

**Ackerman Creek Bridge
(No. 10C-0065) on North State Street
Replacement Project**

**Proposed Mitigated Negative Declaration and Initial Study
Public Draft**

December 2015

Prepared for:

Mendocino County
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NSR 51294

- 1. Project Title:** Ackerman Creek Bridge (No. 10C-0065) on North State Street Replacement Project
- 2. Lead Agency Name and Address** Mendocino County Department of Transportation
340 Lake Mendocino Drive
Ukiah, CA 95482
- 3. Contact Person and Phone Number** Jackson Ford, Environmental Compliance Specialist
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- 4. Project Location** North State Street at Ackerman Creek, just north of the incorporated city limits of Ukiah, Mendocino County, California and about 0.1 mile east of U.S. Interstate 101; Yokaya Land Grant, *Ukiah, California* quadrangle; Assessor Parcel Numbers: 169-211-13, 169-211-26, 169-242-12, and 170-150-02
- 5. Project Sponsor's Name** Jason Wise, P.E., Project Manager
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340 Lake Mendocino Drive
Ukiah, CA 95482
- 6. General Plan Designation** General Commercial (C); General Commercial (I)
- 7. Zoning** Inland General Commercial (C2); Floodplain (FP)
- 8. Description of Project**

The Mendocino County Department of Transportation (County) proposes to replace the existing bridge (No. 10C-0065) on North State Street over Ackerman Creek and construct the necessary roadway approach improvements (project). The existing bridge is currently classified as functionally obsolete. Although the California Department of Transportation (Caltrans) Sufficiency Rating for the existing bridge found it to be structurally sufficient (having a rating greater than 50), replacement was determined to be the more cost effective alternative due to the high costs associated with retrofitting and widening the existing bridge to be consistent with the width of North State Street. The County has nominated this bridge for replacement under the federal-aid Highway Bridge Program administered by the Federal Highway Administration (FHWA) through the Caltrans Local Assistance program. The new bridge will meet current design standards of Mendocino County, the American Association of State Highway and Transportation Officials (AASHTO), and Caltrans.

The new bridge would be a single-span approximately 146-foot long, cast-in-place, post-tensioned concrete box girder structure. The new structure would be 64 feet wide to accommodate two 11-foot wide traffic lanes, a 12-foot wide left turn lane, 6-foot wide shoulders and 8-foot wide sidewalks on both sides. The new bridge elevation would be lowered in order to reduce the severity of the existing vertical curve and improve sight distance across the bridge. Staged construction would be required in order to keep the existing bridge open during construction.

9. Surrounding Land Uses and Setting

Commercial/Vineyard/Residential/Floodplain

10. Other Public Agencies Whose Approval May Be Required (e.g., permits, financing approval, or participation agreement.)

- Federal Highway Administration
- U.S. Army Corps of Engineers (San Francisco District)
- National Oceanic and Atmospheric Administration Fisheries Service
- California Department of Fish & Wildlife (Region 1)
- California Regional Water Quality Control Board (North Coast Region)
- California Department of Transportation (District 1)
- Mendocino County Planning Department

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Acronyms

| | |
|------------------|--|
| AASHTO | American Association of State Highway and Transportation Officials |
| AC | asphalt concrete |
| ADL | aerially deposited lead |
| AQMD | Air Quality Management District |
| ASR | Archaeological Survey Report |
| AST | aboveground storage tank |
| BA | Biological Assessment |
| BMP | Best Management Practice |
| CalOSHA | California Occupational and Safety Hazard Administration |
| Caltrans | California Department of Transportation |
| CEQA | California Environmental Quality Act |
| CDFG | California Department of Fish and Game |
| CDFW | California Department of Fish and Wildlife |
| CIDH | cast-in-drilled-hole |
| CNDDB | California Natural Diversity Database |
| CO ₂ | carbon dioxide |
| Corps | U.S. Army Corps of Engineers |
| County | Mendocino County |
| D ₅₀ | median diameter of bed material |
| D ₈₄ | 84 th percentile for channel bed roughness |
| dB | decibel |
| dbh | diameter at breast height |
| DPS | Distinct Population Segment |
| DTSC | Department of Toxic Substances Control |
| EFHA | Essential Fish Habitat Assessment |
| EPA | U.S. Environmental Protection Agency |
| ESM | engineered streambed material |
| ESU | Evolutionarily Significant Unit |
| FHWA | Federal Highway Administration |
| FMMP | Farmland Mapping and Monitoring Program |
| GHG | greenhouse gas |
| HEPA | high energy particulate air |
| HPSR | Historical Properties Survey Report |
| Hz | Hertz (unit of frequency) |
| IS | Initial Study |
| L _{max} | maximum noise level |
| LUST | leaking underground storage tank |

| | |
|------------------|---|
| MND | Mitigated Negative Declaration |
| mph | miles per hour |
| msl | mean sea level |
| NEPA | National Environmental Policy Act |
| NES | Natural Environmental Study |
| NMFS | National Marine Fisheries Service |
| NSR | North State Resources |
| OHWM | ordinary high water mark |
| PCC | Portland Concrete Cement |
| PM ₁₀ | particulate matter 10 microns or less |
| project | Ackerman Creek Bridge on North State Street Replacement Project |
| Q ₅₀ | 50-year flood |
| Q ₁₀₀ | 100-year flood |
| RCRA | Resource Conservation and Recovery Act |
| ROW | right of way |
| RSP | rock slope protection |
| RWQCB | Regional Water Quality Control Board |
| SQG | small-quantity hazardous waste generator |
| SWPPP | Storm Water Pollution Prevention Plan |
| TSDF | Transfer, Storage, and Disposal Facilities |
| US 101 | U.S. Interstate 101 |
| UST | underground storage tank |
| UVSD | Ukiah Valley Sanitation District |

1 Introduction

1.1 Introduction and Regulatory Guidance

This document is an Initial Study (IS) that summarizes the technical studies prepared for the proposed Ackerman Creek Bridge (No. 10C-0065) on North State Street Replacement Project (project). It includes an evaluation of potential environmental impacts that could result from the project and provides justification for a Mitigated Negative Declaration (MND) for the project. This document has been prepared in accordance with the current California Environmental Quality Act (CEQA), Public Resources Code Section 21000 et seq., and the State CEQA Guidelines. Mitigation measures have been proposed to avoid or minimize any significant impacts that were identified.

1.2 Lead Agency

The Lead Agency is the public agency with primary responsibility for implementing a project. The project would receive funding through federal and state sources and would require approvals from the Federal Highway Administration (FHWA) and the California Department of Transportation (Caltrans). FHWA has designated Caltrans to act as the National Environmental Policy Act (NEPA) Lead Agency on its behalf. The Mendocino County Department of Transportation (County) is the CEQA Lead Agency. NEPA approval is anticipated to be in the form of a Categorical Exclusion supported by technical studies.

1.3 Supporting Technical Studies

Completed technical studies are available for review at the County. Please contact:

Jackson Ford, Environmental Compliance Specialist
Mendocino County Department of Transportation
340 Lake Mendocino Drive
Ukiah, CA 95482
Phone: (707) 234-2818

Technical studies completed for this project include:

- Archeological Survey Report (ASR)/Historical Properties Survey Report (HPSR) (confidential; available to qualified readers only)
- Biological Assessment/Essential Fish Habitat Assessment (BA/EFHA) Report
- Natural Environment Study (NES) Report
- Design Hydraulic Study
- Fishway Technical Memorandum
- Wetland Delineation Report
- Preliminary Geotechnical Investigation
- Farmland Impact Assessment Report
- Construction Noise Memorandum

1.4 Document Organization

The IS consists of the following chapters:

- **Chapter 1.0 – Introduction:** describes the purpose and content of this document.
- **Chapter 2.0 – Project Description:** provides a comprehensive description of the project, tentative schedule, required permit approvals, and project alternatives.
- **Chapter 3.0 – Environmental Impacts and Mitigation Measures:** describes the environmental impacts of the project using the CEQA Environmental Checklist. Where appropriate, mitigation measures are provided that would reduce potentially significant impacts to a less-than-significant level.
- **Chapter 4.0 – Determination:** provides the environmental determination for the project.
- **Chapter 5.0 – Summary of Mitigation Commitments:** provides a comprehensive list of all mitigation measures proposed for the project.
- **Chapter 6.0 – Report Preparation:** identifies the individuals responsible for preparation of this document.
- **Chapter 7.0 –References:** provides a list of references used to prepare this document.

2 Project Description

2.1 Location

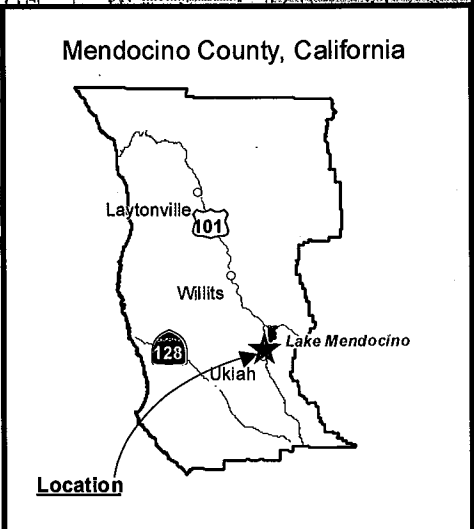
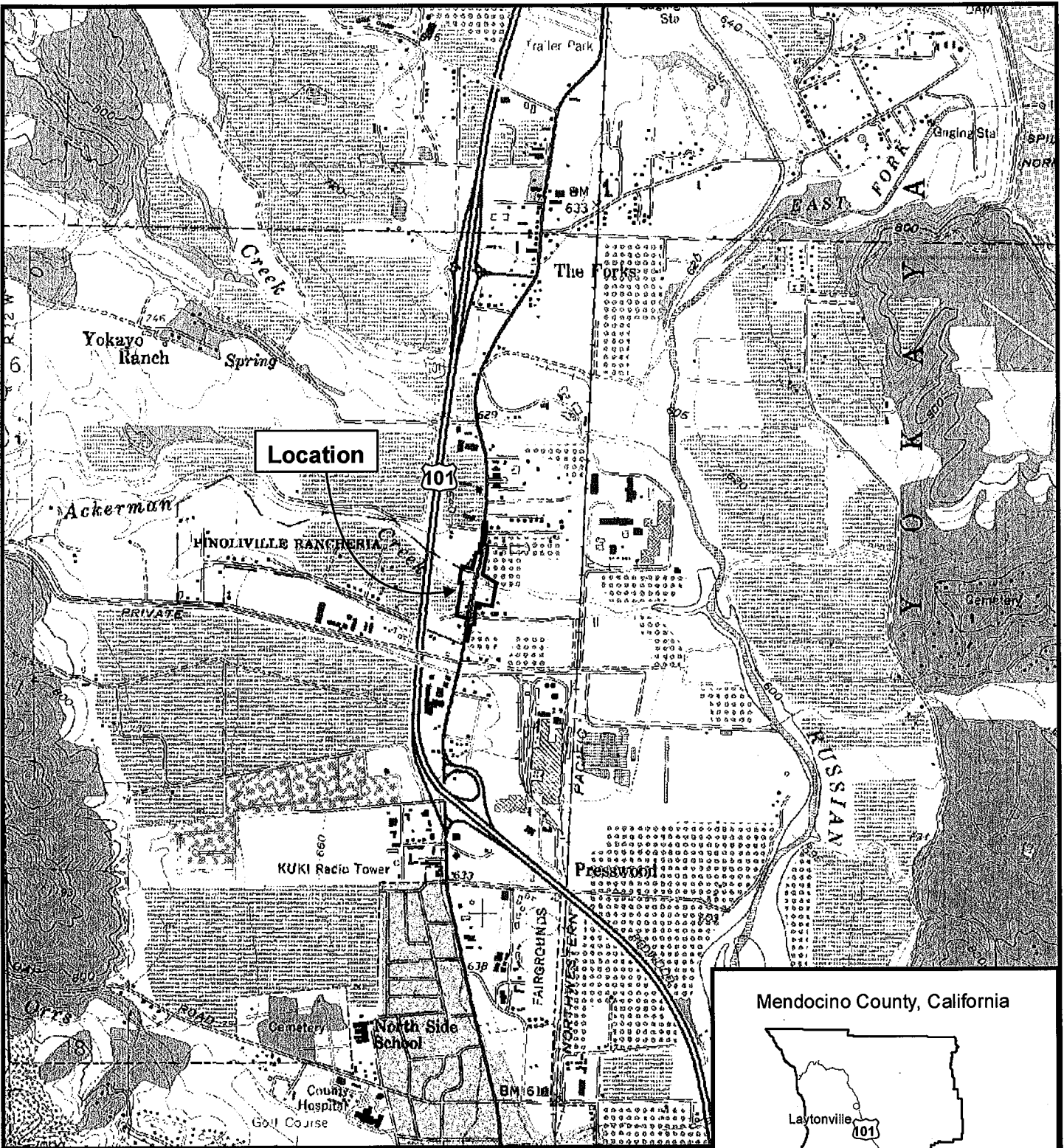
The Ackerman Creek Bridge (No. 10C-0065) on North State Street is located just north of the incorporated city limits of Ukiah and about 0.1 mile east of U.S. Interstate 101 (US 101). The approximately 6.7-acre project area is aligned along the section of North State Street that passes over Ackerman Creek between Olive Avenue to the north and Kunzler Ranch Road to the south. North State Street is a major collector road serving as an access to Hensley Creek Road (located approximately 0.4 mile north of the project area), the primary access to Mendocino College. The project site is found on the *Ukiah, California* 7.5 minute U.S. Geological Survey quadrangle, Yokaya Land Grant, Mount Diablo Base and Meridian. The project location is shown in Figure 1. The project site corresponds to a Mendocino County right-of-way (ROW) easement through portions of the following parcels: 169-211-13, 169-211-26, 169-242-12, and 170-150-02.

2.2 Existing Facility Conditions

North State Street is a two-way, two-lane, north/south principle collector roadway that roughly parallels US 101 through Ukiah and several adjacent communities. North and south of the project area, North State Street has been improved. In the immediate project area, the roadway alignment is straight and both the north and south ends of the road within the project limits include a center two-way turn lane. However, the approach roadways on both sides of the existing bridge narrow considerably towards the bridge, with the turn lane and road shoulders being constricted, resulting in a narrow two-lane roadway that is further restricted by metal guardrail and bridge railing on both shoulders. The bridge is unsafe for pedestrians and bicyclists, and has a high vehicle accident rate (greater than one accident per year) (Mendocino County 2011). Although the existing bridge structure is classified as *Sufficient* with a rating of 75.1, it is Functionally Obsolete.

The Ackerman Creek bridge is a continuously reinforced concrete flat slab bridge constructed in 1965 that is made up of three equal 48.7-foot spans for a total length of 146 feet. The three-span structure is founded on concrete piles with solid concrete pier walls and seat abutments. The bridge currently accommodates a single 12-foot lane of traffic with a 2-foot shoulder and sidewalks in both directions. The bridge was originally designed for a 40 miles-per-hour (mph) design speed, while North State Street through this stretch is signed for 45 mph.

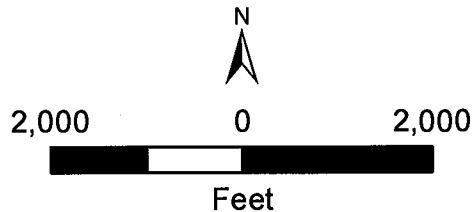
There are several overhead and underground utilities within the proposed project area. Overhead electric lines belonging to Pacific Gas and Electric (PG&E) and City of Ukiah and AT&T copper and fiber optic telecommunications lines are located on joint use poles on both the east and west sides of North State Street. Ukiah Valley Sanitation District (UVSD) maintains a sewer line through the project area. There is an 8 inch waterline and a 4 inch fiber optic carrier fastened to the eastern side of the bridge. There is a newer 18-inch Millview County Water District water line fastened to western side of the bridge. Lastly, there are two buried PG&E natural gas lines, a 4-inch and an



 Proposed Project Area

Public Land Survey:
Yokayo Land Grant,
Township 15 North,
Range 12 East, HBM

USGS 15' Quad:
Ukiah



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Figure 1
Location and Vicinity Map

8-inch, PG&E natural gas lines in North State Street on the upstream side of the Ackerman Creek bridge, crossing Ackerman Creek west of the bridge at an approximate depth of 3.5 feet.

Immediately downstream of the existing bridge is a 6- to 8-foot tall check dam and Denil-type fish ladder. This stabilization structure was presumably completed in 1950/51 as part of the California Highways Division's old Highway 101 reinforcement project. This reinforcement project was required in part to stop a head-cut in Ackerman Creek propagated by decreased channel elevation downstream in Ackerman Creek and in the Russian River. This old bridge was replaced with the current Ackerman Creek Bridge in 1965 that preserved the stabilization structure. This stabilization structure has long been recognized as an impediment to fish passage. In 1983 a Denil-type fish ladder was installed under contract with California Department of Fish and Game (CDFG) (now California Department of Fish and Wildlife (CDFW)). Later the ladder was reinforced to provide low-flow access again under contract with CDFG although the structure is still recognized as being a partial barrier to anadromous salmonids. The stream channel currently drops approximately 7 feet over the length of the short-step ladder. The existing Denil-type fish ladder is poorly suited for providing adult fish passage at typical migration flows. At migration flows, the hydraulic capacity of the steel fish ladder is overwhelmed and there is inadequate attraction flow for fish to find the outlet. At low flows, there is inadequate depth in the ladder for adult fish to swim through. Further, the ladder does not provide passage for juvenile salmonids and is highly susceptible to plugging by debris.

Much of the land adjacent to North State Street through the project area is developed either commercially—including paved parking lots and driveways fronting North State Street—or as intensively farmed agricultural lands, specifically an established vineyard (Dunnewood Vineyards and Winery) on the northeast side of Ackerman Creek. The County has designated land use on the east side of North State Street as Industrial, while land use on the west side of the road is designated for Commercial use (Mendocino County Planning and Building Services 2011).

2.4 Project Purpose and Need

The purpose of the proposed project is to improve public safety by replacing the existing functionally obsolete bridge with a modern structure that meets current design criteria. In 2010, the County completed improvements to North State Street both north and south of the Ackerman Creek bridge, adding a center turning lane, bicycle lanes, and sidewalk in select locations on North State Street. The project is needed to make the bridge crossing conform to the newly widened roadway approaches and to provide sidewalks for pedestrian safety and bike lanes for bicyclist safety.

2.4 Proposed Project

2.4.1 Replacement of Existing Bridge with a New Structure

The existing bridge would be replaced with a modern structure that would meet current County, AASHTO, and Caltrans design criteria. The proposed project layout is shown in Figure 2. The new bridge would be a single-span approximately 146-foot long, cast-in-place, post-tensioned concrete box girder structure. The new structure would be 64-feet wide to accommodate two 11-foot wide traffic lanes, a 12-foot wide left turn lane, 6-foot wide shoulders, and 8-foot wide sidewalks on both sides. The new bridge elevation would be lowered in order to reduce the severity of the existing

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North State Street at Ackerman Creek Bridge Replacement Project

vertical curve and improve sight distance across the bridge. Staged removal and construction would be required in order to keep the existing bridge open during construction.

Ukiah Valley Sanitation District (UVSD) would replace a portion of the sewer line in the project area. UVSD would be responsible for coordinating connection of the new sewer line to the new bridge structure

The Hydraulic Design Criteria established in the Caltrans Local Procedures Manual prescribe that the facility be capable of conveying the base or 100-year flood (Q_{100}) and passing the 50-year flood (Q_{50}) without causing objectionable backwater, excessive flow velocities, or encroaching on through traffic lanes. Additionally, the minimum design criteria for this project would provide at least 2 feet of freeboard for drift above the Q_{50} and the ability to withstand the potential scour effects of the base flood (i.e., Q_{100}). The Preliminary Design Hydraulic Study (Avila and Associates 2015) determined that replacement of an existing check dam and fish ladder located in the channel beneath the bridge with a more fish friendly alternative would significantly lower the Q_{100} water surface elevation of Ackerman Creek. Additionally, the single span bridge configuration combined with a reconfigured channel would provide freeboard for a Q_{50} event.

The replacement structure will be designed for the standard design and permit truck live loading according to AASHTO LRFD 6th Edition with interims through 2013 including Caltrans Amendments as well as the current *Seismic Design Criteria Version 1.7*, April 2013. The span length would be set based on the hydraulic capacity requirements and structural considerations. Based upon initial field observations, no problem with falsework is anticipated and therefore the use of cast-in-place construction appears appropriate. Bridge abutments would be founded on 16-inch diameter driven steel pipe piles. Foundation construction would consist of excavating approximately 20 feet down below existing grade to the footing foundation elevation in an area the size of the new abutment. Temporary shoring is anticipated to facilitate staged construction and maintain traffic operations. Excavation would be required to this level to facilitate existing bridge removal, lowering of the roadway profile, channel re-grading, and to ensure the new bridge would be founded below future hydraulic impacts. Pipe piles would be driven to required tip elevations to support bridge loads. Approximately 25 piles would be required for each abutment, including both stages of construction. Reinforcement and formwork would be placed for the bridge abutments prior to casting concrete. Falsework would be used to support and form the concrete bridge superstructure. Falsework would be placed within the 100-year floodplain of Ackerman Creek and is expected to consist of the typical timber post and steel beams founded on wooden pads. Gravel pads may be used in the dry streambed below the falsework for temporary support. Upon completion of the concrete superstructure, all falsework materials would be removed from the channel.

Underground and overhead utilities aligned through the project area including gas, electric, fiber optic, water, and sewer would be relocated within the project area to accommodate the widened bridge, roadway, and proposed channel improvements.

2.4.2 Channel Design

A roughened channel fishway consisting of pools and chutes was selected by the project development team, which included consultation with National Marine Fisheries Service (NMFS) engineers.

Roughened channels are used to control stream slope to facilitate fish passage using natural rock materials. These structures provide debris transport, sediment transport, fish passage, structural stability, fish refuge, and hydraulic diversity. The project team worked with and received approval from CDFW and NMFS to design attainable standards for fish passage. Both agencies have hydraulic design guidelines and criteria for juvenile and adult salmonid passage at road/stream crossings that were used to guide the project design (National Marine Fisheries Service 2001; Flosi et al. 2010). The guidelines recognize meeting the hydraulic design criteria should be a goal for improvement and not the required design threshold.

Roughened channels, sometimes referred to as nature-like fishways, are constructed channel reaches stabilized with an immobile framework of large rock mixed with smaller material. Roughened channels provide fish passage by controlling the channel profile and adding roughness and structure. By design, they create hydraulic diversity that emulates conditions found in steeper or confined natural channels. Unlike individual rock weirs used to control the channel profile, the bed framework forming a roughened channel creates a continuous stable channel structure that is able to flex and move slightly while continuing to function as intended. Unlike stream simulation, a roughened channel is designed with an immobile bed and is not necessarily based on a reference reach in the same channel. Roughened channels are designed using the hydraulic approach (Flosi et al. 2010).

A chute and pool channel consists of a short rock ramp subunit followed by an armored pool subunit. The bed structure of this repeating sequence dissipates energy through a combination of hydraulic roughness across the chute and the volume of the pool below the chute. The chute is typically constructed with a rock band at the upstream and downstream ends of the chute. Engineered streambed material (ESM) is placed between the rock bands. Both the bands and the ESM are v- or u-shaped in cross section to concentrate flows towards the center of the channel and make for shallower and slower flow along the channel margins. The bed of the pools typically consists of ESM, making them resistant to erosion and controlling the depth and length of the pool (Flosi et al. 2010).

The basis for, and design of, the roughened channel is to provide grade control and fish passage under a replacement bridge on North State Street at Ackerman Creek is detailed in the technical memorandum by Quincy Engineering (Quincy Engineering 2014). The roughened channel design for Ackerman Creek at North Street Bridge consists of 5 cycles of chute and pool. The chutes have a slope of 5 percent and combined with pools slope does not exceed 4 percent. The drop across the chutes does not exceed 2 feet and the pools have a residual pool depth of 2 feet. A series of boulder banks occur on the upstream and downstream sides of the pools to create hydraulic roughness and structural stability. The transition back to native channel at the downstream end of the fishway is comprised of a chute that is 40-feet long with a slope of 5 percent and drops 2-feet across the chute. At the end of the chute is a stone curtain wall 11.5-feet high. The entire transition is buried sufficiently deep to mitigate any further downstream incision. The chute contains rock bank lines that tie into the existing banks.

For the North State Street crossing, the chutes were found capable of providing suitable fish passage hydraulics and low and moderate fish passage flows; although they would slightly exceed design criteria at higher passage flows for both the juvenile and adult anadromous salmonids.

2.4.3 Construction Staging

The ability to phase the construction so that the Ackerman Creek bridge would remain open to traffic is critical to this project. The bridge replacement construction would require a phased approach where one half of the new bridge is constructed while traffic is maintained on the existing bridge. Traffic flow would be maintained using one lane of the existing bridge while the other lane is removed. After removal of a portion of the existing bridge, a portion of the new bridge would be constructed within a portion of the previous footprint. Upon completion of the new bridge half, traffic would be shifted to the new structure and the remainder of old bridge would be removed. The second half of the new bridge would then be constructed in its place and once complete, traffic would be moved to the final configuration after completion of a closure pour and final railing construction.

Upland construction activities and staging would commence prior to the in-channel construction season (June 15–October 31). This may include grading, excavation of bridge abutment footings, footing pours, and other preparations for in-channel construction activities. The County will coordinate with the Ukiah Valley Sanitation District (UVSD) to relocate UVSD's sewer line to the new bridge structure. Currently, the sewer line crosses Ackerman Creek via attachment to the existing bridge structure. Similarly, the County will coordinate with the Millview Water District to relocate its water line to the new bridge structure. Although pile driving would occur in uplands, its timing would be restricted to the in-channel construction season to avoid and minimize potential percussion impacts to salmonids. In-channel construction activities associated with the bridge replacement at Ackerman Creek, removal of the existing grade control structure, construction of the roughened channel and rock weirs, bridge removal and bridge construction, including placement of falsework in the channel of Ackerman Creek would occur in the following sequence:

Construction Season 1

- Construct a temporary pedestrian walkway wide enough to accommodate bicycle traffic, shift traffic, install shoring, and demolish a portion of the existing bridge for staged construction.
- Portion of abutments would be constructed from cast-in-place concrete founded on driven pipe piles. These would be installed from the new approaches which are outside of the base flow channel (this could begin prior to or in conjunction with the in-channel work during the first construction season).
- Construct falsework for first half of the new bridge upon gravel pad.
- Construct first half of the new bridge box girder superstructure. New Stage 1 superstructure would be built in place then raised with jacks to meet hydraulic clearance criteria for existing flood profile during the winter shutdown period; it would then be jacked (lowered) into place at the start of the second season.
- Remove falsework for new bridge.
- Complete onsite mitigation (installation of best management practices (BMPs) for erosion control and revegetation).

- Utility relocation work may occur before construction season 1 and during winter period between season 1 and season 2.

Construction Season 2

- Lower the bridge portion completed during season 1. Complete utility relocation to the new bridge.
- Construct a temporary pedestrian walkway wide enough to accommodate bicycle traffic and shift traffic onto bridge completed in season 1.
- Demolish the remainder of the second half of the existing bridge and dispose of offsite. Remove the existing bridge portion using an excavator with a chipping tool to remove the existing bridge, which would be allowed to fall upon the gravel pad. This existing concrete would be removed and disposed of offsite. Complete construction of the remainder of the new bridge.
- Begin fishway construction.
- Remainder of abutments would be constructed from cast-in-place concrete founded on driven pipe piles. These would be installed from the new approaches, which are outside of the low baseflow channel and may occur prior to the in-channel construction period).
- Construct falsework for remainder of new bridge upon gravel pad.
- Construct second half of new bridge-box girder superstructure.
- Remove falsework for new bridge.
- Remove gravel pad and any temporary materials and equipment.
- Remove existing check dam and Denil-type fish ladder.
- Complete final fishway grading in vicinity of the new bridge.
- Complete onsite mitigation (installation of BMPs for erosion control and revegetation).

During construction, traffic through the construction area would be maintained by staging construction and shifting traffic. Some night closures may be required at the end of construction for final approach work. Construction would take two years, which includes two instream work windows that would begin in spring 2016 and end in-late 2017.

2.4.4 Construction Criteria and Methods

Construction specifications would be in accordance with Caltrans Standard Specifications (current at the time the construction contract is awarded) and any Caltrans project Special Provisions. Equipment and materials would be staged in the field just north of the east side of the existing bridge (Figure 2). During construction, traffic through the construction area would be maintained.

Temporary work platforms would be constructed of suitably sized salmon spawning gravel “fish rock” except where construction activities would occur over the portion of channel that would ultimately be excavated as part of the fishway construction action. Gravel would be uncrushed, rounded, natural river rock with no sharp edges and a cleanliness value of 85 or higher based on Caltrans Test No. 227. Gravel would also be completely free of oils, clay, debris, and organic material. The work platform would extend approximately 20-feet upstream and 20-feet downstream of the existing bridge. Any remaining flow, which is expected to be minimal, would be diverted through High Density Polyethylene Pipe(s) or K-Railing lined with plastic and gravels to maintain any flow through the temporary work pad. Material used as fish rock would follow the size criteria identified in Table 1. Temporary work platforms would be removed prior to October 31.

Table 1. Size Criteria for Spawning-sized Gravel Fish Rock for Constructing Gravel Work Pad

| Particle Size | Percent Passing | Percent Retained |
|---------------|-----------------|------------------|
| 5-inch | 95-100 | 0-5 |
| 2-inch | 70-85 | 15-30 |
| 1-inch | 40-50 | 56-60 |
| 3/4-inch | 25-35 | 60-75 |
| 1/2-inch | 10-20 | 85-90 |
| 1/4-inch | 0-5 | 95-100 |

Abutments would be constructed from cast-in-place concrete founded on driven steel pipe piles. These would be installed from the new approaches and would be located outside of the low-flow channel. Temporary shoring would be required due to depth of excavation adjacent to existing traffic lanes. Approximately 25 driven piles would be used to construct each abutment. Piles would be approximately 60 feet in length, but less than 80 feet; 16 inches in diameter; and weigh 83 pounds per foot (Table 2).

Table 2. Pile driving information for the North State Street at Ackerman Creek Bridge Replacement Project

| Structure | Driver type | Pile type | Pile size | | Maximum number of Piles | Piles Installed per day/strikes per day |
|-----------------------|-------------|------------|-----------|--------|-------------------------|---|
| | | | Diameter | Length | | |
| Bridge Abutment Piles | Impact | Steel Pipe | 16-inch | 60-80 | 50 (25 per abutment) | 6/4,800 |

The materials under both abutments are primarily compact clayey silts and sands, with dense gravels. The single-span, cast-in-place, post-tensioned concrete box girder structure would be built on falsework. The falsework would be an engineered system, typically consisting of the bridge concrete formwork supported on a temporary stringers-and-post system. It is likely that this falsework system would use timber and plywood forms, rolled steel girders, and timber posts supported on timber foundation pads. In order to provide an adequate and level support surface for the timber pads.

Imported clean gravel would be placed on the ground surface to form a proper work pad. Once the bridge construction has been completed, the falsework system would be disassembled and removed, including the imported clean gravel materials.

Due to the channel incision potential in Ackerman Creek, protection of the abutments would be required. New rock slope protection (RSP) (quarter ton, method B) would be installed along both banks of the creek (approximately 400 lineal feet) from existing ground slope, with a 10-foot wide flat RSP apron at the base. A large excavator with a bucket/thumb attachment would pick and place/fit together the RSP. As the apron is placed, the excavator would progress with the installation. Dump trucks would drop the RSP into the site from a temporary access road adjacent to the new bridge. This would take about 6–8 weeks to install. Voids in the RSP below the ordinary high mark (OHWM) would be filled with gravel, and RSP above the OHWM would be filled with well-graded soil suitable for plantings (e.g., willow cuttings, cottonwood seedlings). The planting would occur along the face of the RSP at a variety of elevations.

The existing bridge will be removed in two stages: half at the end of the first construction season, and the other half near the beginning of the second season. An excavator with a chipping tool would remove the bridge, which would be allowed to fall upon the gravel pad. The concrete rubble would then be removed and disposed of offsite. Once the new bridge is complete, the existing bridge has been removed, and the RSP has been placed, the crushed rock atop the gravel work pad would be removed and disposed of offsite.

Construction of a roughened channel is typically done in the following sequence as described in the *California Salmonid Stream Habitat Restoration Manual* (Flosi et al. 2010) and would be completed during the second in-water construction season. The physical impact area for the new roughened channel would be approximately 105 feet wide by 400 feet long (approximately 1 acre).

- Excavate native material and/or backfill and compact material to the sub-grade elevations for installation of granulated filter blanket (if needed), bank lines and engineered streambed material (ESM). Then excavate trenches for placement of steps, bands, or other rock structures that extend below the ESM or key into the banks.
- It is typically best to work in sections; going from upstream to downstream so completed work does not backwater the current work area. If water is well controlled, working from downstream going up has the advantage of rock being placed against the downstream bed, which is closer to a natural condition of hydraulic sorting. Plan the sequence of construction so large equipment does not have to cross over completed structures or bank line rock. If they do have to cross over existing structures, smaller fill material from the ESM can be used to protect the structures.
- Place the footing row(s) and top row of rocks for steps, bands, or other rock structures.
- Install bank line rock, including any keystone rocks that protrude from the bank. Individually place the larger rock in the bank line gradation. Use the smaller material to fill in the voids between the large rocks. To compact the bank lines, tamp in place followed by jetting or flooding to wash the finer material into remaining voids.

- Install ESM in lifts across the active channel. The height of each lift should be greater than the D_{50} but less than the D_{84} of the ESM. Plan and specify the lifts and the large rock within each lift so the desired distribution of exposed rock is eventually achieved as described below.
 - Begin each lift by individually placing the largest rocks in the lift (size greater than thickness of lift) throughout the channel bed in the proportions called out in the ESM gradation. This ensures the large rocks are positioned vertically and laterally throughout the ESM horizon. It also allows the large rocks to protrude above the finished grade to create hydraulic roughness and diversity. For stability, the rock should not protrude more than one-third of its height above the finished grade of the channel bed.
 - Place the remaining material into the channel at a thickness equal to one lift. Mix in-place as necessary until the mixture is well graded.
 - Compact each lift by tamping, followed by jetting or flooding so fine material is worked into the lift. If water continues to rapidly infiltrate through the placed ESM, the bed is not adequately sealed. Add additional fine material to the top of the lift and then jet or flood the material into the bed. Repeat until the bed is adequately sealed. During final flooding of the top lift, an adequately sealed bed will maintain water flowing down-slope across the surface of the roughened channel.

Backfilled RSP along the stream banks will be planted with native vegetation (e.g., willow, alder, or cottonwood) furnished by the Pinoleville Pomo Tribe which maintains a nursery just upstream of the project area and has previously participated in stream restoration in the vicinity.

2.5 Tentative Schedule

It is anticipated that the earliest that construction would start is May 2016. Construction is anticipated to require two construction seasons with project completion anticipated by October 2017. All instream activities, including bridge removal, and substructure and superstructure construction activities will be confined to a work period between June 15 through October 31 to minimize and avoid impacts on water quality. Construction activities below the OHWM of Ackerman Creek may be allowed outside of the June 15 through October 31 period if permitted by CDFW and the North Coast Regional Water Quality Control Board (RWQCB), depending on weather conditions.

2.6 Required Permits and Approvals

The following permits and approvals likely will be required to implement the project:

- U.S. Army Corps of Engineers – San Francisco District (Eureka Field Office): Section 404 Nationwide Permit 14 (Linear Transportation Crossing Projects)
- National Marine Fisheries Service – Endangered Species Act Compliance (Biological Opinion)

- California Department of Fish and Wildlife – Region 1: Section 1602 Streambed Alteration Agreement; State Endangered Species Act Compliance
- North Coast Regional Water Quality Control Board: Section 401 Water Quality Certification

2.7 Project Alternatives

2.7.1 Widening/Rehabilitation Alternative

The widening/rehabilitation alternative was considered by the County because of the existing bridge's currently acceptable Caltrans Sufficiency Rating of greater than 50. However, it was subsequently determined that total replacement of the bridge would be far more cost effective than to retrofit the existing bridge. Over time, continued scour of the existing bridge's support structures would degrade its sufficiency rating and would eventually necessitate bridge replacement.

2.7.2 No Project Alternative

In addition to the action alternatives, the County also considered a "No Project" alternative in its evaluation of the project, pursuant to CEQA. Under the No Project alternative, the County would not proceed with replacement of the existing Ackerman Creek bridge. However, Caltrans and FHWA have identified the existing bridge structure as being functionally obsolete. Implementation of the No Project alternative could result in future public safety issues associated with of the narrowness of the existing bridge relative to North State Street and long term issues associated with its structural integrity.

3 Environmental Setting, Impacts, and Mitigation Measures

This chapter incorporates the Environmental Checklist contained in Appendix G of the CEQA Guidelines, including the CEQA Mandatory Findings of Significance. Each resource section provides a brief description of the setting, a determination of impact potential, and a discussion of the impacts. Where appropriate, mitigation measures are provided that would be used by the County to reduce potential impacts to a less-than-significant level. A discussion of cumulative impacts is included at the end of this chapter.

Addressed in this section are the following 17 environmental categories:

- Aesthetics
- Agricultural Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- Greenhouse Gases
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation/Traffic
- Utilities and Service Systems

Each of these issue areas was fully evaluated and one of the following four impact determinations was made:

- **No Impact:** No impact to the environment would occur as a result of implementing the proposed project.
- **Less-than-Significant Impact:** Implementation of the proposed project would not result in a substantial and adverse change to the environment and no mitigation is required.
- **Less than Significant With Mitigation Incorporated:** A “significant” impact that can be reduced to a less-than-significant level with the incorporation of project-specific mitigation measures.
- **Potentially Significant Impact:** Implementation of the proposed project could result in an impact that has a “substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project” (CEQA Guidelines Section 15382).

3.1 Environmental Setting

3.1.1 Regional Setting

The project region lies in Ukiah Valley, which, along with the Santa Rosa Plains, Alexander Valley, Hopland Valley, Redwood Valley, Potter Valley, and other smaller valleys, are level areas comprising about 15 percent of the Russian River drainage basin. The remainder of the region is hilly or mountainous, with approximately 45 percent at elevations in excess of 1,000 ft above mean sea level (U.S. Army Corps of Engineers 1982).

The Russian River drainage basin topography is characterized by a sequence of northwest/southeast trending fault-block ridges and valleys. Unstable Franciscan lithology underlies most mountainous topography, and landslides are common in the region. Primary alluvial valleys lie along the course of the mainstem Russian River and include the Ukiah and Sanel (Hopland) valleys in Mendocino County, Alexander Valley, and the Santa Rosa Plain in Sonoma County. Mount St. Helena, at 4,344 feet, is the highest point in the Russian River drainage basin (Florsheim and Goodwin 1993; Steiner Environmental Consulting 1996).

Regionally, the Russian River watershed is primarily an agricultural area with the greatest emphasis on vineyard and orchard crops. Major orchard crops include prunes, pears, and apples, while lesser crops such as cherries and walnuts also being produced. In addition to agriculture, there is increasing light industrial and commercial development. The production and processing of timber, agricultural and animal products; gravel removal and processing; energy production; and miscellaneous light manufacturing operations are examples of industrial activities in the watershed (Sonoma County Water Agency 2003).

The lower Ackerman Creek watershed is characterized by an open valley consisting of small private residential land ownerships. The middle section consists of a steep V-shaped canyon which is relatively unpopulated. Land use in this area is primarily cattle grazing. The upper Ackerman Creek watershed is a U-shaped canyon mostly owned by the Louisiana-Pacific Corporation with some smaller ownership. It is managed for timber production and grazing, although some gravel extraction activities have occurred in the past.

3.1.2 Local Setting

Climate

The project area has a Mediterranean climate. Summers are hot and dry with average July temperatures of 93 °Fahrenheit. Winters are cool and wet with an average annual rainfall of approximately 37 inches. As a reflection of the Mediterranean climate of the region, almost all precipitation falls as rain in winter. The growing season (i.e., 50 percent probability of air temperature of 28 °Fahrenheit or higher) is approximately 316 days and occurs between February and December. The soil temperature is thermic.

Existing Land Uses

The project area is along North State Street, which is a major two-lane collector road that continues north beyond the Ukiah city limits and through the project area. The project is centered on North State Street and includes the road corridor; bridge; Ackerman Creek on either side of the bridge; and portions of adjacent private parcels including vacant parking lots, a barren residential yard, and a vineyard. There is an irrigation supply warehouse northwest of the bridge. South of the bridge is a vacant building and a few residences and businesses.

General uses in the surrounding area include a vineyard, retail and service businesses, general commercial, business parks, mixed commercial office, public facilities, processing and manufacturing, and places of assembly. To the southwest and northwest of the site across Highway 101, the land is zoned agricultural. Residential properties are scattered throughout the project vicinity.

Topography

The topography of the project area is generally characterized as a portion of Ackerman Creek channel and the adjacent river banks. The bank along the northern side of the creek is steeper than the bank on the south side. The bridge deck is at an approximate elevation of 620 feet above mean sea level (msl). A fish ladder and dam on the west side of the bridge interrupts flow and changes the composition of the creek bed and bank. The creek is wide and shallow on the west (upstream) side of the dam and deeper with a greater incised channel on the east (downstream) side.

Hydrological Setting

The project area is located less than one mile from the confluence of Ackerman Creek and the Russian River. Ackerman Creek drains over 20 square miles of contributing area into the Russian River watershed (California Department of Fish and Game 1999). Ackerman Creek flows into the Russian River approximately 0.65 mile east of project area. In the Russian River Basin, 93 percent of the average seasonal runoff occurs in the five-month period between December and April; virtually no rainfall occurs during the summer months. Locally, Ackerman Creek is driven by seasonal precipitation patterns with intermittent flow typically occurring from November into late-May.

Soils

The soil map units and miscellaneous land types within the study area and vicinity are described in the *Soil Survey of Mendocino County, Eastern Part and Southwestern Part of Trinity County* (U.S. Department of Agriculture Soil Conservation Service 1991). Three soil map units occur within the project area:

- **Feliz clay loam, 0 to 2 percent slopes.** This is a non-hydric, well-drained soil formed in alluvium from sedimentary rock. The depth to a restrictive layer is greater than 80 inches.
- **Talmage very gravelly sandy loam, 0 to 2 percent slopes.** This is a non-hydric, somewhat excessively drained soil formed in alluvium. The depth to a restrictive layer is greater than 80 inches.

- **Xerofluents-Riverwash complex, 0-2 percent slopes.** This is a partially-hydric, excessively drained soil formed in alluvium. The depth to a restrictive layer is greater than 80 inches.

Geology

The geology of the project area and vicinity is comprised of the Franciscan formation that dominates the North Coast of California (Jennings and Strand 1960, U.S. Environmental Protection Agency 2004). This formation is naturally unstable and is sensitive to human disturbance (U.S. Environmental Protection Agency 2004).

Vegetation Community Types

Vegetation community types were classified based on the descriptions provided in *A Guide to Wildlife Habitats of California* (Mayer and Laudenslayer Jr. 1988). The vegetation community types occurring within the project area include valley foothill riparian, riverine, ruderal, and barren.

Valley Foothill Riparian

Valley foothill riparian habitat occurs along the entire length of Ackerman Creek within the project area. Valley foothill riparian habitat is generally characterized as a multi-layered canopy composed of winter-deciduous trees, with a dense understory and little herbaceous growth. The dominant canopy tree is Fremont cottonwood (*Populus fremontii*), while several willow species dominate the mid-canopy: arroyo willow (*Salix lasiolepis*), shining willow (*Salix lucida*), and sandbar willow (*Salix exigua*). Vegetation on the west side of the fish ladder is heavily dominated by sandbar willow with a small amount of Himalayan blackberry (*Rubus armeniacus*) present in the understory. The understory on the east side of the fish ladder has much more Himalayan blackberry present. Subdominant trees and shrubs include mulefat (*Baccharis salicifolia*), Oregon ash (*Fraxinus latifolia*), and California grape (*Vitis californica*).

Riverine

The riverine community type is present as the channel of Ackerman Creek, and gravel bars and revetment within the OHWM. The substrate is gravel and sand, and the channel is incised throughout the project area. There is riparian vegetation adjacent to most of the riverine area within the project area. There are also islands of riparian vegetation interspersed throughout the riverine community.

Ruderal

The ruderal vegetation community includes several disturbed areas within the project area. The ruderal community is dominated by non-native annual grasses and forbs including slender wild oats (*Avena barbata*), mustard (*Brassica nigra*), fennel (*Foeniculum vulgare*), and rose clover (*Trifolium hirtum*). On the south east side of the project area a row of planted eucalyptus (*Eucalyptus* sp.) borders the creek and the ruderal vegetation community.

Barren

Barren areas are generally devoid of vegetation and within the project area include North State Street, adjacent gravel shoulders and parking areas, and a vacant parking lot. Sparse opportunistic weedy species may be present within barren areas.

3.2 Environmental Impacts and Mitigation Measures

| | <i>Potentially Significant Impact</i> | <i>Less than Significant with Mitigation Incorporated</i> | <i>Less than Significant Impact</i> | <i>No Impact</i> |
|--|---|---|---|-------------------------------------|
| I. AESTHETICS — Would the project: | | | | |
| a) Have a substantial adverse effect on a scenic vista? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Substantially degrade the existing visual character or quality of the site and its surroundings? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Discussion of Impacts

- a) ***No Impact.*** There are no scenic areas or resources within the project area. The project consists of replacing the Ackerman Creek bridge and North State Street roadway approaches with similar structures and would be constructed in a manner consistent with the existing aesthetic.
- b) ***No Impact.*** North State Street is not designated as a local scenic highway in the County's General Plan. There are no scenic resources or historic buildings in the project area. The removal of vegetation to allow for the new bridge alignment downstream of the existing bridge would have no significant effect on views of the project area from nearby homes, businesses, or the road corridor and would therefore remain consistent with the existing scenic character and quality of the project area and vicinity.
- c) ***Less-than-Significant Impact.*** The project consists of replacing the Ackerman Creek bridge and North State Street roadway approaches with similar structures. The project would be constructed in a manner consistent with the existing aesthetic and would slightly expand the width and lower the elevation of the bridge crossing over Ackerman Creek. The project would not introduce any elements that would degrade the existing visual character or quality of the site or surrounding area. The impact on existing visual character would be less than significant.
- d) ***No Impact.*** Construction and operation of the project are not expected to result in increased glare in the project area and no lighting is proposed as part of the project.

Mitigation Measures

No project-specific mitigation is required under this subject.

| | | | | |
|--|---|---|---|----------------------|
| | <i>Potentially Significant Impact</i> | <i>Less than Significant with Mitigation Incorporated</i> | <i>Less than Significant Impact</i> | <i>No Impact</i> |
|--|---|---|---|----------------------|

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

- | | | | | |
|--|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Conflict with existing zoning for agricultural use, or a Williamson Act contract? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined by Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production as defined by Government Code Section 51104(g)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Result in loss of forest land or conversion of forest land to non-forest use? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use, or conversion of forest land to non-forest use? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Discussion of Impacts

- a, b) ***Less-than-Significant Impact.*** Approximately 0.162 acre of vineyard—mapped as Prime and Unique farmlands—near the northeast corner of the bridge falls within the project area. An unpaved farm access road buffers the vineyard from North State Street and the north side of Ackerman Creek. Of the portion of vineyard within the project area, 0.072 acre has been

mapped by the Farmland Mapping and Monitoring Program (FMMP) as being Unique Farmland and 0.090 acre is designated Prime Farmland. Based on the preliminary engineering plan drawing it is anticipated that there would be no need to convert any portion of the designated farmlands within the project area to a use other than their current use—vineyard and an unpaved farm access road. While it is likely that the farm access road may be used to access the Ackerman Creek corridor during project construction, the grape vines would be avoided and agricultural productivity would not be impaired. During construction, a temporary fence would be installed between the farm access road and the grape vines to protect the vines from construction-related disturbance associated with temporary access.

Typically, grapes are harvested between August and October. Although the harvest season coincides with the proposed project construction schedule, alternative routes for agricultural equipment access exist throughout the vineyard. Coordination between the County and the vineyard owner during the ROW acquisition phase of the project may be necessary to ensure that construction access would not interfere with agricultural activities. The project would not result in the irreversible conversion of any prime or important farmland to a nonagricultural use. The project impact on designated farmland would be less than significant.

- c) **No Impact.** The project would not cause rezoning of forestland, timberland, or timberland zoned timber production.
- d) **No Impact.** The project area does not include any forestland.
- e) **No Impact.** Replacement of Ackerman Creek bridge on North State Street would have no additional direct or indirect effects on farmland other than those impacts previously described. The project would occur within an existing road corridor and would have no influence on growth in areas served by North State Street.

Mitigation Measures

No project-specific mitigation is required under this subject.

| | <i>Potentially Significant Impact</i> | <i>Less than Significant with Mitigation Incorporated</i> | <i>Less than Significant Impact</i> | <i>No Impact</i> |
|---|---|---|---|-------------------------------------|
| III. AIR QUALITY — Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project: | | | | |
| a) Conflict with or obstruct implementation of the applicable air quality plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Violate any air quality standard or contribute to an existing or projected air quality violation? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| d) Expose sensitive receptors to substantial pollutant concentrations? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| e) Create objectionable odors affecting a substantial number of people? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Discussion of Impacts

- a, b) ***Less-than-Significant Impact.*** Air pollution control will conform to Caltrans Standard Specifications, which state that the contractor shall comply with all applicable air pollution control rules, regulations, ordinances, and statutes.
- c) ***Less than Significant with Mitigation Incorporated.*** Mendocino County is currently a state non-attainment area for particulate matter (PM₁₀) (California Air Resources Board 2013). Construction activities associated with the project would result in a relatively minor net increase in PM₁₀. While the amount of PM₁₀ generated by the project would be minor, it would nevertheless be considered a significant impact because of the Mendocino County Air Quality Management District's (AQMD) current non-attainment status for particulate matter. In addition to adhering to Caltrans Standard Specifications and Mendocino County AQMD's Particulate Matter Attainment Plan (Mendocino County Air Quality Management District 2005) for air quality, implementation of *Mitigation Measure #1—Air Quality Fugitive Dust Control* will reduce this impact to a less-than-significant level.
- d) ***Less than Significant with Mitigation Incorporated.*** Several residences and businesses are located on parcels adjacent to or in close proximity to the project area. Air quality at these locations is influenced in part by the emissions generated by vehicle traffic on North State Street, US 101 (approximately 0.1 mile west of the project area), numerous side streets and

parking lots, and dust from the vineyard access roads and other nearby unimproved roads. The project would not result in increased traffic on North State Street, since there would be no change in the road's level of service (i.e., the road would remain a two-lane road). The volume of air pollutants generated by construction of the project would be minor and consistent with existing conditions; however, project activities will be implemented according to Caltrans' Standard Specifications and Mendocino County AQMD's Particulate Matter Attainment Plan (Mendocino County Air Quality Management District 2005) for air quality. *Mitigation Measure #1—Air Quality Fugitive Dust Control* will be used to ensure this impact will remain at a less-than-significant level.

- e) **No Impact.** The project would not create any objectionable odors.

Mitigation Measures

Mitigation Measure #1—Air Quality/Fugitive Dust and Emission Controls

The County shall include provisions in the construction bid documents that the contractor shall implement a dust control program to limit fugitive dust and vehicle emissions. The dust and emissions control program shall include, but not be limited to, the following elements, as appropriate:

- Water inactive construction sites and exposed stockpile sites at least twice daily, including during non-work days or until soils are stable.
- Pursuant to the California Vehicle Code (State of California 2014), all trucks hauling soil and other loose material to and from the construction site shall be covered or shall maintain at least 6 inches of freeboard (i.e., minimum vertical distance between top of load and the trailer).
- Any topsoil that is removed during construction shall be stored onsite in piles not to exceed 4 feet in height to allow development of microorganisms prior to resoiling of the construction area. These topsoil piles shall be clearly marked and flagged. Topsoil piles that will not be immediately returned to use shall be revegetated with a non-persistent erosion control mixture.
- Soil piles for backfill shall be marked and flagged separately from native topsoil stockpiles. These soil piles shall also be surrounded by silt fencing, straw wattles, or other sediment barriers or covered unless they are to be immediately used.
- Equipment or manual watering shall be conducted on all stockpiles, dirt/gravel roads, and exposed or disturbed soil surfaces, as necessary, to reduce airborne dust.

Timing/Implementation: During construction
Enforcement: Mendocino County AQMD
Monitoring: County and/or its contractor

| | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|--|--------------------------------|--|-------------------------------------|-------------------------------------|
| IV. BIOLOGICAL RESOURCES — Would the project: | | | | |
| a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 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"/> |

Discussion of Impacts

- a) ***Less than Significant with Mitigation Incorporated.*** A Natural Environment Study (NES) report (North State Resources 2015a), which analyzes the project impacts on biological resources was prepared for the proposed project. No special-status plant species were detected by North State Resources (NSR) during its protocol-level survey of the project area in April and June 2012. Suitable habitat does occur for the following special-status fish and wildlife species:
- Central California Coast Distinct Population Segment (DPS) steelhead (*O. mykiss*) – Federally Threatened

- California Coastal ESU Chinook salmon (*O. tshawytscha*) – Federally Threatened
- Western pond turtle (*Actinemys marmorata*) – Species of Special Concern
- White-tailed kite (*Elanus leucurus*) – State Fully Protected
- Long-eared owl (*Asio otus*) – Species of Special Concern
- Yellow-breasted chat (*Icteria virens*) – Species of Special Concern
- Yellow warbler (*Dendroica petechia brewsteri*) – Species of Special Concern
- Pallid bat (*Antrozous pallidus*) – Species of Special Concern

Fish. On March 6, 2015, NMFS issued a Concurrence Letter (No.: WCR-2015-2155) that concurred with Caltrans' determination that the project *is not likely to adversely affect* Central California Coast DPS steelhead and California Coastal ESU Chinook salmon, and is not likely to eliminate or significantly diminish or disrupt Essential Fish Habitat (EFH) for Pacific salmon inhabiting Ackerman Creek. Due to the life history of these species and environmental conditions (no flow) in Ackerman Creek during the seasonal in-channel work window (June 15–October 31) it is possible to entirely avoid direct impacts to all life stages of these species. Following is a discussion of anticipated project impacts on special-status fish:

Loss or Modification of Juvenile Rearing Habitat

Ackerman Creek in the project area is not designated critical habitat for steelhead or Chinook salmon, and habitat is limited to migration and transient rearing habitat—summer holding and spawning habitat do not occur in the project area. Due to the seasonal flows and presence of listed fish species in Ackerman Creek, a seasonal work window from June 15–October 31 is an appropriate conservation measure to entirely avoid direct impacts on salmonids.

Loss of Riparian Habitat

A few mature trees along the riverbank within the construction area would be removed to accommodate the new bridge alignment and grade control structure, and allow for construction access to the work pad. Work activities such as vehicle parking and placement of storage containers on the upland terrace on the east bank may temporarily affect the low growing grasses and forbs in the construction area, but no permanent impacts on this habitat would occur.

The project design includes measures to account for temporary impacts on riparian habitat and streamside vegetation in the project area. Impacts on riparian habitat would not result in a modification or loss of riparian habitat that would decrease survival or recovery of these species. Improvements to fish passage would greatly outweigh any localized temporary impacts on riparian vegetation.

Percussion Impacts

In instances where piles are hammered into the ground in the aquatic environment, there is a

potential for barotraumas (i.e., injuries sustained in response to the sudden pressure change due to compression waves travelling underwater). The effect of pile driving on free swimming fish depends on the duration, frequency (Hz), and pressure (dB) of the compression wave. The potential impacts of barotraumas are greatest for salmonid embryos, which are very sensitive to seismic vibrations following fertilization until the eyed-stage of development (Piper et al. 1982). Pile driving would not occur during the incubation period and would not affect salmonid embryos. Percussion shock waves may damage the sensory cells of juvenile fish if sustained high-intensity exposures occur. Low-frequency sounds have been found to repel salmonids, while high-frequency sounds may result in internal physiological damage (California Department of Transportation 2001). Juvenile salmonids, when startled, can be harmed by temporarily disrupting normal behaviors that are essential to growth and survival such as feeding, sheltering, and migrating. Adverse effects occur when disruption of normal behaviors increases the likelihood that individual fish will face increased competition for food and space, and experience reduced growth rates or possibly weight loss. Disruption of these behaviors may also result in the death of some individuals to increased predation if fish are disoriented or concentrated in areas with high predator densities.

Approximately 50 16-inch steel pipe piles (25 per abutment) would be driven with a Delmag D19-42 or similar piece of equipment to support both the abutments; half would be driven during the first in-water construction season and the other half would be driven the second season to accommodate staged bridge construction. The maximum acoustic impact area for the proposed project is 213 feet. Sound pressure levels in Ackerman Creek would exceed NMFS' thresholds for physical injury within a radial distance of 46 feet from driven piles and for behavioral impacts within a radial distance of 213 feet of piles driven adjacent to the stream at the eastern abutment. Therefore, pile driving shall occur only during the in-water work window—the time period that takes into account both localized life history patterns and physical habitat conditions (i.e., flow and water temperature)—to protect steelhead and Chinook salmon from barotraumas.

Increased Turbidity and Suspended Sediment

Activities related to the construction of the new bridge foundation, substructure, and roughened channel would result in some localized loss of vegetation and general disturbance to the soil. It would also necessitate the dewatering of excavated areas during footing construction; the volume of which would depend on the depth, source and flow rate of groundwater in the area. Suspended solids and turbidity generally do not acutely affect aquatic organisms unless they reach extremely high levels (i.e., levels of suspended solids reaching 25 mg/L).

The proposed project would not likely result in significant increases of suspended solids and turbidity resulting in acute effects. Increases in turbidity resulting from the replacement of grade control and fish passage structures and would be short lived immediately following first seasonal flows following construction. Studies on sediment duration in similar types of activities (culvert replacement and streambed modifications) have shown that suspended sediment duration is typically short lived.

Impaired Fish Passage During Construction

All instream construction activities would be completed during the dry seasonal work window (June through October) when no freshwater life stage of steelhead or Chinook salmon would be present and subject to direct impacts. Construction activities would not temporarily impair fish passage through the project area.

The project involves removal of the existing check dam and Denil-type fish ladder and reforming of the channel using a roughened channel design. This design would sufficiently protect against scour through the use of rock weirs keyed into the stream bed and would create hydraulic conditions suitable for fish passage through the project area. The new structure would ultimately improve fish passage in Ackerman Creek, both upstream and downstream, for juvenile and adult salmonids by improving the hydraulic conditions and greatly increasing the range of operational flows. This would be a beneficial impact.

Potential Spill of Hazardous Materials

The potential spill of hazardous materials (i.e., oil, grease, gasoline, solvent) during construction and staging activities into Ackerman creek could have deleterious effects on all life stages of the special-status fish species present within close proximity to construction activities. Additionally, operation of construction equipment in or adjacent to the river would increase the risk of a spill of hazardous materials into the river (i.e., construction equipment leaking fluids). All in-channel work would occur during the dry season when no surface flow would be present in Ackerman Creek and no steelhead or Chinook salmon are present. Out-of-channel construction during the rest of the year on upland habitats would have a smaller potential for direct releases to surface waters. Further, conservation measures included as part of the project require a site-specific spill prevention plan and limitations on fueling of equipment, storage of hazardous materials and use of non-toxic vegetable oil for all hydraulic equipment operating within the OHWM minimizing the potential for direct releases of hazardous materials to surface water features. Therefore, adverse effects resulting from a localized spill of hazardous material are highly improbable.

Mitigation Measure #2 – Special-Status Fish, Mitigation Measure #3 – Erosion and Sediment Control, Mitigation Measure #4 – Prevention of Accidental Spills of Pollutants, Mitigation Measure #5 – Replacement of Lost Riparian Habitat, and Mitigation Measure #6 – Prevention of Spread of Invasive Species will be used to reduce project impacts on fish and **the aquatic environment to a less-than-significant level.**

Western pond turtle. Western pond turtle was not observed during field assessments/surveys conducted for the project; however, Ackerman Creek, in the project area provides habitat for this species (North State Resources 2015a). There is one recorded occurrence of western pond turtle approximately 1.46 miles southwest of the project area. Although unlikely, construction related impacts, especially in-channel work, could result in an adverse effect via direct loss (e.g., due to operation of equipment in or adjacent to the river channel when flowing or standing water is present). The potential for direct loss would occur only during project construction. *Mitigation Measure #7 – Western Pond Turtle* will be used to reduce any impacts on turtles to a less-than-significant level. This species may also be affected if construction activities result in degradation of aquatic habitat and water quality

due to erosion and sedimentation, accidental fuel leaks, and spills. *Mitigation Measure #3 – Erosion and Sediment Control* and *Mitigation Measure #4 – Prevention of Accidental Spills of Pollutants* will be used to maintain water quality. In addition, loss of riverine and riparian habitat may have a negative impact on this species; therefore, *Measure #5 – Replacement of Lost Riparian Habitat* will be used to reduce this impact to a less-than-significant level.

Long-eared owl and white-tailed kite. Neither long-eared owl nor white-tailed kite were observed during the field assessments/surveys conducted for the project; however, riparian vegetation along Ackerman Creek provides nesting habitat for both of these species (North State Resources 2015a). Owls and kites may nest in or adjacent to the project area. Thus, construction disturbance during the breeding season could result in the loss of fertile eggs or nestlings, or otherwise lead to nest abandonment. Loss of fertile eggs or any activities resulting in nest abandonment may adversely affect these species. The project may also result in a small, temporary reduction of foraging or roosting habitat for these species. However, due to the regional abundance of similar habitats, temporary habitat loss is not expected to result in an impact on either species. *Mitigation Measure #8 – Raptors* will be used to reduce any impacts on owls and kites to a less-than-significant level.

Yellow warbler and yellow-breasted chat. Neither yellow warbler nor yellow-breasted chat were observed during the field assessments/surveys conducted for the project; however, the riparian vegetation along Ackerman Creek provides breeding habitat for both species (North State Resources 2015a). These migratory bird species may nest in or adjacent to the project area. Thus, construction disturbance during the breeding season could result in the loss of fertile eggs or nestlings, or otherwise lead to nest abandonment. Loss of fertile eggs or nestlings, or any activities resulting in nest abandonment, may adversely affect these species. The proposed project may also result in a small, temporary reduction of foraging or roosting habitat for migratory bird species. However, due to the regional abundance of similar habitats, temporary habitat loss is not expected to result in an impact on migratory birds. *Mitigation Measure #9– Yellow Warbler and Yellow-Breasted Chat* will be used to reduce any impacts on yellow warbler and yellow-breasted chat to a less-than-significant level.

Pallid bat. Pallid bat was not observed during the field assessments/surveys conducted for the project (North State Resources 2015a). The existing bridge does not have any suitable roosting crevices. The riparian habitat along Ackerman Creek may provide suitable night roosting and foraging habitat for pallid bat. The closest California Natural Diversity Database (CNDDB) occurrence record for pallid bat is a 1987 occurrence recorded along 6.59 miles northeast of the project area. Given the absence of mines, caves, rock crevices, and large snags, the project area is not anticipated to provide suitable breeding habitat (e.g., maternity roosts) for pallid bat. Project implementation is unlikely to have an impact on foraging bats due to the abundance of suitable foraging habitat in the region and the temporary nature of impacts on riparian vegetation within the project area. Therefore, the proposed project is not anticipated to result in significant adverse impacts on these species. However, *Mitigation Measure #10 – Bats* will be used to reduce any potential impacts on pallid bats to a less-than-significant level.

Migratory Birds: The existing bridge structure was visually surveyed for evidence of previous migratory bird nesting activity (e.g., remnant mud nests) during the June 20, 2012 field assessment (North State Resources 2015a). No nests were observed; however, the structure provides suitable nesting habitat for migratory birds. Riparian habitat within the project area also provides suitable nesting habitat for migratory birds. Adverse impacts on songbirds and other migratory birds could occur if they are actively nesting during project construction. Adverse impacts on other migratory birds could occur if they are actively nesting during pre-construction brush removal. *Mitigation Measure #11 – Migratory Birds* will be used to reduce any potential impacts on migratory birds and songbirds to a less-than-significant level.

- b) ***Less than Significant with Mitigation Incorporated.*** Riparian habitat is considered a sensitive natural community by the U.S. Army Corps of Engineers (Corps), CDFW, and the County, and is present in the project area. The proposed project would result in direct permanent impacts on approximately 0.289 acre of intermittent stream, 0.095 acre of riparian wetland, and 0.257 acre of upland riparian habitat. These permanent impacts would result from construction of the armored fishway passage and the construction of a short road drainage northwest of the bridge. The proposed project may result in temporary impacts on approximately 0.045 acre of intermittent stream, 0.010 acre of riparian wetland, and 0.790 acre of upland riparian habitat. These temporary impacts would be due to the construction of the new bridge and the fishway passage. *Mitigation Measure #12 – Sensitive Natural Communities* will be used to reduce impacts on riparian vegetation to a less-than-significant level. *Mitigation Measure #5* will be used to compensate for impacts on riparian vegetation.
- c) ***Less than Significant with Mitigation Incorporated.*** The project would result in permanent and temporary impacts on wetland features under the jurisdiction of the Corps, pursuant to Section 404 of the Clean Water Act. Implementation of the proposed project would result in permanent impacts on up to 0.384 acre (0.289 acre of intermittent stream; 0.095 acre of riparian wetland) and temporary impacts on up to 0.055 acre (0.045 acre of intermittent stream; 0.010 acre of riparian wetland) of waters of the United States. Project activities resulting in permanent impacts on waters of the United States are associated with the construction of the armored fishway passage and the construction of a short road drainage northwest of the bridge. Temporary impacts would result from equipment access and grubbing of vegetation during the construction of the new bridge and fishway passage. *Mitigation Measure #5* and *Mitigation Measure #13 – Waters of the United States* will be used to reduce any potential impacts to waters to a less-than-significant level. *Mitigation measures #3* and *#4* will be used to maintain water quality. *Mitigation Measure #5* will be used to compensate for impacts on riparian vegetation.
- d) ***Less-than-Significant Impact.*** The project area does not encompass any wildlife nursery sites. All instream construction activities will be completed during the dry seasonal work window (June through October) when no freshwater life stage of anadromous fish would be present in the affected reach of Ackerman Creek. Construction activities would not impair fish passage through the project area.

- e) ***Less than Significant With Mitigation Incorporated.*** The proposed project will comply with the goals and objectives described in the County's General Plan (Pacific Municipal Consultants 2009), including measures for water quality and biological resources protection. The proposed project will also comply with the County's oak tree retention/replacement provisions and riparian vegetation provisions specified in the General Plan, which include adhering to the County's grading ordinance and protecting and retaining natural vegetation to the extent possible. Construction of the new bridge would result in the loss of riparian vegetation, which may be inconsistent with riparian vegetation protection guidelines in the Land Use Element in the General Plan (Pacific Municipal Consultants 2009). Mitigation Measure #5 will be used to reduce any potential impacts to vegetation to a less-than-significant level.
- f) ***No Impact.*** Currently, there are no adopted Habitat Conservation Plans, Natural Community Conservation Plans, or other approved habitat conservation plans that cover the project area.

Mitigation Measures

Mitigation Measure #2 – Special-Status Fish

The County shall include provisions in the construction bid documents to minimize project impacts on special-status fish species. The following measures shall be implemented during construction to reduce impacts on special-status fish:

- All instream work will be completed June 15–October 31.
- To the extent practicable with construction of the roughened channel, any new or previously excavated gravel material placed in the channel shall meet Caltrans' cleanness test indicating the relative proportions of clay-sized material clinging to coarse aggregate and screenings (California Test No. 227) with a value of 85 or higher (excluding such materials as soil in the RSP to allow for riparian planting).
- Equipment will be staged and materials will be stockpiled outside of the riparian habitat.
- Impacts on herbaceous cover will be offset by reseeding disturbed areas with a suitable seed mixture immediately following completion of construction.
- Any construction equipment operating upon work pads or adjacent to Ackerman Creek will be inspected daily for leaks. External oil, grease, and mud will be removed from equipment and disposed of properly. Spill containment booms will be maintained onsite at all times during construction operations and/or staging of equipment or fueling supplies. Fueling trucks will maintain adequate spill containment materials at all times.
- The contractor shall develop and implement site-specific BMPs, a water pollution control plan, and an emergency spill control plan. The contractor shall be responsible for immediate containment and removal of any toxins released.

Timing/Implementation: During and after construction

Enforcement: NMFS, CDFW, Caltrans
Monitoring: County and/or its contractor

Mitigation Measure #3—Erosion and Sediment Control

The County shall include provisions in the construction bid documents that the contractor shall implement to reduce the potential for erosion and sediment to result from project construction. Erosion and sediment controls will include, but not be limited to, the following elements, as appropriate:

- Erosion control measures will be implemented during project construction. These measures will conform to the provisions in the Caltrans Standard Specifications and the special provisions included in the project contract. Such provisions include the preparation of a Storm Water Pollution Prevention Plan (SWPPP) that includes best management practices (BMP) to be used at the project site.
- Erosion control measures to be included in the SWPPP or to be implemented by the County include the following:
 - To the maximum extent practicable, activities that increase the erosion potential in the project area will be restricted to the relatively dry summer and early fall period to minimize the potential for rainfall events to transport sediment to surface water features. In-channel construction will be conducted from June 15-October 31 and upland construction will likely occur throughout the year as long as work activities comply with the conservation and avoidance and minimization measures identified herein and for the protection of other sensitive or special-status plant or animal species. For upland construction activities that must take place during the late fall, winter, or spring, temporary erosion and sediment control structures shall be in place and operational at the end of each construction day and maintained until permanent erosion control structures are in place.
 - Areas where wetland and upland vegetation need to be removed will be identified in advance of ground disturbance and limited to only those areas that have been approved by the County. Exclusionary fencing will be installed around areas that do not need to be disturbed.
 - Within 10 days of completion of construction in those areas where subsequent ground disturbance will not occur for 10 calendar days or more, weed-free mulch shall be applied to disturbed areas to reduce the potential for short-term erosion. Prior to a rain event or when there is a greater than 50 percent possibility of rain within the next 24 hours, as forecasted by the National Weather Service, weed-free mulch shall be applied to all exposed areas upon completion of the day's activities. Soils shall not be left exposed during the rainy season.
 - Suitable BMPs, such as silt fences, straw wattles, or catch basins, shall be placed below all construction activities at the edge of surface water features to intercept sediment before it reaches the waterway. These structures shall be installed prior to any clearing or

grading activities. Further, sediment built up at the base of BMPs will be removed before BMP removal to avoid any accumulated sediments from being mobilized post-construction.

- All dewatering activities will be conducted in compliance with the *Caltrans Field Guide for Construction Site Dewatering* and Section 13-4.03G of the Caltrans Standard Specifications. Water removed from the excavated area for pier and abutment footings or construction of fishway will be pumped to a temporary sediment retention basin outside of the channel, through a mechanized water filtration system, or into baker tanks or similar storage system and trucked offsite to an authorized disposal site. If a temporary basin is constructed, it will be located outside of the active channel and include sediment sock or similar sediment control on the discharge.
- If spoil sites are used, they will be located such that they do not drain directly into a surface water feature, if possible. If a spoil site drains into a surface water feature, catch basins will be constructed to intercept sediment before it reaches the feature. Spoil sites will be graded and vegetated with native species to reduce the potential for erosion.
- Sediment control measures will be in place prior to the onset of the rainy season and will be monitored and maintained in good working condition until disturbed areas have been revegetated with native species.
- To the extent practicable during construction of the roughened channel, any new or previously excavated gravel material placed in the channel will meet Caltrans' cleanness test indicating the relative proportions of clay-sized material clinging to coarse aggregate and screenings (California Test No. 227) with a value of 85 or higher (excluding such materials as soil in the RSP to allow for riparian planting).

Timing/Implementation: Prior to, during, and after construction
Enforcement: Corps, North Coast RWQCB, CDFW
Monitoring: County and/or its contractor

Mitigation Measure #4—Prevention of Accidental Spills of Pollutants

The County shall include provisions in the construction bid documents that shall be implemented by the contractor to reduce the potential for accidental spills of pollutants during project construction. Measures to avoid accidental spills of pollutants will include, but not be limited to, the following elements, as appropriate:

- Construction specifications will include the following measures to reduce potential impacts on vegetation and aquatic habitat resources in the project area associated with accidental spills of pollutants (e.g., fuel, oil, and grease):
 - A site-specific spill prevention plan will be implemented for potentially hazardous materials. The plan will include the proper handling and storage of all potentially hazardous materials, as well as the proper procedures for cleaning up and reporting any

spills. If necessary, containment berms will be constructed to prevent spilled materials from reaching surface water features.

- Equipment and hazardous materials shall be stored 50 feet away from surface water features.
- Vehicles and equipment used during construction shall receive proper and timely maintenance to reduce the potential for mechanical breakdowns leading to a spill of materials. Maintenance and fueling shall be conducted in an area at least 50 feet away from Ackerman Creek or within an adequate fueling containment area.
- Equipment operating within the OHWM shall use non-toxic vegetable oil for operating hydraulic equipment instead of traditional hydraulic fluids.
- Place plastic materials under asphaltic concrete (AC) paving equipment while not in use, to catch and/or contain drips and leaks.
- Minimize sand and gravel from new asphalt from getting into storm drains, streets, and creeks by sweeping. Old or spilled asphalt must be recycled or disposed as approved by the Resident Engineer.
- AC grindings, pieces, or chunks used in embankments or shoulder backing must not be allowed to enter any storm drain or watercourses. Install silt fence until structure is stabilized or permanent controls are in place.
- Collect and remove all broken asphalt and recycle when practical; otherwise, dispose in accordance with Standard Specification 7-1.13.
- During chip seal application and sweeping operations, petroleum or petroleum covered aggregate must not be allowed to enter any storm drain or water courses. Use silt fence until installation is complete.
- Use only non-toxic substances to coat asphalt transport trucks and asphalt spreading equipment.
- Drainage inlet structures and manholes shall be covered with filter fabric during application of seal coat, tack coat, slurry seal, and/or fog seal.
- Seal coat, tack coat, slurry seal, or fog seal shall not be applied if rainfall is predicted to occur during the application or curing period.
- Do not allow saw-cut Portland Concrete Cement (PCC) slurry to enter storm drains or watercourses.

Timing/Implementation: During construction
Enforcement: Corps, North Coast RWQCB, CDFW
Monitoring: County and/or its contractor

Mitigation Measure #5—Replacement of Lost Riparian Habitat

The County shall include provisions in the construction bid documents to mitigate the loss of riparian habitat as a result of project construction. The following measures shall be implemented to reduce potential impacts on riparian habitat in the project area:

- The width of the construction disturbance zone within the riparian habitat shall be minimized through careful pre-construction planning.
- Exclusionary fencing shall be installed along the boundaries of all riparian areas to be avoided to ensure that impacts to riparian vegetation outside of the construction area are minimized.
- Riparian habitat areas temporarily disturbed shall be replanted using riparian species that have been recorded along the Ackerman Creek in the project area, including willow (*Salix lasiolepis* and *Salix laevigata*), white alder (*Alnus rhombifolia*), and Fremont cottonwood (*Populus fremontii*).
- Onsite creation/restoration shall occur in areas that have been disturbed during project construction and within interstitial spaces of the RSP. The amount of habitat created/restored shall be at a 3:1 ratio of new plantings per large (6 inch diameter at breast height (dbh)) woody plants removed. This replanting ratio will help ensure successful establishment of at least one vigorous plant for each plant removed to accommodate the project.
- Plant spacing intervals will be determined as appropriate based on site conditions following construction.
- Non-native tree species removed during project construction will be replaced with native riparian species (e.g., willow, alder, and cottonwood).
- Revegetation monitoring would be implemented in compliance with regulatory permit conditions and be initiated immediately following completion of the planting. The monitoring surveys will consist of a general site walkover evaluating the survival and health of riparian plantings, signs of drought stress, weed or herbivory problems, and the presence or trash or other debris. Within the mitigation area, less than 50 percent total mortality of planted species (including container stock and hardwood cuttings) will be considered a success. Greater than 50 percent mortality of planted species will be considered acceptable if “volunteer” native species provide complete vegetation coverage in the mitigation area. If monitoring results indicate that revegetation efforts are not meeting established success criteria, corrective measures will be implemented.

Timing/Implementation: Prior to, during, and after construction
Enforcement: CDFW
Monitoring: County and/or its contractor

Mitigation Measure #6 – Prevention of Spread of Invasive Species

The County shall include provisions in the construction bid documents to prevent the spread of invasive plant species as a result of project construction. The following measures shall be implemented to prevent the spread of invasive species in the project area:

- All equipment used for off-road construction activities will be weed-free prior to entering the project area.
- If project implementation calls for mulches or fill, they will be weed free.
- Any seed mixes or other vegetative material used for re-vegetation of disturbed sites will consist of locally adapted native plant materials to the extent practicable.
- Any personal equipment (including boots/waders), construction materials (falsework members, sand bags, etc.) and construction equipment shall be properly disinfected or cleaned according guidance provided by the State of California Aquatic Invasive Species Management Plan (California Department of Fish and Game 2008; U.S. Bureau of Reclamation 2012) prior to in-channel work to prevent the spread of aquatic invasive species.

Timing/Implementation: Prior to, during, and after construction
Enforcement: CDFW
Monitoring: County and/or its contractor

Mitigation Measure #7—Western Pond Turtle

In addition to implementation of mitigation measures #3-5, the County shall include additional provisions in the construction bid documents to minimize project impacts on western pond turtles. The following measures shall be implemented to reduce construction-related impacts on western pond turtles:

- Because turtles may move into and out of the project site at any time, a preconstruction survey for the species is necessary to confirm its status (presence/absence) on the site immediately prior to the onset of project construction. Therefore, a qualified biologist shall conduct a minimum of one survey of the project site for pond turtles and their nests. The survey shall be conducted a maximum of one week prior to construction. If a pond turtle is found within a construction impact zone, the biologist shall move it to a safe location within similar habitat. If a pond turtle nest is found, the biologist shall flag the site and determine if construction activities can avoid affecting the nest. If the nest cannot be avoided, it will be excavated and re-buried at a suitable location outside of the construction impact zone by a qualified biologist. The County will inform Caltrans when such an activity occurs.
- If a western pond turtle is encountered during construction, activities in the vicinity shall cease until appropriate corrective measures have been implemented or it has been determined that the turtle will not be harmed. Any turtles encountered during construction shall be allowed to move away on their own. Any trapped, injured, or killed turtles shall be reported immediately to CDFW.

Timing/Implementation: Prior to and during construction
Enforcement: CDFW
Monitoring: County and/or its contractor

Mitigation Measure #8—Raptors

The County shall include provisions in the construction bid documents to minimize project impacts on raptors. The following measures shall be implemented to reduce construction-related impacts on raptors:

- Preconstruction surveys for nesting raptors shall be conducted by a qualified biologist within the project area and a 250-foot buffer around the project area to ensure that no nests will be disturbed during project implementation. At least one survey should be conducted no more than 15 days prior to the initiation of construction activities. During this survey, the biologist should inspect all trees immediately adjacent to the impact areas for raptor nests. If an active raptor nest is found close enough (i.e., within 250 feet) to the construction area to be disturbed by these activities, the biologist (in consultation with the CDFW) shall determine the extent of a construction-free buffer zone to be established around the nest. The County will inform Caltrans when such an activity occurs.
- If all necessary approvals have been obtained, potential nesting substrate (e.g., shrubs and trees) that will be removed as a result of the project shall be removed before the onset of the nesting season (February 15 through September 30), if practicable. This will discourage nesting in areas that would be directly impacted by the proposed project and substantially decrease the likelihood of direct impacts.

Timing/Implementation: Prior to and during construction
Enforcement: CDFW, Caltrans
Monitoring: County and/or its contractor

Mitigation Measure #9—Yellow Warblers and Yellow-Breasted Chats

The County shall include provisions in the construction bid documents to minimize project impacts on yellow warblers and yellow-breasted chats. The following measures shall be implemented to reduce construction-related impacts on migratory bird species:

- Grading and other construction activities shall be scheduled to avoid the nesting season to the extent possible. The nesting season for yellow warblers and yellow-breasted chats that may occur in the project vicinity extends from March through August. If construction occurs outside of the breeding season, no further mitigation is necessary. If the breeding season cannot be completely avoided, the following mitigations shall be implemented:
 - A qualified biologist shall conduct a minimum of one preconstruction survey for yellow warblers and yellow-breasted chats within the project area and a 250-foot buffer around the project area. The survey should be conducted no more than 15 days prior to the initiation of construction in any given area. The preconstruction survey should be used to ensure that no nests of these species within or immediately adjacent to the project area

would be disturbed during project implementation. If an active nest is found, a qualified biologist should determine the extent of a construction-free buffer zone to be established around the nest. The County will inform Caltrans when such an activity occurs.

- If vegetation is to be removed by the project and all necessary approvals have been obtained, potential nesting substrate (e.g., shrubs and trees) that will be removed by the project should be removed before the onset of the nesting season, if feasible. This will help preclude nesting and substantially decrease the likelihood of direct impacts.

Timing/Implementation: Prior to and during construction
Enforcement: CDFW, Caltrans
Monitoring: County and/or its contractor

Mitigation Measure #10—Pallid Bat

The County shall include provisions in the construction bid documents to minimize project impacts on pallid bats. The following measures shall be implemented to reduce construction-related impacts on pallid bats:

- To the extent practicable, the removal of any large trees shall occur outside of the breeding season of pallid bat. For the purposes of implementation of this measure, the breeding season is considered to be from April 1 through August 15th.

Timing/Implementation: Prior to and during construction
Enforcement: CDFW
Monitoring: County and/or its contractor

Mitigation Measure #11—Migratory Birds

In addition to implementation of Mitigation Measure #9, the County shall include provisions in the construction bid documents to minimize project impacts on songbird and migratory bird species. The following measures are recommended to avoid or minimize project-related impacts on songbirds and other migratory birds:

- Construction activities on, and removal of, the existing bridge should be scheduled to avoid the nesting season to the extent feasible. The typical nesting season in northern California extends from March through July. Thus, if bridge demolition can be scheduled to occur between August and December, or the period before nesting begins and after nesting is complete, the nesting season would be avoided, and no impacts would be expected.
- If it is not possible to schedule bridge removal to avoid nesting, any existing unoccupied and inactive nests shall be removed from the existing bridge before March 1 of the construction year. Removal of empty or unfinished nests should be repeated as frequently as necessary (can be up to three times per week) to prevent nest completion. A nest exclusion device can be installed (e.g. netting or similar mechanism that keeps birds from building nests) if desired prior to March 1 or after August 1. Any nest exclusion devices should be approved by CDFW prior to installation. Exclusion efforts should be continued until actual removal of the bridge structure. The County will inform Caltrans when such an activity occurs

Timing/Implementation: Prior to and during construction
Enforcement: CDFW, Caltrans
Monitoring: County and/or its contractor

Mitigation Measure #12 – Sensitive Natural Communities

The County shall include provisions in the construction bid documents to minimize project impacts on sensitive natural communities. In addition to use of Mitigation Measure #5, the following measure shall be implemented to reduce construction-related impacts on sensitive natural communities:

- The project shall be designed and constructed to avoid and minimize removal of riparian vegetation to the maximum extent practicable. Staging areas and construction access routes shall avoid encroachment into riparian vegetation where practicable and minimize encroachment where complete avoidance is not practicable. Avoided riparian habitat will be clearly identified in the construction drawings and contractor work plans. Exclusionary fencing will be installed to mark boundaries of all avoided riparian areas. All pedestrian and vehicular traffic into the avoided areas delineated by the fencing shall be prohibited during construction. The exclusionary fencing shall be inspected and maintained on a regular basis throughout project construction.

Timing/Implementation: Prior to and during construction
Enforcement: CDFW
Monitoring: County and/or its contractor

Mitigation Measure #13 – Waters of the United States

The County shall include provisions in the construction bid documents to minimize project impacts on waters of the United States. In addition to use of Mitigation Measure #5, the following measures shall be implemented to reduce construction-related impacts on waters of the United States:

- To the extent practicable, the discharge of dredged or fill material into waters of the United States, including wetlands shall be avoided (this also includes waters not subject to Corps jurisdiction, but subject to RWQCB jurisdiction). Complete avoidance of waters of the United States is not feasible due to the need for the placement of new abutments, thus the following measures shall be implemented to avoid or minimize the potential for these project-related impacts:
 - To the maximum extent practicable, activities that increase the erosion potential in the project area shall be restricted to the relatively dry summer and early fall period to minimize the potential for rainfall events to transport sediment to surface water features. If these activities must take place during the late fall, winter, or spring, then temporary erosion and sediment control structures shall be in place and operational at the end of each construction day and maintained until permanent erosion control structures are in place.

- Areas where wetland and upland vegetation need to be removed shall be identified in advance of ground disturbance and limited to only those areas that have been approved by the County.
- Within 10 days of completion of construction in those areas where subsequent ground disturbance will not occur for 10 calendar days or more, weed-free mulch shall be applied to disturbed areas to reduce the potential for short-term erosion. Prior to a rain event or when there is a greater than 50 percent possibility of rain within the next 24 hours, as forecasted by the National Weather Service, weed-free mulch shall be applied to all exposed areas upon completion of the day's activities. Soils shall not be left exposed during the rainy season.
- Suitable BMPs, such as silt fences, straw wattles, or catch basins, shall be placed below all construction activities at the edge of surface water features to intercept sediment before it reaches the waterway. These structures shall be installed prior to any clearing or grading activities.
- If spoil sites are used, they shall be located such that they do not drain directly into a surface water feature, if possible. If a spoil site drains into a surface water feature, catch basins shall be constructed to intercept sediment before it reaches the feature. Spoil sites shall be graded and vegetated to reduce the potential for erosion.
- Sediment control measures shall be in place prior to the onset of the rainy season and will be monitored and maintained in good working condition until disturbed areas have been revegetated.
- Any new or previously excavated gravel material placed in the channel shall be washed at least once and have a cleanliness value of 85 or higher based on Caltrans Test No. 227.
- A site-specific spill prevention plan shall be implemented for potentially hazardous materials. The plan shall include the proper handling and storage of all potentially hazardous materials, as well as the proper procedures for cleaning up and reporting any spills. If necessary, containment berms shall be constructed to prevent spilled materials from reaching surface water features.
- Equipment and hazardous materials shall be stored 50 feet away from surface water features.
- Vehicles and equipment used during construction shall receive proper and timely maintenance to reduce the potential for mechanical breakdowns leading to a spill of materials. Maintenance and fueling shall be conducted in an area at least 50 feet away from the Ackerman Creek or within an adequate fueling containment area.

Timing/Implementation: Prior to, during, and after construction
Enforcement: Corps, North Coast RWQCB, CDFW
Monitoring: County

| | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|--|--------------------------------|--|-------------------------------------|-------------------------------------|
| V. CULTURAL RESOURCES — Would the project: | | | | |
| a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Disturb any human remains, including those interred outside of formal cemeteries? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| e) Cause a substantial adverse change in the significance of a Tribal resource pursuant to AB 52? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Discussion of Impacts

- a) **Less than Significant with Mitigation Incorporated.** The North State Street over Ackerman Creek Bridge (10C-0065) Replacement Project, Mendocino County, California, Archaeological Survey Report (North State Resources 2015b) states that no historic properties were identified in the project area that meet the significance criteria of the National Register of Historic Places. The bridge (10C-0065) is listed as a Category 5 bridge by Caltrans and as such does not meet the criteria for listing on the National Register of Historic Places. However, the presence of documented historic-era resources in the general vicinity of the project area suggests there is a potential for presently unrecorded resources to be encountered during ground-disturbing activities associated with project construction. *Mitigation Measure #14 – Cultural Resources* will be used to reduce any potential impacts on historic resources to a less-than-significant level.
- b) **Less than Significant with Mitigation Incorporated.** The North State Street over Ackerman Creek Bridge (10C-0065) Replacement Project, Mendocino County, California, Archaeological Survey Report (North State Resources 2015b) states that no prehistoric resources were identified in the project area. However, being situated adjacent to an intermittent watercourse (Ackerman Creek) on well-drained landforms that are generally level, the areas adjacent to the creek could have been suitable for early Native American activities and habitation. The presence of documented prehistoric-era resources in the general vicinity of the project area suggests there is a potential for presently unrecorded resources to be encountered during ground-disturbing activities associated with project construction. *Mitigation Measure #14 – Cultural Resources* will be used to reduce any potential impacts on prehistoric resources to a less-than-significant level.

- c) **No Impact.** The project area is not known to support any unique paleontological resources or unique geologic features. Soil profiles and geologic map for the project area suggest that alluvial and weathering processes have shaped the region for a considerable period of time. Soils in the project area are derived from the weathering processes on the sedimentary rock laid down millions of years ago. Soils found in terraces along stream channels have considerable depths and consequently any paleontological resources are likely buried, becoming visible only in cut banks or on scoured ground surfaces.
- d) **Less than Significant with Mitigation Incorporated.** Although no impacts on known cultural resources are anticipated, currently undetected cultural resources or evidence of human remains could be exposed during project excavation activities. This would be a significant impact. *Mitigation Measure #14 – Cultural Resources* and *Mitigation Measure #15 – Human Remains* will be used to reduce any potential impacts to cultural resources to a less-than-significant level.
- e) **Less than Significant Impact.** Assembly Bill 52 (AB 52) was passed in 2014 and amends sections of CEQA relating to Native Americans. AB 52 establishes a new category, named Tribal cultural resources, and states that a project with an effect that may cause a substantial adverse change in the significance if a Tribal cultural resource may have a significant impact on the environment. Section 21074 was added to the Public Resources Code (PRC) to define cultural resource, as follows:

21074. (a) “Tribal cultural resources” are either of the following:

- 1) Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:
 - (A) Included or determined to be eligible for inclusion in the California Register of Historical Resources.
 - (B) Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1 of the PRC.
- 2) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1. In applying the criteria set forth in subdivision (c) of PRC Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.
 - b) A cultural landscape that meets the criteria of subdivision (a) is a Tribal cultural resource to the extent that the landscape is geographically defined in terms of the size and scope of the landscape.
 - c) A historical resource described in Section 21084.1, a unique archaeological resource as defined in subdivision (g) of Section 21083.2, or a “non-unique

archaeological resource” as defined in subdivision (h) of Section 21083.2 may also be a Tribal cultural resource if it conforms to the criteria of subdivision (a).

AB 52 requires the CEQA lead agency to begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project if the tribe requests the lead agency to inform them, in writing, of projects in that area, and the tribe requests consultation, before the determination of whether a negative declaration, mitigated negative declaration, or environmental impact report is required. In addition, AB 52 includes time limits for certain response regarding consultation, as follows:

- Within 14 days of determining that an application for a project is complete or a decision by a public agency to undertake a project, the lead agency shall provide formal notification to the designated contact of, or a tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice;
- After provision of the formal notification by the lead agency, the California Native American tribe has 30 days to request consultation; and
- The lead agency must begin the consultation process within 30 days of receiving a California Native American tribe’

The County, under the purview of Caltrans District 1, consulted with the Native American Heritage Commission and local Native American groups and individuals pursuant to Section 106 of the National Historic Preservation Act (NHPA) and Section 21080.3 of CEQA. This consultation included contacting the local Native American individuals identified by the NAHC via letters and follow-up phone calls. Additionally, the NAHC conducted a review of their Sacred Lands database for culturally significant properties and they responded that they had no records for the project area. Multiple local Native American tribes responded to the consultation letter; no specific information about traditional properties or locations of traditional cultural use in the APE was received. Based on the responses received to date, and the relatively disturbed nature of the project site where ground-disturbing activities are proposed, it is unlikely that the project site contains Tribal cultural resources, as defined in PRC 21074. This impact would be less than significant. In addition, implementation of *Mitigation Measure #14 – Cultural Resources* and *Mitigation Measure #15 – Human Remains* will be used to reduce any potential impacts to cultural resources to a less-than-significant level.

Mitigation Measures

Mitigation Measure #14—Cultural Resources

The County shall include provisions in the construction bid documents to minimize project impacts on cultural resources. The following measure shall be implemented to avoid construction-related impacts on cultural resources:

- In the event archaeological deposits—other than those determined to lack eligibility for listing in the National Register of Historic Places—are discovered during project activities, all work in the immediate vicinity of the discovery shall be stopped immediately and the Mendocino County Department of Transportation shall be notified. An archaeologist meeting the Secretary of Interior’s Professional Qualifications Standards in prehistoric or historical archaeology, as appropriate, shall be retained to evaluate the find and recommend appropriate conservation measures. The conservation measures shall be implemented prior to re-initiation of activities in the immediate vicinity of the discovery.

Timing/Implementation: During construction
Enforcement: Native American Heritage Commission and County
Monitoring: County and/or its contractor

Mitigation Measure #15—Human Remains

The County shall include provisions in the construction bid documents to address the inadvertent discovery of human remains. The following measure shall be implemented to avoid construction-related impacts on inadvertently discovered human remains:

- If human remains are discovered during project activities, all activities in the vicinity of the find shall be suspended and the Mendocino County Sheriff–Coroner shall be notified. If the coroner determines that the remains may be those of a Native American, the coroner shall contact the Native American Heritage Commission. Treatment of the remains shall be conducted in accordance with the direction of the County Coroner and/or the Native American Heritage Commission, as appropriate.

Timing/Implementation: During construction
Enforcement: Native American Heritage Commission and County
Monitoring: County and/or its contractor

| | <i>Potentially Significant Impact</i> | <i>Less than Significant with Mitigation Incorporated</i> | <i>Less than Significant Impact</i> | <i>No Impact</i> |
|--|---|---|---|-------------------------------------|
| VI. GEOLOGY AND SOILS — Would the project: | | | | |
| a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: | | | | |
| i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| ii) Strong seismic ground shaking? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| iii) Seismic-related ground failure, including liquefaction? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| iv) Landslides? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Result in substantial soil erosion or the loss of topsoil? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c) Be located on strata 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code, creating substantial risks to life or property? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 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 type="checkbox"/> | <input checked="" type="checkbox"/> |

Discussion of Impacts

- a) i, ii) ***Less-than-Significant Impact.*** The nearest deterministic seismic source is the Maacama Fault zone (North Section) that is mapped approximately 0.79 mile to the east of the project site (Quincy Engineering 2012). However, faults are not mapped passing through the project area and the site is not within an Alquist-Priolo area for fault-rupture hazard (California Department of Conservation 2014). To ensure that potential seismically induced hazards do not affect the replacement bridge, Caltrans seismic design parameters, including staged increases in spectral acceleration, are incorporated into the project design.
- iii) ***Less-than-Significant Impact*** Based on the existing subsurface data, the loose, granular soils within at least 10 feet of the channel bottom are likely susceptible to liquefaction

(Quincy Engineering 2012). The underlying soils are compact, cemented, and/or cohesive, and appear to have a much lower potential for liquefaction. The used of deep foundations extending below the depth of susceptible soils would be reduce the risk of adverse impacts resulting from liquefaction to a less than significant level.

- iv) ***Less-than-Significant Impact.*** The topography of the project area is generally characterized a level to slightly sloping, although banks immediately along the Ackerman Creek channel are relatively steep. The potential for landslides to occur within the project area is low, with the possible exception of local bank instability (Quincy Engineering 2012). The project design includes stabilization methods such as RSP and a retaining wall to prevent landslides within the project area.
- b) ***Less than Significant with Mitigation Incorporated.*** Ground-disturbing construction activities would expose soils and make them susceptible to erosion in the event of rain; however, once soils are paved or overlain with RSP, the potential for erosion would be significantly reduced. Mitigation Measure #3 has been incorporated into the project to minimize erosion pre- and post-construction, and reduces this impact to a less-than-significant level.
- c, d) ***Less-than-Significant Impact.*** The geology of the project area and vicinity is naturally unstable and is sensitive to human disturbance (U.S. Environmental Protection Agency 2004). However, soils in and immediately adjacent to the Ackerman Creek channel are not expansive and have a low shrink-swell potential, while soils outside of the channel and immediate vicinity have a moderate shrink-swell potential (Natural Resources Conservation Service 2014). Because work outside of the existing road corridor would be temporary and the project would be constructed within the existing road corridor consistent with Caltrans Design Specifications, the potential for adverse impacts associated with geologic instability would be less than significant.
- e) ***No Impact.*** The proposed project does not involve septic or wastewater systems.

Mitigation Measures

Implement *Mitigation Measure #3 - Soil Erosion and Sedimentation Control* to prevent degradation of water quality.

| | <i>Potentially Significant Impact</i> | <i>Less than Significant with Mitigation Incorporated</i> | <i>Less than Significant Impact</i> | <i>No Impact</i> |
|---|---|---|---|--------------------------|
| VII. GREENHOUSE GAS EMISSIONS — Would the Project: | | | | |
| a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b) Conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Discussion of Impacts

- a) ***Less than Significant with Mitigation Incorporated.*** Construction of the proposed bridge replacement project would generate greenhouse gas (GHG) emissions. In order to determine the significance of the impact, a carbon footprint was estimated based on the proposed project's generation of GHG emissions, primarily carbon dioxide (CO₂). Online calculator tools¹ specifically developed to estimate GHG emissions resulting from construction projects were used to generate an estimate of the carbon footprint for the proposed project. For purposes of the proposed project, the following constants for combustible fuel, area of vegetation disturbance, and project duration were used:
- an average of 300 gallons per day of diesel fuel would be used by heavy construction equipment²;
 - onsite, mobile construction equipment would travel an average of approximately 5 miles per day as the vehicles work throughout the construction site;
 - offsite construction equipment, including worker's personal vehicles used to commute to the construction site (assuming five (5) personal diesel pick-up roundtrips) and equipment/materials haul trucks (assuming five (5) heavy duty diesel truck roundtrips) from central Ukiah (10 miles roundtrip) would travel a total of approximately 100 miles per day;

¹ The mobile combustion CO₂ Emissions Calculation Tool was used to calculate GHG emissions for combustible fuel (Greenhouse Gas Protocol Initiative 2013). The Construction Carbon Calculator Build Carbon Neutral (2013) was used to calculate GHG emissions for vegetation loss.

² The amount of fuel used by the project is based on operating three (3) pieces of heavy equipment at any given time (e.g., a grader, an excavator, crane) that each have an average fuel consumption of 100 gallons per day.

- onsite miscellaneous combustion engine equipment, including generators would operate 8 hours per day; and
- project construction would require approximately 300 days to complete.

Based on the above values, the proposed project would generate approximately 1 metric ton of GHG emissions (primarily CO₂) from construction equipment and worker vehicles during project construction. Upon completion of the new bridge and roadway approaches, there would be no change from the existing volume of GHG emissions generated by vehicle use of North State Street.

Approximately 0.35 acre of vegetation—0.10 acre of riparian wetland and 0.26 acre of upland riparian habitat—would be removed at the site as a result of excavation and grading activities. The volume of carbon sequestered by the vegetation removed as a result of project implementation would be minor and partially or totally offset by planned revegetation.

While the project's GHG emissions would be measurable, they would not necessarily be significant and would be limited to the project construction period. Plantings of riparian trees and shrubs in the interstices of the RSP to replace those removed as a result of the project (having a greater than 6 inch dbh) would ultimately offset almost twice as much CO₂ as would be generated by project construction. In addition, the new project facilities including wider roadway approaches and a wider bridge would be conducive to alternative forms of non-motorized transportation such as bicycles and pedestrians. Measures included in *Mitigation Measure #16 – Greenhouse Gas Emissions* have been incorporated into the project design and would be used during construction to ensure that project related impacts would remain less than significant (California Attorney General's Office 2010).

- (b) ***Less-than-Significant Impact.*** The Mendocino County AQMD has not adopted a plan, policy, or regulation for reducing GHG emissions (Mendocino County Air Quality Management District 2013). However, the State of California has adopted several regulations related to GHG emissions reduction. These include efforts to reduce tailpipe emissions and diesel exhaust produced by fuel-combustion engines. Project operations would adhere to statewide efforts aimed at minimizing GHG emissions.

Mitigation Measures

Mitigation Measure #16–Greenhouse Gas Emissions

The County shall include provisions in the construction bid documents to minimize project-related greenhouse gas emissions. The following measures shall be implemented to reduce construction-related greenhouse gas emissions:

- Reuse and recycle construction and demolition waste, including, but not limited to soil, vegetation, concrete, lumber, metal, and cardboard.
- Ensure that the project enhances, and does not disrupt or create barriers to, non-motorized transportation.

- Protect existing trees to the extent possible and encourage the planting of new trees.

Timing/Implementation: Prior to and during construction

Enforcement: County

Monitoring: County and/or its contractor

| | <i>Potentially Significant Impact</i> | <i>Less than Significant with Mitigation Incorporated</i> | <i>Less than Significant Impact</i> | <i>No Impact</i> |
|--|---|---|---|-------------------------------------|
| VIII. HAZARDS AND HAZARDOUS MATERIALS — Would the project: | | | | |
| a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 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 checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, 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"/> |
| 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"/> |
| e) For a project located within an airport land use compatibility 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"/> |
| 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"/> |
| 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"/> |
| 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 checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Discussion of Impacts

- a) ***Less than Significant with Mitigation Incorporated.*** Project construction and operation would not routinely generate any hazardous materials. Project operation would not involve the use or storage of any hazardous materials. Although construction would not generate any hazardous materials, a potential hazard to the public and the environment would be posed by the use of diesel or gasoline powered construction equipment (trucks, excavators, etc.) and

lubricants such as oil and hydraulic fluids. The potential for such a hazard would be temporary and mitigable since equipment would be routinely maintained and inspected to avoid leaks, and is similar to vehicles operating on nearby roads. Best management practices described in Mitigation Measure #4 will be used to reduce potential impacts associated with accidental spills of pollutants (i.e., fuel, oil, grease, etc.) on vegetation and aquatic habitat resources within the project area. Best management practices included in Mitigation Measure #4 will be provided in the project design construction specifications. In the event of an accidental spill, implementation of this measure will reduce the potential hazard to the public and the environment to a less-than-significant level.

- b) ***Less than Significant with Mitigation Incorporated.*** No hazardous materials are currently stored, or proposed for use or storage, in the project area. However, the following potentially hazardous materials may occur within the proposed project area (pending further testing prior to construction) (Lawrence and Associates 2013):
- Lead based paint may be present on existing bridge components such as painted concrete and utility piping. If found to be present, measures included in *Mitigation Measure #17 – Lead-based Paint* have been incorporated into the project design and will be used during construction to ensure that project related impacts will remain less than significant.
 - Asbestos containing construction materials may be present as part of existing bridge components such as bearing pads and pipe wrap or insulation. Naturally occurring asbestos may possibly be present in gravels located within the project limits in native. If either sources are found to be present, measures included in *Mitigation Measure #18 – Asbestos-Containing Building Material* have been incorporated into the project design and will be used during construction to ensure that project related impacts will remain less than significant.
 - Aerially deposited lead (ADL) may be present in the roadway shoulders within the project limits based on the age of the roadway and the date of the ban of leaded motor vehicle fuel. Survey and testing of potential ADL is recommended.
 - Treated wood posts such as sign posts and guard rail posts were observed within the project limits and their disposition should follow Caltrans protocol during and following construction of the proposed realignment. *Mitigation Measure #19 – Treated Wood Waste* will be used during construction to ensure that project-related impacts will remain less than significant.
- c) ***No Impact.*** The nearest schools to the project area are Redwood Academy (approximately 1.0 mile south), Mendocino College (approximately 1.1 mile northwest) and Ukiah High School (approximately 1.2 miles southwest). The project would not pose a hazard to any school.
- d) ***No Impact.*** The Phase 1 Preliminary Environmental Site Assessment report (Lawrence and Associates 2013) prepared for the project conducted a review of federal and state records of known contaminated sites, regulated landfill sites, underground tank sites, and hazardous-

waste generators in the project vicinity. Table 3 lists the sites included in environmental databases that are within one mile of the project area.

Table 3. Vicinity Properties Listed in Environmental Databases

| List | Distance from Project (miles) | # of Sites Found | Site Location |
|---|--------------------------------------|-------------------------|---|
| Federal Resource Conservation and Recovery Act (RCRA) Corrective Action Activities Site | 1.00 | 1 | Georgia Pacific Resin, 2163 North State Street <1/8 mile south of project |
| RCRA non- Corrective Action Activities Site Transfer, Storage, and Disposal Facilities (TSDF) | 0.50 | 1 | Georgia Pacific Resin, 2163 North State Street <1/8 mile south of project |
| RCRA small quantity hazardous-waste generator (SQG) | 0.25 | 4 | Georgia Pacific Resin, 2163 North State Street <1/8 mile south of project |
| State and Tribal (CERCLIS equivalent) ENVIROSTOR | 1.00 | 3 | Georgia Pacific Resin, 2163 North State Street <1/8 mile south of project |
| State and Tribal leaking underground storage tanks (LUST) | 0.50 | 7 | Georgia Pacific Corp., 901 24th Street <1/8 mile south of project |
| State and Tribal list of Spills, Leaks, Investigation, and Cleanup Program | 0.50 | 1 | Tri-Valley Paint, 1900 North State Street <1/4 mile south/southwest of project |
| Underground Storage Tank database (UST) | 0.25 | 1 | Rinehart Oil, Inc., 2401 North State Street <1/4 mile north of project |
| Aboveground Storage Tank database (AST) | 0.25 | 3 | Dunnewood Winery, 2399 North State Street <1/4 mile north of project |
| Landfills/Solid Waste Disposal Sites | 0.5 | 1 | PG&E Ukiah Service Center, 2541 North State Street <1/2mile north of project |
| Hazardous Waste/Contaminated Sites (Toxic Pits) | 1.0 | 1 | PG&E Ukiah Service Center, 2541 North State Street <1/2mile north of project |
| Registered Storage Tanks | 0.25 | 35 | Rinehart Oil, Inc., 2401 North State Street <1/4 mile north of project |
| Historic Underground Storage Tanks | 0.25 | 5 | Georgia Pacific Resin, 2163 North State Street <1/8 mile south of project |
| UST sites, no longer used database | 0.25 | 3 | Georgia Pacific Resin, 2163 North State Street <1/8 mile south of project |

| List | Distance from Project (miles) | # of Sites Found | Site Location |
|--|-------------------------------|------------------|---|
| RCRA non-hazardous-waste generator | 0.25 | 1 | Rinehart Oil, Inc., 2401 North State Street <1/4 mile north of project |
| Cortese | 0.5 | 1 | PG&E Ukiah Service Center, 2541 North State Street <1/2mile north of project |
| California State Water Resources Control Board LUST, Solid Waste Facility/Landfill, and Department of Toxic Substances Control (DTSC) Calsites | 0.5 | 1 | Georgia Pacific Corp., 901 24th Street <1/8 mile south of project |
| Notify 65 | 1.0 | 6 | Georgia Pacific Resin, 2163 North State Street <1/8 mile south of project |
| Well Investigation Program | 0.25 | 1 | Speedy Signs, 850 West Foothill Boulevard <1/8 mile north of project |

Source: Lawrence and Associates 2013

Site investigations at the Georgia Pacific Resin site were closed by DTSC in May 1991 and therefore, would not be likely to have any impact on soils or groundwater quality within the project area (Lawrence and Associates 2013).

The Georgia Pacific Corporation site identified in the Phase 1 ESA as having an open LUST case appears to have been mislocated in its listing. There was a nearby Georgia Pacific Corporation LUST case at a location off Hollow Tree Creek Road, but this location is about one-half mile east/southeast of the project area and would not have an impact on soils or groundwater quality within the project area.

The nearest open LUST site is the Rinehart Oil, Inc. site located northeast of the project area. The LUST site is actively being evaluated. Results of groundwater monitoring show the direction of groundwater flow to be southeast in the direction of Ackerman Creek; however, not in the direction of the project site (Lawrence and Associates 2013). The next nearest site of concern is the former Ken Fowler Motors located at 2150 North State Street. This investigation was in response to underground storage tank removals where contaminated soil was encountered. Because of shallow beneficial use groundwater in the vicinity, a groundwater investigation was conducted and based on the non-detect results of groundwater monitoring, the case was closed by the North Coast RWQCB.

The State and Tribal list of spills, leaks, investigation, and cleanup program site and the AST site are both located either down gradient, cross-gradient, or close enough to the project site that the likelihood of contamination migration exists for the project area (Lawrence and Associates 2013).

In addition to the database review, Lawrence and Associates also conducted a review of sites listed on the State of California Water Resources Control Board's GeoTracker web site (State Water Resources Control Board 2013). No additional potential hazardous sites were identified.

The project area is not included on the list of hazardous materials sites compiled pursuant to Government Code Section 65962.5.

- e, f) **No Impact.** The proposed project is not located near any public or private airstrip.
- g) **Less-than-Significant Impact.** Construction would be staged to allow for continued flow of traffic through the project area using one lane of the existing bridge then shifting to one lane of the replacement bridge. Although temporary, short duration disruptions to normal traffic operations would occur during construction, but the effect would be less than significant. The project is not anticipated to impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan because vehicular access would be maintained through the project area during construction.
- h) **Less than Significant with Mitigation Incorporated.** Most of the project area and vicinity is developed or has otherwise had vegetation largely removed. The Ackerman Creek channel, however, does support fairly continuous stands of trees and riparian vegetation along both banks. In addition to the numerous road corridors in the project area and vicinity, development is dispersed with large expanses of paved or graveled parking areas, which could serve as effective fire breaks. Fire hazard in the project area and vicinity is mapped as a "Local Responsibility Area – Unincorporated" (County of Mendocino 2007). Although fire risk is not significant, the use of construction equipment in and around vegetated areas increases the potential for wildfire ignition. *Mitigation Measure #20 - Wildfire Potential* will be implemented to reduce the risk of wildfire associated with project construction to a less-than-significant level. Operation of the project would have no effect on wildfire potential.

Mitigation Measures

Implement *Mitigation Measure #1 – Air Quality/Fugitive Dust and Emission Controls* and *Mitigation Measure #4 - Prevention of Accidental Spills of Pollutants* to prevent degradation of the project area environment.

Mitigation Measure #17–Lead-based Paint

The County shall include provisions in the construction bid documents to ensure the proper removal and disposal of lead-based paint coated surfaces found on the existing bridge. The following measure shall be implemented to reduce construction-related environmental impacts that could result from lead-based paint removal:

- A limited assessment for lead in the soil under the bridge will be performed for the project area. Samples shall be collected at each of the four corners of the two bridge abutments. In order for hazardous waste management requirements of Health and Safety Code, Chapter 6.5 and California Code of Regulations, title 22 to be waived, lead-contaminated soils must not

exceed the contaminant concentrations discussed in section 9 of the variance and must meet all the conditions contained within the same section. Required handling of lead contaminated soils is outlined in Table 4 and would depend on the level of lead contamination in the soils at the site.

Table 4. Lead Soil Management

| Soluble Lead (mg/l) | Total Lead (mg/kg) | Soil Type | Handling |
|---------------------------|---|-----------|--|
| California Testing | | | |
| STLC <5.0 | TTLIC <1000 | X | Non-hazardous Waste. Notify and require Lead Compliance Plan for worker safety. |
| | 1000 – 1411 and DI WET < 1.5 mg/l | Y1 | Hazardous Waste. Variance applies – cover with minimum 1 foot of clean soil.* |
| | 1411 – 3397 and DI WET < 150 mg/l | Y2 | Hazardous Waste. Variance applies – cover with pavement structure.* |
| | 1000 – 3397 but Surplus | Z2 | Hazardous Waste. Surplus. Dispose at Class 1 disposal site. |
| | > 3397 or 1000 – 3397 and DI WET > 150 mg/l | Z2 | Hazardous Waste. Not reusable under Variance. Dispose at Class 1 disposal site. |
| TLC >5.0 | TTLIC < 1411 and DI WET < 1.5 mg/l | Y1 | Hazardous Waste. Variance applies – cover with minimum 1 foot of clean soil.* |
| | 1411 – 3397 and DI WET < 150 mg/l | Y2 | Hazardous Waste. Variance applies – cover with pavement structure.* |
| | < 3397 and DI WET < 150 mg/l but Surplus | Z2 | Hazardous Waste. Surplus. Dispose at Class 1 disposal site. |
| | > 3397 or DI WET > 150 mg/l | Z2 | Hazardous Waste. Variance applies – cover with pavement structure. |
| Federal Testing | | | |
| TCLP > 5.0 mg/l | N/A | Z3 | RCRA Hazardous Waste. Dispose at Class 1 disposal site as a RCRA waste regardless of TTLIC and STLC results. |

* Note: For hazardous waste levels of lead – if pH is less than 5.5 soil must be placed under a pavement structure. If pH is less than 5.0 variance cannot be used and the soil must be disposed as Z-2 material. (Source: Caltrans Website: http://www.dot.ca.gov/hq/env/haz/hw_adl.htm)

- Lead-based paint will be removed using one of several methods approved by the Federal Environmental Protection Agency (EPA), at the contractor's discretion. Acceptable methods include wet scraping or the use of a dustless needle gun connected to a vacuum unit with a high efficiency particulate air (HEPA) filter that empties directly into a waste container. The waste container will be properly documented and disposed of at a Class I landfill, such as the Clean Harbors Buttonwillow LLC facility in Buttonwillow, CA (CAD980675276) or the Chemical Waste Management Inc. Kettleman facility in Kettleman, CA (CAT000646117).

Timing/Implementation: During construction
Enforcement: County, EPA
Monitoring: County and/or its contractor

Mitigation Measure #18–Asbestos-Containing Building Material

The County shall include provisions in the construction bid documents to ensure the proper removal and disposal of asbestos-containing building material found on the existing bridge. The following measure shall be implemented to reduce construction-related environmental impacts that could result from asbestos removal:

- Prior to the start of construction, the existing bridge’s building material will be tested for asbestos. If present, the following measure will be used:
 - Asbestos-containing building material will be removed using one of several methods approved by the Federal EPA and California Occupational and Safety Hazard Administration (CalOSHA), at the contractor’s discretion. Acceptable methods include wet scraping or the use of a dustless needle gun connected to a vacuum unit with a HEPA filter that empties directly into a waste container. The waste container will be properly documented and disposed of at a Class I landfill, such as the Clean Harbors Buttonwillow LLC facility in Buttonwillow, CA (CAD980675276) or the Chemical Waste Management Inc. Kettleman facility in Kettleman, CA (CAT000646117).

Timing/Implementation: During construction
Enforcement: County, EPA, CalOSHA
Monitoring: County and/or its contractor

Mitigation Measure #19–Treated Wood Waste

The County shall include provisions in the construction bid documents to ensure the proper removal and disposal of treated wood waste material found on the existing bridge. The following measure shall be implemented to reduce construction-related environmental impacts that could result from treated wood waste removal:

- The contractor will remove treated wood waste following the alternative management standards specific under Caltrans Special Stand Provision 14-11.09 for treated wood waste, as well as California Code of Regulations Title 22, Chapter 34, Sections 67386.1 through 67386.12 for labeling, accumulation, offsite shipment tracking, notification, treatment, and disposal. All personnel that may come into contact with treated wood waste will receive, at a minimum, training on safe handling, sorting and segregating, storage, labeling (including date), and proper disposal methods.

Timing/Implementation: Prior to, during, and after construction
Enforcement: County
Monitoring: County and/or its contractor

Mitigation Measure #20–Wildfire Potential

The County shall include provisions in the construction bid documents to minimize the potential for ignition of wildfire as a result of project construction. The following measure shall be implemented to reduce construction-related wildfire ignition potential:

- Per the requirements of Public Resources Code 4442, the County shall include a note on all construction plans that internal combustion engines shall be equipped with an operational spark arrester, or the engine must be equipped for the prevention of fire.

Timing/Implementation: Prior to construction

Enforcement: County

Monitoring: County and/or its contractor

| | <i>Potentially Significant Impact</i> | <i>Less than Significant with Mitigation Incorporated</i> | <i>Less than Significant Impact</i> | <i>No Impact</i> |
|--|---|---|---|-------------------------------------|
| XI. HYDROLOGY AND WATER QUALITY — Would the project: | | | | |
| 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 should 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 which would result in substantial erosion or siltation on- or off-site? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input 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 which would result in flooding on- or off-site? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input 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 checked="" type="checkbox"/> | <input type="checkbox"/> |
| f) Otherwise substantially degrade water quality? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input 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 which would impede or redirect flood flows? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input 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 checked="" type="checkbox"/> | <input type="checkbox"/> |
| j) Inundation of seiche, tsunami, or mudflow? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Discussion of Impacts

- a) ***Less-than-Significant Impact.*** Construction and operation of the project would not violate any water quality standards or waste discharge requirements set forth by the North Coast RWQCB in its Water Quality Control Plan for the North Coast region (North Coast Regional Water Quality Control Board 2011). Water pollution control measures have been incorporated into the project design and are required according to Caltrans Standard Specifications (Section 7-1.01G). Additionally, project activities will comply with the requirements set forth in a 401 Water Quality Certification, which is required by the RWQCB prior to project implementation.
- b) ***No Impact.*** Construction and operation of the project would have no effect on groundwater supplies. There would be no net change in local aquifers or the local groundwater table as a result of the project.
- c) ***Less-than-Significant Impact.*** Construction activities associated with the project are not anticipated to alter the existing drainage pattern of the site or area in a way that would result in downstream erosion or sedimentation. Scour protection of the abutments from creek flows would be required; the scour protection would consist of RSP along both banks of Ackerman Creek for a stretch of approximately 400 lineal feet with a 10-foot wide flat RSP apron at the base. This RSP would be placed outside of the summer baseflow channel, but would be within the OHWM of Ackerman Creek. A temporary work area within the channel would be needed to construct the necessary falsework and to drop the existing bridge onto during its removal. Ackerman Creek is an intermittent stream and project construction within the channel would occur during the dry summer months (June 15 through October 31), thus avoiding the need for any stream diversion. Although unlikely, if subsurface groundwater is encountered in the stream channel during fishway installation, it would be temporarily diverted away from the active construction site using pipes during excavation of the creek bed for the fishway installation. The temporary work area would consist of a temporary work pads constructed of clean spawning gravel and would be removed following completion of the new bridge construction.
- d) ***Less-than-Significant Impact.*** The project would not substantially alter the existing surface or instream drainage patterns of the project area. The new bridge elevation would be lowered in order to reduce the severity of the existing vertical curve and improve sight distance across the bridge. The Preliminary Design Hydraulic Study (Avila and Associates 2014) determined that replacement of an existing check dam and fish ladder located in the channel beneath the bridge with a more fish friendly alternative would significantly lower the Q_{100} water surface elevation of Ackerman Creek. Additionally, the single span bridge configuration combined with a reconfigured channel would provide freeboard for a Q_{50} event well beyond minimum requirements. There would be no significant adverse impacts on drainage patterns.
- e) ***Less-than-Significant Impact.*** The larger, wider new bridge structure and roadway approaches would increase the amount of impervious surface in the project area. The additional surface area would result in a slight, but less-than-significant increase in storm water runoff and the potential for polluted runoff (e.g., lubricants). However, the new bridge

and roadway approaches would be constructed in the existing alignment and therefore, would not noticeably alter the existing drainage patterns in the project area.

- f) ***Less than Significant with Mitigation Incorporated.*** Construction and operation of the project would involve the use of hazardous materials, such as petroleum-based fuels and lubricants used by motor vehicles, in and adjacent to waterways. Construction activities could also temporarily increase the potential for sediment to enter the river. These project activities could temporarily degrade water quality in Ackerman Creek. It is anticipated that roadway and bridge deck drainage for this project would be diverted away from the approach fills and directly into the natural drainage swales within the 100-year flood plain of Ackerman Creek. Once the water is within the drainage swales, it is expected to infiltrate into the ground following typical rainfall events. The following resource protection measures will be used during construction to reduce this potential impact to a less-than-significant level:
- Water pollution control measures have been incorporated into the project description and will be included in the construction contract pursuant to Caltrans Standard Specifications (Section 7- 1.01G).
 - Erosion control measures will be implemented during construction of the proposed project in accordance with Mitigation Measure #3.
 - Construction specifications will include Mitigation Measure #4 to reduce potential impacts associated with hazardous materials.
 - In-channel construction work and operation of the new bridge will be conducted in accordance with all measures contained in permits or associated with agency approvals.
- g) ***No Impact.*** The project does not include the construction of new housing within a flood hazard area.
- h) ***Less-than-Significant Impact.*** The new bridge elevation would be lowered in order to reduce the severity of the existing vertical curve and improve sight distance across the bridge. The Hydraulic Design Criteria established in the Caltrans Local Procedures Manual prescribe that the facility be capable of conveying the base or 100-year flood (Q_{100}) and passing the Q_{50} without causing objectionable backwater, excessive flow velocities, or encroaching on through traffic lanes. Additionally, the minimum design criteria for this project would provide at least 2 feet of freeboard for drift above the Q_{50} and the ability to withstand the potential scour effects of the base flood (i.e., Q_{100}). Project materials that would be placed in the Q_{100} floodplain of Ackerman Creek include temporary false work and a gravel work platform. Bridge abutments, including footings, would be outside of the Q_{100} flow channel and above the Q_{100} water surface elevation. Placement of RSP on the channel banks beneath and adjacent to the abutments would be required to protect the abutments from erosion. Placement of the RSP along the abutments outside of the OHWM would avoid impinging hydraulic flow within the channel and would not adversely impact the upstream flooding characteristics of the river.

The Preliminary Design Hydraulic Study (Avila and Associates 2014) determined that replacement of an existing check dam and fish ladder located in the channel beneath the bridge with a more fish friendly alternative would significantly lower the Q_{100} water surface elevation of Ackerman Creek. Additionally, the single span bridge configuration combined with a reconfigured channel would provide freeboard for a Q_{50} event well beyond minimum requirements.

Temporary materials and structures would be in place during the instream construction window (June 15 through October 31) and would be removed following construction and prior to October 31st. The area disturbed by the temporary gravel construction pad would be restored to preconstruction contours. The proposed use of falsework—temporary bridge structure support—would require that it be placed in the Q_{100} floodplain of Ackerman Creek during construction. It is likely that this falsework system would use timber and plywood forms, rolled steel girders, and timber posts supported on timber foundation pads. All falsework materials, including imported clean gravel materials, would be removed after bridge construction is complete (prior to October 31).

- i) ***Less-than-Significant Impact.*** Hydraulic Design Criteria prescribed in Caltrans' Local Procedures Manual (California Department of Transportation 2009) have been incorporated into the project design to ensure that the new structure would be capable of conveying the base or Q_{100} flood. The new bridge would be designed to avoid problems stemming from the transport of woody debris in the channel during periods of high flow by avoiding the use of piers and by providing the minimum drift clearance recommended by Caltrans and FHWA. A temporary diversion would be used to maintain typical river flows during construction.
- j) ***No Impact.*** The project site is not at risk of seiche, tsunami, or mudflow.

Mitigation Measures

Implement *Mitigation Measure #3 – Soil Erosion and Sedimentation Control* and *Mitigation Measure #4 – Prevention of Accidental Spills* to prevent degradation of water quality.

| | <i>Potentially Significant Impact</i> | <i>Less than Significant with Mitigation Incorporated</i> | <i>Less than Significant Impact</i> | <i>No Impact</i> |
|---|---|---|---|-------------------------------------|
| X. LAND USE AND PLANNING — Would the project: | | | | |
| a) Physically divide an established community? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c) Conflict with any applicable habitat conservation plan or natural communities' conservation plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Discussion of Impacts

- a) ***Less-than-Significant Impact.*** The proposed bridge would replace the existing bridge over Ackerman Creek. North State Street is a major collector road in the Ukiah area used by local and commercial traffic in the downtown area as well as development and outlying areas north of Ukiah. Although the project would involve an important regional connector street, several alternative routes would be available during construction. In addition, one lane of the bridge would remain open to through traffic during construction. The impact of project construction on residents and other travelers would be temporary and less than significant because North State Street would remain open to through traffic during construction and alternative routes are available.
- b) ***Less-than-Significant Impact.*** Construction of the project is consistent with the Mendocino County General Plan, Development Element (Pacific Municipal Consultants 2009). The General Plan includes several Development Goals with which the project would be directly compatible. These include:
- **Goal DE-1 (Land Use):** Land use patterns that maintain the rural character of Mendocino County, preserve its natural resources, and recognize the constraints of the land and the limited availability of infrastructure and public services.
 - **Goal DE-4 (Land Use):** Functional, safe, and attractive communities compatible with the General Plan and community objectives, infrastructure availability, and environmental safety, as well as economic and other opportunities and constraints.
 - **Goal DE-5 (Noise):** A county in which existing residential and other sensitive uses are protected from excessive noise and in which noise-intensive uses are protected from encroachment by residential and other noise-sensitive uses.

- **Goal DE-7 (Infrastructure):** Basic infrastructure—roadways, water and sewer service, schools, libraries, internet access, etc.—sufficient to support existing and future development, in place when needed, and fully funded both initially and on an ongoing basis.
- **Goal DE-8 (Transportation):** A balanced and coordinated transportation system that:
 - Is an integrated and attractive part of each community
 - Is functional, safe and pleasant to use, and supports emergency services
 - Provides a choice of modes accessing and connecting places frequented in daily life
 - Promotes compact development and infrastructure efficiencies
 - Is consistent with principles of sustainability and conservation of resources
 - Is not solely dependent on the continuation of fossil fuel resources
 - Can be maintained, used, and justified if available energy sources change during the duration of the General Plan
- **Goal DE-9 (Road Systems):** A countywide road system that provides safe, efficient and attractive access, coordinated with interstate, state, local and area-wide systems.
- **Goal DE-10 (Pedestrian & Bicycle):** Functional, safe and attractive pedestrian and bicycle systems coordinated with regional and local transportation plans and other transportation modes.

The project would also be consistent with the following goals and policies specified in the Ukiah Valley Area Plan:

- **Goal CT1 (Circulation and Transportation):** Provide for efficient and safe circulation networks throughout the Ukiah Valley.
- **Goal CT2 (Circulation and Transportation):** Enhance pedestrian, bicycle, and transit connectivity between land use types.
- **Goal HS1 (Health and Safety):** Consider natural and human-made hazards when planning development and minimize potential conflicts.

Policy HS1.2: Minimize impacts from flooding through flood mitigation components and ongoing flood management practices including implementation of the “No Adverse Impacts”, as recommended by the Association of Flood Plain Managers.

- **Goal OC1 (Open Space and Conservation):** Maintain and enhance the area’s natural resources by balancing protections, conservation, replenishment, and sustainable use.

Policy OC1.1: Protect the river corridor and riparian habitat while accommodating responsible development.

Replacement of the existing bridge structure would ensure safe and efficient movement of people and goods; meets environmental and circulation objectives; and implements funding strategies for construction, improvement, and maintenance of an existing roadway in Mendocino County. Project design and mitigation measures address local, state, and federal safety improvements to existing county roads.

- c) *No Impact.* Currently, there are no adopted habitat conservation plans, natural community conservation plans, or other approved habitat conservation plans that cover the project area.

Mitigation Measures

No project-specific mitigation is required under this subject.

| | <i>Potentially Significant Impact</i> | <i>Less than Significant with Mitigation Incorporated</i> | <i>Less than Significant Impact</i> | <i>No Impact</i> |
|--|---|---|---|-------------------------------------|
| XI. MINERAL RESOURCES — Would the project: | | | | |
| a) Result in the loss of availability of a known mineral resource classified MRZ-2 by the State Geologist that would be of value to the region and the residents of the state? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Discussion of Impacts

- a) **No Impact.** The project area has not been mapped by the State Division of Mines and Geology as containing marketable aggregate (California Geological Survey 2006). Gravel mining activities do not occur at this location. It is unlikely that the project site would be considered an important aggregate resource.
- b) **No Impact.** No locally important mineral resource recovery sites are located within the project area.

Mitigation Measures

No project-specific mitigation is required under this subject.

| | Potentially Significant Impact | <i>Less than Significant with Mitigation Incorporated</i> | <i>Less than Significant Impact</i> | No Impact |
|---|--------------------------------------|---|---|-------------------------------------|
| XII. NOISE — Would the project result in: | | | | |
| a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| e) For a project located within an airport land use compatibility plan or, where such a plan has not been adopted, within two miles of a public airport of public use airport, would the project expose people residing or working in the project area to excessive noise levels? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Discussion of Impacts

- a) ***Less than Significant with Mitigation Incorporated.*** The noise environment in the project vicinity is primarily defined by traffic noise emanating from Highway 101 and North State Street. A *Construction Noise Memorandum* (Bollard Acoustical Consultants 2015) prepared for the proposed project concluded that ambient noise levels measured in the immediate project vicinity are typical for semi-rural areas affected by local roadway noise. Modeling was used to predict construction noise levels at residential receiver locations that could be generated by the anticipated sequence³ in which construction activities would be implemented. While it is anticipated that project construction noise would be elevated when compared with measured maximum ambient noise levels in the project area, noise generated by project construction activities would not exceed the Caltrans specification maximum noise level (Lmax) of 86 decibels (Caltrans Specification, Section 14-8.02, Noise Control). The

³ Sequence refers to a construction activity such as relocation of utility poles, construction of bridge falsework, existing bridge demolition, etc. Anticipated noise levels for each sequence were derived by assessing noise produced by the specific construction equipment (e.g., pickup truck, jackhammer, excavator) that would be used during the implementation of a particular sequence.

greatest noise levels generated by project construction activities would occur during construction of the pile cap foundations at the abutments; an activity that would include periods of pile driving. However, anticipated maximum noise levels experienced by residential receptors would be approximately 75 decibels, well below the maximum 86 decibels allowed by Caltrans. Although project construction activities would result in short term periods of elevated ambient noise levels in the immediate project vicinity, provided construction activities are limited to daytime hours, no adverse construction noise impacts would occur (Bollard Acoustical Consultants 2015).

Mitigation Measure #21 – Construction Noise will be used to ensure that project-related noise impacts remain at a less-than-significant level. Operation of the new bridge would not generate noise above existing levels.

- b) ***Less than Significant with Mitigation Incorporated.*** The project would include pile driving. Construction-related ground vibration resulting from pile driving would be temporary and localized, and would occur only during daylight hours (typically 7:00 a.m. to 7:00 p.m., Monday through Saturday). The project area and vicinity are in a mixed use area (residential, commercial, industrial, and agricultural). Pile driving can create loud percussive sounds and ground-borne vibration within 100 feet of the operation. It is possible that nearby residents and businesses could temporarily experience ground vibration and be exposed to short-term elevated ambient noise levels as a result of pile driving. However, the *Construction Noise Memorandum* (Bollard Acoustical Consultants 2015) prepared for the proposed project concluded that the short term elevated noise levels (up to approximately 75 decibels) generated by pile driving and experienced by nearby residential receptors would be below the maximum 86 decibels allowed by Caltrans (Caltrans Specification, Section 14-8.02, Noise Control). *Mitigation Measure #21 – Construction Noise* will be used to ensure that noise impacts associated with pile driving are less than significant. The project does not involve the use of explosives.
- c) ***No Impact.*** Construction and operation of the project would not result in a permanent (on-going) increase in ambient noise because traffic levels would not increase as a result of the project.
- d) ***Less than Significant with Mitigation Incorporated.*** Heavy equipment used during construction would contribute to short duration increases in ambient noise levels in the project vicinity. However, anticipated maximum noise levels generated by project implementation would be short term and well below the maximum 86 decibels allowed by Caltrans (Caltrans Specification, Section 14-8.02, Noise Control). Although project construction activities would result in short term periods of elevated ambient noise levels in the immediate project vicinity, provided construction activities are limited to daytime hours, no adverse construction noise impacts would occur (Bollard Acoustical Consultants 2015). *Mitigation Measure #21 – Construction Noise* will be used to ensure that project-related noise impacts remain at a less-than-significant level. Operation of the new bridge would not generate noise above existing levels.
- e, f) ***No Impact.*** The project is not located in the vicinity of an airport or landing strip.

Mitigation Measures

Mitigation Measure #21 – Construction Noise

The County shall include in the construction specifications the following measures to reduce potential impacts associated with construction noise to a less-than-significant level:

- Construction shall be limited to the hours between 7:00 AM and 7:00 PM, Monday through Saturday.
- When feasible, pre-drill pile bores to minimize the number of blows needed. Residents within approximately 100 feet of pile-driving operations shall be notified when pile driving will occur, and work shall only occur in the daytime.
- Equip an internal combustion engine with the manufacturer-recommended muffler. Do not operate an internal combustion engine on the job site without the appropriate muffler.

Timing/Implementation: During construction
Enforcement: County
Monitoring: County and/or its contractor

| | <i>Potentially Significant Impact</i> | <i>Less than Significant with Mitigation Incorporated</i> | <i>Less than Significant Impact</i> | <i>No Impact</i> |
|---|---|---|---|-------------------------------------|
| XIII. POPULATION AND HOUSING — Would the project: | | | | |
| a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Displace substantial numbers of people necessitating the construction of replacement housing elsewhere? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Discussion of Impacts

- a) **No Impact.** Replacement of the existing Ackerman Creek bridge structure would have no effect on population or housing in the vicinity of North State Street. It would not increase traffic capacity or extend road access beyond what is available without the project. It would improve traffic safety on North State Street where it crosses Ackerman Creek.
- b) **No Impact.** Existing housing in the vicinity of North State Street and Ackerman Road would not be displaced by the project and no replacement housing would be required.
- c) **No Impact.** No people would be displaced as a result of the project and no replacement housing would be required.

Mitigation Measures

No project-specific mitigation is required under this subject.

| | | | | |
|--|---|---|---|----------------------|
| | <i>Potentially Significant Impact</i> | <i>Less than Significant with Mitigation Incorporated</i> | <i>Less than Significant Impact</i> | <i>No Impact</i> |
|--|---|---|---|----------------------|

XIV. PUBLIC SERVICES — Would the project:

- a) 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 checked="" type="checkbox"/> | <input type="checkbox"/> |
| Police protection? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Schools? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Parks? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Other public facilities? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Discussion of Impact

- a) ***Less-than-Significant Impact.*** The project would have a less-than-significant impact on public resources, including fire protection, police protection, schools, and other public facilities. The proposed bridge would provide an improved, safer road and bridge across Ackerman Creek. Traffic flow would be maintained by keeping one lane open to through traffic throughout construction. No significant adverse impacts on service ratios, response times, or service objectives for any of the public services are anticipated.

Mitigation Measures

No project-specific mitigation is required under this subject.

| | <i>Potentially Significant Impact</i> | <i>Less than Significant with Mitigation Incorporated</i> | <i>Less than Significant Impact</i> | <i>No Impact</i> |
|--|---|---|---|-------------------------------------|
| XV. RECREATION — Would the project: | | | | |
| 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"/> |
| b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Discussion of Impacts

(a, b) **No Impact.** The project includes widening the shoulders of the roadway approaches and the bridge to improve pedestrian and bicyclist safety. The effect would be a benefit for recreationists using North State Street. The project would have no adverse effect on existing recreational facilities.

Mitigation Measures

No project-specific mitigation is required under this subject.

| | | | | |
|--|---|---|---|----------------------|
| | <i>Potentially Significant Impact</i> | <i>Less than Significant with Mitigation Incorporated</i> | <i>Less than Significant Impact</i> | <i>No Impact</i> |
|--|---|---|---|----------------------|

XVI. TRANSPORTATION/TRAFFIC — Would the project:

- | | | | | |
|--|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation, including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Conflict with an applicable congestion management program, including, but not limited to, level of service standards and travel demand measures or other standards established by the county congestion management agency for designated roads or highways? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 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"/> |
| d) Substantially increase hazards to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) Result in inadequate emergency access? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Discussion of Impacts

- a) ***Less-than-Significant Impact.*** The project is not anticipated to increase either the number of vehicle trips, volume-to-capacity ratio, or congestion at intersections along North State Street. The project is consistent with the goals and policies of the Ukiah Valley Area Plan, the Ukiah General Plan, Mendocino County Regional Transportation Plan, and the County’s General Plan.
- b) ***Less-than-Significant Impact.*** The primary purpose of the project is to provide for safer traffic circulation. There is a potential for minor delays during construction. However, there would not be a lowered level of service during the construction phase of the project, as North State Street would remain open and traffic would continue to be routed over one lane of

either the existing or replacement bridge crossing. In addition, alternative routes exist that could be used to reach areas on either side of the project area. Any impacts on traffic during construction would be temporary and less than significant.

- c) **No Impact.** The project would not result in a change in air traffic patterns.
- d) **No Impact.** The project would not result in the creation of sharp curves, dangerous intersections, or incompatible uses. In fact, the new bridge elevation would be lowered in order to reduce the severity of the existing vertical curve and improve sight distance across the bridge. The project is designed to provide a wider, safer bridge crossing across Ackerman Creek.
- e) **Less-than-Significant Impact.** The new bridge would be constructed in the footprint of the existing bridge, thus construction of the new bridge and demolition of the existing bridge would be staged to allow for one lane of either bridge to remain open to through traffic during project implementation. Traffic control measures such as stop signs, flagging, and stoplights would be used during construction. Although temporary, short-duration disruptions to normal traffic operation could occur during project construction. North State Street would remain open to traffic during construction and no significant impact on emergency vehicle access is anticipated.
- f) **No Impact.** The project would not be in conflict with any adopted plans, policies, or programs that support alternative transportation, and would be consistent with the goals and policies of the Ukiah Valley Area Plan and the Mendocino County General Plan. Alternative forms of transportation (e.g., pedestrian, bicycles) would be allowed to pass through the project area and use the current bridge crossing during construction.

Mitigation Measures

No project-specific mitigation is required under this subject.

the Millview Water District to relocate a sewer line and a water line, respectively, to the new bridge structure.

- c) **No Impact.** Construction and operation of the project would not require new facilities or alterations to existing storm water facilities. The project profile would provide sufficient gradient for drainage of roadway and bridge surfaces. It is anticipated that roadway and bridge deck drainage for this project would be diverted away from the approach fills and directly into the natural drainage swales within the 100-year flood plain of Ackerman Creek. Once the water is within the drainage swales, it is expected to infiltrate into the ground following typical rainfall events.
- d) **No Impact.** No new or expanded water entitlements would be required for the project.
- e) **No Impact.** The project would be limited to improvements to the existing bridge and approaches, and would not result in a change in the current demand for wastewater treatment.
- f) **Less-than-Significant Impact.** Construction activities associated with the project could generate solid waste in the form of demolished materials, metal pilings, and other trash. Solid waste generated at the project site would be disposed of at a suitable facility such as the Ukiah Transfer Station. Treated wood waste would be disposed of in accordance with Caltrans Special Provisions at a suitable facility. The project is not likely to generate solid waste in amounts that would adversely affect the existing capacity of the local landfill. The contractor would be responsible for removing the existing bridge from the site.
- g) **Less-than-Significant Impact.** All solid waste generated by the project would be disposed of at an approved landfill, in compliance with local, state, and federal regulations pertaining to solid waste disposal.

Mitigation Measures

No project-specific mitigation is required under this subject.

| | | | | |
|--|---|---|---|----------------------|
| | <i>Potentially Significant Impact</i> | <i>Less than Significant with Mitigation Incorporated</i> | <i>Less than Significant Impact</i> | <i>No Impact</i> |
|--|---|---|---|----------------------|

XVIII. MANDATORY FINDINGS OF SIGNIFICANCE

(To be filled out by Lead Agency if required)

- | | | | | |
|--|--------------------------|-------------------------------------|-------------------------------------|--------------------------|
| a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 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)? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Discussion

- a) ***Less than Significant with Mitigation Incorporated.*** As discussed in the preceding sections, the proposed project has a potential to result in adverse effects on air quality, biological resources, and cultural resources. Special-status wildlife species that could be affected by the project are Central California Coast DPS steelhead, California Coastal ESU Chinook salmon, western pond turtle, white-tailed kite, long-eared owl, yellow-breasted chat, yellow warbler, and pallid bat. Potential impacts on resources and the specified species are discussed in detail in the corresponding sections above. Mitigation measures required to reduce the significance of project impacts are summarized in Chapter 5. With implementation of the required mitigation measures, potential impacts would be reduced to a less-than-significant level. Although cultural resources are not likely to be affected, there is the potential for previously undetected cultural resources or human remains to be affected by project activities. Therefore, mitigation measures (see Chapter 5) have been incorporated into the proposed project to ensure protection of any such resources in the event of inadvertent discovery. The project is consistent with the existing land uses, and the relevant plans and policies that govern such projects.
- b) ***Less-than-Significant Impact.*** The project would include improvements to an existing transportation system by replacing an existing bridge structure with a new bridge. The project would not introduce new development into a previously undeveloped area. The

project would be constructed in the existing North State Street ROW, which is adjacent to residential, commercial, and agricultural land uses. Temporary encroachment onto adjacent agricultural land, specifically existing agricultural access roads, would be necessary to enter the Ackerman Creek channel. Open space (i.e., the Ackerman Creek channel and floodplain) will be maintained. For the most part, impacts associated with the project would be limited to the construction phase and can be fully mitigated for at the project level. As a result, cumulative impacts are considered to be less than significant.

- c) ***Less than Significant with Mitigation Incorporated.*** The proposed Ackerman Creek bridge on North State Street replacement project could result in a variety of impacts on human beings, particularly during the construction phase. Potential adverse effects on adjacent residential and commercial areas along North State Street are related to temporary impacts on air quality, geology and soils, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, and temporary increases in noise levels during construction. Chapter 5 contains mitigation measures that will be implemented to avoid or minimize potentially adverse effects to humans resulting from the construction and operation of the project. The project would not involve any actions that would have a substantial direct or indirect impact on the human environment that cannot be mitigated to a less-than-significant level.

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4 Determination

On the basis of this initial evaluation:

- I find that the proposed project COULD NOT have a significant effect on the environment and a NEGATIVE DECLARATION will be prepared.
- I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- I find that the proposed project MAY have a "Potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Alicia Meier

Alicia Meier, Acting Deputy Director, Engineering
Mendocino County Department of Transportation

12/14/15

Date

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5 Summary of Mitigation Commitments

Mendocino County is committed to implementing the following mitigation measures during construction of the Ackerman Creek Bridge (No. 10C-0065) on North State Street Replacement Project:

5.1 Air Quality

5.1.1 Mitigation Measure #1 – Air Quality/Fugitive Dust and Emission Controls

The County shall include provisions in the construction bid documents that the contractor shall implement a dust control program to limit fugitive dust and vehicle emissions. The dust and emissions control program shall include, but not be limited to, the following elements, as appropriate:

- Water inactive construction sites and exposed stockpile sites at least twice daily, including during non-work days or until soils are stable.
- Pursuant to the California Vehicle Code (State of California 2014), all trucks hauling soil and other loose material to and from the construction site shall be covered or shall maintain at least 6 inches of freeboard (i.e., minimum vertical distance between top of load and the trailer).
- Any topsoil that is removed during construction shall be stored onsite in piles not to exceed 4 feet in height to allow development of microorganisms prior to resoiling of the construction area. These topsoil piles shall be clearly marked and flagged. Topsoil piles that will not be immediately returned to use shall be revegetated with a non-persistent erosion control mixture.
- Soil piles for backfill shall be marked and flagged separately from native topsoil stockpiles. These soil piles shall also be surrounded by silt fencing, straw wattles, or other sediment barriers or covered unless they are to be immediately used.
- Equipment or manual watering shall be conducted on all stockpiles, dirt/gravel roads, and exposed or disturbed soil surfaces, as necessary, to reduce airborne dust.

Timing/Implementation: During construction
Enforcement: Mendocino County AQMD
Monitoring: County and/or its contractor

5.2 Biological Resources

5.2.1 Mitigation Measure #2 – Special-Status Fish

The County shall include provisions in the construction bid documents to minimize project impacts on special-status fish species. The following measures shall be implemented during construction to reduce impacts on special-status fish:

- All instream work will be completed June 15–October 31.
- To the extent practicable with construction of the roughened channel, any new or previously excavated gravel material placed in the channel shall meet Caltrans' cleanness test indicating the relative proportions of clay-sized material clinging to coarse aggregate and screenings (California Test No. 227) with a value of 85 or higher (excluding such materials as soil in the RSP to allow for riparian planting).
- Equipment will be staged and materials will be stockpiled outside of the riparian habitat.
- Impacts on herbaceous cover will be offset by reseeded disturbed areas with a suitable seed mixture immediately following completion of construction.
- Any construction equipment operating upon work pads or adjacent to Ackerman Creek will be inspected daily for leaks. External oil, grease, and mud will be removed from equipment and disposed of properly. Spill containment booms will be maintained onsite at all times during construction operations and/or staging of equipment or fueling supplies. Fueling trucks will maintain adequate spill containment materials at all times.
- The contractor shall develop and implement site-specific BMPs, a water pollution control plan, and an emergency spill control plan. The contractor shall be responsible for immediate containment and removal of any toxins released.

Timing/Implementation: During and after construction

Enforcement: NMFS, CDFW, Caltrans

Monitoring: County and/or its contractor

5.2.2 Mitigation Measure #3 – Erosion and Sediment Control

The County shall include provisions in the construction bid documents that the contractor shall implement to reduce the potential for erosion and sediment to result from project construction. Erosion and sediment controls will include, but not be limited to, the following elements, as appropriate:

- Erosion control measures will be implemented during project construction. These measures will conform to the provisions in the Caltrans Standard Specifications and the special provisions included in the project contract. Such provisions include the preparation of a Storm Water Pollution Prevention Plan (SWPPP) that includes best management practices (BMP) to be used at the project site.

- Erosion control measures to be included in the SWPPP or to be implemented by the County include the following:
 - To the maximum extent practicable, activities that increase the erosion potential in the project area will be restricted to the relatively dry summer and early fall period to minimize the potential for rainfall events to transport sediment to surface water features. In-channel construction will be conducted from June 15-October 31 and upland construction will likely occur throughout the year as long as work activities comply with the conservation and avoidance and minimization measures identified herein and for the protection of other sensitive or special-status plant or animal species. For upland construction activities that must take place during the late fall, winter, or spring, temporary erosion and sediment control structures shall be in place and operational at the end of each construction day and maintained until permanent erosion control structures are in place.
 - Areas where wetland and upland vegetation need to be removed will be identified in advance of ground disturbance and limited to only those areas that have been approved by the County. Exclusionary fencing will be installed around areas that do not need to be disturbed.
 - Within 10 days of completion of construction in those areas where subsequent ground disturbance will not occur for 10 calendar days or more, weed-free mulch shall be applied to disturbed areas to reduce the potential for short-term erosion. Prior to a rain event or when there is a greater than 50 percent possibility of rain within the next 24 hours, as forecasted by the National Weather Service, weed-free mulch shall be applied to all exposed areas upon completion of the day's activities. Soils shall not be left exposed during the rainy season.
 - Suitable BMPs, such as silt fences, straw wattles, or catch basins, shall be placed below all construction activities at the edge of surface water features to intercept sediment before it reaches the waterway. These structures shall be installed prior to any clearing or grading activities. Further, sediment built up at the base of BMPs will be removed before BMP removal to avoid any accumulated sediments from being mobilized post-construction.
 - All dewatering activities will be conducted in compliance with the *Caltrans Field Guide for Construction Site Dewatering* and Section 13-4.03G of the Caltrans Standard Specifications. Water removed from the excavated area for pier and abutment footings or construction of fishway will be pumped to a temporary sediment retention basin outside of the channel, through a mechanized water filtration system, or into baker tanks or similar storage system and trucked offsite to an authorized disposal site. If a temporary basin is constructed, it will be located outside of the active channel and include sediment sock or similar sediment control on the discharge.
 - If spoil sites are used, they will be located such that they do not drain directly into a surface water feature, if possible. If a spoil site drains into a surface water feature, catch

basins will be constructed to intercept sediment before it reaches the feature. Spoil sites will be graded and vegetated with native species to reduce the potential for erosion.

- Sediment control measures will be in place prior to the onset of the rainy season and will be monitored and maintained in good working condition until disturbed areas have been revegetated with native species.
- To the extent practicable during construction of the roughened channel, any new or previously excavated gravel material placed in the channel will meet Caltrans' cleanliness test indicating the relative proportions of clay-sized material clinging to coarse aggregate and screenings (California Test No. 227) with a value of 85 or higher (excluding such materials as soil in the RSP to allow for riparian planting).

Timing/Implementation: Prior to, during, and after construction
Enforcement: Corps, North Coast RWQCB, CDFW
Monitoring: County and/or its contractor

5.2.3 Mitigation Measure #4 – Prevention of Accidental Spills of Pollutants

The County shall include provisions in the construction bid documents that shall be implemented by the contractor to reduce the potential for accidental spills of pollutants during project construction. Measures to avoid accidental spills of pollutants will include, but not be limited to, the following elements, as appropriate:

- Construction specifications will include the following measures to reduce potential impacts on vegetation and aquatic habitat resources in the project area associated with accidental spills of pollutants (e.g., fuel, oil, and grease):
 - A site-specific spill prevention plan will be implemented for potentially hazardous materials. The plan will include the proper handling and storage of all potentially hazardous materials, as well as the proper procedures for cleaning up and reporting any spills. If necessary, containment berms will be constructed to prevent spilled materials from reaching surface water features.
 - Equipment and hazardous materials shall be stored 50 feet away from surface water features.
 - Vehicles and equipment used during construction shall receive proper and timely maintenance to reduce the potential for mechanical breakdowns leading to a spill of materials. Maintenance and fueling shall be conducted in an area at least 50 feet away from Ackerman Creek or within an adequate fueling containment area.
 - Equipment operating within the OHWM shall use non-toxic vegetable oil for operating hydraulic equipment instead of traditional hydraulic fluids.
 - Place plastic materials under asphaltic concrete (AC) paving equipment while not in use, to catch and/or contain drips and leaks.

- Minimize sand and gravel from new asphalt from getting into storm drains, streets, and creeks by sweeping. Old or spilled asphalt must be recycled or disposed as approved by the Resident Engineer.
- AC grindings, pieces, or chunks used in embankments or shoulder backing must not be allowed to enter any storm drain or watercourses. Install silt fence until structure is stabilized or permanent controls are in place.
- Collect and remove all broken asphalt and recycle when practical; otherwise, dispose in accordance with Standard Specification 7-1.13.
- During chip seal application and sweeping operations, petroleum or petroleum covered aggregate must not be allowed to enter any storm drain or water courses. Use silt fence until installation is complete.
- Use only non-toxic substances to coat asphalt transport trucks and asphalt spreading equipment.
- Drainage inlet structures and manholes shall be covered with filter fabric during application of seal coat, tack coat, slurry seal, and/or fog seal.
- Seal coat, tack coat, slurry seal, or fog seal shall not be applied if rainfall is predicted to occur during the application or curing period.
- Do not allow saw-cut Portland Concrete Cement (PCC) slurry to enter storm drains or watercourses.

Timing/Implementation: During construction
Enforcement: Corps, North Coast RWQCB, CDFW
Monitoring: County and/or its contractor

5.2.4 Mitigation Measure #5 – Replacement of Lost Riparian Habitat

The County shall include provisions in the construction bid documents to mitigate the loss of riparian habitat as a result of project construction. The following measures shall be implemented to reduce potential impacts on riparian habitat in the project area:

- The width of the construction disturbance zone within the riparian habitat shall be minimized through careful pre-construction planning.
- Exclusionary fencing shall be installed along the boundaries of all riparian areas to be avoided to ensure that impacts to riparian vegetation outside of the construction area are minimized.
- Riparian habitat areas temporarily disturbed shall be replanted using riparian species that have been recorded along the Ackerman Creek in the project area, including willow (*Salix*

Management Plan (California Department of Fish and Game 2008; U.S. Bureau of Reclamation 2012) prior to in-channel work to prevent the spread of aquatic invasive species.

Timing/Implementation: Prior to, during, and after construction
Enforcement: CDFW
Monitoring: County and/or its contractor

5.2.6 Mitigation Measure #7 – Western Pond Turtle

In addition to implementation of mitigation measures #3-5, the County shall include additional provisions in the construction bid documents to minimize project impacts on western pond turtles. The following measures shall be implemented to reduce construction-related impacts on western pond turtles:

- Because turtles may move into and out of the project site at any time, a preconstruction survey for the species is necessary to confirm its status (presence/absence) on the site immediately prior to the onset of project construction. Therefore, a qualified biologist shall conduct a minimum of one survey of the project site for pond turtles and their nests. The survey shall be conducted a maximum of one week prior to construction. If a pond turtle is found within a construction impact zone, the biologist shall move it to a safe location within similar habitat. If a pond turtle nest is found, the biologist shall flag the site and determine if construction activities can avoid affecting the nest. If the nest cannot be avoided, it will be excavated and re-buried at a suitable location outside of the construction impact zone by a qualified biologist. The County will inform Caltrans when such an activity occurs.
- If a western pond turtle is encountered during construction, activities in the vicinity shall cease until appropriate corrective measures have been implemented or it has been determined that the turtle will not be harmed. Any turtles encountered during construction shall be allowed to move away on their own. Any trapped, injured, or killed turtles shall be reported immediately to CDFW.

Timing/Implementation: Prior to and during construction
Enforcement: CDFW
Monitoring: County and/or its contractor

5.2.7 Mitigation Measure #8 – Raptors

The County shall include provisions in the construction bid documents to minimize project impacts on raptors. The following measures shall be implemented to reduce construction-related impacts on raptors:

- Preconstruction surveys for nesting raptors shall be conducted by a qualified biologist within the project area and a 250-foot buffer around the project area to ensure that no nests will be disturbed during project implementation. At least one survey should be conducted no more than 15 days prior to the initiation of construction activities. During this survey, the biologist should inspect all trees immediately adjacent to the impact areas for raptor nests. If an active raptor nest is found close enough (i.e., within 250 feet) to the construction area to be

disturbed by these activities, the biologist (in consultation with the CDFW) shall determine the extent of a construction-free buffer zone to be established around the nest. The County will inform Caltrans when such an activity occurs.

- If all necessary approvals have been obtained, potential nesting substrate (e.g., shrubs and trees) that will be removed as a result of the project shall be removed before the onset of the nesting season (February 15 through September 30), if practicable. This will discourage nesting in areas that would be directly impacted by the proposed project and substantially decrease the likelihood of direct impacts.

Timing/Implementation: Prior to and during construction
Enforcement: CDFW, Caltrans
Monitoring: County and/or its contractor

5.2.8 Mitigation Measure #9 – Yellow Warblers and Yellow-Breasted Chats

The County shall include provisions in the construction bid documents to minimize project impacts on yellow warblers and yellow-breasted chats. The following measures shall be implemented to reduce construction-related impacts on migratory bird species:

- Grading and other construction activities shall be scheduled to avoid the nesting season to the extent possible. The nesting season for yellow warblers and yellow-breasted chats that may occur in the project vicinity extends from March through August. If construction occurs outside of the breeding season, no further mitigation is necessary. If the breeding season cannot be completely avoided, the following mitigations shall be implemented:
 - A qualified biologist shall conduct a minimum of one preconstruction survey for yellow warblers and yellow-breasted chats within the project area and a 250-foot buffer around the project area. The survey should be conducted no more than 15 days prior to the initiation of construction in any given area. The preconstruction survey should be used to ensure that no nests of these species within or immediately adjacent to the project area would be disturbed during project implementation. If an active nest is found, a qualified biologist should determine the extent of a construction-free buffer zone to be established around the nest. The County will inform Caltrans when such an activity occurs.
 - If vegetation is to be removed by the project and all necessary approvals have been obtained, potential nesting substrate (e.g., shrubs and trees) that will be removed by the project should be removed before the onset of the nesting season, if feasible. This will help preclude nesting and substantially decrease the likelihood of direct impacts.

Timing/Implementation: Prior to and during construction
Enforcement: CDFW, Caltrans
Monitoring: County and/or its contractor

5.2.9 Mitigation Measure #10 – Pallid Bat

The County shall include provisions in the construction bid documents to minimize project impacts on pallid bats. The following measures shall be implemented to reduce construction-related impacts on pallid bats:

- To the extent practicable, the removal of any large trees shall occur outside of the breeding season of pallid bat. For the purposes of implementation of this measure, the breeding season is considered to be from April 1 through August 15th.

Timing/Implementation: Prior to and during construction
Enforcement: CDFW
Monitoring: County and/or its contractor

5.2.10 Mitigation Measure #11 – Migratory Birds

In addition to implementation of Mitigation Measure #9, the County shall include provisions in the construction bid documents to minimize project impacts on songbird and migratory bird species. The following measures are recommended to avoid or minimize project-related impacts on songbirds and other migratory birds:

- Construction activities on, and removal of, the existing bridge should be scheduled to avoid the nesting season to the extent feasible. The typical nesting season in northern California extends from March through July. Thus, if bridge demolition can be scheduled to occur between August and December, or the period before nesting begins and after nesting is complete, the nesting season would be avoided, and no impacts would be expected.
- If it is not possible to schedule bridge removal to avoid nesting, any existing unoccupied and inactive nests shall be removed from the existing bridge before March 1 of the construction year. Removal of empty or unfinished nests should be repeated as frequently as necessary (can be up to three times per week) to prevent nest completion. A nest exclusion device can be installed (e.g. netting or similar mechanism that keeps birds from building nests) if desired prior to March 1 or after August 1. Any nest exclusion devices should be approved by CDFW prior to installation. Exclusion efforts should be continued until actual removal of the bridge structure. The County will inform Caltrans when such an activity occurs.

Timing/Implementation: Prior to and during construction
Enforcement: CDFW, Caltrans
Monitoring: County and/or its contractor

Mitigation Measure #12 – Sensitive Natural Communities

The County shall include provisions in the construction bid documents to minimize project impacts on sensitive natural communities. In addition to use of Mitigation Measure #5, the following measure shall be implemented to reduce construction-related impacts on sensitive natural communities:

- The project shall be designed and constructed to avoid and minimize removal of riparian vegetation to the maximum extent practicable. Staging areas and construction access routes shall avoid encroachment into riparian vegetation where practicable and minimize encroachment where complete avoidance is not practicable. Avoided riparian habitat will be clearly identified in the construction drawings and contractor work plans. Exclusionary fencing will be installed to mark boundaries of all avoided riparian areas. All pedestrian and vehicular traffic into the avoided areas delineated by the fencing shall be prohibited during construction. The exclusionary fencing shall be inspected and maintained on a regular basis throughout project construction.

Timing/Implementation: Prior to and during construction
Enforcement: CDFW
Monitoring: County and/or its contractor

5.2.11 Mitigation Measure #13 – Waters of the United States

The County shall include provisions in the construction bid documents to minimize project impacts on waters of the United States. In addition to use of Mitigation Measure #5, the following measures shall be implemented to reduce construction-related impacts on waters of the United States:

- To the extent practicable, the discharge of dredged or fill material into waters of the United States, including wetlands shall be avoided (this also includes waters not subject to Corps jurisdiction, but subject to RWQCB jurisdiction). Complete avoidance of waters of the United States is not feasible due to the need for the placement of new abutments, thus the following measures shall be implemented to avoid or minimize the potential for these project-related impacts:
 - To the maximum extent practicable, activities that increase the erosion potential in the project area shall be restricted to the relatively dry summer and early fall period to minimize the potential for rainfall events to transport sediment to surface water features. If these activities must take place during the late fall, winter, or spring, then temporary erosion and sediment control structures shall be in place and operational at the end of each construction day and maintained until permanent erosion control structures are in place.
 - Areas where wetland and upland vegetation need to be removed shall be identified in advance of ground disturbance and limited to only those areas that have been approved by the County.
 - Within 10 days of completion of construction in those areas where subsequent ground disturbance will not occur for 10 calendar days or more, weed-free mulch shall be applied to disturbed areas to reduce the potential for short-term erosion. Prior to a rain event or when there is a greater than 50 percent possibility of rain within the next 24 hours, as forecasted by the National Weather Service, weed-free mulch shall be applied to all exposed areas upon completion of the day's activities. Soils shall not be left exposed during the rainy season.

- Suitable BMPs, such as silt fences, straw wattles, or catch basins, shall be placed below all construction activities at the edge of surface water features to intercept sediment before it reaches the waterway. These structures shall be installed prior to any clearing or grading activities.
- If spoil sites are used, they shall be located such that they do not drain directly into a surface water feature, if possible. If a spoil site drains into a surface water feature, catch basins shall be constructed to intercept sediment before it reaches the feature. Spoil sites shall be graded and vegetated to reduce the potential for erosion.
- Sediment control measures shall be in place prior to the onset of the rainy season and will be monitored and maintained in good working condition until disturbed areas have been revegetated.
- Any new or previously excavated gravel material placed in the channel shall be washed at least once and have a cleanliness value of 85 or higher based on Caltrans Test No. 227.
- A site-specific spill prevention plan shall be implemented for potentially hazardous materials. The plan shall include the proper handling and storage of all potentially hazardous materials, as well as the proper procedures for cleaning up and reporting any spills. If necessary, containment berms shall be constructed to prevent spilled materials from reaching surface water features.
- Equipment and hazardous materials shall be stored 50 feet away from surface water features.
- Vehicles and equipment used during construction shall receive proper and timely maintenance to reduce the potential for mechanical breakdowns leading to a spill of materials. Maintenance and fueling shall be conducted in an area at least 50 feet away from the Ackerman Creek or within an adequate fueling containment area.

Timing/Implementation: Prior to, during, and after construction
Enforcement: Corps, North Coast RWQCB, CDFW
Monitoring: County

5.3 Cultural Resources

5.3.1 Mitigation Measure #14 – Cultural Resources

The County shall include provisions in the construction bid documents to minimize project impacts on cultural resources. The following measure shall be implemented to avoid construction-related impacts on cultural resources:

- In the event archaeological deposits—other than those determined to lack eligibility for listing in the National Register of Historic Places—are discovered during project activities, all work in the immediate vicinity of the discovery shall be stopped immediately and the Mendocino County Department of Transportation shall be notified. An archaeologist

meeting the Secretary of Interior's Professional Qualifications Standards in prehistoric or historical archaeology, as appropriate, shall be retained to evaluate the find and recommend appropriate conservation measures. The conservation measures shall be implemented prior to re-initiation of activities in the immediate vicinity of the discovery.

Timing/Implementation: During construction
Enforcement: Native American Heritage Commission and County
Monitoring: County and/or its contractor

5.3.2 Mitigation Measure #15 – Human Remains

The County shall include provisions in the construction bid documents to address the inadvertent discovery of human remains. The following measure shall be implemented to avoid construction-related impacts on inadvertently discovered human remains:

- If human remains are discovered during project activities, all activities in the vicinity of the find shall be suspended and the Mendocino County Sheriff-Coroner shall be notified. If the coroner determines that the remains may be those of a Native American, the coroner shall contact the Native American Heritage Commission. Treatment of the remains shall be conducted in accordance with the direction of the County Coroner and/or the Native American Heritage Commission, as appropriate.

Timing/Implementation: During construction
Enforcement: Native American Heritage Commission and County
Monitoring: County and/or its contractor

5.4 Geology and Soils

Implement *Mitigation Measure #3 - Soil Erosion and Sedimentation Control* to prevent degradation of water quality.

5.5 Greenhouse Gas Emissions

5.5.1 Mitigation Measure #16 – Greenhouse Gas Emissions

The County shall include provisions in the construction bid documents to minimize project-related greenhouse gas emissions. The following measures shall be implemented to reduce construction-related greenhouse gas emissions:

- Reuse and recycle construction and demolition waste, including, but not limited to soil, vegetation, concrete, lumber, metal, and cardboard.
- Ensure that the project enhances, and does not disrupt or create barriers to, non-motorized transportation.
- Protect existing trees to the extent possible and encourage the planting of new trees.

Timing/Implementation: Prior to and during construction
Enforcement: County
Monitoring: County and/or its contractor

5.6 Hazards and Hazardous Materials

Implement *Mitigation Measure #1 – Air Quality/Fugitive Dust and Emission Controls* and *Mitigation Measure #4 - Prevention of Accidental Spills of Pollutants* to prevent degradation of the project area environment.

5.6.1 Mitigation Measure #17 – Lead-based Paint

The County shall include provisions in the construction bid documents to ensure the proper removal and disposal of lead-based paint coated surfaces found on the existing bridge. The following measure shall be implemented to reduce construction-related environmental impacts that could result from lead-based paint removal:

- A limited assessment for lead in the soil under the bridge will be performed for the project area. Samples shall be collected at each of the four corners of the two bridge abutments. In order for hazardous waste management requirements of Health and Safety Code, Chapter 6.5 and California Code of Regulations, title 22 to be waived, lead-contaminated soils must not exceed the contaminant concentrations discussed in section 9 of the variance and must meet all the conditions contained within the same section. Required handling of lead contaminated soils is outlined in Table 4 and would depend on the level of lead contamination in the soils at the site.

Table 4. Lead Soil Management

| Soluble Lead (mg/l) | Total Lead (mg/kg) | Soil Type | Handling |
|---------------------------|---|-----------|---|
| California Testing | | | |
| STLC <5.0 | TTLC <1000 | X | Non-hazardous Waste. Notify and require Lead Compliance Plan for worker safety. |
| | 1000 – 1411 and DI WET < 1.5 mg/l | Y1 | Hazardous Waste. Variance applies – cover with minimum 1 foot of clean soil.* |
| | 1411 – 3397 and DI WET < 150 mg/l | Y2 | Hazardous Waste. Variance applies – cover with pavement structure.* |
| | 1000 – 3397 but Surplus | Z2 | Hazardous Waste. Surplus. Dispose at Class 1 disposal site. |
| | > 3397 or 1000 – 3397 and DI WET > 150 mg/l | Z2 | Hazardous Waste. Not reusable under Variance. Dispose at Class 1 disposal site. |
| TLC >5.0 | TTLC < 1411 and DI WET < 1.5 mg/l | Y1 | Hazardous Waste. Variance applies – cover with minimum 1 foot of clean soil.* |
| | 1411 – 3397 and DI WET < 150 mg/l | Y2 | Hazardous Waste. Variance applies – cover with pavement structure.* |

Table 4. Lead Soil Management

| Soluble Lead (mg/l) | Total Lead (mg/kg) | Soil Type | Handling |
|---------------------|--|-----------|---|
| | < 3397 and DI WET < 150 mg/l but Surplus | Z2 | Hazardous Waste. Surplus. Dispose at Class 1 disposal site. |
| | > 3397 or DI WET > 150 mg/l | Z2 | Hazardous Waste. Variance applies – cover with pavement structure. |
| Federal Testing | | | |
| TCLP > 5.0 mg/l | N/A | Z3 | RCRA Hazardous Waste. Dispose at Class 1 disposal site as a RCRA waste regardless of TTLC and STLC results. |

* Note: For hazardous waste levels of lead – if pH is less than 5.5 soil must be placed under a pavement structure. If pH is less than 5.0 variance cannot be used and the soil must be disposed as Z-2 material. (Source: Caltrans Website: http://www.dot.ca.gov/hq/env/haz/hw_adl.htm)

- Lead-based paint will be removed using one of several methods approved by the Federal Environmental Protection Agency (EPA), at the contractor’s discretion. Acceptable methods include wet scraping or the use of a dustless needle gun connected to a vacuum unit with a high efficiency particulate air (HEPA) filter that empties directly into a waste container. The waste container will be properly documented and disposed of at a Class I landfill, such as the Clean Harbors Buttonwillow LLC facility in Buttonwillow, CA (CAD980675276) or the Chemical Waste Management Inc. Kettleman facility in Kettleman, CA (CAT000646117).

Timing/Implementation: During construction
Enforcement: County, EPA
Monitoring: County and/or its contractor

5.6.2 Mitigation Measure #18 – Asbestos-Containing Building Materials

The County shall include provisions in the construction bid documents to ensure the proper removal and disposal of asbestos-containing building material found on the existing bridge. The following measure shall be implemented to reduce construction-related environmental impacts that could result from asbestos removal:

- Prior to the start of construction, the existing bridge’s building material will be tested for asbestos. If present, the following measure will be used:
 - Asbestos-containing building material will be removed using one of several methods approved by the Federal EPA and California Occupational and Safety Hazard Administration (CalOSHA), at the contractor’s discretion. Acceptable methods include wet scraping or the use of a dustless needle gun connected to a vacuum unit with a HEPA filter that empties directly into a waste container. The waste container will be properly documented and disposed of at a Class I landfill, such as the Clean Harbors Buttonwillow LLC facility in Buttonwillow, CA (CAD980675276) or the Chemical Waste Management Inc. Kettleman facility in Kettleman, CA (CAT000646117).

Timing/Implementation: During construction
Enforcement: County, EPA, CalOSHA
Monitoring: County and/or its contractor

5.6.3 Mitigation Measure #19 – Treated Wood Waste

The County shall include provisions in the construction bid documents to ensure the proper removal and disposal of treated wood waste material found on the existing bridge. The following measure shall be implemented to reduce construction-related environmental impacts that could result from treated wood waste removal:

- The contractor will remove treated wood waste following the alternative management standards specific under Caltrans Special Stand Provision 14-11.09 for treated wood waste, as well as California Code of Regulations Title 22, Chapter 34, Sections 67386.1 through 67386.12 for labeling, accumulation, offsite shipment tracking, notification, treatment, and disposal. All personnel that may come into contact with treated wood waste will receive, at a minimum, training on safe handling, sorting and segregating, storage, labeling (including date), and proper disposal methods.

Timing/Implementation: Prior to, during, and after construction
Enforcement: County
Monitoring: County and/or its contractor

5.6.4 Mitigation Measure #20 – Wildfire Potential

The County shall include provisions in the construction bid documents to minimize the potential for ignition of wildfire as a result of project construction. The following measure shall be implemented to reduce construction-related wildfire ignition potential:

- Per the requirements of Public Resources Code 4442, the County shall include a note on all construction plans that internal combustion engines shall be equipped with an operational spark arrester, or the engine must be equipped for the prevention of fire.

Timing/Implementation: Prior to construction
Enforcement: County
Monitoring: County and/or its contractor

5.7 Hydrology and Water Quality

Implement *Mitigation Measure #3—Soil Erosion and Sedimentation Control* and *Mitigation Measure #4—Prevention of Accidental Spills* to prevent degradation of water quality.

5.8 Noise

5.8.1 Mitigation Measure #21 – Construction Noise

The County shall include in the construction specifications the following measures to reduce potential impacts associated with construction noise to a less-than-significant level:

- Construction shall be limited to the hours between 7:00 AM and 7:00 PM, Monday through Saturday.
- Noise levels shall not exceed 86 decibels at 50 feet from the construction activities from 9:00 PM to 6 AM.
- When feasible, pre-drill pile bores to minimize the number of blows needed. Residents within approximately 100 feet of pile-driving operations shall be notified when pile driving will occur, and work shall only occur in the daytime.
- Equip an internal combustion engine with the manufacturer-recommended muffler. Do not operate an internal combustion engine on the job site without the appropriate muffler.

Timing/Implementation: During construction
Enforcement: County
Monitoring: County and/or its contractor

6 Report Preparation

6.1 Mendocino County Department of Transportation – CEQA Lead Agency

| | |
|------------------|-------------------------------------|
| Jason Wise, P.E. | Project Manager |
| Jackson Ford | Environmental Compliance Specialist |

6.2 North State Resources, Inc. – Environmental Compliance

| | |
|----------------------------|---------------------------------------|
| Wirt Lanning | Project Manager/Environmental Analyst |
| Connie MacGregor Carpenter | Environmental Analyst |
| Paul Kirk | Biologist |
| Sarah Tona | Botanist |
| Mike Gorman | Fisheries Biologist |
| Brian Ludwig | Principal Archaeological Investigator |
| Kristina Crawford | Cultural Resources |
| Teri Mooney | GIS Analyst |

6.3 Quincy Engineering – Design Engineers

| | |
|--------------|-----------------|
| Jim Foster | Project Manager |
| Jason Jurens | Bridge Engineer |
| Max Katt | Bridge Engineer |

6.4 Avila and Associates – Design Hydraulics

| | |
|----------------------------|-----------|
| Catherine M.C. Avila, P.E. | Principal |
|----------------------------|-----------|

6.5 Lawrence and Associates – Phase 1 Initial Site Assessment

| | |
|--------------------|-------------------|
| Robert Ekin, REPA | Task Manager |
| Bryan Gartner, PG. | Project Geologist |

6.6 Bollard Acoustical Consultants, Inc. – Noise Study

| | |
|--------------|-----------|
| Paul Bollard | Principal |
|--------------|-----------|

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