Mountain Counties Bridge Rails

Four bridges in Alpine County near the town of Markleeville

10-ALP-4/88/89-Various

10-1300-0009

SCH #: 2018022019

Addendum to the Categorical Exclusion/Initial Study with Proposed Mitigated Negative Declaration

Prepared by the

State of California Department of Transportation

March 2020

SCH Number: 2018022019
10-ALP-4/88/89-VAR
10-1300-0009

Upgrade bridge rails to all four bridges in Alpine County on State Routes 4, 88, and 89, near the town of Markleeville. In addition, shoulder widening, and scour mitigation will occur at the Markleeville Creek Bridge on SR 89.

ADDENDUM TO THE CATEGORICAL EXCLUSION/INITIAL STUDY with Mitigated Negative Declaration

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

THE STATE OF CALIFORNIA
Department of Transportation

3-5-2020
Date of Approval

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ENVIRONMENTAL ADDENDUM

Title

Mountain Counties Bridge Rails

Clearinghouse

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EXECUTIVE SUMMARY

This document is an Environmental Addendum to the Categorical Exclusion/Final Initial Study with Mitigated Negative Declaration proposed for the Mountain Counties Bridge Rails Project that was approved on December 28, 2018. A Notice of Determination was adopted on January 17, 2019, and CEQA Findings were made pursuant to the provision of CEQA.

The initial project description proposed to upgrade the existing bridge rails at four locations on State Routes 4, 88, 89, in Alpine County. The Categorical Exclusion/Final Initial Study with Mitigated Negative Declaration determined the project would have no effect on aesthetics, agriculture and forest resources, air quality, cultural resources, geology and soils, hazardous waste and materials, hydrology and water quality, land use, planning, mineral resources, noise, population and housing, public services, recreation, transportation and traffic, as well as, utilities and service systems. In addition, the proposed project would have no significant adverse effect on biological resources because the implementation of mitigation measures would reduce the potential effect to less than significant.

This addendum is necessary to reflect the project work scope changes adopted by the Project Development Team to locations 1, 2, 3, and 4. Minor changes to deck overlay and shoulder widenings are proposed at locations 1 and 4. Location 2 will not be

upgraded and access to the bridge will be blocked off with K-rail. At location 3, Caltrans will construct a new bridge. The detailed scope changes to all locations are discussed below under the heading, Project Description. These changes do not alter the findings of the approved Categorical Exclusion/Final Initial Study with Mitigated Negative Declaration, dated December 28, 2018, State Clearinghouse Number 2018022019, and therefore, the environmental document is still valid.

Project Location

The project consists of four different bridges in Alpine County on State Routes 4, 88, and 89. In general, all four bridges are located within the forested area of the Sierra Nevada Mountains. Two of the bridges, both West Fork Carson River Bridges (Numbers 31-0022 and 31-0005), are located on State Route 88 between Picketts Junction and Woodfords. One bridge, Markleeville Creek Bridge (31-002), is located on State Route 89 in the town of Markleeville. The last bridge, Silver Creek Bridge (31-0001) is located between the State Route 4 and 89 junction and Ebbetts Pass on State Route 4. The exact post mile location of each bridge is listed in both the project vicinity and location maps (see Figures 1 and 2).

Figure 1—Project Vicinity Map

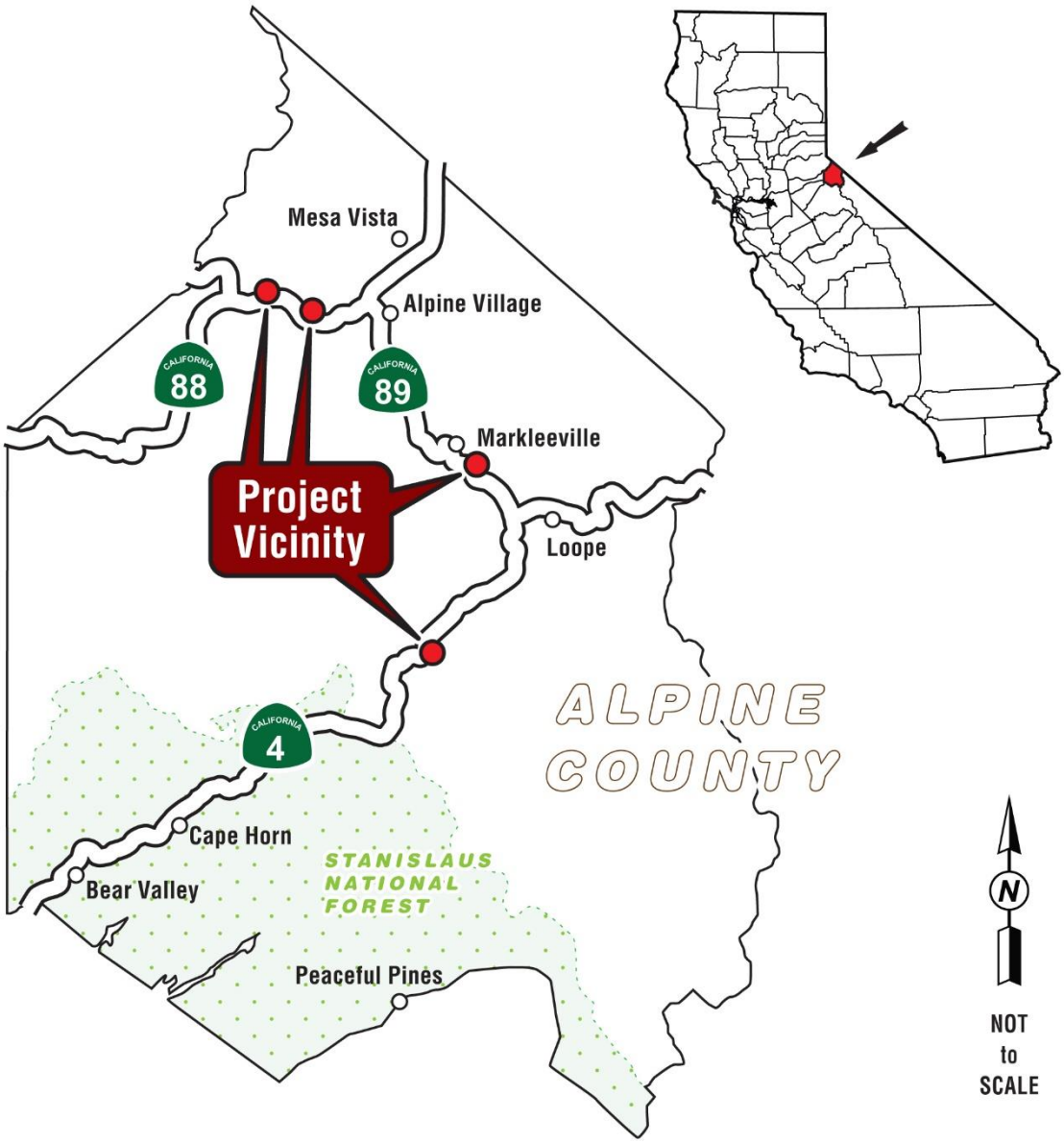
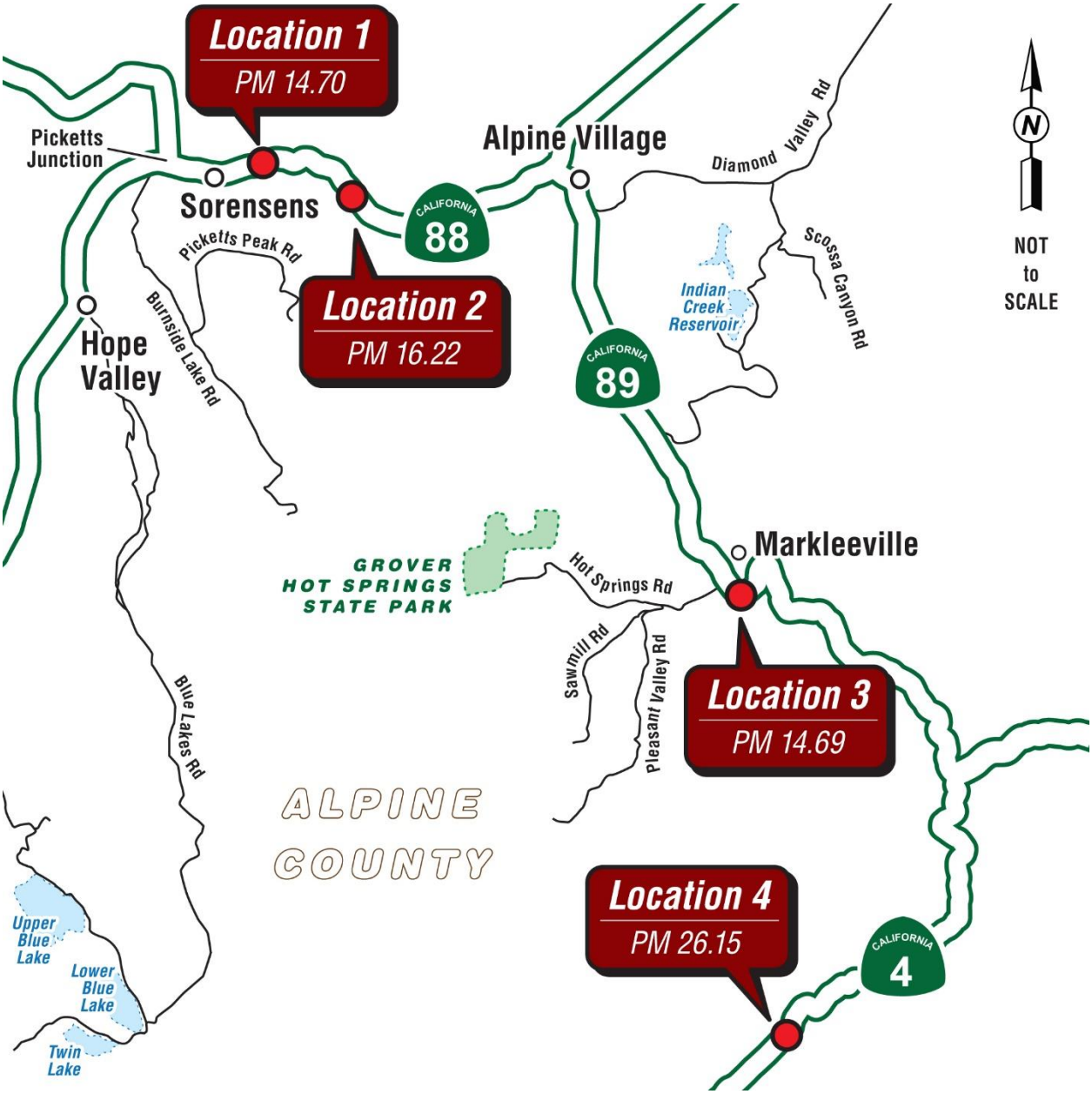


Figure 2—Project Location Map



Project Description

The Final Categorical Exclusion/Final Initial Study with Mitigated Negative Declaration, approved on December 28, 2018, proposed to remove and replace the existing bridge rails at all four locations in Alpine County. In addition to the bridge rail work, the Markleeville Creek Bridge will include shoulder widening to the standard 8-foot shoulders and scour mitigation installed at one its abutments. Below is a detailed discussion on the previous scope of work for each of the four locations, along with the current scope of work changes adopted by the PDT.

Location 1—West Fork Carson River Bridge (31-0022)

The existing concrete bridge rail will be removed and replaced with Concrete Barrier Rail (Type 80 Mod) with Tubular Bicycle Railing. After bridge rail installation, the existing asphalt concrete will be removed from the bridge deck and a 2-inch thick polyester concrete overlay will be installed on the deck. The overlay will be placed on the deck for the entire span prior to finishing the deck to grade (tying into the highway on both ends).

Project scope changes adopted by the PDT for Location 1: The West Fork Carson River Bridge deck will be removed, and a 1-inch thick polyester concrete overlay will be installed on the deck rather than the original 2-inch thick polyester concrete overlay.

Location 2—West Fork Carson River Bridge (31-0005)

The existing timber rail, timber posts, curb, and sidewalk will be removed and replaced with California Type 80 barrier with Tubular Bicycle Railing. After the bridge rail installation, the existing asphalt concrete will be removed from the bridge deck and a 2-inch thick polyester concrete overlay will be installed on the deck. The overlay will be placed on the deck for the entire span prior to finishing the deck to grade.

Project scope changes adopted by the Project Design Team for Location 2:

The West Fork Carson River Bridge has been **removed from the project**. It was determined that since the bridge is off the highway and not on the mainline, it is best for this project to eliminate the scope of work at location 2. The existing bridge will not be upgraded and access to the bridge will be closed off to vehicle traffic with the use of K-rail being placed at the bridge approach and departure points.

Location 3—Markleeville Creek (31-0002)

The bridge abutments will be widened 8 feet to the north (downstream) and 8 feet to the south (upstream) to accommodate bike lanes. In addition, scour mitigation will be placed along the northern bridge abutment in the form of riprap. Both the north and south Markleeville Creek bridge abutments are within the active creek channel and therefore will require in-water work. Temporary diversion dams will be incorporated to divert water flows away from the in-water work areas during the in-water work window (June 1 to October 15). The diversion dams will be composed of washed river gravel, which may be used as potential fish spawning habitat after construction is complete. If flows within the creek are low, the diversion dam may be composed of simple berms and pipes; however, if the flows are higher the diversion dam may include concrete k-rail barriers to bolster the gravel berms. The design of the diversion dams will ensure adequate fish passage during the in-water work window.

It is assumed that staging areas will be on the north and south side of Markleeville Creek Bridge. Construction equipment access to the creek during the in-water work will occur only on the downstream side of the bridge. Vegetation, including riparian habitat, within the staging areas on the upstream side of the bridge, will be removed to accommodate the two-season construction schedule.

To accommodate for the one-lane traffic control during construction, one side of the bridge will be widened during the first stage, while the opposite side of the bridge will be widened during the second stage. The project's construction staging has been designed so that all work in the stream bed will be completed during the in-water work window to minimize impacts to the creek and wildlife. The June 1 through October 15 period is due to the salmonid migration and spawning periods that occur outside of this window.

Project scope changes adopted by the Project Design Team for Location 3:

Due to the age of the bridge and cost savings, Caltrans proposes to **replace the Markleeville Bridge** with a new bridge. The existing Markleeville bridge, including foundations, wingwall and parts of abutments will be removed and replaced with a new 44 foot-wide bridge that will accommodate bike lanes. The roadway shoulders at both sides of the bridge will be widened 8 feet on each side, 16 feet total, to accommodate pedestrian traffic. The embankments will be reconstructed to match the bridge widening. Midwest Guardrail Systems will be installed at all four corners of the bridge. All other work scope and the construction methods discussed in the paragraph above will remain the same.

Location 4—Silver Creek Bridge (31-0011)

The existing metal beam guard rail will be removed and replaced with California ST-70 railings. The bridge will require in-water work in Silver Creek to accommodate 5-foot shoulders on both sides of the bridge. The bridge will be widened 3 feet on both sides by removing and replacing the overhangs. After the bridge rail installation, the existing asphalt concrete will be removed from the bridge deck and a 2-inch polyester concrete overlay will be installed. The overlay will cover the entire span. Construction is anticipated to take two seasons.

Carbon fiber strengthening technique will be employed at the replacement overhang and the existing concrete Tee girders. Carbon fiber strengthening work includes cleaning existing concrete surfaces, spreading a bonding agent to the existing concrete bridge superstructure beams and then applying carbon fiber strips to the bonding agent. Subsequent layers of bonding agent and carbon fiber strips are applied at right-angles to the previous layer to orient carbon fiber strands in different directions from the previous layer to maximize continuity of added strength of fibers.

The platforms and temporary support footings for the temporary falsework will require level ground and will require either a combination of grading and adding gravel within the banks of the Silver Creek. A temporary diversion dam will be placed in the bed of Silver Creek to divert water where temporary footings will be necessary to construct the temporary falsework footing. The temporary diversion dam will be constructed using a combination of multiple materials, such as pre-washed cobbles with gravel, K-rail, precast concrete blocks, rock-filled gabions, thick plastic-rubber-neoprene pool liners, added berm-erosion-control-diversion pipes 12 to 24 inches in diameter, bolted-down or

free-standing pre-fabricated metal or plastic berm liners to support gravel placements on edges of berms, or thick plastic-rubber-neoprene bladders filled with water to line edges of berms.

It is assumed that staging areas and construction access to the creeks during the in-water work window will occur on both sides of the creek on the up- and downstream sides of the bridges. Vegetation (including riparian habitat), within the staging areas on the upstream and downstream sides of the bridge, will be removed to accommodate the two-season construction schedule. Upland vegetation along the upstream and downstream portion of the bridge will be a permanent impact.

Project scope changes adopted by the Project Design Team for Location 4: The Silver Creek Bridge will be widened by 2 feet (1 foot on each side). After the bridge rail installation, the existing asphalt concrete will be removed from the bridge deck and replaced with a 1-inch polyester concrete overlay. Construction is anticipated to take one season and all construction activities will be performed from the bridge deck. Carbon fiber strengthening techniques, platforms, support footing, falsework, and in-water-work will **NOT** be required.

Conclusion

Biological resources were identified as the critical path within the Final Environmental Document. Staff reevaluated the impacts associated with the scoping changes. It was determined that the change in scope lessened the permanent environmental impacts from 1.51 acres to 0.04 acres (see Figures 2C and 2D). An addendum was prepared for the Biological Assessment (Caltrans 2019) and a letter of concurrence was received from the U.S. Fish and Wildlife Service (February 20, 2020). Based upon the current changes to the scope of work, it has been determined by the Project Design Team, that the current Categorical Exclusion/Final Initial Study with Mitigated Negative Declaration is still valid, and no additional technical studies, public notices, or document circulation are required.

Figure 2C—Proposed Impacts

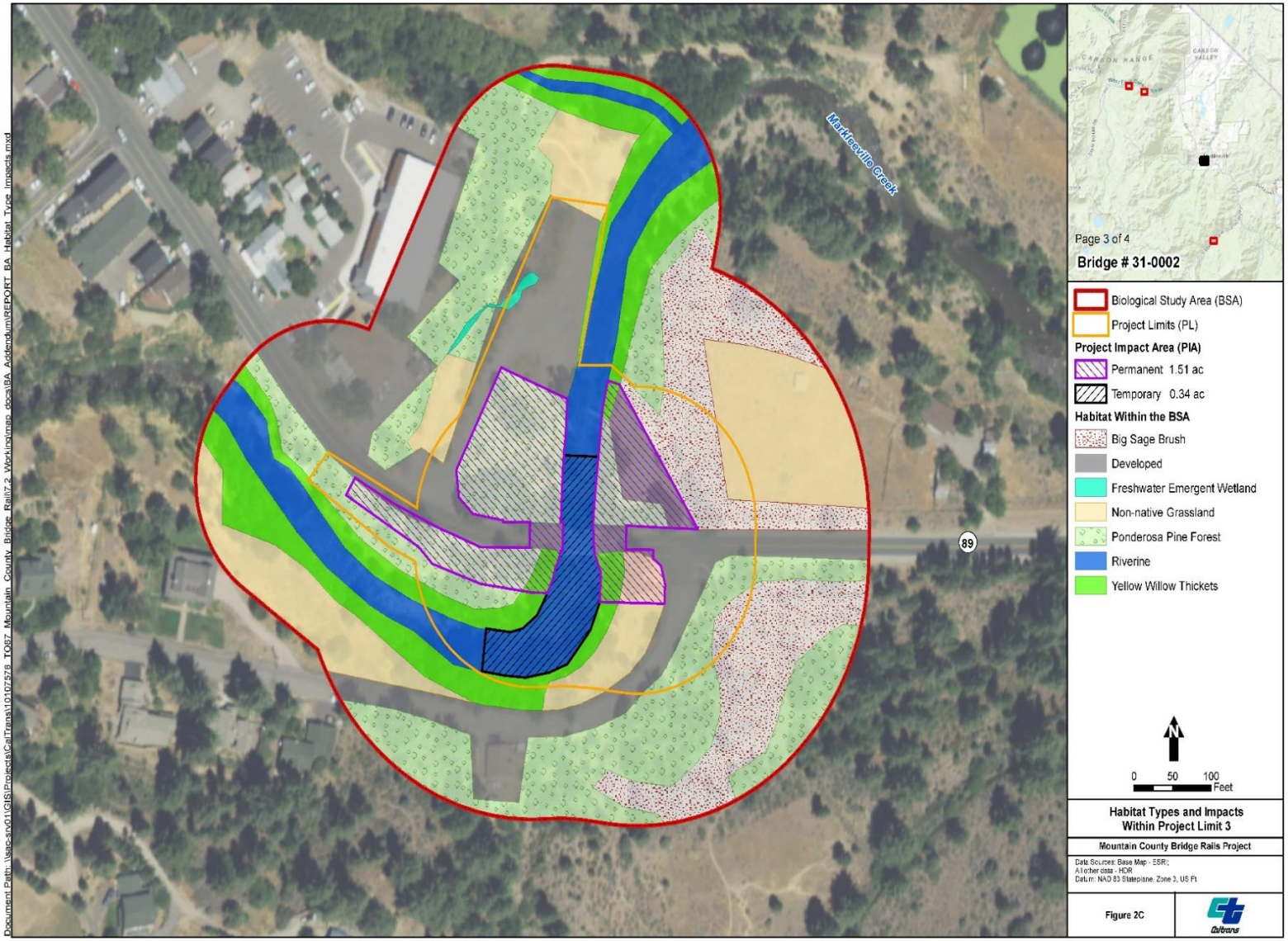
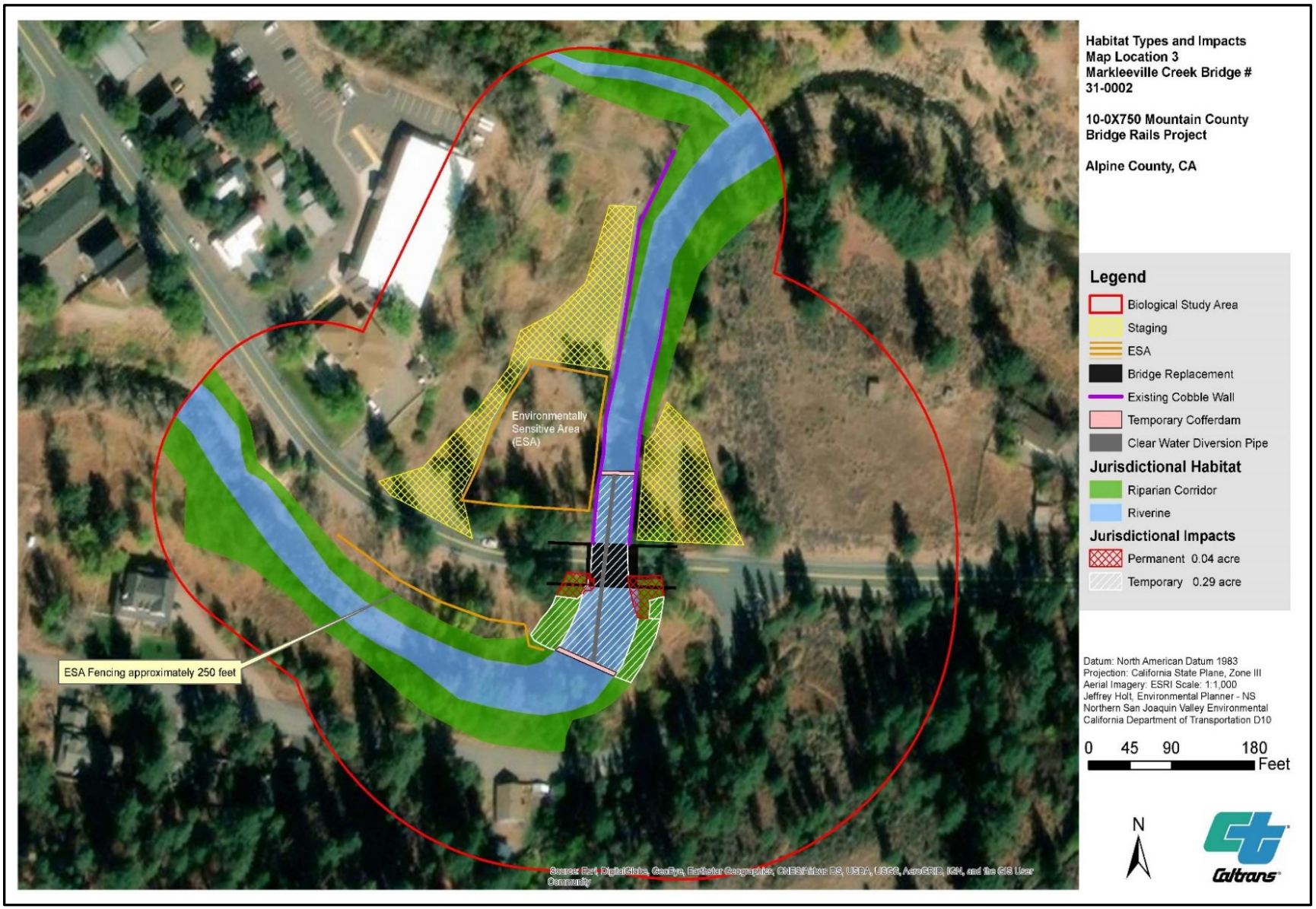



Figure 2D—New Impact Area