

Highway 1 Improvements at Pitkins Curve and Rain Rocks

On Route 1, about 0.5 mile north of Limekiln Creek and 1.5 miles south of
Lucia, on the Big Sur coast, Monterey County, California

05-MON-1 KP 34.2/34.8; PM 21.3/21.6

EA 05-0E9600

Final Environmental Impact Report



Prepared by the
State of California
Department of Transportation

September 2006



General Information about this Document

What's in this document?

The California Department of Transportation (Caltrans) has prepared this Final Environmental Impact Report, which discloses the potential environmental impacts of alternatives being considered for the proposed project located in Monterey County, California. The document identifies Alternative 1 (the bridge and rock shed) as the alternative that provides the least costly, most reliable and safest highway facility at Pitkins Curve and Rain Rocks. It describes why the project is proposed, alternatives for the project, the environment that would be affected by the project, potential impacts from each of the alternatives, and the proposed avoidance, minimization, and/or mitigation measures.

A Draft Environmental Impact Report was circulated for public comment from February 16, 2006 to April 7, 2006. Two public hearings were held. The first was held Tuesday, March 21, 2006 from 5:00 p.m. to 8:00 p.m. at the Big Sur Lodge Conference Room, Pfeiffer Big Sur State Park, Highway 1, Big Sur. The second was held Wednesday, March 22, 2006, from 5:00 p.m. to 8:00 p.m. at the Cambria Veteran's Hall, 1000 Main Street, Cambria. Comments received during the public comment period were taken into consideration in the selection of the preferred alternative. Comments received and responses to comments are included in this document as Appendix G.

A vertical line in the margin indicates changes made to this document since its earlier circulation.

What happens next?

In accordance with California Environmental Quality Act, Caltrans will certify that the project complies with California Environmental Quality Act, prepare findings for all significant impacts identified, prepare a Statement of Overriding Considerations for impacts that will not be mitigated below a level of significance, and certify that the Findings and Statement of Overriding Considerations have been considered prior to project approval. Caltrans will then file a Notice of Determination with the State Clearinghouse that will identify the project's significant impacts, the mitigation measures that were included as conditions of project approval, findings that were made, and the Statement of Overriding Considerations that was adopted. If the Federal Highway Administration determines the action is excluded from environmental review, they will issue a Categorical Exclusion in accordance with the National Environmental Policy Act. The proposed project has completed environmental compliance after circulation of this document and approval by the Federal Highway Administration. When funding is approved, the California Department of Transportation and the Federal Highway Administration can design and construct all or part of the project.

For individuals with sensory disabilities, this document is available in Braille, large print, on audiocassette, or computer disk. To obtain a copy in one of these alternate formats, please call or write to Caltrans, Attn: John Luchetta, Central Coast Management Branch, 50 Higuera Street, San Luis Obispo, CA 93401; 805-549-3493 Voice, or use the California Relay Service TTY number, 1-800-735-2929.

Highway 1 Improvements at Pitkins Curve and Rain Rocks

Stabilize Highway 1 from 0.5 mile north of Limekiln Creek to 1.5 miles south of Lucia, on the Big Sur Coast in Monterey County, California. (Mon-1 KP 34.2/34.8; PM 21.3/21.6)

FINAL ENVIRONMENTAL IMPACT REPORT

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



THE STATE OF CALIFORNIA
Department of Transportation

10-16-06

Date of Approval

A handwritten signature in black ink, appearing to read 'Richard Krumholz', written over a horizontal line.

Richard Krumholz,
District Director, District 5
California Department of Transportation
50 Higuera Street
San Luis Obispo, California



Summary

Location

The California Department of Transportation (Caltrans) and the Federal Highway Administration propose improvements to Highway 1 at Pitkins Curve and the northern chute of Rain Rocks along the Big Sur Coast in Monterey County, California (5-Mon-1 KP 34.2/34.8; PM 21.3/21.6). The project is on a state scenic highway and national scenic byway “All-American Road,” which is the only direct coastal link to the communities between San Simeon (San Luis Obispo County) and Carmel (Monterey County).

Need and Purpose



Unpredictable and extensive landslides repeatedly occur at Pitkins Curve/Rain Rocks, reducing or severing travel on Highway 1 for months at a time. Emergency highway restoration increases risk for highway workers, elevates costs, restricts highway restoration methods, and limits avoidance and

minimization of environmental impacts. Routine maintenance is riskier and costs more than for other locations on Highway 1. The hillsides will continue to slide, the highway will be damaged repeatedly, and it will likely be severed again. The project's purpose is to decrease maintenance expenditures and increase safety and roadway reliability.

Alternatives

The Draft Environmental Impact Report evaluated two build alternatives and the No-Build Alternative. Alternative 1 would construct a bridge at Pitkins Curve and rock shed at Rain Rocks. Alternative 2 would construct a bridge at Pitkins Curve and continue with active management at the Rain Rocks location. The No-Build Alternative would make no improvement to the project location. Six additional alternatives were considered and withdrawn.

Table 1. Summary of Project Effects by Alternative

Potential Environmental Impacts		Alternative 1	Alternative 2	No-Build Alternative
Land Use 2.1		1.75 hectares (4.25 acres) of California State Park land is included in the project area. Caltrans identified this land, as a result of 2002 emergency highway restoration, for purchase to use as highway right-of-way. Purchase pending.	1.75 hectares (4.25 acres) of California State Park land is included in the project area. Caltrans identified this land, as a result of 2002 emergency highway restoration, for purchase to use as highway right-of-way. Purchase pending.	As a result of 2002 emergency highway restoration, 1.75 hectares (4.25 acres) of California State Parks land was identified for purchase by Caltrans to use as highway right-of-way. Purchase pending.
Coastal Zone 2.1.1	Local Coastal Program	While this alternative presents both conflict and consistency, on balance the project is consistent with the local coastal plan.	While this alternative presents both conflict and consistency, on balance the project is consistent with the local coastal plan.	The No-Build Alternative is in conflict with the local coastal plan because it does not act to facilitate public access to the coast.
	California Coastal Act	While this alternative presents both conflict and consistency, on balance the project is consistent with the California Coastal Act.	While this alternative presents both conflict and consistency, on balance the project is consistent with the California Coastal Act.	The No-Build Alternative is in conflict with the California Coastal Act because it does not act to facilitate public access to the coast.
Traffic & Transportation/ Pedestrian & Bicycle Facilities 2.1.3		Improves reliability and safety of the highway. Provides improved facilities for non-motorized travel. Does not preclude future development of trails.	Improves reliability and safety of the highway. Provides improved facilities for non-motorized travel. Does not preclude future development of trails.	No change
Visual/Aesthetics 2.1.4		Addition of rock shed to state scenic highway may result in significant impacts to the aesthetic qualities of the Big Sur coast. <i>Mitigation proposed.</i>	Addition of bridge to state scenic highway would not substantially change the aesthetic qualities of the Big Sur coast. <i>Avoidance and minimization measures proposed.</i>	No change
Natural Communities 2.3.1		Removes approximately 0.4 hectare (1.0 acre) of coastal sage scrub. <i>Minimization measures proposed.</i>	Removes approximately 0.4 hectare (1.0 acre) of coastal sage scrub. <i>Minimization measures proposed.</i>	No anticipated impact

Potential Environmental Impacts		Alternative 1	Alternative 2	No-Build Alternative
Wetlands/ other Waters 2.3.2	U.S. Army Corps	No Army Corps of Engineers wetlands in project area.	No Army Corps of Engineers wetlands in project area.	No impact
	Other Waters of U. S.	Less than 0.01 hectare (0.01 acre) of unvegetated seeps and springs would be redirected. <i>Minimization measures proposed.</i>	Less than 0.01 hectare (0.01 acre) of unvegetated seeps and springs would be redirected. <i>Minimization measures proposed.</i>	No impact
	Coastal Zone	No anticipated impact to wetlands under jurisdiction of the local coastal program. <i>Minimization measures proposed.</i>	No anticipated impact to wetlands under jurisdiction of the local coastal program. <i>Minimization measures proposed.</i>	No impact
Threatened/Endangered Species 2.3.4		No effect to threatened or endangered species. <i>Avoidance and minimization measures proposed.</i>	No effect to threatened or endangered species. <i>Avoidance and minimization measures proposed.</i>	No impact
Construction 2.4	Excess Material	Alternative would not generate excess material.	Alternative would result in 11,000 cubic meters (14,500 cubic yards) of excess material.	Up to 100,000 cubic meters of excess material from unpredictable landslide and rockfall. Between 10,000 and 30,000 cubic meters of excess material from annual routine maintenance.
	Traffic	Restriction of roadway to one lane, regulated by a temporary traffic signal, for duration of construction. Occasional multiple day (of 8-hour duration) full highway closures scheduled during off peak hours. Traffic flow impacts from scheduled increased heavy equipment traffic. <i>Avoidance and minimization measures proposed.</i>	Restriction of roadway to one lane, regulated by a temporary traffic signal, for duration of construction. Occasional multiple day (of 8-hour duration) full highway closures scheduled during off peak hours. Traffic flow impacts from scheduled increased heavy equipment traffic. <i>Avoidance and minimization measures proposed.</i>	Unscheduled and potentially extensive full lane closures and lane restrictions due to landslides and rockfall. Occasional regular closures and traffic disruption due to annual maintenance cleanup activities.
	Duration	Estimated at between 4.1 and 5.7 years.	Estimated at between 3.0 to 3.7 years.	On-going

Potential Environmental Impacts		Alternative 1	Alternative 2	No-Build Alternative
	Noise	Increased noise at construction site. Increased noise (of 1 dBA) would be imperceptible at nearby sensitive receptors. <i>Avoidance and minimization measures proposed.</i>	Increased noise at construction site. Increased noise (of 1 dBA) would be imperceptible at nearby sensitive receptors. <i>Avoidance and minimization measures proposed.</i>	Increased noise at construction site. Increased noise (of 1 dBA) from unscheduled and annual maintenance activities would be imperceptible at nearby sensitive receptors.
	Water Quality	Potential for suspended solids, dissolved solids, and organic pollutants to be introduced into the ocean. <i>Avoidance and minimization measures proposed.</i>	Potential for suspended solids, dissolved solids, and organic pollutants to be introduced into the ocean. <i>Avoidance and minimization measures proposed.</i>	Potential for suspended solids, dissolved solids, and organic pollutants to be introduced into the ocean.
	Air Quality	No exceedances anticipated.	No exceedances anticipated.	No exceedances anticipated.
	Site Appearance	Temporary impacts from earth movement, distracting activities, and storage of equipment and materials. <i>Avoidance and minimization measures included.</i>	Temporary impacts from earth movement, distracting activities, and storage of equipment and materials. <i>Avoidance and minimization measures included.</i>	On-going impacts from earth movement, distracting activities, and storage of equipment and materials.
	Cultural	No effects anticipated. <i>Avoidance and minimization measures included in event of unanticipated discovery.</i>	No effects anticipated. <i>Avoidance and minimization measures included in event of unanticipated discovery.</i>	No impact
	Paleontology	No effects anticipated. <i>Avoidance and minimization measures included in event of unanticipated discovery.</i>	No effects anticipated. <i>Avoidance and minimization measures included in event of unanticipated discovery.</i>	No impact
	Haz Waste	No effects anticipated. <i>Avoidance and minimization measures included in event of unanticipated discovery.</i>	No effects anticipated. <i>Avoidance and minimization measures included in event of unanticipated discovery.</i>	No impact
Cumulative Impacts 2.1.4		Alternative 1 has been considered with other projects in the area for its potential to contribute to cumulative impacts. Addition of bridge and rock shed would contribute to cumulative visual impacts. <i>Minimization measures proposed.</i>	Alternative 2 has been considered with other projects in the area for its potential to contribute to cumulative impacts. Addition of bridge would contribute to cumulative visual impacts. <i>Minimization measures proposed.</i>	Not applicable



Environmental Determination

The Highway 1 Improvements at Pitkins Curve and Rain Rocks Project is subject to review under the California Environmental Quality Act. Because the project would expend federal funds and requires federal approval from the Federal Highway Administration, it is also subject to review under the National Environmental Policy Act.

For this project, impacts to the visual quality of the state scenic highway/national scenic byway along the Big Sur coast have been determined to be potentially significant under the California Environmental Quality Act. The Final Environmental Impact Report has been prepared in compliance with the California Environmental Quality Act.

Final selection of an alternative has been made based upon the full evaluation of environmental impacts and full consideration of public hearing comments. This Final Environmental Impact Report has been approved as indicated on the signature page, page *i*.

Following circulation of the Final Environmental Impact Report, Caltrans, as lead agency, has determined to certify the Final Environmental Impact Report and issue Findings and a Statement of Overriding Considerations.



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List of Abbreviated Terms

Caltrans	California Department of Transportation
CFR	Code of Federal Regulations
CEQA	California Environmental Quality Act
FHWA	Federal Highway Administration
KP	kilometer post
NEPA	National Environmental Policy Act
PM	post mile
USC	United States Code

Chapter 1 Proposed Project

1.1 Introduction

The California Department of Transportation (Caltrans) proposes improvements to Highway 1 to restore highway reliability, decrease maintenance expenditures, and protect highway workers at Pitkins Curve and the northern chute of Rain Rocks along the Big Sur Coast in Monterey County, California. See Figures 1-1 and 1-2.

Unstable geology and winter storms cause unpredictable and extensive landslides and rockfall at Pitkins Curve/Rain Rocks. These events regularly reduce and sever travel for months at a time on Highway 1, a state scenic highway and national scenic byway “All-American Road,” and the only direct coastal link to communities between San Simeon and Carmel. Highway restoration is generally conducted under emergency conditions, which increases risk to highway workers, elevates costs, restricts the range of methods available to restore the highway, and limits ways to avoid or minimize impacts to traffic movement, the economy, and the environment. At this location, even the routine maintenance of managing the landslides is riskier and has higher maintenance costs than for other locations on the Big Sur Coast Highway. Caltrans geologists and geotechnical engineers have studied the slopes at Pitkins Curve/Rain Rocks and concluded that the hillside will continue to slide, the highway will be damaged repeatedly, and it will likely be severed again.

Section 1.2.1 provides the historical context for the project. Section 1.2.2 introduces the land use plans the project was developed under and evaluated within. Section 1.2.3 discusses related highway projects. Section 1.3 presents the highway deficiencies, the need for, and the purpose of the proposed project.

The project evaluates two build alternatives and the No-Build Alternative. Alternative 1 would construct a bridge at Pitkins Curve and a rock shed at Rain Rocks. Alternative 2 would construct a bridge at Pitkins Curve and provide no built improvement to the Rain Rocks location, but would rather continue with active management of the location. The No-Build Alternative would make no improvement to the entire project location, but would continue with active management of it. Six additional alternatives were considered and withdrawn. Each of these alternatives is discussed in more detail in Section 1.4.

Caltrans has studied the alternatives and comments received during circulation of the Draft Environmental Impact Report and selected Alternative 1 as the preferred

alternative because it would provide the safest and most reliable highway and would be the most efficient use of funds and construction effort.

This project will be funded through the Major Damage Restoration Program (201.130) of the 2006 State Highway Operation and Protection Program, which adopted total construction funding of \$34,461,000 for the 2009-2010 fiscal year.



Figure 1-1 Project Vicinity



Project Location Map

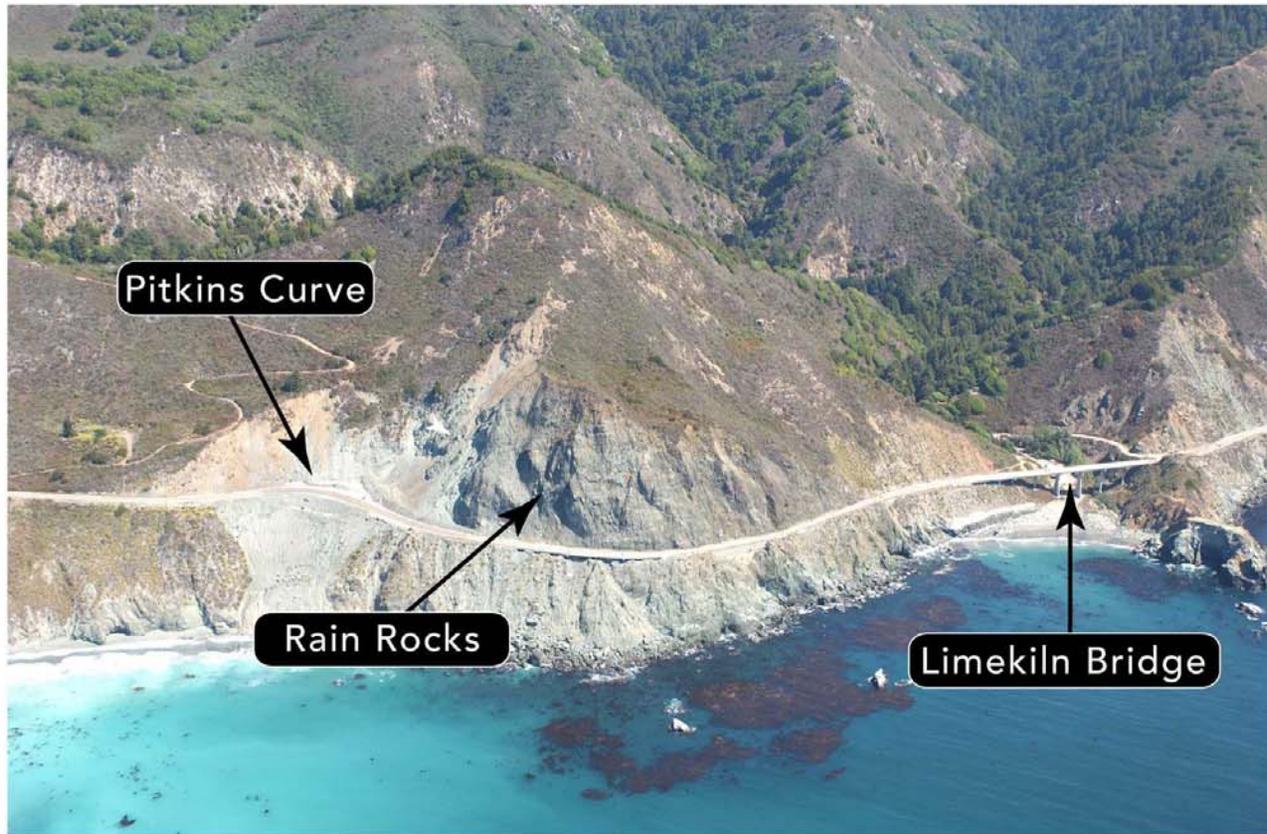
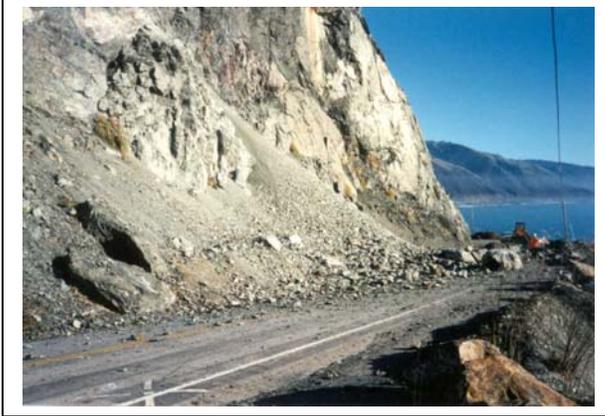


Figure 1-2 Project Location



1.2 Background

1.2.1 History of Landslides and Highway Repair



Slopes above and below Highway 1 at Pitkins Curve/Rain Rocks are in a constant state of erosion and continually shed debris onto the highway and slump below it. Landslides and rockfall have closed the highway from time to time since it was constructed in 1937. Records from between 1973 and 1997 tell of landslides that closed the highway

at Pitkins Curve/Rain Rocks an average of two days per event while clean-up activities were conducted. Since 1998, erosion has increased significantly at Pitkins Curve/Rain Rocks, closing the highway every two to three years for months at a time and requiring unexpected, disruptive, and costly roadway reconstruction.

The 1998 El Niño storms caused the most damage to the Big Sur Coast Highway in its history. At Pitkins Curve, these storms triggered landsliding below the highway, causing the southbound lane to collapse. To restore the highway, the embankment was partially reconstructed at a cost of \$1 million. Traffic was



disrupted for five months. El Niño also activated rockfall at Rain Rocks, causing unsafe conditions for travelers and highway workers. To ensure their safety, the slope was covered with a wire mesh rock net. This effort cost about \$1 million and disrupted traffic for 20 days.



In 2000, a massive landslide, below the highway at Pitkins Curve, removed 100 meters (300 feet) of both lanes of the highway. Configuration of the slide, constraints of terrain, and potential environmental impacts dictated that the roadway be relocated

inland to restore its full width. To accomplish this, 76,000 cubic meters (100,000 cubic yards) of landslide debris was removed in 7,000 truckloads. This event closed the highway for 30 days and travel was severely limited for a subsequent 60 days. The cost of this highway repair was \$3.4 million.

When winter storms hit the coast in 2001, landsliding resumed above Pitkins Curve and rockfall intensified at Rain Rocks. A catchment ditch and an earth berm were constructed at the base of the hillside to contain landslide material until it could be trucked out for stockpiling. A portion of the rock net at the north chute of Rain Rocks was replaced with a stronger cable mesh. Traffic was disrupted for two months while cable mesh was installed and 1400 truckloads of material were removed from the highway. The cost of these repairs was \$1.5 million.

Since 2001, the slopes above Pitkins Curve/Rain Rocks have continued to shed debris onto the highway. Each year, approximately 7,646 cubic meters (10,000 cubic yards or 700 truckloads) of material are transported away from the site. These routine maintenance efforts require about 10 days of road closure and cost an average of \$1 million each year.

1.2.2 Planning Context

Monterey County Local Coastal Plan

The project is subject to the requirement of obtaining a Coastal Development Permit from Monterey County under its delegated authority to implement provisions of the California Coastal Act with its certified Local Coastal Program of 1986. Specifically,

the project is subject to the policies of the Monterey County Big Sur Coast Land Use Plan.

Big Sur Coast Land Use Plan policies are discussed under the regulatory setting for affected resources presented in Chapter 2: Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures. In addition, a discussion of the project's consistency with the California Coastal Act and Monterey County Big Sur Coast Land Use Plan is presented in Section 2.1.1: Consistency with Local Land Use Plans.

Monterey County is updating their General Plan. Until the update is complete, the current General Plan remains in effect. The Coastal Commission is currently conducting a periodic review of the Monterey County Local Coastal Plan.

Coast Highway Management Plan

Caltrans, in conjunction with a steering committee made up of 19 organizations¹, underwent a five-year collaborative process to revise the Corridor Management Plan for Highway 1. This effort was undertaken in cooperation with the Federal Highway Administration and under the authority of the National Scenic Byways Program.

The result of these efforts is the *Big Sur Coast Highway Management Plan*. The Plan covers the part of the Big Sur Coast Highway 1 that is a designated National Scenic Byway “All-American Road,” between the Carmel River in Monterey County and San Carpoforo Creek in San Luis Obispo County. It establishes a framework for continued safe and efficient operation of Highway 1 through a series of management guidelines on 1) Corridor Aesthetics, 2) Landslide Management and Storm Damage Response, And 3) Vegetation Management. These guidelines provided the framework for developing the Highway 1 Improvements at Pitkins Curve and Rain Rocks Project.

1.2.3 Related Projects

Related projects in the area are shown on Figure 1-3.

¹ Association of Monterey Bay Area Governments, Big Sur Chamber of Commerce, Big Sur Land Use Advisory Committee, Big Sur Multi-Agency Advisory Council, CA Coastal Commission, CA Department of Parks & Recreation, CA State Assembly 27th District, CA State Senate 15th District, Coast Property Owners Association, Coast Watch, Monterey Bay National Marine Sanctuary, Monterey County Planning & Building, Monterey County District 5 Supervisorial District, Monterey County Travel & Tourism Alliance, South Coast Advisory Committee, US Congress 17th District, and the U.S. Forest Service.

Pitkins Curve Pilot Project (5-Mon-1 PM 21.5)

The goal of the Pitkins Curve pilot project is to mimic the natural processes of landslide material making its way naturally to the sea while monitoring the environmental effects of the process. Soil generated from the active slide at Pitkins Curve above the highway was placed below the highway behind a constructed dirt berm west of Pitkins Curve. Though the placed soil will not immediately affect the marine environment, gradual downward migration of the soil towards the ocean is expected. As part of the project, the existing marine environment was characterized and is being monitored for a three-year period. This project is funded, the environmental determination has been completed, permits have been secured and is ongoing.

Limekiln Bridge (5-Mon-1 PM 21.1)

Scouring (erosion caused by moving water) at the north abutment of Limekiln Creek Bridge was identified and a study was initiated to find a solution.² A number of solutions were investigated, including one that would have included fixing the deficiencies at Pitkins Curve and Rain Rocks in combination with those at the Limekiln Creek Bridge. (Refer to Section 1.4.5: Alternatives Considered and Withdrawn for a discussion of the Tunnel Alternative). Ultimately, the alternative selected to address the scouring at Limekiln Creek Bridge was an augmentation of the north bridge foundation. The project is a candidate for funding in 2006 with completion of the environmental document anticipated in 2008 and start of construction expected in 2010.

Hermitage Slope (5-Mon-1 PM 21.9/22.1)

The Hermitage Slope project proposes to reconstruct the Highway 1 southbound lane by building a soldier pile tieback retaining wall with treated timber lagging to support the embankment. A steel-backed timber guardrail would be placed along the outside shoulder. The construction would generate about 2,500 cubic meters (3,340 cubic yards) of soil, which would be taken to a nearby inland site, placed, and planted with native grasses and shrubs. This project is funded and environmental compliance was completed in 2004. Start of construction is anticipated in 2006 with completion in 2007.

² Project Study Report for Limekiln Creek Bridge Improvements, prepared by Caltrans, 9/14/04.

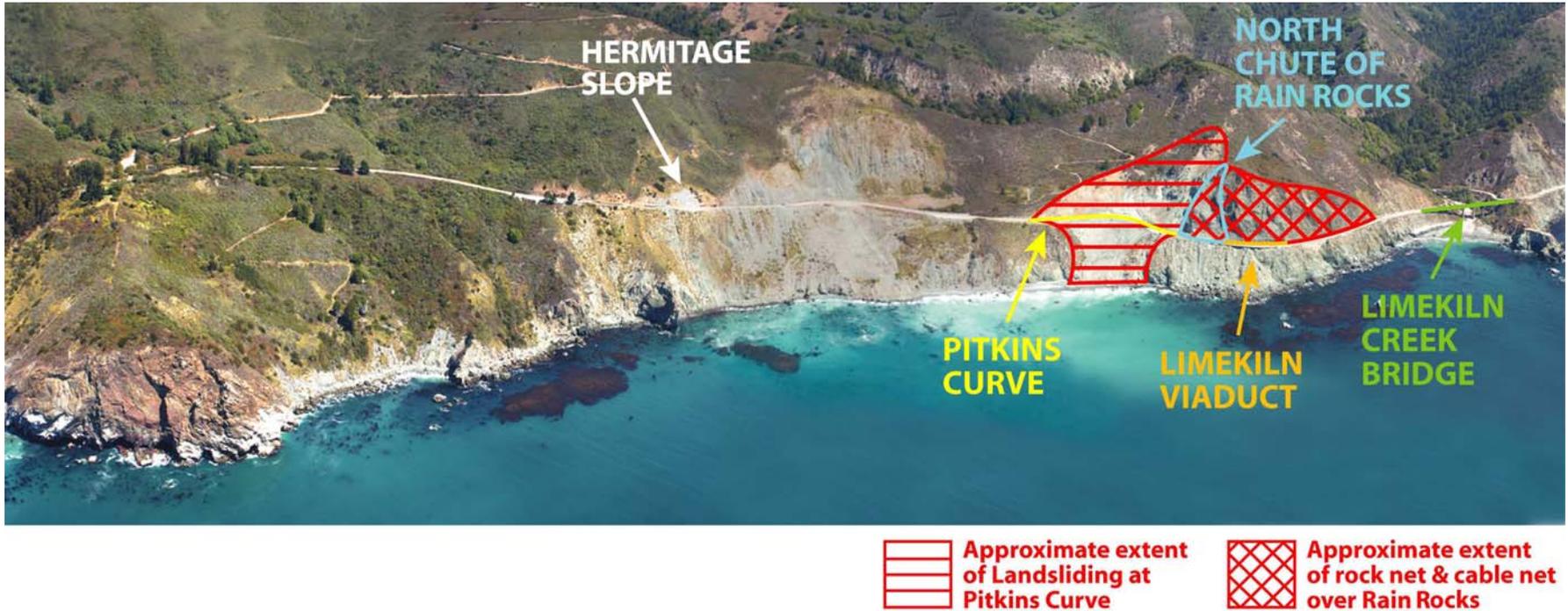


Figure 1-3 Location of Nearby and Related Projects



1.3 Purpose and Need

1.3.1 Purpose

The purpose of the Pitkins Curve/Rain Rocks Project is to provide improvements that substantially decrease maintenance expenditures and appreciably increase highway worker safety and roadway reliability, dependability, and safety while minimizing environmental impacts at the Pitkins Curve/Rain Rocks location.

1.3.2 Need

1.3.2.1 Location

The project is located on Highway 1 (the Big Sur Coast Highway) between kilometer post 34.2 and 34.8 (Postmile 21.3 and 21.6), in Monterey County, about 0.9 kilometer (0.5 mile) north of Limekiln Creek and 1.8 kilometers (1.5 miles) south of Lucia. The 0.6-kilometer (0.3-mile) -long project encompasses two areas of roadway instability, which are commonly known as “Pitkins Curve” and the northern chute of “Rain Rocks.” Rain Rocks is a 35-meter (115-foot) -long section of roadway, at the southern limit of the project, extending between the Limekiln Viaduct and a projecting unnamed ridgeline. Just north, around the corner, is Pitkins Curve, where the highway hugs a 230-meter (755-foot) -long landslide in a 70-meter (230-foot) radius curve. Refer to Figures 1-1 and 1-2.

The stretch of coastline surrounding the project area, from San Simeon to Carmel, is world-renowned as one of California's most beautiful and majestic. It provides breathtaking views from the narrow roadway overlooking the Pacific Ocean (which, in this location, has been designated a part of the Monterey Bay National Marine Sanctuary). Here, Highway 1 is a state scenic highway and a national scenic byway “All-American Road.” It is the primary access road that serves the Big Sur communities and the vast number of tourists who visit there. Residents and travelers, alike, rely on the highway for essential and emergency services, for support of the area's economy, and for access to recreational sites.

This stretch of coastline is also known to be geologically active and unstable. The area has a mild climate but typically receives heavy rainfall from Pacific storms in the winter months. Over the years, these disruptive forces have caused rockfall and landslides, stripped vegetation from the nearby hillsides, and damaged the highway.

1.3.2.2 Roadway Deficiencies

The transportation concept for the Big Sur Coast Highway provides for 9.8 meters (32 feet) of paved width consisting of two 3.6-meter (12-foot) lanes, each with 1.2-meter (4-foot) shoulders. The current roadway at Pitkins Curve/Rain Rocks has two 3.4-meter (11-foot) lanes with 0.6 to 1.2-meter (2- to 4-foot) shoulders.

Geology and Slope Instability

At Pitkins Curve/Rain Rocks, Highway 1 traverses the rugged and steep slopes of the Santa Lucia Mountains, the steepest coastal slope in the contiguous United States. It is a narrow ledge perched 60 meters (190 feet) above the Pacific Ocean. The area is characterized by steep terrain with deeply cut drainages and narrow crested ridges. Much of the mountainside is a collection of broken and weak Franciscan rocks covered with eroded soils and highly prone to landslides, as is the case at Pitkins Curve. Within the Franciscan collection, there are some blocks of semi-volcanic rocks that are relatively large and hard. Rain Rocks is one of these blocks, covered with rock and soil. Groundwater, surface water infiltration, and erosion contribute to the landsliding and rockfall at Pitkins Curve/Rain Rocks. Heavy rainfall from Pacific storms in the winter months often trigger landsliding and rockfall.

Effects of Roadway Failures

The amount of labor and cost to maintain Highway 1 at Pitkins Curve/Rain Rocks is high and, because of the unpredictable nature of the instabilities, difficult to forecast. Repair of catastrophic failures and routine maintenance efforts at Pitkins Curve/Rain Rocks substantially interrupt local and tourist traffic because there are no reasonable alternative routes to Highway 1. Regional economies can be profoundly affected by Highway 1 road closures. Roadway closures require maintenance and construction workers to perform activities that demand extraordinary safety precautions. Environmental impacts, particularly those associated with disposal of landslide material, are difficult to avoid or minimize when highway restoration is conducted under emergency conditions. During emergency highway restoration, ensuring public safety may take precedence over minimizing environmental impacts.

High Repair and Maintenance Costs

The Pitkins Curve/Rain Rocks location costs more to restore and maintain than any location on the Big Sur Coast Highway. Since 1998, the cost to maintain Highway 1 at Pitkins Curve/Rain Rocks has ranged from a half million dollars to \$3.4 million a year, in response to the magnitude of damage inflicted by landslides. Between 1998 and 2004, an approximate total of \$8 million has been spent at this location to keep

Highway 1 open; more than one million dollars annually. By comparison, the other unstable Big Sur Coast Highway locations needing regular maintenance require between \$10,000 and \$20,000 each year.

Funding for emergency highway restoration can be obtained from the state, or if damage were widespread and a Federal State of Emergency were declared (as was the case during the El Niño storms of 1998), from federal sources. Availability of emergency funding can be uncertain, however, and is dependent on the use of funds for other emergency projects throughout the state and nation.

Travel Disruption

During each of the years when catastrophic events have affected Highway 1 at Pitkins Curve/Rain Rocks (1998, 2000, and 2001), the highway was closed for at least a month while restoration activities were undertaken. Traffic was further disrupted (generally limited to one lane) for between 20 and 120 days during each of these years. Use of Highway 1 is reduced to one lane an average of 10 days every year for routine maintenance.

Highway 1, between San Simeon and Carmel, is designated an “All-American Road” as part of the National Scenic Byways Program to distinguish it as a roadway of such spectacular beauty as to be considered a destination unto itself. Additionally, it is the only direct route between world-renowned tourist destinations such as Big Sur and Hearst Castle near San Simeon. Approximately 95 percent of vehicles traveling on the Big Sur Coast Highway are visiting from out of the area. Highway 1 is of utmost importance for tourist and recreational travel and as a conduit for the local economy.

When the highway is closed at Pitkins Curve/Rain Rocks, travelers must either wait until the road is open or travel up to 100 miles out of direction to reach their destination. Traffic interruptions adversely affect emergency response, transport of essential goods, transport to basic services (such as to work, school, and for household necessities), local and regional economies, and the general quality of life.

When travel is disrupted on Highway 1, the local and regional economy is profoundly affected by the loss of tourism and the revenue it generates. In 2000, the extensive road closures led to a 6 to 10 percent decrease in visitation at Hearst Castle and an annual estimated loss of approximately \$150,000 to the Department of Parks and Recreation. Visitors to Hearst Castle account for about a third of the \$900 million tourist-related revenue generated in San Luis Obispo County and an unspecified amount of that in Monterey County.

Highway Worker Safety

Highway workers regularly operate in areas of extreme concern for safety while maintaining the roadway at Pitkins Curve/Rain Rocks. They remove rock by scaling cliffs with technical climbing equipment and knocking down precariously situated boulders from the hillside to the roadway below. Highway workers also scoop up rocks that have fallen behind the protective berms or onto the highway using mechanized equipment, such as loaders and dump trucks. These activities place highway workers within the most active rockfall areas. Rocks have rolled down the slope and/or through the net and entered the work area. Traffic moving through a work area is a safety concern as well, especially when rockfall causes vehicles to make evasive maneuvers. Extraordinary precautions must be taken to ensure worker safety while maintaining Pitkins Curve/Rain Rocks. Exposure to rockfall is high and Caltrans highway workers have reported numerous rockfall-related accidents.

Environmental Impacts

Environmental impacts, particularly those associated with soil disposal, are difficult to avoid or minimize when emergency restoration work is undertaken on the highway. Among the most difficult and expensive activities at Pitkins Curve/Rain Rocks is the handling of large volumes of rock and soil generated by landslides and subsequent highway repair. In times past, soil would generally be pushed seaward. Since the designation of the Monterey Bay National Marine Sanctuary in 1992, however, this practice has been avoided, in response to concern over potential impacts to the marine environment. Consequently, soil must be trucked to inland locations. Material from Pitkins Curve/Rain Rocks is generally transported to the Willow Creek or Grey Slip sites, 10 and 15 miles south, respectively. The number and capacity of nearby stockpile sites is limited and diminishing. As soil is transported further and further from where it was generated, the associated monetary and environmental costs increase.

In two of the years when catastrophic landsliding has occurred at Pitkins Curve/Rain Rocks (1998 and 2000), an average of 7,000 truckloads of soil were transported over Highway 1 from Pitkins Curve/Rain Rocks to stockpile sites up to 24.1 kilometers (15 miles) away. Annual routine maintenance generally requires transport of about 700 truckloads of soil from the site to stockpile locations. Heavy truck travel on Highway 1 degrades air quality and contributes to traffic disruption.

1.3.2.3 Roadway Safety

Safety

Between January 1, 2001 and December 31, 2003, there were a total of three collisions within the project limits. This accident data does not represent a concentration and no accident patterns can be identified. Traffic safety would be improved by straightening the roadway as much as practical to reduce the potential for vehicles to run off the road. Three vehicles traveling through Pitkins Curve/Rain Rocks have been struck by falling rock, causing damage to the vehicles. These rockfall events did not result in injury or lead to more serious accidents.

1.4 Alternatives

This section describes the process that was used to develop the alternative solutions for the proposed project and to select the preferred alternative.

A multi-disciplinary Project Development Team, using the framework provided by the *Big Sur Coast Highway Management Plan Guidelines for Landslide Management* and other planning documents, developed and evaluated alternatives to meet the project's purpose. The team used criteria provided by the project's purpose statement and relevant planning documents to develop and evaluate alternative solutions.

Criteria used were:

- Highway reliability and dependability
- Safety
- Design standards
- Cost to construct and maintain
- Time to completion
- Avoidance and minimization of environmental, social, and economic impacts.

The team's work concluded with two build alternatives (below), the No-Build Alternative, and multiple alternatives that were considered and withdrawn from further consideration.

- Alternative 1: proposes to build a bridge at Pitkins Curve and a rock shed at Rain Rocks.

- Alternative 2: proposes to build a bridge at Pitkins Curve and continue with active management at Rain Rocks.
- For purposes of comparison, pursuant to the California Environmental Quality Act, the No-Build Alternative is also presented.

After circulation of the Draft Environmental Impact Report and consideration of comments received, Alternative 1 (bridge and rock shed) was selected as the preferred alternative. Caltrans has made a final determination of the project's effect on the environment. In accordance with the California Environmental Quality Act, potentially significant environmental impacts to the area's visual qualities have been identified.

In accordance with California Environmental Quality Act, Caltrans will certify that the project complies with California Environmental Quality Act, prepare findings for all significant impacts identified, prepare a Statement of Overriding Considerations for impacts that will not be mitigated below a level of significance, and certify that the Findings and Statement of Overriding Considerations have been considered prior to project approval. Caltrans will then file a Notice of Determination with the State Clearinghouse that will identify the project's significant impacts, the mitigation measures that were included as conditions of project approval, findings that were made, and the Statement of Overriding Considerations that was adopted. If the Federal Highway Administration determines the action is excluded from environmental review, they will issue a Categorical Exclusion in accordance with the National Environmental Policy Act.

1.4.1 Alternatives Development Process

Alternatives were considered and promoted or withdrawn using the Coast Highway Management Plan's "Guidelines for Landslide Management." These guidelines discuss three basic strategies to address highway repair in landslide-prone areas: 1) Relocate or Separate, 2) Stabilize, and 3) Manage and Protect.

Relocate or Separate

This strategy involves moving the highway away from the landslide. This can be accomplished either by realigning the highway away from the landslide or through construction of viaducts, bridges, and tunnels. Relocation moves the highway away

from the landslide and allows the natural landslide processes to continue without interference.

Stabilize

This strategy uses techniques to stabilize the landslide in place. Stabilization techniques include buttresses, retaining walls, crib walls, shoreline armor, anchor bolts, and reinforced earth embankments.

Manage and Protect

Management and protection strategies are used to reduce the likelihood of a large landslide, but slopes may continue to move at a more gradual and controlled pace. Management involves slowing or stopping landslide movement by balancing the landslide's resisting and driving forces. Examples of this strategy include removing soil from the top of a slide or reinforcing a slope to slow its downward movement. Protection involves the placement of physical barriers to shield travelers from falling rocks and soil. Examples of protection are rock sheds, rockfall fences, and earthen berms.

1.4.2 Build Alternatives

Two build alternatives are under consideration. The build alternatives are:

Alternative 1

Alternative 1 would build a bridge at Pitkins Curve and a rock shed at Rain Rocks. See Figure 1-4.

Alternative 2

Alternative 2 would build a bridge at Pitkins Curve and continue with active management at Rain Rocks. See Figure 1-5.

1.4.2.1 Common Features of the Build Alternatives

Both Alternative 1 and 2 include the following features:

- **Roadway alignment:** Alternatives 1 and 2 propose to straighten the existing road alignment and construct a 160-meter (525-foot) -long, two-lane bridge at Pitkins Curve to span the extent of the landslide there. The bridge implements the Coast Highway Management Plan landslide strategy of relocating the highway away from the slide, thus allowing the natural landslide processes to proceed without interference. Straightening the existing alignment would also move the roadway

away from the slope instabilities, eliminating the need for a rockfall catchment ditch and berm. This strategy would minimize maintenance activities and soil stockpiling needs at the site.

- **Bridge:** The Pitkins Curve site allows for a standard type of bridge (for example a three-span arch, single-span arch or conventional type) or other, alternative type of bridge to be built³. Refer to Figure 1-6 for sketches of standard bridge types.
- **Roadway width:** Throughout the project limits, the highway would provide two 3.6-meter (12-foot) -wide lanes and 1.2-meter (4-foot) -wide outside shoulders. The shoulder width is less than the standard 2.4-meter (8-foot) width and requires a design exception. The exception was pursued, and has been approved.
- **Right-of-way:** All work would be conducted in the existing Caltrans right-of way and 1.75 hectare (4.25 acres) of State Parks land identified for purchase by Caltrans.
- **Utilities:** Two existing telephone poles would be relocated during construction with ultimate placement in conduits across or through the proposed structure(s).
- **Construction:** The proposed bridge and rock shed would be very large structures and building them would be involved and challenging. Construction would require excavation, soil disposal, and restriction of traffic to one lane through the project limits with occasional road closures, transport of large amounts of construction materials and heavy equipment, and increased noise and dust. Refer to Section 2.4: Construction Impacts, for additional detail.

1.4.2.2 Unique Features of the Build Alternatives

Alternative 1: Bridge and Rock shed

In addition to the bridge at Pitkins Curve, Alternative 1 proposes a 73-meter (240-foot) -long, two-lane rock shed structure immediately south of the bridge, at the northern chute of Rain Rocks. The rock shed implements the Coast Highway Management Plan landslide strategy of protecting the highway from the rockfall and allows the natural rockfall processes to proceed without interference.

A rock shed is a robust concrete structure with a thick slanted roof built up against the hillside and over the roadway. On the ocean side, columns support the roof and

³ Bridge type selection will be made during the project design phase and in consultation with agency and community representatives, as described in Section 2.1.4.

provide a partial view of the ocean. The project site allows for construction of a standard or for an alternative type of rockshed to be built.⁴ Refer to Figure 1-6 for a sketch of a typical rock shed.

The roadway through the rock shed would provide two 3.6-meter (12-foot) -wide lanes and 1.2-meter (4-foot) -wide outside shoulders. Lighting would not be included in the rock shed. Approximately half of the rock net would remain in place with this alternative. All of the cable mesh would be removed.

The estimated construction cost of Alternative 1 ranges from \$26, 500,000 to \$33,700,000.

Construction of the bridge and rock shed would substantially reduce the need for regular roadway maintenance and associated traffic disruption. It would eliminate the risk to highway workers of working in the active rockfall area and eliminate the risk of catastrophic failure, extensive road closures, and environmental and economic costs. Minor periodic maintenance would still be required, however, and its cost, escalated⁵ over the life of the project⁶, is estimated to be \$1,700,000.

Alternative 2: Bridge

Alternative 2 proposes to build only a bridge at Pitkins Curve. With this alternative, no change would be made to the existing situation at Rain Rocks; all of the cable mesh and rock netting would remain in place and routine maintenance would continue. The estimated cost of construction for this alternative ranges from \$16,200,000 to \$19,209,000. Annual routine maintenance (including regular soil removal and periodic replacement of cable and rock netting), escalated⁷ over the life of the project⁸, is projected to be \$9,000,000.

Construction of the bridge would eliminate the risk for highway workers of working in the active landslide area at Pitkins Curve. It would also eliminate the risk of extensive road closure due to catastrophic failure at this location. The need for regular road maintenance and traffic disruption would also be substantially reduced. This alternative does not reduce the risk to highway workers, or of catastrophic failure at

⁴ Rock shed type selection will be made during the project design phase and in consultation with agency and community representatives, as described in Section 2.1.4.

⁵ Escalated costs were calculated using a 3% annual inflation rate.

⁶ The life span of the project is considered to be 50 years.

⁷ Escalated costs were calculated using a 3% annual inflation rate.

⁸ The life span of the project was considered to be 50 years.

Rain Rocks because this alternative does not propose changes to the existing situation at that location.

1.4.3 No-Build Alternative

The No-Build Alternative would leave the Pitkins Curve/Rain Rocks section of Highway 1 as it is currently. Routine maintenance would continue to clean out landslide material from behind the berms and transport it to stockpile sites. Cable and rock netting would need to be replaced every ten to thirteen years. Routine costs are expected to remain similar to what is currently spent and escalated⁵ costs are estimated to be \$112,000,000 over the fifty-year period that represents the life span of the structures proposed in Alternatives 1 and 2.

When a catastrophic landslide occurs, the roadway would be closed until repairs could be undertaken. Caltrans' alternatives for restoring the highway, in the event of a future catastrophic failure, are extremely constrained at Pitkins Curve/Rain Rocks. The road could be closed for an extensive period. Immense excavation of the adjacent hillside could be required to reestablish the highway. During emergency highway restoration, ensuring public safety could take precedence over minimizing environmental impacts. Highway worker activities must be performed using extraordinary safety precautions. Cost to restore the highway in the event of a catastrophic failure is estimated to be in excess of \$45,000,000. This alternative does not offer any improvement to the existing situation nor does it meet the purpose of the project.

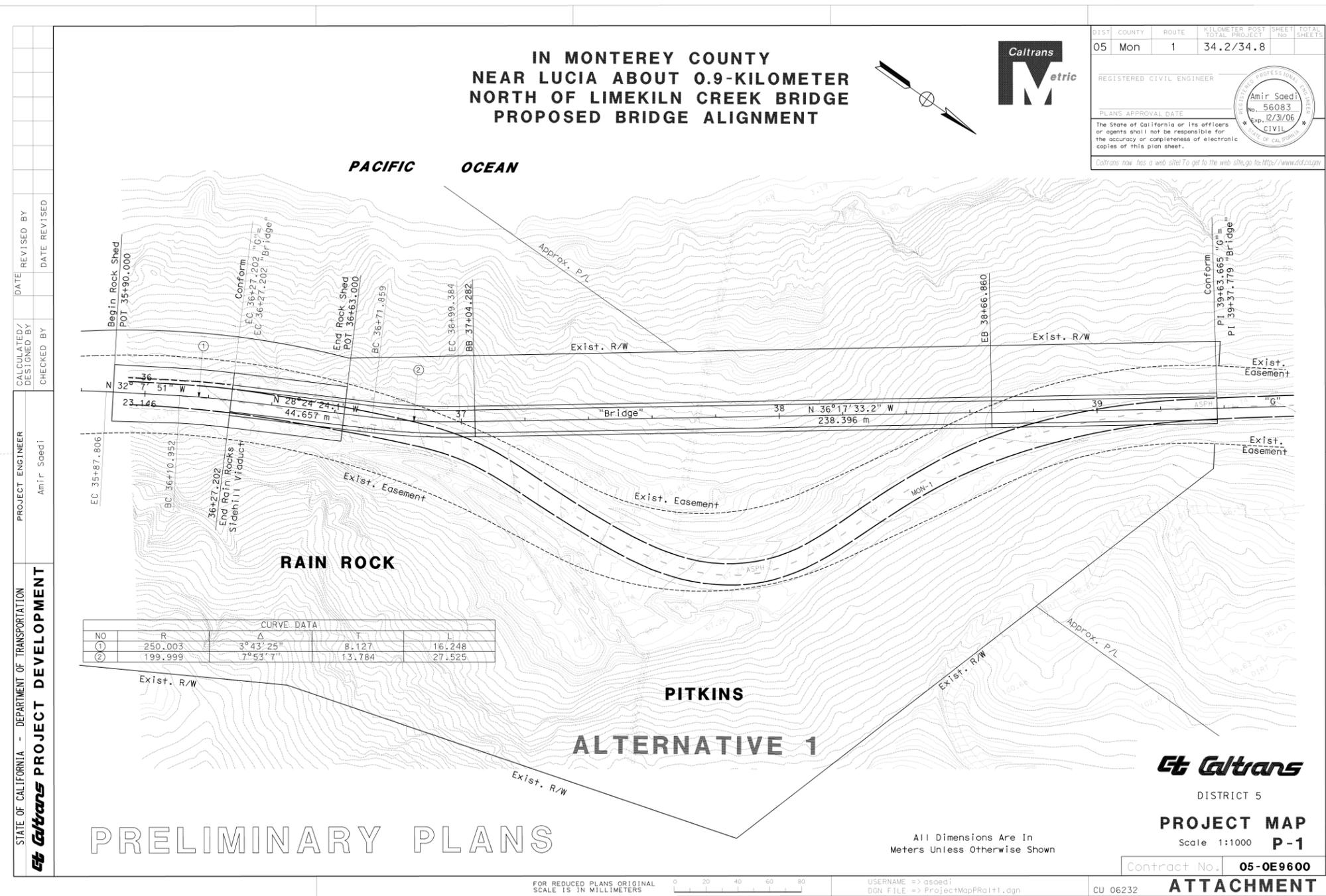


Figure 1-4 Alternative 1: Bridge and Rock Shed



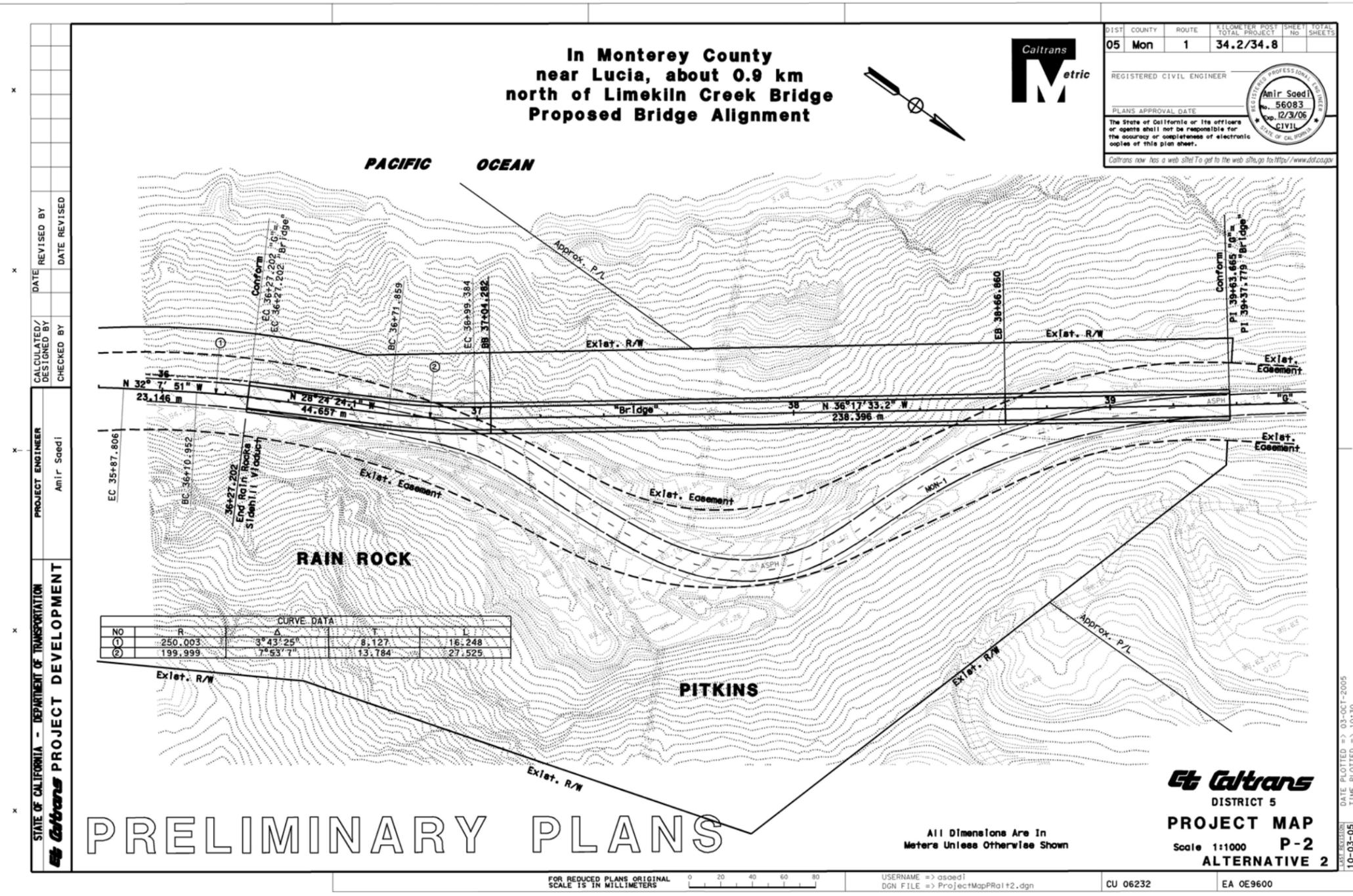
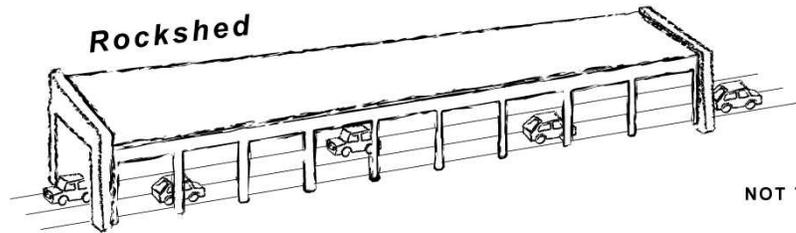
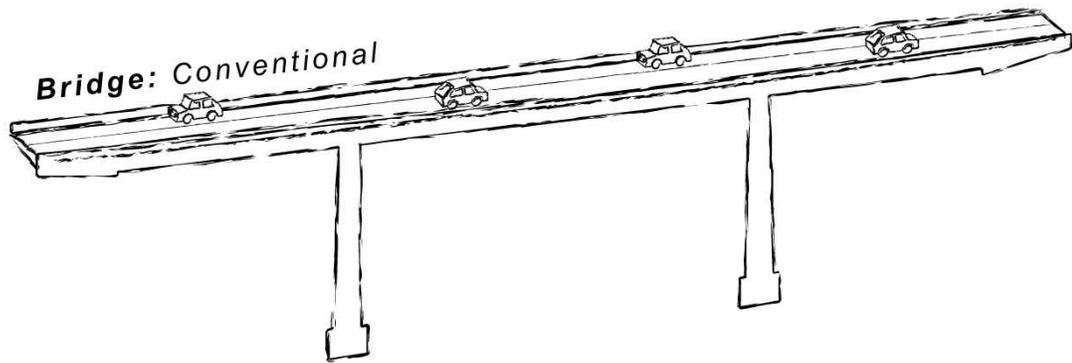
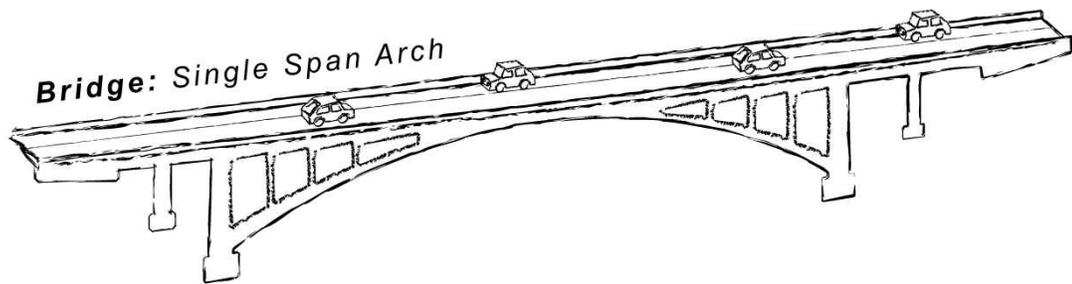
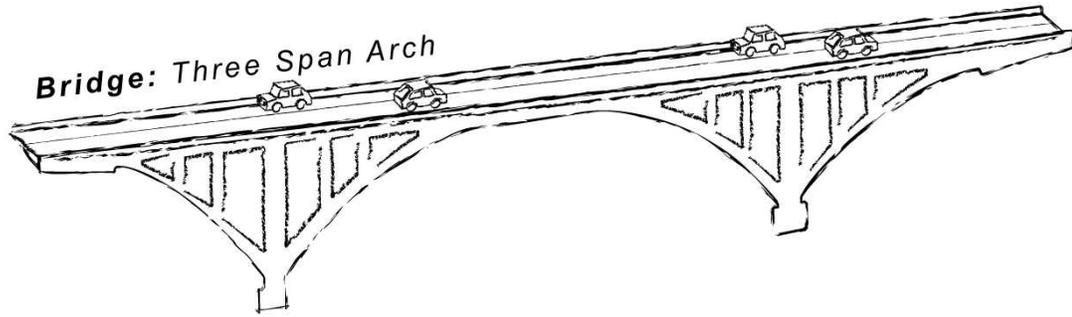


Figure 1-5 Alternative 2: The Bridge





NOT TO SCALE

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Figure 1-6 Bridge Types and Rock Shed



1.4.4 Comparison of Alternatives

Table 2. Summary of Project Comparison Criteria and Effects by Alternative⁹

Comparison Criteria		Alternative 1	Alternative 2	No-Build Alternative
Safety		Provides substantially improved protection to highway workers throughout the project limits.	Provides substantially improved protection to highway workers at Pitkins Curve. Does not improve protection to highway workers at Rain Rocks.	No additional protection provided.
Reliability		Provides most reliable highway facility at Pitkins Curve and Rain Rocks. Landslide would be bypassed and the highway would be protected from rockfall.	Provides a reliable highway facility at Pitkins Curve by bypassing the landslide. There would be no change to the highway at Rain Rocks. Active management strategies would continue to perform annual maintenance and emergency response to unexpected rockfall and would require road closures and restrictions.	Active management strategies would continue to require annual maintenance and emergency response to unexpected landslides and rockfall. Regular and unexpected extensive road closures and restrictions would continue.
Design Standards		Meets design standards.	Meets design standards in location of bridge. Rain Rocks location would not be changed from current dimensions.	Does not meet design standards.
Time to Construct		Estimated at between 4.1 and 5.7 years, depending on the ultimate design.	Estimated at between 3.0 and 3.7 years, depending on the ultimate design.	N/A
Cost	Current Cost	\$26.5 to 33.7 million	\$16.2 to 19.2 million	N/A ¹⁰
	Maintenance Costs ¹¹	\$1.7 million	\$ 9.0 million	\$ 112.0 million

⁹ Comparison criteria and potential impacts that have been highlighted in yellow are those that differ by alternative.

¹⁰ In the event of a catastrophic failure the cost to restore the highway is estimated to be in excess of \$45,000,000.

¹¹ Maintenance activities include annual removal of soil and regular replacement of cable/rocknet. Costs were based on the last six years of actual maintenance expenditures and escalated for the estimated life span of the project, which is 50 years, using a 3% annual inflation rate. Does not include cost of highway restoration in the event of a catastrophic failure. (See footnote 10).

Comparison Criteria		Alternative 1	Alternative 2	No-Build Alternative
Land Use 2.1		1.75 hectares (4.25 acres) of California State Park land is included in the project area. Caltrans identified this land, as a result of 2002 emergency highway restoration, for purchase to use as highway right-of-way. Purchase pending.	1.75 hectares (4.25 acres) of California State Park land is included in the project area. Caltrans identified this land, as a result of 2002 emergency highway restoration, for purchase to use as highway right-of-way. Purchase pending.	1.75 hectares (4.25 acres) of California State Park land is included in the project area. Caltrans identified this land, as a result of 2002 emergency highway restoration, for purchase to use as highway right-of-way. Purchase pending.
Coastal Zone 2.1.1	Local Coastal Program	While this alternative presents both conflict and consistency, on balance the project is consistent with the local coastal plan.	While this alternative presents both conflict and consistency, on balance the project is consistent with the local coastal plan.	The No-Build Alternative is in conflict with the local coastal plan because it does not act to facilitate public access to the coast.
	California Coastal Act	While this alternative presents both conflict and consistency, on balance the project is consistent with the California Coastal Act.	While this alternative presents both conflict and consistency, on balance the project is consistent with the California Coastal Act.	The No-Build Alternative is in conflict with the local coastal plan because it does not act to facilitate public access to the coast.
Traffic & Transportation/ Pedestrian & Bicycle Facilities 2.1.3		Improves reliability and safety of the highway. Provides improved facilities for non-motorized travel. Does not preclude future development of trails.	Improves reliability and safety of the highway. Provides improved facilities for non-motorized travel. Does not preclude future development of trails.	No change.
Visual/Aesthetics 2.1.4		Addition of rock shed to state scenic highway may result in significant impacts to the aesthetic qualities of the Big Sur coast. <i>Mitigation proposed.</i>	Addition of bridge to state scenic highway would not substantially change the aesthetic qualities of the Big Sur coast. <i>Avoidance and minimization measures proposed.</i>	No change
Natural Communities 2.3.1		Removes approximately 0.4 hectare (1.0 acre) of coastal sage scrub. <i>Minimization measures proposed.</i>	Removes approximately 0.4 hectare (1.0 acre) of coastal sage scrub. <i>Minimization measures proposed.</i>	No anticipated impact

Comparison Criteria		Alternative 1	Alternative 2	No-Build Alternative
Wetlands/ other Waters 2.3.2	U.S. Army Corps	No impacts	No impacts	No impact
	Other Waters of U. S.	Less than 0.01 hectare (0.01 acre) of unvegetated seeps and springs would be redirected. <i>Minimization measures proposed.</i>	Less than 0.01 hectare (0.01 acre) of unvegetated seeps and springs would be redirected. <i>Minimization measures proposed.</i>	No impact
	Coastal Zone	No impacts are anticipated to wetlands under jurisdiction of the local coastal program. <i>Minimization measures proposed.</i>	No impacts are anticipated to wetlands under jurisdiction of the local coastal program. <i>Minimization measures proposed.</i>	No impact
Threatened/Endangered Species 2.3.4		No effect to threatened or endangered species. <i>Avoidance and minimization measures proposed.</i>	No effect to threatened or endangered species. <i>Avoidance and minimization measures proposed.</i>	No impact
Construction 2.4	Excess Material	Alternative would not generate excess material.	Alternative would result in 11,000 cubic meters (14,500 cubic yards) of excess material.	Up to 100,000 cubic meters of excess material from unpredictable landslide and rockfall. Between 10,000 and 30,000 cubic meters of excess material from annual routine maintenance.
	Traffic	Restriction of roadway to one lane, regulated by a temporary traffic signal, for duration of construction. Occasional multiple day (of 8-hour duration) full highway closures scheduled during off peak hours. Traffic flow impacts from scheduled increased heavy equipment traffic. <i>Avoidance and minimization measures proposed.</i>	Restriction of roadway to one lane, regulated by a temporary traffic signal, for duration of construction. Occasional multiple day (of 8-hour duration) full highway closures scheduled during off peak hours. Traffic flow impacts from scheduled increased heavy equipment traffic. <i>Avoidance and minimization measures proposed.</i>	Unscheduled and potentially extensive full lane closures and lane restrictions due to landslides and rockfall. Occasional regular closures and traffic disruption due to annual maintenance cleanup activities.
	Duration	Estimated at between 4.1 and 5.7 years, depending on the ultimate design.	Estimated at between 3.0 and 3.7 years, depending on the ultimate design.	On-going

Comparison Criteria		Alternative 1	Alternative 2	No-Build Alternative
	Noise	Increased noise at construction site. Increased noise (of 1 dBA) would be imperceptible at nearby sensitive receptors. <i>Avoidance and minimization measures proposed.</i>	Increased noise at construction site. Increased noise (of 1 dBA) would be imperceptible at nearby sensitive receptors. <i>Avoidance and minimization measures proposed.</i>	Increased noise at construction site. Increases of 1 dBA from unscheduled and annual maintenance activities would be imperceptible at nearby sensitive receptors.
	Water Quality	Potential for suspended solids, dissolved solids, and organic pollutants to be introduced into the ocean. <i>Avoidance and minimization measures proposed.</i>	Potential for suspended solids, dissolved solids, and organic pollutants to be introduced into the ocean. <i>Avoidance and minimization measures proposed.</i>	Potential for suspended solids, dissolved solids, and organic pollutants to be introduced into the ocean.
	Air Quality	No exceedances anticipated.	No exceedances anticipated.	No exceedances anticipated.
	Site Appearance	Temporary impacts from earth movement, distracting activities, and storage of equipment and materials. <i>Avoidance and minimization measures included.</i>	Temporary impacts from earth movement, distracting activities, and storage of equipment and materials. <i>Avoidance and minimization measures included.</i>	Permanent impacts from earth movement, distracting activities, and storage of equipment and materials.
	Cultural	No effect anticipated. <i>Avoidance and minimization measures included in event of unanticipated discovery.</i>	No effect anticipated. <i>Avoidance and minimization measures included in event of unanticipated discovery.</i>	No impact
	Paleontology	No effect anticipated. <i>Avoidance and minimization measures included in event of unanticipated discovery.</i>	No effect anticipated. <i>Avoidance and minimization measures included in event of unanticipated discovery.</i>	No impact
	Haz Waste	No effect anticipated. <i>Avoidance and minimization measures included in event of unanticipated discovery.</i>	No effect anticipated. <i>Avoidance and minimization measures included in event of unanticipated discovery.</i>	No impact
Cumulative Impacts 2.1.4		Alternative 1 has been considered with other projects in the area for its potential to contribute to cumulative impacts. Addition of bridge and rock shed would contribute to cumulative visual impacts. <i>Minimization measures proposed.</i>	Alternative 2 has been considered with other projects in the area for its potential to contribute to cumulative impacts. Addition of bridge would contribute to cumulative visual impacts. <i>Minimization measures proposed.</i>	Not applicable

1.4.5 Alternatives Considered and Withdrawn

In addition to the two alternatives under consideration, six more were developed¹², considered, and ultimately withdrawn from consideration. These alternatives are described below and the reasons for withdrawing them from further consideration are presented.

Relocate or Separate

Tunnel

Using the strategy of separating the highway from the landslide, a tunnel was considered as an alternative solution at Pitkins Curve/Rain Rocks. It would have required a tunnel of at least 450 meters (1,500 feet) in length, stretching from the Limekiln Bridge to beyond Pitkins Curve. To build the tunnel, the highway would have been realigned for the full length of the tunnel and slightly beyond. Major retaining structures above the roadway at the tunnel entrance and exit were expected. An estimated 765,000 cubic meters (1,000,000 cubic yards) of rock and soil were expected to be generated from excavation for the tunnel. Impacts associated with disposal of the large amounts of material were anticipated. In addition, impacts to the campground at Limekiln Creek, as well as to threatened and endangered species, wetlands, and cultural resources were anticipated. Loss of a quarter mile of views to the ocean was also anticipated. Construction costs were estimated at between \$73 and \$100 million. Construction duration was projected to be over five years. This alternative was withdrawn from consideration because of the difficulty of construction, high cost, potential for significant visual impacts, and impacts to recreation, cultural, and biological resources.

Stabilize

Using the strategy of stabilizing the landslide, alternatives to realign the highway, construct a retaining wall, or construct a reinforced embankment were considered.

Realign Highway Inland

The alternative to relocate the highway inland, away from the landslide, was considered at Pitkins Curve. This alternative would have required moving the highway alignment inland and cutting the slope back to the top of the ridgeline, effectively removing the entire slide above the roadway. The slide below the roadway

¹² The three basic strategies to address highway repair in landslide-prone areas: 1) Relocate or Separate, 2) Stabilize, and 3) Manage and Protect, as presented in the Coast Highway Management Plan *Guidelines for Managing Landslides* (and discussed above in Section 1.4.1: Alternatives Development Process), were used to develop these alternatives.

would remain, however, and would continue to have potential to undermine the ultimate alignment. This alternative would have generated an estimated 380,000 cubic meters (500,000 cubic yards) of rock and soil that would need to be trucked from the project site. Environmental impacts and traffic disruption during construction would have been among the greatest of all alternatives considered and the alternative was ultimately withdrawn from consideration.

Retaining Wall and Reinforced Embankment

The alternatives of building either a retaining wall or reinforcing the embankment below the roadway were considered at Pitkins Curve to buttress the roadway and isolate it from the landslide. The wall would have been an estimated 18 meters (55 feet) high and 90 meters (300 feet) long. A reinforced embankment would have involved removing the entire landslide below the roadway and reconstructing the slope with imported and stockpiled soil; gradually rebuilding the embankment upwards by compacting the soils and reinforcing them with geo-textiles. Both these stabilization efforts would have included the construction of a substantial catchment ditch for rockfall and rockslides that would continue to occur above the roadway.

Current conditions suggest that the stabilization strategies would not be permanent solutions, but would require further reconstruction as the landslide above the roadway moved downward. Construction cost for either alternative was estimated at \$5 million dollars; annual maintenance costs were estimated at \$1 million. This alternative was withdrawn from consideration because it could not be considered a long-term or permanent solution.

Manage and Protect

Place Rock Net Above Pitkins Curve

Using the strategy of managing the landslide and protecting the highway users, an alternative was considered which would place rock net or cable mesh at Pitkins Curve. This alternative was withdrawn because the slope above Pitkins Curve is too unstable to allow anchoring of these protective devices.

Continuous Rock shed

Using the strategy of protecting the highway users, a rock shed that would cover the roadway the entire length of the project (from Rain Rocks to beyond Pitkins Curve) was considered. The alignment would have been required to hug the slope, necessitating tight curves and 25 mile per hour speeds within the rock shed. The continuous rock shed would be supported by a down-slope retaining wall. The total

length of the continuous rock shed and retaining wall was estimated to be approximately 215 meters (700 feet) long; the retaining wall would be 7.6 meters (25 feet) high. Construction costs were estimated at \$25 million; routine maintenance would be minimal. This alternative was ultimately withdrawn because the alignment would have limited the sight distance within the rock shed, causing unsafe driving conditions.

1.4.6 Transportation Systems Management

Transportation System Management strategies consist of actions that increase the efficiency of existing roads; they are actions that increase the number of vehicle trips a roadway can carry without increasing the number of through lanes. Examples of Transportation System Management strategies pertinent to the Big Sur Coast Highway include auxiliary and turning lanes. Transportation System Management also encourages automobile, public and private transit, ridesharing programs, and bicycle and pedestrian improvements of a unified transportation system. Modal alternatives integrate multiple forms of transportation modes, such as pedestrian, bicycle, automobile, rail, and transit.

Transportation System Management is not applicable to this project's location, purpose, or need.

1.5 Permits and Approvals Needed

Permits, reviews, and approvals required for project construction are shown in Table 3.

Table 3. Permits and Approvals

Agency	Permit/Approval
Federal Highway Administration	Approval of Project Funding
Monterey County	Local Coastal Development Permit
U. S. Army Corps of Engineers	Section 404 Nationwide Permit
Regional Water Quality Control Board	401 Water Quality Certification



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

This chapter describes the impacts that the project would have on the human, physical, and biological environments in the project area. It describes the existing environment that could be affected by the project and potential impacts from each of the alternatives.

The environmental study area defined for this project included the maximum area that could be affected by all project alternatives. It included the area needed to construct the project, roughly outlined by the ridgeline above the roadway limits and the coastline below. Additionally, it included all locations within the existing highway right-of-way that could potentially be used for construction staging, and vehicle and equipment storage within a mile north of the actual bridge and/or rock shed location. Refer to Figure 2-1.

As part of the scoping and environmental analysis conducted for the project, the following environmental resources were considered, but no potential for adverse impacts to these resources was identified. Consequently, there is no further discussion regarding these resources in this document:

- **Land Use:** Approximately 1.7 hectares (4.25 acres) of land, which is currently part of Limekiln State Park would be included in the construction area as part of this project. This land was included as part of the 2000-2002 emergency highway restoration work and ultimately identified for purchase by Caltrans as “post certification work.” Caltrans is currently negotiating with State Parks to purchase the land. Refer to Section 2.1.1.4 for further discussion. No additional conversions are anticipated with this project.
- **Wild and Scenic Rivers:** No wild and scenic rivers exist within the project area.
- **Growth:** Construction of the project is not expected to shift the pattern of development or induce additional development beyond that included in the Monterey County General Plan.

- **Farmlands/Timberlands:** No farmlands or timberlands are present in the project limits.
- **Community Impacts:** There are no disproportionately high and adverse human health and environmental effects on minority populations and low-income populations.
- **Cultural Resources:** There are no eligible prehistoric or historic archaeological resources within the project area. There are no impacts to properties eligible for listing on the National Register of Historic Places (Negative Historic Property Survey Report, August 23, 2002).
- **Hydrology and Floodplain:** The project does not encroach upon the 100-year flood plain; no floodplain impact would occur with the project (Federal Emergency Management Agency Flood Rate Insurance Map, Monterey County).
- **Water Quality and Storm Water Runoff:** The major water body in the project area is the Pacific Ocean. The ocean adjacent to the project is designated as the Monterey Bay National Marine Sanctuary. By incorporating proper and accepted engineering practices and best management practices, the project would not impact water quality. Refer to Section 2.4: Construction Impacts for further discussion.
- **Paleontology:** The project is not expected to encounter paleontological resources (Paleontological Technical Report August 11, 2004).
- **Hazardous Waste/Materials:** The project area was investigated for potential involvement with aerially deposited lead, structures with lead-based paint and asbestos-containing materials, and hazardous materials. The study found no evidence that the project would encounter any hazardous materials (Initial Site Assessment for Hazardous Waste, November 27, 2001).
- **Air Quality:** There will be no increase in traffic volumes or speeds with the proposed project and, therefore, no increase in long-term air emissions. (Air Report, May 2005). Refer to Section 2.4: Construction Impacts for further discussion.
- **Noise:** There will be no increase in traffic volumes with the proposed project and, therefore, no increase in long-term noise levels. (Noise Report, May 2005). Refer to Section 2.4: Construction Impacts for further discussion.



Figure 2-1 Project Environmental Study Area (outlined in yellow)



2.1 Human Environment

2.1.1 Consistency with State, Regional and Local Plans

2.1.1.1 Regional Transportation Plan for Monterey County

The 2006 Regional Transportation Plan outlines the region's goals and policies for meeting current and future transportation needs and provides a foundation for making transportation decisions. The proposed improvements to Highway 1 at Pitkins Curve and Rain Rocks project is included in and consistent with the 2002 Regional Transportation Plan for Monterey County and the 2002 cost-constrained Regional Transportation Improvement Program.

2.1.1.2 Monterey County General Plan

The project is consistent with the goals and policies of the Monterey County General Plan. The principal planning policies for the area are found in the Big Sur Coast Land Use Plan. Since the project falls in the Coastal Zone, it is regulated by the Local Coastal Program and Implementation Plan (see Coastal Zone discussion below).

Although Monterey County is updating its 1982 General Plan, the 1982 General Plan is still in effect. The 1982 General Plan promotes a safe, effective, and economical transportation system that will serve existing and future land uses and maintain and enhance a system of scenic highways without imposing undue restrictions or constricting the normal flow of traffic.

Both alternatives are consistent with the Monterey County General Plan. Refer also to Section 2.4.6: Construction Noise.

2.1.1.3 Coastal Zone

Regulatory Setting

The Coastal Zone Management Act of 1972 is the primary federal law enacted to preserve and protect coastal resources. This act sets up a program under which coastal states are encouraged to develop coastal management programs. States with an approved coastal management plan are able to review federal permits and activities to determine if they are consistent with the state's management plan.

California has developed a coastal zone management plan and has enacted its own law, the California Coastal Act of 1976, to protect the coastline. The California Coastal Act is the state's approved coastal zone management plan under the federal

Coastal Zone Management Act. It includes the protection and expansion of public access and recreation; the protection, enhancement and restoration of environmentally sensitive areas; the protection of agricultural lands and lands of scenic beauty; and the protection of property and life from coastal hazards. The California Coastal Commission is responsible for implementation and oversight under the California Coastal Act.

Just as the federal Coastal Zone Management Act delegates power to coastal states to develop their own coastal management plans, the California Coastal Act delegates power to local governments (15 coastal counties and 58 cities) to enact their own Local Coastal Programs. Local Coastal Programs determine the short- and long-term use of coastal resources in their jurisdiction consistent with the California Coastal Act goals.

Monterey County developed its own Local Coastal Program, which was certified by the California Coastal Commission in 1986 and includes various certified amendments since 1986. The California Coastal Commission is currently undertaking a periodic review of the County's Local Coastal Program.

Affected Environment

Monterey County's coastal zone is divided into four distinct regions that are part of the Monterey County Local Coastal Program. The Big Sur Coast Planning Area stretches over 70 miles between Carmel and the San Luis Obispo County line. Rugged terrain, scarce water, difficult access, unstable slopes, and dangers of fire and flood limit the kinds of development that occur in the planning area. Ranching, tourism, and private residential development are the largest land uses in the planning area. The Big Sur area retains a strong and independent community identity.

Land use designations adjacent to the project area are Watershed and Scenic Conservation Lands, Rural Lands, and Public Lands.¹³ Watershed and Scenic Conservation Lands provide for the protection of watersheds, streams, plant communities, and scenic values as a primary objective. Rural Lands provide for farming or grazing, tourist facilities, and private residences. The community center of Lucia, a mile and a half north of the project area, is designated Rural Lands. Public Lands include Limekiln State Park and Los Padres National Forest. The Limekiln

¹³ Current land use designations were identified using zoning maps for Monterey County, the Monterey County General Plan and the Big Sur Coast Land Use Plan, including the Local Coastal Program and the Implementation Plan.

State Park entrance is half a mile south of the project and a small portion of their land is in the project area. Los Padres National Forest lands are east of the project area, beyond the ridgeline and project limits. Public Lands provide open space, recreational opportunities, and areas for resource protection.

Project Consistency with Monterey County Local Coastal Program

A discussion of the build alternatives in relation to applicable sections of the Big Sur Coast Local Coastal Plan appears in Table 4.

Table 4. Consistency with Monterey County Local Coastal Program

Policy No.	Subject of Policy	Discussion	For Further Discussion in this Document, see:
3.2	Scenic Resources	Alternative 1 This alternative introduces a unique built feature into the scenic landscape. <i>Mitigation recommended.</i> Alternative 2 This alternative introduces built features that are compatible with the highway's scenic highway designation. <i>Avoidance and minimization measures recommended.</i>	Section 2.1.4
3.3	Environmentally Sensitive Habitats	The proposed project is compatible with the long-term maintenance of environmentally sensitive habitat. While displacements of minimal amounts of native shrubs are unavoidable, they would be restored and/or replaced onsite to incur no net loss of these resources. Measures are included to avoid impacts to marine habitats. <i>Avoidance and minimization measures recommended.</i>	Section 2.3
3.4	Water Resources	The proposed project is compatible with the long-term maintenance of wetlands. No U.S. Army Corps of Engineers-regulated wetlands would be affected by any of the project alternatives. While minimal impacts to "other waters of the U.S." are unavoidable, these would be restored and/or replaced onsite to incur no net loss of wetlands. Strict erosion control and sediment control measures would be implemented during construction of the proposed project to minimize potential impacts to water quality in sensitive areas. <i>Avoidance and minimization measures recommended.</i>	Section 2.3
3.7	Hazardous Areas	Project is compatible with minimization of risks to life and property.	Section 2.2.1
4.0	Highway 1 and County Roads	Alternative 1 is compatible with the highway's function as a recreational route. Highway upgrades are consistent with the recommended standards and preservation of coastal resources and are made with consideration of the scenic character. <i>Mitigation recommended.</i> Alternative 2 is consistent with the maintenance and enhancement of the highway's aesthetic character and function as a recreational route. Highway upgrades are consistent with recommended standards, preservation of coastal resources, and enhancement of scenic character. <i>Avoidance and minimization measures recommended.</i>	Section 2.1.4
6.0	Public Access	Alternatives 1 and 2 improve coastal public access by increasing roadway reliability and both alternatives are compatible with recommended provisions to provide improved access for non-motorized traffic.	Section 2.1.2

Project Consistency with the California Coastal Act

A discussion of the build alternatives in relation to applicable sections of the California Coastal Act appears in Table 5.

Table 5. Consistency with California Coastal Act

California Coastal Act Policy ¹⁴	Subject of Policy	Discussion	For Further Discussion in this Document, see:
30210-30214	Public Access	Alternatives 1 and 2 would improve coastal public access by increasing roadway reliability. None of the proposed alternatives would interfere with existing public access. The proposed project includes improved facilities for non-motorized travel through the project limits. Accommodations for the California Coastal Trail through the project area would be addressed during development of the local coastal permit.	Section 2.1.2 & Appendix G
30220-30224	Recreation	The project site could not safely offer access to water-oriented recreational activities. Accommodations for the California Coastal Trail through the project area would be addressed during development of the local coastal permit.	Appendix G
30230-30237	Marine Environment	The project would avoid marine habitat and includes stringent safeguards to ensure minimal inadvertent discharge of materials to the ocean. <i>Avoidance and minimization measures recommended.</i>	Section 2.3
30240-30244	Land Resources/ Environmentally Sensitive Habitat/Ag Land	The project would avoid environmentally sensitive habitat where practicable and enhance or replace lost habitat to ensure no net loss. No agricultural land use in project vicinity. <i>Avoidance and minimization measures recommended.</i>	Section 2.3
30250-30255	Development/ Scenic Qualities	Alternative 1 would substantially retain views to the ocean and minimize the alteration of landforms. <i>Mitigation recommended.</i> Alternative 2 would substantially retain views to the ocean, minimize the alteration of landforms and would be visually compatible with and subordinate to the scenic character of the area. <i>Avoidance and minimization measures recommended.</i>	Section 2.1.4
30260-30265.5	Industrial Development	Not applicable.	

¹⁴ Policy numbers reference statutes in the California Public Resources Code.

2.1.1.4 Parks and Recreation

Affected Environment

The California Department of Parks and Recreation owns and manages lands adjacent to the highway at Limekiln State Park. The mission of the Department is to provide for the health, inspiration, and education of the people of California by helping to preserve the state's extraordinary biological diversity, protecting its most valued natural and cultural resources, and creating opportunities for high quality outdoor recreation.

Approximately 1.7 hectares (4.25 acres) of land, which is currently part of Limekiln State Park, would be included in the construction area as part of this project. This land was included as part of the 2000-2002 emergency highway restoration work and ultimately identified for purchase by Caltrans as “post certification work.” Caltrans is currently negotiating with State Parks to purchase the land.

2.1.2 Utilities

Both alternatives would require removal of two existing utility poles and lines. Lines would be placed across or through the structure(s) and/or underground.

2.1.3 Pedestrian and Bicycle Facilities

Regulatory Setting

The Federal Highway Administration directs that full consideration should be given to the safe accommodation of pedestrians and bicyclists during the development of federal-aid highway projects (see 23 Code of Federal Regulations 652). It further directs that the special needs of the elderly and the disabled must be considered in all federal-aid projects that include pedestrian facilities. When current or anticipated pedestrian and/or bicycle traffic presents a potential conflict with motor vehicle traffic, every effort must be made to minimize the detrimental effects on all highway users who share the facility.

Caltrans and the Federal Highway Administration are committed to carrying out the 1990 Americans with Disabilities Act by building transportation facilities that provide equal access for all persons. The same degree of convenience, accessibility, and safety available to the general public will be provided to persons with disabilities.

Affected Environment

The California Coastal Conservancy has prepared a plan, at the direction of the State Legislature, to complete the “California Coastal Trail.” The trail is intended to be a continuous public right-of-way along the California coastline for hiking. Through the project area, the California Coastal Trail route concept generally follows existing trails, above and parallel to Highway 1, through public and private land. However, the trail is not passable at present. The Pacific Coast Bike Route is Highway 1. Currently both bikes and pedestrians use the existing highway shoulders, which range in width from 0.6 to 1.2 meters (2 to 4 feet), to travel through the project area.

Impacts

The project would provide dependable access and include uniform 1.2-meter (4-foot) -wide shoulders throughout the length of the project. This would provide a benefit to non-motorized traffic.

Avoidance, Minimization, Mitigation Measures and/or Permit Conditions

The Coastal Commission has indicated that the local coastal permit would include conditions to support implementation of the California Coastal Trail through the project area. Caltrans’ policy for non-motorized transportation directs that highway facilities safely support pedestrian, bicycle and accessibility for the disabled. Traditionally, wide shoulders next to the travel way have served this purpose. Caltrans’ role and responsibility for developing, constructing and maintaining any portion of the California Coastal Trail separated trail facility, on or off the highway, has not been established. In the interest of supporting the California Coastal Trail, Caltrans would consider providing direct support to the California Coastal Conservancy for their implementation of a separated coastal trail that bypasses the Rain Rocks promontory. Ultimate determination of an acceptable condition to address Coastal Commission comments regarding the California Coastal Trail would be made during development of the local coastal permit with Monterey County.

2.1.4 Visual/Aesthetics

Regulatory Setting

The National Environmental Policy Act of 1969 as amended establishes that the federal government use all practicable means to ensure all Americans safe, healthful, productive and *aesthetically* (emphasis added) and culturally pleasing surroundings [42 U.S. C. 4331(b)(2)]. To further emphasize this point, the Federal Highway Administration, in its implementation of the National Environmental Policy Act [23

U.S.C. 109(h)], directs that final decisions regarding projects are to be made in the best overall public interest taking into account adverse environmental impacts, including among others the destruction or disruption of aesthetic values.

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

The Monterey County Local Coastal Program provides for the preservation of the incomparable beauty of the Big Sur country. It specifies that all development must harmonize with and be subordinate to the wild and natural character of the land, and should remain within the small-scale, rural values of the area, rather than introduce new or conflicting uses. It is the County’s objective to preserve the Big Sur Coast scenic resources in perpetuity and to promote the restoration of the natural beauty of visually degraded areas wherever possible. The County’s Viewshed Policy essentially prohibits all new construction if visible from Highway 1, with the exception of road capacity, safety, and aesthetic improvements; provided these projects enhance the highway’s aesthetic beauty and protect its primary function as a two-lane recreation route, include walking and bicycle trails wherever feasible, and maintain the highest possible standard of visual beauty and interest.

The Coast Highway Management Plan was undertaken, in part, to foster a corridor-wide understanding of the aesthetic values along the Big Sur coast and to provide guidance in managing scenic resources. The Coast Highway Management Plan Guidelines for Corridor Aesthetics outlines some primary areas of local concern regarding the corridor’s visual setting: These are:

- The essential character of Highway 1 is that of a functional highway that passes through a unique and spectacular landscape.
- The true historic character of the corridor is worthy of preservation. Leaving the corridor essentially as it is would better honor this character than converting it to a sanitized scenic highway experience or theme park.
- The highway is not homogeneous in character; it passes through a series of different environments, each with distinct characteristics and individual themes.

- Uniformity of roadside features should be avoided, as it would conflict with recognizing the varied and distinct characteristics along the corridor.
- The needs of one stakeholder group should not be disproportionate to others. Accommodating needs of visitors should not outweigh the desires and needs of the local community for whom the highway is a central feature of daily life, and visa versa.
- For decades, the local community has accepted and encouraged a measure of eclecticism and expressions of individuality and craft in features such as mailboxes, private signs, and small structures.
- Although diversity in roadside features is valued, increasing clutter is a serious concern. This is most evidenced in commentary regarding unnecessary, redundant, or poorly designed signs and visually intrusive overhead utilities.

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

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

- Any new bridges should be authentic in design, rather than emulate something they are not, i.e., historic bridges. At the same time, structural designers should recognize historic bridges for the quality of aesthetic and engineering excellence they represent and strive to match or exceed this quality in contemporary terms.
- In the interests of overall continuity, designers should first consider bridge types that are in the same visual family as the historic bridges: arched or arch-like main span structures below deck level and made of concrete.

- In designing the alignment of a new bridge, designers should allow the roadway's geometry (plan and profile) to flow smoothly over the bridge, not necessarily limiting the alignment to a tangent (or straight) geometry.
- To maintain the visual continuity of the existing roadway, the width of new bridges should match the width of the approaching roadways, including shoulders, as closely as possible. As with roadway shoulder widths, the desired aesthetic for structures would support the concept for a 32-foot roadbed, subject to site-specific considerations and with consideration for appropriate exceptions from the 40-foot standard.
- New bridges must include an appropriate rail for safety of motorists, cyclists, and pedestrians; the rail type should be visually compatible with the open concrete balustrade rail seen on historic bridges.

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

Affected Environment

The project is located within the southern region of the Big Sur coast, and the visual character of the project vicinity includes steep, rugged slopes alternating with well-vegetated ravines and natural drainages. The highway alignment is curved within the vicinity of the project, as it is for several miles to the north and south.

The landform varies within the project limits. The southern section of the project area appears as a massive rock-formed ridge that extends steeply up from the ocean. The topography of the middle portion of the project is a slightly bowl-shaped ravine, caused by landslide activity over the years. The hillside at the northern end of the project is more stable and less rocky in appearance than the middle and southern ends of the project. The roadway alignment curves inland as it follows the varied topography of the project site.

The Limekiln Bridge and the Rain Rocks viaduct are within close proximity to the southern end of the project. The existing road alignment limits side-views of these

two structures, and as a result, the majority of viewers know them only by their bridge railing and deck surfaces. Extensive “rock-net drapery,” resembling chain-link fence fabric, has been installed on the rocky slopes above the highway immediately south of the project. No residential or commercial structures are within proximity of the project site. Limekiln campground is approximately one-quarter mile south of the project.

Coastal chaparral is the primary vegetative cover in the project vicinity. Medium to small shrubs and grasses are found throughout the project limits, however the most unstable and rocky slopes are relatively barren and lack vegetative cover. Although no trees are on site, several can be seen on the upper elevations of slopes adjacent to the project.

Existing Visual Quality

The visual quality of the project site is high. From this location, the view quality is due mostly to the elevated viewing position above the ocean, and the view of the steep topography as it descends to the shoreline to the north and south. The site is one of the more rugged appearing locations along the highway because of its history of landslides and rockfalls. Within the project limits, vegetation is somewhat sparse and doesn't contribute greatly to the visual quality. The visual character of the immediate project site is largely defined by the perception and awareness of the dynamic forces of nature in the landscape. The components that make up the view are visually strong, and the character is a bold combination of towering rock cliffs, sheer drop-offs to the crashing surf line, and the vast Pacific Ocean as far as the eye can see. The quality of the view at the project site is somewhat reduced by the landslide scarring and required on-going maintenance efforts.

The visual experience of traveling the Big Sur coast is influenced by a variety of historic features. Seven historic bridges, built in the 1930s and important examples of the engineering technology and aesthetic preference of the era, are found along a 65-kilometer (41-mile) stretch of the coast highway. These bridges share a common design; each is an open-spandrel concrete arch structure with open bridge rail. Other historic elements seen by the highway traveler include original highway features constructed of rock masonry, such as parapet walls, culvert headwalls, and drinking fountains.

In addition to the historic structures, many other built elements contribute to the visual character of the highway experience. Bridge rails are noticeable components of

both historic and non-historic structures. The railings of the coastal bridges are important in their ability to define the architectural style of structures, as well as their potential effect on ocean views. Open style railing is associated with older structures and design, while the railing constructed since the 1970s is typically solid.

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

The existing visual quality of Highway 1 in the project area is high, due primarily to the presence of natural vegetation, the topographic relief, ocean views, and the minimal visibility of built elements. The project is within the southern Big Sur area, which tends to have less tree cover and generally appears more rocky and steep than the northern section of the coast. The major visual detractors within the project vicinity are the scarring caused by landslides, the on-going maintenance activities required to keep the road clear of landslide debris, rock netting on the cut slopes, the utility poles, and the solid railing on the existing viaduct and bridge.

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

Impacts

Photo simulations were prepared to assess the potential impacts from each alternative, and to illustrate general landform and structure appearance. Photo simulations are presented following page 57. Specific design details are not included in the simulations and will be the product of subsequent design and review. The simulations are intended to show a reasonable representation of the project, and to illustrate the estimated scale and form of any proposed features and their relationship to the setting. The photo-simulations were prepared showing the project setting soon after construction.

This project would result in a substantial alteration of the visual environment. The inherent change associated with introducing two large structures into this mostly natural environment would affect the character of the project setting.

The Bridge

Bridges and viaducts are somewhat common features along the Big Sur Coast, and the proposed Pitkins Bridge would not seem out of character to viewers traveling Highway 1. As seen from the highway, views of the bridge structure would be somewhat limited. The road alignment north and south of the bridge won't allow full "side views" of the structure, and most views from the highway would be at acute angles. The greatest opportunity for viewing the complete bridge architecture would be from the roadside at the few informal turnouts immediately north of the project site, and from offshore. The majority of viewers would know the bridge by traveling on it and seeing its railing and design details. Construction of the project is expected to cause more people to stop at the bridge approaches and nearby turnouts to view the structure and the natural vistas available from the project site.

The project site itself is somewhat visually degraded because of landslides and ongoing human activity. In spite of that, the route's federal and state scenic designations, combined with a demonstrated high level of local concern regarding the preservation of visual resources, indicate that Highway 1, which includes the project area, is among the most sensitive in the state and perhaps the nation. The visual impact associated with the bridge would depend largely on how well the form of the structure and the design details complement the aesthetic character of the Big Sur community and visitors' expectations of the coast highway. How the bridge visually relates to the other structures on the coast, and how well its appearance responds to the community's aesthetic goals and planning documents would be the ultimate determinant of visual impact. The Pitkins bridge has the potential to contribute to the high visual quality of the coast or to substantially degrade it.

Although the proposed bridge would be a large engineered structure, bridges are relatively common visual elements along Highway 1, and the addition of one more would not appear unusual or particularly unexpected. Although the construction of the proposed bridge would represent a change in the immediate environment, with the incorporation of mitigation and minimization measures, Alternative 2 would be consistent with the character of the Big Sur corridor.

The Rock shed

The proposed rock shed would be a unique structure on the California coast. It is expected that because of its distinctiveness, the rock shed would be recognized as a landmark along the highway corridor. As seen from the roadway, the portals and parapet walls of the rock shed would be the most visible elements of either project alternative. The function of the rock shed would require a large engineered structure, and the ability to reduce the perception of the structure's scale through creative engineering and architecture would be limited. The inherent mass of the rock shed would remain apparent, largely due to the viewer's experience of passing under and through it. Regardless of architectural forms, materials, and details, the shape and size of the rock shed would not readily blend with the landscape. The geometric forms associated with the structure would contrast with the mostly organic appearance of the setting.

From inside the rock shed, the proposed columns have the potential to frame views, and although the viewing duration within the rock shed would be short, the framed views combined with the enclosed spatial quality may increase the viewing experience in a unique way.

The Highway 1 corridor has a relatively low level of artificial night lighting. Lighting inside the rock shed would introduce a new source of visible light along the highway. No residences are close enough to be adversely affected by the lighting, although the lights would be seen from up-close and from distant northbound locations on the highway. Any lighting proposed on the exterior of the rock shed structure, such as the portals, would potentially increase visibility of glare.

Viewer perception of the rock shed and sensitivity to change is expected to vary. Comparison to planning goals and the results of the Visual Quality Evaluation included in this study indicate that the majority of viewers are likely to consider the rock shed to be out of character with the natural Big Sur character in terms of scale and engineered appearance. It is also expected that other viewers would consider the rock shed as an interesting engineered element. This viewer group would likely see the rock shed as an exciting feature along this dynamic roadway.

Even with implementation of the measures listed below, extensive visual impacts would remain with Alternative 1 primarily due to visibility of the rock shed. The proposed rock shed would be a large, one-of-a-kind built structure and would become a visual landmark along the coast highway. Such a memorable large-scale element

built along this national All-American Road would cause a substantial change in the visual character of the project area.

Avoidance, Minimization, and/or Mitigation Measures

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

- Exaggerated topographic relief.
- The dramatic vistas of the Pacific Ocean.
- The minimal visual encroachment of constructed elements
- The harmonious visual pattern of the diverse native vegetation on the hills and ground plane.
- The combination of alternating distant vistas and narrowing view caused by undulating landform.

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

Measures 2.1.3.A through Q apply to both Alternative 1 and Alternative 2:

- A. Design the structures with the highest quality architectural and engineering practices and considerations, acknowledging the existing historic bridges of the Big Sur Coast and using current state-of-the-art technology.
- B. Involve the community in the design of all structures, walls, barriers, and other project aesthetics through the creation of an Aesthetic Design Advisory Committee.
- C. Consider including a high level of architectural detailing in the design of the structures.
- D. Use an open-style safety rail that minimizes view blockage.
- E. Use finish colors and textures that minimize reflectivity and glare.

- F. To the greatest extent possible use an “honest use of materials” philosophy that avoids the use of obviously “fake” materials, such as materials that are concrete formed and colored to look like wood, etc.
- G. Re-contour all disturbed areas and construction access roads to a natural appearance.
- H. Vegetate all stabilized soil areas with native shrubs and grasses. Include planting where possible around all exposed drainage pipes, permanent access roads, and retaining walls (except the interior of the rock shed).
- I. Integrate existing rock outcroppings and stone landforms into the design to the greatest extent possible.
- J. Minimize the use of signage and reflectors to the minimum required in the Manual of Uniform Traffic Control Devices with concurrence by Caltrans Traffic Design.
- K. Minimize use of asphalt or concrete paving beyond the proposed 4-foot shoulders. If additional paving is required, alternative natural-appearing surfaces such as soil cement would be used.
- L. Color additional rock netting or mesh, if required, completely black, including all integral connectors.
- M. Bury all overside drains and inlet structures or hide them from view to the greatest extent possible. Where unavoidably exposed to view, color the pipes to reduce noticeability, and dull the gloss of the finish.
- N. Color all paved ditches to reduce noticeability.
- O. Where metal beam guardrail is required, use measures to reduce reflectivity of the metal components.
- P. If paving is required beyond the paved portion of the roadway, use alternative natural-appearing surfaces such as soil cement. If a safety barrier is required at the perimeter of the pullout or parking area, design it to complement the other project structures. If boulders are used, half-bury them into the soil to appear natural.

- Q. If pedestrian or bicycle railing is required, design it with materials, form, and colors to minimize noticeability and ocean view blockage, and to complement the bridge and rock shed architecture.

In addition to the above measures, mitigation measures 2.1.3.R through V apply to Alternative 1 only:

- R. Minimize the tight, enclosed spatial characteristics of the rock shed to the greatest extent possible through measures such as:
1. Reducing the number of columns,
 2. Reducing the thickness of the columns,
 3. Raising the ceiling height of the structure,
 4. Aligning the inside retaining wall (closest to the uphill slope) as far from the highway lanes as possible.
 5. Allowing the entry portals openings to be as large as feasible and still architecturally appropriate.
- S. Design the length of the rock shed and the form of the parapet walls at the portals so that no personnel fencing or railings are visible from the highway.
- T. Consider using a ledger beam to support the rock shed roof connection to the hill rather than a full-height retaining wall, so that the native rock face of the hill would be exposed to highway viewers.
- U. Disguise to the greatest extent possible any permanent road required to the roof of the rock shed for maintenance access. Also disguise any necessary gate by making it appear as a natural landform or screening it with berms and/or natural appearing boulders and native vegetation if possible.

Cumulative Impacts

The construction of either alternative would result in an extensive visual alteration of the project area. In addition, Alternative 1 would have a greater effect on the overall corridor viewing experience due to the memorability of the rock shed.

The highway traveler would experience the alternatives in conjunction with the Limekiln Creek Bridge and Rain Rocks viaduct. Travelers would likely think of these series of structures as a connected sequence of built structures and as one continuous built element. The cumulative visual affect of all these structures would be to intensify the “man-made” appearance of the area. Construction of either one of the project alternatives would result in the greatest concentration of highway structures on the Big Sur corridor. The construction of the rock shed with Alternative 1 would greatly increase the awareness of these engineered elements.

The visual transition between the project and the setting, both natural and built, would greatly affect whether the project looks like a cohesive design or a collection of unrelated elements. The Visual Quality Evaluation indicates a lack of visual unity between the basic forms of the bridge and rock shed structures proposed with Alternative 1. Incompatibility of the bridge and rock shed would potentially cause an increase in noticeability of the entire project and a cumulative degradation of visual quality.

Both Alternatives 1 and 2 would contribute to a cumulative increase of the overall built character of the Big Sur corridor. Alternative 2 would be a minor factor in this cumulative change because of the relatively common occurrence of bridges along the corridor. Alternative 1 would be a substantial contributor to a cumulative visual change because of the highly engineered and unique character of the rock shed.

Avoidance, Minimization, and/or Mitigation Measures for Cumulative Impacts

Mitigation measure 2.1.3.V applies to both build alternatives to address cumulative impacts.

- V. Retrofit or replace the existing bridge rail on the Rain Rocks viaduct to complement the new bridge and rock shed structures.



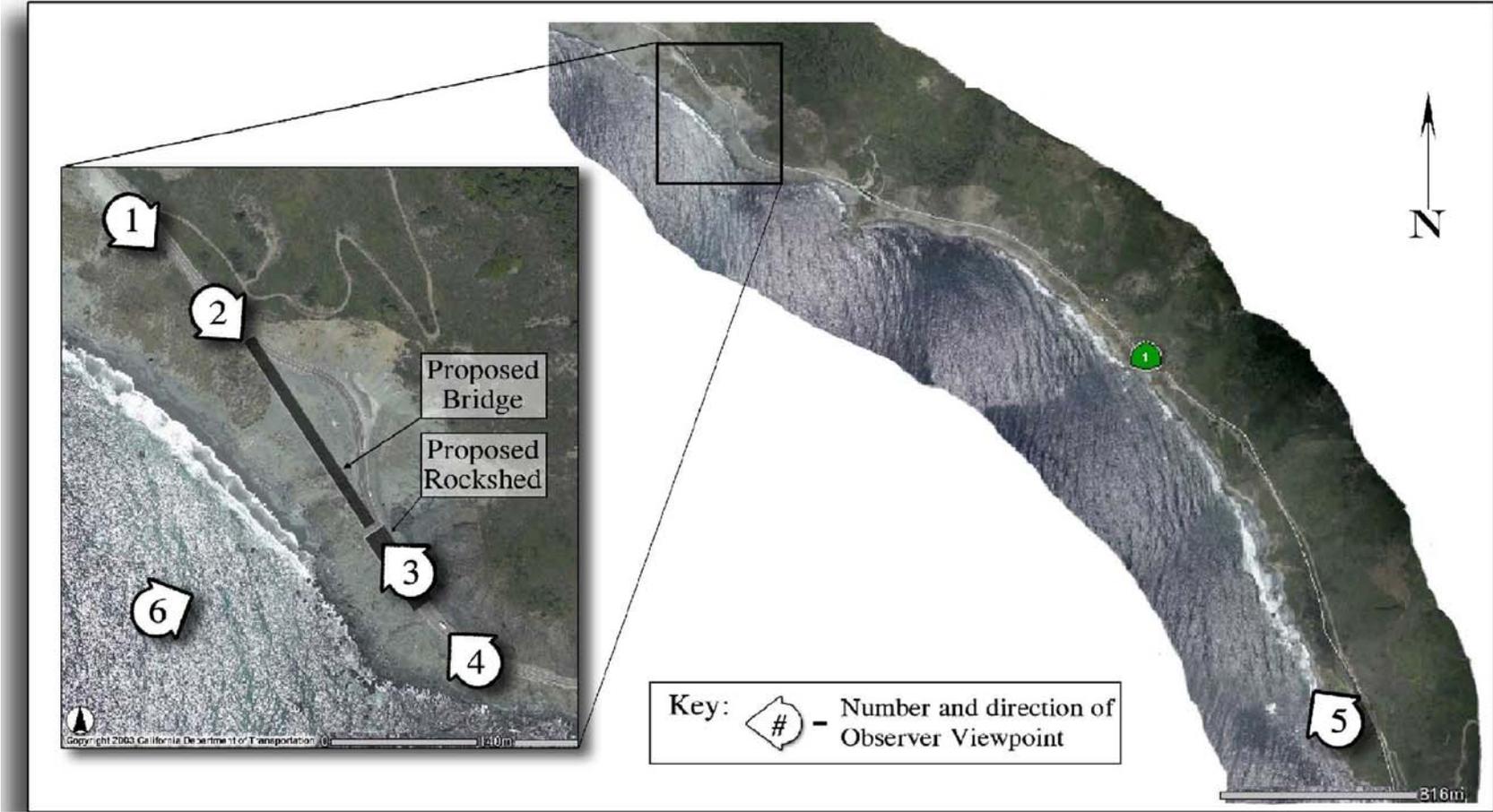


Figure 2-2 Observer Viewpoint Map



Figure 2-3 Existing View from Observer Viewpoint 1



Figure 2-4 Proposed Alternative 1 from Observer Viewpoint 1



Figure 2-5 Proposed Alternative 2 from Observer Viewpoint 1



Figure 2-6 Existing View from Observer Viewpoint 2



Figure 2-7 Proposed Alternative 1 from Observer Viewpoint 2



Figure 2-8 Proposed Alternative 2 from Observer Viewpoint 2



Figure 2-9 Existing View from Observer Viewpoint 3



Figure 2-10 Proposed Alternative 1 from Observer Viewpoint 3



Figure 2-11 Proposed Alternative 2 from Observer Viewpoint 3



Figure 2-12 Existing View from Observer Viewpoint 4



Figure 2-13 Proposed Alternative 1 from Observer Viewpoint 4



Figure 2-14 Proposed Alternative 2 from Observer Viewpoint 4

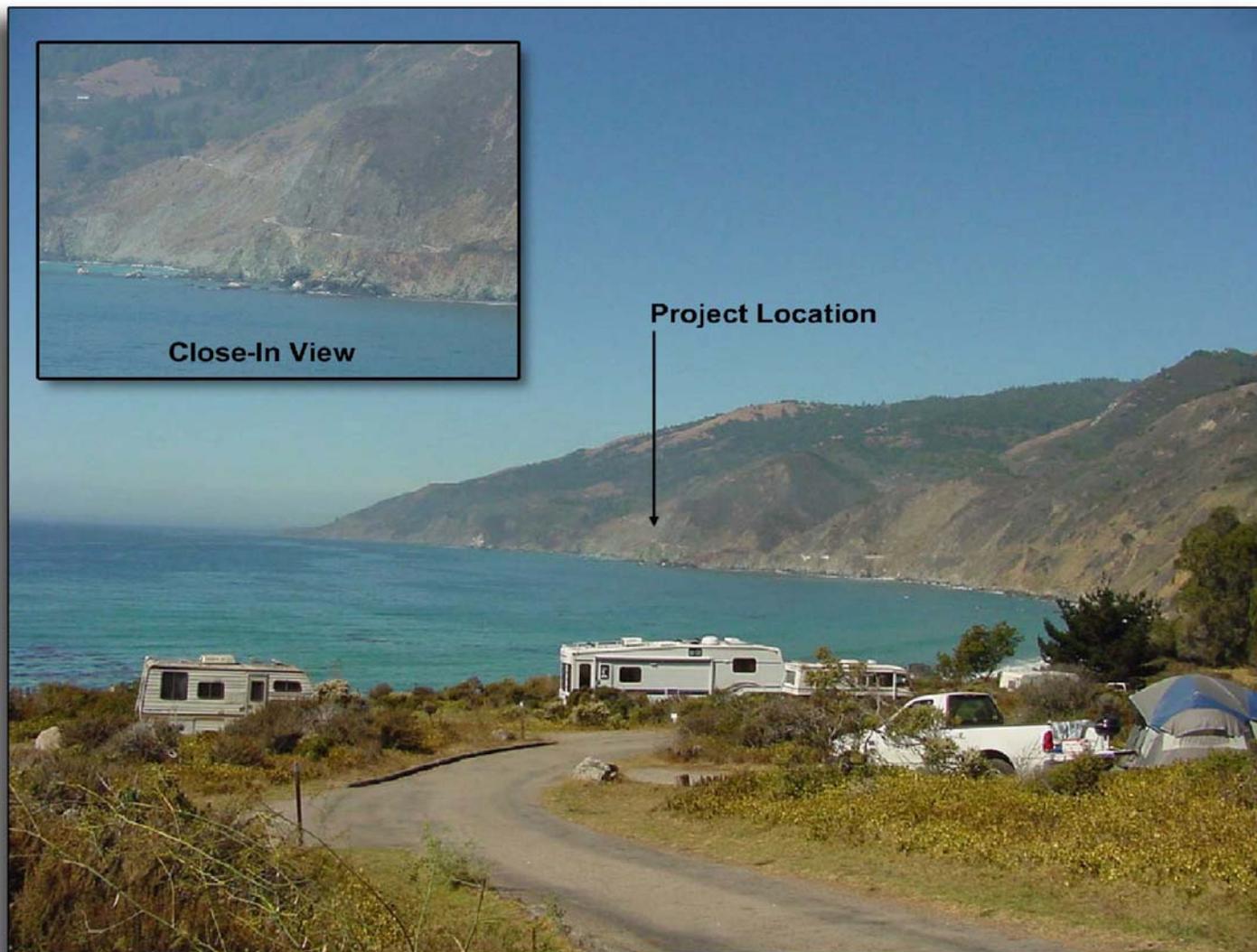


Figure 2-15 Existing View of Observer Viewpoint 5



Figure 2-16 Proposed Alternative 1 from Observer Viewpoint 5



Figure 2-17 Proposed Alternative 2 from Observer Viewpoint 5



Figure 2-18 Existing View from Observer Viewpoint 6



Figure 2-19 Proposed Alternative 1 from Observer Viewpoint 6



Figure 2-20 Proposed Alternative 2 from Observer Viewpoint 6



2.2 Physical Environment

2.2.1 Geology/Soils/Seismic/Topography

This section discusses geology, soils, and seismic concerns as they relate to public safety and project design. The Preliminary Geotechnical Report, prepared December 3, 2004, documents the literature review, and surface and subsurface explorations used to evaluate the nature and extent of the geologic and geotechnical conditions of the project site.

Affected Environment

The Santa Lucia Mountain Range is part of the northwest southeast trending Coast Range Geomorphic Province. It is bounded on the west by the San Gregorio Fault zone and to the northeast by the Rinconada-Reliz fault. Several faults are located near the project site. The fault possessing the potential for the greatest influence on this site is the Sur-Arroyo Laguna-San Simeon fault.

The most widespread geologic unit is the Franciscan complex, which in this area consists of sheared metamorphosed sedimentary and volcanic rocks. It has been reported that occasionally, small bodies of serpentine exist in Franciscan shear zones; however, no serpentine bodies have been mapped or were found either on the surface or in drill borings within the project area. Overlying these are Quaternary age surface deposits, which were transported by gravity and water, and are described as colluvium (loose soil and rock fragments) and debris flow deposits. Below the roadway, artificial fill was used to construct and maintain the roadway embankment. Landslide features within the project area vary in size. The materials associated with the landslide features are highly variable, ranging from nearly intact bedrock to completely disrupted soils in a matrix of mixed sand, silt, and clay.

Groundwater, in the form of seeps and springs, is prevalent in the area.

Impacts

Ground rupture hazard at the project site is considered low, as no known faults cross the project site. The bridge would be constructed outside the slide plane and would not be impacted by future landsliding. The rock shed is designed to withstand forces anticipated from future rockfall. Both Alternatives 1 and 2 have been designed to allow the natural landslide processes to proceed without obstruction.

Avoidance, Minimization, and/or Mitigation Measures

None required.

2.3 Biological Environment

Biological studies are documented in the “Pitkins Curve Bridge and Rock shed Natural Environment Study,” completed April 2005 and summarized below. Topics discussed are, Natural Communities: Section 2.3.1, Wetlands and Other Waters: Section 2.3.2, Animal Species: Section 2.3.3, Threatened and Endangered Species: Section 2.3.4 and Invasive Species: Section 2.3.5.

Early in the project while alternatives were being developed, a biological study area was delineated in consultation with design engineers and construction personnel to encompass the full range of alternative solutions, including the area that might be needed temporarily for construction activities. This biological study area is depicted in Figure 2-1. It was the focus of biological inventories. After identification of the build alternatives, a narrower area of direct impact was delineated to assess potential impacts. The area of direct impact includes the area in which the bridge and rock shed would be constructed. Additionally, it includes existing highway turnouts within a mile north of the bridge and rock shed location, which could potentially serve as equipment storage and staging areas, as shown in Figure 2-21 (A-C).

2.3.1 Natural Communities

This section of the document discusses natural communities of concern. The focus of this section is on biological communities, not individual plant or animal species. Refer to Section 2.3.4 for discussion of Threatened and Endangered species. The “Natural Environment Study,” completed in April 2005, documents the studies undertaken to assess impacts to natural communities from the proposed project.

Affected Environment

The land in most of the study area has been influenced by years of active natural slope movement and highway restoration, leaving it rocky and devoid of well-developed habitat. There are some patches of vegetation, made up of both native plants and common invasive weeds, which border the immediate roadside and, in some places, extend beyond it. Where these patches of vegetation exist, native central coastal scrub, coastal sage scrub and riparian plants predominate.

Impacts

Native Vegetation

Approximately 0.39 hectare (0.96 acre), sparsely vegetated with native plants of the central coastal sage scrub community and non-native plants, would be removed during construction of either Alternative 1 or 2.

Avoidance, Minimization, and/or Mitigation Measures

- A. To minimize construction-related impacts, Environmentally Sensitive Areas would be delineated on the project plans around all pullouts that may be used for equipment storage, as indicated on Figure 2-21(A-C). The resident engineer, in consultation with the project biologist, would determine where Environmentally Sensitive fencing would be installed to limit construction activities.
- B. After construction is complete, the project area would be evaluated to determine where revegetation would be appropriate and successful. Those areas identified for revegetation would be planted with native vegetation, suitable for the area, as recommended by Caltrans Office of Landscape Architecture and in consultation with the project biologist. Vegetation would be replaced at a ratio of 1:1. Plant salvage, local seed collection, and contract growing are techniques that can be used to mitigate for the loss of native shrubs that are removed.
- C. An installation and maintenance contract for mitigation plantings would be developed. The maintenance agreement would be at least three years in length. During that time, all invasive weeds should be regularly removed. A 70 percent survival rate for of all plantings, three years post-construction, would be the target goal.
- D. A Caltrans biologist or designee would prepare monitoring reports for various agencies if they are needed as part of conditions set forth in permits. Annual reports summarizing results would be sent to any requesting and appropriate state and federal agencies.
- E. A Mitigation, Monitoring, Restoration, and Success Criteria Plan would be prepared for this project. The plan would include success criteria for revegetation. A three-year monitoring schedule, with annual reports to various agencies is typically recommended. For three years, biannual environmental monitoring for all mitigation plantings would be conducted to determine if the project meets success criteria, to request any needed replacement plantings, and to identify remedial actions if the success criteria were not achieved.

2.3.2 Wetlands and Other Waters

Regulatory Setting

Wetlands and other waters are protected under a number of laws and regulations. Two types of wetlands have potential to occur in the project study area: U. S. Army Corps of Engineers and California Coastal Zone.

The U. S. Army Corps of Engineers regulates wetlands and other waters of the United States through the Clean Water Act (33 U.S.C. 1344). The Clean Water Act regulates the discharge of dredged or fill material into waters of the United States, including wetlands. Waters of the United States include navigable waters, interstate waters, territorial seas, and other waters that may be used in interstate or foreign commerce and tributaries to navigable waters. To classify wetlands for the purposes of the Clean Water Act, a three-parameter approach is used that includes the presence of hydrophytic (water-loving) vegetation, wetland hydrology, and hydric soils (soils subject to saturation and inundation). All three parameters must be present, under normal circumstances, for an area to be designated as a jurisdictional wetland under the Clean Water Act.

Section 404 of the Clean Water Act establishes a regulatory program that provides that no discharge of dredged or fill material can be permitted if a practicable alternative exists that is less damaging to the aquatic environment or if the nation's waters would be significantly degraded. The U. S. Army Corps of Engineers, with oversight by the Environmental Protection Agency, runs the Section 404 permit program.

The Executive Order for the Protection of Wetlands (Executive Order 11990) also regulates the activities of federal agencies with regard to wetlands. Essentially, this executive order states that a federal agency, such as the Federal Highway Administration, cannot undertake or provide assistance for new construction located in wetlands unless the head of the agency finds: 1) that there is no practicable alternative to the construction and 2) the proposed project includes all practicable measures to minimize harm.

At the state level, wetlands and waters are regulated primarily by the Department of Fish and Game and the Regional Water Quality Control Boards. In certain circumstances, such as with this project, the Coastal Commission may also be involved.

Sections 1600-1607 of the Fish and Game Code require any agency that proposes a project that would substantially divert or obstruct the natural flow of or substantially change the bed or bank of a river, stream, or lake to notify the California Department of Fish and Game before beginning construction. If the Department determines that the project may substantially and adversely affect fish or wildlife resources, a Lake or Streambed Alteration Agreement would be required. California Department of Fish and Game jurisdictional limits are usually defined by the tops of the stream or lake banks, or the outer edge of riparian vegetation, whichever is wider. Wetlands under jurisdiction of the Army Corps of Engineers may or may not be included in the area covered by a Streambed Alteration Agreement obtained from the California Department of Fish and Game and visa versa.

Regional Water Quality Control Boards were established under the Porter-Cologne Water Quality Control Act to oversee water quality. The Regional Water Quality Control Boards also issue water quality certifications in compliance with Section 401 of the Clean Water Act. Please see the Water Quality section for additional details.

The California Coastal Commission and County of Monterey regulate some of the wetlands through the California Coastal Act. To classify wetlands for the purposes of the California Coastal Act, wetland hydrology must be present. However, the presence of hydrophytic (water-loving) vegetation and/or hydric soils (soils subject to saturation and inundation) are not required in under normal circumstances, for an area to be designated as a jurisdictional wetland under the California Coastal Act.

The Marine Sanctuaries Protection Act prohibits discharge of material into the ocean that could harm a sanctuary resource. The Monterey Bay National Marine Sanctuary is a federally protected marine area offshore of California's central coast. The sanctuary is concerned with the potential for highway activities on the steep slopes of Pitkins Curve/Rain Rocks to affect the intertidal and nearshore habitats. The Monterey Bay National Marine Sanctuary includes a permit program to review planned activities that may harm sanctuary resources and to issue permits or other authorizations with specific measures needed to minimize impacts.

Affected Environment

Non-marine

Ephemeral seeps and springs, defined as “Other Waters of the U.S.” by the Army Corps of Engineers, are near the location of the proposed bridge and rock shed. They originate on the steep slopes above and below the highway, are seasonal, weather-

dependent, and carry water for only a few months every year. Because of the dynamic movement of the slopes, there is no vegetation associated with these springs where they seep from the hillside. Waters from uphill seeps are collected in culverts and directed under the highway to drain to the ocean. There are two culverts within the project limits.

There are coastal wetlands¹⁵ located adjacent to the existing roadway, near Turnouts 1 and 2, though outside the project footprint. These wetlands exhibit willow riparian vegetation and standing water, though no hydric soils. No Army Corps of Engineers wetlands are present in the project area.

Marine

The Pitkins Curve marine habitat has been characterized by biologists who conducted biannual studies of the shoreline in the project area.¹⁶ The beach at the base of the project area is sand and gravel, strewn with limpet-covered boulders. Strong and persistent wave action scours the shore here, creating relatively barren conditions. In the surf zone, the shore is sandy with scattered boulders that support mussel, oar kelp, and red algae populations. Offshore, kelp beds provide habitat for southern sea otters.

The movement of soil, from slope to sea, influences the marine habitat here. While this process has been ongoing, the exact effects are not clearly understood. Caltrans has begun a project to mimic the natural processes of landslide material making its way naturally to the sea while monitoring the environmental effects of the process. (Refer to Section 1.2.3.)

Impacts

The Pacific Ocean and the ephemeral springs and seeps are considered “Other Waters of the U.S.” under jurisdiction of the U.S. Army Corp of Engineers. The Monterey Bay National Marine Sanctuary has jurisdiction over the Pacific Ocean adjacent to the project.

¹⁵ In this document, wetlands under jurisdiction of the California Coastal Commission Coastal Act and the Monterey County Local Coastal Program are called coastal wetlands.

¹⁶ “Shoreline and Nearshore Biological Characterization of the Highway 1 Slide Area at Pitkins Curve, 2002.” “Shoreline and Nearshore Biological Characterization of the Highway 1 Slide Area at Pitkins Curve, March 15, 2004.”

Non-marine

Approximately 0.005 hectare (0.012 acre) of “Other Waters of the U. S.,” in the form of unvegetated seeps and springs, would be affected by Alternative 1 or 2 during construction activities undertaken to redirect them into new culverts.

Neither build alternative would affect Army Corps of Engineers wetlands or coastal wetlands.

Marine

Construction of the build alternatives would avoid placement and prevent accidental placement of soil in the Pacific Ocean/Monterey Bay National Marine Sanctuary.

Avoidance, Minimization and/or Mitigation Measures

Non-marine

- A. To ensure that all potential impacts to wetland resources are avoided and minimized, Environmentally Sensitive Area fencing would be installed to protect coastal wetlands, as delineated in Figure 2-21 (A-C). The mapped locations of the Environmentally Sensitive Areas would be included on the project plans and layout sheets and included in the Special Provisions of the construction contract. All fencing would be placed at the direction of the Resident Engineer, in consultation with a representative from the Environmental Branch.
- B. All refueling and maintenance of equipment would be conducted at least 20 meters (60 feet) from wetlands and waters of the U.S.
- C. Prior to the onset of work, the Resident Engineer would insure that the contractor has prepared a plan for prompt and effective response to any accidental spills, to ensure protection of aquatic resources. All personnel would be informed of the plan and the importance of preventing spills.
- D. All construction activities would be completed in accordance with the Caltrans National Pollution Discharge Elimination System Permit, the General Construction Permit, and Caltrans Statewide Storm Water Management Plan.
- E. To protect all adjacent springs, seeps, willow riparian wetlands, and the Pacific Ocean/Monterey Bay National Marine Sanctuary, Caltrans would implement best management practices, as identified by the appropriate Regional Water Quality Control Board. These best management practices would be implemented to minimize or eliminate the potential for a non-storm water discharge to occur.

Construction site best management practices are addressed in detail in the Storm Water Pollution Control Plan that will be developed for the project site.

- F. If a work site were to be temporarily de-watered by diversion or pumping, intakes would be completely screened with wire mesh not larger than five millimeters to prevent all aquatic wildlife from entering the pump system. Water would be treated, released, or pumped to an appropriate location at a rate to maintain downstream flows during construction. Upon completion of construction activities, any barriers to flow would be removed in a manner that would allow flow to resume with the least disturbance to the substrate.
- G. Due to the time that would elapse before project construction and because the biological environment in the project area is subject to change, pre-construction surveys would be undertaken approximately one year prior to construction to identify up-to-date distribution of wetlands. If wetland presence or distribution has changed from that documented in the April 2005 Natural Environment Study, the appropriate agencies would be consulted. All avoidance, minimization, and mitigation measures would be applied, as directed above, to newly identified wetlands.

Marine

- H. A biological/environmental monitor would be present onsite during construction activities that may impact the ocean and marine environment, special-status species, and/or migratory birds. This includes drilling and blasting for the construction of piers and abutments for the new bridge and rock shed and any associated de-watering activities.
- I. The Caltrans Resident Engineer, in consultation with the biologist and/or environmental monitor would have the authority to halt any action that might result in impacts that exceed the anticipated levels of impact that were determined during agency review (by Caltrans, Army Corps of Engineers, California Department of Fish and Game, Coastal Commission, Monterey Bay National Marine Sanctuary and/or U.S. Fish and Wildlife Service) of the proposed actions. If work is stopped, the biologist or environmental monitor would immediately notify these same regulatory agencies.
- J. All refueling and maintenance of equipment and vehicles would be at least 20 meters (60 feet) from any aquatic habitat, wetland area, or any water body. The contractor would ensure contamination of habitat does not occur during such

- operations. All workers would be informed of the importance of preventing spills of fuels and of the appropriate measures to take should a spill occur.
- K. Prior to the onset of work, the Army Corps of Engineers would ensure that the permittee has prepared a plan to allow a prompt and effective response to any accidental spills around aquatic habitats. All workers would be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur.
- L. Erosion Control and Storm Water Management. All construction activities would be completed in accordance with Caltrans National Pollution Discharge Elimination System Permit, the General Construction Permit, and Caltrans Statewide Storm Water Management Plan.
- M. To protect the Pacific Ocean/Monterey Bay National Marine Sanctuary, Caltrans would implement best management practices as identified by the appropriate Regional Water Quality Control Board. These best management practices would be implemented to minimize or eliminate the potential for a non-storm water discharge to occur. Construction site best management practices are addressed in detail in the Storm Water Pollution Control Plan that will be developed for the project site.
- N. If a work site is to be temporarily dewatered by diversion, pumping, and treating, intakes would be completely screened with wire mesh not larger than five millimeters to prevent all aquatic wildlife from entering the pump system. Water would be released or pumped to an appropriate location at a rate to maintain downstream flows during construction. Upon completion of construction activities, any barriers to flow would be removed in a manner that would allow flow to resume with the least disturbance to the substrate.

2.3.3 Animal Species

Regulatory Setting

Many state and federal laws regulate impacts to wildlife. The U.S. Fish and Wildlife Service, the National Oceanic and Atmospheric Fisheries, and the California Department of Fish and Game are responsible for implementing these laws. This section discusses potential impacts and permit requirements associated with wildlife not listed or proposed for listing under the state or federal Endangered Species Act.

Species listed or proposed for listing as threatened or endangered are discussed in Section 2.3.4. All other special-status animal species are discussed here, including California Department of Fish and Game fully protected species and species of special concern, and the U.S. Fish and Wildlife Service or National Oceanic and Atmospheric Fisheries candidate species.

Federal laws and regulations pertaining to wildlife include the following:

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

State laws and regulations pertaining to wildlife include the following:

- California Environmental Quality Act
- Sections 1601 – 1603 of the Fish and Game Code
- Section 4150 and 4152 of the Fish and Game Code

Affected Environment

Migratory Birds

Common migratory birds such as barn swallows have been observed nesting under the existing cable rock net at Rain Rocks and on the rocky cliffs above Pitkins Curve.

Impacts

Migratory Birds

Loss of nesting habitat for one to two seasons is anticipated with construction of either Alternative 1 or 2. Approximately 50 percent of the existing cable net would be removed at Rain Rocks under Alternative 1.

Avoidance, Minimization and/or Mitigation Measures

Migratory Birds

- A. One year prior to construction, pre-construction surveys would be conducted during the nesting season to identify the presence or absence of active nests for birds protected under the Migratory Bird Treaty Act. If birds were nesting, after their dispersal, bird netting would be installed to deter nesting during construction.

2.3.4 Threatened and Endangered Species

Regulatory Setting

The primary federal law protecting threatened and endangered species is the Federal Endangered Species Act: United States Cod, Section 1531, et seq. See also 50 CFR Part 402. This act and subsequent amendments provide for the conservation of endangered and threatened species and the ecosystems upon which they depend.

Under Section 7 of this act, federal agencies, such as the Federal Highway Administration, are required to consult with the U. S. Fish and Wildlife Service and the National Marine Fisheries Service to ensure that they are not undertaking, funding, permitting, or authorizing actions likely to jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat. Critical habitat is defined as geographic locations critical to the existence of a threatened or endangered species. The outcome of consultation under Section 7 is a Biological Opinion or an incidental take permit. Section 3 of the federal Endangered Species Act defines take as “...harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect or any attempt at such conduct.”

California has enacted a similar law at the state level, the California Endangered Species Act, California Fish and Game Code, Section 2050, et seq. The California Endangered Species Act emphasizes early consultation to avoid potential impacts to rare, endangered, and threatened species and to develop appropriate planning to offset project caused losses of listed species populations and their essential habitats. The California Department of Fish and Game is the agency responsible for implementing the California Endangered Species Act. Section 2081 of the Fish and Game Code prohibits “take” defined in Section 86 of the Fish and Game Code as “... hunt, pursue, catch, capture, or kill, or attempt to hunt pursue, catch capture, or kill.” California Endangered Species Act allows for take incidental to otherwise lawful development projects; for these actions an incidental take permit is issued by California Department of Fish and Game.

For projects requiring a Biological Opinion under Section 7 of the Federal Endangered Species Act, California Department of Fish and Game may also authorize impacts to California Endangered Species Act species by issuing a Consistency Determination under Section 2080.1 of the Fish and Game Code.

Affected Environment

Ten plant species, one invertebrate species, two fish species, two amphibian species, one reptile species, six bird species, and one mammal species are listed by state and federal agencies¹⁷ as threatened or endangered and potentially present within one mile of the project area. Biological studies for the project assessed the potential for each of the 23 threatened or endangered species to occur in the project study area and, subsequently, Caltrans conducted surveys to determine the presence or absence of the species within the project study area and the project area of direct impact. The results of these studies are detailed in the Natural Environment Study, April 2005, summarized in Table 6 and discussed below.

Of the 23 species identified for further consideration, biological studies determined that only eight had potential to occur in the biological study area. Further biological study and field evaluations identified habitat for Smith's blue butterfly, the California condor, and the Southern sea otter in the project area.

¹⁷ California Natural Diversity Data Base, California Native Plants Survey, U. S. Fish and Wildlife Service, March 5, 2002.

Table 6. Threatened and Endangered Species Listed Near the Project Area¹⁸

Scientific Name Common Name	Legal Status			Plant Community / Habitat Association	Survey / Flowering Window	Potential in the BSA (Biological Study Area) or ADI (Area of Direct Impact) ¹⁹ /info source
	Federal	State	CNPS			
<i>Plants</i>						
<i>Astragalus tener</i> var. <i>titi</i> Coastal Dune Milk Vetch	FE	SE	1B	Coastal bluff scrub (sandy), coastal dunes, coastal prairie (mesic). Elevation 0-50 meters. Annual herb.	March – May	Out of elevation range. Habitat not present in BSA or ADI. Not observed during surveys. USFWS list.
<i>Chorizanthe pungens</i> var. <i>pungens</i> Monterey spineflower	FT		1B	Maritime chaparral, Cistomontane woodland, coastal dunes, coastal scrub, valley and foothill grasslands. Sandy soils in coastal dunes or more inland within chaparral or other habitats. Elevation 3-450 meters. Annual herb.	April – June	Habitat not present and does not occur in BSA or ADI. Not observed during surveys. USFWS list.
<i>Cirsium loncholepis</i> La Graciosa thistle	FE	ST	1B	Coastal dunes, coastal scrub, marshes, and swamps (brackish), mesic, elevation 4-220 meters. Perennial herb.	May- August	Habitat not present and does not occur in BSA or ADI. Not observed during surveys. CNDDDB list.
<i>Eriogonum butterworthianum</i> Butterworth's buckwheat		Rare	1B	Chaparral (sandstone). Elevation 585-730 meters. Perennial herb.	June-July	Habitat not present and does not occur in BSA or ADI. Not observed during surveys. CNDDDB list.
<i>Gilia tenuiflora</i> ssp. <i>arenaria</i> Sand gilia	FE	ST	1B	Chaparral (maritime), cistomontane woodland, coastal dunes, coastal scrub, /sandy, openings. Elevation: 0-45 meters. Annual herb.	May – June	Out of elevation range. Habitat not present and does not occur in BSA or ADI. Not observed during surveys. USFWS list.

¹⁸ Sources of Information: April 2004 California Natural Diversity Database (CNDDDB) Search, U.S. Geological Survey Quads - Cape San Martin, Lopez Point and Cone Peak, U.S. Fish and Wildlife Service (USFWS) Species list received 3-5-02 and California Native Plant Society (CNPS) Inventory of Rare, Threatened and Endangered Plants – published 2001

¹⁹ BSA/ADI: Biological Study Area or Area of Direct Impact defined as all areas directly or indirectly affected by the proposed project.

Scientific Name Common Name	Legal Status			Plant Community / Habitat Association	Survey / Flowering Window	Potential in the BSA (Biological Study Area) or ADI (Area of Direct Impact) ¹⁹ /info source
	Federal	State	CNPS			
<i>Layia carnosa</i> Beach layia	FE	SE	1B	Coastal dunes, coastal scrub, (sandy). Elevation: 0-60 meters. Annual herb.	March - July	Out of elevation range – Suitable habitat not present. Not observed during surveys. Does not occur in BSA or ADI. USFWS list.
<i>Lupinus tidestromii</i> Tidestrom's lupine	FE	SE	1B	Coastal dunes. Elevation: 0-100 meters. Rhizomatous perennial herb.	April – June.	Out of elevation range – Suitable habitat not present. Not observed during surveys. Does not occur in BSA or ADI. USFWS list.
<i>Piperia yadonii</i> Yadon's Rein Orchid	FE		1B	Coastal Bluff Scrub, closed cone coniferous forest, chaparral (maritime) / sandy. Elevation: 10-415 meters. Perennial herb.	May - August	Suitable habitat not present. Not observed during surveys Does not occur in BSA or ADI. USFWS list.
<i>Potentilla hickmanii</i> Hickman's potentilla	FE	SE	1B	Coastal bluff scrub, closed-cone coniferous forest, meadows and seeps (vernally mesic), marshes, and swamps freshwater. Elevation 10-135 meters. Perennial herb.	April – August.	Suitable habitat not present. Not observed during surveys. Does not occur in BSA or ADI. USFWS list.
<i>Sanicula maritima</i> Adobe sanicle		Rare	1B	Chaparral, coastal prairie, meadows and seeps, valley and foothill grasslands/clay/serpentine. Elevation: 30-240 meters. Perennial herb.	February – May	Does not occur in BSA or ADI. Not observed during surveys. CNDDDB list.
Invertebrates						
Smith's blue butterfly <i>Euphilotes enoptes smithi</i>	FE			Buckwheat plants, coastal sage scrub. Larvae are dependent on buckwheat plants and flowers and soil beneath the plants.	June-July Survey window	Potential habitat present in BSA, and possibly in ADI– observed on 1 solitary plant in landslide area during focused surveys June 2004. CNDDDB and USFWS lists.

Scientific Name Common Name	Legal Status			Plant Community / Habitat Association	Survey / Flowering Window	Potential in the BSA (Biological Study Area) or ADI (Area of Direct Impact) ²⁰ /info source
	Federal	State	CNPS			
Fish						
<i>Eucyclogobius newberryi</i> Tidewater goby	FE, CH	SSC		Found in shallow lagoons and lower stream reaches, they need fairly still but not stagnant water and high oxygen levels.	NA	No suitable habitat present. Does not occur in BSA or ADI. CNDDDB and USFWS lists.
<i>Oncorhynchus mykiss</i> Steelhead – South/Central California Coast	FT, CH			Require cool, deep freshwater pools for holding through the summer, prior to spawning in the winter. Generally found in shallow areas, with cobble or boulder bottoms at the tails of pools, enter Pacific Ocean as juveniles for 3-7 years.	NA	Potential breeding habitat present just south of BSA at Limekiln Creek, located approximately 1 mile south of ADI. Does not occur in BSA or ADI. CNDDDB and USFWS lists.
Amphibians						
<i>Rana aurora draytonii</i> California red-legged frog	FT, CH	SSC		Favors cool pools (>2 feet deep) with undercut banks bordered by dense vegetation. Requires emergent or submergent vegetation for egg attachment. Requires 4-5 months of permanent water lacking predators for successful larval development	May 1 – November 1	Potential foraging and dispersal habitat exists within the BSA, but not within ADI. No suitable breeding habitat present in BSA or ADI. No permanent water – ephemeral drainages and subsurface seeps. USFWS and CNDDDB lists.
<i>Taricha torosa torosa</i> Coast range newt		SSC		Favors annual grassland habitat; adults spend most of the year in underground burrows. Breeding and egg laying occur after first rains in vernal pools and temporary ponds. Larvae transform late spring, early summer, usually by first of July.		Suitable breeding habitat not present, but potential foraging and dispersal habitat present in BSA (adjacent to some of the turnout/staging areas) but not in ADI. CNDDDB list.

²⁰ BSA/ADI: Biological Study Area or Area of Direct Impact defined as all areas directly or indirectly affected by the proposed project.

Scientific Name Common Name	Legal Status			Plant Community / Habitat Association	Survey / Flowering Window	Potential in the BSA (Biological Study Area) or ADI (Area of Direct Impact) ²¹ /info source
	Federal	State	CNPS			
Reptiles						
<i>Clemmys(Emys) marmorata pallida</i> Southwestern pond turtle		SSC		Require basking sites such as partially submerged logs, vegetation mats, or open mud banks. Need suitable nesting sites.	NA	Suitable habitat not present in BSA or ADI. USFWS and CNDDDB list.
Birds						
<i>Brachyramphus marmoratus</i> Marbled murrelet	FT	SE		Occurs year-round in marine sub-tidal and pelagic habitats and nearshore environment from the Oregon border to Point Sal, Santa Barbara Co. Partial to coastlines with stands of mature redwood and Douglas-fir; uses these trees for nesting and probably roosting	NA	Suitable nesting habitat not present in BSA or ADI. Foraging and dispersal habitat present in BSA (Pacific Ocean), but species has not been observed. USFWS list.
<i>Cypseloides niger</i> Black swift		SSC		Nests in moist crevice or caves on sea cliffs above surf or on cliffs behind or adjacent to waterfalls in deep canyons. Needs moisture at nest. Migrates south for winter.	May-Sept.	Suitable nesting habitat not present in BSA or ADI. Foraging and dispersal habitat present. Observed in flight over BSA in 2001. CNDDDB list.
<i>Charadrius alexandrinus nivosus</i> Western snowy plover	FT CH	SSC		Requires sandy, gravelly, or friable soil substrate for nesting.		Suitable habitat not present in BSA or ADI. USFWS list.

²¹ BSA/ADI: Biological Study Area or Area of Direct Impact defined as all areas directly or indirectly affected by the proposed project.

Scientific Name Common Name	Legal Status			Plant Community / Habitat Association	Survey / Flowering Window	Potential in the BSA (Biological Study Area) or ADI (Area of Direct Impact) ²¹ /info source
	Federal	State	CNPS			
<i>Gymnogyps californianus</i> California condor	FE	SE		Permanent resident of semi-arid, rugged mountain ranges. Forages over open rangelands, roosts on cliffs and large tree snags between sea level and 2700 meters. Nesting sites in caves, crevices, behind rock slabs.	NA	Suitable nesting habitat not present in BSA or ADI. Foraging habitat present and species has been observed in BSA and in ADI. USFWS list.
<i>Pelicanus occidentalis</i> Brown pelican	FE	SE		Found in estuarine, marine sub-tidal, and marine pelagic waters along the California coast.	NA	Suitable foraging and dispersal habitat offshore in BSA but not within ADI. Species observed, but not within ADI. USFWS list.
<i>Haliaeetus leucocephalus</i> Bald eagle	FT, Delisting proposed	SE		Ocean shorelines, lake margins, and river courses for both nesting and wintering. Nests in large, old growth, or dominant live tree with open branches, especially ponderosa pine. Roosts communally in winter.	NA	Suitable nesting habitat not present in BSA or ADI. Foraging and dispersal habitat present, species has not been observed. USFWS list.
Mammals						
<i>Enhydra lutris nereis</i> Southern sea otter	FT			Sea otters are found in a narrow band along the coast, kelp beds are favorite habitat for sleeping, raising young, and for staying close to shore.	NA	Suitable dispersal, foraging, and breeding habitat exists offshore in BSA, but not within ADI. Species observed in all seasons, sometimes caring for young. USFWS list.

California Department of Fish and Game Listing Codes

SSC California Species of Special Concern
SE State Listed as Endangered
ST State Listed as Threatened

Federal Listing Codes

FE Federally Listed as Endangered
FT Federally Listed as Threatened
CH Critical Habitat
C Candidate Species
PCH Proposed Critical habitat

* Critical habitat for Steelhead was vacated in April 2002 to be reconsidered in future

** Critical habitat for California red-legged frog was vacated in November 2002, and reintroduced in Spring 2004



Smith's blue butterfly

Smith's blue butterfly is listed by U.S. Fish and Wildlife Service as an endangered species. Its distribution extends along the coast and in the Santa Lucia Mountains. Buckwheat plants serve as the butterfly's food source and egg laying location. Surveys were conducted to locate Smith's blue butterfly three times during the season when it blooms on the coast, but none were found. A single, isolated buckwheat plant, one of the butterfly's host plants, was identified growing on rocky soil within the biological study area.

California Condor

The California condor is listed by the U.S. Fish and Wildlife Service and by the Department of Fish and Game as an endangered species. It permanently resides in semi-arid and rugged mountain ranges, such as the Santa Lucias, and forages over open rangelands. It roosts on cliffs and large tree snags between sea level and 2,700 meters above sea level. Nesting sites are commonly in caves. Suitable nesting habitat is not present in the biological study area. Foraging and dispersal habitat is present in and adjacent to the project area and the species has been observed in this area in the past.

Southern Sea Otter

The southern sea otter is listed by U.S. Fish and Wildlife Service as threatened. It resides in the Pacific Ocean in kelp beds and near the shore. Suitable dispersal, foraging, and breeding habitat exist offshore in the biological study area. Sea otter have been observed offshore, adjacent to the project location in all seasons.

Impacts

Smith's blue butterfly

A single buckwheat plant is located in the construction area for Alternatives 1 and 2 and would be affected by construction of either alternative. Due to the isolated location of this single Smith's blue butterfly host plant, the marginal habitat it is growing in, and the lack of butterflies observed during surveys, there is a very low potential for impacts to this species from construction of either alternative.

California condor

Trees and tall rocky cliffs, which may provide roosting habitat for the California condor, are present adjacent to the area of direct impact for Alternative 1 and 2. Condors have been known to perch on large construction equipment and have been attracted to human activity, trash, and food. Condors have been sighted flying by the

area. It is likely that they would be present occasionally near the area of direct impact during construction; however, the project is not likely to impact them.

Southern sea otter

There is a slight potential for indirect impacts to occur to this species during construction due to noise generated from the construction site. Wildlife experts²² were consulted to determine the project's potential to affect southern sea otters. Due to the distance between the project and the sea otter resident kelp beds, the temporary nature of project noise, and the existence of contiguous kelp beds, it was determined that it is unlikely and only remotely possible that the sea otter would be affected by construction noise. Otters are expected to move to adjacent kelp beds if noise from the project is disturbing to them. No other impacts are anticipated to occur to the sea otter population.

Coordination with Resource Agencies

Caltrans sought technical assistance from the U. S. Fish and Wildlife Service under Section 7 of the Endangered Species Act and the California Department of Fish and Game. The proposed project, with identified avoidance, minimization, and mitigation measures would have No Effect on any Federal and or State listed endangered, threatened, or special-status wildlife species.

Avoidance, Minimization, and/or Mitigation Measures

- A. The number of access routes, size of staging areas, and the total area of activity would be limited to the minimum necessary to safely construct this project.

Smith's blue butterfly

- B. As a result of technical assistance from U.S. Fish and Wildlife Service under Section 7 of the Endangered Species Act, the single Smith's blue butterfly host plant (buckwheat) would be removed, with the surrounding soils and duff, and relocated outside the area of direct impact to an area nearby that has an established stand of buckwheat plants.

²² Christine Pattison, Department of Fish and Game; Bryan Hatfield, U. S. Geological Survey; Greg Sanders and David Pereksta, U. S. Fish and Wildlife Service and Christine Fahy, NOAA Fisheries Service. Michelle Roest, Monterey Bay National Marine Sanctuary.

California condor

- C. Due to their curious nature, condors may frequent the construction site and perch on large equipment, looking for food scraps. During construction, all food-related trash would be properly contained and regularly removed from the work site.

Southern sea otter

- D. A Caltrans biologist or designee would monitor sea otter activity during events that cause loud noises, such as blasting, for observation of abnormal activity or behavior and contact U.S. Fish and Wildlife Service if such behavior occurs.

Measures applying to all Special-Status Species

- E. Due to the time that would elapse before project construction and because the biological environment in the project area is subject to change, pre-construction surveys would be undertaken during the appropriate survey season, approximately one year prior to construction to identify up-to-date distribution of special-status species. If any federally listed species are found during the pre-construction surveys, no construction would be undertaken until consultation was completed between the Federal Highway Administration and the U. S. Fish and Wildlife Service. If any state special-status species were found during the pre-construction surveys, no construction would be undertaken until consultation was completed between Caltrans and the California Department of Fish and Game. All requirements resulting from consultation with the resource agencies would be followed.
- F. A Caltrans biologist (or designee) would conduct a training session for all construction personnel before any construction activities begin. The training session would include a description of all special-status species known to occur in the project vicinity (Smith's blue butterfly and buckwheat host plants, California condor, and southern sea otter). The biologist would discuss their habitats, their importance, and general measures being implemented to conserve these species as they relate to the project boundaries. Brochures, photographs, books, and briefings may be used in the training session, provided that a qualified person is on hand to answer any questions.
- G. A biological/environmental monitor would be present onsite during construction activities that may affect special-status species. This includes blasting for the construction of structure piers and abutments and any associated de-watering activities.

- H. If any special-status species were found during construction, the Environmental Branch would be contacted immediately. After any and all required consultations with agencies have occurred, the Caltrans biologist or designee would be present at the construction site until such time as special-status species have been removed and any special instructions have been given to construction personnel.
- I. The Caltrans resident engineer, in consultation with the biologist and/or environmental monitor would have the authority to halt any action that might result in impacts that exceed the anticipated levels of impact that were determined during agency review (between Caltrans, U.S. Army Corps of Engineers, California Department of Fish and Game and/or U.S. Fish and Wildlife Service). Once work has stopped, the biologist or environmental monitor would notify these same regulatory agencies.

2.3.5 Invasive Species

Regulatory Setting

On February 3, 1999, President Clinton signed Executive Order 13112 requiring federal agencies to combat the introduction or spread of invasive species in the United States. The order defines invasive species as “any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem whose introduction does or is likely to cause economic or environmental harm or ham to human health.” Federal Highway Administration guidance issued August 10, 1999 directs the use of the state's noxious weed list to define the invasive plants that must be considered as part of the National Environmental Policy Act analysis of a proposed project.

Section 4.1.3 (B)(2) of the Monterey County Local Coastal Big Sur Coast Land Use Plan notes that specific attention should be given by the state to eradicate non-native plant species that contribute to the decline of the natural beauty of Big Sur. Pampas grass, Kikuyu grass, broom, eucalyptus, and other species should be removed and replaced with native plants.

Affected Environment

Most of the project area has been altered by past highway and community development. Throughout the project area, exotic and invasive weeds such as pampas grass, Kikuyu grass, wild mustard, and fennel are present.

Impacts

The project would generate some excess soil that would be removed from the site and which may contain the seeds of invasive plants.

Avoidance, Minimization, and/or Mitigation Measures

- A. In compliance with the Executive Order on Invasive Species, Executive Order 13112, and subsequent guidance from the Federal Highway Administration, the landscaping and erosion control included in the project would not use species on the California List of Noxious Weeds.
- B. Measures to control invasive exotic plants would be implemented according to the Caltrans Landscape Architect's recommendations. Exotic and invasive weeds such as ice plant, kikuyu grass, fennel, pampas grass, fountain grass, and other assorted invasive plants that are listed as "most invasive" on the list would be removed within the project area and topsoil would not be used in any revegetation areas due to the presence of a high quantity of weed seeds, unless a weed removal program is implemented.



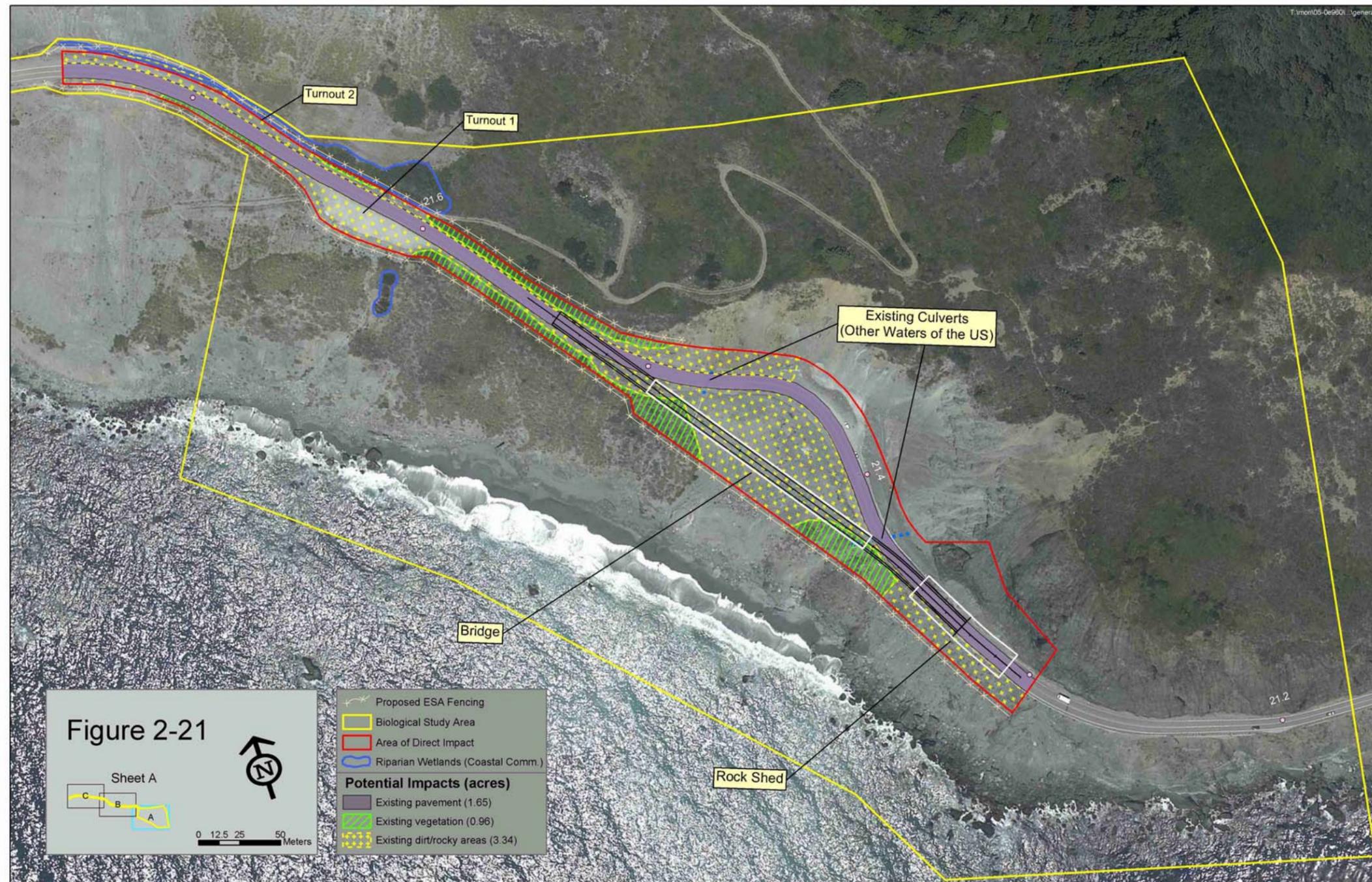


Figure 2-21 Sheet A



Figure 2-21 Sheet B



Figure 2-21 Sheet C



2.4 Construction Impacts

2.4.1 Introduction

The proposed bridge and rock shed would be very large structures and building them would be involved and challenging, particularly because the project site is remote and surrounded by steep slopes, which leaves little room to store equipment or operate outside the roadway. Consequently, one lane of the roadway at Pitkins Curve and eight paved turnouts, within a mile north of the project construction limits, have been identified for use during construction. Construction would require excavation, backfill, soil disposal and materials equipment handling, with associated noise and dust occurring over an extended period of time. Traffic would be constrained by occasional road closures, transport of large loads and heavy equipment. The roadway would be limited to one lane with a traffic signal through the project limits. Avoidance and minimization measures have been incorporated into the project to ensure that impacts from these activities do not adversely affect the environment.

2.4.2 Construction Techniques

2.4.2.1 The Bridge

The bridge would be built on a new alignment, which would allow most of the construction activities to be completed off the existing roadway. Temporary roads and work platforms would be built adjacent to the new bridge and existing roadway alignment to allow equipment and materials to reach the location of the bridge foundations and columns. The foundation shafts would be drilled and mined, using tall shoring systems, then filled with concrete. Once the foundation is in place and bents are constructed, the supporting understructure would be constructed. Finally, the bridge superstructure (i.e. girders and deck) would be built. The superstructure elements would be made of concrete, which would be either poured-in-place or pre-cast and transported to the construction site. After completion of the superstructure, the road to each end of the bridge would be aligned to meet the existing highway. The site would be recontoured and, perhaps, planted to maximize the visual quality and provide stabilization.

2.4.2.2 The Rock Shed

The rock shed would be built on the existing highway alignment, which would require the highway to be reduced to a single lane to allow room for construction. The single lane of traffic would be regulated by a traffic signal. The constrained working

area would also require full highway closures. Traffic would first be limited to use of the inside lane while the rock shed's outside columns and retaining wall were built. After completion of these outside elements, traffic would be moved to the outside lane while the rock shed's mountainside structural elements were built. The void behind the mountainside retaining wall would then be backfilled. The roof panels of the rock shed would be placed last, then covered with soil. Backfilling and roof placement/covering would require full road closure to complete. Most structural sections are expected to be pour-in-place concrete. The roof sections are expected to be of pre-cast of concrete and transported to the project site in sections. The rock shed would eliminate the need for about 50 percent of the existing rock net and cable netting that is currently draped along the Rain Rocks mountainside. Unnecessary netting would be removed after the rock shed was constructed.

2.4.3 Excess Material

Both alternatives would involve excavation. Alternative 1 would not generate excess material. Alternative 2 would generate some excess material. The total estimated volume of excavation anticipated for Alternative 1 is approximately 19,000 cubic meters (25,000 cubic yards). The total amount for Alternative 2 is 18,000 cubic meters (23,500 cubic yards). Of the material excavated, a portion would be suitable to use as backfill. Backfill would be required for both alternatives; however, the rock shed (constructed as part of Alternative 1) would require a larger amount. Backfill would be required between the existing hillside and the inside surfaces of the proposed rock shed, as well as on the roof of the rock shed. This material would be obtained from the project excavation surpluses. Alternative 1 would use approximately 19,000 cubic meters (25,000 cubic yards) of surplus material for backfill. Alternative 2 would use approximately 7000 cubic meters (9,000 cubic yards). The onsite use of excavated material as backfill would save project costs and construction difficulties and minimize project impacts by decreasing the volume of material that would need to be disposed.²³

Alternative 1 would excavate virtually the same amount of backfill as the amount excavated, resulting in a balanced job and little to no need for soil disposal.

Alternative 2 would excavate more material than the amount used for backfill, resulting in excess material that would need to be stockpiled and ultimately disposed.

Alternative 2 would create approximately 11,000 cubic meters (14,500 cubic yards)

²³ Mike Van de Pol, Caltrans Structures Design. September 6, 2006

of excess material.²⁴ Disposal sites are available within 15 miles of the project location to stockpile and dispose of excess material. Erosion control and site restoration strategies for disposal sites would be consistent with the Coast Highway Management Plan's *Site Restoration Guidelines*.

Table 7. Excess Material

	Alternative 1	Alternative 2
Estimated volume to be excavated	19,000 cubic meters (25,000 cubic yards)	18,000 cubic meters (23,500 cubic yards)
Estimated volume used for backfill	19,000 cubic meters (25,000 cubic yards)	7,000 cubic meters (9,000 cubic yards)
Estimated volume of excess material	0.0 cubic meters (0.0 cubic yards)	11,000 cubic meters (14,500 cubic yards)

The preferred alternative is not anticipated to generate material needing disposal.

2.4.4 Traffic Impacts During Construction

Under both alternatives, traffic flow would be affected by the large amount of equipment and materials that would need to be transported over the highway and from lane closures needed to provide room for construction.

Large trucks transporting materials and equipment to and from the construction site would add to traffic impacts. Construction of Alternative 1 would require approximately 7,500 cubic meters (9,800 cubic yards) of concrete and pre-cast pieces delivered in approximately 850 truckloads. Construction of Alternative 2 would require approximately 5,000 cubic meters (6,540 cubic yards) of concrete and pre-cast pieces delivered in approximately 550 truckloads. However, these deliveries could be appropriately scheduled to minimize their impact to traffic flow by scheduling their transport during non-peak hours.²⁴

It is anticipated that, for both alternatives, the highway would be limited to a single lane, regulated with a traffic signal, for the duration of the project. Some construction activities (e.g. tying in the roadway at each end of the bridge, placement of rock shed roof panels and soil, backfilling the void between the back wall of the rock shed and the hillside) would require multiple 8-hour time periods of full highway closure. For

²⁴ Mike Van De Pol, Caltrans Structures Design. June 20th, 2005

both of the build alternatives, these closures could occur during the day or at night, as dictated by safety standards, and the sequence of construction would be planned and scheduled to minimize traffic delays. All traffic handling and lane closures would be managed as directed by a comprehensive Traffic Management Plan.

A Traffic Management Plan would be developed to increase driver awareness, ease congestion, and minimize delay during construction. For this project the Traffic Management Plan would be broadened from a standard plan to allow for consideration of recommendations resulting from consultation and feedback from a community advisory group. The community advisory group would include representation from local tourist and commerce bureaus and businesses, representatives of the Sheriff's Department, California Highway Patrol, local emergency service providers and others. The group would assist Caltrans in the development of the Traffic Management Plan and provide monitoring and feedback during its application.

Development of the Traffic Management Plan would be initiated during the design phase of the project for application prior to and during the construction phase. The Traffic Management Plan would include agreements reached with the community advisory group that would inform and may constrain the construction contractor for the purpose of minimizing traffic impacts during construction. The Traffic Management Plan would cover construction scheduling, limitations of lane closures, noticing requirements, emergency response, and other topics as necessary. It would describe the manner in which Caltrans would provide information to travelers, regarding potential traffic delays and road closures and other construction-related activities that could inconvenience local businesses, residents and travelers, so they could plan accordingly. The plan may require the use of changeable message and construction area signs and noticing to local contacts and news media. The project contract Special Provisions would require that emergency services (police, fire, and ambulance) be notified before any required roadway or lane closures.

2.4.5 Construction Duration

The duration of construction for Alternative 1 is estimated to be between 4.1 and 5.7 years, depending on the ultimate design of the bridge and rock shed. The duration of construction for Alternative 2 is estimated to be between 3.0 and 3.7 years depending on the ultimate design of the bridge.

2.4.6 Noise

A certain degree of disruptive noise is inevitable during construction activities. Specific construction noise levels have been estimated for the project based on the types of activities and equipment expected to be employed during construction. Caltrans Traffic Noise Analysis Protocols require consideration of noise abatement measures when predicted noise levels from a project substantially increase existing noise levels²⁵ or when the project noise levels approach or exceed the Noise Abatement Criteria²⁶ for residences. Predicted noise levels fall below the Noise Abatement Criteria levels for both alternatives. The Monterey County general plan classifies 50 A-weighted decibels (dBA), which are decibels adjusted to approximate the way humans perceive sound, as Noise Range I for passively used open spaces. A noise level that falls at or below Range I is considered normally acceptable.²⁷ This is the quietest category of noise ranges listed in the general plan.

The two receptors closest to the project site are the Camaldoli Hermitage, a monastic retreat, and Limekiln State Park, a state owned campground. Camaldoli Hermitage lies approximately 2,164 meters (7,100 feet) to the north and 335 meters (1,100 feet) above the project location. Limekiln Campground is approximately 671 meters (2,200 feet) to the south and 30 meters (99 feet) lower than the proposed construction location.

Table 8. Estimated Noise Impacts from Construction²⁸

Location	Existing Peak Noise Level	Predicted Noise Level of Construction	Estimated Noise Level During Construction
Limekiln Campground	48 dBA	40 dBA	49 dBA
Camaldoli Hermitage	39 dBA	35 dBA	40 dBA

Currently, noise levels at Limekiln Campground during peak-hour traffic are approximately 48 dBA. Average construction noise levels are predicted to be 86 dBA

²⁵ A substantial increase in noise level is considered to be 12 dBA or more.

²⁶ of 67-dBA (decibels on the A-weighted scale)

²⁷ Land Use Compatibility for Exterior Community Noise, Table 6. Monterey County General Plan.

²⁸ Air, Noise, and Paleontology, Wayne Mills. July 2005.

at 100 feet from the proposed construction site. There is a 270-meter (880-foot) tall hill that separates the proposed construction site from Limekiln Campground, which, in conjunction with its distance from the project location, would serve to reduce noise levels at the campground. Based on average drop off rates (7.5 dBA per distance doubled) and the topography separating the construction from the campground, average construction noise levels at the campground are predicted to be approximately 40 dBA. This predicted construction noise is expected to raise the noise level at the campground by approximately 1 dBA; an increase that is imperceptible to the human ear (see Table 9: Decibel Addition). The resulting estimated noise level at the campground during construction is 49 dBA.

Table 9. Decibel Addition²⁹

When Two Decibel Values Differ By:	Add This Amount to the Higher Value:	Examples:
0 or 1 dBA	3 dBA	70+69 = 73 dBA
2 or 3 dBA	2 dBA	74+71 = 76 dBA
4 to 9 dBA	1 dBA	66+60 = 67 dBA
10 dBA or more	0 dBA	65+55 = 65 dBA

Currently, noise levels at Camaldoli Hermitage during peak-hour traffic are approximately 39 dBA. Average construction noise levels are predicted to be 86 dBA at 100 feet from the proposed construction site. In addition to the distance between the Hermitage and the project location, a mountain ridge acts as a natural sound barrier and would additionally reduce noise at Camaldoli Hermitage. Based on average drop off rates (7.5 dBA per distance doubled) and the topography separating the construction from the Hermitage, average construction noise levels at the Hermitage are predicted to be approximately 35 dBA. This predicted construction noise is expected to raise the noise level at the Hermitage by approximately 1 dBA; an increase that is imperceptible to the human ear (see Table 9: Decibel Addition). The resulting estimated noise level at the Hermitage during construction is 40 dBA.

Both Limekiln Campground and the Camaldoli Hermitage have predicted noise levels that fall below Range I as indicated in the Monterey County General Plan. Although neither of the two locations has predicted noise levels that would approach the Noise

²⁹ Technical Noise Supplement, October 1998.

Abatement Criteria or experience a substantial increase in noise level, the following measures would be implemented to minimize noise impacts caused by construction.

- Equipment Noise Control: Newer equipment that is quieter would be used. All equipment items would have intact and operational manufacturers' recommended noise abatement measures, such as mufflers, engine covers, and engine vibration isolators.
- Administrative Measures: Maintenance yard and other construction-oriented operations would be placed in the locations that would minimize disruption to the community.
- Community Relations: Good public relations would be maintained with the community to minimize objections to the impact of unavoidable construction noise. Community members and visitors would be notified in advance of the construction schedule through the public awareness campaign.

2.4.7 Water Quality

The project is located in the Santa Lucia Hydrologic Unit (308) along the Big Sur coast. In the project area, the oceanic waters are included in the Monterey Bay National Marine Sanctuary. Primary impacts could occur from exposure of loose soil during excavation, grading, and filling activities during construction. The suspended solids, dissolved solids, and organic pollutants in surface water bodies could increase while nearby soils are disturbed and dust is generated.

Accidental spills of petroleum hydrocarbons (fuels and lubricating oils), sanitary wastes, and or concrete waste are also a concern during construction activities. An accidental release of these wastes could adversely affect surface water quality, vegetation, and wildlife habitat.

During construction, a Storm Water Pollution Prevention Plan would be implemented to help identify the sources of sediment and other pollutants that affect the quality of storm water discharges and to describe and ensure the implementation of Best Management Practices, used to reduce or eliminated sediment and other pollutants in storm water as well as non-storm water discharges. Additional Best Management Practices may also be implemented if determined necessary during construction to reduce or eliminate the potential for a non-storm water discharge to occur during

construction. The following list includes some of these measures available to the Resident Engineer.

- Temporary Sediment Control
- Temporary Soil Stabilization
- Temporary Concentrated Flow Conveyance Systems
- Scheduling
- Clear Water Diversion
- Dewatering Operations
- Wind Erosion Control
- Sediment Tracking Control
- Solid Waste Management
- Materials Handling
- Concrete Waste Management
- Vehicle and Equipment Operations
- Paving Operations
- Stockpile Management
- Water Conservation Practices
- Illicit Connection/Illegal Discharge Detection and Reporting
- Storm Drain Inlet Protection
- Contaminated Soil Management

2.4.8 Air Quality

The proposed project is in the North Central Coast Air Basin, which is composed of Santa Cruz, San Benito, and Monterey Counties. Monterey Bay Unified Air Pollution Control District is responsible for maintaining air quality in the North Central Coast Air Basin.

Construction activity would disturb the soil, causing a temporary increase in air emissions during the construction period. Particulate matter can originate from construction equipment exhaust and the grading of soil. The Monterey Bay Unified Air Pollution Control District considers construction emissions of greater than 82 pounds (37.2 kilograms) per day of particulate matter to have a significant effect on air quality. The emissions for the proposed project are expected to be well within Monterey Bay Unified Air Pollution Control District's daily air pollutant emissions thresholds. Predicted emissions for this project from grading and excavating are 26 pounds (11.8 kilograms) per day.³⁰

Daily watering would minimize temporary airborne emissions from the construction of the proposed project. There are further measures approved by the Monterey Bay Unified Air Pollution Control District available to the Resident Engineer to further reduce particulate matter emissions. This list would be provided to the Resident Engineer who would determine when measures from the list should be used if daily watering is insufficient to minimize particulate emissions.

2.4.9 Appearance of Site and Surrounding Area

Construction disruption, which includes earth movement, distracting activities, and storing equipment and material, is unavoidable but not permanent. Material storage areas would be kept neat and as inconspicuous as possible. When practicable, broken concrete and debris developed during clearing and grubbing would be disposed of concurrently with its removal. If stockpiling of soil were necessary, the material would be removed or disposed of weekly. Any construction debris would be placed in trash bins daily. Forms or falsework that are to be re-used would be stacked neatly concurrently with their removal. Forms and falsework that are not to be re-used would be disposed of concurrently with their removal. Visual impacts caused by construction activity are temporary effects that would cease upon completion of the project.

³⁰ Air, Noise, and Paleontology. Wayne Mills, July 2005.

2.4.10 Cultural Resources

No prehistoric or historic archaeological resources were identified within the project study area. If archaeological remains were found during construction, earth-moving operations would be halted in the vicinity of the discovery. Construction operations would not resume in the discovery area until the District Archaeologist Coordinator (or other qualified archaeologist) has the opportunity to review the site.

2.4.11 Paleontological Resources

No paleontological resources were identified within the project study area. If any vertebrate or plant fossil remains are found during construction operations, it is required that construction be halted in the immediate vicinity of the discovery (10 meters [33 feet]) until the District Paleontology Coordinator has the opportunity to review the site.

2.4.12 Hazardous Waste

No hazardous materials are expected to be encountered during construction. However, if hazardous materials were discovered during construction operations, formal procedures specified by the Department Headquarters Hazardous Waste Management Section would be implemented immediately. All hazardous materials involvement would be coordinated with the appropriate federal, state, and local regulatory agencies.

Chapter 3 California Environmental Quality Act Evaluation

3.1 Determining Significance Under the California Environmental Quality Act

Refer to the discussion in the Summary regarding the differences between the state and federal requirements and the roles of the Federal Highway Administration and Caltrans.

3.2 Discussion of Significant Impacts

3.2.1 Significant Environmental Effects of the Proposed Project

The following impacts would have a significant effect on the environment:

- Change in the visual character of the project location with Alternative 1. (Refer to Sections 2.1.1 and 2.1.4 for further discussion.)

3.2.2 Unavoidable Significant Environmental Effects

The rock shed feature of Alternative 1 would be a substantial structure that is highly visible, distinctive, and unexpected in the magnificent natural setting of the Big Sur coast and on the state scenic highway. Measures are proposed to mitigate the aesthetic character of the rock shed. It is not possible, however, to hide this structure from view, minimize its scale to be subordinate to the natural character of the land, nor blend its features to fully harmonize with the scenic qualities of the Big Sur coast.

3.3 Mitigation Measures for Significant Impacts Under the California Environmental Quality Act

Extensive measures are proposed to avoid, minimize, and mitigate the significant visual impacts associated with the addition of a rock shed to the state scenic highway. These measures are presented in Section 2.1.4 and Appendix C.



Chapter 4 Comments and Coordination

Early and continuing coordination with the general public and appropriate public agencies is an essential part of the environmental process to determine the scope of environmental documentation, the level of analysis, potential impacts and mitigation measures, and related environmental requirements. Agency consultation and public participation for this project have been accomplished through a variety of formal and informal methods, including project development team meetings and interagency coordination meetings. This chapter summarizes the results of Caltrans efforts to fully identify, address, and resolve project-related issues through early and continuing coordination.

4.1 Notice of Preparation and Scoping Meeting

A Notice of Preparation was sent to 21 state and federal agencies and the State Clearinghouse on October 22, 2003. The Notice of Preparation informed the recipients of Caltrans intention to prepare an Environmental Impact Report and provided the project description, alternatives under consideration, and the environmental resources the project had potential to impact. The agencies were asked to provide the relevant scope and content of the environmental information they required, including their agency's permit and environmental review requirements. It also included an invitation to attend a scoping meeting. Recipients were alerted to the state law requiring submittal of their comments to Caltrans no later than 30 days after receipt of the Notice of Preparation. Appendix D contains correspondence relevant to the Notice of Preparation, scoping process, and meeting.

In addition to the state and federal agencies that received the Notice of Preparation, the scoping meeting announcement was sent to approximately 350 local, state, and federal agencies, interested organizations, and individuals. A public notice announcing the meeting was placed in the *Monterey Pine Cone* and *Big Sur Roundup*.

The scoping meeting was held on November 19, 2003 at the Big Sur Lodge in Big Sur. The meeting provided an opportunity for attendees to view informational displays, interact with Caltrans staff, and participate in a presentation and question/answer period. Eight agency representatives and public members attended the meeting and provided verbal comments.

In response to the Notice of Preparation, written comments were received from the following agencies:

- Monterey Bay Unified Air Pollution Control District
- Monterey County Planning and Building Department
- Monterey Bay National Marine Sanctuary
- Association of Monterey Bay Area Governments
- California Coastal Commission
- Department of the Army, U.S. Army Corps of Engineers

4.2 Project Development Team Meetings

The Project Development Team is composed of key members of the Caltrans staff and external stakeholders. The team acts as a steering committee and decision-making body in directing the course of studies required for developing and evaluating project alternatives. The team met on November 19, 2002 and June 10, 2003 and January 18, 2006 to review and provide direction on project progress. The Project Development Team met after circulation of the Draft Environmental Impact Report and public hearings, on April 25, 2006 to discuss the comments received during the public comment period. The team met again, on June 14, 2006 to discuss the response to comments received during the public comment period and to select a preferred alternative; Alternative 1 was selected at this meeting as the preferred alternative.

External members of the Highway 1 Improvements at Pitkins Curve and Rain Rocks included representatives from the following agencies and organizations:

- Monterey County Department of Public Works
- Monterey County Department of Planning and Building Inspection
- Transportation Agency of Monterey County
- California Coastal Commission

4.3 Interagency Coordination

Monterey County

A field visit to Pitkins Curve/Rain Rocks and a presentation was made to the Big Sur and North County Land Use Advisory Committees of Monterey County on July 23, 2002. Representatives from Monterey County Office of Planning and Building Inspection, the Monterey Bay National Marine Sanctuary, and the Coastal Commission were also present. The project need and purpose, the range of alternatives, and the potential environmental impacts were discussed. Permit requirements were presented.

Big Sur Multi-Agency Advisory Council

Caltrans staff made a presentation on the project to the Big Sur Multi-Agency Advisory Council on February 6, 2004. The Council is made up of representatives from three local organizations, six local, state, and federal agencies, and one each from the State Assembly, State Senate, and United States Congress³¹. They meet quarterly to discuss development and management topics relevant to the Big Sur coastal area.

The project's description, need, purpose, range of alternatives, potential environmental impacts, schedules, and costs were presented to the Council. The Council was offered an opportunity to provide written or verbal comments. The Council made a request that subsequent project meetings be held in the south coast portion of the County, since the residents there are affected by the project. Concerns were raised about traffic control and detour information during construction.

California Department of Fish and Game

Caltrans requested technical assistance from the California Department of Fish and Game regarding the project's potential to affect the southern sea otter and California condor. The Department concluded that the project would have No Effect to these species or associated critical habitat.

³¹ The Big Sur Multi-agency Advisory Council is made up of representatives from the following entities: Big Sur Resident Member, Big Sur Chamber of Commerce, Coast Property Owner's Association, Monterey County Planning and Building Inspection, Monterey County Board of Supervisors, Monterey Peninsula Regional Park District, California Coastal Commission, Caltrans, California State Parks and Recreation, Monterey Bay National Marine Sanctuary, United States Forest Service, 27th District State Assembly, 15th District State Senate and the United States Congress.

U. S. Geological Survey

Caltrans requested technical assistance from the United States Geological Survey regarding the project's potential to affect the southern sea otter. The Survey concluded the project would have No Effect to this species or its habitat.

U. S. Fish and Wildlife Service

Caltrans requested technical assistance from the United States Fish and Wildlife Service on the potential for the project to affect the California condor, Smith's blue butterfly, and the southern sea otter. The Service concluded that the project would have No Effect on these species or associated critical habitat.

National Oceanic and Atmospheric Administration Fisheries Service

Caltrans requested technical assistance from the National Oceanic and Atmospheric Administration Fisheries Service regarding the project's potential effect on the southern sea otter. The Service concluded that the project would have No Effect on this species.

4.4 Public Hearings

Caltrans held two public hearings for the proposed project. The first was held on March 21st, 2006 from 5:00 pm to 8:00 pm, at the Big Sur Lodge Conference Room in the Pfeiffer Big Sur State Park, 47225 Highway 1, Big Sur. The second was held the following night on March 22nd, 2006, 5:00 pm to 8:00 pm, at the Cambria Veteran's Hall at 1000 Main Street, Cambria.

The public notice announcing availability of the draft environmental document and advertising the hearings ran on February 19th, 2006 and March 17th, 2006 in the *San Luis Obispo Tribune* and the *Monterey Herald*. The public notice also ran on February 24th, 2006 and March 17th, 2006 in the *Monterey Pine Cone* and on February 23rd, 2006 and March 16th, 2006 in the *Cambrian*.

The Draft Environmental Document and public hearing notice was sent directly to the California State Clearinghouse and to persons listed in Chapter 6: Distribution List.

During the public comment period, the Draft Environmental Document was available for review on-line at: <http://www.dot.ca.gov/dist05/projects/#mon> and at the following locations:

- Caltrans' District 05 Office, San Luis Obispo

- Monterey County Clerk's office , Salinas
- San Luis Obispo County Clerk's office, San Luis Obispo
- Big Sur Library, Big Sur
- Monterey City Library
- San Luis Obispo City/County Library, San Luis Obispo
- Cambria branch of San Luis Obispo County Library, Cambria

These public hearings were held to meet CEQA and NEPA requirements as part of the circulation of the Draft Environmental Impact Report. This document was made available to the public on February 16th, 2006. The comment period closed on April 7th, 2006.

The purpose of the public hearings was to provide information and solicit comments on the Draft Environmental Impact Report, the preferred alternative and the Federal Highway Administration's 4(f) *de minimis* finding.

Participants were greeted as they entered the room and asked to sign in. This allowed Caltrans staff to maintain an attendance record and ensure that all interested parties were added to the project mailing list. Attendees were offered information sheets and explained the purpose and schedule of the hearing. Informational display boards with maps, graphics, and project information were set up around the room. In addition, a topographic model was available for viewing. Caltrans project team members were available to explain the displays, answer questions and receive public input.

The proposed project would require the purchase of 4.32 acres of California State Parks & Recreation land (1.25 acres from Parcel No. 6283-1 and 3.07 acres from Parcel No. 6284-1). This land is characterized by extremely steep topography and degraded environmental and visual qualities due to frequent landslide activity. Caltrans and FHWA have made a preliminary determination that this project would not adversely affect the State Park activities, features, or attributes of the park.

The format of both public hearings included an open house from 5:00 pm – 6:00 pm. A project informational presentation was given at 6:00 pm. After the presentation, a question and answer session was held. Following the question and answer session, the open house format resumed. Caltrans staff encouraged attendees to fill out comment cards, email comments, or record comments with the court reporter that was on hand to record dictated comments.

Seventeen people attended the Public Hearing in Big Sur. Four people attended the public hearing in Cambria.

At the close of the comment period, Caltrans received 24 comments from federal, state, and local agencies, as well as individuals. These comments expressed support for the project with concerns about traffic and visual impacts. Please refer to Appendix G for copies of the comments.

Chapter 5 List of Preparers

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

Karen Bewley, Environmental Planner. B.A., Environmental Studies. 1 year experience in environmental planning. Contribution: Construction Impacts.

Bob Carr, Landscape Associate. B.S., Landscape Architecture; 18 years experience in visual impact analysis and landscape architecture. Contribution: Visual Impact Analysis.

Eric Covington, Transportation Engineer. B.S., Environmental Engineering; 6 years experience in environmental engineering studies. Contribution: Initial Site Assessment for Hazardous Materials.

Zeke Dellamas, Project Engineer/Storm Damage Coordinator, PE. B.S., Civil Engineering. 11 years experience in transportation engineering and storm damage response. Contribution: History of highway restoration.

John Duffy, Geologist. B.S., Geological Engineering. 28 years experience in geotechnical evaluation and engineering. Contribution: Preliminary Geotechnical Report.

Rajeev L. Dwivedi, Engineering Geologist. M.S., Geology; M.S., Civil Engineering; Ph.D., Environmental Sciences; 17 years experience in conducting water quality research and analysis. Contribution: Water Quality Report.

David Ewing, Graphic Designer III. B.S. Graphic Arts; 13 years experience in graphics arts and design. Contribution: Created graphic illustrations and mapping.

Krista Kiaha, Associate Environmental Planner/Archaeologist. B.A., Anthropology; M.A., Anthropology; 10 years experience in North American archaeology. Contribution: Prepared the cultural resources studies.

John Luchetta, Senior Environmental Planner. B.S., Natural Resources Management; 16 years experience in environmental analysis and document preparation. Contribution: Supervision and review of Environmental Impact Report and various technical studies.

Ruth A. McCuen, Graphic Designer III. Fine Art/Design major; 35 years experience in graphics arts and design. Contribution: Created graphic illustrations and mapping.

Wayne W. Mills, Transportation Engineer. B.A., Earth Science; B.A., Social Sciences; 21 years experience in air quality and noise studies; 8 years experience in paleontology studies. Contribution: Air Quality, Noise, and Paleontology Study.

Steve Price, Deputy District Director Maintenance and Operations. B.S., Civil Engineering, Professional Engineer (P.E.); 25 years experience in transportation engineering. Contribution: Project Sponsor.

James Perano, Senior Transportation Engineer. B.S., Civil Engineering; 24 years experience in transportation engineering. Contribution: Design Senior.

David Rasmussen, Senior Project Manager. B.S., Civil Engineering; 15 years experience in civil engineering, highways, construction and project management. Contribution: Project Manager.

Amir Saedi, PE, Caltrans Design Engineer. B.S., Civil Engineering; 12 years experience in design and civil engineering. Contribution: Design Engineer.

Ed Schefter, Senior Transportation Surveyor, GIS/GPS Specialist; 20 years experience surveying, impact analysis, and mapping. Contribution: Impact analysis and mapping.

Lisa Schicker, Associate Environmental Planner/Natural Sciences. B.A., Biology; M.L.A. Landscape Architecture, Coastal Ecology and Environmental Management. 25 years experience in environmental planning and biological studies. Contribution: Natural Environment Study.

Wendy Waldron, Associate Environmental Planner. B.A., Anthropology; 12 years experience in environmental analysis and documentation; 20 years experience in California archaeology. Contribution: Environmental Impact Report analysis and preparation.

Chapter 6 Distribution List

Table 10. Name and Affiliation of Notice of Availability of Draft Environmental Impact Report Recipient

First Name	Last Name	Title	Organization
Sam	Farr		Property Owner
Elizabeth	Henkle		Property Owner
			Big Sur Library
			Monterey County Library
			Office of Planning & Research
			San Luis Obispo County Library
			Bureau of Land Management
Rick	Hanks	National Monument Manager	
Gary	Hamby	Division Administrator	Federal Highway Administration
Jeannie	Derby	Forest Supervisor	Los Padres National Forest Supervisor's Office
Bill	Douros	Superintendent	Monterey Bay National Marine Sanctuary
Karin	Strasser Kauffman		Monterey Bay National Marine Sanctuary - Advisory Council
Cheryl	Hapke		Pacific Science Center of USGS/UCSC
Tom	Kendall	Chef, Planning Branch	U.S. Army Corps of Engineers
Calvin	Fong	Regulatory Branch Chief	U.S. Army Corps of Engineers
Becky	Tuden		U.S. Environmental Protection Agency
Diane	Gunderson	Fish & Wildlife Biologist	U.S. Fish & Wildlife Service
Catrina	Martin	North Coast Field Supervisor	U.S. Fish & Wildlife Service
David	Pereksta	Fish and Wildlife Biologist	U.S. Fish & Wildlife Service, Ventura Office
Jeff	Kwasny	Resource Officer	U.S. Forest Service
John S.	Bradford	Monterey District Ranger	U.S. Forest Service
Robert	Kayen		Los Padres National Forest
Homa	Lee	Chief Scientist	U.S. Geological Survey
Albert	Cerna, Jr.		U.S. Geological Survey
			U.S.D.A Natural Resource Conservation Services
Tim	Vendlinski		Wetland's Regulatory Office (WTR-8)
			U.S. Environmental Protection Agency, Region 9
Alec	Arago	Aide to Congressman Farr	U.S. Congress - 17th Dist.
Sam	Farr	Congressman	U.S. Congress - 17th Dist.
Lois	Capps	Congressman	U.S. Congress - 22nd Dist.
Mark	Blum		El Sur Ranch
Larry	Horan		El Sur Ranch
Roger	Lyon		Hearst Ranch
Nick	Papadakis	Executive Director	Association of Monterey Bay Area Governments
			Carmel Land Use Advisory Committee
			Monterey Bay Unified Air Pollution Control District
Sarah	Hardgrave		Monterey County Planning
			General Plan Update Team
Scott	Hennessy	Director	Monterey County Planning & Building Dept.
Jeff	Main	Supervising Coastal Planner	Monterey County Planning & Building Dept.
Martha	Diehl		Monterey County Planning Commission
Tom	Lockhart		Monterey County Resource Conservation District
Joe	Moses		Monterey County Supervisor's Office
Harry	Robins	Emergency Services Manager	Monterey County, Office of Emergency Services
Jess	Mason	Sheriff	Monterey County, Sheriff's Dept.

First Name	Last Name	Title	Organization
Tim	Jensen	Special Projects & Planning Mgr	Monterey Peninsula Regional Park District
Joseph	Donofrio	General Manager	Monterey Peninsula Regional Parks Dist.
Richard	Macedo	Legislative Assistant, District 2	San Luis Obispo Board of Supervisors
Ron	DeCarli	Executive Director	San Luis Obispo Council of Governments
Victor	Holanda	Planning Director	San Luis Obispo County, Planning Dept.
Bill	Reichmuth	Executive Director	Transportation Agency of Monterey County
Dave	Potter	Supervisor	Monterey County, District 5
Shirley	Bianchi	Supervisor	San Luis Obispo County, District 2
			Big Sur Round-Up
			Carmel Pine Cone
			Coast Weekly
			KSBW - TV 8
			KSBY
			Monterey County Herald
			The Salinas Californian
			The Salinas Californian and El Sol
			American Cetacean Society, Monterey Bay Chapter
Henry	Hanka		America's Byways Resource Center
Erin Lee	Gaffill	Executive Director	Big Sur Arts Initiative
			Big Sur Health Center
Howard	Strohn		Big Sur Historical Society
Zad	Leavy	General Counsel	Big Sur Land Trust
			Big Sur Land Use Advisory Committee
Mary Ann "Corky"	Matthews	Conservation Chair	CA Native Plant Society
Lesley	Ewing	President	CA Shore and Beach Preservation Association
David	Chipping		Cal Poly
Jim	Allen		Cambria Chamber of Commerce
Suzy	Ficker		Cambria Legal Defense Fund
			Captain Cooper School
Honey	Williams		Carmel Highlands Association
James	Rossen		Carmel Highlands Fire District
Captain	McDonald		Carmel Highlands Fire Station
			Carmel Residents Association
			Carmel River School
Mark	Christensen	Chairman	Carmel River Watershed Council
Kaitilin	Gaffney	Central Coast Program Director	Center for Marine Conservation
Mike	Caplin	President	Coast Property Owner's Association
			Coast Watch
Ann	Bertken	Chair	Coastal Watershed Council
Tony	Cerda	Chairperson	Coastanoan Rumsen Carmel Tribe
Richard	Nichols	Executive Director	Coastwalk
Tom	Nason	Tribal Chair	Esselen Tribe
Ken	Ekelund	Watershed Coordinator	Garrapata Creek Watershed Council
			Henry Miller Library
Randall	Dennis	Founder	Highway One Museum
Gary A.	Patton	Executive Director	LandWatch Monterey County
Gwen	Henry		League of Women Voters
Ken	Wright		Monterey County Convention and Visitor's Bureau
Susan	Elliot	Executive Director	Monterey County Film Commission
Kim	Kimball	Executive Manager	Morro Bay Chamber of Commerce
Jim	Oakden		Moss Landing Marine Labs
Claudia	Harmon		North Coast Advisory Council (SLO County)
Cat	McConnell		North Coast Advisory Council/CCSD
			Ohlone Tribe
Rudy	Rosales	Tribal Chair & Cultural Resources	Ohlone-Costanoan-Esselen Nation (OCEN)
W.F. "Zeke"	Grader, Jr.	Executive Director	Pacific Coast Fed. Of Fishermen's Assoc.
			Pacific Valley School

First Name	Last Name	Title	Organization
Ben	Strumwasser	Principal	Public Affairs Management
Paul	Kephart		Rana Creek Habitat Restoration
Robert & Carolee	Cross		Red Cross
David	Dilworth		Responsible Consumers of the Monterey Peninsula
John	Courtney	Vice President	Robinson Jeffers Foundation
			Salinan Nation
			San Luis Land Conservancy
David	Garth	Executive Director	San Luis Obispo Chamber of Commerce
Michael R.	Hanchett		San Simeon Chamber of Commerce
Glenda	Nelson	Executive Director	Save Our Shores
Ian	Moore	Executive Director	Scenic California
Pat	Veesart		Sierra Club Santa Lucia Chapter
			Sierra Club, Ventana Chapter
			South Coast Land Use Advisory Committee
Scott	Kimura		Tenera Environmental
Emily	Tibbott		The Nature Conservancy
			Ventana Wilderness Alliance
			Ventana Wilderness Sanctuary
			Ventana Wilderness Society
Jim	Davis	Executive Director	Watershed Institute
Wendi	Newman		Big Sur Campground
Rick	Aldinger		Big Sur Center Deli
Joanne	Redici		Big Sur Chamber of Commerce
Laura	Moran	President	Big Sur Grange
Chris	Sutton		Big Sur Internet
Stan	Russell		Big Sur Magazine
Reed	Cripe		Big Sur River Inn
Janet	Lesniak		Blaze Engineering
Helmuth	Morganwrath		Carmel High School
Gary	Paddock	Owner	Carmel Valley Construction
			Crossroads Shopping Center
			Deetjens
Bettie Sue	Walters		Deetjen's
Andy	Nusbaum		Esalen Institute
Bruce	Whale		Esalen Institute
Bob	Robinson		Fernwood
Lydia	Bergen	PISCO Policy Coordinator	Long Marine Lab
Bill	Henry		Morro Group
Kirk	Gafill	General Manager	Nepenthe
John	Leding		Pacific Monarch, Ltd.
			Quail Lodge
James	Ramey	General Manager	Ragged Point Inn
D.	Passovey		RRI
Kathe	Tanner		The Cambrian
Frank	Pinney	Chief	Big Sur Fire Brigade
Sean	Grauel		Cambria Community Services District
Cheryl	Goetz	Chief	Mid Coast Fire Brigade
Molly A.	Joest	Director - External Affairs	Pacific Bell
Jim	Kimball		Pacific Valley Unified School District
Leon	Panetta		Panetta Institute for Public Policy, CA State University, Monterey Bay
Eddie	Marquez	Government Relations Rep.	PG&E
Forrest	Warren		San Simeon Community Services District
Dan	Stefanifko	Ranger	Andrew Molera State Park
			Asilomar State Beach
Jeff	Frey		Big Sur State Park
Charles	Lester	Deputy Director	CA Coastal Commission
Lee	Otter	Coastal Program Analyst	CA Coastal Commission

First Name	Last Name	Title	Organization
Kim	Sterrett		CA Dept. of Boating & Waterways
Fred	Botti	Environmental Specialist	CA Dept. of Fish & Game
Greg	Smith	Coastal Sector Supt.	CA Dept. of Parks & Recreation
Lois	Harter	Park Superintendent	CA Dept. of Parks & Recreation, Monterey District
Glen	McGowan	Supervising Ranger	CA Dept. of Parks & Recreation, Point Lobos
Gary	Hughy		CA Dept. of Parks & Recreation/MBNMS
Dan	Eller	Public Relations Officer	CA Dept. of Parks & Recreation Hearst Castle
Chris	Wills		CA Geological Survey
Don	Follett		CA Highway Patrol, Monterey Area
Matt	Thompson	Associate Water Resource Control Engineer	CA Regional Water Quality Control Board
Neal	Fishman	Deputy Executive Officer	CA State Coastal Conservancy
Nanci	Smith		CA State Historic Preservation Office
Gretchen	Brigaman		CA State Lands Commission
Dominic	Gregorio		CA Trade & Commerce Agency
			Division of Water Quality
			State Water Resources Control Board
			Hearst Castle Historical Monument
			Point Lobos State Reserve
Gary	Nelson		Pt. Sur State Historic Park
John	Laird	Assembly member	CA State Assembly, 27th District
Gary	Shallcross	Aide to Assembly member Laird	CA State Assembly, 27th District
Abel	Maldonado	Assembly member	CA State Assembly, 33rd Dist.
Bruce	McPherson	Senator	CA State Senate, 15th Dist.
Jeff	Norman	Resident Representative	Big Sur Multi-Agency Advisory Council
Hoyt	Fields	Interim Museum Dir./Supt.	San Luis Obispo Coast District

Appendix A California Environmental Quality Act Checklist

The following checklist identifies physical, biological, social, and economic factors that might be affected by the proposed project. The California Environmental Quality Act impact levels include “potentially significant impact,” “less than significant impact with mitigation,” “less than significant impact,” and “no impact.”

The California Environmental Quality Act requires that environmental documents determine significant or potentially significant impacts. In many cases, background studies performed in connection with the project indicate no impacts. A mark in the “no impact” column of the checklist reflects this determination. Any needed explanation of that determination is provided at the beginning of Chapter 2.



Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
--------------------------------	--	------------------------------	-----------

AESTHETICS - Would the project:

- | | | | | |
|---|-------------------------------------|-------------------------------------|--------------------------|-------------------------------------|
| a) Have a substantial adverse effect on a scenic vista? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic building within a state scenic highway? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c) Substantially degrade the existing visual character or quality of the site and its surroundings? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| d) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

AGRICULTURE 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. 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Conflict with existing zoning for agricultural use, or a Williamson Act contract? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Involve other changes in the existing environment that, due to their location or nature, could result in conversion of Farmland, to non-agricultural use? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

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? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|---|--------------------------|--------------------------|-------------------------------------|--------------------------|

Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
--------------------------------	--	------------------------------	-----------

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

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 that exceed quantitative thresholds for ozone precursors)?

d) Expose sensitive receptors to substantial pollutant concentration?

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

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 Game or U.S. Fish and Wildlife Service?

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 Game or U.S. Fish and Wildlife Service?

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?

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?

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

Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
--------------------------------	--	------------------------------	-----------

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

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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COMMUNITY RESOURCES - Would the project:

a) Cause disruption of orderly planned development?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	--------------------------	-------------------------------------

b) Be inconsistent with a Coastal Zone Management Plan?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------	--------------------------

c) Affect lifestyles or neighborhood character or stability?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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d) Physically divide an established community?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	--------------------------	-------------------------------------

e) Affect minority, low-income, elderly, disabled, transit-dependent, or other specific interest group?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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f) Affect employment, industry, or commerce, or require the displacement of businesses or farms?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	--------------------------	-------------------------------------

g) Affect property values or the local tax base?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	--------------------------	-------------------------------------

h) Affect any community facilities (including medical, educational, scientific, or religious institutions, ceremonial sites or sacred shrines)?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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i) Result in alterations to waterborne, rail, or air traffic?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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j) Support large commercial or residential development?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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k) Affect wild or scenic rivers or natural landmarks?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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l) Result in substantial impacts associated with construction activities (e.g., noise, dust, temporary drainage, traffic detours, and temporary access, etc.)?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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CULTURAL RESOURCES - Would the project:

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

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

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

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

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.

ii) Strong seismic ground shaking?

iii) Seismic-related ground failure, including liquefaction?

iv) Landslides?

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

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

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.

Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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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?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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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?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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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?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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c) Emit hazardous emissions or handle hazardous or acutely hazardous material, substances, or waste within one-quarter mile of an existing or proposed school?

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

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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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?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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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?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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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?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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HYDROLOGY AND WATER QUALITY - Would the project:

Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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 which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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 offsite?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j) Result in inundation by a seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

LAND USE AND PLANNING - Would the project:

Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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- a) Physically divide an established community?
- 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?
- c) Conflict with any applicable habitat conservation plan or natural community conservation plan?

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?
- 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?

NOISE - Would the project:

- 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?
- b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?
- c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?
- d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?
- e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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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?

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)?

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

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

PUBLIC SERVICES -

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

Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other public facilities?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

RECREATION -

Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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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?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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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?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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TRANSPORTATION/TRAFFIC - Would the project:

a) Cause an increase in traffic which has 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)?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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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?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incomplete uses (e.g., farm equipment)?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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e) Result in inadequate emergency access?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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f) Result in inadequate parking capacity?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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UTILITY AND SERVICE SYSTEMS - Would the project:

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

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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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?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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- c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?
- d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?
- e) Result in 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?
- f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?
- g) Comply with federal, state, and local statutes and regulations related to solid waste?

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

Appendix B Title VI Policy Statement

DEPARTMENT OF TRANSPORTATION
OFFICE OF THE DIRECTOR
1120 N STREET
P. O. BOX 942873
SACRAMENTO, CA 94273-0001
PHONE (916) 654-5266
FAX (916) 654-6608
TTY (916) 653-4086



*Flex your power!
Be energy efficient!*

January 14, 2005

TITLE VI POLICY STATEMENT

The California Department of Transportation under Title VI of the Civil Rights Act of 1964 and related statutes, ensures that no person in the State of California shall, on the grounds of race, color, national origin, sex, disability, and age, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity it administers.

A handwritten signature in black ink that reads "Will Kempton".

WILL KEMPTON
Director

"Caltrans improves mobility across California"



Appendix C Minimization and/or Mitigation Summary

Section Number Reference	Mitigation Reference	Mitigation Commitments
2.1.4 Visual/Aesthetics	A	Design the structures with the highest quality architectural and engineering practices and considerations, acknowledging the existing historic bridges of the Big Sur Coast and using current state-of-the-art technology.
	B	Involve the community in the design of all structures, walls, barriers, and other project aesthetics through the creation of an Aesthetic Design Advisory Committee.
	C	Consider using a high level of architectural detailing when designing structures.
	D	Use an open-style safety rail that minimizes view blockage.
	E	Use finish colors and textures that minimize reflectivity and glare.
	F	To the greatest extent possible, use an "honest use of materials" philosophy that avoids the use of obviously "fake" materials, such as materials that are concrete formed and colored to look like wood, etc.
	G	Re-contour all disturbed areas and construction access roads to a natural appearance.
	H	Vegetate all stabilized soil areas with native shrubs and grasses. Include planting where possible around all exposed drainage pipes, permanent access roads, and retaining walls (except the interior of the rock shed).
	I	Integrate existing rock outcroppings and stone landforms into the design to the greatest extent possible.
	J	Minimize the use of signage and reflectors to the minimum required by the Manual of Uniform Traffic Control Devices with concurrence from Caltrans Traffic Design.
	K	Do not use asphalt or concrete paving beyond the proposed 4-foot shoulders. If additional paving is required, alternative natural appearing surfaces such as soil cement would be used.
	L	Color additional rock netting or mesh, if required, completely black, including all integral connectors.
	M	Bury all overside drains and inlet structures or hide them from view to the greatest extent possible. Where unavoidably exposed to view, color the pipes to reduce noticeability, and dull the gloss of the finish.
	N	Color all paved ditches to reduce noticeability
	O	Where metal beam guardrail is required, use measures to reduce reflectivity of the metal components.
	P	If paving is required beyond the paved portion of the roadway, use alternative natural appearing surfaces, such as soil cement. If a safety barrier is required at the perimeter of the pullout or parking area, design it to complement the other project structures. If boulders are used, half-bury them into the soil to appear natural
Q	If pedestrian or bicycle railing is required, design it with materials, form, and colors to minimize noticeability and ocean view blockage, and to complement the bridge and rock shed architecture.	
R	Minimize the tight, enclosed spatial characteristics of the rock shed to the greatest extent possible through measures such as: a. Reducing the number of columns, b. Reducing the thickness of the columns, c. Raising the "ceiling" height of the structure, d. Aligning the inside retaining wall (closest to the uphill slope) as far from the highway lanes as possible. e. Allowing the entry portals openings to be as large as feasible and still architecturally appropriate.	
S	Design the length of the rock shed and the form of the parapet walls at the portals so that no personnel fencing or railings are visible from the highway.	
T	Consider using a ledger beam to support the rock shed roof connection to the hill rather than a full-height retaining wall, so that the native rock face of the hill would be exposed to highway viewers.	

Section Number Reference	Mitigation Reference	Mitigation Commitments
	U	Disguise to the greatest extent possible any permanent road required to the roof of the rock shed for maintenance access. Also disguise any necessary gate by making it appear as a natural landform or screening it with berms and/or naturally appearing boulders and native vegetation if possible.
	V	Retrofit or replace the existing bridge rail on the Rain Rocks viaduct to complement the new bridge and rock shed structures
2.3.1 Natural Communities	A	To minimize construction-related impacts, Environmentally Sensitive Areas would be delineated on the project plans around all pullouts that may be used for equipment storage, as indicated on Figure 2-21A-C. The Resident Engineer, in consultation with the project biologist, would determine where Environmentally Sensitive fencing would be installed to limit construction activities.
	B	After construction is complete, the project area would be evaluated to determine where revegetation would be appropriate and successful. Those areas identified for revegetation would be planted with native vegetation, suitable for the area, as recommended by Caltrans Office of Landscape Architecture and in consultation with the project biologist. Vegetation would be replaced at a ratio of 1:1. Plant salvage, local seed collection, and contract growing are techniques that can be used to mitigate for the loss of native shrubs that are removed.
	C	An installation and maintenance contract for mitigation plantings would be developed. The maintenance agreement shall be at least three years in length. During that time, all invasive weeds should be regularly removed. A 70% survival rate for of all plantings, three years post-construction, would be the target goal.
	D	A Caltrans biologist or designee would prepare monitoring reports for various agencies if they are needed as part of conditions set forth in permits. Annual reports summarizing results would be sent to any requesting and appropriate state and federal agencies.
	E	A Mitigation, Monitoring, Restoration, and Success Criteria Plan shall be prepared for this project. The plan would include success criteria for revegetation. A three-year monitoring schedule, with annual reports to various agencies is typically recommended. For three years, biannual environmental monitoring for all mitigation plantings would be conducted to determine if the project meets success criteria, to request any needed replacement plantings, and to identify remedial actions if the success criteria were not achieved.
2.3.2 Wetlands and Other Waters	A	To ensure that all potential impacts to wetland resources are avoided and minimized, Environmentally Sensitive Area fencing would be installed to protect coastal wetlands, as delineated in Figure 2-21 A-C. The mapped locations of the Environmentally Sensitive Areas would be included on the project plans and layout sheets and included in the Special Provisions of the construction contract. All fencing would be placed at the direction of the Resident Engineer, in consultation with a representative from the Environmental Branch.
	B	All refueling and maintenance of equipment shall be conducted at least 20 meters (60 feet) from wetlands and waters of the U.S.
	C	Prior to the onset of work, the Resident Engineer would insure that the contractor has prepared a plan for prompt and effective response to any accidental spills, to ensure protection of aquatic resources. All personnel would be informed of the plan and the importance of preventing spills.
	D	All construction activities would be completed in accordance with the Caltrans National Pollution Discharge Elimination System Permit, the General Construction Permit, and Caltrans Statewide Storm Water Management Plan.
	E	To protect all adjacent springs, seeps, willow riparian wetlands, and the Pacific Ocean/Monterey Bay National Marine Sanctuary, Caltrans would implement best management practices, as identified by the appropriate Regional Water Quality Control Board. These best management practices would be implemented to minimize or eliminate the potential for a non-storm water discharge to occur. Construction site best management practices are addressed in detail in the Storm Water Pollution Control Plan that will be developed for the project site.
	F	If a work site is to be temporarily de-watered by diversion or pumping, intakes would be completely screened with wire mesh not larger than five millimeters to prevent all aquatic wildlife from entering the pump system. Water would be treated, released, or pumped to an appropriate location at a rate to maintain downstream flows during construction. Upon completion of construction activities, any barriers to flow shall be removed in a manner that would allow flow to resume with the least disturbance to the substrate.

Section Number Reference	Mitigation Reference	Mitigation Commitments
	G	Due to the time that will elapse before project construction and because the biological environment in the project area is subject to change, pre-construction surveys would be undertaken approximately one year prior to construction to identify up-to-date distribution of wetlands. If wetland presence or distribution has changed from that documented in the April 2005 Natural Environment Study, the appropriate agencies would be consulted. All avoidance, minimization, and mitigation measures would be applied, as directed above, to newly identified wetlands.
	H	A biological/environmental monitor would be present onsite during construction activities that may impact the ocean and marine environment, special-status species, and/or migratory birds. This includes drilling and blasting for the construction of piers and abutments for the new bridge and rock shed and any associated de-watering activities.
	I	The Caltrans Resident Engineer, in consultation with the biologist and/or environmental monitor would have the authority to halt any action that might result in impacts that exceed the anticipated levels of impact that were determined during agency review (by Caltrans, Army Corps of Engineers, Department of Fish and Game, Coastal Commission, and/or U.S. Fish and Wildlife Service) of the proposed actions. If work is stopped, the Biologist or Environmental Monitor would immediately notify these same regulatory agencies.
	J	All refueling and maintenance of equipment and vehicles would be at least 20 meters (60 feet) from any aquatic habitat, wetland area, or any water body. The contractor would ensure contamination of habitat does not occur during such operations. All workers would be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur
	K	Prior to the onset of work, the Army Corps of Engineers would ensure that the permittee has prepared a plan to allow a prompt and effective response to any accidental spills around aquatic habitats. All workers would be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur.
	L	Erosion Control and Storm Water Management. All construction activities would be completed in accordance with Caltrans National Pollution Discharge Elimination System Permit, the General Construction Permit, and Caltrans Statewide Storm Water Management Plan.
	M	To protect the Pacific Ocean/Monterey Bay National Marine Sanctuary, Caltrans would implement best management practices as identified by the appropriate Regional Water Quality Control Board. These best management practices would be implemented to minimize or eliminate the potential for a non-storm water discharge to occur. Construction site best management practices are addressed in detail in the Storm Water Pollution Control Plan that would be developed for the project site.
	N	If a work site is to be temporarily dewatered by diversion, pumping, and treating, intakes would be completely screened with wire mesh not larger than five millimeters to prevent all aquatic wildlife from entering the pump system. Water shall be released or pumped to an appropriate location at a rate to maintain downstream flows during construction. Upon completion of construction activities, any barriers to flow would be removed in a manner that would allow flow to resume with the least disturbance to the substrate.
2.3.3 Animal Species	A	One year prior to construction, pre-construction surveys would be conducted during the nesting season to identify the presence or absence of active nests for birds protected under the Migratory Bird Treaty Act. If birds are nesting, after their dispersal, bird netting would be installed to deter nesting during construction

Section Number Reference	Mitigation Reference	Mitigation Commitments
2.3.4 Threatened and Endangered Species	A	The number of access routes, size of staging areas, and the total area of activity would be limited to the minimum necessary to safely construct this project
	B	As a result of technical assistance from U.S. Fish and Wildlife Service under Section 7 of the Endangered Species Act, the single Smith's blue butterfly host plant (buckwheat) would be removed, with the surrounding soils and duff, and relocated outside the area of direct impact to an area nearby that has established buckwheat plants
	C	Due to their curious nature, condors may frequent the construction site and perch on large equipment, looking for food scraps. During construction, all food-related trash shall be properly contained and regularly removed from the work site.
	D	A Caltrans biologist or designee would monitor sea otter activity during events that cause loud noises, such as blasting, for observation of abnormal activity or behavior and contact U.S. Fish and Wildlife Service if such behavior occurs
	E	Due to the time that would elapse before project construction and because the biological environment in the project area is subject to change, pre-construction surveys would be undertaken during the appropriate survey season, approximately one year prior to construction to identify up-to-date distribution of special-status species. If any federally listed species are found during the pre-construction surveys, no construction would be undertaken until consultation was completed between the Federal Highway Administration and the U. S. Fish and Wildlife Service. If any state special-status species were found during the pre-construction surveys, no construction would be undertaken until consultation was completed between Caltrans and the California Department of Fish and Game. All requirements, resulting from consultation with the resource agencies would be followed.
	F	A Caltrans biologist (or designee) would conduct a training session for all construction personnel before any construction activities begin. The training session would include a description of all special-status species known to occur in the project vicinity (Smith's blue butterfly and buckwheat host plants, California condor, and southern sea otter). The biologist would discuss their habitats, their importance, and general measures being implemented to conserve these species as they relate to the project boundaries. Brochures, photographs, books, and briefings may be used in the training session, provided that a qualified person is on hand to answer any questions.
	G	A biological/environmental monitor would be present onsite during construction activities that may impact special-status species. This includes blasting for the construction of structure piers and abutments and any associated de-watering activities.
	H	If any special-status species are found during construction, the Environmental Branch shall be contacted immediately. After any and all required consultations with agencies have occurred, the Caltrans Biologist or designee shall be present at the construction site until such time as special-status species have been removed and any special instructions have been given to construction personnel.
	I	The Caltrans resident engineer, in consultation with the biologist and/or environmental monitor would have the authority to halt any action that might result in impacts that exceed the anticipated levels of impact that were determined during agency review (between Caltrans, U.S. Army Corps of Engineers, California Department of Fish and Game, and/ or U.S. Fish and Wildlife Service). Once work has stopped, the biologist or environmental monitor would notify these same regulatory agencies.
2.3.5 Invasive Species	A	In compliance with the Executive Order on Invasive Species, E.O. 13112, and subsequent guidance from the Federal Highway Administration, the landscaping and erosion control included in the project would not use species on the California List of Noxious Weeds.
	B	Measures to control invasive exotic plants would be implemented according to the Caltrans Landscape Architect's recommendations. Exotic and invasive weeds such as ice plant, kikuyu grass, fennel, pampas grass, fountain grass, and other assorted invasive plants that are listed as "most invasive" on the list would be removed within the project area and topsoil would not be used in any revegetation areas due to the presence of a high quantity of weed seeds, unless a weed removal program is implemented.

Appendix D Notice of Preparation



Gray Davis
GOVERNOR

STATE OF CALIFORNIA

Governor's Office of Planning and Research
State Clearinghouse

Notice of Preparation



Tal Finney
INTERIM DIRECTOR

November 4, 2003

To: Reviewing Agencies
Re: Improvements to Highway 1 at Pitkins Curve/Rainrocks
SCH# 2003111016

Attached for your review and comment is the Notice of Preparation (NOP) for the Improvements to Highway 1 at Pitkins Curve/Rainrocks draft Environmental Impact Report (EIR).

Responsible agencies must transmit their comments on the scope and content of the NOP, focusing on specific information related to their own statutory responsibility, within 30 days of receipt of the NOP from the Lead Agency. This is a courtesy notice provided by the State Clearinghouse with a reminder for you to comment in a timely manner. We encourage other agencies to also respond to this notice and express their concerns early in the environmental review process.

Please direct your comments to:

Dave Rasmussen
Department of Transportation, District 5
50 Higuera Street
San Luis Obispo, CA 93041-5415

with a copy to the State Clearinghouse in the Office of Planning and Research. Please refer to the SCH number noted above in all correspondence concerning this project.

If you have any questions about the environmental document review process, please call the State Clearinghouse at (916) 445-0613.

Sincerely,


Scott Morgan
Associate Planner, State Clearinghouse

Attachments
cc: Lead Agency

1400 TENTH STREET P.O. BOX 3044 SACRAMENTO, CALIFORNIA 95812-3044
916-445-0613 FAX 916-323-3018 www.opr.ca.gov

(NON) 12 8 03 11:49/ST 11:49/NO 4862620292 P 2

FROM OPR

Resources Agency	SCH#	County: <i>Tulare</i>	FROM: OPR
<input checked="" type="checkbox"/> Resources Agency Nadell Gayou			(MON) 12 8' 03 11:50/ST. 11:49/NO. 4862620292 P 4
<input type="checkbox"/> Dept. of Boating & Waterways Suzi Belzler			
<input type="checkbox"/> California Coastal Commission Elizabeth A. Fuchs			
<input type="checkbox"/> Colorado River Board Gerald R. Zimmerman			
<input type="checkbox"/> Dept. of Conservation Roseanna Taylor			
<input type="checkbox"/> California Energy Commission Environmental Office			
<input type="checkbox"/> Dept. of Forestry & Fire Protection Allen Robertson			
<input type="checkbox"/> Office of Historic Preservation Hans Kreuzberg			
<input checked="" type="checkbox"/> Dept. of Parks & Recreation B. Noah Tilghman			
<input type="checkbox"/> Reclamation Board Lori Bulford			
<input type="checkbox"/> Santa Monica Mountains Conservancy Paul Edelman			
<input type="checkbox"/> S.F. Bay Conservation & Dev't. Comm. Steve McKern			
<input type="checkbox"/> Dept. of Water Resources Resources Agency Nadell Gayou			
Fish and Game			
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CA Dept. of Transportation
 District 5
 50 Higuera St
 San Luis Obispo CA 93401

NOP Mailing List
OPR SCH

Pitkins Curve/Rainrocks
 5-MON-1 PM 21.3/21.6
 10/29/03

Organization	Address	City	St.	Zip
Office of Planning & Research	1400 Tenth Street	Sacramento	CA	95814
Los Padres National Forest Supervisor's Office	6755 Hollister Ave., Suite 150	Goleta	CA	93117
Monterey Bay National Marine Sanctuary	299 Foam Street	Monterey	CA	93940
U.S. Army Corps of Engineer	333 Market St.	San Francisco	CA	94105-2197
U.S. Environmental Protection Agency	Region 9 (WTR-8), 75 Hawthorne St.	San Francisco	CA	94105
U.S. Fish & Wildlife Service	2493 Portola Road, Suite B	Ventura	CA	93003
U.S. Forest Service Los Padres National Forest	406 S. Mildred	King City	CA	93930
Association of Monterey Bay Area Governments	445 Reservation Road, Suite G	Marina	CA	93933-0809
Monterey Bay Unified Air Pollution Control District	24580 Silver Cloud Ct	Monterey	CA	93940
Monterey County Planning & Building Dept.	2620 First Avenue	Marina	CA	93933
San Luis Obispo Council of Governments	1150 Osos Street, Suite 202	San Luis Obispo	CA	93401
San Luis Obispo County, Planning Dept.	County Government Center	San Luis Obispo	CA	93408
Transportation Agency of Monterey County	55-B Plaza Circle	Salinas	CA	93901-2902
CA Coastal Commission	725 Front Street, Suite 300	Santa Cruz	CA	95060
CA Dept. of Fish & Game	20 Lower Ragsdale Dr., #100	Monterey	CA	93940
CA Dept. of Parks & Recreation	Big Sur Station #1	Big Sur	CA	93920
CA Dept. of Parks & Recreation	PO Box 942896	Sacramento	CA	94296-001
CA Dept. of Parks & Recreation, Monterey District	2211 Garden Road	Monterey	CA	93940
CA Highway Patrol, Monterey Area	19055 Portola Dr.	Salinas	CA	93908-1822
CA Regional Water Quality Control Board	81 Higuera St., Suite 200	San Luis Obispo	CA	93401
CA State Coastal Conservancy	1330 Broadway, 11th Floor	Oakland	CA	94612-2530
CA State Historic Preservation Office	P.O. Box 942896	Sacramento	CA	94296-0001
CA Trade & Commerce Agency	801 "K" Street, Suite 1600	Sacramento	CA	95814

SCH NO. 2003 111 016

NOTICE OF PREPARATION

To: **From:** California Department of Transportation
District 5,
50 Higuera St
San Luis Obispo, CA 93401

Subject: **Notice of Preparation of a Draft Environmental Impact Report**
[Reference: Division 13, Public Resources Code, Section 21080.4 (State)]

This is to inform you that the California Department of Transportation (Caltrans), in cooperation with the Federal Highway Administration (FHWA), will be the Lead Agency and will prepare an EIR for the project described herein and depicted on the attached maps. We request your participation as a responsible agency in preparation and review of this document.

We need to know the applicable permit and environmental review requirements of your agency and the scope and content of the environmental information which is germane to your agency's statutory responsibilities in connection with the proposed project. Your agency will need to use the EIR prepared by our agency when considering your permit or other approval for the project.

Due to the time limits mandated by State law, **your response must be sent** at the earliest possible date but **not later than 30 days after receipt of this notice**. A Scoping/Public Information Meeting is being held in Big Sur during the evening of November 19, 2003, as detailed in the attached invitation. We invite you to attend to learn more about the project.

Project Title: Improvements to Highway 1 at Pitkins Curve/Rainrocks

Project Location: The project is located 0.3 mile north of Limekiln Creek on Highway 1 along the Big Sur coast, between kilopost 34.2 and 34.8 (postmile 21.3 and 21.6), in Monterey County, California. It encompasses two areas of roadway instability. The southernmost, commonly known as "Rainrocks", is subject to regular occurrences of severe rockfall. To the north, the roadway at "Pitkins Curve", is closed for extended periods as a result of landslides.

Project Description: Caltrans and FHWA have allocated funds to select a project which would increase roadway reliability and safety while decreasing maintenance costs at the Pitkins Curve/Rainrocks location. Caltrans has begun environmental and engineering studies and is in the early stages of developing alternative solutions, evaluating potential environmental impacts and preparing an Environmental Impact Report to meet CEQA requirements for this project.

Alternative solutions currently under consideration include:

1. Continued management and maintenance of the project location (No-Build),
2. Construction of a retaining wall at Pitkins Curve combined with construction of a rockshed at Rainrocks.
3. Construction of a bridge at Pitkins Curve combined with construction of a rockshed at Rainrocks.

Environmental factors potentially affected include:

1. Aesthetics
2. Terrestrial and marine biological resources
3. Geology and soils
4. Transportation and traffic movement during construction

Send your response and direct any comments regarding this project to Wendy Waldron, Environmental Project Manager, at the address shown above, or call (805) 549-3118. Please include the name of the person in your agency we should use as our main contact.

Date: October 22, 2003

Signature:

Wendy Waldron
Senior Environmental Branch Chief

Attachments: Project Map
USGS Quadrangle
Scoping/Informational Meeting invitation



Public Notice



**ANNOUNCEMENT of PUBLIC SCOPING MEETING/OPEN HOUSE
For Improvements to Highway 1 at Pitkins Curve/Rainrocks,
near Limekiln Creek, in Monterey County.**



WHERE AND WHEN?

- Date: Wednesday, November 19, 2003
- Time: 5:00 p.m. to 8:00 p.m.
- Place: Big Sur Lodge
47225 Highway One
Big Sur, CA 93920

WHAT'S BEING PLANNED

The California Department of Transportation (Caltrans) and the Federal Highway Administration (FHWA) have allocated funds to identify, study and select a project which would increase roadway reliability and safety while decreasing maintenance costs at a combined area of landslides (known as Pitkins Curve) and rockfall (known as Rainrocks-north chute). The project is located 0.3 mile north of the Limekiln Creek Bridge along the Big Sur coast, Highway 1 in Monterey County.

WHY THIS AD

Caltrans has begun environmental and engineering studies and is in the early stages of preparing an Initial Study/Environmental Assessment to meet CEQA/NEPA requirements for this project.

This ad is an announcement of a Public Scoping/Information Meeting. The meeting is being held to provide information and seek response from agencies, interested parties and the community regarding the project environmental process and the scope of the studies being undertaken.

WHERE DO YOU COME IN?

The meeting will provide the opportunity to learn about and discuss the project.

- **Open House:** From 5:00 to 6:00 p.m., project information will be displayed and Caltrans staff will be available to discuss the project in a small group or one-on-one format.
- **Presentation/Question and Answer:** At 6:00 p.m. Caltrans staff will gather the audience, give a brief presentation, invite discussion and answer questions. The Open House format will resume following the question and answer period.

CONTACT

For more information about this study, please contact Dave Rasmussen, Project Manager, at (805) 549-3677 or Wendy Waldron, Project Environmental Planner, at (805) 549-3118. For all other State Highway matters, please contact District 05 Public Affairs at (805) 549-3318.

SPECIAL ACCOMMODATIONS

Individuals who require documents in alternative formats are requested to contact the District 5 Public Affairs Office at (805) 549-3318. Telecommunications Devices for the deaf (TDD) users may contact the California Relay Service TDD line at 1-800-735-2929 or Voice Line at 1-800-735-2922.

STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY

GRAY DAVIS, Governor

DEPARTMENT OF TRANSPORTATION

50 HIGUERA STREET
 SAN LUIS OBISPO, CA 93401-5415
 TELEPHONE (805) 549-3111
 TDD (805) 549-3259
<http://www.dot.ca.gov/dist05>



*Flex your power!
 Be energy efficient!*

October 22, 2003

To: All interested parties,

Subject: Announcement of a Scoping Meeting/Open House for improvements to Highway 1 at Pitkins Curve/Rainrocks, near Limekiln Creek, Monterey County, California

Arrangements have been made for a Scoping meeting to provide information and seek response from agencies, interested parties and the community regarding the environmental process and scope of studies being undertaken for proposed improvements to Highway 1 at Pitkins Curve/Rainrocks, in Monterey County. The meeting will be held:

Date: Wednesday, November 19, 2003

Time: 5:00 to 8:00 p.m.

- **Open House: 5:00 to 6:00 p.m.:** Project information will be displayed and Caltrans staff will be available to discuss the project.
- **Presentation/Question and Answer: 6:00 p.m.:** Caltrans staff will gather the audience, give a brief presentation, invite discussion and answer questions.
- **Open House format will resume at 7:00 p.m.**

Place: Big Sur Lodge, Pfeiffer Big Sur State Park
 47225 Highway One,
 Big Sur, CA 93922.

Caltrans and the Federal Highway Administration (FHWA) have allocated funds to identify, study and select a project, which would increase roadway reliability and safety while decreasing maintenance costs at the Pitkins Curve/Rainrocks-north chute location; a section of roadway that experiences severe instability and periodic failure. Caltrans has begun environmental and engineering studies and is in the early stages of developing alternative solutions, evaluating potential environmental impacts and preparing an Environmental Impact Report/ Finding of No Significant Impact to meet CEQA/NEPA requirements for this project.

For more information about this study, please contact Dave Rasmussen, Project Manager, at (805) 549-3677 or Wendy Waldron, Project Environmental Planner, at (805) 549-3118.

Attach: Project Location and Vicinity maps

"Caltrans improves mobility across California"



Appendix E United States Fish and Wildlife Service Species List

**LISTED, PROPOSED, AND CANDIDATE SPECIES
WHICH MAY OCCUR IN THE LOPEZ POINT 7.5 MINUTE QUADRANGLE,
MONTEREY COUNTY, CALIFORNIA**

Mammals

Southern sea otter	<i>Enhydra lutris nereis</i>	T
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Birds

Bald eagle	<i>Haliaeetus leucocephalus</i>	PD, T
Brown pelican	<i>Pelecanus occidentalis</i>	E
Marbled murrelet	<i>Brachyramphus marmoratus</i>	T
California condor	<i>Gymnogyps californianus</i>	E
Western snowy plover	<i>Charadrius alexandrinus nivosus</i>	T, CH

Amphibians

California red-legged frog	<i>Rana aurora draytonii</i>	T, CH
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Fish

Tidewater goby	<i>Eucyclogobius newberryi</i>	E
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Invertebrates

Smith's blue butterfly	<i>Euphilotes enoptes smithi</i>	E
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Plants

Beach layia	<i>Layia carnosa</i>	E
Coastal dunes milk-vetch	<i>Astragalus tener</i> var. <i>titi</i>	E
Tidestrom's lupine	<i>Lupinus tidestromii</i>	E
Yadon's piperia	<i>Piperia yadonii</i>	E
Sand gilia	<i>Gilia tenuiflora</i> ssp. <i>arenaria</i>	E
Monterey spineflower	<i>Chorizanthe pungens</i> var. <i>pungens</i>	T, PCH
Hickman's potentilla	<i>Potentilla hickmanii</i>	E

Key:

E - Endangered I - Threatened CH - Critical habitat

PD - Proposed for delisting

PCH - Critical habitat which has been proposed

C - Candidate species for which the Fish and Wildlife Service has on file sufficient information on the biological vulnerability and threats to support proposals to list as endangered or threatened.



Appendix F List of Technical Studies that are Bound Separately

Copies of the following technical studies can be requested from:

Caltrans District 5
50 Higuera Street
San Luis Obispo CA 93401
wendy_waldron@dot.ca.gov

Air Quality Report
Noise Study Report
Water Quality Report
Natural Environment Study
Shoreline Biological Characterization
Historical Property Survey Report
• Archaeological Survey Report³²

Hazardous Waste Reports
• Initial Site Assessment

Scenic Resource Evaluation/Visual Assessment
Initial Paleontology Study
Preliminary Geotechnical Report
Project Study Report

³² The Archaeological Survey Report contains confidential information and cannot be made available. A summary of the study is included in the Historic Property Survey Report, which can be distributed upon request.



Appendix G Comments and Responses

G.1. California Coastal Commission

STATE OF CALIFORNIA – THE RESOURCES AGENCY

ARNOLD SCHWARZENEGGER, Governor

CALIFORNIA COASTAL COMMISSION

CENTRAL COAST DISTRICT OFFICE
725 FRONT STREET, SUITE 300
SANTA CRUZ, CA 95060
PHONE: (831) 427-4863
FAX: (831) 427-4877



April 7, 2006

Ms. Wendy Waldron
California Department of Transportation
District 5, Environmental Branch
50 Higuera Street
San Luis Obispo, CA 93401

Subject: **Draft Environmental Impact Report for Highway 1 Improvements at Pitkins Curve and Rain Rocks**; State Highway Route 1, Big Sur Coast area, 0.5 mile north of Limekiln Creek, Monterey County (SCH# 2003-111-016)

Dear Ms. Waldron:

This comment letter will confirm and amplify our verbal observations at the project hearings in Big Sur (March 21, 2006) and Cambria (March 22, 2006). The overall impression, we stated, is that the Draft Environmental Impact Report (DEIR) for the proposed improvements at Pitkins Curve is a thorough and thoughtfully prepared document. In addition to addressing the CEQA requirements, it will serve as a sound foundation for the necessary coastal development permit (CDP) application—assuming the remaining public access issue, explained below, is resolved.

Project comments, overall. We are encouraged that the two developed project alternatives represent implementation of the management strategies developed through the Coast Highway Management Plan (CHMP) process. Many of the affected stakeholders for this project assisted with the creation of this updated management plan for the Big Sur Coast National Scenic Byway/All-American Road, and have specifically ratified the CHMP. Signatory agencies affected by this project include Caltrans, Coastal Commission, State Parks, NOAA-Monterey Bay National Marine Sanctuary, Monterey County, and others¹.

With respect to the LCP, and Coastal Act public access and recreation policies, our review of the DEIR leads us to focus on the following issues:

Marine habitat protection. Protecting the quality of Big Sur's marine resources is a pivotal issue. All tidelands adjacent to the project, at the toe of the slope below the Highway, lie within the waters of the Monterey Bay National Marine Sanctuary, as well as the State-designated California Sea Otter Refuge. The LCP's Big Sur Coast LUP marine habitat protection policies state that alteration of the shoreline "...shall not be permitted except for work essential for the maintenance of Highway 1."² Similarly, the adopted regulations for the National Marine

¹ See, in particular, the CHMP *Corridor Management Plan*, 2004.

² Big Sur Coast Land Use Plan, Section 3.3.3.B.2.

Agency_CCC final.doc

Wendy Waldron
California Department of Transportation
April 7, 2006
Page 2

Sanctuary prohibit any alteration of the seabed, as well as the disposal of any material that will harm Sanctuary resources or qualities³.

The disposal of landslide materials is a basic need for keeping the highway in operation. At one time, landslide disposal may have meant simply pushing it over the side. But, this has the potential to impact marine resources along the shoreline. The impacts of direct burial, or indirect impacts of sediment smothering are the major concerns. Thus the issue of disposing of landslide materials that fall onto the roadway, without harming marine resources, became the central challenge of the CHMP.

This difficult question was ultimately resolved through the ratified CHMP management strategies. Some landslide-related examples include reuse and recycling of landslide materials; dewatering and other measures to increase stability, including manipulation of the driving and resisting forces acting on the landslide; establishment of pre-approved, off-highway disposal sites⁴; pursuing further investigation of potential locations for beach replenishment or slope detention; and realignment or structural solutions that avoid the problem by separating the highway from the instability.

Each of these strategies will help protect marine resources. The *avoidance* strategy is particularly appropriate to the Pitkins Curve-Rain Rocks site, and is well-exemplified by the design of Project Alternative #1. This Alternative realigns the highway onto a new bridge that will soar over the landslide, and then continue into a rockshed structure that will allow the natural rock fall from the cliff above to slide harmlessly over the roadway. Disposal impacts will be nearly eliminated, especially when compared to the No Project Alternative. The highway will, in effect, step aside from the natural geologic processes.

The DEIR prescribes a range of mitigation measures that apply to each of the built alternatives. These include, but are not limited to, an on-site biological/environmental monitor, Resident Engineer authority to halt any activity that would exceed anticipated impact thresholds, accidental spill avoidance measures, and detailed water quality best management practices to be included in the Storm Water Pollution Prevention Plan. Therefore, we believe Project Alternative #1, coupled with the recommend mitigation measures, will best protect adjacent marine habitats from man-made impacts.

Geologic hazard avoidance. Studies undertaken by the USGS and California Geological Survey, in concert with the CHMP, demonstrated that much of the southern Big Sur Coast comprises active and dormant landslides. Landslides at this scale are a major natural phenomenon, a primary scenery-maker. The Pitkin's Curve landslide is one of the more active examples.

At present, the segment of State Highway Route 1 at Pitkins Curve and below the Rain Rocks monolith is exposed to fairly dramatic and frequent episodes of geologic instability. This

³ Title 15, Code of Federal Regulations, Section 944.4.

⁴ The Treebones landslide disposal site, approved by the Commission as CDP 3-05-001, is an example.

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California Department of Transportation
April 7, 2006
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produces hazards in the form of landslides, rock fall, and embankment failure. These impacts are most pronounced during the winter storm season. This year, 2006, is no exception: at this writing, unseasonably late storms have once again closed the highway, at the project location.

Furthermore, shoreline erosion represents an additional potential category of hazard to which the highway is exposed. The position of the shoreline on the beach that forms at the toe of the Pitkins Curve landslide represents a natural equilibrium between sediment input and shoreline erosion. If sediment is withheld, but wave action continues, it stands to reason that the position of the shoreline will shift landward. This in turn will steepen the slope below the highway, increasing the likelihood of further slope failures and collapse of the roadway. Thus, removal of natural landslide materials from the area, or other interference with the downslope flow of replenishing sediments, will tend to cumulatively contribute to slope failure.

At present, the downslope movement of rock and sediments is halted by the highway surface, or the adjacent catch basin. Caltrans, in order to maintain and/or reopen the road, must remove these materials from the highway and relocate them in a manner that will not be deemed harmful to Sanctuary resources. The relocation must be done with care. This takes time. Even if placed locally on the seaward slope of the highway (slope detention – a technique established in cooperation with the National Marine Sanctuary), the sediments will probably not reach the shoreline in time to offset the current season's rate of shoreline erosion.

Consequently, of the three alternatives analyzed in the DEIR, the No Project Alternative will result in the greatest degree of interference with the natural movement of landslide materials to the shoreline. The No Project Alternative, far from having no impact, is the alternative most likely to trigger shoreline erosion episodes – as well as exposure to the more direct geologic hazards. On the other hand, Alternative #1 best addresses the need to maintain stability, without interfering with natural sediment replenishment to the shoreline.

Scenic and visual resources. This discussion can be divided into two considerations: views *of* the new bridge, and potentially, rockshed; and views *from* the roadway, inclusive of the new structures.

The DEIR correctly anticipates that the appearance of the proposed bridge and rockshed will be of critical concern. The new structures will be seen in the context of the extraordinary natural scenic landscape at the northern edge of Limekiln State Park. Additionally, they are bound to be compared to existing historic highway structures along the Big Sur Coast. These include the iconic concrete arch bridges built in the 1930's, as well as the stone walls and other roadside masonry that blend so well with the surrounding natural landforms.

The LCP's Big Sur Coast Land Use Plan policies fully recognize the area's significance as a highly scenic area within the meaning of Coastal Act Section 30251. Highway 1 is defined as the primary vantage point for the LUP's Critical Viewshed Protection policy. While roadside safety elements are essential, high berms, solid barriers and roadside structures (e.g., guardrails) have the potential to interfere with or detract from the line of sight from the roadway, depending on

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design. Therefore, a special effort will be required to insure that the necessary roadside components will not impair public enjoyment of Big Sur's spectacular landscapes and seascapes.

Accordingly, we applaud the suite of proposed mitigation measures ("A" thru "W" on pp. 54-57 of the DEIR). These measures reflect the ideas offered by the CHMP⁵, and include the appointment of a stakeholder-based Aesthetic Design Advisory Committee (ADAC). The ADAC will help protect Big Sur's scenic resources and the experience of driving the Scenic Byway, by generating specific recommendations concerning aesthetic treatments for the new structures.

Public Access and Recreation. The analysis of this issue can be divided into several topics, as follows:

Mobility to and along the coast. State Highway Route 1 provides the principal means by which the public reaches all the other coastal access features of the Big Sur Coast: the improved vista points, the informal pullouts, nine different State Park System units, the coastal unit of Los Padres National Forest, the trailheads, the campgrounds, inns, restaurants and many other visitor amenities. It is the vantage point from which the LCP-designated Critical Viewshed is enjoyed, in addition to the innumerable rocks and islets of the California Coastal National Monument and the even broader views encompassed by the unmarred horizons of the Monterey Bay National Marine Sanctuary.

As well, the recreational driving experience is of paramount importance: the Big Sur Coast Highway is one of the State's premier visitor attractions. It is a designated State Scenic Highway, and National Scenic Byway/All-American Road. As such, it is a destination in itself, not just a means of reaching a destination. Therefore, when the road is closed, public access to these enroute features, and the Scenic Byway experience, is impaired or denied. Thus, keeping the road open and available is a significant public access and recreation issue.

The proposed project will improve the stability, safety, and reliability of the roadway. It will do this by separating it from the moving landscape at Pitkins Curve. Accordingly, the risk of roadway failure, and consequently the frequency and duration of closures, will be reduced. From a strategic perspective, this expected project outcome is clearly supportive of public access and recreation, to and along the entire Big Sur Coast region.

The regional, state and national significance of the Big Sur Coast Highway underscores the significance of storm damage closures. In selecting a project alternative, we recommend that a "strategic" public access perspective be used as a criterion. Specifically, which alternative will perform best at keeping the highway open and available over the long run? Our opinion is that the No Project Alternative would have the greatest adverse impact on public access and recreation, since it would yield the most "road closed" days per year. Conversely, Alternative #1, the new bridge with rockshed, would best protect opportunities for the motoring public to travel to and along the coast.

⁵ See, for example, CHMP *Guidelines for Corridor Aesthetics*, July 2003.

Wendy Waldron
 California Department of Transportation
 April 7, 2006
 Page 5

Public Access—nonmotorized transportation alternatives. Bicyclists and pedestrians also use the Highway 1 corridor, and it is Caltrans' policy to accommodate these alternative transportation modes in project design. Each of the two developed alternatives for the Pitkins Curve project will provide, at minimum, paved shoulders 4 ft. in width. The Big Sur Coast Highway is part of the Pacific Coast Bike Route--albeit a difficult and challenging segment, most suitable for the particularly dedicated and experienced cyclist. The provision of 4 ft. paved shoulders within project limits will support such bicycle use.

Applicable Coastal Act policies call for maximizing public coastal access opportunities⁶; providing access along the coast in new projects⁷; maintenance and enhancement of public access by providing for nonautomobile circulation within projects⁸; and minimizing adverse impacts by minimizing energy consumption and vehicle miles traveled⁹. The Big Sur Coast LUP specifies a standard of 12 ft. for motor vehicle lane width, with 2-4 ft. shoulders where constraints allow¹⁰. We recommend that performance for non-motorized transportation be used as a project selection criterion, consistent with these policies.

With shoulder widths approaching zero at Rain Rocks, the present situation is deficient and unsatisfactory. Therefore, the document should call out the No Project Alternative as having a negative impact not only with respect to public recreational resources, but also air quality and energy consumption (insofar as cumulatively discouraging bicycle use). In contrast, Alternative #1, in addition to providing adequate paved shoulders, would also incorporate a rockshed at the aptly-named Rain Rocks headland. This new structure would reduce exposure to rockfall injury, and makes it the clearly preferred option for non-motorized (bicycle) travel.

Public Access—continuity of the Coastal Trail. Prior to construction of Highway 1 along the Big Sur Coast, a well-loved pack trail, shown as the Coast Trail on older USGS quadrangles, extended continuously along the Big Sur Coast. Disjunct segments of this trail still exist, but are known by their contemporary names such as the Girard Trail, Kirk Creek Trail, and Buckeye Trail. It is proposed that these segments be reconnected as part of the California Coastal Trail (CCT).

The California Coastal Conservancy's 2003 report to the Legislature, *Completing the California Coastal Trail*, emphasizes that the CCT is foremost a *hiking* trail. The report also includes a chapter concerning alignment principles. One of the five key principles is Continuity [for the CCT]. At the project site, the highway itself provides CCT continuity. That is, where there is no usable shoulder at Rain Rocks, hikers must share the roadway with vehicle traffic. The experience is neither safe nor enjoyable. And, through the Pitkins Curve landslide, lateral access is possible only by walking on the rough and broken, frequently reconfigured shoulder.

⁶ PRC Section 30210.

⁷ PRC Section 30212.

⁸ PRC Section 30252.

⁹ PRC Section 30253(4).

¹⁰ Monterey County LCP: Big Sur Coast Land Use Plan, Section 4.1.3.A.1.

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Project Alternatives #1 and #2 would both provide paved 4 ft. shoulders, which pedestrians can use. But, this close exposure to motor traffic will still be a deficient condition for the CCT; and the southerly portion of the Rain Rocks “no-shoulder bottleneck” outside the project limits, would remain. Therefore, none of the Alternatives are satisfactory for hiking trail purposes.

Public Access—relationship to character of Highway 1. An important Coastal Act issue raised by the design of this project is that it does *not* provide for a separated pedestrian accessway on or under the proposed bridge and rockshed. This enhancement may be necessary, for the reasons elaborated below, but would add to the bulk and expense of the structures. Because such a feature is not part of project design, the DEIR does not evaluate these potential impacts, nor does it identify an alternative for providing a CCT link through or around the area impacted by the project.

Since there is not yet a separate State Highway System standard for *hiking trails*, it would be fair to assume that the general Caltrans standards for pedestrian walkways on bridges would apply. These standards provide for wheelchair accessibility, consistent with ADA requirements. Therefore, if added at surface level, a separated pedestrian accessway meeting Caltrans standards would increase the bridge deck width by about 5 ft. For any extra width, additional excavation and disposal needs would potentially be an issue. The extra width would also appear to make Alternative #1 less feasible, because of the need to provide a walkway within the rockshed structure. And, any extra width to the bridge deck would detract from the rural, scenic character of Highway 1, the protection of which is required by Coastal Act Section 30254 and the LCP’s Big Sur Coast Land Use Plan¹¹.

Nonetheless, a separated public accessway may be necessary if no other alternative is available for coastwise hikers. Based on recent requirements imposed by the Coastal Commission for redesign of the Noyo River and Ten Mile River bridges on Highway 1 in Mendocino County, it would be reasonable to expect that such redesign would be required in this case as well--unless an off-highway alternative can be assured¹².

Is there a feasible alternative? Commission staff’s preliminary evaluation is that a hiking trail that bypasses Rain Rocks and Pitkins Curve is feasible. This can be done by rehabilitating the upper part of the defunct Girard Trail¹³ within Los Padres National Forest and establishing a 0.3 mile connection between two existing trails within Limekiln State Park. If this trail can be

¹¹ A design variation that would partially address these concerns, would be to suspend the hypothetical walkway beneath the inland lane of the bridge deck (so as to avoid spoiling the graceful arched appearance of the structure). This “stacked” configuration is used, for example, where the Blue Ridge Parkway and Appalachian Trail cross the Interstate Highway System in Virginia. Within the rockshed, a walkway gallery could be stacked on the downhill side, under seaward lane of the motor traffic deck, without increasing the overall width of the new structure.

¹² Policy 6.1.5.C.2 of the Big Sur Coast LUP anticipates this problem. It calls for trail alignment *away* from roadways, stating that use of public road shoulders should be limited “...to bridge gaps where a trail elsewhere is not feasible...” and describes the preferred route of the coastal trail southwards from Pfeiffer-Big Sur State Park as being seaward of the Coast Ridge Road on U.S. Forest Service and State Park lands. Therefore, the first step is to determine feasibility of the off-highway bypass.

¹³ For location and alignment, see “Girard Trail” on the Lopez Point 7.5’ USGS quadrangle.

Wendy Waldron
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extended around the adjacent Big Slide as well, with the consent of the Hermitage, then an exceptional 4.7 mile¹⁴ segment of the CCT will become available to the People of California. (Commission staff will provide a detailed alignment analysis by separate memorandum.)

Commission staff believes that provision of this bypass alignment will satisfy the California Coastal Act requirement that public access opportunities to and along the coast be maximized; and, that appropriate public access facilities be provided in new development projects. It would also be consistent with the direction given by the Legislature, regarding the goal of completing the California Coastal Trail (CCT)¹⁵.

Recommendation. Commission staff requests that Caltrans assist in identifying and implementing a hiking trail alignment that bypasses Rain Rocks and Pitkins Curve. This will require a cooperative partnership with State Parks, and potentially the State Coastal Conservancy, US Forest Service and the New Camadoli Hermitage.

Supplemental EIR may be needed. In event that the above-identified inland bypass CCT segment can not be completed, Commission staff strongly recommends a supplemental to this EIR. The supplement would be needed to evaluate the impacts of project Alternatives #1 and #2 with the addition of a separated pedestrian accessway, and to identify additional measures for avoiding or mitigating the additional impacts that would result.

Suggested corrections and clarifications. On DEIR p. 42, please note that the Monterey County Local Coastal Program (LCP) was certified in 1986. On p. 44, Table 5, the evaluation of Coastal Act consistency is appreciated, but incomplete. For example, the Coastal Act Section 30212 requirement to provide public access along the coast in new development projects is omitted; and, the discussion column does not make the case that public access and recreational opportunities will be *maximized*¹⁶ consistent with Section 30210. While DEIR Table 5 may be helpful for understanding the context of the preceding Table 4 (Consistency with Monterey County Local Coastal Program), we fear the reader would have the impression that all Coastal Act issues have been resolved. As noted previously, this is not the case.

Future regulatory process. Either of the build alternatives will require a coastal development permit (CDP) from to the County of Monterey. The County's CDP action will be appealable to the California Coastal Commission¹⁷. In such event, however, the standard of review will remain the same: the certified Monterey County Local Coastal Program (LCP), including the policies of

¹⁴ Calculation: Kirk Creek/Vicente Flat Trail (lower segment; existing USFS), approx. 2 miles; Girard Trail (rehabilitation, USFS segment), 0.8 mile; Girard/Hare Creek Trail (existing DPR), 0.2 miles; Limekilns Trail (existing DPR), 0.3 mile; Rain Rocks bypass connector (new DPR), 0.3 mile; West Fork fire trail (existing DPR), 0.1 mile; connector to Highway 1 at Point 16 (via West Fork fire trail-Hermitage entrance road), approx. 1 mile. Total=4.7 miles.

¹⁵ Senate Bill 908 of 2001.

¹⁶ *Italics* added for emphasis.

¹⁷ The project is appealable because it comprises a major public works, and also because it will in large measure lie seaward of the current alignment of State Highway Route 1.

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Page 8

the Big Sur Coast Land Use Plan (LUP); and, the public access and recreation policies of the California Coastal Act.

Depending on what federal agency actions or activities are involved (e.g., a NOAA or Corps of Engineers permit approval), the project may also be subject to the federal consistency review process under the Coastal Zone Management Act of 1972. We strongly recommend further interagency consultation to make this determination, following selection of the project alternative and determination of disposal site for excavated materials.

Conclusion. We look forward to the process of selecting a project alternative, and then refining the project design. In this connection, we appreciate the invitation to participate with the Project Development Team and as a member of the ADAC. Most critically, we must also resolve the issue of providing an appropriate Coastal Trail link through Limekiln State Park. We are confident that an off-highway solution can be identified, and hereby offer whatever services that we can to achieve this end. Please do not hesitate to call me at (831) 427-4863.

Sincerely,

Lee Otter
Transportation & Public Access Liaison

cc:
Cheryl Willis, District Director (Acting), Caltrans D5
Aileen Loe
Sheila Mone
Gregg Albright
DPR
MBNMS
Coastal Conservancy (attn: Steve Horn)
USFS (John Bradford, District Ranger)
Monterey County Planning & Bldg. Inspection Dept.

Response to California Coastal Commission

Page 42: Change was made to indicate that the Monterey County Local Coastal Program was certified in 1986.

Page 44: Refer to Section 2.1.1.3. Table 5 was expanded to address all relevant Coastal Act Policies.

The Coastal Commission has indicated that the local coastal permit would include conditions to support implementation of the California Coastal Trail through the project area. Caltrans' policy for non-motorized transportation directs that highway facilities safely support pedestrian, bicycle and accessibility for the disabled. Traditionally, wide shoulders next to the travel way have served this purpose. Caltrans' role and responsibility for developing, constructing and maintaining any portion of the California Coastal Trail separated trail facility, on or off the highway, has not been established. In the interest of supporting the California Coastal Trail, Caltrans would consider providing direct support to the California Coastal Conservancy for their implementation of a separated coastal trail that bypasses the Rain Rocks promontory. Ultimate determination of an acceptable condition to address Coastal Commission comments regarding the California Coastal Trail would be made during development of the local coastal permit with Monterey County.

G.2. California Department of Fish and Game



State of California - The Resources Agency
DEPARTMENT OF FISH AND GAME
<http://www.dfg.ca.gov>
POST OFFICE BOX 47
YOUNTVILLE, CALIFORNIA 94599
(707) 944-5500

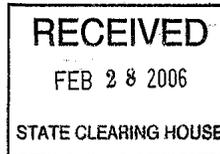
ARNOLD SCHWARZENEGGER, Governor



February 23, 2006

Ms. Wendy Waldron
California Department of Transportation
50 Higuera Street
San Luis Obispo, CA 93401

*Clear
2/3/06
e*



Dear Ms. Waldron:

Pitkins Curve
Big Sur, Monterey County
SCH 2003111016

The Department of Fish and Game (DFG) has reviewed the document for the subject project. Please be advised this project may result in changes to fish and wildlife resources as described in the California Code of Regulations, Title 14, Section 753.5(d)(1)(A)-(G). Therefore, a de minimis determination is not appropriate, and an environmental filing fee as required under Fish and Game Code Section 711.4(d) should be paid to the Monterey County Clerk on or before filing of the Notice of Determination for this project.

Please note that the above comment is only in regard to the need to pay the environmental filing fee and is not a comment by DFG on the significance of project impacts or any proposed mitigation measures.

If you have any questions, please contact Mr. Carl Wilcox, Habitat Conservation Manager, at (707) 944-5525.

Sincerely,

Robert W. Floerke
Regional Manager
Central Coast Region

cc: State Clearinghouse

Conserving California's Wildlife Since 1870



Response to California Department of Fish and Game

Caltrans will provide the environmental filing fee to the State Clearinghouse for transfer to your department, upon filing the Notice of Determination for this project.

G.3. Monterey Bay Unified Air Pollution Control District



MONTEREY BAY
Unified Air Pollution Control District
serving Monterey, San Benito, and Santa Cruz counties

AIR POLLUTION CONTROL OFFICER
Douglas Quetin

24580 Silver Cloud Court • Monterey, California 93940 • 831/647-9411 • FAX 831/647-8501

DISTRICT BOARD MEMBERS

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Santa Cruz County

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Salinas

Lou Calcagno
Monterey County

Butch Lindley
Monterey County

Ila Mettee-
McCutcheon
Marina

John Myers
King City

Dennis Norton
Capitola

Ellen Pirie
Santa Cruz County

Jerry Smith
Monterey County

April 6, 2006

Ms. Wendy Waldron, Project Environmental Planner
California Department of Transportation
50 Higuera Street
San Luis Obispo, California 93401

SUBJECT: HIGHWAY 1 IMPROVEMENTS AT PITKINS CURVE / RAIN ROCKS

Dear Ms. Waldron:

Staff reviewed the Draft EIR and submits the following comments for your consideration:

Excavation / Grading, and Mitigation Measures. Page 109.

Given the description of the amount of excavation, grading and stockpiling, the District suggests the following mitigation measures to decrease the amount of fugitive dust generated by the project:

- ◆ Limit grading to 8.1 acres per day, and grading and excavation to 2.2 acres per day.
- ◆ Water graded / excavated areas at least twice daily. Frequency should be based on the type of operations, soil and wind exposure.
- ◆ Prohibit all grading activities during periods of high wind (over 15 mph)
- ◆ Apply chemical soil stabilizers on inactive construction areas (disturbed lands within construction projects that are unused for at least four consecutive days)
- ◆ Apply non-toxic binders (e.g., latex acrylic copolymer) to exposed areas after cut and fill operations, and hydro-seed area.
- ◆ Haul trucks shall maintain at least 2'0" of freeboard.
- ◆ Cover all trucks hauling dirt, sand, or loose materials.
- ◆ Plant vegetative ground cover in disturbed areas as soon as possible.
- ◆ Cover inactive storage piles.
- ◆ Install wheel washers at the entrance to construction sites for all exiting trucks.

Haul Trucks [and Heavy Duty Construction Equipment]. Page 109.

Given the number of haul trucks for Alternatives 1 and 2 (850 and 550, respectively), please document the fleet mix, the schedule of haul trips during the project, and any “atypical construction equipment” to be used on the project, so the District can determine if there might be emissions over thresholds of significance. (“Typical construction equipment”, which has been accommodated in the emission inventories of State- and federally-required air plans and therefore would not have a significant impact on the attainment and maintenance of ozone ambient air quality standards, include dump trucks, scrapers, bulldozers, compactors and front-end loaders.) An URBEMIS output would provide the requested information, and should be included in the Final EIR. (For NO_x or VOC, the threshold is 137 lbs/day; for PM₁₀, it is 82 lbs/day; for SO_x, it is 150 lbs/day.) The District’s CEQA Air Quality Guidelines may be found on the District’s website at www.mbuapcd.org.

Thank you for the opportunity to review the document.

Yours truly,

Jean Getchell
Supervising Planner
Planning and Air Monitoring Division



MONTEREY BAY
Unified Air Pollution Control District
serving Monterey, San Benito, and Santa Cruz counties

AIR POLLUTION CONTROL OFFICER
Douglas Quetin

24580 Silver Cloud Court • Monterey, California 93940 • 831/647-9411 • FAX 831/647-8501

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Santa Cruz
County

Jerry Smith
Monterey County

April 6, 2006

Ms. Wendy Waldron, Project Environmental Planner
California Department of Transportation
50 Higuera Street
San Luis Obispo, California 93401

Sent electronically to:
wendy_waldron@dot.ca.gov

SUBJECT: HIGHWAY 1 IMPROVEMENTS AT PITKINS CURVE / RAIN ROCKS
(Air Quality Report: Air Quality, Noise, and Paleontology Studies)

Dear Ms. Waldron:

Staff reviewed the Air Quality section in "Air Quality, Noise, and Paleontology Studies" and submits the following comments for your consideration:

Temporary Construction Impacts. Page 2.

As specified in the first comment letter sent to you, the NOx and ROG emissions of typical construction equipment that is used in projects that have been included in the financially constrained Monterey County Regional Transportation Plan, have been accommodated in the emission inventories of State- and federally-required air plans. Accordingly, those emissions would not have a significant impact on the attainment and maintenance of ozone ambient air quality standards. The unanswered question is whether the Pitkins Curve / Rain Rocks project would include construction equipment beyond what is considered "typical" (typical equipment including dump trucks, scrapers, bulldozers, compactors and front-end loaders). To answer that question, the District would like to know the model type and number of other equipment that would be used in the project.

PM₁₀ Thresholds / Speculating on PM₁₀ Emissions from Equipment. Pages 2-3.

The 82 lbs/day threshold for PM₁₀ that is associated with grading 8.1 acres per day or excavating 2.2 acres per day applies to emissions of fugitive dust. One cannot assume a correlation between emissions of fugitive dust and the exhaust emissions of PM₁₀ from the construction equipment used in the project. Accordingly, the assumption is not sound and the conclusion that construction equipment emissions of PM₁₀ will be within thresholds is not supported by evidence. Please see my first comment letter and the request for an URBEMIS calculation of construction emissions.

This letter supplements the April 6 comment letter sent to you regarding the Draft EIR.

Thank you for the opportunity to review the document.

Yours truly,

Jean Getchell
Supervising Planner
Planning and Air Monitoring Division

Response to Monterey Bay Unified Air Pollution Control District, Letters 1 and 2
Excavation/Grading and Mitigation Measures, page 109: All of the measures listed to decrease fugitive dust are included in the Air Quality Report and provided to the Resident Engineer for application during construction.

Haul Trucks, Page 109 and Temporary Construction Impacts, page 2: The exact fleet mix will not be known until a contractor is hired to construct this project, however, the use of “atypical construction equipment” is not anticipated.

PM₁₀ Thresholds, pages 2-3: The project air quality analysis used the *CEQA Air Quality Guidelines of Monterey Bay Unified Air Pollution Control District*, revised June 2004 to evaluate project impacts. The total project area to be graded is estimated to be 0.7 acre, which is below the daily excavation threshold and meets the screening procedure established in the guidelines. The following worksheet shows that no emissions over the Monterey Bay Unified Air Pollution Control District’s thresholds of significance were found.

Pitkin's Curve (05-0E9600)

TOTAL EXPECTED CONSTRUCTION EMISSIONS

(Tons/Quarter)

	ROG	NO _x	PM ₁₀	# Quarters
Vehicles	0.10	1.10	0.10	8
Grading	0.00	0.00	0.08	1.5
Asphalt	0.001	0.00	0.00	1
TOTAL	0.10	1.10	0.18	8
MBUAPCD Threshold	NA	NA	2.5 tons	NA

Grading (Acres)	x4 (1) (Acres)	/ 100 working days (Acres per day)	x 32 lbs. PM10/ acre/day (pounds/day)	Quarterly (2) (tons PM10)
2	8	0.08	2.56	0.08
MBUAPCD Threshold	NA	2.2	82	2.50

Asphalt/ concrete (Tons)	X .06% asphalt (Tons)	X .04 pounds ROG/ton (pounds)	1.72 pounds/10 days paving (Daily lbs.)	Quarterly (2) (Tons)
715	42.90	1.72	0.17	0.001
Emulsion (Tons)	X 0.65% Asphalt (Tons)	X .04 pounds ROG/ton (Pounds)	.0016 pounds/ 10 days paving (Daily lbs.)	Quarterly (2) (Tons)
2	0.04	0.00	0.00	0.000
Total ROG from Asphalt		1.72	0.17	0.001

(1) to account for grading and excavation

(2) 66 working days

Pitkin's Curve (05-0E9600)

**CONSTRUCTION AIR QUALITY ANALYSIS--
Structural Excavation**

Operation	Bridge (m3)	Bridge (yd3)	Rock Shed (m3)	Rock Shed (yd3)	Wall (m3)	Wall (yd3)	Total (yd3)
Structure ex.	1190	1556.52	1120	1464.96	160	209.28	3230.76
Structure backfill	720	941.76	280	366.24	100	130.8	1438.8
Final Structure ex.	470	614.76	840	1098.72	60	78.48	1791.96
Total							6461.5

Structural Concrete

Structural Element Bridge	(m3)	(yd3)	Truck Trips	Cargo 150#/cf (pounds)	Cargo (tons)	trips 33 tons/ trip
Abutment piles	55	71.9	8			
Bent shafts	1047	1369.5	153			
Shafts for wall	123	160.9	18			
Abut/Bent footings	297	388.5	44			
Bridge concrete	1400	1831.2	204			
Wall at abut	328	429.0	48			
Shotcrete at walls	13	17.0	2			
Arch (Precast)				5403348	2702	81.9
Spandrels (Precast)				529740	265	8.0
Girders (Precast)				1732250	866	26.2
Barrier	80	104.6	12			
Approach slabs	18	23.5	3			
Tieback anchor grout	4	5.2	1			
	3365	4401.4	493	7665338	3832.7	116.14

Structural Element Rock Shed	(m3)	(yd3)	Truck Trips	Cargo 150#/cf (pounds)	Cargo (tons)	trips 33 tons/ trip
Rock shed shafts	255	333.5	38			
Rock shed concrete	1406	1839.0	205			
Roof panels (Precast)				3639314	1820	55.1
Rain rocks interface	20	26.2	3			
Barrier (80/27 mod)	39	51.0	6			
Tieback anchor grout	6	7.8	1			
	1726	2257.61	253	3639314	1820	55.1
Sum Br + Rx Shltr	5091	6659	746	11304652	5652	171

CONSTRUCTION ACTIVITIES AND EQUIPMENT WORKSHEET					PROJECT (Co-Rte-PM): Mon-1-21.3/21.6 Pitkin's Curve											
OPERATION	VEHICLE TYPE	HOURS PER	ESTIMATED QUANTITIES	TOTAL HOURS	# OF VEHICLES	HRS. / DAY / VEHICLE	TOTAL HOURS	TOTAL DAYS	CO Lb/hr	CO Lb/total	ROG Lb/hr	ROG Lb/total	NOx Lb/hr	NOx Lb/total	TSP Lb/hr	PM10 Lb/total
AC Paving (tons)		2000	715.0													
	Paver	8		2.9	1	8	3	0.4	0.65	1.9	0.16	0.5	1.95	5.6	0.09	0.2
	Roller	24		8.6	3	8	9	0.4	0.83	7.1	0.21	1.8	2.52	21.6	0.12	1.0
	Heavy duty truck	160		57.2	10	8	57	0.7	1.69	96.7	0.43	24.6	5.13	293.4	0.24	13.2
	Medium duty truck	8		2.9	1	8	3	0.4	0.85	2.4	0.21	0.6	2.56	7.3	0.12	0.3
								0.4								
Structure Concrete (cu yds)		50	6659													
cast in place	Crane or pumper	1		133	1	8	133	16.6	1.28	170.5	0.32	42.6	3.87	515.4	0.18	23.1
	Heavy duty truck	5		666	5	8	666	16.6	1.69	1125.4	0.43	286.3	5.13	3416.1	0.24	154.1
precast	(Transit mix truck)															
	Heavy duty truck		2791	342	5	8	342	8.6	1.69	578.0	0.43	147.1	5.13	1754.5	0.24	79.1
	(33 T per 2 hr trip)															
	Crane	1		55.82	1	8	56	7.0	1.28	71.4	0.32	17.9	3.87	216.0	0.18	9.7
								16.6								
Structure excavation (cu yds)		20	6462													
	Backhoe	1		323	1	8	323	40.4	0.57	184.2	0.14	45.2	1.73	559.0	0.08	24.9
	Light duty truck	1		323	1	8	323	40.4	0.59	190.6	0.15	48.5	1.8	581.6	0.08	24.9
								40.4								
Roadway excavation (cu yds)		7000	2910													
	Scraper	48		20	2	8	20	1.2	2.14	42.7	0.54	10.8	6.48	129.3	0.30	5.8
	Water truck	8		3	1	8	3	0.4	0.65	2.2	0.16	0.5	1.95	6.5	0.09	0.3
	Roller/Compactor	8		3	1	8	3	0.4	0.83	2.8	0.21	0.7	2.52	8.4	0.12	0.4
	Dozer	8		3	1	8	3	0.4	0.57	1.9	0.14	0.5	1.73	5.8	0.08	0.3
	Motor Grader	8		3	1	8	3	0.4	0.91	3.0	0.23	0.8	2.74	9.1	0.13	0.4
								0.7								
Base, subbase, etc. (cu yds)		2000	0													
	Motor grader	16		0	2	8	0	0.0	0.91	0.0	0.23	0.0	2.74	0.0	0.13	0.0
	Water truck	8		0	1	8	0	0.0	0.65	0.0	0.16	0.0	1.95	0.0	0.09	0.0
	Heavy duty truck	120		0	15	8	0	0.0	1.69	0.0	0.43	0.0	5.13	0.0	0.24	0.0
	Roller/Compactor	8		0	1	8	0	0.0	0.83	0.0	0.21	0.0	2.52	0.0	0.12	0.0
								0.0								
Total emissions										2481		628		7529		338
Total days								220								
Average daily emissions (lbs)										11		3		34		2
Quarterly emissions (tons)										0.4		0.1		1.1		0.1

Emission factors from CARB Off-Road Model MSC 99-32

G.4. Monterey County Resource Management Agency

MONTEREY COUNTY RESOURCE MANAGEMENT AGENCY



PLANNING & BUILDING INSPECTION DEPARTMENT, Scott Hennessy, Director

168 W. Alisal St., 2nd Floor
Salinas, CA 93901

(831) 755-5025
FAX (831) 757-9516

April 5, 2006

Wendy Waldron
California Department of Transportation
50 Higuera Street
San Luis Obispo, CA 93401

**Subject: Response to Caltrans DEIR
Highway 1 Improvements at Pitkins Curve and Rain Rocks**

Ms. Waldron,

Monterey County Planning and Building Inspection Staff evaluated Alternatives 1 and 2 as described in the above DEIR for consistency with the Big Sur Coast Land Use Plan (BSCLUP), Big Sur Coastal Implementation Plan, and the Big Sur Coast Highway Management Plan. It is our understanding that as presented, Alternative 1 includes the construction of a bridge at Pitkins Curve and the construction of a lighted rock shed at the area known as Rain Rocks, while Alternative 2 includes the construction of the bridge with ongoing maintenance at Rain Rocks.

Due to the proposed lighting and current design as well as the overall scale and bulk of the rock shed staff is concluding that Alternative 1 does not substantially conform to the BSCLUP. Conflicts with policy topics include aesthetics, historic resources, rustic design, and protection of the natural beauty of the Big Sur coastline. The following policies underscore this central theme.

Big Sur Land Use Plan

Policy 3.2 Scenic Resources

As per Policy 3.2.1 of the Big Sur Land Use Plan, it is the County's objective to preserve these scenic resources in perpetuity and to promote the restoration of the natural beauty of visually degraded areas wherever possible.

Policy 3.2.5 Exceptions to Key Policy (3.2.1)

Road capacity, safety and aesthetic improvements shall be allowed, as set forth below, provided they are consistent with Section 4.1.1, 4.1.2, and 4.1.3 of this Plan.

4.1.1. Monterey County will take a strong and active role in guiding the use and improvement of Highway One and land use development dependent on the highway. The County's objective is to maintain and enhance the highway's aesthetic beauty and to protect its primary function as a recreational route.

4.1.2.2 A principal objective of management, maintenance, and construction activities within the Highway 1 right-of-way shall be to maintain the highest possible standard of visual beauty and interest.

4.1.3 (B) 4 "...the objective of such criteria shall be to ensure that all improvements are inconspicuous and are in harmony with the rustic natural setting of the Big Sur Coast..."

Big Sur Coast Highway Management Plan (BSCHMP)

3.3 New Construction and Rehabilitation. A common theme is to conserve the historic, rural character of the corridor....

Roadway Protection Systems (3) Preference for type and material selection on protective systems will be given to those that are visually subordinate to the landscape to the extent possible.

BSCHMP Page 32. Traditional protection measures often relied on rigid barriers, such as walls to protect Highway travelers. With changes in technology, flexible barriers made of cable or wire mesh netting can be colored to match or recede into the natural background.

Additional Comments

It is Staff's conclusion that Alternative 1 (Bridge and Rock Shed), as currently designed and depicted within the DEIR will cause significant impacts to the scenic resources of the Big Sur Coast because of scenic policy conflicts with the BSCLUP. However, we support the creation of the Aesthetic Design Advisory Committee (ADAC) and feel that alterations and design changes in response to ADAC concerns and input may serve to reduce these impacts below a level of significance with the application of creative and innovative solutions. To this end we look forward to developing these solutions in partnership on the ADAC.

During our project specific comprehensive review, The County of Monterey will apply additional Conditions of Approval to the Coastal Development Permit to further the goals and policies of the Big Sur Land Use Plan, Big Sur Coastal Implementation Plan, and the Big Sur Coast Highway Management Plan including but not limited to noise abatement, cultural resources, grading, placement and removal of spoils, erosion control and traffic related impacts.

As always, we believe it is critical that the public be preemptively informed of all road closures and construction activities (length and duration), and that Caltrans continue the active dialogue and public outreach to ensure that impacts to residents and visitors are limited in their nature and duration. Thank you for the opportunity to comment. We look forward to working with your agency throughout this process.

Sincerely,

Shandell Frank
Associate Planner
Coastal Team
franks@co.monterey.ca.us

cc: Jeff Main; Dale Ellis; Alana Knaster; Kathleen Lee

Response to Monterey County Planning and Building Inspection Department
Further design evaluation found that lighting would not be required for the rock shed (refer to Section 1.4.2.2).

Please refer to Section 2.4.4 for a revised discussion of the Traffic Management Plan during construction.

It is Caltrans' expectation that Aesthetic Advisory Design Committee proposed features, incorporated into the final bridge and rock shed design, will substantially lessen the potentially significant impacts to the visual qualities of the Big Sur coast. While it is our current conclusion that, even with incorporation of the Aesthetic Advisory Design Committee proposed design features, the rock shed is potentially inconsistent with some referenced Monterey County policies, a more comprehensive evaluation is expected during development of the Local Coastal Permit. This would allow for a consistency evaluation with full benefit of Aesthetic Advisory Design Committee participation and recommendations on the ultimate bridge and rock shed designs.

The Coastal Commission has indicated that the local coastal permit would include conditions to support implementation of the California Coastal Trail through the project area. Caltrans' policy for non-motorized transportation directs that highway facilities safely support pedestrian, bicycle and accessibility for the disabled. Traditionally, wide shoulders next to the travel way have served this purpose. Caltrans' role and responsibility for developing, constructing and maintaining any portion of the California Coastal Trail separated trail facility, on or off the highway, has not been established. In the interest of supporting the California Coastal Trail, Caltrans would consider providing direct support to the California Coastal Conservancy for their implementation of a separated coastal trail that bypasses the Rain Rocks promontory. Ultimate determination of an acceptable condition to address Coastal Commission comments regarding the California Coastal Trail would be made during development of the local coastal permit with Monterey County.

G.4. National Oceanic and Atmospheric Administration



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE

Monterey Bay National Marine Sanctuary
299 Foam Street
Monterey CA 93940

March 22, 2006

Ms. Wendy Waldron
California Department of Transportation
50 Higuera Street
San Luis Obispo, California 93401

SUBJECT: Draft Environmental Impact Report for Highway 1 Improvements at Pitkins Curve and Rain Rocks

Dear Ms. Waldron:

The Monterey Bay National Marine Sanctuary (MBNMS) has reviewed the Draft Environmental Impact Report for Highway 1 Improvements at Pitkins Curve and Rain Rocks. The MBNMS has been engaged in disposal issues at this location for a number of years and looks forward to the implementation of an environmentally preferable solution to the chronic landslides at this location.

The Draft Environmental Impact Report (DEIR) analyzes three alternatives in depth. As outlined in the document, Alternative 1 would construct a bridge at Pitkins Curve and a rock shed at Rain Rocks. Alternative 2 would construct a bridge at Pitkins Curve and continue with active management at the Rain Rocks location. The No-build Alternative would make no improvement to the project location.

The MBNMS has reviewed this document and has the following comments:

The MBNMS supports the implementation of either Alternative 1 or Alternative 2, as we believe that finding an active solution to deal with landslides at this location will reduce environmental impacts. Either of these alternatives would be preferable to the current system of emergency highway management at this location. Our more detailed comments are below.

Pitkins Curve Pilot Project, p. 10:

It would be appreciated if Caltrans could summarize the information that has been gleaned from the three-year monitoring period, for the Pitkins Curve Pilot Project and submit any results that have been acquired thus far.

Permits and Approvals, p. 35:

It may be possible, based upon the level of work that would be required, that the MBNMS might be involved in permit matters. The MBNMS has authorization authority through a Memorandum of Agreement with the Regional Water Quality Control Board for discharges into the Sanctuary under the NPDES program. Of course, should any excavated sediment also be proposed for disposal in the Sanctuary, an authorization would be required. For this reason please include the MBNMS in "Table

- 2 -

3,Permits and Approvals Needed” of the Final Environmental Impact Report, pending a more detailed project description.

Water Quality, p. 38:

Throughout the document the major water body referenced in the project area is the Pacific Ocean. Please include information here and throughout the document when referring to the Pacific Ocean, that it is also designated as the Monterey Bay National Marine Sanctuary.

Avoidance, Minimization and/or Mitigation Measures, Marine, I, p. 86:

Please add the Monterey Bay National Marine Sanctuary to the list of agencies that would require review of the marine impacts of the project.

Avoidance, Minimization and/or Mitigation Measures, Marine, M, p. 87:

Please add the phrase “and the MBNMS,” after the phrase “To protect the Pacific Ocean”, in the first sentence of this section. The MBNMS has an “enter and injure” clause in our regulations, which prohibits discharging any matter that could subsequently enter or injure Sanctuary resources from beyond the boundary of the Sanctuary. Therefore we would be interested in coordinating with the Regional Board and Caltrans to ensure that the best management practices are in place to prevent non-storm water discharges from occurring within the MBNMS.

Regulatory Setting, p. 87:

The first sentence of this paragraph (and elsewhere in the document) misspells the National Oceanic and Atmospheric Administration (NOAA). Please make this correction here and in the other necessary locations of the Final Environmental Impact Report.

It may also be important to note in this section that the MBNMS prohibits the taking of any marine mammal, sea turtle or seabird in or above the Sanctuary, except as permitted by regulations, as amended, under the Marine Mammal Protection Act, the Endangered Species Act, or the Migratory Bird Species Act, per Sanctuary regulations at 15 CFR §922.132.

Southern Sea Otter, p. 99:

The document states that a Caltrans biologist would monitor sea otter activity during events that cause loud noises, such as blasting, for observation of abnormal activity, and contact the US Fish and Wildlife Service should such behavior occur. Caltrans should consider and address in the Final Environmental Impact Report whether the need to monitor other marine mammals (such as migrating whales) also exists, and if not, explain why.

Excess Material, p. 108:

The document states “The total estimated volume of excavation anticipated (approximately 33,000 cubic meters [43,162 cubic yards]) is virtually the same for Alternative 1 and 2.” Later paragraphs involve a discussion of stockpiling options for the excess material. Additionally the document states, “Further assessment will explore the possibility of disposing excess material onsite”. We hope that Caltrans will be able to handle the volume of material that either of these alternatives will create without

- 3 -

looking to disposal options within the Sanctuary. Disposal of any anthropogenically-generated material would need to be thoroughly evaluated through our permit program.

We appreciate your efforts to work with the MBNMS and other marine resource management agencies to ensure Caltrans road repair activities along Highway One do not adversely affect the important marine resources along the Big Sur coast. Please incorporate the comments and recommendations contained in this letter into the Final Environmental Impact Report.

Thank you for your continued cooperation. If you have any questions regarding our comments please contact Ms. Deirdre Hall in the MBNMS office by phone at 831.647.4207 or via email at deirdre.hall@noaa.gov

Sincerely,



KAREN GRIMMER
Acting Superintendent

Response to Monterey Bay National Marine Sanctuary

Page 10: Caltrans contracted with Tenera Environmental to conduct a series of intertidal surveys at the Pitkins Curve intertidal zone for the purposes of characterizing the shoreline biota (in 2000 and 2002) and monitoring the effects of landslide material placement and dispersal in this environment (in 2004, 2005 and

2006). The surveys have culminated in a series of five reports³³, which have been submitted to Deirdre Hall at the Monterey Bay National Marine Sanctuary.

In 2001 Caltrans constructed a dirt berm east of Highway 1 at Pitkins curve to impede landslide material from encroaching onto the highway. As the landslide material accumulated, Caltrans would periodically truck it to material disposal sites, 10 to 15 miles away. In 2003-4, under permit from Monterey County and the Monterey Bay National Marine Sanctuary, Caltrans placed the landslide material into a 'receiving area', defined by another dirt berm, west of the highway at Pitkins Curve. This area was constructed to mimic the natural erosion process of landslide materials into the ocean and allowed for a systematic evaluation of the effects of this process on the marine environment.

The studies since 2000 have noted that this activity has not substantially changed the configuration and position of the toe of the slide relative to the water line. This indicates that heavy wave action effectively breaks up rocks and sediments into smaller pieces and disperses the material in to the ocean without build-up on the shore. The species that characterize the intertidal community at the toe of the slide and adjoining areas are only those that are well adapted to tolerate and persist in an environment of heavy wave action and natural sand scour, boulder rolling and rock smashing. The most common species found are those that can firmly attach to rocks, such as limpets and mussels. Species that are not as well adapted to persist in this environment, such as shore crabs and turban snails, are conspicuously absent or in low abundance. The few emergent, sand-scoured boulders in the upper intertidal zone on Pitkins Beach have remained populated mainly with limpets. The several large, stable rocks in the offshore surf zone have remained colonized by mussels, red algae and species of kelps.

Page 35: As currently proposed, excavated sediment would be either placed as fill behind and on top of the rock shed or transported to a disposal site. There are no plans to dispose of excavated material in the Marine Sanctuary.

Page 38: Refer to Chapter 2, the changes you requested have been made.

Page 86: Revisions made as requested.

Page 87: Corrections made as noted

Page 99: In consultation with biologists from National Oceanic and Atmospheric Administration and the Monterey Bay Marine Sanctuary, it was concluded that noise impacts associated with the project would not impact any marine mammal species. Even if the noise levels from the drilling on the land reached the water at any decibel level of concern, marine mammals have been shown to easily avoid noise by moving farther offshore. Caltrans biologists will be monitoring all offshore activity of all

³³ *Shoreline Biological Characterization of the Highway 1 Slide Area at Pitkins Curve, Monterey*. Prepared by Tenera Environmental for the California Department of Transportation. June

animals in the area during the noisy operations and will report any activity to U.S. Fish and Wildlife Service, but because of their ability to move further offshore, impacts to marine mammals of any kind are not anticipated.

Page 108: Please refer to Section 2.4.3 and Table 7 for an update of the estimated amount of excess material that would be generated with each project alternative. It appears that no material would be excess for the preferred alternative, Alternative 1 (bridge and rock shed). Consequently, there would be no need for material disposal.

G.5. State Clearinghouse and Planning



Arnold
Schwarzenegger
Governor

STATE OF CALIFORNIA
Governor's Office of Planning and Research
State Clearinghouse and Planning Unit



Sean Walsh
Director

April 5, 2006

Wendy Waldron
Department of Transportation, District 5
50 Higuera Street
San Luis Obispo, CA 93401

Subject: Pitkins Curve
SCH#: 2003111016

Dear Wendy Waldron:

The State Clearinghouse submitted the above named Draft EIR to selected state agencies for review. On the enclosed Document Details Report please note that the Clearinghouse has listed the state agencies that reviewed your document. The review period closed on April 3, 2006, and the comments from the responding agency (ies) is (are) enclosed. If this comment package is not in order, please notify the State Clearinghouse immediately. Please refer to the project's ten-digit State Clearinghouse number in future correspondence so that we may respond promptly.

Please note that Section 21104(c) of the California Public Resources Code states that:

"A responsible or other public agency shall only make substantive comments regarding those activities involved in a project which are within an area of expertise of the agency or which are required to be carried out or approved by the agency. Those comments shall be supported by specific documentation."

These comments are forwarded for use in preparing your final environmental document. Should you need more information or clarification of the enclosed comments, we recommend that you contact the commenting agency directly.

This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act. Please contact the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process.

Sincerely,

Terry Roberts
Director, State Clearinghouse

Enclosures
cc: Resources Agency

1400 TENTH STREET P.O. BOX 3044 SACRAMENTO, CALIFORNIA 95812-3044
TEL (916) 445-0613 FAX (916) 323-3018 www.opr.ca.gov

**Document Details Report
State Clearinghouse Data Base**

SCH# 2003111016
Project Title Pitkins Curve
Lead Agency Caltrans #5

Type EIR Draft EIR
Description Caltrans is proposing long-term improvements to the reliability and safety of Highway 1 at the Pitkins Curve/Rain Rocks location, which has a history of slope instability and costly road closures. The project is located near Lucia and Limekiln Creek on the Big Sur coast highway between postmiles 21.3 and 21.6. Significant impacts to the project area's visual qualities are anticipated as a result of the project.

Lead Agency Contact

Name Wendy Waldron
Agency Department of Transportation, District 5
Phone (805) 549-3118 **Fax**
email
Address 50 Higuera Street
City San Luis Obispo **State** CA **Zip** 93401

Project Location

County Monterey
City
Region
Cross Streets SR 1 (near Limekiln Campground)
Parcel No.
Township **Range** **Section** **Base**

Proximity to:

Highways 1
Airports
Railways
Waterways Limekiln Creek, unnamed drainages, Pacific Ocean
Schools
Land Use Public / Quasi-public and Recreation

Project Issues Aesthetic/Visual; Air Quality; Archaeologic-Historic; Biological Resources; Coastal Zone; Cumulative Effects; Drainage/Absorption; Economics/Jobs; Fiscal Impacts; Geologic/Seismic; Landuse; Noise; Public Services; Recreation/Parks; Soil Erosion/Compaction/Grading; Toxic/Hazardous; Traffic/Circulation; Vegetation; Water Quality; Wetland/Riparian; Wildlife

Reviewing Agencies Resources Agency; Regional Water Quality Control Board, Region 3; Department of Parks and Recreation; Native American Heritage Commission; Department of Fish and Game, Region 3; Department of Water Resources; California Coastal Commission; California Highway Patrol; Department of Toxic Substances Control; State Water Resources Control Board, Division of Water Quality

Date Received 02/16/2006 **Start of Review** 02/16/2006 **End of Review** 04/03/2006

Note: Blanks in data fields result from insufficient information provided by lead agency

Response to State Clearinghouse
No response necessary.

G.6. U.S. Environmental Protection Agency (Michael Monroe)



Monroe.Michael@epam To: wendy_waldron@dot.ca.gov
all.epa.gov cc:
03/02/2006 02:43 PM Subject: Pitkins Curve Project . no EPA involvement

Wendy:

On February 15, 2006, you requested our comments on the DEIR for the Pitkins Curve/Rain Rocks Project (your letter was addressed to Tim Vendlinski, Wetlands Regulatory Office, EPA, Region 9, San Francisco).

I have reviewed the DEIR. Considering that the project will not involve the discharge of dredged or fill material to areas that are under the jurisdiction of the Corps of Engineers, we have no comments to provide.

If you have any questions, please call or send me an email.

Cheers,

Mike

Mike Monroe
Environmental Scientist
U.S. Environmental Protection Agency
Wetlands Regulatory Office (WTR-8)
75 Hawthorne Street
San Francisco, CA 94105
(415) 972-3453 phone (415) 947-3537 fax
monroe.michael@epa.gov

Response to U. S. Environmental Protection Agency
No response necessary.

G.7. Big Sur Chamber of Commerce

BIG SUR CHAMBER OF COMMERCE

April 7, 2006

VIA FACSIMILE & US MAIL

Wendy Waldron
California Department of Transportation
Central Coast Management Branch
50 Higuera St.
San Luis Obispo, CA 93401

Re: Draft Environmental Impact Report/Highway 1 Improvements at Pitkins Curve and Rain Rocks

Dear Ms. Waldron,

I am writing this letter to comment on the draft environmental report on the proposed Highway 1 improvements at Pitkins Curve and Rain Rocks. The Board of Directors of the Big Sur Chamber of Commerce is extremely concerned about the economic impact on the business community associated with the anticipated nighttime closures of Highway 1 during the construction of the Rock Shed in Alternative 1.

Programmed closures each night of the week during the winter months over a multi-year period in conjunction with the numerous delays throughout the rest of the year and likely additional non-planned closures associated with a construction project of this nature will have severe negative impacts on each and every business that serves the traveling public along the Big Sur Coast.

These costs will be further magnified by the loss of income to employees in the community who see their hours reduced during these closure periods.

The Big Sur business community provides the means and resources for the vast majority of residents to live in Big Sur and for the traveling public to enjoy the Big Sur coast with its dining facilities, overnight accommodations, gas stations, grocery stores, and public bathrooms.

The viability and success of any Big Sur business that serves the traveling public is directly related to the opportunity for guests to travel on Highway 1. Each and every time Highway 1 access is restricted or cut off, the business community suffers significant economic damages. Additionally, the public notifications of highway delays and closures strongly influence the public not only during the actual periods of construction or highway closure, but well beyond the time the delays and closures have ended due to lack of comparable notification of unrestricted traffic access. In virtually all cases where the highway is closed for any multi-day period, the perception amongst much of the traveling

public is that the highway is still closed for days and even months after the road has re-opened.

The Big Sur Chamber of Commerce recognizes the importance of maintaining Highway 1 in a safe and reliable manner and supports the proposed bridge project for the Pitkins Curve section of Highway 1, which allows for single lane through traffic access during the construction project. The additional Rock Shed proposal in its current form for the Rain Rocks section of Highway 1 does not appear to be warranted given the heavy economic burden such a project would impose on the community and the relatively limited benefit it would offer in keeping Highway 1 open during periods of winter storm activity.

We thus urge Caltrans to either adopt Alternative 2 (bridge without rock shed) or to develop a plan that allows for construction of a rock shed without extensive programmed highway closures over a multi-year period.

If you have any questions, please feel free to call me at 831.667.2200.

Sincerely,

Dan Priano
President
Big Sur Chamber of Commerce
P.O. Box 87
Big Sur, CA 93920

Response to Big Sur Chamber of Commerce

In response to your comment and in consultation with members of the Big Sur business community, the number and timing of necessary lane closures has been reassessed resulting in fewer closures and shorter project duration. Please refer to

Sections 2.4.4 and 2.4.5 for a revised discussion of the Traffic impacts anticipated during construction. Furthermore, a Traffic Management Plan, with continued community input and expanded features is proposed for this project to minimize traffic delay and noticing. Please refer to Section 2.4.4

G.8. The Big Sur Historical Society

The Big Sur Historical Society
P.O. Box 176
Big Sur, CA 93920
20 February 2006

R Gregg Albright
Director, District 5
California Department of Transportation
50 Higuera St
San Luis Obispo, CA 93401

RE: DEIR for Highway 1 improvements at Pitkins Curve and Rain Rocks, Big Sur.

Dear Mr. Albright:

The Board of Directors of the Big Sur Historical Society (BSHS) has reviewed the Draft Environmental Impact Report (DEIR) prepared by your department for the proposed improvements on Highway 1 just north of Limekiln Creek

In a historical perspective, BSHS assumes that a name (or names) will be proposed for the bridge and rock shed. The two features named in the DEIR, Pitkins Curve and Rain Rocks, have a degree of historical significance. The Pitkins Curve designation, made by Don Harlan, the late former Caltrans Maintenance Foreman at Willow Springs, commemorates a vehicle accident in the late 1950s or early 1960s involving the daughter of Dorothy Pitkin, a former resident of the Salmon Creek area of Big Sur's South Coast. Miss Pitkin drove off the road when she failed to adequately negotiate the 25 MPH curve there. Rain Rocks was another of Don Harlan's names, as the rock formation above the highway there has constantly been "raining" small (and large) stones for years.

Although these names evoke a certain local color, the Board of Directors of the BSHS would offer a suggestion that we feel has a greater degree of historical relevance. We strongly endorse the idea of naming the bridge (at least) after Mr. Harlan. As a member of one of the first families of Big Sur, born and raised at Lucia (not to mention his dedication to keeping Highway 1 "on the map" for so many years), Don Harlan exemplified the spirit of the coast, as well as extraordinary savvy regarding engineering problems relating to the highway.

We think the name "Don Harlan Bridge" for the span proposed at Pitkins Curve would provide a better historical context than any other designation. Please consider this name for the bridge when you reach that stage in the proposed project.

Thank you,


Antonia Nicklaus, Board President
Big Sur Historical Society

Response to Big Sur Historical Society

It is common for state legislation to be introduced and passed to name a highway after an individual. Caltrans does not have this authority. Once legislation is passed, money would most likely need to be raised to design, construct, and install the signs. State funds are not eligible for the signage.

G.9. Monterey County Advisory Committee (Robert M. Willett)



COMMENT CARD

NAME: Robert M. Willett
 ADDRESS: 14 Pacific Valley CITY: Big Sur ZIP: 93920
 REPRESENTING: Monterey County Advisory Committee

Do you wish to be added to the project mailing list? YES NO

Please drop comments in the Comment Box or

I'm already on the list.

Mail to: **CALTRANS DISTRICT 5**
 Environmental Branch
 Wendy Waldron
 50 Higuera Street
 San Luis Obispo, CA 93401

I would like the following comments filed in the record (please print):

I HAVE LIVED FOR 35 years 5 miles south of Pitkin's Curve. I understand fully what is happening there. I feel the bridge alone is enough. I don't feel you need the rock shed. Thank you R-M

Please respond by April 7, 2006

How Did You Hear About This Meeting? newspaper newsletter someone told me about it other: _____

G.10. Alan Perlmutter: Big Sur River Inn owner



COMMENT CARD

NAME: ALAN PERLMUTTER
 ADDRESS: PO Box 460 CITY: Big Sur ZIP: 93920
 REPRESENTING: Self (resident) AND Big Sur River Inn (owner)

Do you wish to be added to the project mailing list? YES NO

Please drop comments in the Comment Box or

Mail to: **CALTRANS DISTRICT 5**
 Environmental Branch
 Wendy Waldron
 50 Higuera Street
 San Luis Obispo, CA 93401

I would like the following comments filed in the record (please print):

I STRONGLY SUPPORT THE PROJECT & THE PREFERRED ALTERNATIVE.

HOWEVER, I AM CONCERNED ABOUT PROPOSED NIGHT CLOSURES. EXTENSIVE NIGHT CLOSURES WILL CAUSE HAVE EXTREMELY NEGATIVE CONSEQUENCES FOR OUR BUSINESS AND ITS VIABILITY. OCCASIONAL, NONSEASONAL, ~~EXTENSIVE~~ CLOSURES (ONE OR TWO PER MONTH) WITH ADVANCE NOTIFICATION WOULD BE ACCEPTABLE. BUT ONGOING, LENGTHY NIGHT CLOSURES WOULD BE EXTREMELY DIFFICULT TO TOLERATE!

Please respond by April 7, 2006

How Did You Hear About This Meeting? newspaper newsletter someone told me about it other: -NOTICE FROM CALTRANS/CHAMBER OF COMMERCE

MR. PERLMUTTER: My concern has to do with the
7 night road closures. My name is Alan Perlmutter, and I
8 am the owner of the Big Sur River Inn. I have serious
9 concerns about extensive night closures. Eileen
10 mentioned that it's uncertain just when those would
11 occur, but my concern is, closures at night, if they are
12 occasional and we know well in advance of when they are
13 going to occur so we can advise people who we know are
14 coming from the south who stay with us or visit us, that
15 they can be notified that the road will be closed on
16 such and such a date. It sounds to me like it would be
17 night road closures throughout not all of the project,
18 but much of the project, and night closures over an
19 extended period of time regularly would damage our
20 business severely. It would put us out of business.
21 Because we have business people come from Los Angeles,
22 they arrive at night, and they would have to drive an
23 extra hundred-some miles to go around and come down from
24 the north. It would be severe damage, not only to our
25 business -- I'm not only speaking for myself, but there
0004

1 are other businesses who have overnight guests, people
2 traveling from the south who cannot get here, and that
3 would be -- I summarily object to night closures on a
4 regular basis. Again, I'll say, periodic night

5 closures, when necessary, because when it's done at
6 night, if we know in advance, then we can notify our
7 patrons and we would have to live with that.

MR. PERLMUTTER: Just an added comment about

14 e-mail. Eileen has a lot of e-mail addresses already.
15 This would be a good and quick way to keep in touch
16 about closures or other announcements.

REPORTER'S CERTIFICATE

2 STATE OF CALIFORNIA)
) SS.
3 COUNTY OF SAN LUIS OBISPO)

4

5 I, JERI L. CAIN, Certified Shorthand Reporter,
6 RMR-CRP-CRR, holding California CSR License No. 2460, do
7 hereby certify:

8 The aforementioned public comments were verbatim-
9 reported by me by the use of computer shorthand at the
10 time and place therein stated and thereafter transcribed
11 into writing under my direction.

12 I certify that I am not of counsel nor attorney for
13 nor related to any of the parties hereto, nor am I in
14 any way interested in the outcome of this action.

15 In compliance with Section 8016 of the Business and
16 Professions Code, I certify under penalty of perjury

17 that I am a Certified Shorthand Reporter with License

18 No. 2460 in full force and effect.

19 WITNESS my hand this 3rd day of April, 2006.

20

21

22

JERI L. CAIN, CSR #2460, RMR-CRP-CRR

Response to Alan Perlmutter

In response to your comment and in consultation with members of the Big Sur business community, the number and timing of necessary lane closures has been reassessed resulting in fewer closures and shorter project duration. Please refer to Sections 2.4.4 and 2.4.5 for a revised discussion of the Traffic impacts anticipated during construction. Furthermore, a Traffic Management Plan, with continued community input and expanded features is proposed for this project to minimize traffic delay and noticing. Please refer to Section 2.4.4

G.11. Kirk Gafill: Nepenthe, general manager

April 7, 2006

Wendy Waldron
California Department of Transportation
Central Coast Management Branch
50 Higuera St.
San Luis Obispo, CA 93401

Re: Draft Environmental Impact Report/Highway 1 Improvements at Pitkins Curve and Rain Rocks

Dear Ms. Waldron,

I am writing this letter to comment on the draft environmental report on the proposed Highway 1 improvements at Pitkins Curve and Rain Rocks.

As a lifelong resident and business owner in the Big Sur business community I have had the opportunity to see the impacts of Highway 1 improvement and repair projects over a 40-year period. I have also actively worked with Caltrans over the last 20 years to assist in mitigating the negative economic impacts of road closures on the business community and in developing appropriate communication systems to inform both the traveling public and the local populace of the impact of restricted access on Highway 1.

The current draft EIR for the proposed solutions to address the highway maintenance challenges at Pitkins Curve and Rain Rocks is an outstanding and informative communication tool. The work of Caltrans to maintain and improve Highway 1 as well as to communicate with the local community in such a comprehensive and clear manner is very much appreciated.

I support the construction of a bridge as outlined in Alternative 2 to address the Pitkins Curve road problems and would encourage a bridge design that reflects the aesthetic values and components of the other landmark bridges in Big Sur at Bixby Creek, Rocky Creek, and Big Creek.

With respect to the addition of a Rock Shed in Alternative 1 for the Rain Rocks area, I urge Caltrans to drop this alternative in its present form due to the severe and lengthy negative economic impact it will cause to the local business community and its employees. Even though the proposed highway closure periods are planned for evenings in the winter months, the multi-year construction time line with its attendant multi-year closure periods will cause extreme economic harm. Our experience time and again has been that any time there is a multi-day closure there is an additional extended time frame of confusion and uncertainty amongst the traveling public as to whether Highway 1 is open or not. The longer the closure period, the longer this period of uncertainty exists.

There are many reasons for this; primarily the lack of impact a public message associated with the re-opening of a road has compared to the closure of a road. Additionally, the

geography of the Big Sur Coast and the lack of alternative access or detour routes create significant confusion and uncertainty about where and when someone can travel along the Big Sur Coast when access is restricted.

Additionally, while the Pitkins Curve problems are potentially catastrophic in nature due to the massive slide above and below the highway, the closures associated specifically with Rain Rocks have not historically been of a multi-day nature. Thus, the costs to the community of this proposal in terms of the extended multi-year closure periods appear to far exceed the benefits of this project.

If you have any questions or would like to discuss this further, please feel free to call me at 831.667.2345.

Sincerely,

Kirk Gafill
General Manager
Nepenthe/Phoenix Corporation
Highway One
Big Sur, CA 93920

Response to Kirk Gafill

In response to your comment and in consultation with members of the Big Sur business community, the number and timing of necessary lane closures has been reassessed resulting in fewer closures and shorter project duration. Please refer to Sections 2.4.4 and 2.4.5 for a revised discussion of the Traffic impacts anticipated during construction. Furthermore, a Traffic Management Plan, with continued community input and expanded features is proposed for this project to minimize traffic delay and noticing. Please refer to Section 2.4.4

G.12. John Handy: Treebones owner

"John Handy"
<handyjc@mindspring.com>
04/05/2006 12:17 PM

To: <wendy_waldron@dot.ca.gov>
cc: "Stan Russell" <stan@bigsurinternet.com>, "treebones resort" <treeboneslodge@yahoo.com>
Subject: Pitkins Curve and Rain Rocks

As the owner of Treebones Resort I definitely appreciate Caltrans' efforts at keeping Highway 1 open. Treebones Resort is a year round business and road closures cost us a lot of revenue each year.

Of the two proposals I prefer the Bridge only with an arch like appearance to aesthetically match the original bridges built in the 30s like Rainbow and Bixby. The Rock Shed is a great idea but it seems to me that it stretches out the construction period too long.

Please address the following concerns:

1. How can we shorten the construction time? 922 days or 4.5 years seems excessive.
2. Consider only closing the highway from Midnight to 8 AM. This gives an 8 hour shift and allows the traveling public as well as residents to reach their destinations.
3. Don't consider Big Sur a summer only destination. Businesses have worked hard to build year round businesses. Treebones Resort is just as busy in the winter as the summer now. We are fully booked through the remainder of the "off season" right now. Extreme highway closures for winter road work would cripple our business.
4. Could the State set up a fund to help offset the cost of road closures due to construction for the small businesses affected?
5. Very accurate signage needs to be part of the plan. Too often a sign that says "road closed" is put up on Highway #1 even if it's passable with 1 lane.
6. Very accurate planning and reporting needs to take place so that businesses can inform their customers and suppliers of road conditions during construction.

Thanks,

John Handy,
President Treebones Resort, LLC

Response to John Handy In response to your comment and in consultation with members of the Big Sur business community, the number and timing of necessary lane closures has been reassessed resulting in fewer closures and shorter project duration. Please refer to Sections 2.4.4 and 2.4.5 for a revised discussion of the Traffic impacts anticipated during construction. Furthermore, a Traffic Management Plan, with continued community input and expanded features is proposed for this project to minimize traffic delay and noticing. Please refer to Section 2.4.4

G.12. David Allen

"David Allan"
<davidallan7@hotmail.com>

03/03/2006 04:16 PM

To: wendy_waldron@dot.ca.gov
cc:
Subject: Pitkin's Curve

March 2, 2006
Wendy Waldron,

Here are my comments on the proposed Pitkin's Curve-Rain Rocks project. I totally support the idea. I have worked as a teacher at Pacific Valley School for the last 9 years (and as one of the skiff fishermen out of Mill Creek for about 20 years). I have seen the serious problem areas along the highway in winter, because I have to do a commute along 55 miles of the coast each day.

The Pitkin's Curve has evolved into by far the most dangerous "weak spot" along the highway, and sooner or later serious consequences may occur. I have numerous stories about "close calls" with huge boulders careening down the mountain, narrowly missing my truck. When I approach the area, I always slow way down and check the cliff for active sliding, or boulders starting down. I am glad I have done so, because occasionally not checking would have been disastrous. One time, two years ago, I was following the school bus. Just as the bus passes Pitkin's Curve, a trashcan-sized boulder started rolling down. I stopped. The rock went between me and the bus, missing the bus by about 8 feet. The kids looking out the back had faces of shock!

One friend of mine in Santa Barbara has called the area "Jurassic Park"...an appropriate moniker.

Right now, CALTRANS has done a great job. The large berm has added a lot to the safety. Their diligrncc in clearing and scraping the road is commendable. The berm, however is not sufficient when the storms saturate the mountain above the area. I have seen the huge masses of rock and mud during an active slide period that fill up the berm overnight, and then overflow onto the highway. Then, the local CALTRANS crew has to spend untold hours and resource battling to keep the road clear. I have seen them exposed to danger many times. That mountain could do a BIG slide at any time, and somebody will get killed.

Back when the causeway was built at Rain Rocks to mitigate the rockfall danger (which helped), I was surprised that the causeway stopped short at the north end. It was like a job not finished...the time and money spent, and there was still a dangerous zone unattended. Since then, the Pitkin's Curve slide area has expanded to huge proportions. Your proposal will "finish the job". The rock shed will be a good way to replace the screening stretched over the whole cliff, which has been noted as an environmental blemish, inappropriate to the Big Sur aesthetics and scenery. (actually, the screening has effectively stopped a lot of the dangerous rockfall, but it is temporary, and parts of it are peeling away.)

Keeping this section of the road open is a crucial issue to the local community. In winter, there is a real danger of being sealed-off from access to the outside. We used to consider Nacimiento Road as an "escape hatch", but some new slides there closed the road almost all last winter, and the County and Fort Hunter Liggett has little interest in mitigating that problem. We have school children crossing the Pitkin's Curve each weekday. A major slide could isolate them from their families, and create serious problems, both economic, and family related.

I hope my comments are of some help. If you want more commentary from me, you can reach me at my e-mail address: davidallan7@hotmail.com

Thank you,
David Allan

G.13. Katee Armstrong, resident

katee armstrong
<katee4444@yahoo.com>
04/10/2006 04:41 PM

To: Wendy Waldron
<wendy_waldron@dot.ca.gov>
cc:
Subject: Re: Fwd: Pitkin's Curve/Rain Rock proposal

I support the "do nothing" alternative for Pitkin's Curve for the following reasons:

1. The North side of the Pitkin's Curve slide, where the road to the Twitchel Homestead is, continues to slide. This is apparent when one walks up the Twitchel Road....it is impossible to drive up that road any more. It will soon be gone.
2. To the North of Pitkin's curve, approximately 1/4 mile there is an active rockslide, there are rocks on the road continuously.
3. Just to the north of this active rock slide (Paul's Slide) there is about a 300' length of road that is being covered over by the mountain on the inland side. The mountain is pushing across the road surface, making the Highway a wide 1 and 1/2 lane roadway. it gets a little narrower every time I drive over it.
4. Over this very rainy spring there seems to have been little significant movement in the slide at Pitkin's Curve, and what movement there is has been caught by the large berm along side the Highway. Right now Pitkin's Curve is fairly stable. Which is not the case just to the North of it. I feel that creating a bridge and/or rock shed in the Pitkin's Curve will be a waste of time and money. It seems to me that the area 1/4 to 1/2 mile North of Pitkin's Curve is where great efforts need to be made to keep the Highway open.

Thank you for this opportunity to express my views.
Katee Armstrong,
Resident South Coast Big Sur
>

Response to Katee Armstrong

The Pitkins Curve/Rain Rocks location costs more to restore and maintain than any location on the Big Sur Coast Highway. Between 1998 and 2004, an approximate total of \$8 million has been spent at this location to keep Highway 1 open; more than one million dollars annually. By comparison, the other unstable Big Sur Coast

Highway locations needing regular maintenance, including those mentioned in your letter, require between \$10,000 and \$20,000 each year. Geologists have evaluated the slide and concluded that it will continue to move, cause repeated highway destruction and, likely, sever the highway again.

G.14. Sam Farr, Congressman

State of California

Business, Transportation and Housing Agency

M e m o r a n d u m

To: Wendy Waldron
Environmental Planner

Date: April 3, 2006

From: Aileen K. Loe
DEPARTMENT OF TRANSPORTATION
District 5

Subject: Pitkins Curve DEIR--Comments from Congressman Sam Farr

I received a voice mail message from Congressman Farr on March 21, 2006 with comments on the proposed project at Pitkins Curve. I followed up with his office suggesting that his comments be submitted to us in writing. In the event that no written correspondence is received directly from his office, however, please consider this as part of the input received for the record as I believe that was his intent.

The following is my capture (and not a verbatim transcript) of his comments as recorded on voice mail:

I have received the report about the shed and the bridge...and am unable to attend the hearing tonight in Big Sur.

- 1) I am very, very concerned about lighting (of the proposed rockshed). There is no other night lighting on the coast, other than the Pacific Valley Fire Station, which is being changed to a down-light. This is a magnificent vast space of no lights; it's a wonderful part of the wilderness which the Local Coastal Plan and everything else says we have to maintain.*
- 2) Is the rockshed really that important? I see the less intrusive of the two options is the netting, from a distant vista/look.*
- 3) Are you going to use context sensitive design for the materials in the bridge and setting to make it blend in with the same colors and background so that you don't even notice that they are there? I hope so.*
- 4) I want to make sure that the intent of the CHMP (Big Sur Coast Highway Management Plan) is upheld where we don't need to find an engineering solution for every problem. Leave it in its craggy old place is still what I support.*

Thank you.

Response to Congressman Farr

STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY

ARNOLD SCHWARZENEGGER, Governor

DEPARTMENT OF TRANSPORTATION

50 HIGUERA STREET
SAN LUIS OBISPO, CA 93401-5415
PHONE (805) 549-3111
FAX (805) 549-3329
TDD (805) 549-3259
<http://www.dot.gov/dist05>



*Flex your power!
Be energy efficient!*

April 6, 2006

Honorable Sam Farr
U.S. Representative, 17th District
100 West Alisal Street
Salinas, CA 93901

Dear Congressman Farr:

COMMENTS ON THE PROPOSED PITKINS CURVE IMPROVEMENT PROJECT

Thank you for taking the time to call our staff on the date of the public hearing in Big Sur (March 21) about the bridge and rockshed proposal at Pitkins Curve. I want to assure you that the Department of Transportation (Caltrans) will carefully consider and address your concerns in making decisions about the project. In response to the specific points you raised with my staff, I offer the following:

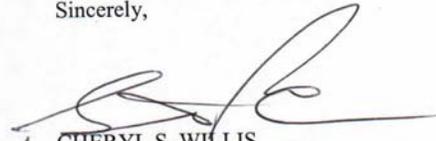
- 1) Lighting inside the proposed rockshed
Based on current information, it appears that lighting is not required for rocksheds (as for tunnels) and therefore will not be included with the project.
- 2) Necessity of the rockshed considering that the less visually intrusive option is the netting (Alternative 2)
The visual impacts of the project, as you point out, are critical to the Department in selecting an alternative.
- 3) Use of context sensitive design for the materials and color of the bridge so that it blends in with its natural setting
Caltrans will work with an Aesthetics Design Advisory Committee (ADAC), which includes members of the community, to achieve visual compatibility of the design and materials relative to its setting.
- 4) Consistency of the proposal with the Big Sur Coast Highway Management Plan (CHMP) including the idea that engineering solutions should not be pursued for every problem that arises on this coast.
The CHMP is the guiding document that has influenced the development of the alternatives (i.e., engineering solutions that allow natural geologic processes to continue) and formation of the ADAC for the community's involvement in our design decisions.

"Caltrans improves mobility across California"

Congressman Samuel Farr
April 6, 2006
Page 2

I thank you again for providing your input on this important project. Please let me know if you have any further questions, or if you wish to discuss the project in more detail, please contact Steve Price, District Deputy Director for Maintenance and Operations at (805) 549-3281.

Sincerely,



CHERYL S. WILLIS
Acting District Director

"Caltrans improves mobility across California"

G.15. Ann Hobson, resident

Ann Hobson
<a1rn@direcway.com>

03/30/2006 02:56 PM

To:

@dot.ca.gov

cc:

Subject: Pitkins Curve-Rain Rocks

wendy_waldr

Thank you Wendy for the good information about the area. I think the tunnel is a good idea. We have them in Northern California for trains to keep things moving. As long as that area keeps moving, which is probably always, there needs to be provision for an open highway. I am assuming that the large slide area will slide under the bridge - that is good but I am concerned about the rocks that bounce down and can land on the bridge and maybe a car. Why not have a covered bridge to connect with the covered roadway? I look forward to hearing the results and commend the thoughts and courage that have gone into the presentation of this concept.

Ann Hobson,
Big Sur

Response to Ann Hobson

Please refer to Section 1.4.5 for a discussion of the tunnel alternative. The bridge would be designed so that its alignment is outside the slide zone and rocks can tumble beneath it.

G.16. Lorri, Robert, and Ann Lockwood, residents

P.O. Box 264
Big Sur, Ca. 93920
3 March 2006

RE: Pitkins Curve & Drain Rocks

Caltrans:Attention Wendy Waldron
50 Higuera St.
San Luis Obispo, Ca. 93401

Dear Ms. Waldron:

At last! Have been wishing for a bridge and rock
shed for the 25 years we've owned land and lived in
Big Sur.

The delays in construction will be off-set by the
delays we tolerate yearly due to big/little slides, etc.

National emergency routes out of Big Sur need to be
in top shape as well as for fire, earthquake.

Thank you for working to get the \$ together to proceed
with this project.

Sincerely, ,

Lorri

Lorri, Robert, Ann Lockwood
Clear Ridge Rd. at Hwy. 1

Response to the Lockwoods

No response necessary.

G.17. R Macedo

rmacedo@co.slo.ca.us

02/28/2006 12:00 PM

To: wendy_waldron@dot.ca.gov

cc:

Subject: Support for Proposed Bridge and Rock Shed on SR 1

I agree that a new bridge/rock shed is essential to insure that SR 1 stays open for public safety, environmental protection and commerce on the central coast of California.

Response to R. Macedo

No response necessary.

G.18. Connie McCoy, resident

Connie McCoy
<conicoy@earthlink.net>
04/06/2006 05:57 PM

To:
cc:
Subject: Pitkins Curve

wendy_waldron@dot

Dear Ms. Waldron,

Thank you for the opportunity to comment on the Pitkin Curve/ Rain Rock Caltrans project. I am sorry I did not attend the March 21st public hearing but at the time I had no reservations about the proposals offered. Like most Big Sur residents I will agree it is a major inconvenience, not to mention a dangerous situation when things are moving at Pitkins/Rain Rock. I have lived on the south coast of Big Sur, both at Lucia and presently Pacific Valley for over 30 years and I appreciate all the efforts of Caltrans in keeping Hwy 1 open and safe. I did not appreciate aesthetically the installation of the wire barrier north of Big Creek nor the wire net over Rain Rock but accepted the concept in terms of safety.

That said I'll get to my point in writing. Having heard (perhaps erroneously) that the proposed rock shed would involve the use of round the clock lights I must say that is something that I would not support and would vigorously oppose. One of the best things about Big Sur is the lack of light pollution. You may have no idea of the distance from which even a small inconspicuous light can be seen in an environment like Big Sur. Under foggy conditions the effect is even worse. Many people I have spoken to share my concerns. I have passed my concerns on to Kate Novoa who is our local representative on the Aesthetics Committee. I would appreciate any additional information you can give me on monitoring this situation and further making my and my neighbors' concern on this issue heard.

Thank you very much.

Connie McCoy

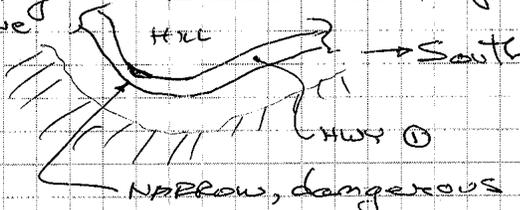
Response to Connie McCoy

Additional design studies concluded that no lighting is required nor would be included in the rock shed.

G.19. Howard Newman

HOWARD NEWMAN COMPANY		
Client	Wendy Waterrow	Date
Subject	Pitkins	Page
Fax:	Address:	

Wendy, several thoughts:

- 1) Definite Yes on the bridge.
- 2) Yes on the rock shed, but NO on its' design! It is out of keeping with the setting, looks like a warehouse. What matters is the western "wall." Reduce it to one or 2 arches, or fewer posts or etc.
- 3) also there is a need to cut back the hill perhaps 4 ft at the very tight narrowing a mile or 2 north of the county line.
 
- 4) Also, the CALTRANS equipment yard, etc just north of Garda is an eyesore, in violation of the 1972 Coastal Act. Bushes are needed to hide it from the road.

Thank you HW

2008 La Brea Terrace Los Angeles, CA 90046 / Fax 213 • 878 • 0443 / Phone 213 • 876 • 0066

Response to Howard Newman

- 1) No response required.
- 2) The photo simulations of the rock shed were not intended to depict the actual design; rather they were intended to show a generic-style rock shed. The actual rock shed design would incorporate recommendations

from a community-based aesthetic design advisory committee and be subject to review during the local coastal development permit process to ensure a design that is suited to the Big Sur coast.

- 3) Caltrans maintenance forces consistently monitor Highway 1 for safety and have been informed of your concerns as depicted in your letter.
- 4) The Willow Springs maintenance station is currently undergoing design revisions, including aesthetic considerations and planting.

G.20. Frank Pinney, Big Sur Volunteer Fire Brigade



COMMENT CARD

NAME: FRANK PINNEY

ADDRESS: PO BOX 683 CITY: BIG SUR ZIP: 93920

REPRESENTING: BIG SUR VOLUNTEER FIRE BRIGADE

Do you wish to be added to the project mailing list? YES NO

Please drop comments in the Comment Box or

Mail to: **CALTRANS DISTRICT 5** * PAST EXPERIENCE:
 Environmental Branch
 Wendy Waldron
 50 Higuera Street
 San Luis Obispo, CA 93401

I SERVED AS INCIDENT COMMANDER DURING THE "SHUTTER IN PLACE" EVENT ON THE BIG SUR COAST WINTER 1998.

I would like the following comments filed in the record (please print):

ALL HWY CLOSURES TO BE COORDINATED WITH BS CHAMBER OF COMMERCE AND EMERGENCY SERVICES (BIG SUR FIRE, ETC.)

IT APPEARS THAT THERE IS GENERAL AGREEMENT WITH YOUR PROPOSED SOLUTION. I URGE YOU TO MAINTAIN YOUR INTEREST AND CONCERN FOR THE RESIDENTS AND BUSINESSES ONCE THE PROJECT BEGINS. YOUR CONTRACTOR SHOULD ^{ALSO} BE REQUIRED TO HAVE A LIAISON WITH THE COMMUNITY SIMILAR TO YOUR OWN TO ASSURE THE ACCOMMODATIONS FOR LOCAL CONCERNS ARE SUSTAINED AT THE WORKING LEVEL. * THIS NEED HAS BEEN DEMONSTRATED IN ALL OF THE PAST PROJECTS OF SCALE AND ESPECIALLY THE WINTER OF 1998.

Please respond by April 7, 2006

How Did You Hear About This Meeting? newspaper newsletter someone told me about it other: BIG SUR CHAMBER OVER →

Response to Frank Pinney

In response to your comment and in consultation with members of the Big Sur business community, the number and timing of necessary lane closures has been reassessed resulting in fewer closures and shorter project duration. Please refer to

Sections 2.4.4 and 2.4.5 for a revised discussion of the Traffic impacts anticipated during construction. Furthermore, a Traffic Management Plan, with continued community input and expanded features is proposed for this project to minimize traffic delay and noticing. Please refer to Section 2.4.4

G.21. Bonnie Svardal

"Svardal, Bonnie E. x4448"
<svardalbe@co.monterey.ca.us>

To: <wendy_waldron@dot.ca.gov>
cc:
Subject: Pitkins Curve & Rain Rocks Highway
Improvement Project
03/15/2006 04:15 PM

I would like to endorse the proposal for a bridge over the Pitkins Curve slide area. Any traffic disruption would be temporary and in the long term would prevent the kind of road closures such as the 1983 slide that kept Hwy. 1 closed for almost a year. That slide was further north near Julia Pfeiffer Burns State Park. Nevertheless, this seems a logical solution and will avoid dangerous slides in that location for motorists and workers.

Bonnie Svardal
622 Carmelita Dr. #1
Salinas, CA 93901
bsvardal@netscape.com
831-753-2071

Response to Bonnie Svardal

No response required.

G.22. *Mary Trotter*



COMMENT CARD

NAME: *Mary Trotter*

ADDRESS: *Box 132* CITY: *Big Sur* ZIP: *93920*

REPRESENTING: _____

Do you wish to be added to the project mailing list? YES NO
 Please drop comments in the Comment Box or *already in it I think*

Mail to: **CALTRANS DISTRICT 5**
Environmental Branch
Wendy Waldron
50 Higuera Street
San Luis Obispo, CA 93401

I would like the following comments filed in the record (please print):

I am very enthusiastic about project that lets the
natural processes of sidehill slough off continue.

I am in support of rockshed because it seems
most cost effective and provides most safety for
travelers. However it is very important to manage the
2 (bridge & rockshed). Most important views to consider
should be from roadway, pullouts & on shore rather
than off shore views.

As to rightwork, crew safety should be most
important factor.

Road closure info should be on Caltrans, CHP & MAF phone lines
Please respond by April 7, 2006 *as well as a website*

How Did You Hear About This Meeting? newspaper newsletter someone told me about it other: *direct notice*

Response to Mary Trotter

The bridge and rock shed design will consider both structures and their close proximity. Most prevalent views to the structures will receive the strongest consideration. Please refer to Section 2.4.4 for discussion of efforts to minimize traffic impacts during construction.

G. 23 California Regional Water Resources Control Board Central Coast Region



Linda S. Adams
Secretary for
Environmental Protection

**California Regional Water Resources Control Board
Central Coast Region**

Internet Address: <http://www.waterboards.ca.gov/centralcoast>
895 Aerovista Place – Suite 101, San Luis Obispo, CA 93401-7906
Phone (805) 549-3147 • FAX (805) 543-0397



Arnold Schwarzenegger
Governor

July 7, 2006

Ms. Wendy Waldron
California Department of Transportation
50 Higuera Street
San Luis Obispo, CA 93401

Dear Ms Waldron:

**RE: HIGHWAY 1 IMPROVEMENTS AT PITKINS CURVE/RAIN ROCKS; DRAFT EIR AND
PROJECT WATER QUALITY COMMENTS**

We appreciate the opportunity to comment on the Draft Environmental Impact Report, and proposed mitigation measures (site specific-Stormwater Pollution Prevention Plan, Best Management Practices and Erosion Control) for the Pitkins Curve/Rain Rocks Highway 1 Improvements Project. We understand the challenge CalTrans faces in working with a portion of this geologically mapped three square mile landslide, and the significant erosion potential of landslide debris material.

A certain amount of erosion and sedimentation is a natural process in this area due to the presence of a landslide with a toe near the shoreline. Regional Water Board concern is only intended to address erosion and sedimentation above the natural occurring rate and as a result of human activities. Therefore, the mitigation plans should focus primarily on the areas of vehicle and construction equipment access and sediment/soil/rock stockpiles. Water Board staff recommends efforts to minimize the footprint of those areas.

Also, Water Board staff recommends water management efforts in the upper portions of the landslide mass to minimize erosion and sedimentation and reduce the frequency of emergency repair. For example, fire suppression reservoir(s) used by California Department of Forestry to fight wildfires are located on the upper part of the slide and have ineffective bottom liners, recharging the slide mass with water, near the landslide's highest elevation. Second, springs along the Sur fault (cutting through the upper part of the landslide mass) have been developed for water supply and leak into landslide fissures. Anything CalTrans can do to mitigate these issues would ultimately benefit water quality.

Water Board staff looks forward to working with CalTrans staff to develop site-specific pollution prevention plans and field modifications as needed. If you have questions, please call Lou Blanck at (805) 542-4626.

Sincerely,

Roger W. Briggs
Executive Officer

S:/CEQA/Comment Letters/Monterey County/Pitkins Curve-Rain Rocks CalTrans DEI

Response to California Regional Water Resources Control Board Water management efforts are standard requirements as set forth in our Caltrans NPDES permit, SWMP and Storm Water Manuals and apply to all projects within our right of way. Water Board staff recommendations regarding water management efforts in the upper portions of the landslide mass are directed to area outside our jurisdiction and beyond the scope of this project.

