The area north of Little River was also previously graded with artificial fill for early road construction. Installation of retaining walls may require drilling up to 30-feet below grade. Although no paleontological resources are known to exist within the Project footprint, the possibility of encountering a paleontological resource cannot be completely discounted. Caltrans Standard Specification 14-7.03 would be followed, requiring that if unanticipated discoveries of paleontological resources occur during construction excavations, all work within a 60-feet radius of the discovery should be halted until the find has been evaluated by Caltrans, consistent with Standard Measure GS-2 (see Section 1.4). Work may resume immediately outside that radius. The project is not anticipated to destroy a unique paleontological resource/site or geologic feature. Given this, it was determined the project would have a less than significant impact on Paleontological Resources.

Mitigation Measures—Paleontological Resources

Based on the determinations made in the CEQA Environmental Checklist, mitigation measures have not been proposed for the project.

2.8. Greenhouse Gas Emissions

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

Climate Change

Climate change refers to long-term changes in temperature, precipitation, wind patterns, and other elements of the earth's climate system. An ever-increasing body of scientific research attributes these climatological changes to greenhouse gas (GHG) emissions, particularly those generated from the production and use of fossil fuels.

While climate change has been a concern for several decades, the establishment of the Intergovernmental Panel on Climate Change (IPCC) by the United Nations and World Meteorological Organization in 1988 led to increased efforts devoted to GHG emissions reduction and climate change research and policy. These efforts are primarily concerned with the emissions of GHGs generated by human activity, including carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), tetrafluoromethane, hexafluoroethane, sulfur hexafluoride (SF_6), and various hydrofluorocarbons (HFCs). CO_2 is the most abundant GHG; while it is a naturally occurring component of Earth's atmosphere, fossil-fuel combustion is the main source of additional, human-generated CO_2.

Two terms are typically used when discussing how we address the impacts of climate change: "greenhouse gas mitigation" and "adaptation." Greenhouse gas mitigation covers the activities and policies aimed at reducing GHG emissions to limit or "mitigate" the impacts of climate change. Adaptation, on the other hand, is concerned with planning for and responding to impacts resulting from climate change (such as adjusting transportation

design standards to withstand more intense storms and higher sea levels). This analysis will include a discussion of both.

Regulatory Setting

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

Federal

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

The National Environmental Policy Act (NEPA) (42 United States Code [USC] Part 4332) requires federal agencies to assess the environmental effects of their proposed actions prior to making a decision on the action or project.

The Federal Highway Administration (FHWA) recognizes the threats that extreme weather, sea-level change, and other changes in environmental conditions pose to valuable transportation infrastructure and those who depend on it. FHWA therefore supports a sustainability approach that assesses vulnerability to climate risks and incorporates resilience into planning, asset management, project development and design, and operations and maintenance practices (FHWA 2019). This approach encourages planning for sustainable highways by addressing climate risks while balancing environmental, economic, and social values— "the triple bottom line of sustainability" (FHWA n.d.). Program and project elements that foster sustainability and resilience also support economic vitality and global efficiency, increase safety and mobility, enhance the environment, promote energy conservation, and improve the quality of life.

Various efforts have been promulgated at the federal level to improve fuel economy and energy efficiency to address climate change and its associated effects. The most important of these was the *Energy Policy and Conservation Act of 1975 (42 USC Section 6201*) and *Corporate Average Fuel Economy (CAFE) Standards*. This act establishes fuel economy standards for on-road motor vehicles sold in the United States. Compliance with federal fuel economy standards is determined through the CAFE program based on each manufacturer's average fuel economy for the portion of its vehicles produced for sale in the United States.

Energy Policy Act of 2005, 109th Congress H.R.6 (2005–2006): This act sets forth an energy research and development program covering: (1) energy efficiency; (2) renewable energy; (3) oil and gas; (4) coal; (5) the establishment of the Office of Indian Energy Policy and Programs within the Department of Energy; (6) nuclear matters and security; (7) vehicles and motor fuels, including ethanol; (8) hydrogen; (9) electricity; (10) energy tax incentives; (11) hydropower and geothermal energy; and (12) climate change technology.

The U.S. EPA, in conjunction with the National Highway Traffic Safety Administration (NHTSA), is responsible for setting GHG emission standards for new cars and light-duty vehicles to significantly increase the fuel economy of all new passenger cars and light trucks sold in the United States. Fuel efficiency standards directly influence GHG emissions.

State

California has been innovative and proactive in addressing GHG emissions and climate change by passing multiple Senate and Assembly bills and executive orders (EOs) including, but not limited to, the following:

EO S-3-05 (June 1, 2005): The goal of this EO is to reduce California's GHG emissions to: (1) year 2000 levels by 2010, (2) year 1990 levels by 2020, and (3) 80 percent below year 1990 levels by 2050. This goal was further reinforced with the passage of Assembly Bill (AB) 32 in 2006 and Senate Bill (SB) 32 in 2016.

Assembly Bill 32, Chapter 488, 2006, Núñez and Pavley, The Global Warming Solutions Act of 2006: AB 32 codified the 2020 GHG emissions reduction goals outlined in EO S-3-05, while further mandating that the California Air Resources Board (CARB) create a scoping plan and implement rules to achieve "real, quantifiable, cost-effective reductions of greenhouse gases." The Legislature also intended that the statewide GHG emissions limit continue in existence and be used to maintain and continue reductions in emissions of GHGs beyond 2020 (Health and Safety Code [H&SC] Section 38551(b)). The law requires the CARB to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective GHG reductions.

EO S-01-07 (January 18, 2007): This order sets forth the low carbon fuel standard (LCFS) for California. Under this EO, the carbon intensity of California's transportation fuels is to be reduced by at least 10 percent by the year 2020. The CARB re-adopted the LCFS regulation in September 2015, and the changes went into effect on January 1, 2016. The

program establishes a strong framework to promote the low-carbon fuel adoption necessary to achieve the governor's 2030 and 2050 GHG reduction goals.

Senate Bill (SB) 375, Chapter 728, 2008, Sustainable Communities and Climate Protection: This bill requires the CARB to set regional emissions reduction targets for passenger vehicles. The Metropolitan Planning Organization (MPO) for each region must then develop a "Sustainable Communities Strategy" (SCS) that integrates transportation, land-use, and housing policies to plan how it will achieve the emissions target for its region.

SB 391, Chapter 585, 2009, California Transportation Plan: This bill requires the State's long-range transportation plan to identify strategies to address California's climate change goals under AB 32.

EO B-16-12 (March 2012): Orders State entities under the direction of the Governor, including the CARB, the California Energy Commission, and the Public Utilities Commission, to support the rapid commercialization of zero-emission vehicles. It directs these entities to achieve various benchmarks related to zero-emission vehicles.

EO B-30-15 (April 2015): Establishes an interim statewide GHG emission reduction target of 40 percent below 1990 levels by 2030 to ensure California meets its target of reducing GHG emissions to 80 percent below 1990 levels by 2050. It further orders all state agencies with jurisdiction over sources of GHG emissions to implement measures, pursuant to statutory authority, to achieve reductions of GHG emissions to meet the 2030 and 2050 GHG emissions reductions targets. It also directs the CARB to update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of carbon dioxide equivalent (MMTCO2e).[2] Finally, it requires the Natural Resources Agency to update the state's climate adaptation strategy, *Safeguarding California*, every 3 years, and to ensure that its provisions are fully implemented.

SB 32, Chapter 249, 2016: Codifies the GHG reduction targets established in EO B-30-15 to achieve a mid-range goal of 40 percent below 1990 levels by 2030.

SB 1386, Chapter 545, 2016: Declared "it to be the policy of the state that the protection and management of natural and working lands … is an important strategy in meeting the state's

[2] GHGs differ in how much heat each trap in the atmosphere (global warming potential or GWP). CO_2 is the most important GHG, so amounts of other gases are expressed relative to CO_2, using a metric called "carbon dioxide equivalent" (CO_2e). The global warming potential of CO_2 is assigned a value of 1, and the GWP of other gases is assessed as multiples of CO_2.

greenhouse gas reduction goals, and would require all state agencies, departments, boards, and commissions to consider this policy when revising, adopting, or establishing policies, regulations, expenditures, or grant criteria relating to the protection and management of natural and working lands."

AB 134, Chapter 254, 2017: Allocates Greenhouse Gas Reduction Funds and other sources to various clean vehicle programs, demonstration/pilot projects, clean vehicle rebates and projects, and other emissions-reduction programs statewide.

SB 743, Chapter 386 (September 2013): This bill changes the metric of consideration for transportation impacts pursuant to CEQA from a focus on automobile delay to alternative methods focused on vehicle miles traveled, to promote the state's goals of reducing greenhouse gas emissions and traffic-related air pollution and promoting multimodal transportation while balancing the needs of congestion management and safety.

SB 150, Chapter 150, 2017, Regional Transportation Plans: This bill requires the CARB to prepare a report that assesses progress made by each metropolitan planning organization in meeting their established regional greenhouse gas emission reduction targets.

EO B-55-18 (September 2018): Sets a new statewide goal to achieve and maintain carbon neutrality no later than 2045. This goal is in addition to existing statewide targets of reducing GHG emissions.

EO N-19-19 (September 2019): Advances California's climate goals in part by directing the California State Transportation Agency to leverage annual transportation spending to reverse the trend of increased fuel consumption and reduce GHG emissions from the transportation sector. It orders a focus on transportation investments near housing, managing congestion, and encouraging alternatives to driving. This EO also directs the CARB to encourage automakers to produce more clean vehicles, formulate ways to help Californians purchase them, and propose strategies to increase demand for zero-emission vehicles.

Environmental Setting

The proposed project is in a rural area. Route 101 is the main transportation route to and through the area for both passenger and commercial vehicles. Traffic counts are low, and Route 101 is rarely congested near the project area. The Humboldt County Association of Governments (HCAOG) guides transportation development. The Humboldt County General Plan Circulation, Safety, and Traffic elements informs GHGs in the project area.

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

National GHG Inventory

The U.S. EPA prepares a national GHG inventory every year and submits it to the United Nations in accordance with the Framework Convention on Climate Change (see Figure 2). The inventory provides a comprehensive accounting of all human-produced sources of GHGs in the United States, reporting emissions of CO_2, CH_4, N_2O, HFCs, perfluorocarbons, SF_6, and nitrogen trifluoride. It also accounts for emissions of CO_2 that are removed from the atmosphere by "sinks" such as forests, vegetation, and soils that uptake and store CO_2 (carbon sequestration). The 1990–2016 inventory found that of 6,511 MMTCO2e GHG emissions in 2016, 81% consist of CO_2, 10% are CH_4, and 6% are N_2O; the balance consists of fluorinated gases (U.S. EPA 2018a). In 2016, GHG emissions from the transportation sector accounted for nearly 28.5% of U.S. GHG emissions.

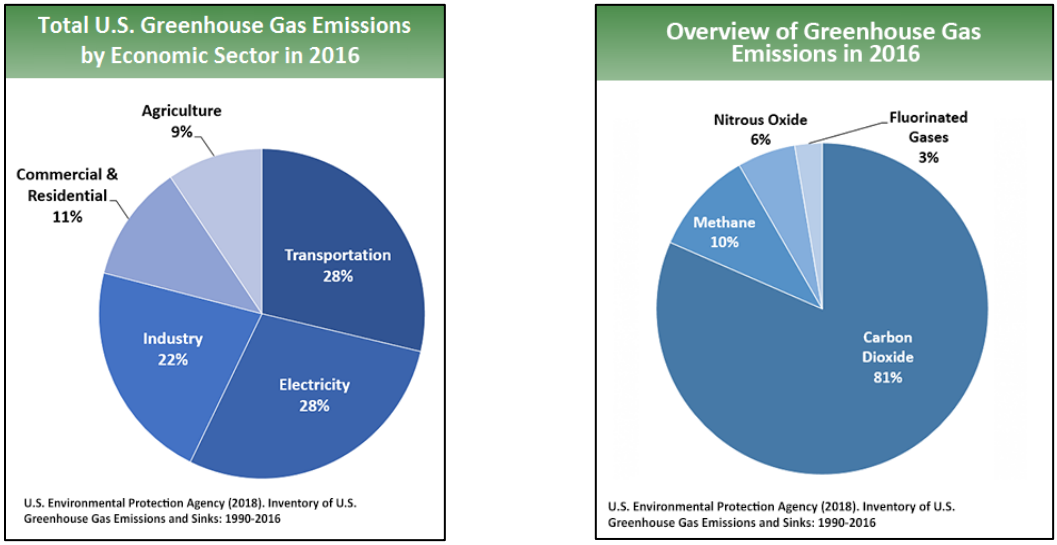

Figure 2. U.S. 2016 GHG Gas Emissions

State GHG Inventory

The CARB collects GHG emissions data for transportation, electricity, commercial/residential, industrial, agricultural, and waste management sectors each year. It then summarizes and highlights major annual changes and trends to demonstrate the state's progress in meeting its GHG reduction goals. The 2019 edition of the GHG emissions inventory found total California emissions of 424.1 MMTCO2e for 2017, with the transportation sector responsible for 41% of total GHGs. It also found that overall statewide GHG emissions declined from 2000 to 2017 despite growth in population and state economic output (see Figure 2) (CARB 2019a).

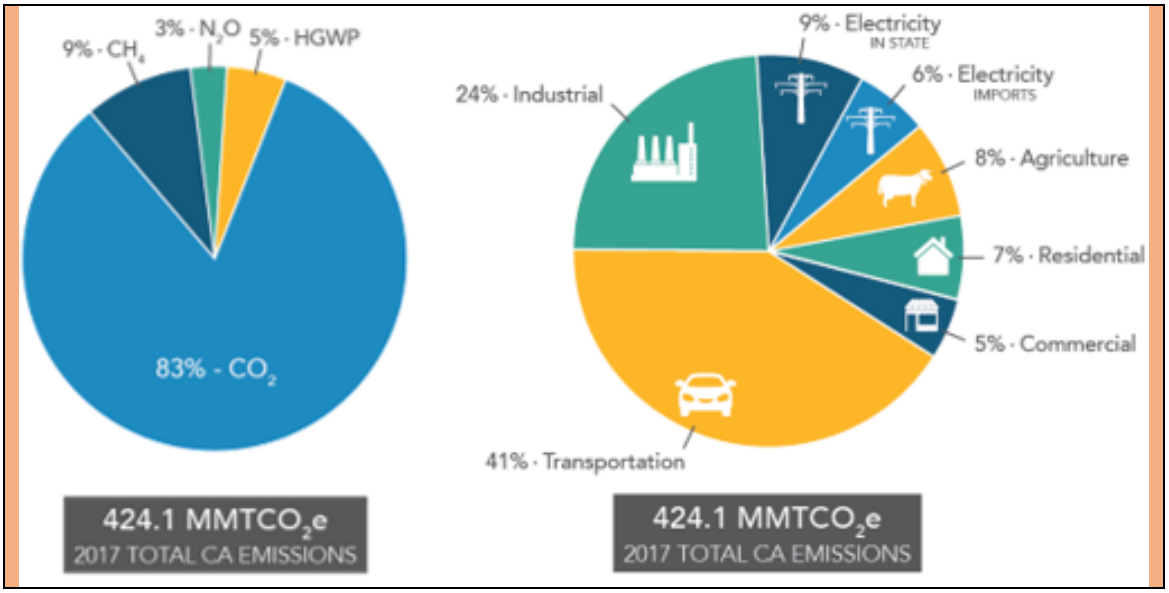

Figure 3. California 2017 Greenhouse Gas Emissions

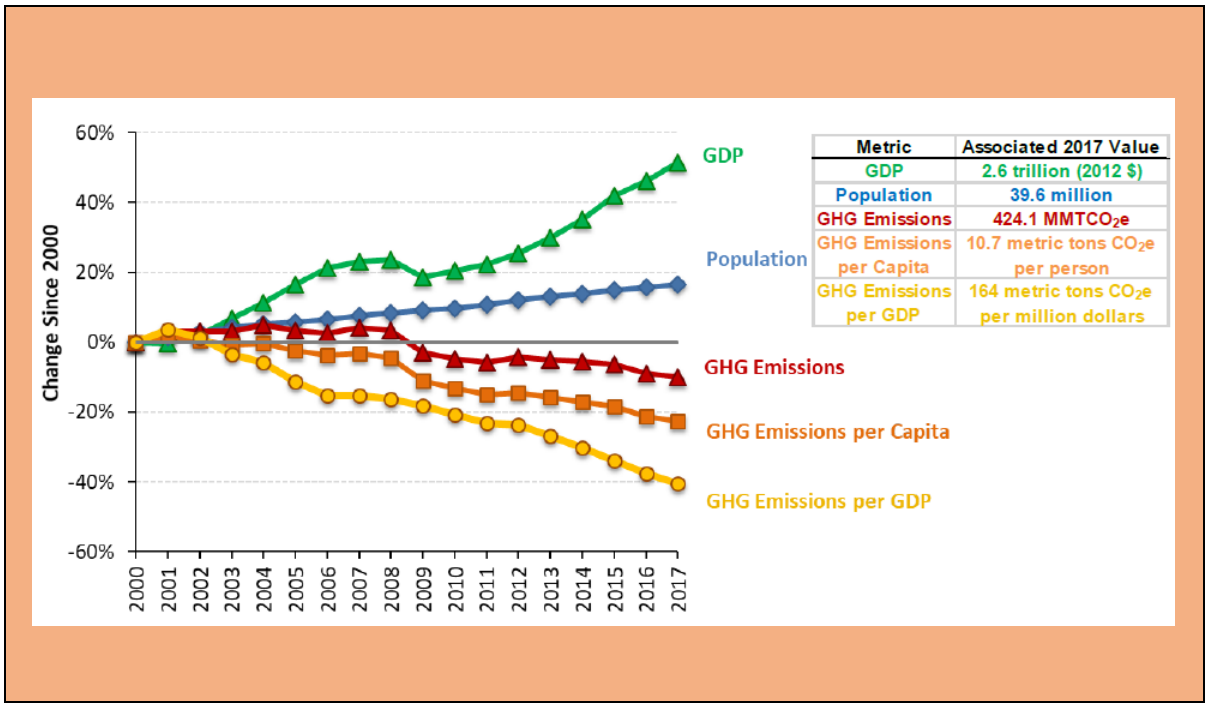

Figure 4. Change in California GDP, Population, and GHG Emissions Since 2000 (Source: CARB 2019b)

AB 32 required CARB to develop a Scoping Plan that describes the approach California will take to achieve the goal of reducing GHG emissions to 1990 levels by 2020, and to update it

every 5 years. The CARB adopted the first scoping plan in 2008. The second updated plan, *California's 2017 Climate Change Scoping Plan*, adopted on December 14, 2017, reflects the 2030 target established in EO B-30-15 and SB 32. The AB 32 Scoping Plan and the subsequent updates contain the main strategies California will use to reduce GHG emissions.

Regional Plans

ARB sets regional targets for California's 18 MPOs to use in their Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) to plan future projects that will cumulatively achieve GHG reduction goals. Targets are set at a percent reduction of passenger vehicle GHG emissions per person from 2005 levels. The proposed project is not included in an MPO, rather it is considered a rural non-MPO Regional Transportation Planning Agency area led by the HCAOG. The RTP/SCS for the project area is the Regional Transportation Plan (RTP) Variety in Rural Options of Mobility (VROOM) 2022-2042. The policies in the RTP VROOM serve to guide the development of a sustainable transportation landscape in which people can safely, comfortably, and reliably get to the places they want to go. Additionally, the Humboldt County Draft Climate Action Plan inventoried GHG emissions at the county level and set targets for reductions in GHG emissions. The regional GHG reduction target for Humboldt County is 40 percent below 1990 levels by 2030, and 60 percent below 1990 levels by 2040 (Humboldt County and RCEA 2015).

Project Analysis

GHG emissions from transportation projects can be divided into those produced during operation of the State Highway System (SHS) and those produced during construction. The primary GHGs produced by the transportation sector are CO_2, CH_4, N_2O, and HFCs. CO_2 emissions are a product of the combustion of petroleum-based products, like gasoline, in internal combustion engines. Relatively small amounts of CH_4 and N_2O are emitted during fuel combustion. In addition, a small amount of HFC emissions are included in the transportation sector.

The CEQA Guidelines generally address greenhouse gas emissions as a cumulative impact due to the global nature of climate change (Public Resources Code § 21083(b)(2)). As the California Supreme Court explained, "because of the global scale of climate change, any one project's contribution is unlikely to be significant by itself." (Cleveland National Forest Foundation *v.* San Diego Assn. of Governments (2017) 3 Cal.5th 497, 512.) In assessing cumulative impacts, it must be determined if a project's incremental effect is "cumulatively considerable" (CEQA Guidelines §§ 15064(h)(1) and 15130).

To make this determination, the incremental impacts of the project must be compared with the effects of past, current, and probable future projects. Although climate change is ultimately a cumulative impact, not every individual project that emits greenhouse gases must necessarily be found to contribute to a significant cumulative impact on the environment.

Operational Emissions

The purpose of the proposed project is to close a critical gap in the California Coastal Trail, resulting in improved access to communities, recreation areas, and coastal resources. The project and will not increase the vehicle capacity of the roadway. This type of project generally causes minimal or no increase in operational GHG emissions. Because the project would not increase the number of travel lanes on [route or location], no increase in vehicle miles traveled (VMT) would occur due to construction of the project. While some GHG emissions during the construction period would be unavoidable, no increase in operational GHG emissions is expected.

Construction Emissions

Construction GHG emissions would result from material processing, on-site construction equipment, and traffic delays due to construction. These emissions will be produced at different levels throughout the construction phase. Their frequency and occurrence can be reduced through innovations in plans and specifications and by implementing better traffic management during construction phases.

In addition, with innovations such as longer pavement lives, improved traffic management plans, and changes in materials, the GHG emissions produced during construction can be offset to some degree by longer intervals between maintenance and rehabilitation activities.

Emissions related to construction were calculated using the SMAQM Road Construction Emissions Model version 9.0 (Appendix C).

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

CEQA Conclusion

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

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

Greenhouse Gas Reduction Strategies

Statewide Efforts

Major sectors of the California economy, including transportation, will need to reduce emissions to meet the 2030 and 2050 GHG emissions targets. Former Governor Edmund G. Brown promoted GHG reduction goals (see Figure 5) that involved (1) reducing today's petroleum use in cars and trucks by up to 50 percent; (2) increasing from one-third to fifty percent our electricity derived from renewable sources; (3) doubling the energy efficiency savings achieved at existing buildings and making heating fuels cleaner; (4) reducing the release of methane, black carbon, and other short-lived climate pollutants; (5) managing farms and rangelands, forests, and wetlands so they can store carbon; and (6) periodically updating the state's climate adaptation strategy, Safeguarding California.

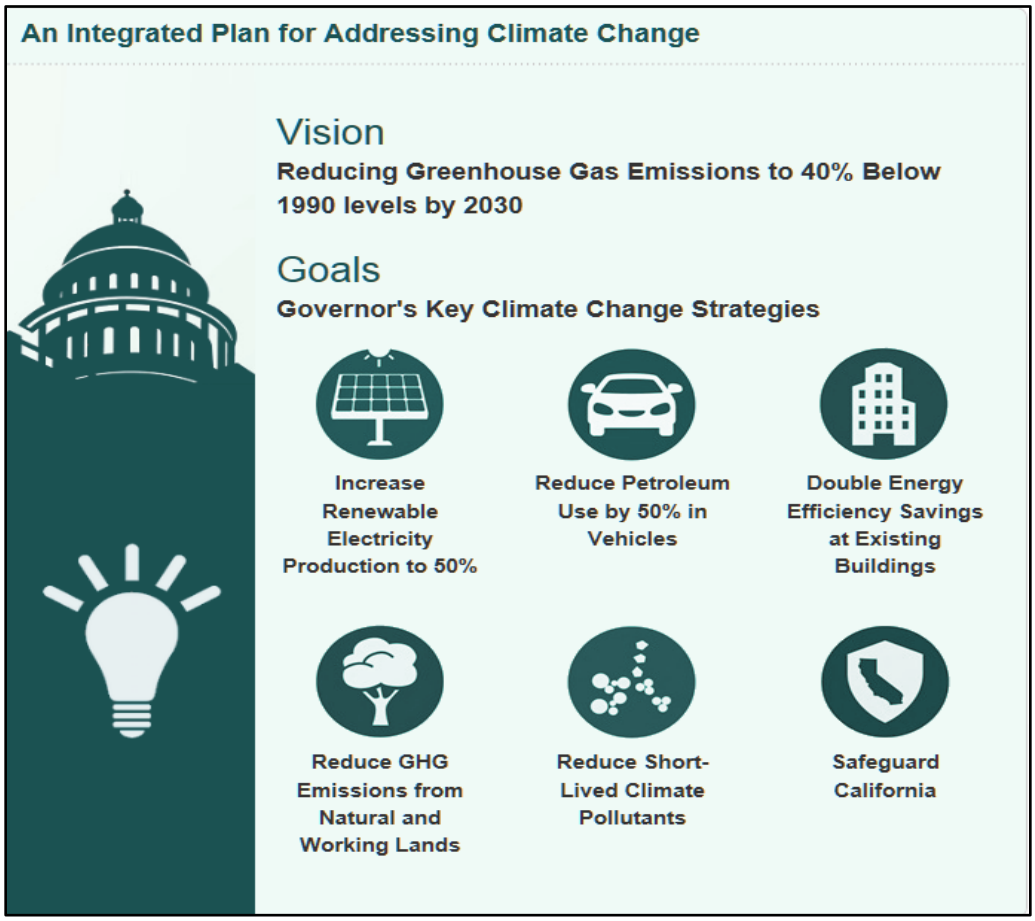

Figure 5. California Climate Strategy

The transportation sector is integral to the people and economy of California. To achieve GHG emission reduction goals, it is vital that the state build on past successes in reducing criteria and toxic air pollutants from transportation and goods movement. GHG emission reductions will come from cleaner vehicle technologies, lower-carbon fuels, and reduction of vehicle miles traveled (VMT). A key state goal for reducing GHG emissions is to reduce today's petroleum use in cars and trucks by up to 50 percent by 2030 (State of California 2019).

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

Caltrans Activities

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

California Transportation Plan (CTP 2040)

The California Transportation Plan (CTP) is a statewide, long-range transportation plan to meet our future mobility needs and reduce GHG emissions. In 2016, Caltrans completed the *California Transportation Plan 2040*, which establishes a new model for developing ground transportation systems, consistent with CO_2 reduction goals. It serves as an umbrella document for all the other statewide transportation planning documents. Over the next 25 years, rather than continuing to expand capacity on existing roadways, California will be working to improve transit and reduce long-run repair and maintenance costs of roadways and developing a comprehensive assessment of climate-related transportation demand management and new technologies.

SB 391 (Liu 2009) requires the CTP to meet California's climate change goals under AB 32. Accordingly, the CTP 2040 identifies the statewide transportation system needed to achieve maximum feasible GHG emission reductions while meeting the state's transportation needs. While MPOs have primary responsibility for identifying land use patterns to help reduce GHG emissions, CTP 2040 identifies additional strategies in Pricing, Transportation Alternatives, Mode Shift, and Operational Efficiency.

Caltrans Strategic Management Plan

The Strategic Management Plan, released in 2015, creates a performance-based framework to preserve the environment and reduce GHG emissions, among other goals. Specific performance targets in the plan that will help reduce GHG emissions include:

- Increasing percentage of non-auto mode share
- Reducing VMT
- Reducing Caltrans' internal operational (buildings, facilities, and fuel) GHG emissions

Funding And Technical Assistance Programs

In addition to developing plans and performance targets to reduce GHG emissions, Caltrans also administers several sustainable transportation planning grants. These grants encourage local and regional multimodal transportation, housing, and land use planning that furthers the region's RTP/SCS; contribute to the State's GHG reduction targets and advance transportation related GHG emission reduction project types/strategies; and support other climate adaptation goals (e.g., *Safeguarding California*).

Caltrans Policy Directives And Other Initiates

Caltrans Director's Policy 30 (DP-30) Climate Change (June 22, 2012) is intended to establish a Department policy that will ensure coordinated efforts to incorporate climate change into Departmental decisions and activities. *Caltrans Activities to Address Climate Change* (April 2013) provides a comprehensive overview of Caltrans' statewide activities to reduce GHG emissions resulting from agency operations.

Project-Level Greenhouse Gas Reduction Strategies

The following standard measures will also be implemented in the project to reduce greenhouse gas emissions and potential climate change impacts from the project (as listed in Section 1.4).

GHG-1: Caltrans Standard Specification "Air Quality" requires compliance by the contractor with all applicable laws and regulations related to air quality.

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

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

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

GHG-5: All areas temporarily disturbed during construction would be revegetated with appropriate native species. Landscaping reduces surface warming and, through

photosynthesis, decreases CO2. This replanting would help offset any potential CO2 emissions increase.

GHG-6: Pedestrian and bicycle access would be maintained on Route 101 during project activities.

Adaptation Strategies

Reducing GHG emissions is only one part of an approach to addressing climate change. Caltrans must plan for the effects of climate change on the state's transportation infrastructure and strengthen or protect the facilities from damage. Climate change is expected to produce increased variability in precipitation, rising temperatures, rising sea levels, variability in storm surges and their intensity, and in the frequency and intensity of wildfires. Flooding and erosion can damage or wash out roads; longer periods of intense heat can buckle pavement and railroad tracks; storm surges, combined with a rising sea level, can inundate highways. Wildfire can directly burn facilities and indirectly cause damage when rain falls on denuded slopes that landslide after a fire. Effects will vary by location and may, in the most extreme cases, require a facility be relocated or redesigned. Accordingly, Caltrans must consider these types of climate stressors in how highways are planned, designed, built, operated, and maintained.

Federal Efforts

Under NEPA assignment, Caltrans is obligated to comply with all applicable federal environmental laws and FHWA NEPA regulations, policies, and guidance.

The U.S. Global Change Research Program (USGCRP) delivers a report to Congress and the President every four years, in accordance with the Global Change Research Act of 1990 (15 U.S.C. Ch. 56A § 2921 et seq.). The Fourth National Climate Assessment, published in 2018, presents the foundational science and the "human welfare, societal, and environmental elements of climate change and variability for 10 regions and 18 national topics, with particular attention paid to observed and projected risks, impacts, consideration of risk reduction, and implications under different mitigation pathways." Chapter 12, "Transportation," presents a key discussion of vulnerability assessments. It notes that "asset owners and operators have increasingly conducted more focused studies of particular assets that consider multiple climate hazards and scenarios in the context of asset-specific information, such as design lifetime" (USGCRP 2018).

The *U.S. DOT Policy Statement on Climate Adaptation* in June 2011 committed the federal Department of Transportation to "integrate consideration of climate change impacts and adaptation into the planning, operations, policies, and programs of DOT order to ensure that

taxpayer resources are invested wisely, and that transportation infrastructure, services and operations remain effective in current and future climate conditions" (U.S. DOT 2011).

FHWA Order 5520 (*Transportation System Preparedness and Resilience to Climate Change and Extreme Weather Events, December 15, 2014*) established FHWA policy to strive to identify the risks of climate change and extreme weather events to current and planned transportation systems. FHWA has developed guidance and tools for transportation planning that foster resilience to climate effects and sustainability at the federal, state, and local levels (FHWA 2019).

State Efforts

Climate change adaptation for transportation infrastructure involves long-term planning and risk management to address vulnerabilities in the transportation system. *California's Fourth Climate Change Assessment* (2018) is the state's effort to "translate the state of climate science into useful information for action" in a variety of sectors at both statewide and local scales. It adopts the following key terms used widely in climate change analysis and policy documents:

- *Adaptation* to climate change refers to adjustments in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities.
- *Adaptive capacity* is the "combination of the strengths, attributes, and resources available to an individual, community, society, or organization that can be used to prepare for and undertake actions to reduce adverse impacts, moderate harm, or exploit beneficial opportunities."
- *Exposure* is the presence of people, infrastructure, natural systems, and economic, cultural, and social resources in areas that are subject to harm.
- *Resilience* is the "capacity of any entity—an individual, a community, an organization, or a natural system—to prepare for disruptions, to recover from shocks and stresses, and to adapt and grow from a disruptive experience". Adaptation actions contribute to increasing resilience, which is a desired outcome or state of being.
- *Sensitivity* is the level to which a species, natural system, or community, government, etc., would be affected by changing climate conditions.
- *Vulnerability* is the "susceptibility to harm from exposure to stresses associated with environmental and social change and from the absence of capacity to adapt." Vulnerability can increase because of physical (built and environmental), social, political,

> and/or economic factors. These factors include, but are not limited to, ethnicity, class, sexual orientation and identification, national origin, and income inequality. Vulnerability is often defined as the combination of sensitivity and adaptive capacity as affected by the level of exposure to changing climate.

Several key state policies have guided climate change adaptation efforts to date. Recent state publications produced in response to these policies draw on these definitions.

EO S-13-08, issued by then-governor Arnold Schwarzenegger in November 2008, focused on sea-level rise, and resulted in the *California Climate Adaptation Strategy* (2009), updated in 2014 as *Safeguarding California: Reducing Climate Risk* (Safeguarding California Plan). The Safeguarding California Plan offers policy principles and recommendations and continues to be revised and augmented with sector-specific adaptation strategies, ongoing actions, and next steps for agencies.

EO S-13-08 also led to the publication of a series of sea-level rise assessment reports and associated guidance and policies. These reports formed the foundation of an interim *State of California Sea-Level Rise Interim Guidance Document* (SLR Guidance) in 2010, with instructions to state agencies on how to incorporate "sea-level rise (SLR) projections into planning and decision making for projects in California" in a consistent way across agencies. The guidance was revised and augmented in 2013. *Rising Seas in California—An Update on Sea-Level Rise Science* was published in 2017 and its updated projections of sea-level rise and new understanding of processes and potential impacts in California were incorporated into the *State of California Sea-Level Rise Guidance Update* in 2018.

EO B-30-15, signed in April 2015, requires state agencies to factor climate change into all planning and investment decisions. This EO recognizes that effects of climate change other than sea-level rise also threaten California's infrastructure. At the direction of EO B-30-15, the Office of Planning and Research published *Planning and Investing for a Resilient California: A Guidebook for State Agencies* in 2017 to encourage a uniform and systematic approach. Representatives of Caltrans participated in the multi-agency, multidisciplinary technical advisory group that developed this guidance on how to integrate climate change into planning and investment.

AB 2800 (Quirk 2016) created the multidisciplinary Climate-Safe Infrastructure Working Group, which in 2018 released its report, *Paying it Forward: The Path Toward Climate-Safe Infrastructure in California.* The report provides guidance to agencies on how to address the challenges of assessing risk in the face of inherent uncertainties still posed by the best available

science on climate change. It also examines how state agencies can use infrastructure planning, design, and implementation processes to address the observed and anticipated climate change impacts.

Caltrans Adaptation Efforts

Caltrans Vulnerability Assessments

Caltrans is conducting climate change vulnerability assessments to identify segments of the State Highway System vulnerable to climate change effects including precipitation, temperature, wildfire, storm surge, and sea-level rise. The approach to the vulnerability assessments was tailored to the practices of a transportation agency, and involves the following concepts and actions:

- *Exposure*—Identify Caltrans assets exposed to damage or reduced service life from expected future conditions.
- *Consequence*—Determine what might occur to system assets in terms of loss of use or costs of repair.
- *Prioritization*—Develop a method for making capital programming decisions to address identified risks, including considerations of system use and/or timing of expected exposure.

The climate change data in the assessments were developed in coordination with climate change scientists and experts at federal, state, and regional organizations at the forefront of climate science. The findings of the vulnerability assessments will guide analysis of at-risk assets and development of adaptation plans to reduce the likelihood of damage to the State Highway System, allowing Caltrans to both reduce the costs of storm damage and to provide and maintain transportation that meets the needs of all Californians.

Project Adaptation Efforts

The project will result in development of a multi-modal trail, supporting active and non-motorized transportation. The project will also close a critical gap in the California Coastal Trail and is therefore regionally significant. The project will not increase parking and is generally VMT reducing.

Sea-Level Rise

A Sea Level Rise Vulnerability Assessment and Adaptation Report was prepared for the project (GHD 2021). The purpose of the report was to evaluate the coastal hazards associated with the

proposed trail alignment, specifically sea level rise (SLR) and fluvial flooding. The majority of the land around the proposed trail is comprised of forested hills with elevations above 20-feet based on topography data from USGS 2020 Coastal National Elevation Database (CoNED). The lower-lying areas include the Little River State Beach, and the land directly adjacent to the Little River, from the beach to the river crossing. This area is characterized by a relatively wide, sandy beach backed by a vegetated dune system. Elevations along the proposed trail alignment are mostly higher than 20-feet, except for a short segment located just north of the Little River crossing, in which the proposed trail elevation will be approximately 15.5-feet.

Water levels that include wave setup and runup are defined as total water levels, or TWL. The TWL is included some flood zone classifications defined by FEMA for coastal areas (GHD 2021). However, only a portion of the project is within the Flood Zone A classification. The majority of the project is not located within a classified FEMA flood zone. Areas adjacent to the project to the west, i.e. the beach, are considered in Flood Zone VE, which is defined as a coastal area subject to storm waves (i.e. wave runup) and with a 1% or greater chance of flooding in a given year. In addition, Zone VE includes a Base Flood Elevation (BFE), which is defined as the extreme elevation corresponding to a 100-year flood event. Portions of the southern Little River State Beach area are classified as Zone VE, with a BFE of 17-feet.

The proposed trail is setback approximately 1,700- to 1,900-feet from the open coast shoreline, with a substantial dune system acting as a buffer. It is unlikely that wave energy will propagate upstream in the lower reaches of the Little River due to the alignment of the river channel and wide beach area. Due to the significant vertical and horizontal setback from these coastal dynamics (i.e. wave setup and runup) the trail alignment is less vulnerable to TWL, and it is more appropriate to consider still water levels in combination with SLR to determine the project's vulnerability to SLR.

The Project has an anticipated design life of 25-50 years, which generally corresponds to a year 2050-2075 timeframe when assuming the proposed project will be implemented by a baseline year of 2025. The SLR projections chosen to represent the site are the "medium-high risk aversion" scenario, as a conservative measure, which estimates 1.0-, 2.3-, and 4.0-feet of SLR by 2030, 2050, and 2070; respectively. The potential timing of these scenarios varies with probability. For example, a 2.3-feet SLR scenario is more likely to occur in 2070 than in 2050. These SLR projections and corresponding scenarios provide a conservative estimate of potential water levels for the project site over the design life. There is only a 0.5% chance that SLR exceeds 4-feet before 2070.

Although the shoreline appears to be stable and the Little River State Beach has been documented as being an accretionary shoreline region by (Hapke et al. 2006), SLR is expected to result in shoreline retreat along the coast. As the sea level rises, the shoreline recedes with sediment from the upper profile being deposited offshore. Using this technique and for a profile across the Little River State Beach, a scenario with 2- to 4-foot of SLR may result in 200- to 350-foot of shoreline retreat. Given the setback from the shoreline to the trail alignment, this long-term shoreline retreat does not pose a significant hazard to the trail, but would likely alter the dynamics of the beach, dune, and Little River in the project vicinity. The current beach width between the wet-dry shoreline and the vegetated dunes is approximately 200- to 300-feet (as measured from the 04/30/2019 Google Earth aerial). Therefore, these rates of SLR would erode the beach and a portion of the dune system. The rate of shoreline retreat through the dune system and eventual interaction with the river channel would result in complicated and likely abrupt morphological responses (e.g. dune breaches and river mouth shifts). It would be unlikely that this scenario would develop over the Project design life.

The project's vulnerability to SLR was evaluated by combining the baseline tidal and flood elevations with the projected rates of sea level rise. The FEMA still water elevations (SWEL) estimates for North Spit tidal gauge were used to represent extreme ocean water levels in the lower reach of the Little River. The water levels and FEMA estimated flood elevations are shown in combination with SLR in Table 5.

Table 5. FEMA Still Water Elevations (SWEL) with Sea Level Rise (feet, NAVD88)

Time Horizon	SLR Projections: Med-High Risk	MHHW + SLR	50% SWEL + SLR	1% SWEL + SLR
2030	1.0	7.5	9.5	11.2
2050	2.3	8.8	10.8	12.5
2070	4.0	10.5	12.5	14.2
2100	7.6	14.1	16.1	17.8

Within the projects design life, the projected extreme water levels with SLR range from 12.5-feet to 14.2-feet for a 2-year return period and 100-year return period storm; respectively. These water levels are shown relative to a cross section through the Project site in Figure 6. During the projects design life, the Project has a very low exposure to extreme still water levels. The 100-year SWEL with SLR is not expected to reach the low point at the trail, which is about 15.5-feet while the SWEL with SLR is 14.2-feet.

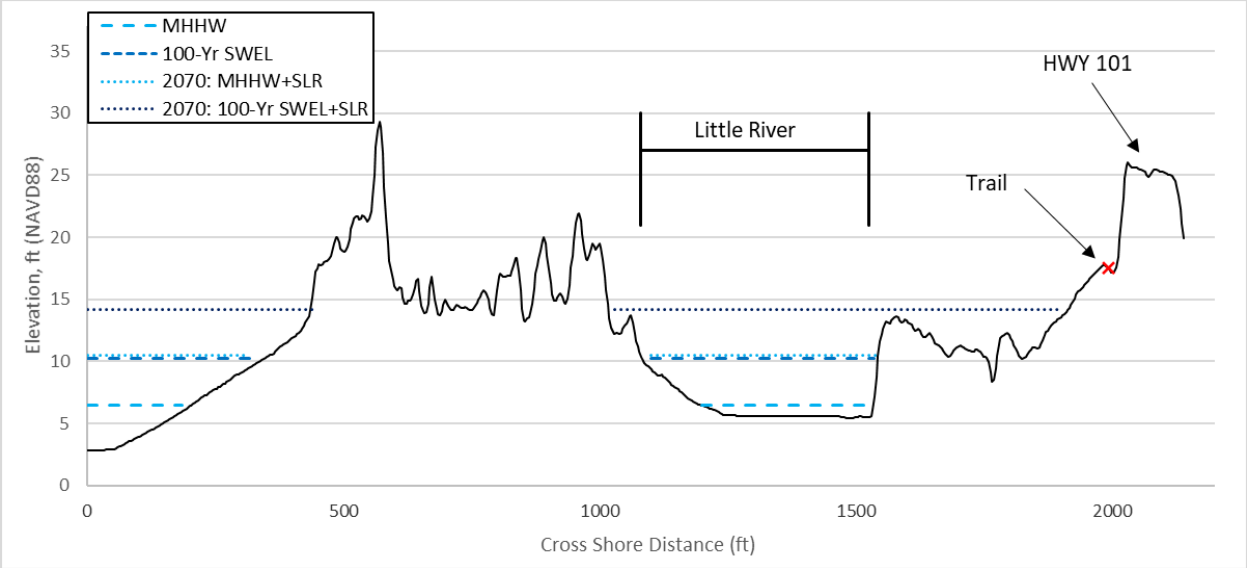

Figure 6. Cross Section of Proposed Trail Low Point Relative to Extreme Water Levels with Sea Level Rise

The proposed trail alignment is not expected to experience major flooding due to sea level rise over the design life of 25-50 years. The overall vulnerability of the trail to coastal hazards with SLR is low with a low point just north of the Little River bridge crossing having the greatest exposure. This low point, at an elevation of approximately 15.5-feet, is still a foot above the 1% SWEL with sea level rise in 2070. The trail is setback far enough from the high-water beach shoreline, and the vegetated dunes provide protection such that it is not exposed to wave action or direct extreme water levels (i.e. TWLs). An extreme flood event (fluvial) would be the greatest concern with an estimated water level elevation (BFE) of 19- to 20-feet. The flooded area with consideration of SLR would likely be similar to Zone A around the Little River as shown in the FEMA FIRM (Exhibit 9 in Appendix A). In addition, it is important to note that the 100-year return period fluvial event (i.e. BFE) is representative of a high intensity, but infrequent event that may lead to temporary flooding, episodically.

The overall sensitivity of the trail is also low, meaning that if flooding did occur along the trail at any point, the trail would not sustain significant damage or warrant any major repairs. It is also worth noting that the probability associated with the OPC medium-high sea level rise projections is 0.5%, and the probability of a 100-year storm occurring is 1%; thus, the likelihood that these events occur together within the next 50 years is extremely low.

Based on the findings of this vulnerability study, the proposed trail is not particularly vulnerable to SLR induced flooding, and the project would not exacerbate sea level rise.

Floodplains

The proposed project is within the Little River watershed, which is a tributary to the Pacific Ocean. Elevations of the proposed trail alignment are mostly higher than 20-feet, except for a short segment located just north of the Little River bridge crossing is proposed to be 15.5-feet. The project area is within the FEMA Flood Zone X, an area of minimal flood hazard, and a small portion of the project overlaps into Flood Zone A, a special flood hazard area without base flood elevation, at the Route 101/Little River bridge. The bridge deck is elevated above the FEMA Flood Zone elevation and appropriately placed to avoid flood impacts, evidenced by the absence of any recent bridge flooding by the Little River.

The proposed project would not result in floodplain encroachment or risk at the bridge location due to the project's predominant location outside of special flood hazard areas, and proposed placement at the same height of the existing bridge. If it were deemed necessary to increase the elevation of the bridge to avoid climate change impacts (unlikely), then the elevation of the proposed trail would also be increased.

Wildfire

The project corridor is located within State Responsibility Area (SRA). The project area is within lands classified as moderate and high fire hazard severity zones (CALFIRE 2022). The project would create a paved trail and would widen the existing bridges and is not expected to exacerbate wildfire risks. Standard fire prevention measures would be implemented during construction, including:

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

2.9. Hazards and Hazardous Materials

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project: a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			✓	
Would the project: b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?		✓		
Would the project: c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				✓
Would the project: d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				✓
Would the project: e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?				✓

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

Regulatory Setting

The primary laws governing hazardous materials include:

- California Health and Safety Code, Chapter 6.5
- Porter-Cologne Water Quality Control Act, § 13000 et seq.
- CFR Titles 22, 23, and 27
- CCR Title 8, Section 1532.1
- CCR Title 8, Section 1529
- Title 40 CFR Section 61, Subparts A and M

Environmental Setting

The project is generally located in an undeveloped portion of the Caltrans ROW, west of Route 101. North of the Little River, in a forested area. South of the Little River, the project is located along the Crannell Road off-ramp and in the adjacent undeveloped area. The project also includes the Route 101 Little River bridge. In some locations, the project area includes the historic highway alignment and remnant pavement. An *Initial Site Assessment* (ISA) was prepared in 2021 (SHN 2021b) to identify potential hazardous materials that could be present within the limits of the proposed Project, and is attached as Appendix G. The ISA determined that the project may disturb aerially deposited lead (ADL) in shoulder soils, as well as lead in paint associated with roadway striping at the Little River Bridge (SHN 2021b). The ISA did not identify other known sources of potential contamination within, or in proximity to the project area.

Discussion of CEQA Environmental Checklist Question 2.9—Hazards and Hazardous Materials

"No Impact" determinations for Question c) and Question d) in this section are based on the scope, description, and location of the proposed project, in addition to the Initial Site Assessment prepared for the project (SHN 2021b).

a) Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Construction of the project would include the transport and use of common hazardous materials inherent to the construction process, including petroleum products such as fuel and lubricants for construction equipment and vehicles, paints, concrete curing compounds, and solvents for construction of project improvements. These materials are commonly used during construction, are not acutely hazardous, and would be used in relatively small quantities.

Hazardous materials storage, handling, and transportation must comply with an interconnected matrix of local, state, and federal laws. Hazardous materials used during construction of the Project will be subject to applicable regulations, including California Health and Safety Code Section 25531, Division 20, Chapter 6.5, and other standards enforced by the various departments and boards under the California Environmental Protection Agency (Cal/EPA). The project will be subject to Cal/EPA hazardous materials regulations consolidated under the state's Unified Program enforced by the Department of Toxic Substances Control (DTSC), the State Water Resources Control Board (SWRCB), North Coast Regional Water Quality Control Board (NCRWQCB), North Coast Unified Air Quality Management District (NCUAQMD), and the Department of Resources Recycling and Recovery (CalRecycle). The Cal/EPA administers the Unified Program via local Certified Unified Program Agencies (CUPAs). The CUPA for Humboldt County is the Humboldt County Division of Environmental Health (HCDEH). The HCDEH Hazardous Materials Unit has jurisdiction over the Project area and is tasked with local CUPA inspections and compliance. Project activities involving the transport, use, storage, and disposal of hazardous materials will be in accordance with established rules and regulations.

Worker exposure to hazardous materials is regulated by California Department of Industrial Relations, Division of Occupational Safety and Health (Cal/OSHA) and requires worker safety protections. Cal/OSHA enforces hazard communication regulations which require worker training and hazard information (signage/postings) compliance. In addition, hazard communication compliance includes procedures for identifying and labeling hazardous

substances, communicating information related to hazardous substances storage, handling, and transportation; and preparation of health and safety plans to protect employees.

The Caltrans standard specifications require the management of hazardous materials to comply with applicable laws, rules, and regulations. Under the Caltrans standard specifications, the contractor would be required to contain hazardous materials and avoid exposure to workers, the public, and surrounding environment during construction. An appropriate facility would be utilized for legal disposal of any hazardous materials generated during construction.

Project construction would be required to implement stormwater management requirements during construction in accordance with the Water Quality Standard Measures and Best Management Practices, including Standard Measure WQ-1 (see Section 1.4). Stormwater management requirements for addressing materials management would be required, including proper material delivery and storage, spill prevention and control, and management of concrete and other wastes, as described in Section 2.10 – Hydrology and Water Quality / Impact (a).

The established regulatory framework, BMPs, and requisite construction protocols provide appropriate risk mitigation and hazard protections, thus the Project would not create a significant hazard to the public or environment from hazardous materials. Because Caltrans and its contractors would be required to comply with existing and future hazardous materials laws and regulations addressing the transport, storage, use, and disposal of hazardous materials, the potential to create a significant hazard to the public or the environment during project construction would be less than significant.

Following construction, operation of the project would require intermittent maintenance and repair, which could involve hazardous materials such as fuel in mowers or other equipment. The operational risk posed by intermittent maintenance and repair of the facility specific to hazardous materials is low. The potential to create a significant hazard to the public or the environment during project operation would be less than significant.

b) Would the project 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?

As identified in the project ISA (SHN 2021b), ADL may be present in soil along the current and former highway alignments and may have been incorporated into the fill prism during grading for the current Route 101 highway configuration. Additionally, lead is present in roadway striping at the Little River Bridge (Geocon 2010 cited in SHN 2021b).

Depending on the location of excavation and soil disturbance established during future design phases, workers may potentially be exposed to ADL during Project activities that disturb soil and create dust, such as earthmoving, driving on dry exposed soil, or other dust-generating work. Exposure to ADL impacted soil or groundwater could result in a potentially significant impact could occur. With implementation of Mitigation Measure HAZ-1, exposure risk would be avoided or minimized, and a less than significant impact would occur. Mitigation Measure HAZ-1 requires pre-construction soil borings to characterize soil and/or groundwater for ADL, in anticipation of construction activities. Additionally, Standard Measure also implement Mitigation Measure AQ-1 which establishes dust control measures. Given the requirements of Mitigation Measure HAZ-1, Mitigation Measure AQ-1, Standard Measure HW-1 and Standard Measure GS-1 required for soil management onsite, the potential hazard associated with the disturbance of soil containing ADL would be less than significant with mitigation.

Modification of the Little River Bridge to accommodate the shared use pathway along the western side of the southbound travel lane would include impaction of bridge guardrails, road surface, roadway striping, and bridge structural elements. In 2010, suspect Asbestos Containing Materials (ACM) and suspect Lead Based Paint (LBP) associated with the Little River Bridge were assessed by Geocon, Inc. (Geocon). Geocon characterized the Little River Bridge for suspect ACM in compliance with the USEPA National Emissions Standards for Hazardous Air Pollutants (NESHAP) regulations, per Title 40 CFR Section 61, Subparts A and M. Suspect LBP at Little River Bridge was evaluated in compliance with 8 CCR 1532.1. Based on the findings of the 2010 Geocon survey, no ACM was identified at Little River Bridge; however, striping associated with the bridge roadway was found to contain lead.

Roadway striping that may be impacted by Project construction along with Little River Bridge would be properly removed in accordance with Cal/OSHA regulations prior to other project construction. Waste generated as a result of lead paint removal would be characterized and disposed of in accordance with DTSC regulations. With adherence to the worker protection rules enforced by Cal/OSHA and DTSC waste disposal requirements, the potential hazard associated with the disturbance of ADL and lead in roadway striping would be less than significant.

The project would utilize heavy machinery to perform construction-related tasks including grading, excavation, and transportation of materials. During any construction project involving operation of equipment, there is the possibility for an accident to occur, and fuel to be released onto the soil. A potentially significant impact could result from an accidental spill, especially in proximity to a wetland or waterway. This potential impact is addressed under Mitigation Measure HWQ-1 (see Section 2.10 – Hydrology and Water Quality). Mitigation Measure HWQ-1 includes requirements to avoid accidental spills from heavy equipment during construction.

Under Mitigation Measure HWQ-1, equipment shall not be refueled within 100-feet of any perennial wetlands or waterways as well as other requirements as described in Mitigation Measure HWQ-1 to protect the environment from the accidental release of hazardous materials. With the incorporation of Mitigation Measure HWQ-1, any potential impact would be less than significant.

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?

The project's southern terminus at Little River State Beach is located approximately 1.8 miles north of the California Redwood Coast – Humboldt County Airport (ACV). The ACV is covered by the 2021 Airport Land Use Compatibility Plan (ALUCP) prepared for the Humboldt County Airport Land Use Commission (ALUC) by ESA. Per the ALUCP, the southernmost portion of the project alignment (approximately 0.2-miles) is located within the ACV Airport Influence Area (AIA) Review Area 2 (ESA 2021). The AIA Review Area 2 denotes the area around ACV where airspace protection and overflight notification policies apply (County of Humboldt 2021).

The project includes the construction of a shared use trail along an existing highway corridor. The project construction would include pedestrian wayfinding and safety infrastructure, including lighting, signage, guardrails, and fencing. Project infrastructure would generally be limited to several feet above ground level, with the exception of trail lighting, which would comply with Review Area 2 design criteria. Project elements would not impede the airspace protection area established around ACV. The project does not include any elements that would interfere with the airspace protection and overflight notification policies, or otherwise conflict with the Review Area 2 constraints.

The project would connect several public access coastal recreation areas be consistent with current public usage of the area. The Project would not create additional residential or commercial buildings. The project would not include a residential or commercial ownership transfer; thus, overflight notifications would not apply to the project.

The project does not include construction of structures which would approach any protected airspace or otherwise impact the air traffic operations of ACV. As the project would not result in a safety hazard or excessive noise and would not conflict with the requirements of the ALUCP AIA Review Area 2, no impact would result.

f) Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

The project is located in an unincorporated area of Humboldt County covered under the Humboldt County Emergency Operations Plan (EOP). The Humboldt County EOP identifies the emergency response and evacuation policies and procedures for hazards related to earthquake, tsunami, extreme weather, flooding/flash flooding, landslides, transportation accidents, hazardous materials, interface wildlife fire, energy shortage, offshore toxic spill, civic disturbance, terrorist activities, and national security (County of Humboldt 2015). The Humboldt County EOP establishes a structure for Humboldt County Operation Area agencies to respond to large-scale emergencies requiring multiagency participation or activation of the Humboldt County Emergency Operations Center (EOC) (Humboldt County 2015). Hazard mitigation and risk assessment strategies for Humboldt County Operation Area are formalized in the Humboldt County Operational Area Hazard Mitigation Plan (HMP).

The project would provide an alternate transportation route for pedestrians and nonmotorized traffic along Route 101. Thus, once constructed the project would create an alternative evacuation route for users near the project alignment.

Temporary lane closure to Route 101 during Project construction on Little River Bridge (04 0026) is anticipated. If required, lane closure would be up to 0.25-miles in length to safely demarcate and separate Project construction work along and near the Little River Bridge. Lane closure at Little River Bridge would be in effect for a discrete portion of the overall project construction, as lane closure would not be required during project construction at other locations along the Project alignment. Signage, notifications, and timing for lane closure, as applicable, would be established in accordance with Caltrans requirements. Emergency response vehicles would not be significantly impeded during lane closures.

The project would not impair implementation or physically interfere with the established Humboldt County EOP or HMP. Once constructed, operational use of the project would not modify transportation along Route 101. Thus, emergency response or evacuation via Route 101 would not change compared to existing conditions. As the project would not impair implementation of an emergency response plan or evacuation plan, the potential impact related to the temporary closure of a single lane of Route 101 during construction would be less than significant.

g) Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

Wildland fire is addressed in Section 2.20 (Wildfire). As noted in Section 2.20, the project would not expose people or structures to a significant risk from wildland fires, thus a less than significant impact would result. Please see Section 2.20 for further discussion of the project as it relates to wildland fire risks.

Mitigation Measures

Mitigation Measure HAZ-1: Management of Potential Aerially Deposited Lead

Prior to project construction, the following shall occur:

- Pre-construction soil borings will be completed to characterize soil and potentially groundwater (depending on the nature of work in the specific area) for lead in anticipation of implementation of construction activities.
- Proposed soil borings and/or grab groundwater sample locations shall be determined following identification of the areas and depths of soil excavation and dewatering activities.
- Laboratory analytical results of soil and potentially groundwater samples collected from the borings shall be used to ascertain whether health and safety concerns are present for construction workers, and to determine potential soil and/or groundwater handling and disposal options.
- Findings of the soil borings and/or grab groundwater samples to be included in the Lead Compliance Plan (Standard Measure HW-1).

2.10. Hydrology and Water Quality

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project: a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?			✓	
Would the project: b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?				✓
Would the project: c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: (i) result in substantial erosion or siltation on- or off-site;			✓	
(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;			✓	
(iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or			✓	
(iv) impede or redirect flood flows?			✓	
Would the project: d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?				✓

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project: e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?				✓

Regulatory Setting

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

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

Environmental Setting

Hydrology

Hydrology in the project area is primarily driven by the Little River, which is a perennial stream that drains westward and bisects the project area. Average annual precipitation is approximately 47 inches and most precipitation falls as rain between the months of October and May.

The project is within the Mad-Redwood Hydrologic Unit (HU) and within the Little River watershed, which is a tributary to the Pacific Ocean. The Little River is located immediately north of the Mad River and south of small coastal drainages within the City of Trinidad; Big Lagoon is located north of Trinidad. The Little River watershed is approximately 40.5 square-miles and drains from the Coast Range to the east to the Pacific Ocean to the west, with perennial and intermittent tributaries contributing flow within the watershed. The majority of the project area is located outside the FEMA 100-year floodplain (Exhibit 9, Appendix). A small portion of the project north of the Little River bridge is within Flood Zone A, which is defined as a special flood hazard area subject to a 100-year flood. Flood Zone A does not contain an estimated base flood elevation (BFE) and therefore based on a comparison of the existing topography and the floodplain defined by FEMA, the fluvial base BFE for the site is estimated to be approximately 19- to 20-feet (GHD 2021).

The Unnamed Tributary drains into the Little River approximately 1,700-feet from the mouth. Based upon topography and aerial imagery, the contributing unnamed tributary watershed is assumed to be small (less than one square mile).

Both the lower Little River and lower unnamed tributary can be considered estuarine areas which form a transition zone between the river systems and the ocean, where freshwater features are influenced by the tide and the influx of saline water. Culverts under Route 101 provide additional hydrology through additional unnamed perennial streams and overflow water during rain events.

Water Quality

The Little River is listed on the Clean Water Act Section 303(d) list due to impairment to water quality by indicator bacteria (SWRCB 2020). The U.S. EPA enforces regulations that require the establishment of TMDLs for 303(d) waterbodies to attain and maintain water quality standards. The overall goal of establishing a TMDL is to ensure that all "beneficial uses" are protected, and water quality objectives are met. Water quality objectives and beneficial uses are identified for all the water bodies in the North Coast Region in the *Water Quality Control Plan, for the North Coast Region (Basin Plan)* (NCRWQCB 2018).

Existing beneficial uses listed in the *Basin Plan* for the Little River Hydrologic Area include, but are not limited to,

- Agriculture (AGR)
- Industrial (IND)
- Groundwater Recharge (GWR)
- Freshwater Replenishment (FRSH)
- Navigation (NAV)
- Non-contact Water Recreation (REC2)
- Commercial and Sport Fishing (COMM)
- Cold Water Freshwater Habitat (COLD)
- Wildlife Habitat (WILD)
- Preservation of Rare and Endangered Species (RARE)

- Marine Habitat (MAR)
- Migration of Aquatic Organisms (MIGR)
- Spawning, Reproduction, and Early Development (SPWN)
- Estuarine Habitat (EST)
- Aquaculture (AQUA)

The *Basin Plan* has identified narrative water quality objective for bacteria in waters with beneficial uses of REC-1 (Water Contact Recreation) and SHELL (Shellfish Harvesting). The project area does not contain these existing beneficial uses; therefore, the water quality objectives are not applicable.

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

A "No Impact" determination was made for Questions b), Question d), and Question e) listed within the CEQA Environmental Checklist Hydrology and Water Quality section. Determinations were based on scope, description, size, and location of the proposed project. See below for further discussion of the "*Less Than Significant Impact*" determination made for Questions a) and Question c).

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

The project has the potential to result in temporary impacts to water quality during construction activities, including vegetation removal, grading and bridge width expansion. However, these potential impacts would be minimized with implementation of Standard Measure WQ-1 (see Section 1.4) which includes preparation and implementation of a SWPPP or Water Pollution Control Program (WPCP). The SWPPP or WPCP would include a site-specific spill prevention plan, requirement that equipment be maintained and staged 500-feet from surface water features, implementation of sediment control and soil stabilization methods (such as coir rolls), and minimization of disturbance to vegetation and preservation of vegetation to remain.

In accordance with Standard Measure WQ-2, netting or other similar method for debris catchment would be installed during bridgework to prevent materials from entering the Little River. The project would also implement Standard Measure WQ-2, which would incorporate pollution prevention and design measures consistent with the *2016 Caltrans Storm Water*

Management Plan and therefore would also comply with the Caltrans Statewide NPDES Permit. The Plan requires utilizing native plants in revegetation efforts, and direction of stormwater to sheet flow across vegetated slopes thus providing filtration of any potential pollutants. With implementation of Standard Measure WQ-1, Standard Measure WQ-2 and Standard Measure WQ-3, potential impacts to water quality leading to degradation of surface water would be less than significant.

The Little River is listed as impaired for bacterial indicator pollution under Section 303(d) of the Clean Water Act and is managed under the Coastal Streams Pathogen TMDL Project to collect data to help understand bacterial sources and hot spots. The proposed project would not generate any sources of bacterial pollution that could potentially enter receiving waters. Therefore, the project would not conflict with the TMDL currently being implemented to improve understanding and management of bacterial pollution.

The project would not utilize groundwater during construction or operation. However, the trail would displace impervious earth with pervious pavement, and thereby reduce surface area for soil infiltration. As a component of design, the trail would be sloped to enable stormwater to drain adjacent to it where it would infiltrate and recharge groundwater supplies. Therefore, the project would have a less than significant impact on groundwater quality.

c) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

(i) result in substantial erosion or siltation on- or off-site?

The project does not include any in-stream work and therefore would not alter the course of a stream or river. All construction-related ground disturbance would be revegetated and/or covered with straw or other material to ensure minimal sediment transport and potential erosion in accordance with Standard Measure WQ-1 (see Section 1.4). The trail would be sloped to drain stormwater adjacent to it. The project would also place gravel adjacent to the paved areas to improve drainage. Due to incorporation of standard water quality protection BMPs and project design, construction and operation of the project would not result in substantial erosion or siltation on- or off-site, and a less than significant impact would result.

(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

The project is not anticipated to substantially increase the rate or amount of surface runoff in a matter which would result in flooding on- or off-site because of the size and location of the project. The trail would displace a linear area of groundcover, as opposed to a centralized, larger area, and therefore spread out the effects of impervious ground cover. Stormwater generated from the trail would drain adjacent to it and infiltrate naturally. Soils in the project area, particularly adjacent to the proposed trail are comprised of Samoa-Clam Beach complex (0 to 50 percent slopes) and Lepoil-Espa-Candy Mountain complex (15 to 50 percent slopes). Both soil types are excessively drained non-hydric soils, with restrictive layers more than 80 inches below ground surface (Stantec 2022b). Due to the linear design of the project, available areas of infiltration adjacent to the trail, and suitable well-drained soils, the project would not result in a substantial increase in the rate or amount of surface runoff which would result in flooding on- or off-site. A less than significant impact would result.

(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?

See response to Question c-ii) above. The project contains appropriate soils for natural onsite drainage. Additionally, there is no stormwater drainage infrastructure in the project area that the project could potentially overwhelm. A less than significant impact would result.

(iv) impede or redirect flood flows?

The trail would displace a corridor of trees, however that corridor would not substantially redirect potential flood flows. No infrastructure is proposed for the project that would impede or redirect flood flows.

Under a 100-year fluvial flood scenario that would result in a BFE of 19- to 20-feet, a small, low- lying segments of the trail (at approximately 15.5-feet) located north of the Route 101 bridge would likely experience flooding. The Route 101 Little River Bridge deck is at an elevation above 20-feet; thus, the trail will be well above the fluvial BFE of the Little River. South of the Little River, the proposed trail alignment is not vulnerable to a 100-year storm (GHD 2021). Therefore, although flooding may occur in a very limited area in the northern portion of the proposed project under the 100-year flood scenario. In this small area, the trail would not impede or redirect flood flows. No flooding is anticipated at the bridge or southern portion of the project. A less than significant impact would result.

Mitigation Measures

Based on the determinations made in the CEQA Environmental Checklist, mitigation measures have not been proposed for the project.

2.11. Land Use and Planning

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

"No Impact" determinations in this section for Question a) and Question b) are based on the scope, description, and location of the proposed project, as well as review of the Humboldt County General Plan, Trinidad Local Coastal Plan (LCP) (northern portion of project area) and McKinleyville LCP (southern portion of project area) dated October 23, 2017, and April 2007 (for both LCPs), respectively. Potential impacts to land use and planning are not anticipated because the project would not divide an established community and would not conflict with a land use plan, policy or regulation adopted for the purpose of avoiding or mitigating an environmental effect. The County's General Plan land use designations that overlap the project footprint include Coastal Recreation (CR) and Public Facility (PF). County zoning that overlaps the project footprint includes Coastal Recreation (CR) and Unclassified (U). Therefore, the project is consistent with land use designations, zoning, community plans, and other land use controls, and no impact to land use or planning would result.

2.12. Mineral Resources

Question:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project: a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				✓
Would the project: b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?				✓

"No Impact" determinations in this section are based upon the scope, description, and location of the proposed project. As there are no designated mineral resource areas of state or regional importance in the project area, and the project would not impede the extraction of any known mineral resources (Division of Mine Reclamation 2016), there would be no impact.

2.13. Noise

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project result in: a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			✓	
Would the project result in: b) Generation of excessive groundborne vibration or groundborne noise levels?			✓	
Would the project result in: c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				✓

Regulatory Setting

The primary laws governing noise are CEQA and NEPA.

Environmental Setting

Current noise in the project area is consistent with the noise associated by street and highway traffic, along Route 101 and adjacent local roadways.

Discussion of CEQA Environmental Checklist Question 2.13—Noise

A "No Impact" determination was made for Question c) listed within the CEQA Environmental Checklist—Noise section. Determinations were based on scope, description, and locations of the proposed project in relation to existing airports. See below for further discussion of the "Less Than Significant Impact" determination made for Questions a) and b).

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

Current noise conditions on and near the Project Area consist of local traffic along Route 101, as well as the adjacent local roadways along the proposed alignment. There are no sensitive receptors, including residences, in or near the project area. The nearest school is located in approximately 2.6-miles south.

The proposed Project is located within the jurisdiction of the McKinleyville and Trinidad Bay Area Plans. However, neither plan provides noise thresholds. Therefore, the Humboldt County General Plan noise policies are used to inform impact analysis related to noise.

Construction

Construction of the Project would result in a temporary noise increase associated with the use of construction equipment. As the Project is linear in nature, the noise associated with construction activities would move along the alignment as work is conducted, resulting in intermittent increases at each of the adjacent sensitive receptors during the construction phase that would shift as construction progresses. Construction activities would be limited to daytime work hours between 7:00 a.m. to 7:00 p.m., Monday through Friday with occasional work on Saturdays. Furthermore, Humboldt County has not established construction-related noise standards. As the construction phase would be temporary and construction activities would be intermittent and limited to between 7:00 a.m. and 7:00 p.m., potential noise impacts generated during the construction phase would be less than significant.

Operation

Once the Project is constructed, recreational users would not generate a significant amount of noise. Noise associated with the operation of the shared use pathway would generally consist of typical human speech, sporadic dog barks, and use of non-motorized modes of transportation including bicycles, scooters, and skateboards. The use of motors, pumps, or other mechanical appurtenance capable of creating a stationary noise source would not occur. Therefore, operation would not result in noise levels exceeding the County's noise standards for residential units or public ROW land uses. No operational impact would result.

b) Would the project result in generation of excessive groundborne vibration or groundborne noise levels?

The project area or surrounding vicinity does not include any residences or buildings that could be damaged by vibratory equipment. Project-related activities would not involve the use of explosives or other intensive construction techniques that could generate significant ground borne vibration or noise. No pile driving is anticipated; however, the Project may utilize a vibratory roller, large bulldozer, and jackhammer.

Vibratory construction methods would be used to install sheet piling near the unnamed tributary, associated with the planned retaining wall. The retaining wall would be approximately 100-feet in length and require approximately three days to install. Potential biological effects to special status fish related to the vibratory sheet piling installation are evaluated in Section 2.4 – Biological Resources. The sheet piling would be installed in an undeveloped, forested environment. There are no existing sensitive receptors or buildings that could be impacted by the vibratory construction methods for sheet pile installation.

Noise impacts from ground borne noise to humans are anticipated to be minor. Minor vibration adjacent to mechanized equipment and road/trail treatments during construction work would be generated only on a short-term basis. Groundborne vibration and noise would have a less than significant impact.

Following construction, operation of the project would not result in substantial sources of groundborne vibration or groundborne noise. Project operation would not generate vibration, except in instances where larger repairs to the shared use pathway might be required. These conditions would be short-term and temporary (taking from one to several weeks to complete depending on the extent of damage or other circumstances). No operational impact would result.

Mitigation Measures

Based on the determinations made in the CEQA Environmental Checklist, mitigation measures have not been proposed for the project

2.14. Population and Housing

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project: a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				✓
Would the project: b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?				✓

"No Impact" determinations in this section are based upon the scope, description, and location of the proposed project for Question a) and Question b). The project involves the construction and operation of a Class I pathway and would not directly or indirectly induce substantial unplanned population growth in the area by constructing housing or creating new employment, nor would it induce population growth by providing new access or opening a new area to development. As the proposed project would not involve acquisition of land occupied by homes or residences and would not result in displacement of people or housing, potential impacts on population and housing are not anticipated.

2.15. Public Services

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

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project. As a non-motorized transportation facility, the project would not necessitate any related new or altered public service facilities. The project would solely be used for recreational purposes. Given the nature of the proposed pathway, the project would not result in a significant adverse effect on the service ratios for the California Highway Patrol (CHP), sheriff, police, or fire departments. The proposed project may result in a slight increase in motorized and non-motorized traffic in the vicinity, as the shared use pathway is anticipated to draw users for recreational and transportation purposes. However, the Project would facilitate an increase in bicycle, foot, and other non-motorized travel in the vicinity as well. The project is not expected to substantially increase the need for patrols by local law enforcement or emergency services. The project may ultimately have the beneficial effect of reducing the need

for patrol by encouraging more public use and discouraging unwanted activity in the area. No impact with respect to fire and law enforcement would result.

As stated above in Section 2.14 (Population and Housing), the Project would not directly or indirectly induce population growth. The student population within the community is anticipated to remain the same as existing. No new or expanded schools would be required and no impact to schools would result.

The project would present a new passive recreational opportunity by increasing connectivity within the community and encouraging residents in the vicinity to utilize the Class I Bikeway for non-motorized travel. The project would not result in the increased use of existing parks or other public facilities as it would not induce population growth. As the project would provide an additional recreational opportunity in the community and would not increase the population, it is anticipated that there would be sufficient service ratios with regard to parks. No expansion of recreational facilities would be required. No impacts to parks would result. Overall, potential impacts to Public Services are not anticipated to occur.

2.16. Recreation

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

Regulatory Setting

The primary law governing recreation is CEQA.

Environmental Setting

As a rural area, Humboldt County has a wealth of outdoor recreational opportunities. More than 20% of the County's 2.3 million acres are protected open space, forests, and recreation areas. Within the County boundaries, there are federal and state parks, 16 County parks and beaches operated by the Humboldt County Parks Division, recreational areas and reserves, city parks, and parks operated by special districts and non-profit organizations. The project is located within a rural area. The proposed trail alignment parallels Route 101 to the east and Moonshine Beach and Little River State Beach to the west. Access to both of those beaches would be accessible from both the northern and southern ends of the proposed Class I trail.

Discussion of CEQA Environmental Checklist Question 2.16—Recreation

a, b) 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, or require the construction or expansion of recreational facilities which might have an adverse effect on the environment?

The project would construct a Class I trail, which would have a long-term positive effect on recreation by increasing recreational opportunities between the communities of McKinleyville and Trinidad. The Humboldt Bay Trail project has been identified as a high-priority regional project by the HCAOG for several years. Once completed, the trail would become a component of the California Coastal Trail providing non-motorized transportation, recreation, and coastal access opportunities for the public. The proposed bike path would increase non-motorized transportation in the area making it convenient and safer for people to travel along the Route 101 corridor.

The proposed project would not lead to an increase in the use of recreational facilities that would contribute to the physical deterioration of other recreational facilities. The project would enhance the existing trail system and would have an overall beneficial impact to the regional trail system. Increasing visibility and usage among public use facilities may deter illegal activity, such as illegal dumping or camping, thereby enhancing public safety and the overall health of the trail corridor. Trails are generally low maintenance facilities, and the additional wear-and-tear would be minimal.

The would be a recreational facility that could encourage the construction of other recreational facilities, predominantly other connecting trails, or trail-related facilities, although a significant amount of connecting trail has already been constructed. Future connecting and related trail and recreational facility projects with the potential to cause significant environmental impacts would be subject to CEQA review and other environmental regulations enacted to protect the environment.

At the southern end, the Caltrans right-of-way boarders California State Parks property at Little River State Beach. Addition of the proposed multi-modal trail access at this location is anticipated to reduce the demand for vehicular parking in the State Beach parking area by creating multi-modal access alternatives. Use of Caltrans right-of-way for the paved trail would avoid project-related permanent impacts on Little River State Beach property, and the existing parking area (State Parks property) along Clam Beach Drive would not be expanded. Work in the State Beach parking area and the new trailhead would be coordinated in advance between Caltrans, State Parks, and the County. The State Beach's existing parking area would be enhanced by installing crosswalks, directional and/or interpretative signage upgrades, and the addition of shoulder striping along Clam Beach Road. These improvements would not require ground disturbance or roadway widening.

The multi-modal trail would be a compatible use of and benefit to the Little River State Beach lands. By closing a critical gap in the California Coastal Trail, the project promotes coastal resources, nature study, and multi-modal transportation while maintaining the visual and ecological integrity of the project area.

Clam Beach Drive, including public beach access parking at the southernmost end of the project area, would remain open during project construction. Staging would be in Caltrans right-of-way on the east side of Route 101. Construction activities related to noise, the appearance of equipment on the landscape (visual resources), and the movement of equipment throughout the project area (accessibility) would have a minimal effect on recreational users in this area. A less than significant impact is expected to occur.

Mitigation Measures

Based on the determinations made in the CEQA Environmental Checklist, mitigation measures have not been proposed for the project.

2.17. Transportation

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

Regulatory Setting

The primary laws and regulations governing transportation and traffic are CEQA, 23 CFR 652, 49 CFR 27, 29 USC 794, and the Americans with Disabilities Act (42 USC § 12101).

Environmental Setting

The main roadway in the project area is Route 101 for the majority of the alignment. At the southern extent of the project the alignment does intersect with Clam Beach drive which provides access to several local roadways and the beach to the west. Similarly, at the northern extent, the alignment intersects with Scenic Drive, which provides access to adjacent local streets. As specified in the Humboldt County Regional Transportation Plan, all streets, roadways, and highways in Humboldt County are open to bicycle use (HCAOG 2018).

Public Transit

The Humboldt Transit Authority, Redwood Transit System route has one stop immediately adjacent to the project area at the northern extent of the alignment, at the Scenic Drive & Moonstone Beach Road stop. No other stops are located within the project footprint, but the Redwood Transit System Route would utilize Route 101 along the extent of the Project. Dial-A-Ride (DAR) services are available in the project site through the Humboldt Transit Authority. Paratransit is a form of transportation service that is more flexible and personalized than fixed route or commuter transit service. Paratransit is tailored to the needs of disabled and elderly individuals. Paratransit services include DAR, Dial-A-Lift (DAL), and non-emergency medical transportation services (HCAOG 2017).

DAR and DAL are discount transportation services available to seniors and/or the disabled with a doctor's verification of disability. These services are also available to individuals over the age of 72, regardless of their medical condition. A reservation must be made to utilize either DAR or DAL.

Discussion of CEQA Environmental Checklist Question 2.17— Transportation and Traffic

a) Would the project conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

The proposed multi-use trail would provide increased opportunities and routes for safe non-motorized travel between the communities of Trinidad and McKinleyville. The project is expected to increase recreational use levels in the project area, which could result in minor amounts of additional motorized and non-motorized traffic. However, the proposed project could reduce motorized traffic levels by providing a safe, alternative modes of travel between the communities of Trinidad, McKinleyville, and communities beyond. At the Scenic Drive trailhead, parking spaces may be delineated within the existing cul-de-sac footprint. The existing Clam Beach parking area near the southern trailhead would continue to be used. Additional parking at the southern trailhead is not proposed.

Construction

Construction would result in vehicle trips by construction workers and haul-truck trips for material off-haul and deliveries. The anticipated haul truck route to the project area would be from Route 101 from the north and south, as well as Scenic Drive and Clam Beach Drive.

Construction-related traffic would be temporary, would vary on a daily basis, and would be spread out over the course of a workday and work week.

The number of construction-related vehicles traveling to and from the project area would vary on a daily basis. Because the project's contribution of construction traffic would be temporary (approximately eight months per year for up to two years) and distributed throughout a workday, roadway segments in the vicinity of the construction sites would have sufficient capacity to accommodate the temporary increase in construction traffic. The temporary construction impact on the circulation system would be less than significant.

In accordance with Caltrans requirements, the construction contractor would be required to obtain an encroachment permit from Caltrans for any portion of work completed within the Route 101 ROW or for access to the project site from the State accessed-controlled ROW. The construction contractor's encroachment permit application would include a proposed temporary traffic control plan, and, if necessary, would include plans for re-routing of vehicles, bicycles, and pedestrians. Traffic controls would be required in accordance with the County and Caltrans standards, and contractors would be required to comply with the general conditions of the encroachment permit. Therefore, through compliance with local requirements, construction activities would not result in substantial adverse effects or conflicts with the local roadway system. The impact would be less than significant.

Operation and Maintenance

Once complete, the proposed project is not expected to significantly increase vehicle traffic on local streets, as it is not intended to increase the area's population or redirect traffic patterns. The project may actually decrease vehicle trips within the area by encouraging non-motorized forms of travel (walking, bicycling, skateboarding, rollerblading, etc.). Any potential increase in traffic generated by public visitation to the proposed trail and associated access areas would likely be offset by increased non-motorized travel to and from the area by trail users. The project would not conflict with effective circulation system performance or intersection level of service standards. The project would not conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system; other modes of transportation, including mass transit and non-motorized travel; and (3) other components of the transportation system, such as intersections, streets, pedestrian paths, and bicycle paths. Therefore, a less than significant impact would result.

b) Determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code § 5024.1. In applying the criteria set forth in subdivision (c) of

Public Resource Code § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Pursuant to SB 743 and the current CEQA Guidelines, evaluation of a project's potential transportation impact requires consideration of vehicle miles traveled (VMT), which refers to the amount and distance of automobile travel attributable to a project. Section 15064.3, subdivision (b), of the CEQA Guidelines lists the criteria for analyzing transportation impacts from proposed projects. The criteria are broken into four categories, including land use projects, transportation projects, qualitative analysis, and methodology. Transportation projects that reduce, or have no impact on, VMT should be presumed to cause a less than significant transportation impact. This section was recently added by the state legislature in an attempt to separate CEQA's purpose and role from traffic or other issues related to ease of use of single occupancy vehicles.

Examples of projects that result in the potential to increase VMT include:

- Changes in land use
- Expanded roadways (e.g., new roads, additional lanes)
- Private development
- Expanded public service facilities, such as new police stations, new fire stations, or new administrative buildings
- Residential development, such as a new sub-division

The trail includes none of the above listed elements and does not include any component that could be characterized as resulting in a potential increase to VMT. To the contrary, the project will promote non-motorized transportation. By its very nature, the project is VMT-reducing. Per the California Office of Planning and Research's (OPR) guidelines for evaluating transportation impacts in CEQA, for roadway capacity projects, agencies have discretion to determine the appropriate measure of transportation impact consistent with CEQA and other applicable requirements (OPR 2019). By promoting multi-modal transportation, the project would reduce VMT throughout the project area and would thus not result in an environmental impact under CEQA. Instead, the Project would result in an environmental benefit by reducing the existing VMT.

PRC 21099 (b) (1), upon which the CEQA VMT guidance is based, specifically states the purpose of the VMT criteria is to promote, "the development of multimodal transportation

networks," consistent with the fundamental goals and objectives of the project. Similarly, the OPR guidance notes the overall purpose of updating CEQA to include VMT analysis is to help achieve California's long-term criteria pollution and greenhouse gas emission goals, based on four strategies that include, "plan and build communities to reduce vehicular greenhouse gas emissions and provide more transportation options (OPR 2019)," which is also directly supported by the project's goals and objectives related to non-motorized transportation.

Other applicable considerations in the OPR guidance note the criteria for determining the significance to transportation impacts must promote the development of multimodal transportation networks. The core goal and objectives of the project promote the development of a multi-modal trail, closing a critical gap in the California Coastal Trail.

Because the proposed project would not increase the length of roadway, add new roadways, or increase the number of travel lanes, there would be no increase in VMT. By promoting non-motorized transportation, the project would reduce VMT through the project area.

Thus, the project is consistent and entirely on par with the expectations of the OPR guidance for evaluating transportation impacts in CEQA. Lastly, the OPR guidance clarifies that when evaluating impacts to multimodal transportation networks, lead agencies generally should not treat the addition of new transit users as an adverse impact. Therefore, any success the project ultimately achieves to increasing multi-modal transit should not be considered an environmental impact under CEQA. The impact would be less than significant.

c) Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

The trail would cross the Little River via the existing Route 101 bridge. The existing travel lanes would be reconfigured to support the multi-use trail. The bridge deck would be widened two feet on the western edge. The existing lanes would be reconfigured to accommodate a 10-foot trail in addition to Caltrans standard shoulder and travel lane widths. In compliance with Caltrans standards for a Class I Bikeway, segments of the trail adjacent to roadways would be separated by at least five feet. The proposed trail along Route 101 would meet all Caltrans safety requirements and is proposing a physical barrier to enhance safety and separate trail users from vehicles traveling on Route 101. Therefore, no potentially hazardous roadway design features would be introduced by the project.

The trail would be ADA-accessible and include warning signage and markings both on the trail and the approaching vehicular way as applicable. In addition, signage would be added along the

trail warning users of curves, bends, and any other hazardous situations. Speed control would occur via through signage and other visual cues; speed bumps or other surface irregularities are not permitted to control the speed of bicycles or other non-motorized vehicles.

The proposed trail may have potential conflicts between users who are stationary, such as birdwatchers, and bicyclists due to the difference in these activities. However, since the proposed trail would have striping, signage, unpaved shoulders on both sides, and scenic vista viewing areas, which could be used by birdwatchers and other uses who want to get out of the main travel lanes, substantial safety related conflicts between trail users and birdwatchers (or other stationary individuals) would be avoided.

The proposed project would not substantially increase hazards due to a design feature; therefore, the impact is less than significant.

d) Would the project result in inadequate emergency access?

The proposed trail would be adjacent to Route 101. Emergency access to the project area already exists from Route 101 and would continue to exist under the proposed project during both construction and operation. To support bridge widening and Route 101 lane configuration, temporary lane closures would occur. Emergency response vehicles would not be significantly impeded during lane closures. Since the trail corridor is already served by emergency and law enforcement personnel, the trail would not slow or hinder emergency response, the trail would not require additional emergency services, and there would be emergency access to all trail segments; therefore, a less than significant impact would result.

Following construction, all properties along the project alignment would continue to have emergency access. No operational impact on emergency access would result.

Mitigation Measures

Based on the determinations made in the CEQA Environmental Checklist, mitigation measures have not been proposed for the project.

2.18. Tribal Cultural Resources

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

"No Impact" determinations in this section are based on the outcomes of the AB 52 consultation governing tribal cultural resources (Chapter 532, Statutes of 2014), as documented in the ASR dated June 2, 2022 (DZC 2022). AB 52 consultation letters were sent by mail on August 27, 2020, to the following Native American representatives:

- Josefina Cortez, Chairperson, The Bear River Band of the Rohnerville Rancheria.

- Erika Cooper, THPO, The Bear River Band of the Rohnerville Rancheria.
- (3) Jesse Lopez, THPO Assistant, The Bear River Band of the Rohnerville Rancheria.
- (4) Claudia Brundin, Chairperson, Blue Lake Rancheria.
- (5) Janet Eidsness, THPO, Blue Lake Rancheria.
- (6) Jacob Pounds, Assistant THPO, Blue Lake Rancheria.
- (7) Garth Sundberg, Chairperson, Cher-Ae-Heights Indian Community of the Trinidad Rancheria.
- (8) Rachel Sundberg, Chairperson, Cher-Ae-Heights Indian Community of the Trinidad Rancheria.
- (9) Rosie Clayburn, THPO, Yurok Tribe of the Yurok Reservation.
- (10) Joe James, Chairperson, Yurok Tribe.
- (11) Ted Hernandez, Chairperson, Wiyot Tribe.
- (12) Amanda O'Connell, THPO, Tolowa Dee Ni' Nation.
- (13) Leann McCallum, Chairperson, Tolowa Dee Ni' Nation.
- (14) Virgil Moorehead, Chairperson, Big Lagoon Rancheria.
- (15) M. Lindgren, Tsurai Ancestral Society.
- (16) Christa Stewart, THPO, The Elk Valley Rancheria.
- (17) Kevin Mealue, Cultural Resource Specialist, The Elk Valley Rancheria.
- (18) Dale Miller, Chairperson, Elk Valley Rancheria.

On August 28, 2020, Caltrans documented receipt of communications from the Wiyot Tribe noting their association to members related to the Beach family and requesting archaeological monitoring during the 2020 geotechnical investigation. On September 5, 2020, the Bear River Band of the Rohnerville Rancheria also responded and requesting tribal monitoring for 2020 geotechnical investigation. Both archaeological and tribal monitoring did occur as requested during the 2020 geotechnical (and wetland) investigations, as documented in the ASR (DZC 2022). During construction of the project, archaeology and tribal monitoring would occur, as required under Standard Measure CR-2 (see Section 1.4).

No additional correspondence for recipient Native American representatives occurred. Tribal cultural resources were not identified as a result of the AB 52 process. The AB 52 process is complete. Potential impacts to Tribal cultural resources would therefore not result. Based on the determinations made in the CEQA Environmental Checklist, mitigation measures have not been proposed for the project.

2.19. Utilities and Service Systems

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

Regulatory Setting

The primary law governing utilities and service systems is CEQA.

Environmental Setting

The solid waste provider in the project area is the Humboldt Waste Management Authority (HWMA). HWMA trucks transport solid waste produced in the County to State licensed landfills located in Anderson, California and Medford, Oregon in compliance with local, state, and federal regulations pertaining to solid waste disposal. Power poles and lines in the project area are serviced by Pacific Gas & Electric. The project area is generally undeveloped, and no additional utility services exist (e.g., water, sewer).

Discussion of CEQA Environmental Checklist Question 2.19—Utilities and Service Systems

A "*No Impact*" determination was made for Questions b) and c) listed within the CEQA Environmental Checklist—Utilities section. Determinations were based on scope, description, and location of the proposed project which does not include drinking or wastewater services. See below for further discussion of the "*Less Than Significant Impact*" determination made for Questions a), d), and e).

> ***a) Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities—the construction or relocation of which could cause significant environmental effects?***

The proposed project does not involve the use or construction of any facilities that would require new water, wastewater, electrical, natural gas, or telecommunications utilities. The project would be designed to maintain existing drainage patterns and would typically have a two percent or less cross slope to allow surface water to flow off the shared use pathway surface. In cases where the trail's fill prism encroaches into the existing drainage ditch, the drainage ditch may need to be reconstructed at approximately the same grade and depth, but at a location (horizontally) offset from the original position. Cross drains or culverts under the shared use pathway or boardwalk crossings would be located at low spots in the topography to convey surface drainage across the trail prism. The construction of these improvements has been evaluated throughout this IS/MND. Existing streetlights along the Crannell Road off-ramp would be relocated in the same general area, and one new streetlight would be installed at the northern trailhead. No stormwater drainage improvements beyond these mentioned would be required. A less than significant impact would result.

d, e) Would the project 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?

The project is not expected to generate a significant increase of services for solid waste disposal needs. The proposed trail would generate limited solid waste during construction and even less during operation. Construction solid waste would include the one-time temporary generation of construction waste associated with the proposed development of the trail. Recyclable construction materials (e.g. scrap metal, wood, concrete, glass) could be shipped to local businesses for reuse, with non-recyclable materials sent to the HWMA transfer station in Eureka.

The project may include waste receptacles, spaces for recycling bins, and pet waste stations. The County of Humboldt have franchise agreements for waste collection in the project area. Solid waste collected as a part of the project would be disposed of at the HWMA. These facilities have sufficient capacity to serve the project's solid waste disposal needs; therefore, a less than significant impact would result.

2.20. Wildfire

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

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

Regulatory Setting

The primary law governing wildfire is CEQA.

Environmental Setting

The Project is located entirely within a SRA and is situated on lands classified as either moderate or high fire severity areas. The northern portion of the shared use pathway is located within a moderate fire severity area, which is typical of the surrounding coastal region. The southern portion of the alignment, from Litter River to the project southern terminus, is within a narrow strip of land designated as a high fire severity area, which includes the Route 101 highway corridor and westerly dunes along Little River State Beach. The project alignment is not located within any lands classified as very high fire severity zones. The nearest land classified as a very high fire hazard severity zone is approximately 12-miles east of the Project alignment (CAL FIRE 2022).

Discussion of CEQA Environmental Checklist Question 2.20—Wildfire

The "No Impact" determination in this section was made for Question c) and is based on the scope, description, and location of the proposed project. The project corridor is located within State Responsibility Area (SRA). The project is within lands classified as moderate and high fire hazard severity zones (CALFIRE 2022). The project would widen or replace existing bridges and would not require new infrastructure that would exacerbate fire risks. The proposed work would not impair an adopted emergency response plan or emergency evacuation plan, exacerbate wildfire risks, or expose people or structures to significant risks; therefore, potential wildfire impacts are not anticipated.

> ***If located in or near State Responsibility Areas or lands classified as very high fire hazard severity zones, would the project:***
>
> ***a) Substantially impair an adopted emergency response plan or emergency evacuation plan?***

See Section 2.9(f) (Hazards) for discussion of the project's effect on emergency response and evacuation plans. The project would not impair implementation or physically interfere with an established emergency response or evacuation plan. Once constructed, the project would not modify transportation along Route 101, thus emergency response or evacuation via Route 101 would not be impeded. As the project includes lane closures, a less than significant impact would result.

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?

The trail would be generally located in the Caltrans ROW along Route 101 within a varied topographical area. Coastal forest and dune vegetation are present along the alignment. The vegetated portions could be susceptible to wildfire during project construction or operation, as a result of accidental ignition.

During construction, all hazardous materials and construction equipment would be appropriately used and stored pursuant to all required State and local regulations. During operation, the Project would not house any pollutants within the project area that may be released if a wildfire occurred. Furthermore, the project does not include any structures built for human occupancy. Trail users would be within the area for a short period of time given the purpose is for passive recreational use.

Due to the temporary nature of construction, the minimal amount of pollutants anticipated to be stored during construction, the project's location outside an area of very high fire severity risk, and lack of structures to be used for human occupancy, it is not anticipated to exacerbate wildfire risks beyond existing conditions or increase exposure pollutants or the spread of wildfire. A less than significant impact would result.

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?

The Project is located within an undeveloped stretch of land between the Pacific coastline and Route 101 highway corridor. As such, there are no downslope structures that could be impacted by the Project. Following a wildfire, erosion within the Project Area could occur due to the loss of vegetation. The Project Area is near the coastline, and the Project's contribution to the Little River and unnamed tributary watersheds is proportionally very small. Unstable slopes would be protected by constructed retaining walls. The Project Area does not otherwise include steep slopes that would be susceptible to post-fire landslides. Additionally, the Project does not significantly alter drainage patterns (see Section 2.10 – Hydrology and Water Quality). Any potential impact would be less than significant.

Mitigation Measures

Based on the determinations made in the CEQA Environmental Checklist, mitigation measures have not been proposed for the project.

2.21. Mandatory Findings of Significance

Does the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?		✓		
b) Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)			✓	
c) Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?			✓	

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

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

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?

As evaluated in this IS/MND, the project would not 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; reduce the number or restrict the range of an endangered, rare, or threatened species; or eliminate important examples of the major periods of California history or prehistory.

Mitigation measures are listed herein to reduce impacts related to air quality, biological resources, cultural resources, and tribal cultural resources. With implementation of the required mitigation measures, impacts would be less than significant.

b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)

Cumulative impacts are defined as “two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts” (CEQA Guidelines Section 15355). Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. The project has been planned and designed to avoid significant environmental impacts. As discussed in the analysis throughout Section 2 of this IS/MND, the project would not have environmental effects that would cause substantial adverse direct or indirect effects on human beings. The impact would be less than significant.

c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

The Project has been planned and designed to avoid significant environmental impacts. As discussed in the analysis throughout Section 3 of this IS/MND, the Project would not have environmental effects that would cause substantial adverse direct or indirect effects on human beings. The impact would be less than significant.

2.22. Cumulative Impacts

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

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

Per Section 15130 of CEQA, a Cumulative Impact Analysis (CIA) discussion is only required in "…situations where the cumulative effects are found to be significant." An EIR is required in all situations when a project might result in a "significant" direct, indirect, or cumulative impact on any resource. Upon analysis of the proposed project, mitigation measures have been developed to reduce potential significant impacts to be less than significant. There are no resource categories on which the project might have a "significant" direct, indirect, or cumulative impact. Given this, an EIR and CIA were not required for this project.

Chapter 3. Agency and Public Coordination

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

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

Chapter 4. Coordination with Resource Agencies

GHD environmental staff Andrea Hilton corresponded via email with Mike Kelly at the National Marine Fisheries Service (NMFS) on July 27 and 28, 2021 to confirm a hydroacoustic assessment would not be required for the project, related to widening the Little River bridge and other informal details related to crossing options for the unnamed tributary. Jen Olsen of the California Department of Fish and Wildlife (CDFW) was included on the email correspondence.

Caltrans provided the draft project plans to NMFS for review and has engaged in ongoing technical assistance with NMFS to inform the design process.

4.1. Coordination with Property Owners

The Trinidad Coastal Land Trust presently owns the northern portion of the trail, nearest the Scenic Drive trailhead. The Trinidad Coastal Land Trust has been an engaged partner in the project since its inception, leading public outreach efforts alongside Redwood Community Action Agency.

4.2. Circulation

This Initial Study/Proposed Mitigated Negative Declaration was publicly circulated for 30 days, from August 15, 2022 to 5:00 p.m. on September 16, 2022. The Initial Study/ Proposed Mitigated Negative Declaration was provided to the State Clearinghouse on August 12, 2022 along with the Notice of Circulation. The Notice of Intent to Adopt the Initial Study/Proposed Mitigated Negative Declaration was published in the *Eureka Times Standard* on August 12, 2022. The Initial Study/Proposed Negative Declaration was distributed to involved federal, state, and local agencies and Native American representatives via certified mail on August 12, 2022 as listed in Section 5 – Distribution List.

Chapter 5. List of Preparers

The following individuals performed the environmental work on the project:

California Department of Transportation, District 1

Coady Reynolds	Environmental Planner
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DZC Archaeology & Cultural Resource Monitoring

Dimitra Zalvarvis-Chase	Principal Investigator for Historical & Prehistoric Archaeology

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Sara Tona	Biologist
David Pluth	Fisheries Biologist
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SHN

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Chapter 6. Distribution List

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Interested Groups, Organizations and Individuals

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Humboldt Trails Council
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Utilities, Service Systems, Businesses, and Other Property Owners

Humboldt Bay Municipal Water District
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Eureka, CA 95502

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Appendix A. Exhibits

Appendix B. Visual Impact Assessment

Appendix C. Road Construction Emissions Modeling Information and Results

Appendix D. Natural Environment Study

Appendix E. ESHA Mapping

Appendix F. Wetland Delineation

Appendix G. Initial Site Assessment

Appendix H. Title VI Policy Statement

Appendix I. Response to Comments

(To be completed following public circulation of the Proposed ISMND.)