Buckhorn Grade Improvement Project

State Route 299 in Trinity and Shasta Counties
02-TRI-299-70.2/72.2
02-SHA-299-0.0/R7.6
02-270310

Final Environmental Impact Report/ Environmental Assessment

The environmental review, consultation, and any other action required in accordance with applicable federal laws for this project is being, or has been, carried out by the California Department of Transportation under its assumption of responsibility pursuant to 23 U.S. Code 327.

August 2009

Caltrans

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California Department of Transportation
Finding of No Significant Impact

for

State Route 299
Buckhorn Grade Improvement Project

The California Department of Transportation (Caltrans) has determined that Alternative BH12 will have no significant impact on the human environment. This Finding of No Significant Impact is based on the attached Environmental Assessment, which has been independently evaluated by Caltrans and determined to adequately and accurately discuss the need, environmental issues, and impacts of the proposed project and appropriate mitigation measures. It provides sufficient evidence and analysis for determining that an Environmental Impact Statement is not required. Caltrans takes full responsibility for the accuracy, scope, and content of the attached Environmental Assessment and incorporated technical reports.

The environmental review, consultation, and any other action required in accordance with applicable federal laws for this project is being, or has been, carried-out by Caltrans under its assumption of responsibility pursuant to 23 U.S. Code 327.

7/31/09
Date

John Bulinski
District Director
California Department of Transportation

SCH# 20020522057
02-TRI-299-70.2/72.2
02-SHA-299-0.0/R7.6
02-270310

Realign State Route 299 in Trinity and Shasta Counties from 2.0 miles west of the Shasta County line to 0.6 miles west of Crystal Creek Road

FINAL ENVIRONMENTAL IMPACT REPORT/ ENVIRONMENTAL ASSESSMENT

Submitted Pursuant to: (State) Division 13, California Public Resources Code
(Federal) 42 U.S. Code 4332(2)(C) and 23 U.S. Code 327

THE STATE OF CALIFORNIA
Department of Transportation

7/31/09
Date of Approval

John Bulinski
District Director
California Department of Transportation

Summary

The proposed project is a joint project by the California Department of Transportation (Caltrans) and the Federal Highway Administration and is subject to state and federal environmental review requirements. Project documentation, therefore, has been prepared in compliance with both the California Environmental Quality Act and the National Environmental Policy Act. Caltrans is the lead agency under the California Environmental Quality Act. In addition, the Federal Highway Administration's responsibility for environmental review, consultation, and any other action required in accordance with applicable federal laws for this project is being, or has been, carried out by Caltrans under its assumption of responsibility pursuant to 23 U.S. Code 327.

Some impacts determined to be significant under the California Environmental Quality Act may not lead to a determination of significance under the National Environmental Policy Act. Because the National Environmental Policy Act is concerned with the significance of the project as a whole, it is quite often the case that a "lower level" document is prepared for the National Environmental Policy Act. One of the most commonly seen joint document types is an Environmental Impact Report/Environmental Assessment.

Following receipt of public comments on the Draft Environmental Impact Report/Environmental Assessment and circulation of the Final Environmental Impact Report/Environmental Assessment, Caltrans is required to take actions regarding the environmental document and determines whether to certify the Environmental Impact Report and issue Findings and a Statement of Overriding Considerations under the California Environmental Quality Act. Caltrans also decides whether to issue a Finding of No Significant Impact or require an Environmental Impact Statement under the National Environmental Policy Act.

Proposed Action

Caltrans in partnership with Shasta, Trinity, and Humboldt Counties proposes to improve the Buckhorn Grade portion of State Route 299 in Trinity and Shasta Counties from 2.0 miles west of the Shasta County line to the western boundary of the Whiskeytown-Shasta Trinity National Recreation Area in Shasta County. Although the official project limits extend into Trinity County (PM 70.2/72.2), construction will occur only on the Buckhorn Grade portion of State Route 299, which is located entirely within Shasta County (PM 0.0/R7.6). Construction activities in Trinity County will be limited to placement of signs and traffic control.

The purpose of the project is to improve interregional travel, improve safety and traffic operations, and provide improved access between U.S. Highway 101 and Interstate 5 for Surface Transportation Assistance Act trucks and recreational vehicles. The project is needed in order to provide a safer, more reliable, and more efficient facility.

The project proposes to improve the safety and efficiency of the highway by realigning the roadway along the existing alignment. Improvements will include standard roadway and shoulder widths, a new alignment with a 40-mile per hour (mph) to 50-mph design speed (depending on which alternative is selected), an 8 percent maximum grade, passing/climbing lanes, and improved superelevation rates and transition distances.

The following alternatives were developed for the project and generally follow the existing alignment: Alternative BH4, Alternative BH5, Alternative BH6, and Alternative BH12. The design speed varies among the alternatives and all four alternatives share a common alignment at both the beginning and end of the project. The environmental impacts of this project will be similar for each of these alternatives, except where noted in this document.

Alternative BH4

Alternative BH4 has a design speed of 40 mph and is a 5.03-mile segment within the project limits with a maximum grade of 8 percent for approximately 1.5 miles. Earthwork for this alternative totals approximately 3.6 million cubic yards and will disturb an area of approximately 103 acres.

Alternative BH5

Alternative BH5 is a 4.8-mile segment within the project limits with a maximum grade of 8 percent for approximately 2.3 miles. The design speed for this alternative is 50 mph; however, there is one 40-mph curve approximately 3.3 miles from the summit at Water and Trail Gulches. Earthwork for this alternative totals approximately 5 million cubic yards and would disturb an area of 114 acres. The western end of this alternative would be difficult to construct in segments due to the difference in elevations between the proposed alignment and the existing profile.

Alternative BH6

Alternative BH6 is a 4.9-mile segment within the project limits with a maximum grade of 8 percent for approximately 2.5 miles. The design speed for this alternative is 50 mph; however, there is one 40-mph curve approximately 3.3 miles from the

summit at Water and Trail Gulches. Earthwork for this alternative totals approximately 6.3 million cubic yards and would disturb an area of 147 acres.

Alternative BH12

Alternative BH12 is a 5.11-mile segment within the project limits with a maximum grade of 7.7 percent for approximately 2.0 miles. The design speed for this alternative is 45 mph; however, there is one 40-mph curve approximately 1.8 miles from the summit. Earthwork for this alternative totals approximately 3.4 million cubic yards and will disturb an area of 101 acres.

Project Impacts

Timber Production Zone Lands

Two parcels of land within the project area are classified as Timber Production Zones. The two parcels total approximately 581 acres, and of this area, between 29 and 34 acres would be acquired as new right-of-way for the project. The California Secretary of Resources and Shasta County will be notified in writing if right-of-way is to be acquired from properties with contracts involving Timber Production Zones.

Relocation

One residential property will be purchased and the occupants will be relocated as a result of the project. Adequate housing is expected to be available to allow for this relocation. Caltrans' Relocation Assistance Program will be followed to ensure that any persons displaced as a result of this project will be treated fairly, consistently, and equitably.

Visual/Aesthetics

Construction of the project would result in a substantial alteration to the visual environment. Methods of construction in this area are, to a large extent, dictated by terrain and geologic conditions. The prevalence of decomposed granitic soils is just one of the elements that limit feasible construction options. Construction would result in large, bare cut and fill slopes, which will conflict with the intent of the Trinity Scenic Byway designation. Although visual impacts will be reduced through the implementation of minimization and mitigation measures, the project will nevertheless result in a significant impact to visual resources.

Cultural Resources

Caltrans has determined that the proposed project would adversely affect one historic property. The State Historic Preservation Officer and Caltrans have negotiated a Memorandum of Agreement, which includes stipulations to take into account the

proposed project's effects on these properties. The Memorandum of Agreement ensures that the adverse effects of the project are resolved by implementing Data Recovery and Environmentally Sensitive Area Action Plans.

Water Quality/Storm Water

The proposed alternatives would require substantial earthwork operations (cut and fill slopes) and would impact natural drainage patterns. The potential for erosion of slopes and siltation in downstream waterways is substantial. A Storm Water Pollution Prevention Plan will be developed for the project and will outline construction Best Management Practices to be used to minimize adverse effects on water quality.

Biological Resources

The following natural communities, wetlands and waters of the United States, special status plant, and special status animal species are found within the environmental study limits:

Alkali Seep – Alkali seep habitat is present within the environmental study limits. The total seep area is approximately 1.2 acres and is located adjacent to State Route 299. The alkali seep habitat is located at the eastern end of the project where construction activities will be limited to placement of signs and traffic control. With implementation of avoidance and minimization measures, impacts to alkali seep habitat are not expected to occur.

Riparian Habitat – The project would result in the disturbance of up to 0.45 acre of riparian vegetation. Riparian habitat losses would be mitigated through a combination of replacement and enhancement of existing riparian habitat. Replacement of any losses would be at a proposed ratio of 1:1 and enhancement would be at a ratio of 2:1. During final project design, a revegetation and restoration plan will be developed that will provide detailed plans for replacement and enhancement, preferably within the project area.

Oak Woodlands – The project would result in up to 95.1 acres of direct impacts to oak-dominated woodlands, depending on the alternative selected. Caltrans would compensate for the impacts to oak woodlands by in-kind creation/restoration and preservation of oak woodlands on abandoned sections of the existing roadway alignment, as well as on newly acquired parcels as needed.

Migration Corridors – Various terrestrial wildlife species are likely to use the creeks and tributaries in the area, as important movement corridors. Creation of wildlife

underpasses or similar structures, particularly along creeks and other natural features that run under the highway, and placement of fencing to direct animals to safe crossing areas would reduce impacts to wildlife species in the project area.

Wetlands and Other Waters of the U.S. – Depending on the alternative, the proposed project would permanently impact up to 0.42 acre of potentially jurisdictional wetlands and up to 1.00 acre of other waters of the U.S. With the implementation of Best Management Practices, temporary impacts to jurisdictional wetlands and other waters of the U.S. are not expected to occur. Compensatory mitigation is necessary to offset permanent wetland losses. Compensation for potential impacts to federally jurisdictional wetlands would be mitigated at a ratio to be determined in consultation with the U.S. Army Corps of Engineers. Compensation for potential impacts to state jurisdictional waters would be mitigated at a ratio to be determined in consultation with the Regional Water Quality Control Board.

Threatened and Endangered Species – The following threatened and endangered species may be present in the proposed project area:

- Howell's Alkali Grass (*Puccinellia howellii*) – This population does not occur within the cut-and-fill lines of the project, so it is not likely to be affected directly as construction activities in this portion of the project will be limited to placement of construction signs and traffic control. Environmentally Sensitive Area fencing will be placed around the population prior to construction to prevent any disturbance from construction-related activities.
- Wolverine (*Gulo gulo*) - The project area is located in the extreme low end of the wolverine elevation range. Wolverines are sensitive to human disturbance such as the existing state highway running through the project area. It is unlikely that wolverines would remain in the environmental study limits for any significant length of time, although they may travel through the area.
- Bald Eagle (*Haliaeetus leucocephalus*) - Eagles have been seen in the area but are more often found at nearby area lakes. Since this species would likely only travel through the environmental study limits in a transitory manner, no project impacts are expected.
- Northern Spotted Owl *(Strix occidentalis caurina)* - The project is not expected to affect nesting or roosting habitat for northern spotted owl. The project would result in the disturbance of up to 41.3 acres of potential northern spotted owl foraging habitat. Pre-construction surveys will be conducted to determine whether there are nesting owls within a 1.3-mile radius of the environmental

study limits; however, construction of the project is likely to have little effect on the availability of foraging habitat. There would be no impacts to the species, if nesting or resident northern spotted owl are not found within 1.3 miles of the environmental study limits.

This project is not likely to jeopardize the continued existence of any listed species or proposed to be listed species if avoidance, minimization, and mitigation measures are successfully implemented.

Other Special Status Species

- Pallid bat (*Antrozous pallidus*)
- Townsend's big-eared bat (*Corynorhinus townsendii*)
- Spotted bat (*Euderma maculatum*)
- Long-legged myotis (*Myotis volans*)
- Ringtail (*Bassariscus astutus*)
- Pacific fisher (*Martes pennanti*)
- American badger (*Taxidea taxus*)
- Cooper's hawk (*Accipiter cooperi*)
- Northern goshawk (*Accipiter gentiles*)
- Sharp-shinned hawk (*Accipiter striatus*)
- Yellow warbler (*Dendroica petechia*)
- Yellow-breasted chat (*Icteria virens*)
- Osprey (*Pandion haliaetus*)
- Purple martin (*Progne subis*)
- Northwestern pond turtle *(Emys marmorata marmorata*)
- California horned lizard (*Phrynosoma coronatum frontale*)
- Western tailed frog (*Ascaphus truei*)
- Foothill yellow-legged frog (*Rana boylei*)

The project footprint will be minimized prior to construction to avoid and minimize impacts to special status species. Vegetation removal, including riparian habitat, oak woodlands, and mature trees will also be minimized. Removal of vegetation will take place outside the breeding season for migratory birds, bats, and ringtails, so that potential effects upon breeding activity will be avoided. Areas temporarily impacted will be revegetated with native plants.

Construction

Temporary traffic delays would occur during construction of the project. A Traffic Management Plan will be developed to implement methods to reduce impacts from construction activities, minimize delays for motorists, and provide a safe construction zone. The plan will also address cumulative impacts resulting from other concurrent construction projects within the State Route 299 corridor.

The project would result in potentially adverse impacts to water quality during construction. Soil erosion would, especially during heavy rainfall, increase suspended solids, dissolved solids, and organic pollutants in the receiving waters of the project area. These conditions would likely persist until construction has been completed and long-term erosion control measures have been implemented. The National Pollutant Discharge Elimination System permit requires Caltrans to address the potential impacts of construction on water quality in the design and construction phases of the project.

Summary of Major Potential Impacts from Alternatives

Potential Impact		Alternative BH4	Alternative BH5	Alternative BH6	Alternative BH12	No Build Alternative
Timber Production Zone (TPZ) Lands		33 acres will be acquired	29 acres will be acquired	30 acres will be acquired	34.3 acres will be acquired	No impact
Land Use	Consistency with Trinity County General Plan	Yes	Yes	Yes	Yes	No
	Consistency with Shasta County General Plan	Yes	Yes	Yes	Yes	No
	Consistency with Humboldt County General Plan	Yes	Yes	Yes	Yes	No
Relocations		1 residence	1 residence	1 residence	1 residence	No impact
Visual/Aesthetics		Large cut and fill areas and removal of vegetation would result in a significant alteration to the visual environment	Large cut and fill areas and removal of vegetation would result in a significant alteration to the visual environment	Large cut and fill areas and removal of vegetation would result in a significant alteration to the visual environment	Large cut and fill areas and removal of vegetation would result in a significant alteration to the visual environment	No impact

Potential Impact	Alternative BH4	Alternative BH5	Alternative BH6	Alternative BH12	No Build Alternative
Cultural Resources	One historic property would be adversely affected	One historic property would be adversely affected	One historic property would be adversely affected	One historic property would be adversely affected	No impact
Water Quality/Storm Water	Potential for erosion and siltation in downstream waterways to be minimized with Best Management Practices	Potential for erosion and siltation in downstream waterways to be minimized with Best Management Practices	Potential for erosion and siltation in downstream waterways to be minimized with Best Management Practices	Potential for erosion and siltation in downstream waterways to be minimized with Best Management Practices	No impact
Riparian Habitat	0.38 acre of disturbance	0.45 acre of disturbance	0.44 acre of disturbance	0.38 acre of disturbance	No impact
Oak Woodlands	69.1acres to be removed	82.5 acres to be removed	95.1 acres to be removed	69.3 acres to be removed	No impact
Wetlands and other Waters	1.23 acres of jurisdictional wetlands to be impacted	1.31 acres of jurisdictional wetlands to be impacted	1.40 acres of jurisdictional wetlands to be impacted	1.18 acres of jurisdictional wetlands to be impacted	No impact
Threatened and Endangered Species	Impacts to Howell's alkali grass, wolverine, bald eagle, and northern spotted owl to be avoided or minimized	Impacts to Howell's alkali grass, wolverine, bald eagle, and northern spotted owl to be avoided or minimized	Impacts to Howell's alkali grass, wolverine, bald eagle, and northern spotted owl to be avoided or minimized	Impacts to Howell's alkali grass, wolverine, bald eagle, and northern spotted owl to be avoided or minimized	No impact
Construction	Delays to motorists; potential impacts to water quality during construction	Delays to motorists; potential impacts to water quality during construction	Delays to motorists; potential impacts to water quality during construction	Delays to motorists; potential impacts to water quality during construction	No impact

The State Historic Preservation Office and Caltrans have negotiated a Memorandum of Agreement, which includes stipulations to take into account the proposed project's effects on historic properties. The Memorandum of Agreement ensures that the adverse effects of the project are resolved by implementing Data Recovery and Environmentally Sensitive Area Action Plans.

Pursuant to Section 7 of the Federal Endangered Species Act, Caltrans entered into informal endangered species consultation with the U.S. Fish and Wildlife Service regarding impacts to federally listed species. In May 2009, the U.S. Fish and Wildlife

Service concurred with Caltrans' determination that the proposed Buckhorn Grade Improvement Project is not likely to adversely affect the federally threatened northern spotted owl *(Strix occidentalis caurina)*.

Coordination with Other Agencies

The impacts identified for this project would require the following permits and approvals:

- Section 404 Permit from the U.S. Army Corps of Engineers for work in jurisdictional waters and wetlands.
- Section 401 Water Quality Certification from the Central Valley Regional Water Control Board.
- Section 1602 Streambed Alteration Agreement from the California Department of Fish and Game.

These permits/approvals may contain restrictions or additional mitigation measures that would be incorporated into the project.

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List of Abbreviated Terms

Caltrans	California Department of Transportation
CEQA	California Environmental Quality Act
FHWA	Federal Highway Administration
mph	miles per hour
NEPA	National Environmental Policy Act
PM	post mile