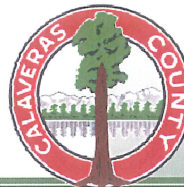


Appendix G

Traffic Memorandum

PUBLIC WORKS CALAVERAS COUNTY



SERVICES

Transit
Land Division
Roads and Bridges
Transportation Planning
Integrated Waste Management
Grading, Drainage and Erosion Control

Jeff Crovitz, PE, Director

June 21, 2016

TO: Caltrans District 10, Office of NEPA Assignment and Environmental Compliance
ATTN: Ms. Haiyan Zhang, Senior Environmental Planner
 Caltrans, Division of Local Assistance
 1976 E. Martin Luther King Jr. Blvd
 Stockton, CA 95205

FROM: Calaveras County Public Works Department
Mark Davis, Senior Engineer *Mark Davis*

Subject: Whiskey Slide Road Bridge at Jesus Maria Creek, 30C0062
 Replacement Project, Federal Project No. BRLO 5930(064)
 Traffic Memorandum

MEMORANDUM

Introduction -- The County of Calaveras, Dept. of Public Works (County) is replacing the existing bridge at Whiskey Slide Road at Jesus Maria Creek, Bridge No. 30C0062. The bridge replacement project is funded through a combination of the California local set-aside from the federal MAP-21 program (replacing the Highway Bridge Program (HBP) funds) and the California Toll Credit program. These funding sources will cover 100% of the costs for the replacement project as long as FHWA and Caltrans programming requirements and authorizations are satisfied.

The project is located in unincorporated, central Calaveras County, California. The town of Mountain Ranch is approximately 2.9 miles southeast of the project site, and California State Route (SR) 49 is approximately 7.3 miles to the west. The project site is located in Section 30 of Township 5 North and Range 13 East of the U.S. Geological Survey (USGS) 7.5-minute "Rail Road Flat" quadrangle map.

The County is planning to replace the existing bridge at Whiskey Slide Road over Jesus Maria Creek (bridge number 30C0062), located 2.7 miles southeast of Jesus Maria Road. The most recent Caltrans bridge inspection report identified the bridge as structurally deficient with a sufficiency rating of less than 50. The federal highway bridge program guidelines provide funding for bridges with a sufficiency rating of less than 80 which are either structurally deficient or functionally obsolete. Bridges that are below 80 qualify for rehabilitation and bridges that are below 50 qualify for replacement or rehabilitation. The purpose of the project is to bring the bridge up to current geometric and structural standards, and provide residents, motorists, pedestrians, and emergency vehicles a safe, all-weather path of travel across Jesus Maria Creek.

The proposed project would involve constructing an approximately 60-foot long, 23.5-foot-wide cast in place concrete, precast concrete, or steel girder, single-span bridge. The bridge would feature a



single lane, 20-foot wide travel way with traffic barriers along each edge of deck. The new profile would be approximately 9 feet higher than existing to increase hydraulic clearance over the creek. Reinforced concrete, seat-type abutments founded on spread footings would be constructed in each foot bank. Exposed embankment slopes near the creek would be protected by rock armoring (riprap) or other slope protection. The new bridge would cross Jesus Maria Creek approximately 30 feet west of the existing alignment. Whiskey Slide Road would be raised, widened, and realigned along the bridge approaches to accommodate the new bridge. The approach roadway reconnections would generally feature a single 20-foot wide travel way with 1-foot-wide shoulders along each edge. At the curves, the interior shoulder would increase to 4-foot-wide for trailer off-tracking. Approximately 0.2 acre of new right-of-way (ROW) acquisition is anticipated to accommodate the replaced bridge and its approaches.

Site -- The existing Whiskey Slide Road Bridge is located 2.7 miles southeast of the intersection of Whiskey Slide Road and Jesus Maria Road in rural Calaveras County. The terrain is comprised of mountainous hillsides with steep side slopes featuring forested lands and large rural acreages. The primary functions of the adjacent lands are agricultural (crops and livestock) and limited timber harvesting. The project site is located below the snow line at Elevation 1,750±. However, the bridge is located near the base of a ravine and is frequently subject to sustained icy conditions due to shading.

Approach Roadway -- Whiskey Slide Road is a paved, local rural road. Sight distance is frequently obscured by the hillside cut slopes for the roadway, the vertical profile of the roadway, and the dense vegetation adjacent to the roadway. The approach roadway width is limited and is listed at 9'-10" (including shoulders) in the most recent inspection report. This width is consistent with project topographic survey data.



Figure 1: Paved south approach roadway with descending 10%± slope; View looking South from bridge.



Figure 2: Paved north approach roadway with ascending 15%± slope; View looking North from bridge.

Within the ravine, there are several point of access for residential driveways and agricultural entrances.

Traffic -- The average daily traffic (ADT) is estimated at 93 vehicles in 2011 serving local traffic, a heavy equipment business, and commercial deliveries. The average daily traffic is projected to increase to 385 vehicles by 2036. Seasonal fluctuation will increase the daily traffic volumes due to local property owners' activities and hauling operations related to agricultural harvesting, livestock transport, and timber harvesting. These increases are not expected to be sustained beyond several months during any given year but peak ADT volumes may increase over 400 vehicles. A high percentage of truck traffic is not expected.

Construction Activities -- Construction of the proposed bridge will require staged construction. During the initial stage, traffic will be maintained on the existing bridge and roadway, while the proposed replacement bridge and the majority of the approach roadway is constructed. Temporary shoring, including temporary wrapped-face embankment or another support method, may be needed to keep fill outside of the traveled way. Once the roadway approach conform tie-ins are constructed, traffic will be shifted to the replacement bridge. During the second stage, the existing bridge and previous roadway section will be removed.

Detour -- Limited feasible temporary detour routes are available to bypass the project site. Due to the semi-remote location and mountainous terrain, the closest creek crossings are located 4.5 miles downstream and 5.0 miles upstream. A temporary low water crossing is not feasible. A creek crossing is accessible from the north bank, but the steep slope of the south bank requires grades exceeding 30% to traverse the crossing in the space available. Full closure of the crossing without providing a temporary crossing span is not feasible.

Construction Related Traffic Management -- Whiskey Slide Road will remain open during construction of the replacement bridge. Partial road closure will be required during roadway conform grading and paving activities near the extents of the project limits. Any temporary impacts to the clear roadway width during construction will take these impacts into consideration to maintain through-traffic operations. During periods of partial closures, through-traffic operations will be maintained with appropriate traffic control measures and temporary facilities, including daylight and nighttime operation.

Through-traffic operations may be disrupted for short 4 hour windows during the geotechnical field sampling and only during daylight hours. Appropriate traffic control measures and temporary facilities will be implemented.