Elephant Trunk Slide Permanent Restoration
On Highway 1, about 0.3 mile south of the Monterey/San Luis Obispo county line
05-SLO-1-73.7/74.0
05 1200 0009

Initial Study
with Proposed Negative Declaration

Prepared by the
State of California Department of Transportation

May 2013
General Information About This Document

What’s in this document?
The California Department of Transportation (Caltrans) has prepared this Initial Study, which examines the potential environmental impacts of alternatives being considered for the proposed project in San Luis Obispo County, California. The document describes the project, the existing environment that could be affected by the project, potential impacts from the project, and proposed avoidance and minimization measures.

What should you do?
• Please read this Initial Study. Additional copies of this document as well as the technical studies are available for review at: Caltrans, 50 Higuera, San Luis Obispo; the Henry Miller Memorial Library, 48603 Highway 1, Big Sur; and the San Luis Obispo County Library, 995 Palm Street, San Luis Obispo.
• The document can also be accessed electronically at the following website:
  http://www.dot.ca.gov/dist05/projects
• No public hearing is scheduled. Please contact Caltrans if you would like a public hearing.
• We welcome your comments. If you have any concerns about the project, please send your written comments to Caltrans by the deadline. Submit comments via U.S. mail to Caltrans at the following address:

  Matt Fowler
  California Department of Transportation
  50 Higuera
  San Luis Obispo, CA  93401

  or via email to: Matt.C.Fowler@dot.ca.gov

• Submit comments by the deadline: June 1, 2013.

What happens next?
After comments are received from the public and reviewing agencies, Caltrans may 1) give environmental approval to the proposed project, 2) do additional environmental studies, or 3) abandon the project. If the project is given environmental approval and funding is appropriated, Caltrans could design and build all or part of the project.

Printing this document: To save paper, this document has been set up for two-sided printing (to print the front and back of a page). Blank pages occur where needed throughout the document to maintain proper layout of the sections.

For individuals with sensory disabilities, this document is available in Braille, in large print, on audiocassette, or on computer disk. To obtain a copy in one of these alternate formats, please contact: Caltrans, Attn: Matt Fowler, 50 Higuera, San Luis Obispo, CA  93401; 805-542-4603 voice, or use the California Relay Service TTY dial 711.
**Proposed Negative Declaration**

Pursuant to: Division 13, Public Resources Code

**Project Description**

On Highway 1 at the northern limits of San Luis Obispo County, the California Department of Transportation (Caltrans) proposes to stabilize settlement occurring in both the north and southbound lanes by constructing a 1000-foot-long soldier pile wall down slope of the roadway and realigning the highway. The restored roadway would be straighter and consist of a 12-foot-wide lane in each direction and 4-foot paved shoulders. Adjacent to the cut slope would be a 2- to 4-foot wide unpaved catchment area for debris control. The existing drainage system would be modified and repaired. The wall would be topped by Type ST-70 steel bridge rail or another appropriate see-through rail.

**Determination**

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

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

- The project would have no adverse effect on land use, growth, farmlands/timberlands, any local community, utilities/emergency services, traffic, transportation/pedestrian or bicycle facilities, hydrology, the floodplain, water quality, storm water runoff, paleontology, cultural resources, air quality, or “other waters”.
- The project would not create any significant impacts due to noise, vibration, hazardous waste or materials, geology, soils, topography, or invasive species; the proposed project would not be particularly vulnerable to seismic activity.
- The project would have no significant impact on biological resources or wetlands.

____________________________________ __________________________
Janet Newland                          Date
Office Chief, Central Coast Environmental Management
California Department of Transportation
Section 1 Project Information

Project Title
Elephant Trunk Slide Permanent Restoration

Lead Agency Name and Address
California Department of Transportation (Caltrans), District 5
50 Higuera
San Luis Obispo, CA  93401

Contact Person and Phone Number
Matt Fowler
805-542-4603

Project Location
On Highway 1, about 0.3 mile south of the Monterey/San Luis Obispo county line and about 0.8 mile north of the Ragged Point Inn.

Project Sponsor’s Name and Address
California Department of Transportation (Caltrans), District 5
Lisa Lowerison, Project Manager
50 Higuera
San Luis Obispo, CA  93401

General Plan Description and Zoning
The project is located within the North Coast Planning Area. It is located in a Geologic Study Area and a Sensitive Resource Area of the Rural Combining Designations map, and is designated “rural area” in the Rural Land Use Category map. The project is also in the coastal zone.

The Geologic Study Area combining designation is applied to areas where geologic and soil conditions could present new developments and their users with potential hazards to life and property as a result of earthquakes, landslides, soil liquefaction, and/or erosion or unstable soil. This last condition is applicable to the coastal bluffs.

The Sensitive Resource Area combining designation is applied to areas with special environmental qualities or areas containing unique or endangered vegetation or habitat resources.
The North Coast Land Use Element (revised August 24, 2008) describes rural lands as “primarily those of steeper terrain with dense vegetation or rocky outcroppings….Another rural lands area is the northwestern corner of the planning area where steep terrain rises directly from the ocean terrace.”

**Description of Project**

The project was initiated to address a recurring slipout below the highway that requires repeated repairs. To permanently stabilize the highway at this location, a soldier pile retaining wall would be constructed down slope of the highway. The wall would be approximately 1000 feet long. The full height of the wall would be about 50 feet tall at its maximum, but the majority of the wall would be below ground and not visible.

As part of the project, the roadway width would be brought up to current design standards. The existing roadway contains 11-foot lanes with generally no paved shoulder and a very narrow space between the edge of the road and the steep, uphill slope. Debris from the slope frequently rains down on the roadway, requiring repeated maintenance efforts that can slow traffic. The new roadway would be slightly straightened and widened to accommodate a 12-foot lane with 4-foot shoulder in each direction. The western limit of the existing permanent roadway easement would be extended to 30 feet beyond the new roadway centerline.

The project would also include a 2- to 4-foot-wide catchment area next to the roadway on the uphill slope to control debris. The dirt excavated during construction would be replaced at a 1.5:1 slope (horizontal distance : vertical distance), covering most of the wall height, and reseeded for erosion control. At the top of this slope, an 8-foot-wide dirt “bench” would be constructed along the length of the wall to provide access for maintenance. The edge of this bench would be planted with seacliff buckwheat. The existing drainage system within the project limits would also be repaired where damaged, and modified to accommodate the wall.

**Surrounding Land Uses and Setting**

The project is located 0.8 mile north of Ragged Point on Highway 1 along a steep, rocky hillside on the western slope of the Santa Lucia mountain range; there are steep slopes both above and below the roadway. The area is bordered to the southwest by the Pacific Ocean and to the northeast by the vast open space of the Santa Lucia Range. Project work would occur in an active landslide area consisting of a steep
slope of loose, unconsolidated material; the slope below the roadway is an active slide. The existing natural habitat consists of coastal scrub growing along steep, often rocky slopes.

The land on either side of the highway within the project limits is privately owned by a single owner. The highway lies on a permanent easement across the property that extends 30 feet on each side of the center line. There are three nearby developments on the west side of the highway: a private residence about 750 feet north of the project; a private residence about 1500 feet south of the project; and the Ragged Point Inn, about three quarters of a mile (measured overland, or a little under a mile driving distance) to the south.

**Other Public Agencies Whose Approvals Are Required**
The project area is within the coastal zone; a coastal development permit would be acquired from San Luis Obispo County.

If approved, the project would be submitted to the California Transportation Commission for programming and funding allocation. The current project cost is $16.7 million; it is programmed in the State Highway Operation and Protection Program, commonly referred to as the SHOPP.
Figure 1  Project Vicinity Map
Figure 2  Project Location Map
Section 2  Environmental Factors Potentially Affected

The environmental factors checked below could cause an effect or would be potentially affected by this project.

- Aesthetics
- Agricultural Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Geology/Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology/Water Quality
- Land Use/Planning
- Mineral Resources
- Noise
- Population/Housing
- Public Services
- Recreation
- Transportation/Traffic
- Utilities/Service Systems
- Mandatory Findings of Significance
Section 3 Determination

On the basis of this determination:

- [X] I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

- [ ] I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

- [ ] I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

- [ ] I find that the proposed project MAY have a “potentially significant impact” or “potentially significant unless mitigated” impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

- [ ] I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Janet Newland
Office Chief, Central Coast Environmental Management
California Department of Transportation

Date 4-29-2013
Section 4  Impacts Checklist

The impacts checklist starting on the next page identifies physical, biological, social, and economic factors that might be affected by the project. Direct and indirect impacts are addressed in checklist items I through XVII. Mandatory Findings of Significance are discussed in item XVIII. The California Environmental Quality Act impact levels include “potentially significant impact,” “less than significant impact with mitigation,” “less than significant impact,” and “no impact.”

A brief explanation of each California Environmental Quality Act checklist determination follows each checklist item. Lengthy explanations, if needed, are provided after the checklist.
I. AESTHETICS — Would the project:

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

Explanation: It will have a less than significant impact. The structure will not affect the ocean view and will be a subordinate element within the larger viewshed. (Source: Scenic Resource Evaluation and Visual Analysis, November 2012.)

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

Explanation: No individual scenic resources as defined by CEQA will be affected by construction of the project, but since this highway is renowned for its scenery in general, the project will have a minor effect on visual quality. There are no historic buildings within the project limits. (Source: Scenic Resource Evaluation and Visual Analysis, November 2012; Section 106 memorandum, September 2012.)

c) Substantially degrade the existing visual character or quality of the site and its surroundings?

Explanation: Any time a new structure is constructed on this highway, there is a change in character—sometimes minor, sometimes more substantial. This project's features would be consistent with viewers’ expectations along this section of the travel corridor and the change in character will be minimal. See Additional Explanations for Questions in the Impacts Checklist for more information. (Source: Scenic Resource Evaluation and Visual Analysis, November 2012.)

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

Explanation: There will be no effect on nighttime views. Daytime views will be slightly impacted because of the additional pavement, metal beam guard railing, concrete anchor blocks and soldier pile shotcrete covering. All of these project features are being treated to reduce reflectivity by coloring, staining and rough-textured finishing. Glare added by construction of the project will be minimal. (Source: Scenic Resource Evaluation and Visual Analysis, November 2012.)

II. AGRICULTURE AND FOREST RESOURCES —

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

Explanation: There is no farmland in the project area. (Source: Rural Land Use Category map.)

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

Explanation: There is no zoning for agriculture or Williamson Act properties in the project area. (Source: Rural Land Use Category map.)

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))?  

Explanation: There is no forest land or timberland in the project area. (Source: Rural Land Use Category map.)

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

Explanation: There is no forest land or timberland in the project area. (Source: Rural Land Use Category map.)

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 if forest land to non-forest use?

Explanation: There is no farmland or forest in the project area. (Source: Rural Land Use Category map.)

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

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

Explanation: Projects that eliminate a hazardous feature or location are exempt from this determination. Nonetheless, the contractor would have to comply with emissions thresholds and follow Caltrans standard practices that pertain to air quality control. Therefore, the project is not expected to exceed the maximum thresholds. (Source: air quality memorandum, September 2012.)

b) Violate any air quality standard or contribute
substantially to an existing or projected air quality violation?

Explanation: See response to (a) above. Compliance with Caltrans standard practices would prevent violations of air quality standards. There are no existing violations at this location. (Source: air quality memorandum, September 2012.)

c) 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 (including releasing emissions, which exceed quantitative thresholds for ozone precursors)?

Explanation: San Luis Obispo County is currently in non-attainment for the state standard for particulate matter (fine dust). The project would create dust during construction, but development projects along coastal Highway 1 are rare and dust ultimately disperses and settles. Cumulative effects on air quality are unlikely. (Source: air quality memorandum, September 2012.)

d) Expose sensitive receptors to substantial pollutant concentrations?

Explanation: The project would generate air pollutants during construction. The exhaust from construction equipment contains hydrocarbons, oxides of nitrogen, carbon monoxide, suspended particulate matter (fine dust), and odors. The largest percentage of pollutants would be windblown dust generated during excavation, grading, hauling, and various other activities. The impacts of these activities would vary each day as construction progressed. Dust and odors generated during construction would cause occasional annoyance and complaints from residents near the project.

The contractor would have to comply with emissions thresholds and follow Caltrans standard practices that pertain to air quality control. These conditions should effectively reduce and control emissions impacts during construction. (Source: air quality memorandum, September 2012.)

e) Create objectionable odors affecting a substantial number of people?

Explanation: See response to (d) above. Construction equipment would generate odors that could be detected by nearby residents and travelers on the highway. (Source: air quality memorandum, September 2012.)

IV. 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?
**Explanation:** The project would impact habitat for Smith’s blue butterfly (federally endangered) and peregrine falcon (state Fully Protected). Further discussion follows this checklist under *Additional Explanations for Questions in the Impacts Checklist.* (Source: Natural Environment Study, October 2012.)

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

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**Explanation:** Two major plant communities dominate the project area: coastal scrub and ruderal/disturbed. Neither of these is considered sensitive. (Source: Natural Environment Study, October 2012.)

c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

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**Explanation:** There are no federally jurisdictional wetlands in the project area. Further discussion follows this checklist under *Additional Explanations for Questions in the Impacts Checklist.* (Source: Natural Environment Study, October 2012.)

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?

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**Explanation:** See response to question (a) above.

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

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**Explanation:** The proposed project does not appear to conflict with any local policies or ordinances. The project would be subject to a Coastal Development Permit administered by the County of San Luis Obispo. As part of the permitting process, the County would review the project for compliance. (Source: Coastal Zone Land Use Ordinance, revised November 2011.)

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?

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**Explanation:** There are no conservation plans applicable to this location. See response to question (e) above.
V. CULTURAL RESOURCES — Would the project:

a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?

Explanation: No historic properties are present within the project Area of Potential Effects. (Memorandum on cultural resource study, September 12, 2012.)

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

Explanation: Archaeological resources are considered “historical resources” and are covered under question V(a).

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

Explanation: There is a low probability of encountering paleontological resources with this project. (Paleontology Identification Report, September 28, 2012.)

d) Disturb any human remains, including those interred outside of formal cemeteries?

Explanation: Human remains fall under historic properties. Based on a field visit, review of design plans, and a review of cultural resources on file, the project has no potential to affect historic properties. (Memorandum on cultural resource study, September 12, 2012.)

VI. GEOLOGY AND SOILS — Would the project:

a) Expose people or structures to 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.

Explanation: The site is not located within the Earthquake Fault Hazard Zone in California. The potential for surface fault rupture hazard is considered low. (Source: Preliminary Foundation Report, July 2011.)

ii) Strong seismic ground shaking?

Explanation: The project site is potentially subject to strong ground motions from earthquakes. The wall would be designed to withstand ground movement, per recommendations provided by Caltrans Geotechnical Services. (Source: Preliminary Foundation Report, July 2011.)

iii) Seismic-related ground failure, including liquefaction?

Explanation: The potential for surface fault rupture hazard is considered low. (Source: Preliminary Foundation Report, July 2011.)
**Explanation:** The potential for soil liquefaction due to strong ground shaking is considered low. (Source: Preliminary Foundation Report, July 2011.)

iv) Landslides? ☒ ☐ ☐ X

**Explanation:** The project was initiated because the site is within a location prone to landslides. The localized slide is being monitored to determine its extent; the results of the monitoring will be used to design a project that would fully repair and stabilize the location. (Source: Preliminary Foundation Report, July 2011.)

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

**Explanation:** The soil makeup, coupled with steep slopes, has resulted in a continual process of natural erosion from the hillside both above and below the highway.

During construction, much of the hillside below the highway would be excavated and the material stockpiled while the wall was being built. This material would be replaced and graded to a 1.5:1 slope (horizontal distance : vertical distance) or flatter and the slope seeded to help minimize future erosion, though the area is likely to continue to erode to some extent. (Source: Preliminary Foundation Report, July 2011; Scenic Resource Evaluation and Visual Analysis, October 2012.)

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 onsite or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse? ☒ ☐ ☐ ☐

**Explanation:** See explanations above for questions (a) iii and iv and question (b). A geologic map shows the project site is underlain by landslide deposits and Franciscan Complex. The Franciscan Complex is generally described as an extensive sequence of rocks, most of which began as sedimentary deposits in a deep ocean environment. The sedimentary rocks, along with the fragments of volcanic and metamorphic rocks from the crust and mantle of the oceanic plate, are sheared and jumbled together into a unit referred to as mélange.

The project area is inherently unstable; this instability has generated the project need. The project is intended to stabilize the underlying soil and thereby maintain a safe highway corridor. (Source: Preliminary Foundation Report, July 2011.)

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

**Explanation:** Soil at the project site is primarily fill and landslide materials overlying metamorphic bedrock. The fill and landslide materials consist of very loose to very dense clayey sand with gravel and cobbles, sandy silt, and poorly graded gravel with clay. The metamorphic bedrock is a mixture of slightly weathered, very hard cobbles to boulder-sized blocks within very weathered or very soft material. (Source: Preliminary Foundation Report, July 2011.)

e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems ☒ ☐ ☐ ☐
where sewers are not available for the disposal of wastewater?

Explanation: This question is not applicable to the project as there are no septic tanks or wastewater disposal systems included in the project.

VII. GREENHOUSE GAS EMISSIONS: Would the project:

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

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

An assessment of the greenhouse gas emissions and climate change is included in Appendix A of the environmental document. While Caltrans has included this good faith effort in order to provide the public and decision-makers as much information as possible about the project, it is Caltrans’ determination that in the absence of further regulatory or scientific information related to greenhouse gas emissions and CEQA significance, it is too speculative to make a significance determination on the project’s direct and indirect impact with respect to climate change. Caltrans does remain firmly committed to implementing measures to help reduce the potential effects of the project. These measures are outlined in Appendix A of the environmental document.

VIII. 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?

Explanation: There are no nearby hazardous waste sites or businesses commonly associated with hazardous waste generation. (Source: Initial Site Assessment September 2012.)

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?

Explanation: The use or transport of hazardous materials is not included with this project, therefore an accident is unlikely to occur. (Source: project description; Initial Site Assessment September 2012.)

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?
Potentially significant impact | Less than significant impact with mitigation | Less than significant impact | No impact
--- | --- | --- | ---

Explanation: There are no schools, proposed or existing, within one quarter mile of the project. (Source: San Luis Obispo County map.)

d) Be located on a site that 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?

[ ] [ ] [ ] [x]

Explanation: The location is not on any list of hazardous material sites. (Source: Initial Site Assessment September 2012.)

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 for people residing or working in the project area?

[ ] [ ] [x] [ ]

Explanation: The location is not within an airport land use plan or within two miles of an airport. (Source: San Luis Obispo County map.)

f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

[ ] [ ] [x] [ ]

Explanation: The location is not within the vicinity of a private airstrip. (Source: San Luis Obispo County map.)

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

[ ] [x] [ ] [ ]

Explanation: At least one lane of traffic would be open during most of the construction period and there would be temporary full closures of up to 10 hours. In the case of an emergency, road barriers would be removed. (Source: personal communication with D. Miller, Senior Transportation Engineer, Caltrans Construction, November 2012.)

h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

[ ] [ ] [ ] [x]

Explanation: The proposed project includes the construction of a wooden wall that could be moderately susceptible to a wildland fire. The tightly stacked wooden beams, backed by dirt and supported by an infrastructure of concrete and steel, would not be highly flammable and would be less likely to burn than the surrounding brush. While a wildland fire in this area could result in a temporary closure of the highway, the wall would not be a unique contribution to the fire. In the event that the wall was damaged during a wildland fire, the damage would not likely be severe enough to compromise the highway. (Source: personal communication with D. Miller, Senior Transportation Engineer, Caltrans Construction, October 2012.)
**IX. HYDROLOGY AND WATER QUALITY —**

Would the project:

a) Violate any water quality standards or waste discharge requirements?  

Explanation: Best Management Practices would be included in the project to protect water quality. In addition, the contractor would be required to prepare a Stormwater Pollution Prevention Plan prior to construction and abide by Caltrans Standard Specifications related to water quality during construction. (Source: water study memorandum, September 2012.)

b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?

Explanation: Existing stormwater drains would be maintained with the project. (Source: project plans.)

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or offsite?

Explanation: There are no streams or rivers in the project vicinity. (Source: field survey)

d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?

Explanation: See response to questions (b) and (c) above.

e) Create or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?

Explanation: The existing drainage system would remain, but would be repaired and modified to accommodate the wall. The wider roadway would create a negligible increase in non-permeable surface area; there would be no other source of additional runoff. (Source: project plans)

f) Otherwise substantially degrade water quality?

Explanation: See response to question (a) above.

g) Place housing within a 100-year flood hazard area

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**Elephant Trunk Slide Permanent Restoration**
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X. **LAND USE AND PLANNING** — Would the project:

a) Physically divide an established community?  

*Explanation:* There would be no change in the spatial relationship of the highway to residences or businesses. (Source: project description)

b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

*Explanation:* The project would be potentially in conflict with Coastal Zone Land Use Ordinance Section 23.06.044(a) related to nighttime noise levels. Measures have been included to bring the project into compliance or moderate the adverse effects the Ordinance addresses. The project would require a coastal development permit from the County of San Luis Obispo prior to construction; final determination of compliance will be made by the County at that time. As a permit condition, the County might require additional measures and/or refinement of some aspects of the project, such as aesthetic treatment, which would be incorporated. Further discussion follows this checklist under *Additional Explanations for Questions in the Impacts Checklist.* (Source: Coastal Zone Land Use Ordinance, revised November 2011)

XI. **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?ym

*Explanation:* There would be no change in the spatial relationship of the highway to residences or businesses. (Source: project description)
**Explanation:** There are no known mineral resources in the project area. (Source: Preliminary Foundation Report, July 2011)

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?  

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**Explanation:** There are no known mineral resource recovery sites in the project area. (Source: Preliminary Foundation Report, July 2011)

**XII. NOISE** — Would the project result in:

a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

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**Explanation:** The contractor would be required to abide by the local noise ordinance to the extent possible. Night work would be necessary and could exceed the allowable decibel levels at the nearby residence. Further discussion follows this checklist under *Additional Explanations for Questions in the Impacts Checklist.* Because the project is subject to a coastal development permit, Caltrans would be subject to all standards in the San Luis Obispo County General Plan. (Source: Noise study memorandum, September 2012.)

b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

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**Explanation:** Because of the extensive earth-moving and subsurface activities involved on this project, there could be some noticeable vibrations to nearby receptors. In accordance with local regulations, this effect would not be allowed to rise above “nuisance” level. (Source: Coastal Zone Land Use Ordinance, revised November 2011.)

c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

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**Explanation:** The project would not add any permanent noise source. (Source: project description)

d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

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**Explanation:** During construction, there is the potential to temporarily disturb nearby residents through an increase in ambient and periodic noise levels that could be substantial at times. Further discussion follows this checklist under *Additional Explanations for Questions in the Impacts Checklist.* (Source: Noise study memorandum, September 2012.)

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 expose people residing or working in the project area to excessive noise levels?

**Explanation:** The project is not located within an airport land use plan or within two miles of an airport. (Source: North Coast Area Plan, revised August 24, 2008; Google Earth)

f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

**Explanation:** The project area is not within the vicinity of a private airstrip. (Source: Google Earth)

**XIII. POPULATION AND HOUSING** — Would the project:

a) Induce substantial 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)?

**Explanation:** The project has no growth-inducing components. (Source: project description)

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

**Explanation:** The project would not remove any housing. (Source: project description; project plans)

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

**Explanation:** The project would not displace any people. (Source: project description; project plans)

**XIV. PUBLIC SERVICES** —

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?
  - Potentially significant impact
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- Police protection?
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Explanation: During construction, there could be delays for emergency response vehicles due to one-way traffic or temporary road closures. Emergency vehicles would be given priority and road barriers would be removed. The final project could improve response times for emergency vehicles and school busses because its purpose is to permanently repair a portion of the highway that is repeatedly in danger of failing. Both highway failure and maintenance efforts can impede traffic flow. The project would reduce the likelihood of either. (Source: project description)

XV. 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?

Explanation: The project would have no impact on recreational facilities. (Source: project description)

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

Explanation: The project would have no impact on recreational facilities. (Source: project description)

XVI. TRANSPORTATION/TRAFFIC — Would the project:

a) Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?

Explanation: The project would not add capacity to the highway or increase traffic. (Source: project description)

b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?
Explanation: Periodically limiting the roadway to one lane during construction would cause temporary congestion and delays lasting several minutes while traffic from the opposing direction was cleared through the project site. In addition, there would be temporary road closures of 8 to 10 hours during construction. These closures would be timed to have the least impact on traffic, likely occurring at night, and would be advertised in the media in advance. The project would not permanently affect the level of service of the roadway. (Source: project description.)

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

Explanation: The project would have no effect on air traffic. (Source: project description)

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

Explanation: The project would bring this section of the highway up to current width standards. All standard safety design features would be included. (Source: project description; project plans)

e) Result in inadequate emergency access?

Explanation: Emergency response vehicles could be delayed during construction if there is a traffic queue, but they would not be blocked from getting through even in the event of a full road closure. (Source: personal communication with Traffic Safety, October 2012.)

f) Result in inadequate parking capacity?

Explanation: There is no parking need within the project limits. (Source: project mapping; field review)

g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?

Explanation: The project includes widening the roadway shoulders to 4 feet, which would accommodate cyclists and pedestrians. (Source: project plans)

XVII. UTILITY AND SERVICE SYSTEMS — Would the project:

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

Explanation: There is no wastewater treatment included in the project. (Source: project description)

b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing
facilities, the construction of which could cause significant environmental effects?

*Explanation:* There would be no requirement for water or additional source of wastewater as a result of the project. (Source: project description)

c) Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

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*Explanation:* The existing stormwater drains would be modified to extend drainage beyond the new wall. All work would be within the area of disturbance for the project, therefore there would be no additional environmental impacts as a result of the modifications. (Source: project mapping)

d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

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*Explanation:* There is no water service required for the project. (Source: project description)

e) Result in a determination by the wastewater treatment provider that 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?

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*Explanation:* There would be no wastewater treatment provider required for the project. (Source: project description)

f) Be served by a landfill with sufficient permitted capacity to accommodate the project’s solid waste disposal needs?

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*Explanation:* The majority of material from the project would either be reused on site (dirt) or taken to a recycling facility (old asphalt concrete, metal). Anticipated trash haul off from the project would be in the vicinity of 10-20 cubic yards. (Source: personal communication with D. Miller, Senior Transportation Engineer, Caltrans Construction, November 2012.)

g) Comply with federal, state, and local statutes and regulations related to solid waste?

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*Explanation:* The contractor would be required to abide by all laws and regulations, as well as all Caltrans standard specifications pertaining to hazardous waste. (Source: personal communication with District Hazardous Waste Coordinator, November 2012.)

**XVIII. MANDATORY FINDINGS OF SIGNIFICANCE —**

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

**Explanation:** Unmodified, the project could substantially reduce the habitat for and potentially reduce the number of Smith’s blue butterfly, a federally endangered species, and the American peregrine falcon, a state Fully Protected species. Further discussion follows this checklist under *Additional Explanations for Questions in the Impacts Checklist, Biological Resources.* (Source: Natural Environment Study, October 2012.)

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)?

**Explanation:** Due to the rural area and steep, unstable terrain, there is little development or construction within a wide area around the project location. There are no known nearby projects. Therefore, there are no cumulative impacts anticipated. (Source: Google Earth)

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

**Explanation:** The final project would have no adverse effects on humans. Construction activities have the potential to cause nuisance effects from noise, dust, and traffic delays. None of these are expected to be significant. Further discussion can be found under the checklist questions for these topics. (Source: environmental technical documents prepared for this project; environmental analysis of project conducted by Caltrans staff throughout 2012.)
**Additional Explanations for Questions in the Impacts Checklist**

**Aesthetics (checklist item I, question c)**

**Affected Environment**
Highway 1 is classified as an All-American Road in the National Scenic Byway system (their highest ranking), and is a Designated State Scenic Highway, the first to be so designated in California. Although the coastline in this area is visually dynamic, with dramatic cliffs above the highway, overall visual quality within the project limits is only moderately high. From Highway 1, a northbound driver has mid-ground and horizon line views of the ocean, but not beach views. Drivers in the southbound lane have a much more dramatic panoramic view of the ocean and distant shoreline.

Overhead utilities along the shoulder slightly lower visual quality. The steep slope above the highway is sparsely vegetated; the slope below the road is mostly a dense mixture of native coastal scrub plants and invasive weeds. On the highway, the patchwork appearance of repaired pavement, irregular shoulders and uneven roadway surface, and temporary traffic safety devices (such as orange cones) are detracting elements within the viewshed.

**Environmental Consequences**
The project will not adversely affect any Designated Scenic Resource as defined by California Environmental Quality Act guidelines or by Caltrans policy. Slightly widening the highway for the length of the project will not have a noticeable effect on the scale or character of Highway 1. For northbound travelers there will be a brief view of the wall face, but the main visible element of the proposed structure will be the tubular steel safety railing on top of the wall. Southbound travelers will have a much longer view of the wall face, but the structure will not affect the ocean view and will be a subordinate element within the larger view shed. Distant views to the project are generally blocked by intervening topography and the highway alignment. The retaining wall will not be visible from any public use areas or businesses. The wall might be visible at an acute angle from the residence north of the project limits.

**Avoidance, Minimization, and/or Mitigation Measures**
The concrete covering the soldier piles will be colored to blend with adjacent ground. The tubular steel railing will be treated to darken and dull the galvanized finish, reducing its prominence in the overall viewshed. (The only open-style railing that currently meets all the safety criteria for this location is Type ST-70, shown in Figure
3. If another style becomes available prior to construction, that type could be used instead.) The same treatment will be applied to metal beam guard rail at wall approaches. If the design requires concrete anchor blocks at the wall ends, they will be colored the same as the concrete on soldier piles. Native shrubs will be planted along the edge of the bench in front of the wall with a year of plant establishment work included in the contract. All disturbed soil area will be contour graded to appear natural, seeded with native grasses and shrubs, and then covered with compost to provide erosion control and to camouflage the disturbance.

Figure 3 Type ST-70 Bridge Rail

**Biological Resources (checklist item IV, questions a, c, and d)**

**Affected Environment**

The project is within the known range of the federally endangered Smith’s blue butterfly. Individuals spend their entire lives in association with seastiff buckwheat (*Eriogonom parvifolium*), typically remaining within 200 feet of their host plant. Seacliff buckwheat commonly grows in recently disturbed locations, such as in landslide areas; the plant occurs within the project area in the ruderal communities and disturbed portions of coastal scrub. Clumps and individual plants were found both above and below the roadway, though the majority of plants are distributed along the northbound shoulder and steep hillside above the roadway.
The American peregrine falcon (*Falco peregrinus anatum*) is listed by the California Department of Fish and Wildlife as a Fully Protected species. Their nest sites are generally located on steep cliff systems, but can also be found in stick nests made by other birds, such as red-tailed hawks, or upon man-made structures. The project site lies between two known peregrine falcon nesting locations: Ragged Point and the “County Line” cliff. Future nest sites could be established at either of these locations, or another nearby cliff.

Two natural drainages within the project limits cause water to collect in two locations along the road at the base of the slope, creating small (less than 200 square feet each) wetland areas. The wetlands do not function to improve water quality, store floodwater or recharge groundwater. They do function to minimally discharge groundwater and provide a small amount of habitat for hydrophytic plant species.

**Environmental Consequences**

As many as 57 seacliff buckwheat plants could be impacted by the project, which could result in injury or death to various life stages of Smith’s blue butterfly.

The project could impact American peregrine falcons by creating audio or visual disturbances that disrupt incubation of eggs, brooding of chicks, or prey deliveries to an incubating adult or chick(s), leading to a failed nesting attempt. The County Line cliff, if occupied, would likely be impacted by this project because of its close proximity and direct line-of-sight. The Ragged Point site is farther from the project location and is shielded from potential audio and visual disturbances by distance and topography; it would not be impacted.

The project would temporarily impact about 300 square feet of wetlands (as defined by the California Department of Fish and Wildlife) within the inland shoulder area. However, the project would not remove the environment that creates the wetland areas; therefore it is expected that the wetlands would re-establish after construction.

**Avoidance, Minimization, and/or Mitigation Measures**

Conditions have been included in the project design to remediate potential impacts to environmental resources that could result if the proposed project were built.

The following general avoidance and minimization measures would be implemented:

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1 This is also the definition adopted by the California Coastal Commission. These areas do not meet the definition of wetlands as jointly defined by the U.S. Army Corps of Engineers or the Environmental Protection Agency. Therefore they do not fall under federal jurisdiction.
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 Area limits will be depicted on the final layout plans.

2. Five days prior to the beginning of work, the Resident Engineer shall 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 shall 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 shall contact the environmental planning 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 shall be selected.

4. Temporary effects to water quality will be avoided by implementing the best management practices from Caltrans’ National Pollution Discharge Elimination System permit. These standard best management practices will be employed to prevent direct or indirect impacts to the Pacific Ocean.

The following avoidance and minimization measures would be implemented for Smith’s blue butterfly:

5. Caltrans will ensure that all construction activities follow well-defined procedures to avoid effects to the Smith’s blue butterfly.

6. Caltrans will prohibit mowing and broadcast spraying of herbicide in stands of buckwheat. Within areas that contain buckwheat, control of invasive weeds, which is beneficial to buckwheat, will be achieved by spot spraying herbicide and/or hand clearing.

7. Caltrans will ensure that only biologists approved by the U.S. Fish and Wildlife Service (Service) will participate in the capture, handling, and monitoring of the
Smith’s blue butterfly in all of its life stages and the handling of buckwheat plants.

8. Caltrans will ensure that ground disturbance for maintenance or project activities will not begin within stands of buckwheat until a Service-approved biologist is on site.

9. Service-approved biologists will verify that the proposed work activity within stands of buckwheat meets all criteria established by the Service.

10. For maintenance work or project activity within stands of buckwheat, a Service-approved biologist will survey the work site no more than 30 days before the onset of ground disturbance. If any life stage of the Smith’s blue butterfly or its host plant, seacliff buckwheat, is found and is likely to be killed or injured by work activities, the approved biologist will be allowed sufficient time to relocate seacliff buckwheat plants, duff, and/or soil from the site before work activities begin. The seacliff buckwheat plants, duff, and/or soil will be hand removed and placed as close as possible to, but not on, living seacliff buckwheat plants. The Service-approved biologist will relocate the seacliff buckwheat plants, duff, and/or soil the shortest distance possible to a location that contains suitable habitat and will not be affected by activities associated with the proposed project. The Service-approved biologist will maintain detailed records of the number of seacliff buckwheat plants that are moved.

11. Before any maintenance or project activity work begins within stands of buckwheat, a Service-approved biologist will provide training to all field personnel. At a minimum, the training will include a description of the Smith’s blue butterfly and its habitat, the specific measures that are being implemented to conserve the Smith’s blue butterfly, and boundaries within which the project may be accomplished. Brochures, books, and briefings may be used in the training session, provided that a qualified person is on hand to answer any questions.

12. A Service-approved biologist will be present at the work site for maintenance or project activity within stands of buckwheat until all Smith’s blue butterflies and seacliff buckwheat plants that are at risk due to project activities have been removed, workers have been instructed, and disturbance to habitat has been completed. After this time, Caltrans will designate a person to monitor on-site compliance with all minimization measures. The Service-approved biologist will ensure that this monitor receives the training outlined in measure 11 and in the
identification of the Smith’s blue butterfly and seacliff buckwheat. If the monitor or the Service-approved biologist recommends that work be stopped because the Smith’s blue butterfly or seacliff buckwheat would be affected to a degree that exceeds the levels anticipated by Caltrans and the Service during review of the proposed action, they will notify the Resident Engineer immediately. The Resident Engineer will either resolve the situation by eliminating the unanticipated effect(s) immediately, or require that all actions causing these effects be halted. If work is stopped, the Service will be notified as soon as is reasonably possible.

13. An assemblage of native species will be used for revegetation of project sites. Seacliff buckwheat seed or plants will be placed outside the vegetation control areas only. The spread of invasive weeds during revegetation efforts will be controlled according to the Vegetation Management Guidelines developed as part of the Big Sur Coast Highway Management Plan.

14. The number of access routes, size of staging areas, and the total area of the activity will be limited to the minimum necessary to achieve the project goal. Environmentally Sensitive Areas will be established to confine access routes and construction areas to the minimum area necessary to complete construction, and minimize impact to Smith’s blue butterfly and seacliff buckwheat.

15. If feasible, the contractor will avoid clearing and grubbing coastal scrub in the areas for temporary road access. Coastal scrub vegetation will be cut down to ground level, to allow for regrowth of natural vegetation and reduce the potential for invasive species.

16. Caltrans will ensure that best management practices are implemented according to the most current approved guidelines to control erosion and sedimentation during and after project implementation. Weed-free hay and straw bales would be used for erosion control measures when they become available.

The proposed project must be designed and scheduled to have no net impacts to American peregrine falcon. The following avoidance and minimization measures would be implemented for this species:

17. Prior to construction, a biologist approved by the California Department of Fish and Wildlife (California Fish and Wildlife) with experience conducting American
peregrine falcon surveys will conduct protocol-level surveys for American peregrine falcons at the project site. The focus of pre-construction surveys will be to determine presence, locate nest site(s), determine breeding phenology, and establish nest site productivity (if nesting occurs). Protocol-level pre-construction surveys will be completed annually until the project begins construction.

18. No work will be permitted within 500 feet of an active American peregrine falcon nest from February 15 to August 31 (the raptor breeding season). No work will be permitted within 0.5 mile of an active nest site for the duration of the incubation period, between egg-laying and hatching, which lasts approximately six weeks. Nesting phenology will be determined by the pre-construction surveys and/or the biological monitor. Nesting phenology may vary from year to year, but generally the six-week incubation period spans from mid-March to mid-April or mid-April to mid-May in central California. Work may resume within 0.5 mile of an active nest when the project biologist determines the falcons are no longer incubating eggs, or that the nest has failed and there is no possibility of a replacement clutch (secondary nesting attempt).

19. A California Fish and Wildlife-approved biologist with experience observing breeding American peregrine falcons will be selected to monitor peregrines during construction of the project.

20. The California Fish and Wildlife-approved biologist will monitor peregrines at the project site from February 15 to August 31. Monitoring will require an average of 8 to 12 hours of observation per week to determine the effect of construction and determine whether peregrine falcons are exhibiting normal breeding behavior. This level of effort will continue as long as incubating peregrines or nestlings under the care of adults occupy the nesting site. If the young fledge, then the observations will continue for a minimum of 30 work days after the last young leaves the nest ledge. All monitoring will be conducted with the use of binoculars and/or spotting scope from a minimally invasive distance and document all American peregrine falcon activity in the vicinity of the project.

21. Quarterly reports summarizing monitoring observations of nesting American peregrine falcons, including breeding behavior, nest data, disturbances, and reproductive success, will be prepared by the biological monitor and submitted during construction of the project. Monitoring reports shall be submitted to the California Fish and Wildlife Regional Representative, Laura Peterson-Diaz, via
email at lpdiaz@dfg.ca.gov. Fish and Wildlife may at any time increase or decrease the timing and number of monitoring reports required under this condition depending on the results of previous surveys or reports.

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

22. Prior to construction, vegetation removal shall be scheduled to occur between September 1 and February 14 (outside of the typical nesting season) if possible, to avoid potential impacts to nesting birds within the project area.

23. Prior to construction, if construction activities are proposed to occur between February 15 and August 31 (the typical nesting season) within potential nesting habitat within the project area, a nesting bird survey shall be conducted by a qualified biologist at least two weeks prior to construction to determine presence/absence of nesting birds within the project area. Work activities shall be avoided within 100 feet of active bird nests until a qualified biologist has determined that young birds have fledged. Readily visible exclusion zones shall be established in areas where nests must be avoided. The U.S. Fish and Wildlife Service and California Department of Fish and Wildlife shall be contacted for additional guidance if nesting birds are observed within or near the boundaries of the project site. Active nests shall not be disturbed and eggs, or young of birds covered by the Migratory Bird Treaty Act and California Fish and Wildlife Code shall not be killed, injured, or harassed at any time.

The following avoidance and minimization measures would be implemented for wetlands:

24. The temporary wetland impacts must be restored at a 1:1 ratio in approximately the same locations as the wetlands exist now. The catchment basin proposed for the toe of the inland slope will continue to provide similar hydrology to support wetland vegetation.

25. All material to be temporarily excavated at the existing wetland area will be stockpiled and retained until the catchment basin construction is completed and the material can be replaced. The retention and reuse of the native parent material will allow for the existing hydrophytic vegetation seed bank within the soil to passively revegetate the wetland.
Noise (checklist items VII, question d and X, question b)

Affected Environment
The project vicinity is sparsely populated, which greatly reduces the number of noise receptors that could be bothered by construction noise. Three receptors, all located down-slope of the highway, could potentially be affected: a private residence about 750 feet north of the construction area; a private residence about 1500 feet south of the construction area; and the Ragged Point Inn, a resort complex about 3700 feet south of the construction area. However, the undulating topography provides some interference and prevents sound waves from impacting any of these receptors directly.

Environmental Consequences
A number of construction activities and equipment are likely to produce noise that could cause a noise disturbance such as vehicles (including backup alarms), drills, pounding, and earth movement. At the receptor locations, the dominant noise source is the ocean due to the rocky shore below. Between the dampening effect of the hills that intervene between the construction location and the receptors and the general increase in ambient daytime noise levels, construction noise is not expected to be noticeable during the day. Construction noise could be more of a disturbance at night, however, when human activities lessen, and has the potential to exceed the levels set in the San Luis Obispo County Coastal Zone Land Use Ordinance.

Avoidance, Minimization, and/or Mitigation Measures
Section 23.06.044(a) of the Coastal Zone Land Use Ordinance states, “No person shall create any noise or allow the creation of any noise at any location within the unincorporated areas of the county on property owned, leased, occupied or otherwise controlled by such person which causes the exterior noise level when measured at any of the preceding noise-sensitive land uses situated in either the incorporated or unincorporated areas to exceed the noise level standards in the following table.”

Table 1 Exterior Noise Level Standards

<table>
<thead>
<tr>
<th></th>
<th>Daytime (7 a.m. to 10 p.m.)</th>
<th>Nighttime(^1) (10 p.m. to 7 a.m.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hourly Equivalent Sound Level (L(_{eq}), dB)</td>
<td>50</td>
<td>45</td>
</tr>
<tr>
<td>Maximum level, dB</td>
<td>70</td>
<td>65</td>
</tr>
</tbody>
</table>

\(^1\) Applies only to uses that operate or are occupied during nighttime hours
The noise-sensitive land uses referenced include residential uses, bed and breakfast facilities, and hotels and motels, among others.

However, section 23.06.042 Exception to Noise Standards states that the above-noted standards “are not applicable to noise from the following sources: (d) Noise sources associated with construction, provided such activities do not take place before seven a.m. or after nine p.m. any day except Saturday or Sunday, or before eight a.m. or after five p.m. on Saturday or Sunday.”

The following measures would be included in the project to reduce impacts from construction noise:

- Manufacturer recommended mufflers should be fitted to all equipment in use.
- To the extent practicable, during evening hours of 10:00 p.m. to 7:00 a.m., the job site should not exceed a maximum hourly equivalent sound level of 45 decibels or a maximum sound level of 65 decibels at the property line of nearby receptors.
- To the extent practicable, local noise ordinances must be observed, in accordance with the County of San Luis Obispo General Plan “Noise Element” requirements.

In addition, measures would be included to address situations when the above measures were not practicable. These would include one or more of the following:

- Notifying the public of the construction schedule.
- Coordinating with affected residents.
- Constructing a barricade between the noise source and the receptor(s).
- Temporarily relocating affected individuals.
Appendix A  Climate Change

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

While climate change has been a concern for several decades, the establishment of the Intergovernmental Panel on Climate Change (IPCC) by the United Nations and World Meteorological Organization in 1988, has led to increased efforts devoted to greenhouse gas emissions reduction and climate change research and policy. These efforts are primarily concerned with the emissions of greenhouse gas generated by human activity including carbon dioxide (CO$_2$), methane (CH$_4$), nitrous oxide (N$_2$O), tetrafluoromethane, hexafluoroethane, sulfur hexafluoride (SF$_6$), HFC-23 (fluoroform), HFC-134a (s, s, s, 2-tetrafluoroethane), and HFC-152a (difluoroethane).

In the U.S., the main source of greenhouse gas emissions is electricity generation, followed by transportation. In California, however, transportation sources (including passenger cars, light duty trucks, other trucks, buses, and motorcycles make up the largest source (second to electricity generation) of greenhouse gas emitting sources. The dominant greenhouse gas emitted is CO$_2$, mostly from fossil fuel combustion.

There are typically two terms used when discussing the impacts of climate change. "Greenhouse Gas Mitigation" is a term for reducing greenhouse gas emissions in order to reduce or "mitigate" the impacts of climate change. “Adaptation,” refers to the effort of planning for and adapting to impacts resulting from climate change (such as adjusting transportation design standards to withstand more intense storms and higher sea levels).²

There are four primary strategies for reducing greenhouse gas emissions from transportation sources: 1) improving the transportation system and operational efficiencies, 2) reducing growth of vehicle miles traveled (VMT), 3) transitioning to lower greenhouse gas emitting fuels, and 4) improving vehicle technologies. To be most effective all four strategies should be pursued collectively. The following Regulatory Setting section outlines state and federal efforts to comprehensively reduce greenhouse gas emissions from transportation sources.
**Regulatory Setting**

With the passage of several pieces of legislation including State Senate and Assembly bills and Executive Orders, California launched an innovative and proactive approach to dealing with greenhouse gas emissions and climate change.

Assembly Bill 1493 (AB 1493), Pavley. Vehicular Emissions: Greenhouse Gases, 2002: requires the California Air Resources Board to develop and implement regulations to reduce automobile and light truck greenhouse gas emissions. These stricter emissions standards were designed to apply to automobiles and light trucks beginning with the 2009-model year. In June 2009, the U.S. Environmental Protection Agency (U.S. EPA) Administrator granted a Clean Air Act waiver of preemption to California. This waiver allowed California to implement its own greenhouse gas emission standards for motor vehicles beginning with model year 2009. California agencies will be working with federal agencies to conduct joint rulemaking to reduce greenhouse gas emissions for passenger cars model years 2017-2025.

Executive Order (EO) S-3-05: (signed on June 1, 2005, by former Governor Arnold Schwarzenegger) the goal of this EO is to reduce California’s greenhouse gas emissions to: 1) year 2000 levels by 2010, 2) year 1990 levels by the 2020, and 3) 80 percent below the year 1990 levels by the year 2050. In 2006, this goal was further reinforced with the passage of Assembly Bill 32.

AB 32, the Global Warming Solutions Act of 2006, Núñez and Pavley: AB 32 sets the same overall greenhouse gas emissions reduction goals as outlined in EO S-3-05, while further mandating that the California Air Resources Board create a scoping plan, (which includes market mechanisms) and implement rules to achieve “real, quantifiable, cost-effective reductions of greenhouse gases.”

Executive Order S-20-06: (signed on October 18, 2006 by former Governor Arnold Schwarzenegger) further directs state agencies to begin implementing AB 32, including the recommendations made by the California’s Climate Action Team.

Executive Order S-01-07: (signed on January 18, 2007 by former Governor Arnold Schwarzenegger) set forth the low carbon fuel standard for California. Under this EO, the carbon intensity of California’s transportation fuels is to be reduced by at least ten percent by the year 2020.

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2 [http://climatechange.transportation.org/ghg_mitigation/](http://climatechange.transportation.org/ghg_mitigation/)
Senate Bill 97 (SB 97) Chapter 185, 2007: required the Governor's Office of Planning and Research (OPR) to develop recommended amendments to the California Environmental Quality Act (CEQA) Guidelines for addressing greenhouse gas emissions. The amendments became effective on March 18, 2010.

Caltrans Director’s Policy 30 (DP-30) Climate Change (approved June 22, 2012): is intended to establish a Department policy that will ensure coordinated efforts to incorporate climate change into Departmental decisions and activities. This policy contributes to Caltrans’ stewardship goal to preserve and enhance California’s resources and assets.

**Project Analysis**

An individual project does not generate enough greenhouse gas emissions to significantly influence global climate change. Rather, global climate change is a cumulative impact. This means that a project may contribute to a potential impact through its incremental change in emissions when combined with the contributions of all other sources of greenhouse gas. In assessing cumulative impacts, it must be determined if a project’s incremental effect is “cumulatively considerable” (CEQA Guidelines sections 15064(h)(1) and 15130). To make this determination the incremental impacts of the project must be compared with the effects of past, current, and probable future projects. To gather sufficient information on a global scale of all past, current, and future projects in order to make this determination is a difficult, if not impossible, task.

The AB 32 Scoping Plan mandated by AB 32 contains the main strategies California will use to reduce greenhouse gas emissions. As part of its supporting documentation for the Draft Scoping Plan, the California Air Resources Board released the greenhouse gas inventory for California (forecast last updated: October 28, 2010). The forecast is an estimate of the emissions expected to occur in the year 2020 if none of the foreseeable measures included in the Scoping Plan were implemented. The base year used for forecasting emissions is the average of statewide emissions in the greenhouse gas inventory for 2006, 2007, and 2008.

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3 This approach is supported by the AEP: *Recommendations by the Association of Environmental Professionals on How to Analyze greenhouse gas Emissions and Global Climate Change in CEQA Documents* (March 5, 2007), as well as the South Coast Air Quality Management District (Chapter 6: The CEQA Guide, April 2011) and the US Forest Service (Climate Change Considerations in Project Level NEPA Analysis, July 13, 2009).
Caltrans and its parent agency, the Business, Transportation, and Housing Agency, have taken an active role in addressing greenhouse gas emission reduction and climate change. Recognizing that 98 percent of California’s greenhouse gas emissions are from the burning of fossil fuels and 40 percent of all human made greenhouse gas emissions are from transportation, Caltrans has created and is implementing the Climate Action Program at Caltrans that was published in December 2006.4

The proposed project would not increase the capacity of the highway, as it would maintain the same number of lanes and capacity as the existing roadway. Because the project would not increase capacity nor vehicle hours travelled, no increases in operational greenhouse gas emissions are anticipated. During construction, temporary signals will be used to regulate traffic. Vehicles idling at a red signal and the presence of construction equipment could cause a temporary increase in the local concentrations of greenhouse gas emissions, but traffic volumes on this route are not heavy and therefore this increase is not expected to be substantial. While construction emissions of greenhouse gases are unavoidable, the project would provide an overall long term public benefit through improved safety and operation of the highway.

**Construction Emissions**

Greenhouse gas emissions for transportation projects can be divided into those produced during construction and those produced during operations. Construction

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4 Caltrans Climate Action Program is located at the following web address: http://www.dot.ca.gov/hq/tpp/offices/ogm/key_reports_files/State_Wide_Strategy/Caltrans_Climate_Action_Program.pdf
greenhouse gas emissions include emissions produced as a result of material processing, emissions produced by onsite construction equipment, and emissions arising from 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 mitigated to some degree by longer intervals between maintenance and rehabilitation events.

**California Environmental Quality Act Conclusion**
While construction will result in a slight increase in greenhouse gas emissions during construction, Caltrans expects that there would be no operational increase in GHG emissions associated with this proposed project. However, it is Caltrans’ determination that in the absence of further regulatory or scientific information related to greenhouse gas emissions and California Environmental Quality Act significance, it is too speculative to make a determination on the project’s direct impact and its contribution on the cumulative scale to climate change. Nonetheless, Caltrans is taking further measures to help reduce energy consumption and greenhouse gas emissions. These measures are outlined in the following section.

**Greenhouse Gas Reduction Strategies**

**AB 32 Compliance**
Caltrans continues to be actively involved on the Governor’s Climate Action Team as the California Air Resources Board works to implement Executive Orders S-3-05 and S-01-07 and help achieve the targets set forth in AB 32. Many of the strategies Caltrans is using to help meet the targets in AB 32 come from the California Strategic Growth Plan, which is updated each year. Former Governor Arnold Schwarzenegger’s Strategic Growth Plan calls for a $222 billion infrastructure improvement program to fortify the state’s transportation system, education, housing, and waterways, including $100.7 billion in transportation funding during the next decade. The Strategic Growth Plan targets a significant decrease in traffic congestion below today’s level and a corresponding reduction in greenhouse gas emissions. The Strategic Growth Plan proposes to do this while accommodating growth in population and the economy. A suite of investment options has been created that combined together are expected to reduce congestion. The Strategic Growth Plan relies on a complete
systems approach to attain CO₂ reduction goals: system monitoring and evaluation, maintenance and preservation, smart land use and demand management, and operational improvements as depicted in Figure 5, the Mobility Pyramid.

Caltrans is supporting efforts to reduce vehicle miles traveled by planning and implementing smart land use strategies: job/housing proximity, developing transit-oriented communities, and high density housing along transit corridors. Caltrans works closely with local jurisdictions on planning activities but does not have local land use planning authority. Caltrans assists efforts to improve the energy efficiency of the transportation sector by increasing vehicle fuel economy in new cars, light and heavy-duty trucks; Caltrans is doing this by supporting on-going research efforts at universities, by supporting legislative efforts to increase fuel economy, and by its participation on the Climate Action Team. It is important to note, however, that the control of the fuel economy standards is held by U.S. Environmental Protection Agency and the California Air Resources Board.

Table 2 summarizes agency and statewide efforts that Caltrans is implementing in order to reduce greenhouse gas emissions. More detailed information about each strategy is included in the Climate Action Program at Caltrans (December 2006).

**Table 2 Climate Change/Carbon Dioxide (CO₂) Reduction Strategies**

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Program</th>
<th>Partnership</th>
<th>Method/Process</th>
<th>Estimated CO₂ Savings (MMT)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Lead</td>
<td>Agency</td>
<td></td>
</tr>
<tr>
<td>Smart Land Use</td>
<td>Intergovernmental Review (IGR)</td>
<td>Caltrans</td>
<td>Local Governments</td>
<td>Review and seek to mitigate development proposals</td>
</tr>
<tr>
<td>Planning Grants</td>
<td>Caltrans</td>
<td>Local and regional agencies &amp; other stakeholders</td>
<td>Competitive selection process</td>
<td>Not Estimated</td>
</tr>
<tr>
<td>Regional Plans and Blueprint Planning</td>
<td>Regional Agencies</td>
<td>Caltrans</td>
<td>Regional plans and application process</td>
<td>0.975</td>
</tr>
<tr>
<td>Operational Improvements &amp; Intelligent Trans. System (ITS) Deployment</td>
<td>Strategic Growth Plan</td>
<td>Caltrans</td>
<td>Regions</td>
<td>State ITS; Congestion Management Plan</td>
</tr>
</tbody>
</table>
The following measures will also be included in the project to reduce the greenhouse gas emissions and potential climate change impacts from the project:

- According to Caltrans’s Standard Specifications, the contractor must comply with all of the local Air Pollution Control District's rules, ordinances, and regulations regarding to air quality restrictions.

**Adaptation Strategies**

“Adaptation strategies” refer to how Caltrans and others can plan for the effects of climate change on the state’s transportation infrastructure and strengthen or protect the facilities from damage. Climate change is expected to produce increased variability in precipitation, rising temperatures, rising sea levels, variability in storm surges and intensity, and the frequency and intensity of wildfires. These changes may affect the transportation infrastructure in various ways, such as damage to roadbeds from longer periods of intense heat; increasing storm damage from flooding and erosion; and inundation from rising sea levels. These effects will vary by location and may, in the most extreme cases, require that a facility be relocated or redesigned. There may also be economic and strategic ramifications as a result of these types of impacts to the transportation infrastructure.

At the federal level, the Climate Change Adaptation Task Force, co-chaired by the White House Council on Environmental Quality (CEQ), the Office of Science and Technology Policy (OSTP), and the National Oceanic and Atmospheric
Administration (NOAA), released its interagency report on October 14, 2010 outlining recommendations to President Obama for how Federal Agency policies and programs can better prepare the U.S. to respond to the impacts of climate change. The Progress Report of the Interagency Climate Change Adaptation Task Force recommends that the federal government implement actions to expand and strengthen the nation’s capacity to better understand, prepare for, and respond to climate change.

Climate change adaption must also involve the natural environment as well. Efforts are underway on a statewide-level to develop strategies to cope with impacts to habitat and biodiversity through planning and conservation. The results of these efforts will help California agencies plan and implement mitigation strategies for programs and projects.

On November 14, 2008, former Governor Arnold Schwarzenegger signed EO S-13-08 which directed a number of state agencies to address California’s vulnerability to sea level rise caused by climate change. This EO set in motion several agencies and actions to address the concern of sea level rise.

The California Natural Resources Agency (Resources Agency) was directed to coordinate with local, regional, state and federal public and private entities to develop. The California Climate Adaptation Strategy (Dec 2009)\(^5\), which summarizes the best known science on climate change impacts to California, assesses California's vulnerability to the identified impacts, and then outlines solutions that can be implemented within and across state agencies to promote resiliency.

The strategy outline is in direct response to EO S-13-08 that specifically asked the Resources Agency to identify how state agencies can respond to rising temperatures, changing precipitation patterns, sea level rise, and extreme natural events. Numerous other state agencies were involved in the creation of the Adaptation Strategy document, including the California Environmental Protection Agency; Business, Transportation and Housing; Health and Human Services; and Caltrans of Agriculture. The document is broken down into strategies for different sectors that include: Public Health; Biodiversity and Habitat; Ocean and Coastal Resources; Water Management; Agriculture; Forestry; and Transportation and Energy Infrastructure. As data continues to be developed and collected, the state's adaptation strategy will be updated to reflect current findings.

The Resources Agency was also directed to request the National Academy of Science to prepare a Sea Level Rise Assessment Report by December 2010\(^6\) to advise how California should plan for future sea level rise. The report is to include:

- Relative sea level rise projections for California, Oregon and Washington taking into account coastal erosion rates, tidal impacts, El Niño and La Niña events, storm surge and land subsidence rates.
- The range of uncertainty in selected sea level rise projections.
- A synthesis of existing information on projected sea level rise impacts to state infrastructure (such as roads, public facilities and beaches), natural areas, and coastal and marine ecosystems.
- A discussion of future research needs regarding sea level rise.

Prior to the release of the final Sea Level Rise Assessment Report, all state agencies that are planning to construct projects in areas vulnerable to future sea level rise were directed to consider a range of sea level rise scenarios for the years 2050 and 2100 in order to assess project vulnerability and, to the extent feasible, reduce expected risks and increase resiliency to sea level rise. Sea level rise estimates should also be used in conjunction with information regarding local uplift and subsidence, coastal erosion rates, predicted higher high water levels, storm surge and storm wave data.

Interim guidance has been released by The Coastal Ocean Climate Action Team as well as Caltrans as a method to initiate action and discussion of potential risks to the states infrastructure due to projected sea level rise.

The proposed project has an expected serviceable life span of about 50 years. According to values adopted in 2011 by the Ocean Protection Council, we can anticipate a maximum sea level rise at this location of 32 inches by 2070. The finished roadway would be approximately 500 feet above sea level; the foundation of the retaining wall structure would reach to approximately 450 feet above sea level. The separation between the highest anticipated sea level during the life of the project and the project itself is substantial, therefore the project is not expected to be affected by sea level rise due to climate change and no adaptive measures would be required.

Executive Order S-13-08 also directed the Business, Transportation, and Housing Agency to prepare a report to assess vulnerability of transportation systems to sea level rise affecting safety, maintenance and operational improvements of the system, and economy of the state. Caltrans continues to work on assessing the transportation system vulnerability to climate change, including the effect of sea level rise.

Currently, Caltrans is working to assess which transportation facilities are at greatest risk from climate change effects. However, without statewide planning scenarios for relative sea level rise and other climate change effects, Caltrans has not been able to determine what change, if any, may be made to its design standards for its transportation facilities. Once statewide planning scenarios become available, Caltrans will be able to review its current design standards to determine what changes, if any, may be warranted in order to protect the transportation system from sea level rise.

Climate change adaptation for transportation infrastructure involves long-term planning and risk management to address vulnerabilities in the transportation system from increased precipitation and flooding; the increased frequency and intensity of storms and wildfires; rising temperatures; and rising sea levels. Caltrans is an active participant in the efforts being conducted in response to EO S-13-08 and is mobilizing to be able to respond to the National Academy of Science Sea Level Rise Assessment Report.