

**CALIFORNIA ENVIRONMENTAL QUALITY ACT**

INITIAL STUDY IN SUPPORT OF A

**NEGATIVE DECLARATION**

FOR THE

**FELIZ CREEK BRIDGE REPLACEMENT, BR# 10C-0134**

COUNTY ROAD No.110 (CR 110)

LEAD AGENCY

**COUNTY OF MENDOCINO**

STATE OF CALIFORNIA

PREPARED BY

**PARK STEINER**

ENVIRONMENTAL COMPLIANCE SPECIALIST

MENDOCINO COUNTY DEPARTMENT OF TRANSPORTATION (MCDOT)

April 1, 2010

APPROVAL RECOMMENDED BY:

RECOMMENDED FOR ADOPTION BY:

\_\_\_\_\_  
**Larry Alexander**      DATE  
Deputy Director of Transportation

\_\_\_\_\_  
**Howard N. Dashiell**      DATE  
Director of Transportation

LOCATION MAP  
BRIDGE AT FELIZ CREEK REPLACEMENT PROJECT  
BRIDGE #10C-0134

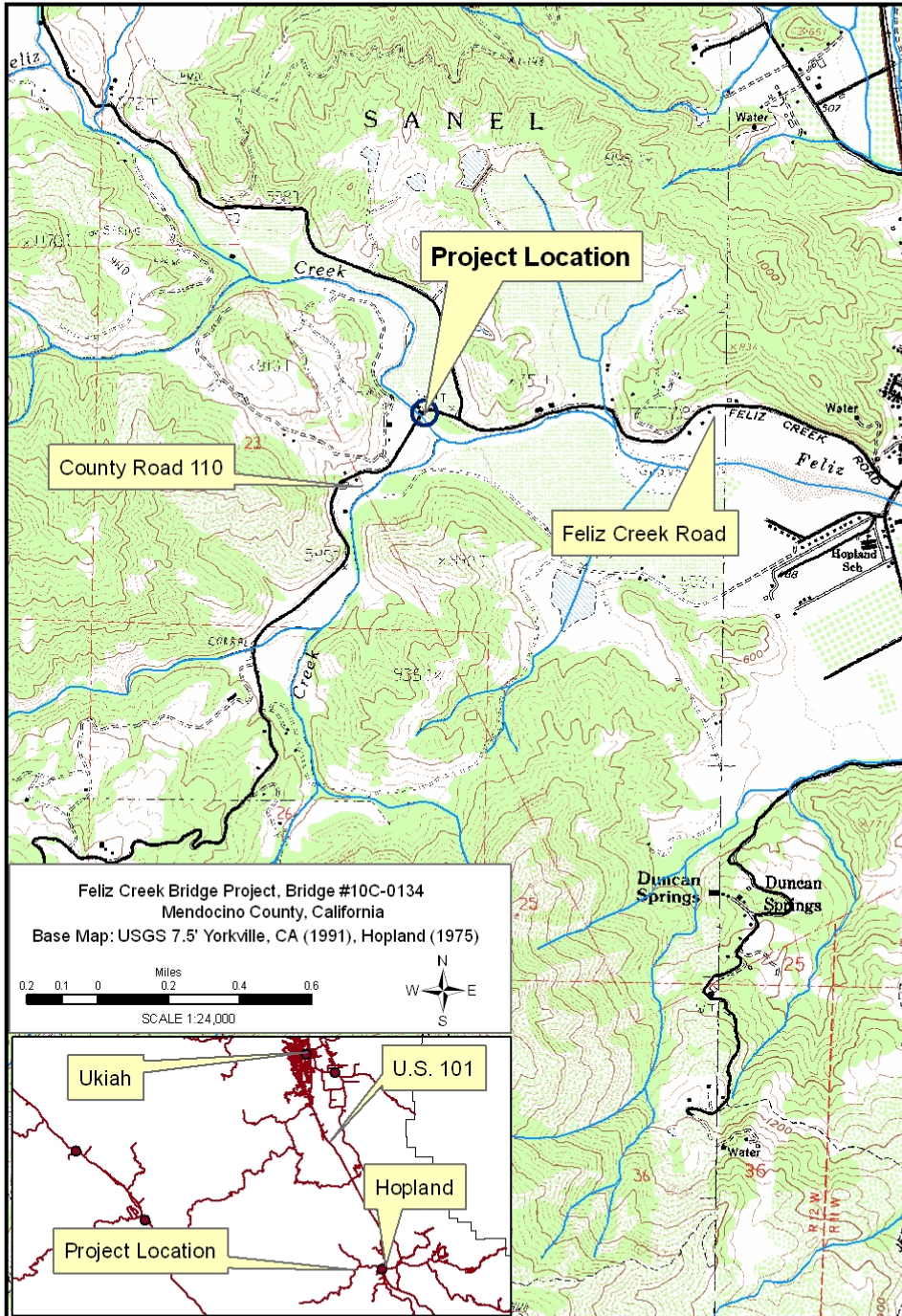


Figure 1. Project Location Map

MENDOCINO COUNTY

**INITIAL STUDY  
FOR  
FELIZ CREEK BRIDGE REPLACEMENT, BR# 10C0134  
FELIZ CREEK ROAD, CR 110**

March 22, 2010

***Section I – Project Overview.***

- 1. Project title: Feliz Creek Bridge Replacement, Br# 10C-0134**
- 2. Lead agency name and address:** Mendocino County Department of Transportation  
340 Lake Mendocino Drive  
Ukiah, Calif. 95482
- 3. Contact person and phone number:** Kidd Immel, Project Coordinator, (707) 463-4071
- 4. Project location:** The bridge at Feliz Creek is approximately 1.5 miles west of the town of Hopland on County Road 110 (formerly the Hopland-Yorkville Road). It is located just west of where the Feliz Creek Road turns north; the road continuing in a westerly direction is CR 110. The bridge is also described as being 0.1 mile southeast of the junction of County Roads roads 109 and 110. Feliz Creek roughly parallels Feliz Creek Road in this location, and CR 110 roughly parallels Johnson Creek, which continues in a southwesterly direction. The confluence of these two creek drainages is approximately 450 ft. south of the existing bridge. The street address for the bridge is 2900 County Road 110, Hopland, California. The bridge is further identified as Bridge Number 10C-0134. The project is located between milepost marker 0.07 to the east and 0.13 to the west. West bounding coordinates: Latitude 38°58'19.5", Longitude 123°08'33.1". East bounding coordinates: Latitude 38°58'18.7", Longitude 123°08'14.2", Yorkville 7.5 minute USGS quadrangle.
- 5. Project sponsor's name and phone number:** Project will be implemented by the Mendocino County Department of Transportation [(707)-463-4363] with project funding made possible by the Highway Bridge Replacement and Rehabilitation Program (HBRRP).
- 6. General Plan Designation:** The General Plan designation is RL160 (Range Lands, 160 acres).
- 7. Zoning:** The zoning designation is RL (Range Land).
- 8. Description of Project:** The existing bridge at Feliz Cr. near Hopland was built in 1960. The road to the west provides the only entry to a residential and agricultural area as well as access for fire fighting. The bridge is deteriorated and is now classed as Structurally Deficient (SD) with a Sufficiency Rating (SR) of only 27.7. The mostly wooden bridge has two spans with a combined length of 61 ft. In 2000, the bridge required structural reinforcement by installation of two steel I-beam "strongbacks" placed on the upper road deck, constraining road width to about 12 ft. It is proposed that the bridge will be replaced at an adjacent southerly location with a new conforming structure of steel or concrete (most likely a combination of both). The new bridge would be a two-span (40 foot +/- each) flat slab bridge with one center bent. (The possibility of a 3-span bridge may be considered.) This proposal

has been accepted by Federal Highway Bridge Replacement and Rehabilitation Program (HBRRP). During the construction of the new bridge, the existing bridge will remain in place to serve as a detour for traffic. This will result in a new alignment for the approaches for the replacement bridge. Approaches to the bridge will be realigned both vertically and horizontally, and cross slopes corrected to meet current standards.

## **9. Surrounding land uses and setting:**

Feliz Creek at the bridge rehabilitation site could be considered a Class III (Rosgen Type C) watercourse usually demonstrating perennial streamflow. Winter high-flow events are typically less than 2,000 cfs mean daily flow (USGS 2009) with instantaneous peak events potentially near 8,000 cfs (Mark Thomas 2009). Late summer streamflows in this stream reach are typically less than 1/3 cfs. During the USGS period of record (Aug 1958 - Sep 1966), July mean streamflows were 0.32 cfs. Similarly for that same period, a 0.0 mean monthly discharge was recorded for six out of nine August periods and eight out of nine September periods. During preliminary site evaluation, Feliz Creek at the bridge location was considered low gradient ( $\leq 0.5\%$ ), had a relatively open channel, demonstrated imbedded spawning gravels, and lacked complexity (cobble, boulders, scour holes, woody debris) adequate to support significant adult and juvenile salmonid utilization other than during migration or juvenile displacement. Water quality appeared marginal for rearing salmonids due to warm temperatures and lack of suitable instream structure.

The stream corridor does support a relatively lush wooded riparian comprised primarily of maturing and senescent oak, alder, and willow. Bay-laurel, toyon, and wild grape also add to the complexity of the riparian habitat. The riparian provides reasonable canopy cover near the existing bridge, but lack of summer surface flow limits the value for rearing salmonids. Given the maturity of the riparian vegetation coupled with the somewhat open aspect of the stream corridor, this habitat undoubtedly provides important nesting and foraging habitat for many birds including warblers, swallows, orioles, tanagers, woodpeckers, smaller raptors, and other perching species. The habitat is likely important to wildlife species, especially those that frequent or migrate along the corridor such as deer, raccoons, mink, opossum, fox, and bobcat. Seasonally when flows are low or intermittent, some of the movement is likely to occur directly in the stream channel.

One notable feature of the riparian corridor in the immediate vicinity of the Feliz Cr. Bridge was the scarcity of invasive plant species such as Himalayan blackberry (*Rubus armeniacus*), periwinkle (*Vinca major*), and Giant Reed (*Arundo donax*). The existing ribbon of native riparian vegetation creates a buffer zone between the creek and the highly domesticated pastures and vineyards adjacent to the County road and the bridge. The native riparian corridor has been constrained by the agricultural encroachment, but is, nonetheless, a continuous feature in this stream reach.

## **10. Other public agencies whose approval is required:**

Public agencies whose approval is required for project implementation include:

North Coast Regional Water Quality Control Board- for project review, input and approval as part of the grant agreement that helped fund this project, and for 401 Water Quality Certification for in-stream work subject to the Clean Water Act.

California Department of Fish and Game- 1600 Streambed and Lake Alteration Agreement for certain portions of project implementation within DFG jurisdiction.

State Water Resources Control Board – Storm Water NPDES permits as required for construction projects in excess of 1 acre total disturbed soil area.

US Army Corps of Engineers- Clean Water Act Section 404 Permit for discharges to jurisdictional waters of the United States.

National Marine Fisheries Service – Will review impacts to and protections for salmonids, listed species under the ESA, and likely present at the replacement site.

Mendocino County Board of Supervisors- Adoption of Resolution supporting a Negative Declaration pursuant to CEQA for the project. Potential approval of certain portions of project work that may be put out to bid for materials or construction.

**Section II – Evaluation of Environmental Impacts.**

“Significant effect on the environment” means a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment. A social or economic change related to a physical change, may be considered in determining whether the physical change is significant (CEQA Guidelines, Section 15382).

Will the project result in the following environmental effects:	No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact
<b>I. AESTHETICS -- Would the project:</b>				
a) Have a substantial adverse effect on a scenic vista?	No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact
	<b>X</b>			
No designated scenic vistas are within or adjacent to the project area.				
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact
	<b>X</b>			
This is not a state scenic highway, nor is the project area viewable from a state scenic highway.				
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact
	<b>X</b>			
Visual character or quality of the site will not be significantly impacted as a result of replacing the existing bridge. After construction the old bridge will be removed and the abandoned right-of-way will be allowed to revegetate with native species resulting in a net gain of natural habitat thereby increasing visual character and quality.				
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact
	<b>X</b>			
No lighting is proposed. Centerline and fog line striping will not produce glare in amounts that will adversely affect day or nighttime views.				

<b>II. AGRICULTURE RESOURCES:</b> In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact
	<b>X</b>			
	Due to the need to keep a detour in place during construction (residential access and public safety) a new bridge will be built downstream from the existing bridge. This will require the acquisition of a small amount of right-of-way (less than 2 acres) from land that currently serves primarily as pasture. This right-of-way will not come from Prime Farmland, Unique Farmland, or Farmland of Statewide Importance.			
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact
		<b>X</b>		
	No changes in existing land use patterns are proposed. One of the two adjacent parcels is under a Williamson Act contract. An area of less than 2 acres will be removed from that contract for right-of-way purposes. The remainder parcel is of sufficient size to stay within Williamson protection. After construction, the old bridge will be removed and the abandoned right-of-way will be allowed to revegetate with native species that will result in a net gain of natural habitat.			
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact
	<b>X</b>			
	Proposed project is for a bridge replacement within the County-maintained road system. No changes of existing land uses will occur as a result of the project.			
<b>III. AIR QUALITY</b> -- 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?	No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact
		<b>X</b>		

	<p>According to the California Department of Conservation, Division of Mines and Geology Mendocino County is a general location for Ultramafic Rocks. Ultramafic rocks and Serpentine may contain chrysotile asbestos. Asbestos can be released when these rocks are broken or crushed as may occur during construction projects. During the replacement of the bridge dust control strategies (mitigation measures) as outlined in Attachment 2 of the Technical Advisory Bulletin CEQA AND ASBESTOS: Addressing Naturally Occurring Asbestos in CEQA Documents issued by the Governor's Office of Planning and Research (OPR) will be implemented thereby reducing possible impacts to a less than significant level.</p>			
<p>b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?</p>	No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact
	<b>X</b>			
	<p>The project area is within a State designated location for Ultramafic rocks as indicated above.</p> <p>Potential air quality violations as a result of fugitive dust will be minimized through Dust Control Strategies issued by the Governor's Office of Planning and Research.</p>			
<p>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)?</p>	No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact
	<b>X</b>			
	<p>As discussed above, specific dust control strategies issued by OPR will be followed to mitigate the possible release of any Naturally Occurring Asbestos that may occur as a result of this bridge replacement project.</p>			
<p>d) Expose sensitive receptors to substantial pollutant concentrations?</p>	No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact
	<b>X</b>			
	<p>No schools, hospitals or elder care facilities are located within or adjacent to the project area. Due to the nature of work being a bridge replacement no substantial pollution concentrations are expected.</p>			
<p>e) Create objectionable odors affecting a substantial number of people?</p>	No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact
	<b>X</b>			

	Some individuals may find that construction equipment produces objectionable odors from exhaust. This will only be temporary during the period of construction and not impact substantial numbers of people due to the remote location.
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**IV. BIOLOGICAL RESOURCES -- Would the project:**

	No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?		<b>X</b>		
	<p>The modification of approaches and the replacement of the bridge will occur within the already disturbed and frequently maintained road prism, and are not anticipated to significantly affect any listed species.</p> <p>With regard to listed species, this project <b>is not likely to adversely affect</b> the two salmonid species present in Feliz Creek, the Central California coast steelhead and the California coastal Chinook salmon. This determination is based on the fact that construction will avoid the time of year when surface flow is present and, hence, listed salmonid fish are unlikely to be present. Should anomalous flow conditions be encountered with water and fish present at the time of construction, appropriate rescue and relocation actions will be implemented. Critical Habitat has not been designated in Feliz Creek by NMFS for either Central Coast California steelhead or California Coastal Chinook salmon.</p>			
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by		<b>X</b>		

regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?

There will be the permanent loss of approximately 22 linear feet of riparian habitat. This is not considered significant since the stream reach at the project site demonstrates other constraints that preclude its utilization by listed salmonids for spawning and rearing. Also, the bridge structure itself will provide significantly more shading than any lost by removal of streamside vegetation. Construction activities will cause minimal and short-term disruption to adjacent streamside riparian vegetation, but this is expected to recover rapidly. Some oak trees will be removed during road realignment causing minor but non-threatening habitat disturbance. The project will result in a net habitat gain due to the creation of approximately 1.6 acres of new oak woodland where abandoned right-of-way will be allowed to naturalize with native vegetation

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?

No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact
	<b>X</b>		
<p>No protected wetlands have been identified within the Area of Potential Effect (APE) of the project. The bridge replacement site has been identified as needing DFG 1600, USACE 404, SWRCB NPFES, and RWQCB 401 clearances. MCDOT will request concurrence with this wetland finding during the permit process with each respective agency</p>			

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory

No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact
	<b>X</b>		

wildlife corridors, or impede the use of native wildlife nursery sites?

Streamflow in this reach of Feliz Creek appears perennial, but surface flows are periodically low or imperceptible during late summer and early fall (0 to 1 cfs). This results in an intermittent flow pattern during the extreme low-flow periods of August and September. Historic records indicate a mostly dry streambed at the bridge site when construction is likely to occur. It is proposed that much of the construction occur on the dry gravel streambed, minimizing impacts associated with wetted-channel work.

This project is not likely to adversely affect the two listed salmonid species present in Feliz Creek, the Central California coast steelhead and the California coastal Chinook salmon. Nor is the project likely to affect any non-salmonid species of fish. This determination is based on the fact that construction will avoid the time of year when surface flow is present and, hence, fish are unlikely to be present. Should anomalous conditions be encountered with water and fish present at the time of construction, appropriate rescue and relocation actions will be implemented. The same is true for aquatic amphibians and reptiles.

As for other wildlife, the stream corridor and associated riparian will only be minimally impacted with minor and temporary loss of vegetation. No significant mortality to resident wildlife species is anticipated. Construction will be during daylight hours, allowing for normal nocturnal wildlife patterns.

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

No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact
<b>X</b>			

The proposed project does not conflict with any local policies or ordinances protecting biological resources, such as tree preservation policy or ordinance since none exist for the County.

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?

No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact
<b>X</b>			

habitat conservation plan?	The proposed project does not conflict with any adopted Habitat Conservation Plan, Natural Community Conservation Plan or other approved local, regional, or state habitat conservation plan.			
<b>V. CULTURAL RESOURCES -- Would the project:</b>				
a) Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?	No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact
	<b>X</b>			
	<p>A Historic Resources Evaluation Report (HRER) was prepared for the project by Diana Painter, PhD, of Painter Preservation and Planning (November 18, 2009). The purpose of the evaluation was to determine whether historic resources are present in the project area or Area of Potential Effect (APE) in order to satisfy requirements of the National Environmental Policy Act (NEPA), Section 106 of the National Historic Preservation Act and the California Environmental Quality Act (CEQA).</p> <p>The evaluation found the only structure within the APE is the bridge itself and that it was not eligible for listing on the National Register of Historic Places; and that there are no historic resources under CEQA.</p>			
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?	No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact
	<b>X</b>			

	<p>An Archaeological Survey Report (ASR) was prepared for the project by Alex DeGeorgy, of North Coast Resource Management (January 8, 2010). The purpose of the evaluation was to determine whether archaeological resources are present in the project area or Area of Potential Effect (APE) in order to satisfy requirements of the National Environmental Policy Act (NEPA), Section 106 of the National Historic Preservation Act and the California Environmental Quality Act (CEQA).</p> <p>The evaluation consisted of a records search, literature review, consultation with local Native Organizations and individuals identified by the Native American Heritage Commission, and a field survey.</p> <p>The evaluation found that no significant cultural resources were identified within the project area, or APE.</p>			
<p>c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?</p>	<p>No Impact</p>	<p>Less than Significant Impact</p>	<p>Less than Significant with Mitigation Incorporated</p>	<p>Potentially Significant Impact</p>
	<b>X</b>			
<p>d) Disturb any human remains, including those interred outside of formal cemeteries?</p>	<p>No Impact</p>	<p>Less than Significant Impact</p>	<p>Less than Significant with Mitigation Incorporated</p>	<p>Potentially Significant Impact</p>
	<b>X</b>			
	<p>No unique geologic features are associated with the project. The potential for encountering paleontological resources is not anticipated due to the geology and topography of the site. If paleontological resources are encountered during construction, encountered materials and their context will not be altered until a qualified paleontological resource professional has evaluated the situation and determined an appropriate course of action.</p>			
	<p>No archaeological or cultural artifacts have been identified within the project study area; hence, encountering human remains is unlikely. If any human remains are encountered during construction, these materials and their context will not be altered until the proper legal authorities and a qualified professional archaeologist have evaluated the situation and determined an appropriate course of action.</p>			

**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? Refer to Division of Mines and Geology Special Publication 42.	No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact
		X		
ii) Strong seismic ground shaking?	No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact
		X		
iii) Seismic-related ground failure, including liquefaction?	No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact
		X		

The project area is located within the Yorkville 7.5 minute USGS quadrangle. This quadrangle is not located within an Alquist Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area.

The Maacama Fault Zone is mapped (*Arcmap, GIS survey, January 13, 2010*) as running through Mendocino County. The project is located more than 4 miles to the west of the fault zone. Additionally proper engineering design and construction in conformance with the Uniform Building Code seismic standards as approved by the Department of Building and Safety will reduce potential impacts due to seismic ground shaking to a less than significant level.

The project area has the potential to experience ground shaking as a result of earthquakes occurring on regional faults. Although the project site could be subjected to strong ground shaking in the event of an earthquake, this hazard is common in Northern California. No new facilities or structures will be constructed that will expose people or structures to potentially substantial adverse affects as a result of seismic ground shaking beyond those that are currently present.

	<p>The potential for seismic related ground failure is present at the project site. The proposed bridge replacement will not increase the potential for exposing people or structures to seismic related ground failure, including liquefaction. While project is not anticipated to result in a significant impact compliance with the Uniform Building Code Chapter 18, Division 1, Section 1804.5 Liquefaction Potential and Soil Loss will ensure that any potential impacts due to liquefaction are reduced to a less than significant level.</p>			
iv) Landslides?	No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact
	X			
b) Result in substantial soil erosion or the loss of topsoil?	No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact
		X		

	<p>The construction of the bridge and approaches will not have a substantial effect on soil erosion or the loss of topsoil. The project includes the replacement of the bridge and improvements to the approaches. All disturbed areas will be treated with agency-approved Best Management Practices (BMPs) as construction is completed or prior to the onset of fall storms. As a result, no significant impacts or losses of topsoil are anticipated.</p> <p>Accessing the stream channel can be done with minimal disruption to the riparian vegetation since it is assumed there are historical access points from the adjacent agricultural field(s), locations where tree spacing may be adequate to allow equipment movement with removal of only understory, or possibly, only a small number of trees. Grading to enter the stream channel should be minimal since the modern equipment to be used is capable of negotiating the bank slopes with minor alteration. All bank sites where soil has been disturbed will be treated with the appropriate BMPs to protect from erosion while natural revegetation occurs. If any significant amount of vegetation loss occurs, replanting will be done with appropriate native species.</p>			
<p>c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?</p>	No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact
	X			
	<p>The bridge project will not be located on a geologic unit or soil that is unstable, or would become unstable as a result of the project, and potentially would result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse. As such, no impacts are anticipated.</p>			
<p>d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?</p>	No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact
		X		
	<p>No foundations or retaining walls are proposed. The current bridge has been in place since 1943. During this time there has been no indication of damage due to expansive solids. Engineering and construction in compliance with the Uniform Building Code will ensure that the project will result in a less than significant impact due to expansive soils.</p>			

e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact
	<b>X</b>			
	No septic tanks or wastewater disposal systems are proposed as part of the project.			
<b>VII. HAZARDS AND HAZARDOUS MATERIALS -- Would the project:</b>				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact
	<b>X</b>			
	This project is for a bridge replacement. It will not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.			
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?	No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact
	<b>X</b>			
	This project is for a bridge replacement. No reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment are anticipated. As part of the bridge design, both the horizontal and vertical alignment of the road will be smoothed to improve the bridge approach and the visibility at the road intersection with County roads 109 and 110, approximately 600 feet the east of the bridge, thereby reducing accident potential.			
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact
	<b>X</b>			
	No facilities are to be constructed, or exist within the project area, that will emit hazardous emissions or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.			
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	No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact
	<b>X</b>			

create a significant hazard to the public or the environment?	The project is located within the existing County road right-of-way in an area of undeveloped agricultural and rangelands, as such the likelihood of contaminated or hazardous sites as a result of legal or illegal activities is not likely. No dumping of byproducts of methamphetamine manufacture has been identified to date.			
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact
	<b>X</b>			
	There are no public use airports within two miles of the project area.			
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?	No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact
	<b>X</b>			
	No private airstrips within two miles of the project area have been identified ( <i>Arcmap, GIS survey, January 13, 2010</i> ). The proposed project is not anticipated to result in any safety hazards for people residing or working in the project area as a result of private airstrips.			
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact
	<b>X</b>			
	The proposed bridge replacement will not impair the implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. The current one-lane bridge will remain in place during construction and will continue to serve as the current emergency evacuation route. The replacement bridge will be two lanes and will facilitate any emergency evacuation that may be necessary after completion of the structure.			
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	No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact
	<b>X</b>			

or where residences are intermixed with wildlands?	Proposed bridge replacement will not 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. The new bridge and approaches will allow for safer and faster access of firefighting personnel and equipment to isolated parcels located past the bridge on the county road.
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**VIII. HYDROLOGY AND WATER QUALITY -- Would the project:**

a) Violate any water quality standards or waste discharge requirements?	No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact
		<b>X</b>		
	Portions of the project will involve instream work that will require 401 Water Quality Certification through the Regional Water Quality Control Board. The 401 process, along with implementation of Best Management Practices (BMPs), will help to ensure that the project complies with water quality standards and meets any conditions imposed under the permit.			
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact
	<b>X</b>			
	Proposed project does not rely on groundwater resources, nor will proposed activities result in impacts to groundwater resources such as increased use or lowering of the groundwater table.			
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?	No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact
	<b>X</b>			
	This is a bridge replacement project and will not alter the existing drainage pattern of the site or area, including the alteration of the course of Feliz Creek in a manner which would result in substantial erosion or siltation on- or off-site.			
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	No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact
	<b>X</b>			

<p>the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?</p>	<p>The proposed bridge replacement will not alter the existing drainage pattern of the site or area, including through the alteration of the course of Feliz Creek, nor substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site.</p>			
<p>e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?</p>	<p>No Impact</p>	<p>Less than Significant Impact</p>	<p>Less than Significant with Mitigation Incorporated</p>	<p>Potentially Significant Impact</p>
	<p><b>X</b></p>			
	<p>The bridge replacement will not create nor contribute runoff water, which would exceed the capacity of existing storm water drainage systems, or would provide substantial additional sources of polluted runoff.</p>			
<p>f) Otherwise substantially degrade water quality?</p>	<p>No Impact</p>	<p>Less than Significant Impact</p>	<p>Less than Significant with Mitigation Incorporated</p>	<p>Potentially Significant Impact</p>
	<p><b>X</b></p>			
	<p>The bridge replacement will be constructed during the summer months when water levels are at their lowest levels. DOT will require that Contractor follows BMP's and the project will not otherwise substantially degrade water quality.</p>			
<p>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?</p>	<p>No Impact</p>	<p>Less than Significant Impact</p>	<p>Less than Significant with Mitigation Incorporated</p>	<p>Potentially Significant Impact</p>
	<p><b>X</b></p>			
	<p>This project will not place any housing within a 100-year flood hazard area as mapped in a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map. No housing is located within the project area and none is provided for in the project design.</p>			
<p>h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?</p>	<p>No Impact</p>	<p>Less than Significant Impact</p>	<p>Less than Significant with Mitigation Incorporated</p>	<p>Potentially Significant Impact</p>
		<p><b>X</b></p>		
	<p>A formal Hydraulic study was conducted during the design phase of the project, and no special flood hazard areas were identified. (<i>Mark Thomas &amp; Company, July 2009</i>). The bridge replacement will be built with a center bent within the stream channel. Given the shape and volume of the supports, it is anticipated that it will not impede or redirect flood flows significantly.</p>			

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?	No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact
	<b>X</b>			
	This project will not 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.			
j) Inundation by seiche, tsunami, or mudflow?	No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact
	<b>X</b>			
	<p>The project is not adjacent to or within close proximity to large bodies of water that may produce seiche or tsunami.</p> <p>In consideration of the chance of a mudflow event; lack of steep topography, low population density associated with agricultural land uses, and predominately being located within the lower gradient reaches of the watershed, no impacts are anticipated.</p>			
<b>IX. LAND USE AND PLANNING - Would the project:</b>				
a) Physically divide an established community?	No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact
	<b>X</b>			
	There are no established communities within or adjacent to the project area. Zoning in the area is for 160-acre parcels resulting in a low-density population.			
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?	No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact
	<b>X</b>			
	The bridge replacement project will not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding mitigating an environmental effect.			
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact
	<b>X</b>			
	No conflicts with any applicable Habitat Conservation Plan or Natural Community Conservation Plan are anticipated as a result of project implementation.			

<b>X. MINERAL RESOURCES -- Would the project:</b>				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact
	<b>X</b>			
	There are no foreseeable impacts to the availability of known mineral resources of value as a result of the project.			
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?	No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact
	<b>X</b>			
	There are no foreseeable impacts to the availability of locally important mineral resources as a result of the project.			
<b>XI. NOISE -- Would the project result in:</b>				
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?	No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact
		<b>X</b>		
	Proposed road use will not change as a result of this project; thus no additional noise sources are expected. Normal automobile use does not result in noise in excess of noise standards. Temporary increases in background noise levels are anticipated during construction but these will remain within acceptable standards as is required of construction projects.			
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact
		<b>X</b>		
	No long-term groundborne vibration or groundborne noise is anticipated from proposed project. No pile driving is planned for the construction of this bridge. Temporary minor increases in local groundborne noise may be experienced during construction from the operation of heavy equipment.			
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact

above levels existing without the project?	<b>X</b>			
	No substantial permanent increases in ambient noise levels above those existing without the project will occur. Minor and temporary noise levels may occur during the construction and demolition phases, but will conclude when these tasks are completed.			
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact
		<b>X</b>		
Increases in temporary or periodic ambient noise levels are anticipated as a result of construction activity. However, due to relatively remote location and construction windows during daylight hours, impacts are considered to be less than significant.				
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact
	<b>X</b>			
No public airport or public use airport is located within two miles of the project area.				
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?	No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact
	<b>X</b>			
No private airstrips have been identified within the vicinity of the project area. ( <i>Source: County GIS server</i> )				
<b>XII. POPULATION AND HOUSING -- Would the project:</b>				
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)?	No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact
	<b>X</b>			
Substantial population growth as a result of the proposed project is not anticipated. The agricultural nature of the surrounding parcels precludes any substantial population growth. Replacement of the existing bridge will not have an impact on population growth.				
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact
	<b>X</b>			

	No housing will be displaced as a result of the project.			
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact
	<b>X</b>			
	No people will be displaced as a result of the project.			
<b>XIII. PUBLIC SERVICES</b>				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
Fire protection?	No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact
	<b>X</b>			
	No new fire protection services will be required.			
Police protection?	No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact
	<b>X</b>			
	No new police protection services will be required.			
Schools?	No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact
	<b>X</b>			
	No new school facilities will be required.			
Parks?	No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact
	<b>X</b>			
	No new parks or open space will be required.			
Other public facilities?	No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact
	<b>X</b>			

	No other public facilities will be required.			
<b>XIV. RECREATION</b>				
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?	No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact
	<b>X</b>			
	There is no existing neighborhood or regional park or other recreational facility within or beyond the project area.			
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?	No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact
	<b>X</b>			
	Project does not include recreational facilities nor does it require the construction or expansion of recreational facilities which might have an adverse effect on the environment.			
<b>XV. TRANSPORTATION/TRAFFIC -- Would the project:</b>				
a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact
	<b>X</b>			
	No substantial increases in traffic are expected as a result of the bridge replacement. Feliz Creek Road beyond the bridge is not a through road. The zoning in the area is 160-acre minimum parcel size and no new development with an anticipated increase in traffic is anticipated.			
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact
	<b>X</b>			
	Level of service standards will not be changed.			
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that result in substantial safety risks?	No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact
	<b>X</b>			
	Air traffic patterns will not be affected by the proposed project.			

d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact
	<b>X</b>			
	The proposed project will not increase hazards due to any design feature. The realignment of the bridge approaches will improve the current line of sight, decreasing the existing hazards.			
e) Result in inadequate emergency access?	No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact
	<b>X</b>			
	The proposed project will not result in inadequate emergency access. The realignment of the bridge approaches and the widening of the traveled way will enhance emergency access.			
f) Result in inadequate parking capacity?	No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact
	<b>X</b>			
	The proposed project will not result in increased parking capacity.			
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact
	<b>X</b>			
	The project will not conflict with adopted policies, plans or programs for alternative transportation enhancements.			
<b>XVI. UTILITIES AND SERVICE SYSTEMS -- Would the project:</b>				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact
	<b>X</b>			
	No wastewater will be generated from the project.			
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact
	<b>X</b>			
	No wastewater treatment utilities or service systems will be required as a result of the project.			

c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact
	<b>X</b>			
	Proposed drainage improvements will not require or result in the construction of new storm water drainage facilities or expansion of existing facilities.			
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact
	<b>X</b>			
	The project will have sufficient water supplies available to serve its minimal needs from existing entitlements and resources and no new or expanded entitlements will be needed.			
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact
	<b>X</b>			
	No wastewater will be generated requiring the services of a wastewater treatment provider.			
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact
	<b>X</b>			
	No solid waste disposal services will be required as a result of the project. All waste generated during construction will be disposed of in accordance with standard County operating procedures for waste disposal from construction projects.			
g) Comply with federal, state, and local statutes and regulations related to solid waste?	No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact
	<b>X</b>			
	No solid waste will be generated by the completed project. All waste generated during construction will be disposed of in accordance with standard County operating procedures pursuant to federal, state and local regulations.			
<b>XVII. MANDATORY FINDINGS OF SIGNIFICANCE</b>				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or	No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact

<p>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?</p>	<b>X</b>			
<p>As discussed in the preceding sections, the project does not have the potential to significantly degrade the quality of the environment, including effects on animals or plants and required habitat elements, or to eliminate historic or prehistoric sites.</p>				
<p>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)?</p>	No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact
<p style="text-align: center;"><b>X</b></p> <p>As discussed in the preceding sections, both short-term and long-term environmental effects associated with the project will be less than significant. When impacts associated with the project are considered alone or in combination with other impacts, the project-related impacts are insignificant.</p>				
<p>c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?</p>	No Impact	Less than Significant Impact	Less than Significant with Mitigation Incorporated	Potentially Significant Impact
<p style="text-align: center;"><b>X</b></p> <p>The above discussions do not identify any substantial adverse impacts to people as a result of the project.</p>				

### ***Section III – Standard Protection and Mitigation Measures to Reduce Environmental Impacts of the Project to a Less than Significant Level.***

A primary design goal of this project is to protect water quality and to minimize habitat and species disruption, both during construction, and then with the final structure. There will be some impacts to the creek and riparian habitat as a result of the construction of the new bridge, followed by the removal of the abandoned structure. The approaches to both ends of the bridge will also be changed as a result of road realignment for safety purposes, hence, there will be some effects to the out-of-channel landscape at both ends. This will be most pronounced at the east end. Though there may be some direct and indirect project impacts from replacing the Feliz Creek Bridge and modifying the approaches to the bridge, the proposed protection, mitigation, and enhancement measures will reduce these to less-than-significant levels.

Significant protections will be implemented to maintain the integrity of the stream channel and riparian habitat, to enhance oak woodland habitat adjacent to the creek, and to protect listed species and water quality. These protections are outlined below and will be integral with the various state and federal resource agency permits. BMPs are a major factor in any construction project of this nature and will be clearly stated in bid specifications packets and again as notes on the formal design plans.

#### **Section III A. Biological Resources**

- **Listed Species**

No federally listed or proposed plant species have the potential for impact from this project (California Department of Fish and Game 2003, U.S. Fish and Wildlife Service 2009).

There are two federally listed salmonid fish species potentially in the vicinity of the project (Chinook salmon and steelhead). Adults of either species could be present during the winter months, but only juvenile steelhead have the potential of being present during the proposed summer construction season. The only chance for young steelhead to be present is if the channel maintains a summer flow, say, following an extremely wet spring. In this scenario, the young might survive if higher than normal flows result in persistent pools near the work zone. Typically, intermittent flows in this stream reach leave the proposed construction zone dewatered in August and September (USGS 2009).

Precautions and enhancements have been incorporated into the project design and construction schedule for the protection and benefit of the juvenile steelhead, other aquatic organisms, and associated habitat present at the site. Avoidance of impacts to listed salmonid fishes is incorporated into the project design by building the project when fish are not present. In-channel construction will be confined late summer/early fall when flows have historically been intermittent or subsurface. During this period, heavy equipment should be able work on the dry, embedded gravel substrate without risk to fishes or other aquatic organisms. When dry, this substrate appears extremely solid and likely will not show significant disturbance during construction. If rutting or mounding occurs, the surface can be graded and re-contoured once work is complete. If the substrate cannot properly support the construction equipment, it may be necessary to import appropriate crushed rock as a work

surface. This material can then be removed at the end of the instream construction phase, should the resource agencies so desire. (**NOTE:** Should anomalous conditions be encountered with water and fish present at the time of construction, an appropriate rescue and relocation action will be implemented. Such an action will be in accordance to standard fisheries methods and will be specified in the CDFG LSAA.)

It will be necessary to dig pilings to a depth of approximately 35 feet for the new bridge. If the spoils from this operation contain a desirable quality and quantity of spawning-grade gravels, resource agencies may request staging of these spoils in-channel to enhance gravel recruitment, hence, providing mitigation by increasing recruitment of favorable spawning materials near the site and, ultimately, to locations downstream.

- **General Habitat Issues**

There will also be loss of some loss of oak trees as a result of the road realignment, trees located in the woodland habitat within the existing County road right-of-way. The current linear occurrence of these trees is somewhat of an artifact; many of the trees survived to their current age as a result of the protection provided by roadside livestock fencing. This fencing has been in place for many decades, so some of the oaks have attained reasonable maturity within this protected zone.

Both the horizontal and vertical alignment of the road will be smoothed to improve the bridge approach and the visibility at the road intersection with County roads 109 and 110, approximately 600 feet to the east of the bridge. This realignment will necessitate the removal of a number of trees (about half exceeding 6" dbh), primarily live oak and white oak. None of these trees are a listed species, nor do they support known listed species for this area. But these trees do provide habitat value, especially for a variety of bird species.

One specific measure is incorporated as an enhancement to the native habitat at the project site which could be considered as a mitigation. For this enhancement, Mendocino County proposes to retain ownership of the old right-of-way once the old bridge approaches and unneeded roadway sections are abandoned and the existing bridge is removed. This land will then be allowed to naturalize back to an oak woodland/riparian interface. This is a deviation from normal County policy wherein abandoned right-of-way is typically relinquished to the adjacent property owners. As part of the project enhancement/mitigation, the County proposes to remove the asphalt from the abandoned roadway segments (approximately 390 feet in total length by 18 feet wide) and the old concrete bridge abutments, allowing the reclaimed acreage (approximately 1.6 acres) to naturalize back to native habitat. Based on the existing successional pattern for that road segment, this land will repopulate with oaks (live and white), bay-laurel, Toyon, and willow in the vicinity of the reclaimed approaches. This pattern is demonstrated by the vegetational pattern of the current roadside flora.

The newly acquired right-of-way needed to build the improved road alignment runs primarily through active agricultural pastureland. Retaining the reclaimed acreage from the old right-of-way and allowing it to run its natural successional pattern is considered to be a net gain for the natural habitat at the project. A significant number of trees will be saved or allowed to propagate as a result of removing abandoned road elements from this retained right-of-way acreage. This is a very positive mitigation for the small amount of vegetation being lost by moving the road alignment to the new location.

- **Riparian Habitat**

The subsurface flow associated with the perennial creek supports a significant riparian corridor that repropagates rapidly when disturbed. The larger footprint of the new bridge compared with the existing bridge will result in the permanent loss of approximately 22 linear feet of riparian habitat. This is not considered significant to listed salmonids since the stream reach at the project site demonstrates other constraints (imbeddedness and high temperatures) that preclude its utilization by these species for spawning and rearing. Also, the new bridge structure itself will provide significantly more shading than that lost to removal of streamside vegetation. Construction activities will cause minor and short-term disruption to streamside riparian vegetation, but this is expected to recover rapidly due to the presence of the perennial subsurface flow. Once construction is completed, any remaining soil disturbance will be reshaped, then protected from erosion by utilizing standard BMPs. This will allow disturbed areas to revert to pre-existing vegetation in subsequent years.

Some riparian vegetation will be affected by construction, but design specifications call for impact minimization by protecting all trees greater than 6 inches dbh, to the extent possible, and by avoiding as much riparian vegetation as possible, removing only understory as needed, and removing only the minimum number of trees, should that become necessary.

It will be necessary to move trucks and equipment in and out of the stream channel by traversing the riparian corridor at the creek's margin. To minimize impacts, it may be possible to use a historic road built during construction of the existing bridge or one of the existing roads from an adjacent agricultural fields where access was created for pump installation or other purposes. Regardless of route chosen, the spacing of existing mature riparian trees is such that it is likely that a temporary access route can be constructed without removal of any larger trees; it should be possible to create an access road by removal of mostly understory and relatively minor grading to drop onto the gravel substrate of the creek channel below. This will result in minimal and short-term disruption of any shading effects. Disturbed streambank soils will be treated with standard erosion control BMPs to prevent soil loss as natural revegetation occurs. The rapid vegetative growth characteristic of this creekside habitat should ensure functional recovery within one or two growing seasons. Grading can be kept to a minimum due to the short distance from the bank to the streambed below. Also, new equipment is capable of climbing steeper grades than in years past, minimizing the need for an extensive road cut. If any significant loss of trees or larger understory occurs, replanting will be done with appropriate native species. In most cases, though, natural revegetation along perennial streams (even with intermittent summer flows) is rapid enough and with sufficient species complexity that simple erosion control during the first year should be adequate.

- **Movement of Migratory Fish and Wildlife/Wildlife Corridors**

The stream corridor supports a relatively lush wooded riparian comprised primarily of maturing and senescent oak, alder, and willow. Bay-laurel, Toyon, and wild grape also add to the complexity of the riparian habitat. Given the maturity of the riparian vegetation coupled with the somewhat open aspect of the stream corridor, this habitat is likely important to wildlife species as well as fish, especially those that frequent or migrate along the corridor such as deer, raccoons, mink, opossum, fox, and bobcat. Seasonally when flows are low or intermittent, some of the movement is likely to occur directly in the stream channel.

The creek channel provides a migration corridor for both adult and juvenile salmonids from winter through late spring. During the proposed construction window of late summer, flows are lacking or

subsurface and impairment of fish migration is not a construction issue. Birds and mammals also use the corridor, possibly more during summer months when construction will occur. Much of their activity, though, occurs at night and should not be significantly affected by the construction. Diurnal feeding activity by birds over the corridor was not evident late in summer, presumably correlated to the end of the nesting season and the lack of active streamflow in the creek. Any impacts that might occur to the corridor are considered insignificant and will cease to be an issue once construction is complete.

*(The following constraints and protections are considered unlikely at this site, but may pertain if anomalous flow conditions exist during the construction season. The anomalous flow condition of concern would be if there is still surface streamflow in the channel at the time when in-channel construction must occur, i.e. after July 15.)*

### **General Measures to Minimize Impacts to Aquatic Habitat and Species during Dewatering of Project Site:**

The breeding period of sensitive amphibians potentially impacted by the in-channel work extends from April to August; however, creek flows are significantly diminished by July, leaving the channel with isolated pools and minimal surface flow. Potential impacts to sensitive amphibians and to fisheries resources should be significantly diminished if work is limited to mid-summer through fall construction season previously defined as July 15<sup>th</sup> to October 15<sup>th</sup>.

When construction work must occur within a perennial flowing channel or intermittent pools, the work site must be dewatered. Dewatering can result in the temporary loss of aquatic habitat, or the stranding, displacement, or crushing of fish and amphibian species. Increased turbidity may occur from disturbance of the channel bed. Generally, if the project activities are conducted according to the principles below, impacts may be sufficiently minimized.

- Prior to dewatering and on a site-specific basis, determine the best means to bypass flow through work area to minimize disturbance to channel flow while avoiding direct mortality of fish and other aquatic organisms.
- Coordinate project site dewatering with a fisheries biologist qualified to perform fish rescue and relocation activities.
- Minimize the length of dewatered stream channel and duration of dewatering.
- Bypass stream flow around work area, but maintain stream flow to channel below construction site. Streamflow must be altered without any significant disruption in quantity or quality since even a short-term lapse of flows can result in significant mortality to the aquatic organisms downstream.
- Utilize energy dissipaters at flow bypass outlets to safeguard against instream erosion and resulting turbidity increases.
- When installing bridges or open-bottom arches set on concrete footings, the work area must be periodically pumped to prevent the accumulation of seepage. If using gas-powered pumps,

place units in flat areas, well away from the stream channel. Secure pumps by tying off to a tree, or stake them in place to prevent movement by vibration. Refuel in area well away from stream channel and place fuel absorbent mats under pump while refueling. Pump intakes should be covered with 3/32" mesh to prevent entrainment of fish or amphibians. Screen cages will need to be of adequate size to prevent flows through-flows from exceeding approximately 1/3 foot per second. Check intake periodically for accumulation of leaves, algae, or other debris which could increase through-screen velocities, resulting in impingement of fish or amphibians.

- Discharge wastewater from the construction area to an upland location where it will not drain sediment-laden water back to stream channel. It may be necessary to process this discharge with sediment containment devices such as straw bale barriers, filter fabric, or waddles.
- Utilize sediment-control BMPs such as a silt sacks with straw bail barrier underlain with filter fabric or other suitable methods to filter sediment laden construction site waters before discharging.

### **General Measures to Minimize Injury and Mortality of Fish, Reptiles, and Amphibian Species during Dewatering:**

There are two federally listed salmonid species potentially in the vicinity of the project (Chinook salmon and steelhead). Adults of either species could be present during the winter months, but only juvenile steelhead have the potential of being present during the proposed summer construction season. The only chance for young steelhead to be present is if the channel maintains a summer flow, say, following an extremely wet spring. In this scenario, the young might survive if higher than normal flows result in persistent pools near the work zone. Typically, intermittent flows in this stream reach leave the proposed construction zone dewatered in August and September.

Central California coast steelhead (*Oncorhynchus mykiss*) and California Coastal Chinook salmon (*Oncorhynchus tshawytscha*) are both potentially present in Feliz Creek though the scheduled time for construction at this site does not overlap with the presence of adults or juveniles of either species. Since construction is to occur in late summer, the only species of concern is the steelhead because their juveniles have the potential to be present during the summer months following a very wet spring. Presence or absence of juvenile steelhead is dependent on streamflows and water temperatures, and may vary from summer to summer. Given the historical flow record for the site as well as historical photos, it is assumed that the presence of juvenile steelhead is highly unlikely. Precautions and enhancements have been incorporated into the project design and construction schedule for the protection and benefit of the juvenile steelhead, other aquatic organisms, and associated habitat present at the site. Protection measures include:

- Avoidance of impacts to listed salmonid fishes is incorporated into the project design by constructing the project when fish are not present. In-channel construction activity will be confined late summer/early fall when flows have historically been intermittent or subsurface.
- During the late summer, heavy equipment should be able work on the dry, embedded gravel substrate without risk to fishes or other aquatic organisms. This substrate appears extremely solid and likely will not show significant disturbance during construction.
- If rutting or mounding occurs, the surface can be graded and re-contoured once work is complete.

- If the substrate cannot properly support the construction equipment, it may be necessary to import appropriate crushed rock as a work surface. This material can then be removed at the end of the instream construction phase, should the resource agencies so desire.
- Yellow-legged frog, western pond turtle, non-salmonid fishes, and other aquatic and semi-aquatic species would also be expected to be present at this site. The protections noted for the listed salmonids would also be appropriate and suitable for protection of these other aquatic species.
- (**NOTE:** Should anomalous conditions be encountered with water, fish, and other aquatic species present at the time of construction, an appropriate rescue and relocation action will be implemented. Such an action will be in accordance to standard fisheries methods and will be specified in the CDFG LSAA.)

### **General Measures to Minimize Impacts to Birds during Bridge Construction:**

The Area of Potential Effect (APE) for the project includes the sites of the existing and the replacement bridges, relatively close to each other, spanning the creek channel and intercepting the mature riparian corridor adjacent to the creek. There are also areas away from the creek and riparian corridor where road alignments will be modified as they approach the bridge. These areas are in an oak/grassland community and involve a significant number of trees and shrubs of various species and sizes. Both the riparian and the oak/grassland represent important native bird habitats that will be impacted at one level or another. Potential impacts include removal of vegetation, especially the larger trees. Additionally, noise and general increase in activity will disrupt the natural cycle of the birds during construction. The goal is to minimize the impacts.

The project will require the removal of a number of trees and shrubs. Since this vegetation is important nesting and foraging habitat, many of the birds residing there are covered under the Migratory Bird Treaty Act (1918). Protections for these birds are incorporated into various provisions enforced by the U.S. Fish and Wildlife Service and California Department of Fish and Game, and are implicit in the intent of the CEQA process. The most common requirement for protection of these bird species, as expressed in various permits, is to protect birds, nests, and nesting sites during the nesting and fledging season. To this end:

- Any tree and vegetation removal will be conducted outside of the nesting season (April 15 – August 15).
- The fact that this project will occur on a frequently used roadway and near vineyards with frequent tractor use makes it unlikely that the additional noise or activity will disturb local birds that are outside the APE since birds in the vicinity have long since habituated to the presence of humans, equipment, and vehicles near this site.
- Aside from the avoidance measures already discussed, one specific measure is incorporated as an enhancement to the native habitat at the project site. For this enhancement, Mendocino County proposes to retain ownership of the old right-of-way once the old bridge approaches and roadway sections are abandoned and the existing bridge is removed. This land will then be allowed to naturalize back to an oak woodland/riparian interface. The County proposes to

remove the asphalt from the abandoned roadway segments and the old concrete bridge abutments, allowing the reclaimed acreage (approximately 1.6 acres) to naturalize back to oaks (live and white), bay-laurel, Toyon, willow, and associated understory. Retaining the reclaimed acreage from the old right-of-way and allowing it to run its natural successional pattern is considered to be a net gain for the natural habitat at the project. This is a very positive mitigation for the small amount of vegetation being lost due to road realignment and will represent a significant habitat expansion in future years.

### **Section III B. Hydrology and Water Quality**

Portions of the project will involve instream work that will require 401 Water Quality Certification through the Regional Water Quality Control Board. The 401 process, along with implementation of Best Management Practices (BMPs), will help to ensure that the project complies with water quality standards and meets any conditions imposed under the permit. Similarly, the project will be subject to the NPDES Construction General Permit requirements (in effect July 1, 2010), therefore, it will be subject to protections and monitoring under that statute. As a result, it will be specified in the project bid package and on the plan specifications that the contractor awarded the project shall be responsible to meet the NPDES requirements, either directly or by providing the services of a NPDES-qualified consultant.

It is proposed that construction equipment will access the river channel during the summer dry period to dig pilings for the new bridge, but all in-channel work will be done when there is a high probability that the majority of the streambed will be dry and that work can occur on the hard gravel substrate present at the site. As a result, no sediment or contaminants will be released into the creek and work can proceed in a most expeditious manner. All areas of the streambank disturbed while accessing the stream channel will be treated with agency-approved Best Management Practices (BMPs) as construction is completed or prior to the onset of fall storms. As a result, no significant sediment inputs or losses of topsoil are anticipated.

Once the new bridge is complete, the old bridge pilings and abutments will be removed. This demolition phase may also be facilitated by some in-channel work. Concrete rubble will be recycled at a permitted facility or otherwise approved location off-site. The existing rock slope protection (RSP) on the east bank under the old bridge (estimated at approximately 60 cu. yds. or less) will be used in conjunction with the new abutments. Additional new material will likely also be used. The remaining exposed bank will be erosion protected with appropriate BMPs, protecting it from erosion as natural revegetation occurs.

#### **General Measures to Minimize Degradation of Water Quality from Instream Construction Activities:**

- Construction should generally occur between July 15th and October 15th. Construct during the dry season if the channel is seasonally dry. This construction season may be extended or initiated sooner if warranted by low flow conditions and approved by permitting agencies.
- If water is present, prevent any construction debris from falling into the stream channel. Any material that does fall into a stream during construction should be immediately removed in a manner that has minimum impact to the streambed and water quality.

- If there is no flow during construction, remove all construction debris at the end of the project or prior to the onset of autumn rains (October 15th), whichever occurs first.
- Where feasible, the construction shall occur from the bank, or on a temporary pad underlain with filter fabric, or other suitable methodology to protect plants and root structures from being damaged, then removed when no longer needed.
- Temporary fill should be removed in its entirety prior to October 15th, unless otherwise authorized by the appropriate permitting agencies.

### **General Measures to Minimize Degradation of Water Quality from Vehicle Fluids and Chemicals:**

- Areas for fuel storage, refueling, and servicing of construction equipment shall be located in an upland location, isolating them from possibility of river inundation during high-water events.
- Prior to use, all equipment should be cleaned to remove external oil, grease, dirt, or mud. Wash sites should be located in upland locations so that dirty wash water does not flow into stream channel or wetlands.
- All construction equipment should be in good working condition showing no signs of fuel, oil, or hydraulic/brake fluid leaks.
- Petroleum products, fresh cement, or deleterious materials should not enter the stream channel.
- Operators should have spill clean-up supplies on site and be knowledgeable in their proper use and deployment.
- In the event of a fluid or chemical spill, operators should immediately cease work, start clean-up, and notify the appropriate authorities.

### **General Measures to Minimize Degradation of Water Quality from Soil Erosion:**

- Isolate the construction area from flowing water until project materials are installed and erosion protection is in place.
- Erosion control measures should be in-place at all times during construction. Do not start construction until all temporary control devices (straw bales, silt fences, etc.) are in place downslope or downstream of project site.
- Maintain a supply of erosion control materials onsite so that crews can quickly respond to unanticipated storm events or emergencies.
- Minimize temporary stockpiling of excavated material by maximizing the use of end-hauling.
- Use erosion controls to protect and stabilize stockpiles and exposed soils to prevent movement of materials. Use methods such as plastic sheeting held down with rocks or sandbags to cover stockpiles; install silt fences at critical downslope locations; and/or construct berms of hay bales to minimize movement of exposed or stockpiled soils.

- Stockpile excavated materials in areas where it cannot enter the stream channel. Prior to start of construction, determine if such sites are available at or near the project location. If unavailable, determine alternate locations where end-hauled material will be deposited. If feasible, conserve topsoil for reuse at project location or use in other suitable restoration areas.
- When needed, utilize in-stream grade control structures to minimize channel scour, sediment routing, and headwall cutting.
- Immediately after project completion and before October 15<sup>th</sup>, stabilize all exposed soil with mulch, seeding, and/or placement of erosion control blankets.
- If project construction continues after October 15<sup>th</sup>, disturbed soils should not be left exposed overnight. Contractors should obtain daily weather forecasts and be prepared to cease work and stabilize construction site prior to forecasted storms.

## *Section IV – Determination*

On the basis of this initial evaluation, it has been determined that:

Although the project, as proposed, could have had a significant effect on the environment, there will not be a significant effect in this case because environmental mitigation and enhancement measures proposed with the project will reduce potentially significant effects to a less than significant level, therefore, it is recommended that a MITIGATED NEGATIVE DECLARATION be adopted.

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