Tier 1—Big Sur Bridge Rail Replacement Program

Monterey County, California
District 5–Mon–1 (PM 28.1/67.9)

and

Tier 2—Garrapata Creek Bridge Rail Replacement Project

Monterey County, California
District 5–Mon–1 (PM 63.0)
EA 05-1H800/Project ID 05-1600-0163
State Clearinghouse Number 2020049027

Draft Environmental Impact Report

Prepared by the
State of California Department of Transportation

November 2020

Caltrans

General Information About This Document

What's in this document:

The California Department of Transportation (Caltrans) has prepared this Environmental Impact Report, which examines the potential environmental impacts of the alternatives being considered for the proposed project in Monterey County, California. Caltrans is the lead agency under the National Environmental Policy Act (NEPA), and Caltrans is the lead agency under the California Environmental Quality Act (CEQA). The document explains why the project is being proposed, the alternatives being considered for the project, the existing environment that could be affected by the project, the potential impacts of each of the alternatives, and the proposed avoidance, minimization, and/or mitigation measures.

What you should do:

- Please read the document. Additional copies of the document and the related technical studies are available for review at the following locations: 1) Caltrans District 5 Midway Office at 2885 South Higuera Street, San Luis Obispo, CA 93401; 2) Henry Miller Memorial Library at 48603 Highway One, Big Sur, CA 93920.
- To find more information about the project, watch a short video presentation, date of the public meeting, when the public comment period ends, or download the environmental document, please refer to the following email address: https://dot.ca.gov/caltrans-near-me/district-5
- We'd like to hear what you think. If you have any comments regarding the proposed project, please attend the public hearing and/or send your written comments to Caltrans by the deadline.
- Submit comments via U.S. mail to: Jason Wilkinson, Environmental Branch Chief, Environmental Management Division, California Department of Transportation, 50 Higuera Street, San Luis Obispo, CA 94301.
- Submit comments via email to: jason.wilkinson@dot.ca.gov.

What happens next:

After comments are received from the public and reviewing agencies, Caltrans, as assigned by the Federal Highway Administration, may, 1) give environmental approval to the proposed project, 2) do additional environmental studies, or 3) abandon the project. If the project is given environmental approval and funding is appropriated, Caltrans could design and construct all or part of the project.

For individuals with sensory disabilities, this document can be made available in Braille, in large print, on audiocassette, or on computer disk. To obtain a copy in one of these alternate formats, please write to or call Caltrans, Attention: Jason Wilkinson, Environmental Branch Chief, Environmental Management Division, California Department of Transportation, 50 Higuera Street, San Luis Obispo, CA 94301; phone 805-542-4663 (Voice), or use the California Relay Service 1-800-735-2929 (TTY), 1-800-735-2929 (Voice), or 711.

State Clearinghouse Number 2020049027
05-Mon-1-PM 28.1/67.9
05-1H800/05-1600-0163

Tier 1 evaluation of projects to rehabilitate historic bridge rails on State Route 1 from post miles 28.1 to 67.9 in Monterey County.

Tier 2 evaluation of bridge rail replacements on the Garrapata Creek Bridge at post mile 63.0 on State Route 1 in Monterey County.

Tier 1 and Tier 2 DRAFT ENVIRONMENTAL IMPACT REPORT

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

THE STATE OF CALIFORNIA
Department of Transportation

Timothy M. Gubbins
District 5 Director
California Department of Transportation
NEPA and CEQA Lead Agency

11/13/2020
Date

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

Jason Wilkinson, Environmental Branch Chief, Caltrans District 5, 50 Higuera Street, San Luis Obispo, CA 93401; phone 805-542-4663; email jason.wilkinson@dot.ca.gov

Summary

This project is divided into two components:

Tier 1 (Program-level analysis)—The California Department of Transportation (Caltrans) proposes bridge rail replacements on six historic bridges along the Big Sur Coast to bring the facilities up to current traffic safety standards. In addition, all six bridges rails were given a poor rating in the Bridge Inventory Status Report and show various levels of deterioration.

Tier 2 (Project-level analysis)—Caltrans proposes to replace the deteriorated nonstandard concrete baluster bridge rail and approach railing on the Garrapata Creek Bridge (Number 44-0018) on State Route 1 in Monterey County, approximately 11.3 miles south of Carmel-By-The-Sea to ensure the safety and reliability of State Route 1. The Garrapata Creek Bridge structure is eligible for listing on the National Register of Historic Places and is located within the Carmel-San Simeon State Highway Historic District as well as within the Coastal Zone.

National Environmental Policy Act (NEPA) Assignment

California participated in the "Surface Transportation Project Delivery Pilot Program" (Pilot Program) pursuant to 23 U.S. Code 327 for more than five years, beginning July 1, 2007 and ending September 30, 2012. MAP-21 (P.L. 112-141), signed by President Barack Obama on July 6, 2012 amended 23 U.S. Code 327 to establish a permanent Surface Transportation Project Delivery Program. As a result, Caltrans entered into a Memorandum of Understanding pursuant to 23 U.S. Code 327 (NEPA Assignment Memorandum of Understanding) with the Federal Highway Administration. The NEPA Assignment Memorandum of Understanding became effective October 1, 2012 and was renewed on December 23, 2016 for a term of five years. In summary, Caltrans continues to assume Federal Highway Administration responsibilities under NEPA and other federal environmental laws in the same manner as was assigned under the Pilot Program, with minor changes. With NEPA Assignment, the Federal Highway Administration assigned, and Caltrans assumed all the U.S. Department of Transportation (U.S. DOT) Secretary's responsibilities under NEPA. This assignment includes projects on the State Highway System and Local Assistance Projects off the State Highway System within the State of California, except for certain categorical exclusions that the Federal Highway Administration assigned to Caltrans under the 23 U.S. Code 326 Categorical Exclusion Assignment Memorandum of Understanding, projects excluded by definition, and specific project exclusions.

Overview of Project Area

Tier 1—The historic Big Sur arch bridges along State Route 1 in Monterey County contribute to the Carmel-San Simeon State Highway Historic District. The bridges

sit along the Big Sur Coast starting from the south with Big Creek Bridge at post mile 28.1 and ending at Malpaso Creek Bridge at post mile 67.9. The six bridges in the proposed bridge rail replacement program are listed below:

- Big Creek Bridge (1938)—post mile 28.1, Bridge Number 44-0056
- Bixby Creek Bridge (1932)—post mile 59.4, Bridge Number 44-0019
- Rocky Creek Bridge (1932)—post mile 60.0, Bridge Number 44-0036
- Garrapata Creek Bridge (1931)—post mile 63.0, Bridge Number 44-0018
- Granite Canyon Bridge (1932)—post mile 64.3, Bridge Number 44-0012
- Malpaso Creek Bridge (1935)—post mile 67.9, Bridge Number 44-0017

Tier 2—Garrapata Creek Bridge (Number 44-0018) is an open-spandrel arch bridge on State Route 1 in Monterey County, approximately 11.3 miles south of Carmel-By-The-Sea at post mile 63.0. State Route 1 through the project area is a two-lane Designated National Scenic Byway and All-American Road that winds through rural and sparse residential development along the steep slopes of the Big Sur Coast.

Garrapata Creek Bridge was constructed in 1931, widened in 1998 and seismically retrofitted in 1987 and 1998. It is one of seven historic arch bridges along State Route 1 on the Big Sur Coast. The bridge is 285 feet long and consists of 12-foot lanes with zero to 1-foot shoulders. The bridge structure is eligible for listing on the National Register of Historic Places and sits within the Carmel-San Simeon State Highway Historic District as well as within the Coastal Zone.

Garrapata Creek Bridge has nonstandard concrete baluster bridge rails on both sides of the structure. The rail end posts exhibit fine pattern cracking, and the barrier rail posts are severely deteriorated with many small cracks beginning to emerge as well as showing previous impact damage. The project on State Route 1 in Monterey County proposes to replace the existing nonstandard concrete baluster bridge rail and approach railing on Garrapata Creek Bridge. The irreversible damage from pervasive salt-laden fog has accelerated the overall deterioration of concrete and reinforcing steel of the bridge rail, warranting replacement. Caltrans is committed to choosing a new compliant railing that is context sensitive and will be compatible with the historic and visual character of the Big Sur Bridges and within the Carmel-San Simeon Highway Historic District.

Purpose

The purpose of the Tier 1 Big Sur Bridge Rail Replacement Program and Tier 2 Garrapata Creek Bridge Rail Replacement Project is to replace the existing nonstandard concrete baluster bridge rails and approach rails with rails that meet current state and federal traffic safety standards to ensure the reliability of State Route 1.

Need

The Tier 1 Big Sur Bridge Rail Replacement Program is needed because the existing rails do not meet current traffic safety standards.

The Tier 2 Garrapata Creek Bridge Rail Replacement Project is needed because the existing rails do not meet current traffic safety standards, and as stated in the 2015 Bridge Inspection Report, portions of the existing Garrapata Creek Bridge rails have developed severe cracking caused by deterioration of concrete and reinforcing steel.

The upcoming projects are necessary due to various levels of deterioration of the existing railing on all six bridges, and the railing no longer meets current traffic safety standards. Caltrans Structure Maintenance and Investigations crews inspected all six bridges in 2019, and the bridge rails on all six bridges were given a poor rating in the Bridge Inventory Status Report.

The Manual for Assessing Safety Hardware, which was implemented as an agreement between the Federal Highway Administration and the American Association of State Highway Transportation Officials in 2009 (updated in 2016), sets the standards for highway safety equipment. Newly adopted Manual for Assessing Safety Hardware standards have mandated that all new installations of roadside safety devices on high-speed roadways, including bridge railing, must meet a new higher standard for crash testing for all projects advertised as of December 31, 2019, without exception.

Manual for Assessing Safety Hardware standards dictate both the structural performance as well as the height and width dimensions of new railing. The existing railings are insufficient by current Manual for Assessing Safety Hardware standards for the posted speed limits on this stretch of State Route 1, so it is not possible to accomplish the purpose of the project and replace the existing railing in-kind moving forward. Portions of the existing Garrapata Creek Bridge rail are in an accelerated state of deterioration, including the concrete spalling and exposed steel reinforcing bar. This deterioration may pose a hazard to public health and safety moving forward if allowed to continue unaddressed.

Tiered CEQA Documents

The California Environmental Quality Act (CEQA) provides for tiered or program Environmental Impact Reports (California Environmental Quality Act Guideline Sections 15175–15179.5). As the CEQA lead agency for this project, Caltrans has prepared a Tier 1 and Tier 2 program Environmental Impact Report. The program Environmental Impact Report is intended to streamline later environmental review and evaluate to the greatest extent feasible cumulative impacts, growth-inducing impacts, and irreversible significant effects on the environment of subsequent projects. Tiering addresses broad programs and issues related to the entire corridor in the Tier 1 analysis. As specific bridge rail replacement projects within the corridor program are ready for implementation, impacts of those specific actions are evaluated in subsequent Tier 2 studies.

Project Impacts

Table S-1 summarizes potential impacts that would result from each alternative. Detailed discussion and an analysis of project impacts are provided in Chapter 2 of this document. Avoidance, minimization, and mitigation measures are included in Appendix D.

Table S-1 Summary of Potential Impacts from Alternatives

Potential Impact	Build Alternative Tier 1	Build Alternative Tier 2	No-Build Alternative Tier 1 and Tier 2
Land Use—Consistency with the Monterey County General Plan	No impact—Land use would not change along the corridor as a result of the project. The project is consistent with the Monterey County General Plan, the Big Sur Highway 1 Sustainable Transportation Management Plan, and the Big Sur Coast Land Use Plan.	Same as Tier 1.	No change in land use.
Coastal Zone	The project limits are entirely within the Coastal Zone and would require a Coastal Development Permit. The project limits are under the jurisdiction of the County of Monterey but also contain a portion in an area of original California Coastal Commission jurisdiction.	A Coastal Development permit will be required from the Monterey County Local Coastal Program.	No Coastal Development Permit required.
Wild and Scenic Rivers	No impact—There are no wild and scenic rivers near the project.	Same as Tier 1.	No impact.
Parks and Recreational Facilities	Daytime construction noise and construction dust may temporarily disturb Big Sur visitors. There may also be some minor traffic delays during construction.	Same as Tier 1.	No impact.
Farmland and Timberland	No impact—There are no prime agricultural lands or timberlands near the project	Same as Tier 1.	No impact.
Growth	No impact—The project would not induce growth or increase development.	Same as Tier 1.	No impact.
Community Character and Cohesion	No impact—The project would not affect community housing or community character.	No Impact.	No impact.

Potential Impact	Build Alternative Tier 1	Build Alternative Tier 2	No-Build Alternative Tier 1 and Tier 2
Relocations and Real Property Acquisition—Housing and Business Displacements	No impact—The project would not displace any houses or businesses.	Same as Tier 1.	No impact.
Relocations and Real Property Acquisition—Utility Service Relocation	No impact—The project would not relocate any utilities.	Same as Tier 1.	No impact.
Environmental Justice	No impact—Residents would not be displaced, and there would not be a disproportionate impact on underserved communities.	Same as Tier 1.	No impact.
Utilities and Emergency Services	The Tier 1 projects may require relocation of utilities.	The Tier 2 Garrapata Creek Bridge project will not involve utility relocation. There will be no impacts to utilities and emergency services.	Further degradation of the Big Sur bridge rails could disrupt travel on the State Route 1 corridor, which would negatively impact the movement of emergency services.
Traffic and Transportation/ Pedestrian and Bicycle Facilities	The replacement bridge rails will conform to bicycle height safety standards. The projects may involve temporary traffic impacts during construction.	Same as Tier 1.	No impact.
Visual/Aesthetics	The projects would result in a loss of scenic vistas, substantial reduction of visual quality and character, and loss of visual access to coastal scenic resources.	Same as Tier 1.	No impact.
Cultural Resources	The projects will adversely impact historic bridges as well as a historic district.	The Tier 2 Garrapata Creek Bridge project will result in an adverse effect to a historic resource.	No impact.
Hydrology and Floodplain	There will be no impacts to hydrology or floodplains.	Same as Tier 1.	No impact.
Water Quality and Storm Water Runoff	There will be no permanent impacts to water quality, and temporary impacts will be minimized through implementation of best management practices and measures.	Same as Tier 1.	No impact.
Geology, Soils, Seismicity and Topography	There are no impacts to geology, soils, seismicity, and topography anticipated.	Same as Tier 1.	No impact.

Potential Impact	Build Alternative Tier 1	Build Alternative Tier 2	No-Build Alternative Tier 1 and Tier 2
Paleontology	No impact—Proposed work would not disturb sediments of high paleontological potential.	Same as Tier 1.	No impact.
Hazardous Waste and Materials	Aerially deposited lead, asbestos-containing materials, and lead-containing paint may be encountered during project construction; they are standard hazardous waste issues encountered in roadway construction projects. Hazardous materials would be appropriately handled and disposed of through implementation of standard avoidance and minimization measures.	Same as Tier 1.	No impact.
Air Quality	No long-term air quality impacts are expected.	Same as Tier 1.	No impact.
Noise and Vibration	Construction noise would be short term and intermittent during the construction period. Implementation of minimization measures and Caltrans' Standard Specifications during construction would minimize impacts. No long-term noise impacts are expected.	Same as Tier 1.	No impact.
Energy	No impact—The project is not capacity-increasing and therefore would not increase long-term energy use. Construction-period energy use would be minimized through recycling of materials and implementation of greenhouse gas reduction strategies.	Same as Tier 1.	No impact.
Natural Communities	No impacts to natural communities are anticipated.	Same as Tier 1.	No impact.
Wetlands and Other Waters	No impacts to wetlands, other waters, or riparian areas are anticipated with the current scope of the project.	Same as Tier 1.	No impact.

Potential Impact	Build Alternative Tier 1	Build Alternative Tier 2	No-Build Alternative Tier 1 and Tier 2
Plant Species	No impacts—No special-status plant species were observed during appropriately timed floristic surveys.	Same as Tier 1.	No impact.
Animal Species	No impacts—It is anticipated that work can fully avoid areas with habitat for special-status species.	Same as Tier 1	No impact.
Threatened and Endangered Species	No impacts to threatened and endangered species are anticipated.	Same as Tier 1.	No impact.
Invasive Species	No impact—Areas of temporary disturbance to natural habitats will be stabilized and revegetated to limit the spread of invasive species.	Same as Tier 1.	No impact.
Cumulative Impacts	The project would contribute substantial direct and/or indirect cumulative impacts to the visual resources/aesthetics in the Big Sur corridor and surrounding areas. Direct and indirect Impacts to cultural resources will also contribute to cumulative impacts but will be mitigated below the level of significance.	Same as Tier 1.	No impact.
Wildfire	No impact—replacement of the bridge rails would ensure the reliability of State Route 1 as an evacuation route in the event of a fire along the Big Sur Coast.	Same as Tier 1.	No impact.
Climate Change	Construction of the project is not expected to locally worsen the effects of climate change.	Same as Tier 1.	No impact.

Coordination with Other Agencies

The following permits are required for this project to move forward:

- The Tier 2 Garrapata Creek Bridge Rail project will require a Coastal Development permit from Monterey County.
- The Tier 1 and Tier 2 projects will both require extensive coordination with the State Historic Preservation Officer to agree upon a finding of adverse effect and a Memorandum of Agreement between the State Historic Preservation Officer and Caltrans.

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Chapter 1 Proposed Project

1.1 Introduction

The California Department of Transportation (Caltrans), as assigned by the Federal Highway Administration, is the lead agency under the National Environmental Policy Act (NEPA). Caltrans is the lead agency under the California Environmental Quality Act (CEQA).

The California Department of Transportation proposes bridge rail replacements on six historic bridges along the Big Sur Coast to bring the facilities up to current standards.

The Tier 2 Garrapata Creek Bridge Rail Replacement Project is eligible for federal-aid funding and is currently programmed in the 2020 State Highway Operation and Protection Program funded by the Bridge Rehabilitation Program (20.XX.201.110). The project would begin construction in the 2023/2024 fiscal year and is expected to take about a year complete.

1.2 Purpose and Need

1.2.1 Purpose

The purpose of the Tier 1 Big Sur Bridge Rail Replacement Program and Tier 2 Garrapata Creek Bridge Rail Replacement Project is to replace the existing nonstandard concrete baluster bridge rails and approach rails with rails that meets current state and federal traffic safety standards. Caltrans will choose a new Manual for Assessing Safety Hardware-compliant railing that is both context sensitive and compatible with the historic and visual character of the Big Sur Bridges and within the Carmel-San Simeon Highway Historic District.

1.2.2 Need

The Tier 1 Big Sur Bridge Rail Replacement Program is needed because the existing rails do not meet current traffic safety standards and are all showing signs of deterioration. The Manual for Assessing Safety Hardware, implemented as an agreement between the Federal Highway Administration and the American Association of State Highway Transportation Officials in 2009 (updated in 2016), sets the standards for highway safety equipment. Newly adopted standards in the Manual for Assessing Safety Hardware have mandated that all new installations of roadside safety devices on high-speed

roadways, including bridge railing, must meet a new higher standard for crash testing for all projects advertised as of December 31, 2019, without exception.

The standards in the Manual for Assessing Safety Hardware dictate both the structural performance as well as the height and width dimensions of new railing. The existing bridge railings are insufficient by current standards in the Manual for Assessing Safety Hardware for the posted speed limits on this stretch of State Route 1; the existing railing cannot be replaced in-kind moving forward.

In addition, the upcoming projects are necessary because of the deterioration of the existing railing on all six bridges and the railing no longer meeting current traffic safety standards. Caltrans Structure Maintenance and Investigations crews inspected all six bridges in 2019, and the bridge rails on all six bridges were given a poor rating in the Bridge Inventory Status Report.

The Tier 2 Garrapata Creek Bridge Rail Replacement Project is needed because the existing rails do not meet current state and federal traffic safety standards, and portions of the existing Garrapata Creek Bridge rails have developed severe cracking caused by deterioration of concrete and reinforcing steel.

According to the 2015 Bridge Inspection Report for Garrapata Creek Bridge, portions of the existing rail are in an accelerated state of deterioration, with concrete spalling and exposed steel reinforcing bar (see Figure 1-1). This deterioration may pose a hazard to public health and safety moving forward if allowed to continue unaddressed. Caltrans would choose a new Manual for Assessing Safety Hardware-compliant railing that is both context sensitive and compatible with the historic and visual character of the Big Sur Bridges and within the Carmel-San Simeon Highway Historic District.

Figure 1-1 Photo of Big Creek Bridge Rail Deterioration

Figure 1-2 Photo of Bixby Creek Bridge Rail Deterioration

Figure 1-3 Photo of Rocky Creek Bridge Rail Deterioration

Figure 1-4 Photo of Garrapata Creek Bridge Rail Damage

Figure 1-5 Photo of Garrapata Creek Bridge Rail Deterioration

Figure 1-6 Photo of Granite Canyon Bridge Rail Deterioration

Figure 1-7 Photo of Malpaso Creek Bridge Rail Deterioration

1.3 Project Description

Tier 1

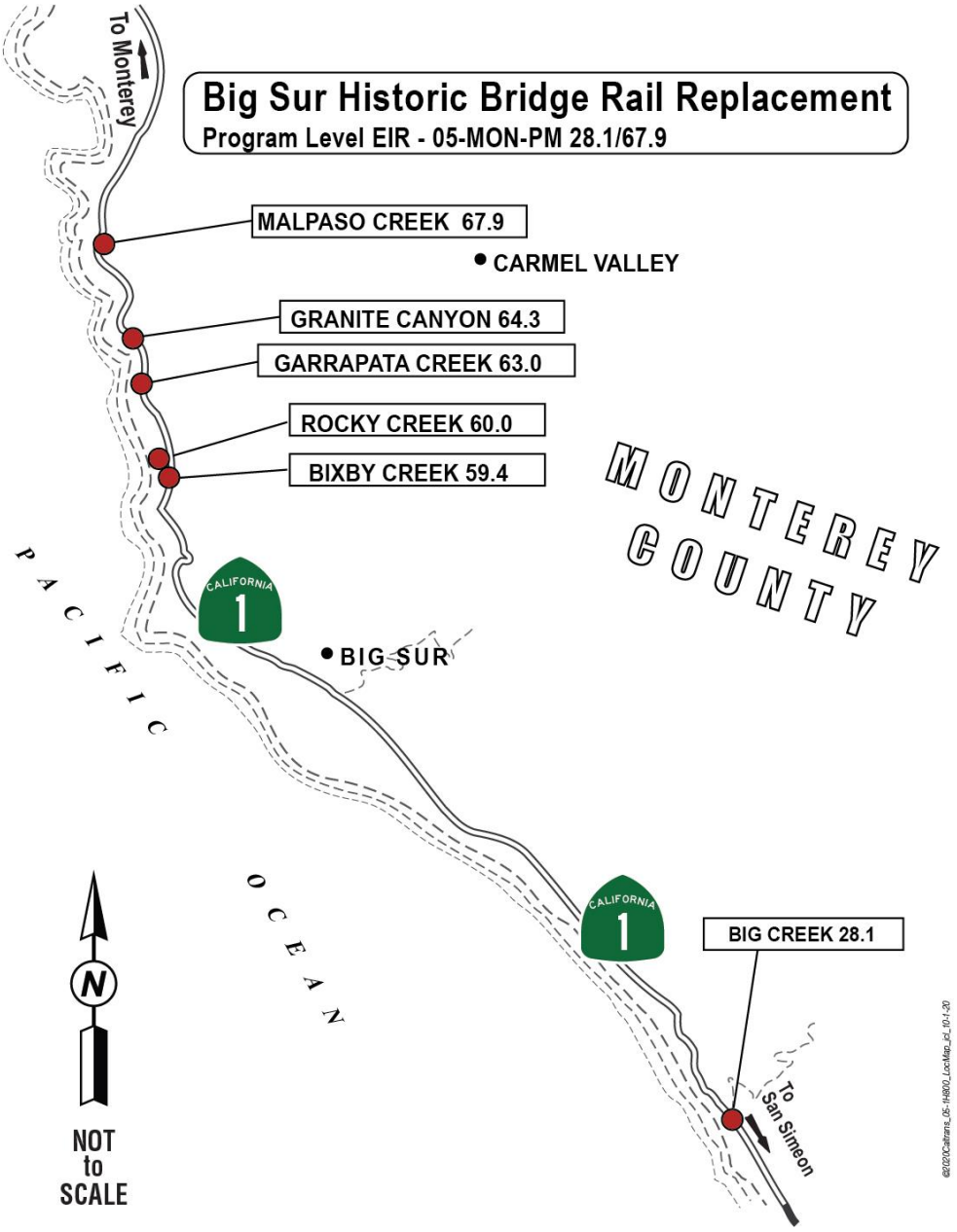
The Big Sur Bridge Rail Replacement Program is a series of six separate projects in which Caltrans would replace deteriorated nonstandard concrete baluster bridge railing for six out of the seven historic reinforced concrete arch bridges along State Route 1 in Monterey County. The original concrete railing would be replaced with a new railing constructed to meet modern safety standards set by the Manual for Assessing Safety Hardware.

Called "the Big Sur Bridges," these structures all date to the initial construction of State Route 1 in Monterey County in the early 1930s. The Big Sur Bridges impacted by this program are the following:

- Big Creek Bridge (1938)—post mile 28.1, Bridge Number 44-0056
- Bixby Creek Bridge (1932)—post mile 59.4, Bridge Number 44-0019
- Rocky Creek Bridge (1932)—post mile 60.0, Bridge Number 44-0036
- Garrapata Creek Bridge (1931)—post mile 63.0, Bridge Number 44-0018
- Granite Canyon Bridge (1932)—post mile 64.3, Bridge Number 44-0012
- Malpaso Creek Bridge (1935)—post mile 67.9, Bridge Number 44-0017

See Figure 1-4 for the Project Vicinity Map showing the locations of the bridges in Monterey County.

Figure 1-8 Project Location Map



Tier 2

Garrapata Creek Bridge (Number 44-0018) is an open-spandrel arch bridge that was constructed in 1931, widened in 1998 and seismically retrofitted in 1987 and 1998. The bridge sits at post mile 63.0 just south of Carmel in Monterey County and is one of seven historic arch bridges along State Route 1 on the Big Sur Coast. See Figure 1-2 for the Project Location Map showing the location of the Garrapata Bridge in Monterey County. The bridge is 285 feet long and consists of 12-foot lanes with zero to 1-foot shoulders.

Figure 1-9 Project Vicinity Map

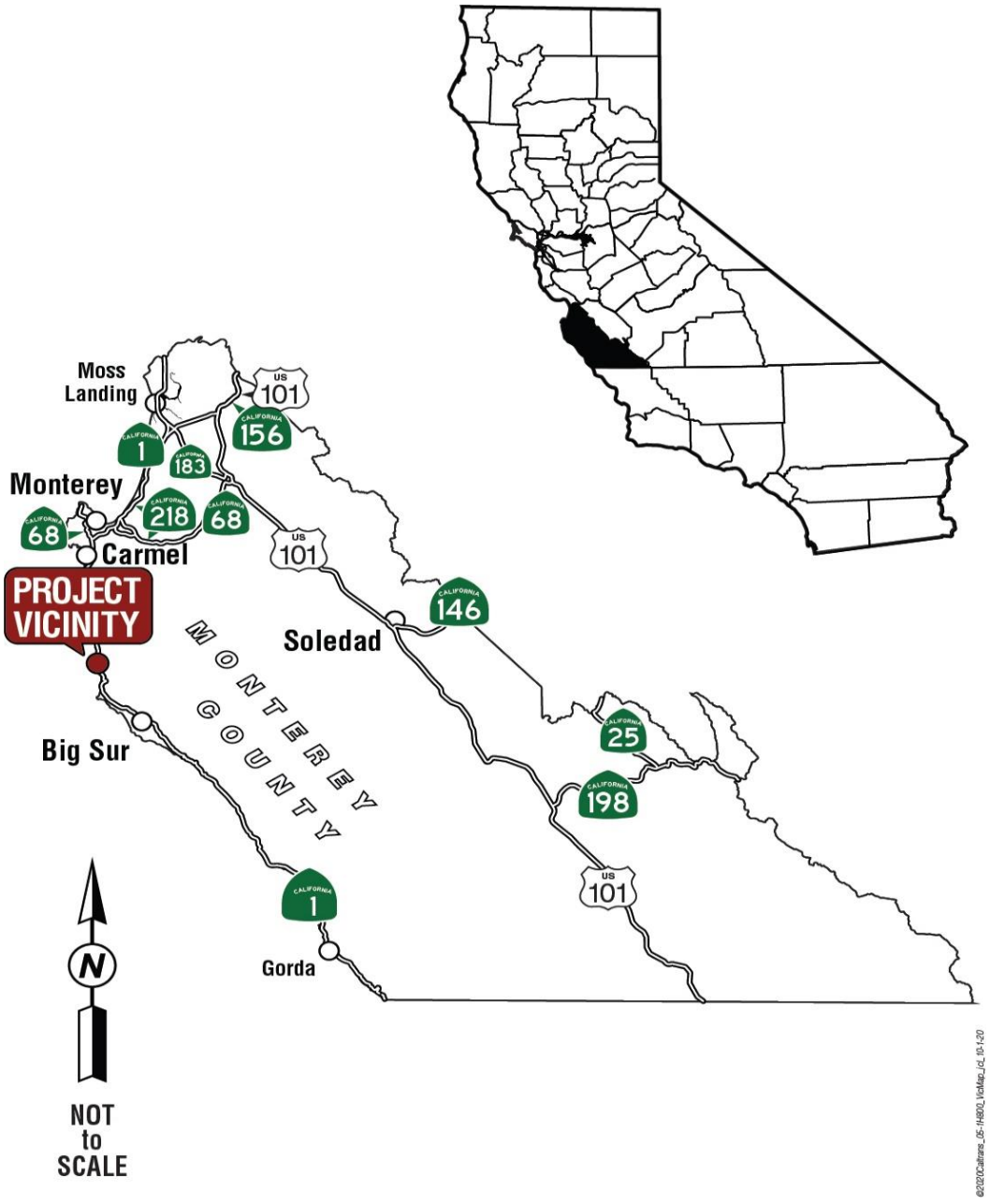


Figure 1-10 Photo of Garrapata Creek Bridge

The structure has nonstandard concrete baluster bridge rails on both sides of the structure. The rail end posts exhibit fine pattern cracking, and the barrier rail posts are severely deteriorated with dozens of spalls (flaking areas) and spalled posts, in addition to previous impact damage.

Construction would remove the existing rail along with the existing 1-foot overhang on each side of the bridge deck and widen the deck 3 inches on each side to place the new standard rails. No work would occur in Garrapata Creek. Debris from removal of the existing rail and overhang would be kept from entering Garrapata Creek by either affixing a debris containment system to falsework hung from the top of the bridge or using an excavator with a bucket designed to catch the debris.

All work would be conducted within the existing state right-of-way, and access below the bridge would be restricted to foot traffic only, so no equipment access roads would be necessary. There are no utility conflicts.

1.4 Project Alternatives

One Build Alternative and a No-Build Alternative are being evaluated for this project. The alternatives under consideration for the project were developed by an interdisciplinary project development team with the goal of adequately addressing the project purpose and need while avoiding and minimizing environmental impacts and reducing project costs.

1.4.1 Build Alternative

This project contains a number of standardized project measures that are used on most, if not all, Caltrans projects and were not developed in response to any specific environmental impact resulting from the proposed project. These measures are addressed in more detail in the Environmental Consequences sections found in Chapter 2.

The current Build Alternative would involve replacing the existing nonstandard bridge rail and approach railing with a new railing that meets current traffic safety standards. The Build Alternative would involve evaluation of multiple rail types and design variations to implement context sensitive design solutions. A context sensitive design approach uses a collaborative, interdisciplinary decision-making process that involves all stakeholders to develop a transportation facility that fits its physical setting.

1.4.2 No-Build (No-Action) Alternative Tier 1 and Tier 2

Under the No-Build Alternative, the historic Big Sur Bridge rails would not be replaced and would continue to deteriorate. Under the No-Build Alternative, the bridge rails would remain nonstandard.

1.5 Comparison of Alternatives for Tier 1 and Tier 2

The sections below describe how the alternatives would meet the project purpose and need and affect environmental resources in the study area. Chapter 2 of this document provides further discussion regarding the project's potential environmental impacts for the build alternative.

After the public circulation period, all comments will be considered, and Caltrans will select a preferred alternative and make the final determination of the project's effect on the environment. Under the California Environmental

Quality Act, Caltrans will certify that the project complies with the California Environmental Quality Act, prepare findings for all significant impacts identified, prepare a Statement of Overriding Considerations for impacts that will not be mitigated below a level of significance, and certify that the findings and Statement of Overriding Considerations have been considered prior to project approval. Caltrans will then file a Notice of Determination with the State Clearinghouse that will identify whether the project will have significant impacts, if mitigation measures were included as conditions of project approval, that findings were made, and that a Statement of Overriding Considerations was adopted.

1.6 Alternatives Considered but Eliminated from Further Discussion for the Garrapata Creek Tier 2 project

1.6.1 2-Foot Widening Alternative

A proposal to widen the shoulders on the Garrapata Creek Bridge by 2 feet on both sides was rejected. Widening to that depth is not feasible at the project location due to engineering constraints, so widening beyond the 6 inches to accommodate the new rail will no longer be considered for the project. The bridge rail replacement would require widening only 3 inches on each side of the Garrapata Creek Bridge structure for the new rail. Widening of the other Tier 1 project locations will be determined during Tier 2 analysis for each location.

1.6.2 Lowering the Speed Limit

The speed limit posted for State Route 1 through the Garrapata Creek Bridge project area is 55 miles per hour. Traffic studies investigated the option of lowering the speed limit through the project area to 45 miles per hour to accommodate an in-kind bridge rail replacement. The analysis determined reducing the speed limit could not be justified and replacing the railing in-kind would not meet current traffic safety standards for the posted speed limit of 55 miles per hour.

1.6.3 New Bridge Alignment

Building a new bridge and leaving the historic structure in place was considered infeasible because of engineering and geographic constraints at the Garrapata Creek Bridge location.

1.7 Permits and Approvals Needed

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

- Coastal Development Permit from the County of Monterey
- Coastal Development Permit from the Coastal Commission for Big Creek Bridge Project (Tier 2)
- Memorandum of Agreement from the State Historic Preservation Office

Chapter 2 Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures

As part of the scoping and environmental analysis done for the project, the following environmental issues were considered, but no adverse impacts were identified. So, there is no further discussion of these issues in this document.

Existing and Future Land Use: The project is consistent with the existing land use of the Big Sur corridor and does not interfere with any future land use plans.

Consistency with State, Regional and Local Plans and Programs: The project is consistent with the Monterey County Big Sur Coast Land Use Plan as well as the Big Sur Coast Highway Management Plan (2006).

Wild and Scenic Rivers: No wild and scenic rivers occur in the project area.

Parks and Recreational Facilities: The project proposes improvements to highway bridges that provide access to various parks and recreational areas along the Big Sur coast. Impacts to parks or recreational facilities are not expected.

Farmland: The County of Monterey zoning map indicates that grazing lands and farmland are adjacent to some of the project locations but are not within the project limits. Impacts to agricultural lands and are not expected.

Timberland: The County of Monterey zoning map indicates that timberland and forest resources are adjacent to some of the project locations but are not within the project limits. Impacts to forest resources are not expected.

Environmental Justice: No minority or low-income populations that would be adversely affected by the project have been identified within or next to the project limits. Therefore, this project is not subject to the provisions of Executive Order 12898. (U.S. Environmental Protection Agency).

Utilities and Emergency Services: The project will have no impact on emergency services. An existing utility pole may be used temporarily during construction of the Tier 2 Garrapata Creek Bridge project for traffic management. There will be no permanent impacts to utilities.

Traffic and Transportation/Pedestrian and Bicycle Facilities: The project may result in minor traffic delays during construction. One-way traffic control with traffic control signals will be required throughout the construction period. Bicycles will be allowed to share the road with vehicles during all stages of construction. There will be no permanent traffic or transportation impacts.

Growth: The project would not change accessibility or influence growth, therefore, no direct or indirect impacts related to growth would occur.

Community Character and Cohesion: The project will be designed to complement the community character of the Big Sur Coast. The project will improve transportation facilities along State Route 1, ensuring access and cohesion for the community of Big Sur.

Relocations and Real Property Acquisition: There will be no relocations or real property acquisitions as a result of the proposed project.

Hydrology and Floodplain: There will be no effects to the 100-year floodplain because the project is not located within a 100-year base floodplain. The Floodplain Evaluation Report and the Location Hydraulic Study indicate there will be no impacts to hydrology or floodplain.

Air Quality: The project would not add capacity to the highway, so no long-term operational impacts to local air quality would occur as a result of the project. An air quality technical report was prepared for this project. Based on a review of the federal guidelines, the project would qualify for an exemption because it consists of bridge rail reconstruction (with no additional travel lanes); such work is considered exempt from federal conformity analysis. In addition, projects that do not further degrade air quality in the basin are consistent with the Monterey Bay Unified Air Pollution Control District's state air quality attainment goals as stated in its State Implementation Plan (2012-15 Air Quality Management Plan).

Noise: Since no capacity will be added to the highway and the vertical profile of the new bridge will be the same after construction, this would be considered a Type 3 project. There was a technical noise study prepared for this project. It is assumed that local noise levels will be the same after completion of the project as they were before. Long-term noise abatement measures are not anticipated with this project.

Threatened and Endangered Species: The proposed project will have a Section 7 No Effect Finding on all listed threatened and endangered species and critical habitat within the project areas. U.S. Fish and Wildlife Service and National Oceanic and Atmospheric Administration species lists were obtained for the project vicinity.

Plant Species: The biological study area includes two plant communities: coastal scrub and ruderal/disturbed. No rare plant species and no special-

status plant species were found during appropriately timed floristic surveys. The proposed project is expected to have No Effect on listed plant species and their designated critical habitat.

Invasive Species: Certain invasive/weedy plants occur within the biological study area and measures will be implemented to avoid/minimize the spread of these species.

Paleontology: The Paleontology technical report indicates there is a low probability of encountering or impacting paleontological resources during project construction because project-related earthwork would take place in areas that have been previously disturbed.

Geology and Soils: There would be no impacts to geology or soils as a result of the project. All work is planned on previously disturbed areas within the roadway prism.

Energy: Caltrans incorporates energy efficiency, conservation, and climate change measures into transportation planning, project development, design, operations, and maintenance of transportation facilities, fleets, buildings, and equipment to minimize use of fuel supplies and energy sources and reduce greenhouse gas emissions. The project is not capacity-increasing and therefore the operation would not increase energy use. Energy use would be required during construction but would be minimized whenever possible through recycling of materials and implementation of greenhouse gas reduction strategies. It is expected that the reduction in maintenance activities required to repair the failing bridge concrete would help offset energy use during construction, and therefore the project would not have substantial energy impacts.

Wild and Scenic Rivers: No wild and scenic rivers occur in the project area.

Wetlands and Other Waters: The project will not impact any jurisdictional wetland areas or other waters. All work will occur from above the bridge decks and will not impact any creeks riparian areas below the bridges.

Water Quality and Storm Water Runoff: The water quality technical report prepared for this project indicates the project is not expected to result in long-term impacts to water quality. Temporary impacts to water quality and stormwater runoff during construction are anticipated but will be minimized by incorporating appropriate Best Management Practices. These practices include a Debris Containment Collection Program and a Temporary Concrete Washout Facility that must be located no less than 100 feet from any water body, including Garrapata Creek and the Pacific Ocean.

Hazardous Waste and Materials: The results of the Initial Site Investigation (November 2016) indicate there are no materials containing hazardous waste

located within the project limits. No additional hazardous waste studies are required.

2.1 Human Environment

2.1.1 Coastal Zone

Regulatory Setting – Tier 1 and Tier 2

The project has the potential to affect resources protected by the Coastal Zone Management Act of 1972, which is the main federal law enacted to preserve and protect coastal resources. The Coastal Zone Management Act sets up a program under which coastal states are encouraged to develop coastal management programs. States with an approved coastal management plan can review federal permits and activities to determine if they are consistent with the state's management plan.

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

Just as the federal Coastal Zone Management Act delegates power to coastal states to develop their own coastal management plans, the California Coastal Act delegates power to local governments to enact their own local coastal programs. This project is subject to Monterey County's local coastal program. Local coastal programs contain the ground rules for development and protection of coastal resources in their jurisdiction consistent with the California Coastal Act goals. A Federal Consistency Certification will be needed as well. The Federal Consistency Certification process will start before the final environmental document and be completed to the maximum extent possible during the National Environmental Policy Act process.

Local Coastal Program

The California Coastal Act requires each community in the Coastal Zone to prepare a local coastal program, including a coastal land use plan to protect, maintain and, where feasible, enhance and restore the overall quality of the Coastal Zone environment and its natural resources. A local coastal program consists of land use plans, zoning ordinances, and zoning district maps. Local coastal programs must contain a specific public access component to ensure

maximum public access to the coast and ensure that public recreation areas are provided.

Affected Environment

The Tier 1 project area is within both original jurisdiction by the California Coastal Commission as well as the jurisdiction of the Monterey County local coastal program.

The Tier 2 Garrapata Creek Bridge project is in the Monterey County local coastal program jurisdiction. The Monterey County local coastal program's Big Sur Coast Land Use Plan was adopted by the Monterey County Board of Supervisors in 1986 and is currently being updated. The Land Use Plan was created to implement the California Coastal Act of 1976, so that all development harmonizes with and is subordinate to the wild and natural character of the land. The plan covers approximately 70 miles from Carmel in the north to the Monterey/San Luis Obispo County line in the south. The Big Sur Coast is renowned for its scenic beauty, history, ecology, recreational opportunities, and the roadway and bridges. Skirting the Pacific Ocean, the highway affords dramatic views of the rugged coast and redwood forest. The corridor is designated an All-American Road.

As the state department responsible for the transportation infrastructure in California, Caltrans is often involved in projects in the Coastal Zone. Consequently, such projects must satisfy the requirements of Caltrans' mission and regulations as well as the policies of the Coastal Act. In designing projects, Caltrans is guided by a rigorous and comprehensive body of specifications set forth in the Highway Design Manual, which is supplemented by an array of documents published by the American Association of State Highway and Transportation Officials and the Federal Highway Administration.

Bridge railings and barriers in the Coastal Zone have presented a distinct set of challenges, largely because the visual protections established by the Coastal Act reach beyond the structural considerations that have traditionally driven Caltrans design practices. These challenges led to the development of Caltrans' and the California Coastal Commission's *Bridge Rails and Barriers: A Reference Guide for Transportation Projects in the Coastal Zone*. This guide was prepared as a tool to help stakeholders and participants in bridge and railing design to better understand options available for potentially successful application in future projects within the Coastal Zone.

The Big Sur Coast Land Use Plan and the Monterey County Local Coastal Program aim to achieve the following larger goals of the Coastal Act:

- Protect, maintain and, where feasible, enhance and restore the overall quality of the Coastal Zone environment and its natural and human-made resources.

- Ensure orderly, balanced use and conservation of Coastal Zone resources, considering the social and economic needs of the people of the state.
- Maximize public access to and along the coast and public recreational opportunities in the Coastal Zone, consistent with sound resources conservation principles and constitutionally protected rights of private property owners.
- Ensure priority for coastal-dependent development over other development on the coast.
- Encourage state and local initiatives and cooperation in preparing procedures to implement coordinated planning and development for mutually beneficial uses, including educational uses, in the Coastal Zone.

Environmental Consequences

Build Alternative—Tiers I and II

Table 2-1 summarizes an analysis of the consistency of the project with policies of Chapter 3 of the California Coastal Act and the Big Sur Coast Land Use Plan.

Overall, the goals of the project are consistent with the goals of the Coastal Act, as achieved through the policies of the Big Sur Coast Land Use Plan and the Monterey County Local Coastal Program. Unavoidable impacts to historic and visual resources are expected, but these impacts would be minimized to the greatest extent possible using context sensitive solutions and collaborative planning and design efforts involving Monterey County, the California Coastal Commission, the State Historic Preservation Officer, and Caltrans.

No-Build Alternative

Under the No-Build Alternative, existing conditions would remain and no impacts to the Coastal Zone would occur.

Table 2-1 California Coastal Act and Big Sur Coast Land Use Plan Policy Consistency Summary Table (Tier 1 Impacts)

California Coastal Act Chapter 3 and Big Sur Coast Land Use Plan Policy Area	Policy Consistency Analysis
Agricultural Resources ***Coastal Act Section 30241 (in relevant part):*** The maximum amount of prime agricultural land shall be maintained in agricultural production to assure the	No prime agricultural lands or timberlands are located within the project locations. Agricultural grazing lands are next to some of the project locations. There

California Coastal Act Chapter 3 and Big Sur Coast Land Use Plan Policy Area	Policy Consistency Analysis
protection of the areas' agricultural economy, and conflicts shall be minimized between agricultural and urban land uses. ***Coastal Act Section 30242 (in relevant part):*** All other lands suitable for agricultural use shall not be converted to nonagricultural uses. ***Coastal Act Section 30243:*** The long-term productivity of soils and timberlands shall be protected, and conversions of coastal commercial timberlands in units of commercial size to other uses or their division into units of noncommercial size shall be limited to providing for necessary timber processing and related facilities. ***Big Sur Coast Land Use Plan 3.6:*** Agriculture, especially grazing, is a preferred use of coastal lands. In locations where grazing has been a traditional use, it should be retained and encouraged both under private and public ownership.	would be no long-term changes to land use, and the project would not affect any agricultural activities. Therefore, no conflicts with California Coastal Act or Big Sur Coast Land Use Plan policies related to agricultural resources would result.
Visual Resources and Community Character ***Coastal Act Section 30251:*** The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas such as those designated in the California Coastline Preservation and Recreation Plan prepared by the Department of Parks and Recreation	The design of the replacement bridge rails would be consistent with the character of the existing bridges and complement the visual character of the rural coastal setting. The replacement bridge rails would have slightly different dimensions than the existing rails. The new rails would be designed to match the existing visual character of the bridges and the corridor, but they would not be an exact in-kind replacement. The community would be involved with the design of all aesthetic project features to minimize the visual impact of the replacement bridge rails. An open-style bridge rail that minimizes view blockage would be used, and it

California Coastal Act Chapter 3 and Big Sur Coast Land Use Plan Policy Area	Policy Consistency Analysis
and by local government shall be subordinate to the character of its setting. ***Big Sur Coast Land Use Plan 3.2:*** New development should be subordinate and blend with its environment, using materials or colors that will achieve that effect. Where necessary, appropriate modifications will be required for siting, structural design, size, shape, color, textures, building materials, access, and screening. ***Big Sur Coast Land Use Plan 4.1.2:*** A principal objective of management, maintenance, and construction activities within the Highway 1 right-of-way shall be to maintain the highest possible standard of visual beauty and interest. ***Big Sur Coast Land Use Plan 4.1.3:*** The County requests that an overall design theme for the construction and appearance of improvements within the Highway 1 right-of-way be developed by Caltrans in cooperation with the State Department of Parks and Recreation, the U.S. Forest Service and local citizens. Design criteria shall apply to roadway signs, fences and railings, access area improvements, bridges, restrooms, trash receptacles, etc. The objective of such criteria shall be to ensure that all improvements are inconspicuous and are in harmony with the rustic natural setting of the Big Sur Coast. The special report by local citizens entitled *Design Standards for the Big Sur Highway* on file at the County Planning Department, should serve as a guide and point of departure for Caltrans and other public agencies in developing a design theme for Highway 1 and in making improvements within the State right-of-way.	would use the smallest end blocks possible that meet safety needs. With the inclusion of mitigation and minimization measures, the project would not conflict with visual resources and community character policies in the Coastal Act or Big Sur Coast Land Use Plan.

California Coastal Act Chapter 3 and Big Sur Coast Land Use Plan Policy Area	Policy Consistency Analysis
Public Access and Recreation ***Coastal Act Section 30210***: In carrying out the requirement of Section 4 of Article X of the California Constitution, maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse. ***Coastal Act Section 30211:*** Development shall not interfere with the public's right of access to the sea where acquired through use or legislative authorization, including, but not limited to, the use of dry sand and rocky coastal beaches to the first line of terrestrial vegetation. ***Coastal Act Section 30213:*** Lower cost visitor and recreational facilities shall be protected, encouraged, and, where feasible, provided. Developments providing public recreational opportunities are preferred. ***Big Sur Coast Land Use Plan 6.1.3:*** The rights of access to the shoreline, public lands, and along the coast, and opportunities for recreational hiking access, shall be protected, encouraged and enhanced.	The project would not conflict with the Coastal Act or Big Sur Coast Land Use Plan policies relating to public access and recreation. The project would improve coastal access by increasing roadway reliability, efficiency, and safety.
Cultural Resources ***Coastal Act Section 30244:*** Where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.	The replacement bridge rails would constitute an adverse effect to the historic structures. Mitigation and minimization measures for the Tier 1 bridges will include context sensitive bridge rail design. Detailed mitigation measures for each Tier 2 project will be finalized in the Memorandum of

California Coastal Act Chapter 3 and Big Sur Coast Land Use Plan Policy Area	Policy Consistency Analysis
Big Sur Coast Land Use Plan 3.10: Designated historical sites shall be protected through zoning and other suitable regulatory means to ensure that new development shall be compatible with existing historical resources to maintain the special values and unique character of the historic properties.	Agreement between Caltrans and the State Historic Preservation Officer.
Biological Resources ***Coastal Act Section 30107.5:*** "Environmentally sensitive area" means any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments. ***Coastal Act Section 30240:*** (a)Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas. (b)Development in areas next to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas and shall be compatible with the continuance of those habitat and recreation areas. ***Big Sur Coast Land Use Plan 3.3.2:*** Development, including vegetation removal, excavation, grading, filing, and the construction of roads and structures, shall not be permitted in the environmentally sensitive habitat areas if it results in any potential disruption of habitat value.	Following construction, it is anticipated that all areas of temporary disturbance to natural habitats would be stabilized and revegetated. The Federal Endangered Species Act Section 7 effects determination is that, with implementation of the included avoidance and minimization measures, the project would have no effect on federally listed species or designated critical habitat. Avoidance and minimization of ground disturbance due to project-related actions would be achieved with the establishment of Environmentally Sensitive Habitat Areas. The Environmentally Sensitive Habitat Areas would ensure that unnecessary disturbance does not occur outside of the project limits. Environmentally Sensitive Habitat Area limits would be shown on the final layout plans. Biological surveys were conducted at all six Tier 1 bridge locations on July 12, July 19, July 27, August 3, and August 10 in 2018 and on July 18, July 30, August 7, and August 21 in 2019.

California Coastal Act Chapter 3 and Big Sur Coast Land Use Plan Policy Area	Policy Consistency Analysis
Where private or public development is proposed, in documented or expected locations of environmentally sensitive habitats, field surveys by qualified individuals or agencies shall be made in order to determine precise locations of the habitat and to recommend mitigating measures to ensure its protection.	

Avoidance, Minimization, and/or Mitigation Measures

Though the goals of the Tier 1 Big Sur Historic Bridge Rail Replacement Program and the Tier 2 Garrapata Creek Bridge Rail Replacement Project are consistent with Coastal Act policies, project construction would create temporary and permanent impacts to protected resources in the Coastal Zone. Implementation of avoidance, minimization, and mitigation measures would reduce impacts to coastal resources to the maximum extent feasible to ensure that the project would remain consistent with coastal resource protection goals.

2.1.2 Visual/Aesthetics

Regulatory Setting – Tier 1 and Tier 2

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

The Monterey County Land Use Plan – Local Coastal Plan provides for the preservation of the incomparable beauty of the Big Sur area. It specifies that all development must harmonize with and be subordinate to the wild and natural character of the land, and should remain within the small-scale, rural values of the area, rather than introduce new or conflicting uses. It is the County's objective to preserve the Big Sur Coast scenic resources in perpetuity and to promote the restoration of the natural beauty of visually degraded areas wherever possible. The County's Viewshed Policy essentially prohibits all new construction if visible from State Route 1, except for road capacity, safety, and aesthetic improvements, provided such projects enhance the highway's aesthetic beauty and protect its primary function as a

two-lane recreation route, include walking and bicycle trails wherever feasible, and maintain the highest possible standard of visual beauty and interest.

The Big Sur Coast Highway Management Plan (2004) is a collaborative document that outlines a Corridor Management Plan (CMP) for the Big Sur Highway and a series of Management Guidelines that address corridor aesthetics, landside management and storm damage response, and vegetation management. The aim of the Coast Highway Management Plan is to foster a corridor-wide understanding of the aesthetic values along the Big Sur coast and to provide guidance in managing scenic resources while continuing to operate the highway in a safe and efficient manner. The plan identifies the main areas of local concern regarding the corridor's visual setting. In developing the Coast Highway Management Plan, the Scenic and Habitat Working Group, composed of local citizens and agency representatives, summarized the following stakeholder interests:

- The essential character of State Route 1 is that of a functional highway that passes through a unique and spectacular landscape.
- The true historic character of the corridor is worthy of preservation. Leaving the corridor essentially as it is would better honor this character than converting it to a sanitized scenic highway experience or theme park.
- The highway is not homogeneous in character; it passes through a series of different environments, each with distinct characteristics and individual themes.
- Uniformity of roadside features should be avoided, as it would conflict with recognizing the varied and distinct characteristics along the corridor.
- The needs of one stakeholder group should not be disproportionate to others. Accommodating needs of visitors should not outweigh the desires and needs of the local community for whom the highway is a central feature of daily life, and vice versa.
- For decades, the local community has accepted and encouraged a measure of eclecticism and expressions of individuality and craft in features such as mailboxes, private signs, and small structures.
- Although diversity in roadside features is valued, increasing clutter is a serious concern. This is most evidenced in commentary regarding unnecessary, redundant, or poorly designed signs and visually intrusive overhead utilities.

The *Guidelines for Corridor Aesthetics* element of the Coast Highway Management Plan specifically addresses the construction of new bridges (and major new structures such as rock sheds) as follows:

- Any new bridges along this coast must complement the architecturally significant historic bridges in the corridor. These bridges are internationally

recognized for their architectural style and engineering excellence and for the continuity established by the use of a common design theme: the concrete arch spandrel. The character of these bridges is a major contributor to the historic character of the highway corridor. The intent of these guidelines is to ensure that new bridges complement this character by balancing respect for historic design themes with the best of contemporary structural expression.

- Any new bridges should be authentic in design, rather than emulate something they are not, i.e., historic bridges. At the same time, structural designers should recognize historic bridges for the quality of aesthetic and engineering excellence they represent and strive to match or exceed this quality in contemporary terms.
- In the interests of overall continuity, designers should first consider bridge types that are in the same visual family as the historic bridges: arched or arch-like main span structures below deck level and made of concrete.
- In designing the alignment of a new bridge, designers should allow the roadway's geometry (plan and profile) to flow smoothly over the bridge, not necessarily limiting the alignment to a tangent (or straight) geometry.
- To maintain the visual continuity of the existing roadway, the width of new bridges should match the width of the approaching roadways, including shoulders, as closely as possible. As with roadway shoulder widths, the desired aesthetic for structures would support the concept for a 32-foot roadbed, subject to site-specific considerations and with consideration for appropriate exceptions from the 40-foot standard.
- New bridges must include an appropriate rail for safety of motorists, cyclists, and pedestrians; the rail type should be visually compatible with the open concrete balustrade rail seen on historic bridges.

The *Roadway Protection Systems* section of the Guidelines for Corridor Aesthetics states that "Preference for type and material selection on protective systems (e.g., rockfall protection) would be given to those that are visually subordinate to the landscape, to the extent possible. Field installation details and the industrial design of system components would also emphasize visual compatibility. For larger protective structures such as rock sheds, recommendations on aesthetic design for bridges should feature aesthetic and engineering design excellence."

Affected Environment – Tier 1 and Tier 2

State Route 1 throughout much of the Big Sur region is a two-lane highway with 12-foot lanes. Shoulder widths vary from zero to 8 feet, with most of them 4 feet or less. The existing highway is mostly asphalt lanes and shoulders and is a two-lane conventional highway until reaching Carmel.

State Route 1 in Monterey County serves local and interregional traffic that mainly includes recreational motorists, local commuters, and limited commercial users. In Monterey County, State Route 1 is designated as an Official State Scenic Highway, a National Scenic Byway, and an All-American Road.

State Route 1 passes through several landscape types through Big Sur. The landform of the region is generally characterized by steep slopes and ravines forming a series of ridgelines and valleys as the mountains rise from the Pacific Ocean. The topography of the region is generally steeper in the southern section and allows more opportunity for long-range vistas toward the west. The topography supports a mostly curvilinear roadway that produces views for the highway traveler ranging from close-in views of the inland slopes to mid-range coastline views and wide-open panoramas.

Surface water is an important visual element throughout the region. The Pacific Ocean is visible throughout much of the route and can be seen from many of the project locations. Numerous seasonal streams run throughout the area, though many are blocked from view and not noticeable from a moving vehicle.

Throughout the region, vegetation is another component of visual character. State Route 1 passes through a variety of plant communities and vegetative types within the project limits. In general, creeks and drainages hold stands of sycamore, redwood, cottonwood and willows. Oak and other native trees are found mostly at the upper elevations along with coastal chaparral. Although native plant communities are the most visually prevalent, exotic plants such as pampas grass have established themselves along the highway corridor. Landscape planting is generally associated with the scattered residential and commercial development along the highway and is most visible along the northern end of the project limits, in the Big Sur village area, and in Carmel.

Along the highway, the main developments are the roadway itself and related features, occasional roadside home sites and tourist-oriented businesses. Along the southern end of Big Sur, built-developments have a low to moderate visual presence in the landscape. In general, the scale and frequency of structures and other built amenities throughout this area, though visible, do not dominate the views when seen in the context of the overall landscape. The northern section of Big Sur is the most developed. Residential uses are the main development, though some tourist-oriented businesses are part of the view. Overhead utilities and roadside signs are visible elements along the route. Due to the topography throughout much of the region, cut slopes are associated with the highway and can be seen often from the road.

State Route 1 has long been recognized for its scenic qualities, and the state and national scenic designations indicate the importance of the aesthetic character of this highway. Monterey County planning policies emphasize the

protection of visual resources along State Route 1 and underscore the concern and sensitivity regarding aesthetic issues along the route. The project locations are all within the Coastal Zone, which places an emphasis on visual quality preservation. In addition, the *Coast Highway Management Plan* (Caltrans 2004), a comprehensive planning document being developed with extensive community input, includes a section on identifying and preserving the scenic qualities of the route. The local community has a history of active participation in projects involving potential changes to the visual environment.

The visual experience of traveling the Big Sur coast is influenced by a variety of historic features. Seven historic bridges, built in the 1930s and important examples of the engineering technology and aesthetic preference of the era, are found along a 41-mile stretch of the coast highway. These bridges share a common design; each is an open-spandrel concrete arch structure with open bridge rail. Other historic elements seen by the highway traveler include parapet walls, culvert headwalls, and drinking fountains.

In addition to the historic structures, many other built elements contribute to the visual character of the highway experience. Bridge rails are noticeable components of both historic and non-historic structures. The railings of the coastal bridges are important in their ability to define the architectural style of structures, as well as their potential effect on ocean views. Open-style railing is associated with older structures and design, while the railing constructed since the 1970s has typically been solid.

There is no single design style evident in the highway features (such as bridges, rails, barriers, walls, drainage inlets and down drains, signage, and other elements) along the Big Sur corridor. Rather, the style and variety of features reflect current engineering standards and funding availability rather than a uniform aesthetic theme. There is a tendency toward natural material construction and finishes such as wood and stone. Metal finishes, where used, are often weathered in appearance.

The existing visual quality of State Route 1 in each of the project locations is high, due mainly to the historic bridges, the presence of natural vegetation, topographic relief, ocean views, and the minimal visibility of off-highway built elements.

The main affected viewers are those who travel the highway and are in the immediate vicinity of the project locations. Viewers through this area generally have high expectations regarding scenic quality and the state and federal scenic designations further heighten viewers' sensitivity along this route.

Environmental Consequences – Tier 1 and Tier 2

Both the Big Sur Bridge Rail Replacement Program (Tier 1) and the Garrapata Bridge Rail Replacement Project (Tier 2) would result in a loss of

scenic vistas, substantial reduction of visual quality and character, and loss of visual access to coastal scenic resources.

Scenic vistas are defined as panoramic views that have high quality compositional and picturesque value. Scenic vistas throughout the project area include expansive mid-to-distant views of the Pacific Ocean, the rocky shoreline, dramatic topography and hillsides, native vegetative patterns, and undeveloped landscapes. The historic bridges are also important contributors to the scenic vistas throughout the area.

The most noticeable aspect of the projects would be new bridge rails. Although the specific design of each of the bridge rails has not been determined at this time, current safety standards require that the new railing be slightly taller than the existing historic rails. The new bridge rail would also have smaller openings and less of a “see-through” appearance. Other potential visual changes associated with the projects may include an increase in paved surfaces, grading and earthwork, new taller and longer guardrail and concrete anchor blocks adjacent to the bridges, change from wooden posts to metal posts, and vegetation removal.

Many of these proposed elements would block or reduce visual access to coastal scenic vistas and scenic resources as seen from State Route 1, an Officially Designated State Scenic Highway and National Scenic byway.

The existing visual quality and character of the Big Sur Coast is based to a large degree on its rugged topography and coastline, sweeping ocean views, historic structure, undeveloped setting, and native vegetation patterns. The highway itself reinforces the overall rugged and rural character because of its curvilinear alignment and generally narrow appearance.

Local, state and federal planning documents base the high visual quality of this route mostly on the striking views of the ocean, the dramatic topography, the native vegetative patterns, and the relatively natural character of the roadside environment. Within the project limits, each of the bridges is historic and iconic scenic features of the California coast.

The projects would change the visual character at each of the locations. Loss of these important architectural elements would fundamentally alter the visual experience of travelling the Big Sur Coast along State Route 1. In addition, the overall effect of these changes would be a more engineered looking, slightly larger scale, more contemporary highway facility.

The following photos show the existing railing on the Garrapata Creek Bridge and proposed railing types; Type c412 and Type 86.

Figure 1-11 Photo of Existing Garrapata Creek Bridge Rail

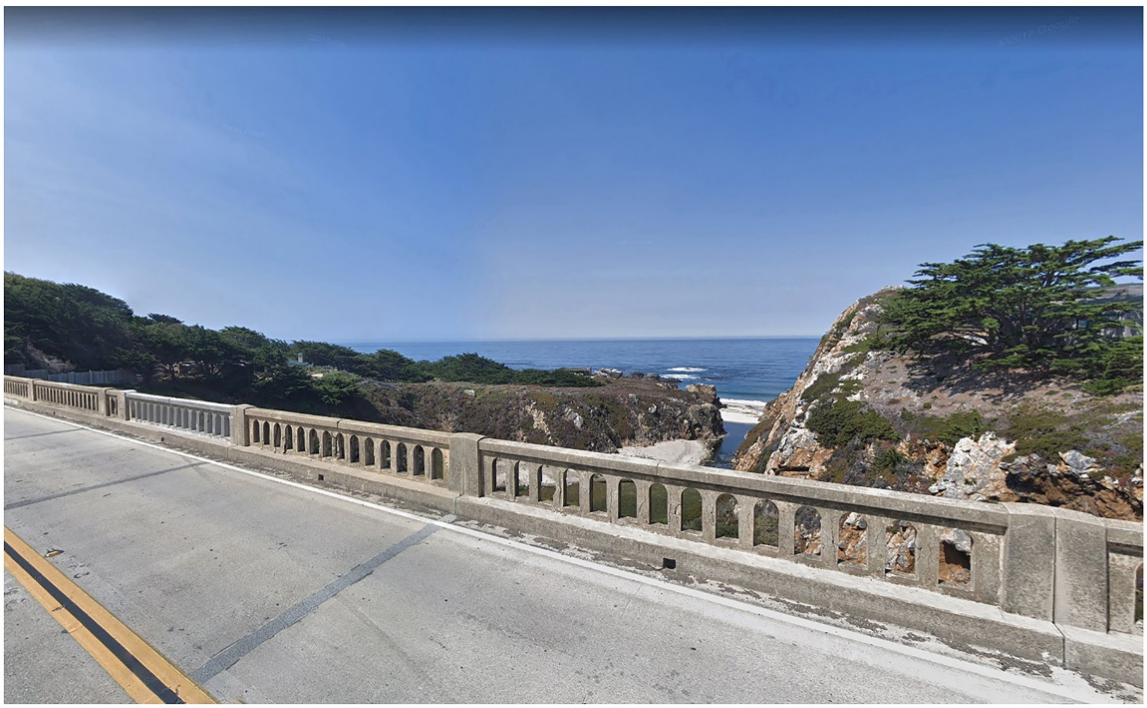


Figure 1-12 Photo Simulation of Barrier Type c412

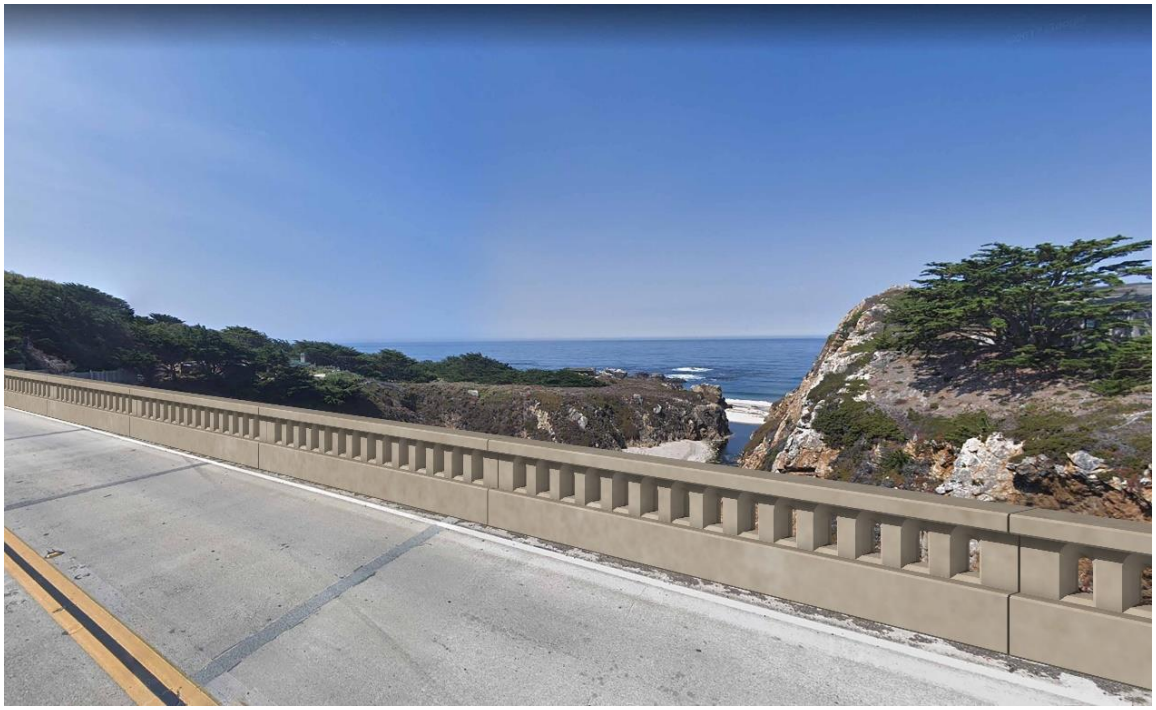
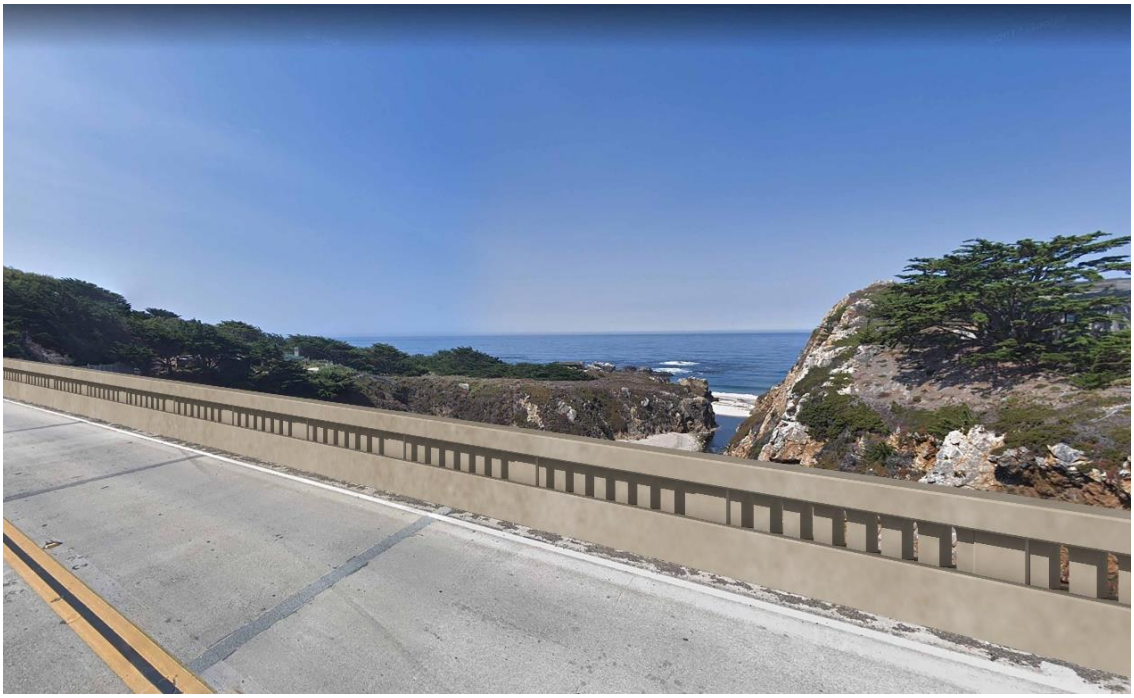


Figure 1-13 Photo Simulation of Barrier Type 86



Avoidance, Minimization, and/or Mitigation Measures (Tier 1 and Tier 2)

Based on visual analysis and review of coastal planning policies, it was found that the existing high visual quality of the area is mostly due to the following:

- Visual access to historic structures and roadside elements.
- Exaggerated topographic relief.
- Dramatic vistas of the Pacific Ocean.
- Minimal visual encroachment of constructed elements.
- Harmonious visual pattern of the diverse native vegetation on the hills and ground plane.
- Combination of alternating distant vistas and narrowing view caused by undulating landform.

To maintain these visual quality elements and decrease potential negative visual impacts caused by the project, the following actions are recommended:

1. Involve the community in the design of all aesthetic project features.
2. Use an open-style bridge rail that minimizes view blockage.
3. Use the smallest end blocks possible that meet safety needs.
4. Use finish colors and textures that minimize reflectivity and glare.

5. Re-contour all disturbed areas and construction access roads to a natural appearance.

6. Vegetate all stabilized soil areas with native shrubs and grasses as appropriate.

7. Bury all over-side drains and inlet structures or hide them from view to the greatest extent possible. Where unavoidably exposed to view, color the pipes to reduce noticeability, and dull the gloss of the finish.

8. Where metal beam guardrail or metal end treatments are required, use measures to reduce reflectivity of the metal components.

2.1.3 Cultural Resources

Regulatory Setting

The term "cultural resources," as used in this document, refers to the "built environment" (structures, bridges, railroads, water conveyance systems, etc.), places of traditional or cultural importance, and archaeological sites (both prehistoric and historic), regardless of significance. Under federal and state laws, cultural resources that meet certain criteria of significance are referred to by various terms including "historic properties," "historic sites," "historical resources," and "tribal cultural resources." Laws and regulations dealing with cultural resources include the following.

The National Historic Preservation Act of 1966, as amended, sets forth national policy and procedures for historic properties, defined as districts, sites, buildings, structures, and objects included in or eligible for listing in the National Register of Historic Places. Section 106 of the National Historic Preservation Act requires federal agencies to take into account the effects of their undertakings on historic properties and to allow the Advisory Council on Historic Preservation the opportunity to comment on those undertakings, following regulations issued by the Advisory Council on Historic Preservation (36 Code of Federal Regulations 800). On January 1, 2014, the First Amended Section 106 Programmatic Agreement among the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and Caltrans went into effect for Caltrans projects, both state and local, with Federal Highway Administration involvement. The Programmatic Agreement implements the Advisory Council on Historic Preservation's regulations, 36 Code of Federal Regulations 800, streamlining the Section 106 process and delegating certain responsibilities to Caltrans. The Federal Highway Administration's responsibilities under the Programmatic Agreement have been assigned to Caltrans as part of the Surface Transportation Project Delivery Program (23 U.S. Code 327).

The California Environmental Quality Act (CEQA) requires the consideration of cultural resources that are historical resources and tribal cultural resources, as well as "unique" archaeological resources. California Public Resources Code Section 5024.1 established the California Register of Historical Resources and outlined the necessary criteria for a cultural resource to be considered eligible for listing in the California Register of Historic Resources and, therefore, a historical resource. Historical resources are defined in Public Resources Code Section 5020.1(j). In 2014, Assembly Bill 52 added the term "tribal cultural resources" to the California Environmental Quality Act, and Assembly Bill 52 is commonly referenced instead of the California Environmental Quality Act when discussing the process to identify tribal cultural resources (as well as identifying measures to avoid, preserve, or mitigate effects to them). Defined in Public Resources Code Section 21074(a), a tribal cultural resource is a California Register of Historical Resources or local register eligible site, feature, place, cultural landscape, or object which has a cultural value to a California Native American tribe. Tribal cultural resources must also meet the definition of a historical resource. Unique archaeological resources are referenced in Public Resources Code Section 21083.2.

Public Resources Code Section 5024 requires state agencies to identify and protect state-owned historical resources that meet the National Register of Historic Places listing criteria. It further requires Caltrans to inventory state-owned structures in its rights-of-way. Sections 5024(f) and 5024.5 require state agencies to provide notice to and consult with the State Historic Preservation Officer before altering, transferring, relocating, or demolishing state-owned historical resources that are listed on or are eligible for inclusion in the National Register of Historic Places or are registered or eligible for registration as California Historical Landmarks. Procedures for compliance with Public Resources Code Section 5024 are outlined in a Memorandum of Understanding between Caltrans and the State Historic Preservation Officer, effective January 1, 2015. [The Memorandum of Understanding is located on the Caltrans Standard Environmental Reference at https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/5024mou-15-a11y.pdf.] For most federal-aid projects on the State Highway System, compliance with the Section 106 Programmatic Agreement will satisfy the requirements of Public Resources Code Section 5024.

Affected Environment

A Historic Property Survey Report was completed for both Tier 1 and Tier 2 project impacts on October 1, 2020.

Tier 1 Analysis

The Big Sur Bridge Rail Replacement Program projects are a series of six separate projects in which Caltrans proposes to replace deteriorated nonstandard concrete baluster bridge rails for six out of the seven historic

reinforced concrete arch bridges along State Route 1 in Monterey County. The original concrete railing will be replaced with a new railing constructed to meet modern safety standards set by the Manual for Assessing Safety Hardware. Called "the Big Sur Bridges," these structures all date to the initial construction of State Route 1 in Monterey County in the early 1930s. The Big Sur Bridges impacted by this program include the following:

- Big Creek Bridge (1938)—post mile 28.1, Bridge Number 44-0056
- Bixby Creek Bridge (1932)—post mile 59.4, Bridge Number 44-0019
- Rocky Creek Bridge (1932)—post mile 60.0, Bridge Number 44-0036
- Garrapata Creek Bridge (1931)—post mile 63.0, Bridge Number 44-0018
- Granite Canyon Bridge (1932)—post mile 64.3, Bridge Number 44-0012
- Malpaso Creek Bridge (1935)—post mile 67.9, Bridge Number 44-0017

In addition to being individually eligible for the National Register of Historic Places and the California Register of Historic Resources, the Big Sur Bridges are all contributing resources within the Carmel-San Simeon Highway Historic District, an 80-mile-long discontinuous historic district composed of 241 original rubble stone masonry highway features as well as seven concrete arch bridges (these include the six listed above in addition to the Wildcat Creek Bridge (Bridge Number 44 0016). (Note: Because the Wildcat Creek Bridge is the only example of a reinforced concrete close spandrel arch bridge within the district and it includes solid railing with a smooth cap, it is not included in the bridge rail replacement program at this time.)

To identify known historic properties for this project, Caltrans consulted the National Register of Historic Places, the California Register of Historical Resources, the California Points of Historical Interest, the Caltrans Historic Bridge Inventory, and the Caltrans Cultural Resources Database. The Caltrans Historic Bridge Inventory shows that all six bridges to be impacted by the Big Sur Bridge Rail Replacement Program have been previously determined eligible for the National Register of Historic Places and California Register of Historical Resources. These resources are all individually eligible and are contributing resources to the Carmel-San Simeon Highway Historic District.

In accordance with the Section 106 Programmatic Agreement Stipulation VIII.A, the Area of Potential Effects for the specific projects will be established in consultation with appropriately qualified District 5 Caltrans Professionally Qualified Staff and the Caltrans Project Manager assigned to each specific project moving forward. The Area of Potential Effects maps will be provided in the most appropriate specific technical study, figure or attached directly to the Tier 2 (project-specific) document.

The Area of Potential Effects generally for each project will include, at minimum, the entirety of the Carmel-San Simeon Highway Historic District, the entirety of each specific bridge structure to be impacted, and any staging or additional work areas proposed. The project-specific Area of Potential Effects maps will be developed along with the Tier 2 documents as those projects are developed and more specific information is available.

Tier 2 Analysis

Archaeology—An archaeological survey was done in the project Area of Potential Effects in 2018 as part of another project (05-1H460), a repair project to address corrosion of the Garrapata Creek Bridge through the use of the Electrochemical Chloride Extraction process. The Area of Potential Effects for this past Electrochemical Chloride Extraction project is the same as the Area of Potential Effects for the current bridge rail replacement project. A thorough survey of the Area of Potential Effects was done in 2018 with negative results for archaeological resources within the Area of Potential Effects. One archaeological resource, known as CT-2 (a bedrock mortar), lies outside the Area of Potential Effects, but due to the topography and distance from proposed work areas, it will not be impacted or affected by the project.

Architectural History—Information found in the Caltrans Historic Bridge Inventory and the Caltrans Cultural Resources Database shows that the Garrapata Creek Bridge has been previously determined eligible on the National Register of Historic Places and California Register of Historical Resources, and it is also part of the Carmel-San Simeon Highway Historic District, an 80-mile-long historic district relating to the initial construction of State Route 1 along the Big Sur Coast of Monterey and Northern San Luis Obispo counties. These determinations all remain valid.

Environmental Consequences

If cultural materials are discovered during construction, all earth-moving activity within and around the immediate discovery area will be diverted until a qualified archaeologist can assess the nature and significance of the find.

If human remains are discovered, California Health and Safety Code (H&SC) Section 7050.5 states that further disturbances and activities will stop in any area or nearby area suspected to overlie remains, and the County Coroner contacted. If the remains are thought by the coroner to be Native American, the coroner will notify the Native American Heritage Commission (NAHC), who, pursuant to Public Resources Code Section 5097.98, will then notify the Most Likely Descendent (MLD). At this time, the person who discovered the remains will contact Caltrans District 5 Environmental Branch staff so that they may work with the Most Likely Descendent on the respectful treatment and disposition of the remains. Further provisions of Public Resources Code 5097.98 are to be followed as applicable.

Tier 1

Caltrans, in accordance with Section 106 Programmatic Agreement Stipulation VIII.C.5, has determined there are properties within the Area of Potential Effects that were previously determined eligible for inclusion in the National Register of Historic Places and those determinations remain valid. All bridges listed below were determined eligible in 1986 with updates in 1996 and 2006.

- Big Creek Bridge (1938)—post mile 28.1, Bridge Number 44-0056
- Bixby Creek Bridge (1932)—post mile 59.4, Bridge Number 44-0019
- Rocky Creek Bridge (1932)—post mile 60.0, Bridge Number 44-0036
- Garrapata Creek Bridge (1931)—post mile 63.0, Bridge Number 44-0018
- Granite Canyon Bridge (1932)—post mile 64.3, Bridge Number 44-0012
- Malpaso Creek Bridge (1935)—post mile 67.9, Bridge Number 44-0017

In addition, the Carmel-San Simeon Historic District (P-27-0027775), determined eligible in 1996 (updated in 2006), is state-owned and on the master list.

Caltrans, pursuant to Section 106 Programmatic Agreement Stipulation X.C, anticipates future Findings of Adverse Effect to be found in the Tier 2 (project-specific) analysis. In keeping with the tiered analysis of the projects, Caltrans has notified the State Historic Preservation Officer of these upcoming projects. The effects of each undertaking will be dealt with on a case-by-case basis in the Tier 2 (project-specific) analysis documents moving forward as more specific information comes to light about each project.

Tier 2

The Garrapata Creek Bridge Rail Replacement Project is expected to significantly impact the historic Garrapata Creek Bridge. Caltrans, pursuant to Section 106 Programmatic Agreement Stipulation X.C, has determined a Finding of Adverse Effect is appropriate for this undertaking, and requests the State Historic Preservation Officer's concurrence in this determination.

Avoidance, Minimization, and/or Mitigation Measures

Mitigation will be required for each Tier 2 project.

Mitigation and minimization measures for the Tier 1 bridges will include the development of a context sensitive bridge railing design that is as compatible with the original railing in terms of design and materials as can be allowed under MASH standards. Project specific mitigation for the individual adverse effects for each of the Tier 2 projects may also include a public interpretive document (pamphlet or booklet) on the history of transportation and historical context of the bridges that will be distributed in the local area, and Historic

American Engineering Record professional photographic and written documentation of the bridge to be prepared before the bridge railing is demolished. An interpretive exhibit may also be installed in an area, or areas, where it can provide a public benefit. The information in the exhibit will be on the history of transportation and historical context of the local area and can be installed in the project vicinity. Detailed mitigation measures will be finalized in the Memorandum of Agreement between Caltrans and the State Historic Preservation Officer and may be streamlined by developing agreements with the State Historic Preservation Officer that address the six projects as a whole.

2.2 Biological Environment

2.2.1 Natural Communities

This section of the document discusses natural communities of concern. The focus of this section is on biological communities, not individual plant or animal species. This section also includes information on wildlife corridors and habitat fragmentation. Wildlife corridors are areas of habitat used by wildlife for seasonal or daily migration. Habitat fragmentation involves the potential for dividing sensitive habitat and thereby lessening its biological value.

Affected Environment

Tier 1 and Tier 2

The Big Sur Coast supports a diverse array of environmentally sensitive habitat areas, including marine habitats (intertidal and submerged rock areas, kelp beds, important spawning areas), plant habitats (sensitive plants, dunes, serpentine rock associations, riparian corridors, coastal prairies, and grasslands), and wildlife habitats (rare endangered, sensitive wildlife). Marine Environmentally Sensitive Habitat Areas occur along this section of Big Sur coastline, but do not occur within the project area, and would not be impacted by the project. Also, the project does not occur within a stream buffer, wetland setback, or any other setbacks.

The Biological Study Area occurs on a coastal terrace along the Big Sur Coast on State Route 1 between the Santa Lucia Mountains and the Pacific Ocean. Elevations vary from 83 and 106 feet above mean sea level. Winter temperatures in the region average 51 degrees Fahrenheit, and summer temperatures average 60 degrees Fahrenheit, with annual average precipitation of 19.85 inches.

The following have headwaters in the Santa Lucia Mountains that outlet into the Pacific Ocean downstream of the project areas: Location 1, Big Creek, a perennial creek; Location 2, Bixby Creek, a perennial creek; Location 3,

Rocky Creek, a perennial creek; Location 4, Garrapata Creek, an intermittent creek; and Location 6, Malpaso Creek, a perennial creek.

Characterizations of natural vegetation communities follow *Preliminary Descriptions of the Terrestrial Natural Communities of California* (1986) and *A Manual of California Vegetation* (2009), where applicable. According to the Soil Survey Geographic (SSURGO 2018) Database, soils in the Biological Study Area consist of arroyo seco (gravelly sandy loam), junipero (coarse-loamy), and fluvents stony (sandy loam), which are typical of the Coast Range in the region.

A Tier 1 and Tier 2 Natural Environment Study was prepared September 2020.

The natural habitat in the project Biological Study Areas consists mostly of ice plant mats (*Carpobrotus* sp.), ruderal and disturbed areas, and coastal scrub growing along steep slopes. Ice plant mat vegetation dominates slopes adjacent to the bridges and the areas below the bridges. At some locations, some native plants are mixed with the ice plant mats, along with a combination of exotic and native species resulting from invasive species introduction associated with highway construction, operation, and maintenance.

Coastal Scrub

Coastal scrub within the Biological Study Area is best described as Central Lucian coastal scrub. Dominant species include black sage (*Salvia mellifera*), California sagebrush (*Artemisia californica*), coyote bush (*Baccharis pilularis*) and sticky monkeyflower (*Mimulus aurantiacus*) with scattered annual grasses and forbs in between the shrub layer. Seacliff buckwheat (*Erigonium parvifolium*) can also be found within this community. This habitat is common on the ocean side of the Santa Lucia Mountain Range, between Monterey and Point Conception, and usually below 2,000 feet above sea level. This community consists of dense shrubs 3 to 6 feet high and lacks grassy or herbaceous openings. Coastal scrub may support habitat for certain special-status plant species, reptile species, various nesting bird species, as well as invertebrates such as Smith's blue butterfly.

Ruderal/Disturbed

Ruderal/disturbed areas contain mainly non-native weedy and/or invasive species tolerant of disturbed conditions (compacted soils, roadsides subjected to vehicle disturbances, etc.). Ruderal/disturbed areas are found throughout the Biological Study Area and in the project area where vehicle impacts and maintenance activities have routinely affected and compacted the unpaved shoulders along State Route 1.

Environmental Consequences

Tier 1

The Biological Study Area does not occur within a known wildlife corridor, and no wildlife connectivity impacts are anticipated. Certain invasive, weedy plants occur within the Area of Potential Impacts, and measures will be implemented to avoid or minimize the spread of these species throughout the Area of Potential Impacts. The project is expected to have no effect on listed plant species and their designated critical habitat. The Biological Study Area includes two plant communities: coastal scrub and ruderal/disturbed. Native and non-native species occur within both of these communities, to varying degrees. No trees are proposed for removal for the project, but vegetation clearing and/or trimming may be required for construction.

No impacts to other waters, riparian areas and/or Environmentally Sensitive Habitat Areas under jurisdiction of the U.S. Army Corps of Engineers, Regional Water Quality Control Board, California Department of Fish and Wildlife, and the California Coastal Commission are anticipated with the current scope of the project.

The Federal Endangered Species Act Section 7 effects determination is that, with implementation of the included avoidance and minimization measures, the project would have no effect on federally listed species or designated critical habitat.

Tier 2

Garrapata Creek is federally designated critical habitat for the south-central California coast steelhead, but this habitat would not be affected by the project. All work would be conducted well outside of the jurisdictional areas of the creek. Permanent impacts are not anticipated with the project.

Avoidance, Minimization, and/or Mitigation Measures

Tier 1 and Tier 2

1. Avoidance and minimization of ground disturbance due to project-related actions will be achieved with the establishment of Environmentally Sensitive Areas. The Environmentally Sensitive Areas will ensure that unnecessary disturbance does not occur outside of the project limits. Environmentally Sensitive Areas limits will be shown on the final layout plans.

2. Five days prior to the beginning of work, the Resident Engineer will meet with the Project Biologist in the field at the project site for the identification of select locations where Environmentally Sensitive Area fence and flagging will be incorporated.

3. All equipment staging and material storage, stockpile, disposal, and borrow sites must be inspected for potentially sensitive biological

resources prior to use or equipment mobilization. If sites are selected other than those already designated on the approved project plans, the Resident Engineer will contact the Environmental Construction Liaison or Project Biologist no less than two weeks prior to use of equipment staging and material storage, stockpile, disposal, and borrow sites. If sensitive biological resources are found at such sites, then new locations will be selected.

4. Following construction, areas of temporary disturbance to natural habitats would be stabilized and revegetated; these include areas supporting coastal scrub. Permanent erosion control, planting, or a combination of both would be used to vegetate all temporarily impacted areas. The Caltrans Landscape Architecture Division would prepare erosion control and planting plans in coordination with the project biologist. Permanent erosion control seed would consist of a mix of species native to the area. Areas of temporarily disturbed coastal scrub would be replaced in-kind.

2.2.2 Animal Species

Regulatory Setting

Many state and federal laws regulate impacts to wildlife. The U.S. Fish and Wildlife Service, the National Oceanic and Atmospheric Administration's National Marine Fisheries Service, and the California Department of Fish and Wildlife are responsible for implementing these laws. This section discusses potential impacts and permit requirements associated with animals not listed or proposed for listing under the federal or state Endangered Species Act. All other special-status animal species are discussed here, including California Department of Fish and Wildlife fully protected species and Species of Special Concern, and U.S. Fish and Wildlife Service or National Oceanic and Atmospheric Administration's National Marine Fisheries Service candidate species.

Federal laws and regulations relevant to wildlife include the following:

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

State laws and regulations relevant to wildlife include the following:

- California Environmental Quality Act
- Sections 1600 to 1603 of the California Fish and Game Code

- Sections 4150 and 4152 of the California Fish and Game Code

Affected Environment

Tier 1

The projects are within the known range of the Smith's blue butterfly (*Euphilotes enoptes smithi*; federally endangered) which inhabits coastal sand dunes and cliff/chaparral areas along the Central California coast in Monterey, Santa Cruz, and San Mateo counties. Individuals spend their entire lives in association with one of two species of buckwheat: seacliff buckwheat (*Eriogonum parvifolium*) and seaside buckwheat (*Eriogonum latifolium*). These plants are host plants for the larvae and the principle nectar sources for adults. Smith's blue butterflies emerge in late summer and early autumn, and the adults mate and lay eggs on the flowers of the host plants. Individuals typically spend their lifetime within 200 feet of the host plant on which they emerged. The major threat to this species is loss of habitat, especially in the coastal sand dune habitat.

The project areas support seacliff buckwheat and seaside buckwheat, which can serve as host plants for the Smith's blue butterfly along this portion of the California coast. Protocol-level surveys were conducted for the Smith's blue butterfly in 2018 and 2019.

The stretch of beach below Big Creek Bridge is used as a haul-out (rest) area by two species of pinnipeds: harbor seals (*Phoca vitulina*) and California sea lions (*Zalophus californianus*). Both species are common along the California coastline and protected under the Marine Mammal Protection Act. Harbor seals rest on rocks, reefs, and beaches at night and during the day. This is done to regulate their body temperature, molt, interact with other seals, give birth, and raise their pups. They also rest in groups to avoid predators. California sea lions prefer sandy beaches or rocky coves for resting and breeding sites. The beach below Big Creek Bridge (Location 1) is a known haul-out location for these two species.

Tier 2

At the Garrapata Creek Bridge, a deceased Monterey big-eared woodrat (*Neotoma macrotis luciana*) was seen under the southern bridge abutment. A single monarch butterfly (*Danaus plexippus*) was seen flying through the Biological Study Area. No other special-status animal species were found in or next to the project limits.

Environmental Consequences

Tier 1

Creeks at Locations 1-4 and Location 6 (Big Creek, Bixby Creek, Rocky Creek, Garrapata Creek, and Malpaso Creek) support federally designated critical habitat for the south-central California coast steelhead; however, this habitat would not be affected by the proposed projects.

Protocol surveys for the federally endangered Smith's blue butterfly (*Euphilotes enoptes smithi*) were done in 2018 and 2019. Smith's blue butterflies were seen at Location 1 (Big Creek Bridge) on August 21, 2019, but it is anticipated that work can fully avoid areas with habitat for the species, so no impacts to the Smith's blue butterfly are anticipated. Protocol surveys would be repeated as each of the Tier 2 projects is programed.

Tier 2

One California species of special concern, a deceased Monterey big-eared woodrat (*Neotoma macrotis* luciana), was discovered under a bridge abutment at Location 4 (Garrapata Creek Bridge). Measures would be incorporated in the Garrapata Creek project to avoid impacts to woodrats.

Avoidance, Minimization, and/or Mitigation Measures

Tier 1

The following avoidance and minimization measures would be implemented for all nesting birds:

1. Prior to construction, a nesting bird survey will be conducted by a Caltrans biologist to determine presence/absence of nesting birds within the project area, if construction activities are to take place during the typical nesting season (February 1 to September 30). If an active nest of a migratory bird is discovered, all work will cease until a Caltrans biologist determines an appropriate buffer and monitoring strategy based on the habits and needs of the species. The buffer area will be avoided until a qualified biologist has determined that juveniles have fledged. Active nests will not be disturbed, and eggs or young of birds covered by the Migratory Bird Treaty Act and California Fish and Game Code will not be killed, injured, or harassed at any time.

The following avoidance and minimization measures will be implemented for pinnipeds at the Big Creek Bridge location:

1. If California sea lions or harbor seals are observed hauling-out on the stretch of beach below the construction area, all work must cease until a Caltrans biologist has monitored and determined construction activities are not causing harm to or altering the behavior of the pinnipeds.

Tier 2

The following avoidance and minimization measures are recommended for the Monterey big-eared woodrat and are applicable to project activities occurring within the Area of Potential Impacts:

1. Prior to implementation of proposed project activities, a pre-construction visual survey will be conducted by a Caltrans biologist

within suitable woodrat habitat in the Area of Potential Impacts to determine the presence or absence of woodrat nests.

2. If woodrat nests are located during this survey, the biologist will flag the area to establish a 25-foot buffer around active nests where work would not occur.
3. If nests are present in a location that cannot be avoided by work activities, a Caltrans biologist will dismantle the woodrat nest by hand immediately prior to work, allowing individuals to move out of the area.

2.2.3 Cumulative Impacts

Regulatory Setting

Cumulative impacts are those that result from past, present, and reasonably foreseeable future actions, combined with the potential impacts of the proposed project. A cumulative effect 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 time.

Cumulative impacts to resources in the project area 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.

California Environmental Quality Act Guidelines Section 15130 describes when a cumulative impact analysis is necessary and what elements are necessary for an adequate discussion of cumulative impacts. The definition of cumulative impacts under the California Environmental Quality Act can be found in Section 15355 of the California Environmental Quality Act Guidelines. A definition of cumulative impacts under the National Environmental Policy Act can be found in 40 Code of Federal Regulations Section 1508.7.

Approach and Methodology

The Tier 1 program analysis presented in Chapter 2 identifies the range of environmental impacts that would result from implementation of the Tier 1 Big Sur Bridge Rail Replacement Program for the six historic bridges at the program level. The analysis of the Tier 1 program cumulative impacts presents a “snapshot” of information currently available at the corridor level.

Because the Tier 1 program improvements would be constructed over a multi-year time frame, potential cumulative impacts, as well as other resource impacts, could change over time. As projects are programmed as Tier 2 construction-level projects, they will be subject to separate environmental review, including the consideration of cumulative impacts.

Discussion of the Tier 2 Garrapata Creek Bridge Replacement is provided at the project level because implementation is expected in the near future.

Resources Considered in the Cumulative Impact Analysis

This cumulative impact analysis includes an analysis of resources that may be undergoing a change due to cumulative impacts of development or are in poor health near the project. For each identified resource, a brief description of the resource, Resource Study Area, and the historic and current health of the resource are provided. For the Big Sur Bridge Rail Replacement Program, the resources considered include Cultural Resources and Visual Resources.

Definition of Resource Study Area

Caltrans guidance for cumulative impacts sections under the California Environmental Quality Act and National Environmental Policy Act indicates that a Resource Study Area must be defined for each Resource. A Resource Study Area is the geographic area within which impacts on a resource are analyzed. The boundaries of a Resource Study Area are often broader than the boundaries used for project-specific analysis, such as a Biological Study Area. The Resource Study Area for each resource is described below.

Visual Resources

The Resource Study Area used for analysis of cumulative visual impacts of the Tier 2 Garrapata Creek Bridge Rail Replacement Project encompasses an approximately 41-mile stretch of coast highway along the Big Sur Coast. State Route 1 in Monterey County throughout the Big Sur corridor is designated as an Official State Scenic Highway, a National Scenic Byway, and an All-American Road.

Included within the Resource Study Area are seven historic bridges built in the 1930s that are important examples of the engineering technology and aesthetic preference of the era. The bridges share a common design; each is an open-spandrel concrete arch structure with open bridge rail. Other historic elements seen by the highway traveler include parapet walls, culvert headwalls, and drinking fountains.

In addition to the historic structures, many other built elements contribute to the visual character of the highway experience. Bridge rails are noticeable components of both historic and non-historic structures. The railings of the coastal bridges are important in their ability to define the architectural style of structures as well as their potential effect on ocean views. Open-style railing

is associated with older structures and design, while the railing constructed since the 1970s is typically solid.

Cultural Resources

The Resource Study Area for cumulative impact analysis of cultural resources associated with the project is defined as the Carmel-San Simeon Highway Historic District, an approximately 80-mile-long historic district relating to the initial construction of State Route 1 along the Big Sur Coast of Monterey and northern San Luis Obispo counties. The Historic District is composed of 241 original rubble stone masonry highway features as well as seven concrete arch bridges (these include the six mentioned above in addition to the Wildcat Creek Bridge (Bridge Number 44 0016). The Wildcat Creek Bridge is the only example of a reinforced concrete closed spandrel arch bridge within the district; because it includes solid railing with a smooth cap, it is not included in the bridge rail replacement program at this time.

The period of significance for the Historic District is 1922 to 1938, which represents the construction period for all of the constituent resources.

Projects Analyzed for Cumulative Impacts

Monterey County Capital Improvement Projects

Past, present, and reasonably foreseeable projects considered for this cumulative impact analysis are listed in Table 2-2. These include infrastructure projects in or adjacent to the project corridor, as well as private developments within the Tier 1 program vicinity. Many are Caltrans-proposed projects, and some are projects authorized by or proposed by local agencies including Monterey County.

The following sources were consulted to identify all projects to be considered in cumulative impact analysis:

- Governor's Office of Planning and Research Office database of environmental documents, available at http://www.ceqanet.ca.gov/
- Monterey County Regional Transportation Plan
- Caltrans District 5, Project Information page, available at http://www.dot.ca.gov/dist05/projects
- Big Sur Coast Land Use Plan

Table 2-2 Past, Present, and Reasonably Foreseeable Projects Considered for Cumulative Impact Analysis

Project Name or Applicant	State Route 1 Project Location (Post Mile)	Project Description	Impacts
Big Sur Capital Preventative Maintenance project	PM 39.8/74.6	Caltrans proposes to extend the service life and improve the existing pavement on approximately 35 miles of State Route 1. At certain locations, the work would also include upgrading existing guardrails, modifying existing pedestrian curb ramps, and replacing existing signage. The project was Ready to List on June 19, 2019.	Mitigation reduced potential visual impacts to a less than significant level. Cultural resources will be avoided. The project will result in a finding of no adverse effect with standard conditions.
Castro Canyon Bridge Rail Upgrade	PM 43.1	Caltrans is proposing to upgrade the existing bridge rails on the Castro Canyon Bridge. The project is expected to be Ready to List on May 13, 2022.	Bridge rail design will minimize visual impacts and will match the surrounding visual character. No impacts to cultural resources are anticipated
Electrochemical Chloride Extraction Projects on Big Creek Bridge	PM 28.1	Rehabilitate the Big Creek Bridge super structure by an Electrochemical Chloride Extraction process. Currently in construction.	Wrapping of the bridge during construction creates temporary visual impacts. No long-term visual or cultural impacts are anticipated.
Electrochemical Chloride Extraction Projects on Garrapata Creek Bridge	PM 63.0	Rehabilitate the Garrapata Creek Bridge super structure by an Electrochemical Chloride Extraction process. Scheduled for construction in 2021.	Wrapping of the bridge during construction creates temporary visual impacts. No long-term visual or cultural impacts are anticipated.

Project Name or Applicant	State Route 1 Project Location (Post Mile)	Project Description	Impacts
Orient Express Tieback Wall	PM 27.5	Caltrans proposes to construct a tieback wall, restore roadway and facilities, place water pollution control Best Management Practices, and erosion control.	Impacts unknown; project in preliminary studies.
Limekiln Creek Bridge Replacement	PM 20.9	Caltrans proposes to replace Limekiln Creek Bridge. The draft environmental document is expected to be released in October 2021.	Impacts unknown; project in preliminary studies.
Monterey County Capital Improvement Project 1158: Nacimiento-Fergusson Road Overlay	Nacimiento Fergusson Road off State Route 1	Project will include grinding existing surface and placing a hot mix asphalt patch. Construction will begin in fiscal year 2023/2024.	No impacts to visual or cultural resources.
Mud Creek Permanent Restoration	PM 8.7/9.1	Caltrans emergency project to restore the highway following the Mud Creek landslide in 2017. Massive earthwork cuts and engineered embankments are included in the project. Construction is in progress.	Visual Impacts include: Vegetation planting for slope stabilization. The addition of new urbanizing elements such as roadside paving, signage, guardrails, concrete barriers, and drainage components would be installed.

Environmental Consequences

Visual Resources

The Big Sur Bridge Rail Replacement Program (Tier 1) and the Garrapata Bridge Rail Replacement (Tier 2) Project would result in a cumulative loss of scenic vistas, a substantial reduction of visual quality and character, and loss of visual access to coastal scenic resources. Scenic vistas throughout the project area include expansive mid-to-distant views of the Pacific Ocean, the

rocky shoreline, dramatic topography and hillsides, native vegetative patterns, and undeveloped landscapes.

The historic bridges are primary contributors to the scenic vistas throughout the area.

Cultural Resources

In addition to being individually eligible for the National Register of Historic Places and the California Register of Historic Resources, the Big Sur Bridges are all contributing resources within the Carmel-San Simeon Highway Historic District. The Garrapata Creek Bridge Rail Replacement Project is expected to significantly impact the historic Garrapata Creek Bridge. Caltrans has determined a Finding of Adverse Effect is appropriate for this undertaking and requests the State Historic Preservation Officer's concurrence in this determination.

Cumulative impacts to the entire historic district will be minimized through various mitigation measures.

Avoidance, Minimization, and/or Mitigation Measures

Visual Resources

To minimize potential cumulative visual impacts caused by the project, the following actions are recommended:

- Involve the community in the design of all aesthetic project features.
- Use an open-style bridge rail that minimizes view blockage.
- Use the smallest end blocks possible that meet safety needs.
- Use finish colors and textures that minimize reflectivity and glare.
- Re-contour all disturbed areas and construction access roads to a natural appearance.
- Vegetate all stabilized soil areas with native shrubs and grasses as appropriate.
- Bury all over side drains and inlet structures or hide them from view to the greatest extent possible. Where unavoidably exposed to view, color the pipes to reduce noticeability, and dull the gloss of the finish.
- Where metal beam guardrail or metal end treatments are required, utilize measures to reduce reflectivity of the metal components.

Cultural Resources

To reduce cumulative impacts, mitigation would be required for each Tier 2 project. Mitigation and minimization measures for all proposed Tier 1 bridge rail replacement projects would include context sensitive bridge railing design.

The Tier 2 projects may also include a public interpretive document (pamphlet or booklet) on the history of transportation and historical context of the bridges that would be distributed in the local area, and Historic American Engineering Record professional photographic and written documentation of the bridge to be prepared before the bridge railing is demolished.

An interpretive exhibit may be installed in an area where it can provide a public benefit. The information in the exhibit would be on the history of transportation and historical context of the local area and can be installed in the project vicinity.

Detailed mitigation measures would be finalized in the Memorandum of Agreement between Caltrans and the State Historic Preservation Officer.

Chapter 3 California Environmental Quality Act Evaluation

3.1 Determining Significance Under CEQA

One of the main differences between the National Environmental Policy Act and the California Environmental Quality Act is the way significance is determined. Under the National Environmental Policy Act, significance is used to determine whether an Environmental Impact Statement, or a lower level of documentation, will be required. The National Environmental Policy Act requires that an Environmental Impact Statement be prepared when the proposed federal action (project) *as a whole* has the potential to "significantly affect the quality of the human environment." The determination of significance is based on context and intensity. Some impacts determined to be significant under the California Environmental Quality Act may not be of sufficient magnitude to be determined significant under the National Environmental Policy Act. Under the National Environmental Policy Act, once a decision is made regarding the need for an Environmental Impact Statement, it is the magnitude of the impact that is evaluated, and no judgment of its individual significance is deemed important for the text. The National Environmental Policy Act does not require that a determination of significant impacts be stated in the environmental documents.

The California Environmental Quality Act, on the other hand, does require Caltrans to identify each "significant effect on the environment" resulting from the project and ways to mitigate each significant effect. If the project may have a significant effect on any environmental resource, then an Environmental Impact Report must be prepared. Every significant effect on the environment must be disclosed in the Environmental Impact Report and mitigated if feasible. In addition, the California Environmental Quality Act Guidelines list a number of "mandatory findings of significance," which also require the preparation of an Environmental Impact Report. There are no types of actions under the National Environmental Policy Act that parallel the findings of mandatory significance of the California Environmental Quality Act. This chapter discusses the effects of this project and California Environmental Quality Act significance.

3.2 CEQA Environmental Checklist

This checklist identifies physical, biological, social, and economic factors that might be affected by the project. Potential impact determinations include Significant and Unavoidable Impact, Less Than Significant With Mitigation Incorporated, Less Than Significant Impact, and No Impact. In many cases,

background studies performed in connection with a project will indicate that there are no impacts to a particular resource. A No Impact answer reflects this determination. The words “significant” and “significance” used throughout the following checklist are related to California Environmental Quality Act, not National Environmental Policy Act, impacts. The questions in this checklist are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

Project features, which can include both design elements of the project and standardized measures that are applied to all or most Caltrans projects such as Best Management Practices and measures included in the Standard Plans and Specifications or as Standard Special Provisions, are considered to be an integral part of the project and have been considered prior to any significance determinations documented below; see Chapters 1 and 2 for a detailed discussion of these features. The annotations to this checklist are summaries of information contained in Chapter 2 to provide you with the rationale for significance determinations; for a more detailed discussion of the nature and extent of impacts, please see Chapter 2. This checklist incorporates by reference the information contained in Chapters 1 and 2.

Aesthetics

CEQA Significance Determinations for Aesthetics

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

a) Have a substantial adverse effect on a scenic vista?

Significant and Unavoidable Impact—Given the high scenic value and visual character of the Big Sur coastline, the ongoing cumulative effect of this project and other highway projects continues to reduce the area’s visual character. Mitigation would not be effective in reducing visual impacts to a level of insignificance.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

Significant and Unavoidable Impact—The inclusion of the avoidance, minimization, and mitigation measures listed in Sections 2.1.2 would reduce the visual impacts but, even with inclusion of these measures, the impacts would not be able to be fully mitigated.

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?

Significant and Unavoidable Impact— The inclusion of the avoidance, minimization, and mitigation measures listed in Sections 2.1.2 would reduce the visual impacts, but even with inclusion of these measures the project impacts would not be able to be fully mitigated. The project will substantially degrade the existing visual character or quality of public views of the site and its surroundings.

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

No Impact—The proposed project would not add any new sources of substantial light or glare.

Agriculture and Forest Resources

CEQA Significance Determinations for 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 and the Forest Legacy Assessment Project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.

Would the project:

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

No Impact—The County of Monterey zoning map indicates that grazing lands are next to some of the project locations, but not within the project limits. Impacts to agricultural lands are not expected.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

No Impact—No land that falls under the Williamson Act would be affected by the project. Existing agricultural zoning would not be impacted.

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

No Impact—The County of Monterey zoning map indicates that forest resources are next to some of the project locations, but not within the project limits. Impacts to forest resources are not expected.

d) Result in the loss of forest land or conversion of forest land to non-forest use?

No Impact—Forest lands would not be impacted by 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—No project work would encroach on forest lands, and no conversion of land use would occur as a result of the project.

Air Quality

CEQA Significance Determinations for Air Quality

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

Would the project:

a) Conflict with or obstruct implementation of the applicable air quality plan?

No Impact—No differences in long-term air quality would result from the project. See Chapter 2.

b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

No Impact—No difference in long-term air emissions would result from the project because no additional lanes or capacity would be added to State Route 1.

c) Expose sensitive receptors to substantial pollutant concentrations?

Less Than Significant Impact—Temporary construction activities could generate fugitive dust and airborne pollutants. A debris containment and

collection plan would be implemented during construction to minimize impacts.

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

No Impact—Other emissions are not expected.

Biological Resources

CEQA Significance Determinations for Biological Resources

Would the project:

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

Less Than Significant Impact—No special-status plant species were found during appropriately timed floristic surveys. No impacts to the Smith's blue butterfly are anticipated. Measures would be incorporated in the Garrapata Creek Tier 2 project to avoid impacts to woodrats.

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 Game or U.S. Fish and Wildlife Service?

Less Than Significant Impact—Marine environmentally sensitive habitat areas occur along this section of the Big Sur coastline, but does not occur within the project area and will not be impacted by the project. The project does not occur within a stream buffer, wetland setback, or any other setbacks. Impacts to marine mammals that are known to haul-out in the Big Creek Project vicinity will be avoided.

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?

No Impact—The project would not involve work within any protected wetland areas.

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

No Impact—The Biological Study Area does not occur within a known wildlife corridor, and no wildlife connectivity impacts are anticipated. The proposed project will not involve any work within any creeks and will not interfere with the movement of migratory fish.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

No Impact—The project complies with local policies and ordinances protecting biological resources.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

No Impact—No habitat conservation plans were identified near the project.

Cultural Resources

CEQA Significance Determinations for Cultural Resources

Would the project:

a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?

Less Than Significant With Mitigation Incorporated—As detailed in the Cultural Resources section in Chapter 2, the six Historic Big Sur Bridges are all individually listed in the National Register of Historic Places and are components of a historic district considered a significant historical resource under the California Environmental Quality Act. The project would have an adverse effect on cultural resources. Therefore, under the California Environmental Quality Act, the project would have a significant impact. To mitigate the significant impact, the replacement bridge railings would incorporate a context sensitive design. Detailed mitigation measures would be outlined in the Memorandum of Agreement between Caltrans and the State Historic Preservation Officer. (See Chapter 2, Cultural Resources section, for detailed discussion of measures.) Impacts to historical resources are less than significant with mitigation incorporated.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?

No Impact—There are no archaeological resources within the project limits for the Tier 1 bridge rail replacement projects or the Tier 2 Garrapata Creek Bridge Rail Replacement Project.

c) Disturb any human remains, including those interred outside of dedicated cemeteries?

No Impact—The project will not disturb any human remains.

Energy

CEQA Significance Determinations for Energy

Would the project:

a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

No Impact—Caltrans incorporates energy efficiency into the design, construction, and maintenance of all transportation projects. Construction of the project would incorporate energy efficiency measures and product recycling wherever feasible. The project is not capacity-increasing, so operation would not increase energy use.

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

No Impact—The project would replace bridge rails on State Route 1 and therefore would not substantially change energy use. The project would comply with relevant policies.

Geology and Soils

CEQA Significance Determinations for Geology and Soils

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?

No Impact—No fault lines cross the project site, but California is subject to earthquakes. The project would be designed to meet Caltrans seismic standards.

ii) Strong seismic ground shaking?

No Impact—The project would be designed and constructed to withstand ground shaking from the maximum credible earthquake event predicted for the site, following Caltrans seismic standards.

iii) Seismic-related ground failure, including liquefaction?

No Impact—The project would replace bridge rails and would not involve work at the base of bridge supports.

iv) Landslides?

No Impact— State Route 1 through Big Sur is susceptible to landslides; however, the project would not create unstable slopes susceptible to landslide activity.

b) Result in substantial soil erosion or the loss of topsoil?

No Impact—Work on the bridges would not involve disruption of large amounts of soil. Standard erosion control Best Management Practices would be used.

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

No Impact—Bridge rail replacement work would be conducted from the bridge decks and would not impact bridge foundations.

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

No Impact— USGS Data suggests the soils are not expansive. Bridge rail replacement work would not impact foundations.

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 waste water?

No Impact—No septic tanks or wastewater disposal systems are proposed for this transportation project.

f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

No Impact—Earthwork is expected to occur in areas that have been previously disturbed or are too young to contain scientifically important fossils.

Inadvertent fossil discoveries would be assessed by a qualified paleontologist.

Greenhouse Gas Emissions

CEQA Significance Determinations for Greenhouse Gas Emissions

Would the project:

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

No Impact—Temporary increases in greenhouse gas emissions during project construction would be minimized through implementation of Best Management Practices. Climate Change Guidance developed by the Caltrans Division of Environmental Analysis indicates that certain types of projects would have minimal or no increase in operational greenhouse gas emissions. Roadway improvement projects, such as this one, are included on that list.

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

No Impact—The project would not conflict with any known plan, policy, or regulation relative to reducing greenhouse gas emissions.

Hazards and Hazardous Materials

CEQA Significance Determinations for Hazards and Hazardous Materials

Would the project:

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

No Impact—Implementation of standard measures to handle, reuse, and dispose of hazardous materials encountered during project construction would avoid and minimize impacts from hazardous waste.

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

No Impact—Standard measures would be implemented to handle and dispose of hazardous waste.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

No Impact—No schools are near the project locations.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

No Impact—The project locations are not on a known hazardous materials site.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

No Impact—The project is not near an airport.

f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

No Impact—The traffic management plan would account for emergency evacuation.

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

No Impact—Certain project-related construction activities have the potential to ignite a wildfire. Avoidance and minimization measures would be incorporated to reduce wildfire risk.

Hydrology and Water Quality

CEQA Significance Determinations for Hydrology and Water Quality

Would the project:

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

No Impact—Short-term construction-related water quality impacts would be minimized with implementation of appropriate Best Management Practices.

b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

No Impact—The project would not involve excavation work extensive enough to impact groundwater resources.

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;

No Impact—Standard Best Management Practices would reduce construction-period erosion and siltation. Long-term changes in erosion or siltation are not expected. No work will occur in the creeks.

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

No Impact—The project would not affect the amount of impervious surface area.

iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or

No Impact—Standard stormwater Best Management Practices would address any concerns related to runoff.

iv) Impede or redirect flood flows?

No Impact—The project would be designed to accommodate 100-year flood events and would not create flood barriers. Existing drainage patterns would be maintained, and flood flows would not be redirected.

d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

No Impact—The project does not contain pollutants that would damage the environment if inundated.

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

No Impact—The project would not substantially alter the flow of surface water or groundwater. Short-term construction-related water quality impacts would be minimized with implementation of appropriate Best Management Practices.

Land Use and Planning

CEQA Significance Determinations for Land Use and Planning

Would the project:

a) Physically divide an established community?

No Impact—The project is improving an existing structure in a rural area.

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—The project is improving an existing structure, so there would be no conflicts with land use.

Mineral Resources

CEQA Significance Determinations for Mineral Resources

Would the project:

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

No Impact—No known mineral resources occur near 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—No known locally important mineral resources occur near the project.

Noise

CEQA Significance Determinations for Noise

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?

No Impact— Adverse noise impacts from construction are not anticipated because construction would be temporary and intermittent, conducted in accordance with Caltrans Standard Specifications, and because local noise levels are significantly influenced by local traffic noise. To minimize impacts on resident's normal nighttime sleep activities it is recommended that whenever possible construction work be done during the day, especially when work is near sensitive receptors. If nighttime construction is necessary, the noisiest construction activities should be done nearest the residences as early

in the evening as possible. Caltrans Standard Specifications (Section 14-8.02) requires the contractor to control and monitor noise resulting from work activities and not to exceed 86 dBA Lmax at 50 feet from the job site from 9:00 p.m. to 6:00 a.m.

b) Generation of excessive ground borne vibration or ground borne noise levels?

No Impact—Noise levels are not expected to exceed Caltrans specifications or be considered excessive.

c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

No Impact—The project is not within 2 miles of a public airport or private airstrip.

Population and Housing

CEQA Significance Determinations for Population and Housing

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)?

No Impact—The project is not capacity-increasing and therefore would not induce growth.

b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

No Impact—The project would not require relocation of residences.

Public Services

CEQA Significance Determinations for Public Services

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

Fire protection?

Less Than Significant Impact—No long-term changes in emergency access would result from the project. Temporary impacts to emergency response times would be accounted for in a traffic management plan.

Police protection?

Less Than Significant Impact—No long-term changes in emergency access would result from the project. Temporary impacts to emergency response times would be accounted for in a traffic management plan.

Schools?

No Impact—No schools are near the project.

Parks?

Less Than Significant Impact—Access to Garrapata State Beach and other parks could be temporarily affected during project construction.

Other public facilities?

Less Than Significant Impact— Access to public facilities could be temporarily affected during project construction.

Recreation

CEQA Significance Determinations for Recreation

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

No Impact—The project would not increase the capacity or change the configuration of State Route 1 and therefore would not increase the use of Big Sur beaches, including Garrapata State Park.

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

No Impact—Bridge rail replacement work would have no effect on recreational facilities.

Transportation

CEQA Significance Determinations for Transportation

Would the project:

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

No Impact—The project would improve existing bridges.

b) Conflict with or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

No Impact—The project would not increase the number of vehicle miles traveled.

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

No Impact—The project would improve existing bridges.

d) Result in inadequate emergency access?

No Impact—No long-term changes in emergency access would result from the project.

Tribal Cultural Resources

CEQA Significance Determinations for Tribal Cultural Resources

Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or

No Impact—There are no Tribal Cultural Resources within the project limits.

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

the lead agency shall consider the significance of the resource to a California Native American tribe.

No Impact—There are no Tribal Cultural Resources within the project limits.

Utilities and Service Systems

CEQA Significance Determinations for Utilities and Service Systems

Would the project:

a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Less Than Significant Impact—The Tier 1 projects may require relocation of utilities. The Tier 2 Garrapata Creek Bridge project will not involve utility relocation.

b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

No Impact—No additional water services would be needed because the project is not capacity-increasing.

c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

No Impact—The project would generate minimal wastewater that would primarily be sanitary waste generated by construction workers, which would be transported and treated off-site.

d) Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

No Impact—Generated solid waste would be recycled when possible and would not exceed standards or local landfill capacities.

e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

No Impact—The project will fully comply with all statutes and regulations related to solid waste.

Wildfire

CEQA Significance Determinations for Wildfire

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?

Less Than Significant Impact—Emergency response and evacuation would be factored into the construction-period traffic management 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?

No Impact—The project involves improvements of existing bridges on State Route 1 and therefore does not have any project occupants.

c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

Less Than Significant Impact—Coordinating with the utility owners and implementing wildfire avoidance and minimization measures would avoid worsening wildfire risk.

d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

No Impact—The project would not increase runoff, post-fire slope instability, or drainage changes.

Mandatory Findings of Significance

CEQA Significance Determinations for Mandatory Findings of Significance

a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

Less Than Significant With Mitigation Incorporated—The project would adversely affect historical resources. These impacts would be mitigated to below the level of significance through the use of context sensitive design and mitigation.

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

Significant and Unavoidable Impact—Significant impacts to visual resources are considered both individual impacts as well as cumulative impacts. Although mitigation measures would be applied, further damage would occur to scenic resources. Other projects considered within the visual resources study area would also result in further degradation of scenic resources.

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

Less Than Significant Impact—The project is replacing existing bridge rails. No adverse impacts to human beings, including hazards or environmental justice issues, have been identified.

3.3 Wildfire

Regulatory Setting

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.

Affected Environment

The Tier 1 and Tier 2 projects are located on coastal bluffs of the Pacific Ocean. The project is in a very high fire hazard severity zone as mapped by the California Department of Forestry and Fire Protection. The project would not permanently worsen wildfire risk because it involves replacing existing structures. Instead, the project is expected to benefit the greater Big Sur Coast region because it would ensure the safety and reliability of the Big Sur corridor, which would be a critical evacuation route should a wildfire event occur locally.

Environmental Consequences

Certain types of construction work have the potential to ignite a wildfire, such as grinding which creates sparks, or work involving electrical utilities. Precautions would be taken to reduce fire risk from construction work as much as possible, and an emergency water supply would be kept on-site throughout the duration of the project. Prior to construction, vegetation would be cleared in a manner that would minimize fire risk while avoiding harm to the biological environment.

Avoidance, Minimization, and/or Mitigation Measures

The following avoidance and minimization measures would be implemented during project construction to reduce the risk of igniting a wildfire.

A traffic management plan (measure TRA-1) would address emergency access and emergency evacuation in the event of a wildfire near the project.

WF-1: An emergency water supply for use if a fire is ignited will be maintained on the project site for the duration of project construction.

3.4 Climate Change

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 greenhouse gas reduction targets, nor have any regulations or legislation been enacted specifically to address climate change and greenhouse gas emissions reduction at the project level.

The National Environmental Policy Act (NEPA) (42 U.S. Code 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 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. The Federal Highway Administration 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 made 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 U.S. Code Section 6201) and Corporate Average Fuel Economy 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 Corporate Average Fuel Economy 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. Environmental Protection Agency in conjunction with the National Highway Traffic Safety Administration is responsible for setting greenhouse gas 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 greenhouse gas emissions.

State

California has been innovative and proactive in addressing greenhouse gas emissions and climate change by passing multiple Senate and Assembly bills and executive orders that can be found listed in the Climate Change Technical Study.

Affected Environment

The project sits along State Route 1 in Monterey County along the Big Sur Coast. Route 1 in Monterey County serves local and interregional traffic which primarily includes recreational, local commuters, and limited commercial users. State Route 1 in Monterey County is designated as an Official State Scenic Highway, a National Scenic Byway, and an All-American Road. Along the highway the primary developments are the roadway itself and related features, occasional roadside home sites and tourist-oriented businesses. The Association of Monterey Bay Area Governments (AMBAG) in coordination with the Transportation Agency for Monterey County (TAMC) guide transportation development in the project area through AMBAG's

Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) and TAMC's Regional Transportation Plan.

The California Air Resources Board sets regional targets for California's 18 Metropolitan Planning Organizations to use in their Metropolitan Transportation Plan/Sustainable Communities Strategy to plan future projects that will cumulatively achieve greenhouse gas reduction goals. Targets are set at a percent reduction of passenger vehicle greenhouse gas emissions per person from 2005 levels. The Association of Monterey Bay Area Governments is the Metropolitan Planning Organization for the project area. The Air Resources Board's regional reduction target for The Association of Monterey Bay Area Governments is 6 percent by 2035 (Air Resources Board 2019c).

The project is within the jurisdiction of the Transportation Agency for Monterey County. The Transportation Agency for Monterey County publishes its own regional transportation plan in association with The Association of Monterey Bay Area Governments. The Metropolitan Transportation Plan describes projects and policies that will contribute to meeting the regional greenhouse gas reduction goals consistent with The Association of Monterey Bay Area Governments Metropolitan Transportation Plan/Sustainable Communities Strategy. The 2018 Monterey County Regional Transportation Plan identifies complete streets projects including bicycle, pedestrian, and public transit projects as important components of the strategy to develop sustainable communities in Monterey County and to achieve greenhouse gas targets.

Table 3-1. Regional and Local Greenhouse Gas Reduction Goals

Title	GHG Reduction Policies or Strategies
Association of Monterey Bay Area Governments 2040 Metropolitan Transportation Plan/Sustainable Communities Strategy and Regional Transportation Plans for Monterey, San Benito and Santa Cruz Counties (adopted June 2018)	• Integrated multi-modal network • Expand the public transit network • Strategic capacity and technology enhancements to existing highways • Identify a list of projects that will add and enhance walking and biking facilities • Transportation Systems Management measures • Transportation Demand Management
Transportation Agency for Monterey County Final 2018 Regional Transportation Plan	Environmental Stewardship Element: Protect and enhance the County's built and natural environment. Act to reduce the transportation system's emission of greenhouse gases.

Project Analysis

Greenhouse gas emissions from transportation projects can be divided into those produced during operation of the state highway system and those produced during construction. The main greenhouse gases produced by the transportation sector are carbon dioxide, methane, nitrous oxide, and hydrofluorocarbons. Carbon dioxide emissions are a product of the combustion of petroleum-based products, like gasoline, in internal combustion engines. Relatively small amounts of methane and nitrous oxide are emitted during fuel combustion. In addition, a small amount of hydrofluorocarbon emissions is included in the transportation sector.

Operational Emissions

The purpose of the proposed project (Tier 1 and Tier 2) is to upgrade bridge railings to meet current safety standards while retaining the historic visual character of the bridges. It would not add vehicle capacity to the roadway and would not increase vehicle miles traveled. While some greenhouse gas emissions during the construction period would be unavoidable, the project once completed would not lead to an increase in operational greenhouse gas emissions.

Construction Emissions

Construction greenhouse gas 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 greenhouse gas emissions produced during construction can be offset to some degree by longer intervals between maintenance and rehabilitation activities.

Construction greenhouse gas emissions were estimated using the Caltrans Construction Emissions Tool. Construction emissions for replacing bridge railings on the Garrapata Creek Bridge are estimated to be 122 tons of carbon dioxide over the 5-month construction period.

Construction greenhouse gas emissions for planned bridge rail replacements on other bridges will be reported in their individual Tier 2 environmental documents.

All construction contracts include Caltrans Standard Specifications Section 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 the California Air Resources Board emission reduction regulations; contracts also include Section 14-9.02, Air Pollution Control,

which requires contractors to comply with all air pollution control rules, regulations, ordinances, and statutes.

The project will also implement Caltrans standardized measures (such as construction Best Management Practices) that apply to most or all Caltrans projects. Certain common regulations, such as equipment idling restrictions and development and implementation of a traffic control plan that reduce construction vehicle emissions also help reduce greenhouse gas emissions.

CEQA Conclusion

While the project will result in greenhouse gas emissions during construction, it is expected that the project will not result in any increase in operational greenhouse gas emissions. The 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 greenhouse gas reduction measures, the impact would be less than significant.

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

Avoidance, Minimization, and/or Mitigation Measures

The following measures will be implemented in the project to reduce GHG emissions and potential climate change impacts from the project.

- Caltrans Standard Specifications Section 7-1.02A and 7 1.02C, Emissions Reduction. Requires contractors to comply with all laws applicable to the project and to certify they are aware of and will comply with all Air Resources Board emission reduction regulations.

- Section 14-9.02, Air Pollution Control. Requires contractors to comply with all air pollution control rules, regulation, ordinances, and statutes.

Project Adaptation Analysis

As noted above, it is expected that California may be vulnerable to climate change effects that relate to temperature, wildfire, precipitation, storm surge, and sea level rise. Though the analysis of climate change risk involves a degree of uncertainty relating to the timing and intensity of potential risks, it is not expected that the Big Sur Historic Bridges (including the Garrapata Creek Bridge) would be particularly vulnerable to the effects of climate change, and construction of the Tier 2 project itself is not expected to locally worsen the effects of climate change.

3.5.6 Sea Level Rise

At the Garrapata Creek Bridge project site, State Route 1 is at an elevation of about 95 feet above mean sea level. The State of California 2018 Sea Level

Rise Guidance Document provides projections for the height of sea level rise along the California Coast using the most current data from the Ocean Protection Council. The guidance document outlines a five-step approach for evaluating the risks associated with sea level rise at a given location.

The first step is identifying the nearest tide gauge, which is Monterey for the Big Sur Historic Bridges. The second and third steps involve estimating the projection year that should be used in the analysis, which is year 2100 for the project given an estimated 75-year life span of the replacement Big Sur Bridge rails. The fourth and fifth steps involve assigning the risk and tolerance for the site. Caltrans' adopted policies are to use the high emissions scenario and a 1-in-200 chance (0.5 percent probability). At the Monterey tide gauge under a high-emissions scenario, there is 0.5 percent probability that sea level rise will meet or exceed 6.9 feet by the year 2100. Also considered is the H++ climate scenario, which has no associated probability, but is an extreme climate change scenario. Under the H++ scenario, sea level rise is predicted to rise 10.1 feet at the Monterey tide gauge by 2100. Sea level rise projections for the Monterey tide gauge are shown in Table 3-1.

Table 3-2 Projected Levels of Sea Level Rise at Project Site for Year 2100 Under a High Emission Scenario, as Reported in the State of California Sea Level Rise Interim Guidance Document

Probability	Risk Level	Year 2100 High Emission Scenario at the Monterey Tidal Gauge
Upper limit of "likely range" (66% probability)	Low	3.3 feet
1-in-200 chance (0.5% probability)	Medium-High	6.9 feet
H++ Scenario (no associated probability)	Extreme	10.1 feet

Floodplains

Regional climate forecasts project California to receive less precipitation overall in the future, with the potential for heavier individual events and more falling as rain than snow. The District 5 Caltrans Climate Change Vulnerability Assessment (2019) analyzed potential changes in the 100-year storm event over time. The 100-year storm event is a metric commonly considered in the design of highway infrastructure.

Average observed 100-year storm precipitation from 1961 to 1990 was about 3.4 inches and ranged from 2.6 to 5.6 inches (CalAdapt 2020). Mapping using the Caltrans District 5 Vulnerability Assessment Mapping Tool shows that 100-year storm precipitation depth in the project area is likely to increase by less than 5 percent through 2055, and up to 9.9 percent by 2085 (compared to data from 1950 to 2005). The project would be designed to accommodate

100-year flood events and would not create flood barriers. Existing drainage patterns would be maintained. It is expected that the project would be resilient to an up to 9.9 percent change in the 100-year storm event.

Wildfire

The Garrapata Bridge project area on State Route 1 traverses moderate and high fire hazard severity zones in a State Responsibility Area (https://egis.fire.ca.gov/FHSZ/). The District 5 Climate Change Vulnerability Assessment Mapping Tool shows the project area to be of moderate concern for wildfire exposure. The project would not introduce new structures vulnerable to fire into the project area. Fire-resistant materials will be selected for the bridge rails. Accordingly, this bridge rail project is expected to be resilient to wildfire.

Vulnerability to fire hazard for the future planned bridge rail projects will be evaluated in each individual Tier 2 environmental document.

For all projects, Caltrans 2018 revised Standard Specification 7-1.02M(2) mandates fire prevention procedures during construction, including a fire prevention plan. The Tier 1 and Tier 2 projects are not anticipated to exacerbate the impacts of wildfire intensified by climate change.

Climate Change References

The following are the sources cited in this section:

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California Air Resources Board (ARB). 2019a. California Greenhouse Gas Emissions Inventory–2019 Edition. https://ww3.arb.ca.gov/cc/inventory/data/data.htm. Accessed: August 21, 2019.

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Transportation Agency for Monterey County. 2018. Final 2018 Monterey County Regional Transportation Plan. In coordination with the Association of Monterey Bay Area Governments. https://www.tamcmonterey.org/regional-transportation-plan. Accessed: October 1, 2020.

U.S. Department of Transportation (U.S. DOT). 2011. Policy Statement on Climate Change Adaptation. June. https://www.fhwa.dot.gov/environment/sustainability/resilience/policy_and_guidance/usdot.cfm. Accessed: August 21, 2019.

U.S. Environmental Protection Agency (U.S. EPA). 2009. Endangerment and Cause or Contribute Findings for Greenhouse Gases under the Section 202(a) of the Clean Air Act. https://www.epa.gov/ghgemissions/endangerment-and-cause-or-contribute-findings-greenhouse-gases-under-section-202a-clean. Accessed: August 21, 2019.

U.S. Environmental Protection Agency (U.S. EPA). 2018. Inventory of U.S. Greenhouse Gas Emissions and Sinks. https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks. Accessed: August 21, 2019.

U.S. Global Change Research Program (USGCRP). 2018. Fourth National Climate Assessment. https://nca2018.globalchange.gov/. Accessed: August 21, 2019.

Chapter 4 Comments and Coordination

Early and continuing coordination with the 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 and tribal consultation and public participation for this project have been accomplished through a variety of formal and informal methods, including interagency coordination meetings and project development team meetings. This chapter summarizes the results of Caltrans' efforts to identify, address, and resolve project-related issues through early and continuing coordination.

4.1 Notice of Preparation

A Notice of Preparation for the project was circulated from April 13, 2020 to June 15, 2020 and mailed directly to the State Clearinghouse and responsible agencies. See Chapter 6 for a distribution list and Appendix E for the Notice of Preparation. Preparing and circulating a Notice of Preparation is typically the first step in the process of preparing an Environmental Impact Report. This process is completed to receive initial comments and feedback on the project and its potential environmental impacts from appropriate public agencies and the public.

4.2 Cultural Resources Coordination

Concurrent to notifying the California State Historic Preservation Office, Caltrans also notified the following about the project:

- Native American Heritage Commission
- Monterey County Historic Resources Review Board (https://www.co.monterey.ca.us/government/departments-a-h/clerk-of-the-board/boards-committees-and-commissions/historic-resources-review-board)
- Historic Bridge Foundation (https://historicbridgefoundation.com/)
- Monterey County Historical Society
- Carmel Heritage Society (https://www.carmelheritage.org/)
- Big Sur Historical Society

Caltrans will continue to consult with these organizations, and any other knowledgeable groups or individuals identified during this process, for all the Tier 2 (project-specific) analyses moving forward.

In addition, an Assembly Bill 52 consultation letter was distributed on August 21, 2018.

A consultation letter was sent to the State Historic Preservation Officer on August 31, 2020.

Chapter 5 List of Preparers

This document was prepared by the following Caltrans Central Region staff:

Robert Carr, Associate Landscape Architect. B.S., Landscape Architecture, California Polytechnic State University, San Luis Obispo; 29 years of experience preparing Visual Impact Assessments. Contribution: Prepared the Visual Impact Assessment.

Andrew Domingos, Associate Environmental Planner (Natural Sciences). B.S., Environmental Science Resource Management, California State University, Channel Islands; 10 years of experience in California biology. Contribution: Prepared the Natural Environment Study Minimal Impacts.

Raymond Gomez, Transportation Engineer (Civil). B.S., Environmental Engineering, Carroll College; 1 year of environmental engineering experience. Contribution: Prepared the Water Quality Assessment Report.

Krista Kiaha, Senior Environmental Planner. M.S., Anthropology, Idaho State University; B.A., Anthropology, University of California, Santa Cruz; more than 20 years of cultural resources experience. Contribution: Review of the Historic Properties Survey Report.

Joel Kloth, Engineering Geologist. B.S., Geology, California Lutheran University; more than 30 years of experience in petroleum geology, geotechnical geology, and environmental engineering/geology-hazardous waste. Contribution: Prepared the Hazardous Waste Studies.

Rajvi Koradia, Environmental Engineer. B.S., Environmental Engineering, L.D. College of Engineering, Ahmedabad, India; M.S., Civil and Environmental Engineering, San Jose State University; 2 years of environmental engineering experience. Contribution: Prepared the Air Quality Report.

Lindsay Kozub, Associate Environmental Planner (Architectural Historian). M.A., History/Cultural Resource Management, Colorado State University; B.A., History, University of Montana; B.S., Business, Montana State University; 10 years of experience in historical and architectural documentation, historic preservation, and cultural resource management. Contribution: Prepared the Architectural Survey Report.

Daniel Leckie, Associate Environmental Planner (Architectural History). M.S., Historic Preservation, The University of Vermont (2014); B.A., American History and Sociology, State University of New York (SUNY) at Stony Brook (2010); over 6 years of experience in the fields of Architectural History and Historic Preservation Planning. Contribution: Principal Architectural Historian. Prepared the Architectural Survey Report.

Isaac Leyva, Engineering Geologist. B.S., Geology; 29 years of experience in petroleum geology, environmental, and geotechnical engineering. Contribution: Prepared the Paleontology Report and Water Quality Assessment.

Christina MacDonald, Associate Environmental Planner (Arch). M.A., Cultural Resources Management, Sonoma State University; B.A., Anthropology, University of California, Los Angeles; 16 years of experience in California prehistoric and historical archaeology. Contribution: Oversaw and prepared the Historic Property Survey Report.

Karl Mikel, Transportation Engineer. B.S., Environmental Engineering; California Polytechnic University, San Luis Obispo; M.S., Civil and Environmental Engineering, California Polytechnic University, San Luis Obispo; 11 years of experience in environmental engineering. Contribution: Prepared the Air Quality, Noise, Greenhouse Gas, and Water Quality Assessments.

Scott Ostrau, Associate Environmental Planner. B.S., Environmental Policy Analysis and Planning, University of California, Davis; 3 years of environmental planning experience. Contribution: Prepared the Environmental Impact Report.

Michael Schmidt, National Pollutant Discharge Elimination System/ Stormwater Coordinator, Transportation Engineer. B.S., California Polytechnic State University, San Luis Obispo; 6 years of stormwater experience. Contribution: Prepared the Stormwater Report.

Jason Wilkinson, Senior Environmental Planner. B.S., Natural Resource Management, Minor in Geographical Information System (GIS), California Polytechnic State University, San Luis Obispo; 12 years of environmental planning experience. Contribution: Reviewed the Environmental Impact Report.

Chapter 6 Distribution List

The Environmental Impact Report was distributed to the following:

- Monterey County Planning Office, 1441 Schilling Place, Salinas, CA 93901
- Monterey County Free Libraries:
    - Buena Vista Branch, 18250 Tara Drive, Salinas, CA 93908
    - Big Sur Branch, Highway-1 at Ripplewood Resort, Big Sur, CA 93920
    - Carmel Valley Branch, 65 West Carmel Valley Road, Carmel Valley, CA 93924
- Transportation Agency of Monterey County (TAMC), 55-B Plaza Circle, Salinas, CA 93901
- Velo Club Monterey, P.O. Box 1404, Monterey, CA 93942
- California Department of Parks and Recreation – Monterey District, 2211 Garden Road, Monterey, CA 93940
- California Department of Fish and Wildlife – Central Region, 1234 East Shaw Avenue, Fresno, CA 93710
- California Coastal Commission – Central Coast District, 725 Front Street, Suite 200, Santa Cruz, CA 95060
- Tami Grove, Transportation Program Manager, California Coastal Commission
- Sean Drake, Transportation Program Analyst, California Coastal Commission
- Joe Sidor - Monterey County - ceqacomments@co.monterey.ca.us
- Big Sur Land Use Advisory Committee
- Big Sur Kate (Local Blogger)
- State Clearinghouse
- State Historic Preservation Officer
- California Department of Fish and Wildlife – Steve Hulbert
- U.S. Fish and Wildlife Service
- U.S. Forest Service
- State Parks
- Landels-Hill Big Creek Reserve

- University of California Natural Reserve System/University of California Santa Cruz
- City of Carmel
- City of Monterey
- California Highway Patrol
- Central Coast Regional Water Quality Control Board, Region 3
- U.S. Army Corps of Engineers
- California Department of Parks and Recreation
- Monterey County Historic Resource Review Board

Appendix A Title VI Policy Statement

STATE OF CALIFORNIA—CALIFORNIA STATE TRANSPORTATION AGENCY Gavin Newsom, Governor

DEPARTMENT OF TRANSPORTATION
OFFICE OF THE DIRECTOR
P.O. BOX 942873, MS-49
SACRAMENTO, CA 94273-0001
PHONE (916) 654-6130
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TTY 711
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Making Conservation a California Way of Life.

November 2019

NON-DISCRIMINATION POLICY STATEMENT

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

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

For information or guidance on how to file a complaint, or obtain more information regarding Title VI, please contact the Title VI Branch Manager at (916) 324-8379 or visit the following web page: https://dot.ca.gov/programs/business-and-economic-opportunity/title-vi.

To obtain this information in an alternate format such as Braille or in a language other than English, please contact the California Department of Transportation, Office of Business and Economic Opportunity, at 1823 14th Street, MS-79, Sacramento, CA 95811; (916) 324-8379 (TTY 711); or at Title.VI@dot.ca.gov.

Toks Omishakin
Director

"Provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability"

Appendix B Avoidance, Minimization and/or Mitigation Summary

To be sure that all environmental measures identified in this document are executed at the appropriate times, the following mitigation program (as articulated in the proposed Environmental Commitments Record that follows) would be implemented. During project design, the avoidance, minimization, and/or mitigation measures would be incorporated into the project's final plans, specifications, and cost estimates, as appropriate. All permits would be obtained prior to implementation of the project. During construction, environmental and construction and engineering personnel would ensure that the commitments contained in the Environmental Commitments Record are fulfilled. Following construction and appropriate phases of project delivery, long-term mitigation maintenance and monitoring would take place, as applicable.

Because the following Environmental Commitments Record is a draft, some fields have not been completed but would be filled out as each of the measures is implemented. Measures that address an impact considered significant under the California Environmental Quality Act are identified as mitigation measures (e.g., Mitigation Measure CUL-1). All other measures are avoidance or minimization measures.

To maintain these visual quality elements and decrease potential negative visual impacts caused by the project, the following actions are recommended:

1. Involve the community in the design of all aesthetic project features.
2. Use an open-style bridge rail that minimizes view blockage.
3. Use the smallest end blocks possible that meet safety needs.
4. Use finish colors and textures that minimize reflectivity and glare.
5. Re-contour all disturbed areas and construction access roads to a natural appearance.
6. Vegetate all stabilized soil areas with native shrubs and grasses as appropriate.
7. Bury all over-side drains and inlet structures or hide them from view to the greatest extent possible. Where unavoidably exposed to view, color the pipes to reduce noticeability, and dull the gloss of the finish.
8. Where metal beam guardrail or metal end treatments are required, use measures to reduce reflectivity of the metal components.

Cultural resource mitigation and minimization measures for the Tier 1 bridges will include context sensitive bridge railing design. The Tier 2 projects may also include a public interpretive document (pamphlet or booklet) on the history of transportation and historical context of the bridges that will be distributed in the local area, and Historic American Engineering Record professional photographic and written documentation of the bridge to be prepared before the bridge railing is demolished. An interpretive exhibit may be installed in an area where it can provide a public benefit. The information in the exhibit will be on the history of transportation and historical context of the local area and can be installed in the project vicinity. Detailed mitigation measures will be finalized in the Memorandum of Agreement between Caltrans and the State Historic Preservation Officer.

Appendix C Notice of Preparation

SCH NO. _____

NOTICE OF PREPARATION

To: State Clearinghouse
1400 Tenth Street
Sacramento, CA 95814

From: California Dept. of Transportation
50 Higuera Street
San Luis Obispo, CA 93401

Subject: **Notice of Preparation of a Draft Environmental Impact Report**

Program Title (Tier I): Big Sur Bridge Rail Replacements

Program Location: State Highway 1 in Monterey County on the Big Sur Coast:

Bridge Name	Bridge Number	Post Mile	Year Constructed
Big Creek Bridge	44-0056	28.1	1938
Bixby Creek Bridge	44-0019	59.4	1932
Rocky Creek Bridge	44-0036	60.0	1932
Garrapata Creek Bridge	44-0018	63.0	1931
Granite Canyon Bridge	44-0012	64.3	1932
Malpaso Creek Bridge	44-0017	67.9	1935

Program Description: Caltrans proposes bridge rail replacements on six historic bridges along the Big Sur Coast to bring the facilities up to current standards.

Project Title (Tier II): Garrapata Creek Bridge Rail Replacement

Project Location: State Route 1 (Post Miles 63.0)

Project Description: Caltrans proposes a bridge rail replacement on the Garrapata Creek Bridge (No. 44-0018) to bring the facility up to current standards.

This is to inform you that the California Department of Transportation will be the lead agency and will prepare a (Tier I) Program Environmental Impact Report (EIR) and a project level (Tier II) EIR for the project described below. Your participation as a responsible agency is requested in the preparation and review of this document.

We invite your agency's input as to the scope and content of the environmental information that is relevant to your agency's statutory responsibilities in connection with the proposed project. Your agency will need to use the EIR prepared by our agency when considering your permit or other approval for the project.

A more detailed project description, location map, and the potential environmental effects are included on the following pages of this NOP. A copy of the Initial Study is not attached.

Due to the time limits mandated by State law, your response must be sent **no later than 45 days** after receipt of this notice.

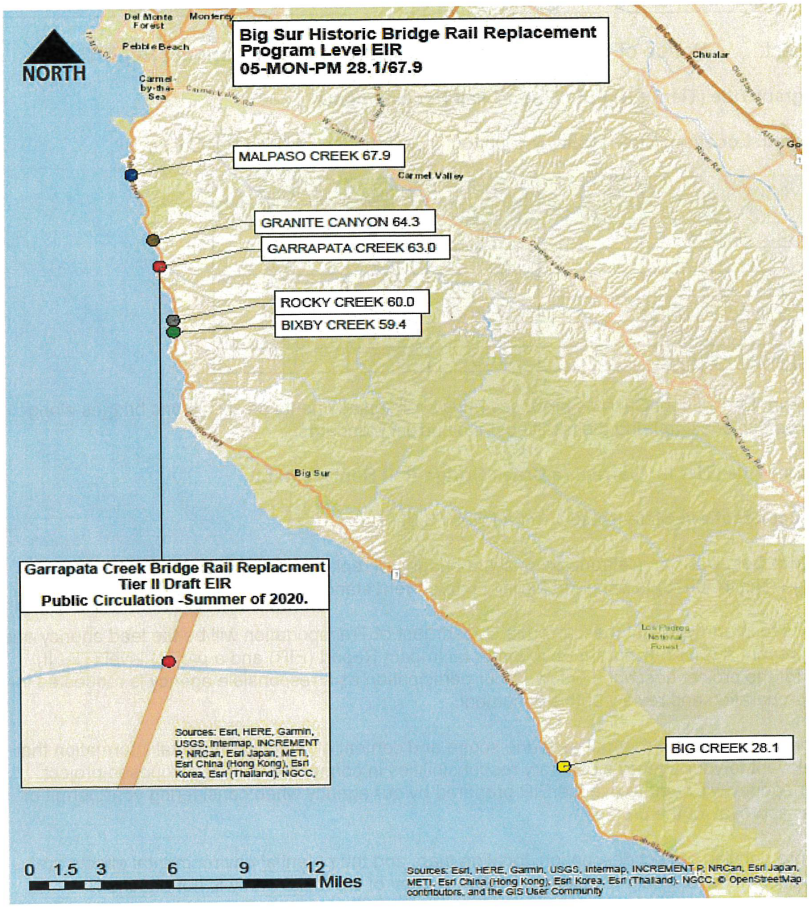
Please direct your response to Jason Wilkinson at the address shown above. Please supply us with the name for a contact person in your agency.

Date 4/10/20

Signature

Title Associate Environmental Planner

Location Map:



Project Description

Garrapata Creek Bridge (No. 44-0018) is an open-spandrel arch bridge that was constructed in 1931, widened in 1998 and seismically retrofitted in 1987 and 1998. Garrapata Creek Bridge is located at post mile 63.0 just south of Carmel, in Monterey County and is one of 7 historic arch bridges along State Route 1 on the Big Sur Coast. The bridge is 285-feet long and consists of 12-foot lanes and 0 to 1-foot shoulders.

This structure has nonstandard concrete baluster bridge rails on both sides of the structure. The rail end posts exhibit fine pattern cracking, and the barrier rail posts are severely deteriorated with dozens of incipient spalls and spalled posts in addition to previous impact damage.

The project on State Route 1 near Carmel-By-The-Sea in Monterey County proposes to replace the existing nonstandard concrete baluster bridge rail and approach railing on Garrapata Creek Bridge (No. 44-0018) at PM 63.0. The irreversible damage from pervasive salt laden fog has accelerated the overall deterioration of concrete and reinforcing steel of the bridge rail, warranting replacement.

Caltrans proposes to address these concerns with the 2 possible alternatives identified below:

Build Alternative: Proposes replacing the existing non-standard bridge rail and approach railing with new railing that meets current traffic safety standards.

No Build Alternative: The non-standard bridge rails would continue to deteriorate and would not be replaced.

Potential Environmental Impacts

The Draft Program EIR (Tier I) will address potential environmental effects of the proposed project for each of the environmental topics outlined in the CEQA guidelines, Appendix G. The proposed project may impact environmental resources, or may have the following effects, including:

- Visual/Aesthetic
  Due to the high degree of viewer sensitivity along State Route 1 and the adjacent public campground and beach, the project will be assessed for potential impacts to scenic vistas, alterations to visual character, and for consistency with the California Coastal Act, state Scenic Highway, National Scenic Byway, and Coast Highway Management Plan principles. Impacts to visual/aesthetic resources will be reduced through measures such as bridge rail design and treatment, planting, and other elements.

- Cultural Resources
  The project is located within the Carmel-San Simeon Highway Historic District, which is eligible for listing in the National Register of Historic Places. The Garrapata Creek Bridge is a contributor to the historic district and is also individually eligible for listing in the National Register. The existing bridge rail is a contributing element to the bridge's historic nature. Currently it is assumed that the bridge rail cannot be replaced in-kind and that the project will potentially result in an adverse effect to a historic resource. Section 106 Consultation will be required.

- Coastal Resources

- Cumulative Impacts

- Section 4(f)
- Biological resources

There would be no effects on paleontological resources, noise, hazardous waste, utilities, water quality, or air quality. The project would not affect planned land use. The project would not require the relocation of residences or businesses.

AGENCY COMMENTS

Agency input regarding the Scope of the EIR, environmental factors potentially affected, and project alternatives must be submitted to Caltrans no later than 5:00pm on May 29, 2020.

Written comments can be mailed to:
California Department of Transportation, District 5
50 Higuera Street
San Luis Obispo, CA 93401
Attention: Jason Wilkinson

Or emailed to:
Jason.wilkinson@dot.ca.gov

List of Technical Studies

Air Quality, Noise, and Greenhouse Gas Memorandum

Water Quality Assessment

Natural Environment Study Minimal Impacts Tier 1 and Tier 2

Historic Property Survey Report Tier 1 and Tier 2

- Historic Resource Evaluation Report
- Archaeological Survey Report

Hazardous Waste Reports

- Initial Site Assessment
- Asbestos and Lead-Containing Paint Survey Report

Visual Impact Assessment

Paleontology Review Memorandum

Stormwater Data Report

Climate Change Technical Study

To obtain a copy of one or more of these technical studies/reports or the Draft Environmental Impact Report, please send your request to the following email address: info-d5@dot.ca.gov

Please indicate the project name and project identifying code (under the project name on the cover of this document) and specify the technical report or document you would like a copy of. Provide your name and email address or U.S. postal service mailing address (street address, city, state and zip code).