

FOR CONTRACT NO.: 01-474804

# **INFORMATION HANDOUT**

## **ARMY CORPS OF ENGINEERS**

NATIONWIDE PERMIT 14 U S ARMY CORPS OF ENGINEERS  
SACRAMENTO DISTRICT

## **WATER QUALITY**

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
NORTH COAST REGION

WDID No. 1B11031WNME  
401 CERTIFICATION

## **STREAMBED ALTERATION**

STATE OF CALIFORNIA  
DEPARTMENT OF FISH AND GAME

NOTIFICATION NO. 1600-2011-0079-R1  
1602 CERTIFICATION

## **COASTAL DEVELOPMENT STANDARD PERMIT**

CDP# 36-2010

## **GROUND PENETRATING RADAR SURVEY REPORT**

## **DRAINAGE REPORT**

## **OPTIONAL DISPOSAL SITE**

DISPOSAL AGREEMENT NO. 201028-BEACON

**ROUTE: 01-Men-1-38.5/38.9**

**ARMY CORPS OF ENGINEERS**

NATIONWIDE PERMIT 14 U S ARMY CORPS OF ENGINEERS  
SACRAMENTO DISTRICT



**DEPARTMENT OF THE ARMY**  
SAN FRANCISCO DISTRICT, U.S. ARMY CORPS OF ENGINEERS  
1455 MARKET STREET  
SAN FRANCISCO, CALIFORNIA 94103-1398

**MAR 23 2011**

Regulatory Division

SUBJECT: File Number SPN-2010-00384 N

Mr. Michael Cane  
California Department of Transportation, District 1  
703 B Street  
Marysville, California 95901

Dear Mr. Cane:

This letter is written in response to your October 21, 2010, request for Department of the Army authorization for the Navarro Bluffs Realignment Project. The project is located between Post Mile 38.38 and 38.92 on Highway 1 in Mendocino County, California.

Multiple slides over time have resulted in roadway failure along this segment of Highway 1. The proposed project would realign the highway farther inland to minimize the effect of slides on the roadway to prevent future lane and roadway closures along this segment. The project would realign the roadway to the east up to approximately 100 feet. The new alignment would include 12-foot lanes and 4-foot shoulders with maximum cut and fill slopes of approximately 3:1. The existing roadway will be removed and vegetation planted. New culverts will be required and some utilities will need to be relocated. Portions of the old road bed will be excavated and used to create on-site seasonal wetland and riparian wetland mitigation.

Based on a review of the information you submitted and an inspection of the project site conducted by Corps personnel on February 18, 2011, your project qualifies for authorization under Department of the Army Nationwide Permit 14 – “Linear Transportation Projects” (72 Fed. Reg. 11092, March 12, 2007), pursuant to Section 404 of the Clean Water Act (33 U.S.C. Section 1344). See Enclosure 1. All work shall be completed in accordance with the following plans and drawings (see Enclosure 4): “Navarro Bluffs Re-Alignment Project Drawing”, “Navarro Bluff Re-Alignment Project Impact Map”, and the “Navarro Bluff On-Site Mitigation Plan Drawing”, dated March 17, 2011.

The project must be in compliance with the General Conditions cited in Enclosure 2 for this Nationwide Permit authorization to remain valid. Non-compliance with any condition could result in the suspension, modification or revocation of the authorization for your project, thereby requiring you to obtain an Individual Permit from the Corps. This Nationwide Permit authorization does not obviate the need to obtain other State or local approvals required by law.

This verification is valid until the NWP is modified, reissued, or revoked. All of the existing NWPs are scheduled to be modified, reissued, or revoked prior to March 18, 2012. It is incumbent upon you to remain informed of changes to the NWPs. We will issue a public notice when the NWPs are reissued. Furthermore, if you commence or are under contract to commence this activity before the date that the relevant nationwide permit is modified or revoked, you will have twelve months from the date of the modification or revocation of the NWP to complete the activity under the present terms and conditions of this nationwide permit. Upon completion of the project and all associated mitigation requirements, you shall sign and return the Certification of Compliance, Enclosure 3, verifying that you have complied with the terms and conditions of the permit.

This authorization will not be effective until you have obtained a Section 401 water quality certification from the North Coast Regional Water Quality Control Board (RWQCB). If the RWQCB fails to act on a valid request for certification within two months after receipt of a complete application, the Corps will presume a waiver of water quality certification has been obtained. You shall submit a copy of the certification to the Corps prior to the commencement of work.

To ensure compliance with this Nationwide Permit authorization, the following special conditions shall be implemented:

1. To compensate for the loss of 0.0886 acres of seasonal wetlands and riparian wetlands and 0.0051 acres of other waters of the U.S., you shall create and restore 0.2544 acres of willow riparian wetland and seasonal wetland within the Caltrans right-of-way within the project area. Mitigation work shall be done in accordance with the "Waters of the United States, Habitat Mitigation and monitoring Plan for the California Department of Transportation's Navarro Bluff Re-Alignment Project" (plan) dated October 2010, and the "Navarro Bluff On-Site Mitigation Plan Drawing", dated March 17, 2011.
2. The compensatory mitigation required by special condition #1 shall be constructed within one year of the old road bed being abandoned.

3. The site shall be deemed successful the site supports 0.2544 acres of seasonal and riparian wetlands. Target riparian and seasonal wetland species include Hooker's willow (*Salix hookeriana*), wax myrtle (*Myrica californica*), slough sedge (*Carex obnupta*), mugwort (*Artemisia douglasiana*), toad rush (*Juncus patens*), and small-flowered bulrush (*Scirpus microcarpus*).
4. The mitigation site shall be monitored for a period of 5 years or until the final success criteria are met. Your responsibility to complete the required compensatory mitigation as set forth in special condition 1 will not be considered fulfilled until you have demonstrated mitigation success and have received written verification from the U.S. Army Corps of Engineers.
5. Environmentally sensitive areas shall be clearly delineated on the construction plans and demarcated in the field with high-visibility fencing prior to commencement of construction activities. ESA fencing shall be properly maintained throughout the duration of the project. The ESA shall be off limits to construction activity and personnel at all times.
6. All project staging and equipment storage areas shall be located away from areas subject to the jurisdiction of the Corps.
7. No debris, oil, petroleum products or other organic material resulting from construction activities shall be allowed to enter or be placed where it may be washed by rainfall or runoff into areas subject to the jurisdiction of the Corps.
8. Following project construction, disturbed areas including access points, staging and equipment storage areas, etc. shall be returned to pre-project conditions. This shall include, but is not necessarily limited to, grading to establish pre-project contours, and removal of debris.
9. In the event of any unanticipated discoveries of potential cultural/historic resources, you shall immediately halt work in the vicinity of the discovery and contact the appropriate regulatory authorities. You shall complete consultation pursuant to 36 CFR 800 to the satisfaction of the State Historic Preservation Officer prior to resuming work.

Should you have any questions regarding this matter, please call Andrea Meier of our Regulatory Division at (415) 503-6798. Please address all correspondence to the Regulatory Division and refer to the File Number at the head of this letter. If you would like to provide comments on our permit review process, please complete the Customer Survey Form available online at <http://per2.nwp.usace.army.mil/survey.html>.

Sincerely,



Jane M. Hicks  
Chief, Regulatory Division

Enclosures

Copies furnished without enclosures:

US EPA, San Francisco, CA  
US FWS, Sacramento, CA  
US NMFS, Santa Rosa, CA  
CA DFG, Yountville, CA  
CA RWQCB, San Luis Obispo, CA

## Enclosure 1.

### 2007 Nationwide Permits

14. Linear Transportation Projects. Activities required for the construction, expansion, modification, or improvement of linear transportation projects (e.g., roads, highways, railways, trails, airport runways, and taxiways) in waters of the United States. For linear transportation projects in non-tidal waters, the discharge cannot cause the loss of greater than 1/2-acre of waters of the United States. For linear transportation projects in tidal waters, the discharge cannot cause the loss of greater than 1/3-acre of waters of the United States. Any stream channel modification, including bank stabilization, is limited to the minimum necessary to construct or protect the linear transportation project; such modifications must be in the immediate vicinity of the project.

This NWP also authorizes temporary structures, fills, and work necessary to construct the linear transportation project. Appropriate measures must be taken to maintain normal downstream flows and minimize flooding to the maximum extent practicable, when temporary structures, work, and discharges, including cofferdams, are necessary for construction activities, access fills, or dewatering of construction sites. Temporary fills must consist of materials, and be placed in a manner, that will not be eroded by expected high flows. Temporary fills must be removed in their entirety and the affected areas returned to preconstruction elevations. The areas affected by temporary fills must be revegetated, as appropriate.

This NWP cannot be used to authorize non-linear features commonly associated with transportation projects, such as vehicle maintenance or storage buildings, parking lots, train stations, or aircraft hangars.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity if: (1) The loss of waters of the United States exceeds 1/10 acre; or (2) there is a discharge in a special aquatic site, including wetlands. (See general condition 27.) (Sections 10 and 404)

Note: Some discharges for the construction of farm roads or forest roads, or temporary roads for moving mining equipment, may qualify for an exemption under Section 404(f) of the Clean Water Act (see 33 CFR 323.4).

## Enclosure 2. *Nationwide Permit General Conditions*

**Note:** To qualify for NWP authorization, the prospective permittee must comply with the following general conditions, as appropriate, in addition to any regional or case-specific conditions imposed by the division engineer or district engineer. Prospective permittees should contact the appropriate Corps district office to determine if regional conditions have been imposed on an NWP. Prospective permittees should also contact the appropriate Corps district office to determine the status of Clean Water Act Section 401 water quality certification and/or Coastal Zone Management Act consistency for an NWP.

1. *Navigation.* (a) No activity may cause more than a minimal adverse effect on navigation.

(b) Any safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States.

(c) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

2. *Aquatic Life Movements.* No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. Culverts placed in streams must be installed to maintain low flow conditions.

3. *Spawning Areas.* Activities in spawning areas during spawning seasons must be avoided to the

maximum extent practicable. Activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized.

4. *Migratory Bird Breeding Areas.* Activities in waters of the United States that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.

5. *Shellfish Beds.* No activity may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWPs 4 and 48.

6. *Suitable Material.* No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see Section 307 of the Clean Water Act).

7. *Water Supply Intakes.* No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization.

8. *Adverse Effects From Impoundments.* If the activity creates an impoundment of water, adverse effects to the aquatic system due to accelerating the passage of water, and/or restricting its flow must be minimized to the maximum extent practicable.

9. *Management of Water Flows.* To the maximum extent practicable, the preconstruction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization and storm water management activities, except as provided below. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the preconstruction

course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).

10. *Fills Within 100-Year Floodplains.* The activity must comply with applicable FEMA-approved state or local floodplain management requirements.

11. *Equipment.* Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance.

12. *Soil Erosion and Sediment Controls.* Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow.

13. *Removal of Temporary Fills.* Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate.

14. *Proper Maintenance.* Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety.

15. *Wild and Scenic Rivers.* No activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, unless the appropriate Federal agency with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation or study status. Information on Wild and

affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, explaining the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.

**19. Designated Critical Resource Waters.** Critical resource waters include, NOAA-designated marine sanctuaries, National Estuarine Research Reserves, state natural heritage sites, and outstanding national resource waters or other waters officially designated by a state as having particular environmental or ecological significance and identified by the district engineer after notice and opportunity for public comment. The district engineer may also designate additional critical resource waters after notice and opportunity for comment.

(a) Discharges of dredged or fill material into waters of the United States are not authorized by NWP 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, and 50 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters.

(b) For NWPs 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, and 38, notification is required in accordance with general condition 27, for any activity proposed in the designated critical resource waters including wetlands adjacent to those waters. The district engineer may authorize activities under these NWPs only after it is determined that the impacts to the critical resource waters will be no more than minimal.

**20. Mitigation.** The district engineer will consider the following factors when determining appropriate and practicable mitigation necessary to ensure that adverse effects on the aquatic environment are minimal:

(a) The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States to the maximum extent practicable at the project site (i.e., on site).

(b) Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating) will be required to the extent necessary to ensure that the adverse effects to the aquatic environment are minimal.

(c) Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland losses that exceed  $\frac{1}{10}$  acre and require preconstruction notification, unless the

district engineer determines in writing that some other form of mitigation would be more environmentally appropriate and provides a projectspecific waiver of this requirement. For wetland losses of  $\frac{1}{10}$  acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in minimal adverse effects on the aquatic environment.

Since the likelihood of success is greater and the impacts to potentially valuable uplands are reduced, wetland restoration should be the first compensatory mitigation option considered.

(d) For losses of streams or other open waters that require pre-construction notification, the district engineer may require compensatory mitigation, such as stream restoration, to ensure that the activity results in minimal adverse effects on the aquatic environment.

(e) Compensatory mitigation will not be used to increase the acreage losses allowed by the acreage limits of the NWPs. For example, if an NWP has an acreage limit of  $\frac{1}{2}$  acre, it cannot be used to authorize any project resulting in the loss of greater than  $\frac{1}{2}$  acre of waters of the United States, even if compensatory mitigation is provided that replaces or restores some of the lost waters. However, compensatory mitigation can and should be used, as

necessary, to ensure that a project already meeting the established acreage limits also satisfies the minimal impact requirement associated with the NWPs. (f) Compensatory mitigation plans for projects in or near streams or other open waters will normally include a requirement for the establishment, maintenance, and legal protection (e.g., conservation easements) of riparian areas next to open waters. In some cases, riparian areas may be the only compensatory mitigation required. Riparian areas should consist of native species. The width of the required riparian area will address documented water quality or aquatic habitat loss concerns. Normally, the riparian area will be 25 to 50 feet wide on each side of the stream, but the district engineer may require slightly wider riparian areas to address documented water quality or habitat loss concerns. Where both wetlands and open waters exist on the project site, the district engineer will determine the appropriate compensatory mitigation (e.g., riparian areas and/or wetlands compensation) based on what is best for the aquatic environment on a watershed basis. In cases where riparian areas are determined to be the most appropriate form of compensatory mitigation, the district engineer may waive or reduce the requirement to provide wetland compensatory mitigation for wetland losses.

(g) Permittees may propose the use of mitigation banks, in-lieu fee arrangements or separate activityspecific compensatory mitigation. In all cases, the mitigation provisions will specify the party responsible for accomplishing and/or complying with the mitigation plan.

(h) Where certain functions and services of waters of the United States are permanently adversely affected, such as the conversion of a forested or scrub-shrub wetland to a herbaceous wetland in a permanently maintained utility line right-of-way, mitigation may be required to reduce the adverse effects of the project to the minimal level.

**21. Water Quality.** Where States and authorized Tribes, or EPA where applicable, have not previously certified compliance of an NWP with CWA Section 401, individual 401 Water Quality Certification must be obtained or waived (see 33 CFR 330.4(c)). The

determine the need for compensatory mitigation. Sketches should be provided when necessary to show that the activity complies with the terms of the NWP. (Sketches usually clarify the project and when provided result in a quicker decision.);

(4) The PCN must include a delineation of special aquatic sites and other waters of the United States on the project site. Wetland delineations must be prepared in accordance with the current method required by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters of the United States, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many waters of the United States. Furthermore, the 45 day period will not start until the delineation has been submitted to or completed by the Corps, where appropriate;

(5) If the proposed activity will result in the loss of greater than  $\frac{1}{10}$  acre of wetlands and a PCN is required, the prospective permittee must submit a statement describing how the mitigation requirement will be satisfied. As an alternative, the prospective permittee may submit a conceptual or detailed mitigation plan.

(6) If any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, for non-Federal applicants the PCN must include the name(s) of those endangered or threatened species that might be affected by the proposed work or utilize the designated critical habitat that may be affected by the proposed work. Federal applicants must provide documentation demonstrating compliance with the Endangered Species Act; and

(7) For an activity that may affect a historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places, for non-Federal applicants the PCN must state which historic property may be affected by the proposed work or include a vicinity map indicating the location of the historic property. Federal applicants must provide documentation demonstrating compliance with Section 106 of the National Historic Preservation Act.

(c) *Form of Pre-Construction*

*Notification:* The standard individual permit application form (Form ENG 4345) may be used, but the completed application form must clearly indicate that it is a PCN and must include all of the information required in paragraphs (b)(1) through (7) of this general condition. A letter containing the required information may also be used.

(d) *Agency Coordination:* (1) The district engineer will consider any comments from Federal and state agencies concerning the proposed activity's compliance with the terms and conditions of the NWPs and the need for mitigation to reduce the project's adverse environmental effects to a minimal level.

(2) For all NWP 48 activities requiring pre-construction notification and for other NWP activities requiring preconstruction notification to the district engineer that result in the loss of greater than  $\frac{1}{2}$ -acre of waters of the United States, the district engineer will immediately provide (e.g., via facsimile transmission, overnight mail, or other expeditious manner) a copy of the PCN to the appropriate Federal or state offices (U.S. FWS, state natural resource or water quality agency, EPA, State Historic Preservation Officer (SHPO) or Tribal Historic Preservation Office (THPO), and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will then have 10 calendar days from the date the material is transmitted to telephone or fax the district engineer notice that they intend to provide substantive, site-specific comments. If so contacted by an agency, the district engineer will wait an additional 15 calendar days before making a decision on the preconstruction notification. The district engineer will fully consider agency comments received within the specified time frame, but will provide no response to the resource agency, except as provided below. The district engineer will indicate in the administrative record associated with each preconstruction notification that the resource agencies' concerns were considered. For NWP 37, the emergency watershed protection and rehabilitation activity may proceed immediately in cases where there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur. The district engineer will

consider any comments received to decide whether the NWP 37 authorization should be modified, suspended, or revoked in accordance with the procedures at 33 CFR 330.5. (3) In cases of where the prospective permittee is not a Federal agency, the district engineer will provide a response to NMFS within 30 calendar days of receipt of any Essential Fish Habitat conservation recommendations, as required by Section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act. (4) Applicants are encouraged to provide the Corps multiple copies of pre-construction notifications to expedite agency coordination. (5) For NWP 48 activities that require reporting, the district engineer will provide a copy of each report within 10 calendar days of receipt to the appropriate regional office of the NMFS. (e) *District Engineer's Decision:* In reviewing the PCN for the proposed activity, the district engineer will determine whether the activity authorized by the NWP will result in more than minimal individual or cumulative adverse environmental effects or may be contrary to the public interest. If the proposed activity requires a PCN and will result in a loss of greater than  $\frac{1}{10}$  acre of wetlands, the prospective permittee should submit a mitigation proposal with the PCN. Applicants may also propose compensatory mitigation for projects with smaller impacts. The district engineer will consider any proposed compensatory mitigation the applicant has included in the proposal in determining whether the net adverse environmental effects to the aquatic environment of the proposed work are minimal. The compensatory mitigation proposal may be either conceptual or detailed. If the district engineer determines that the activity complies with the terms and conditions of the NWP and that the adverse effects on the aquatic environment are minimal, after considering mitigation, the district engineer will notify the permittee and include any conditions the district engineer deems necessary. The district engineer must approve any compensatory mitigation proposal before the permittee commences work. If the prospective permittee elects to submit a compensatory mitigation plan with the PCN, the district engineer will

**Enclosure 3.**

Permittee: Michael Cane  
California Department of Transportation, District 1  
703 B Street  
Marysville, California 95901

File Number: SPN-2010-00384 N

**Certification of Compliance  
for  
Nationwide Permit**

"I hereby certify that the work authorized by the above referenced File Number and all required mitigation have been completed in accordance with the terms and conditions of this Nationwide Permit authorization."

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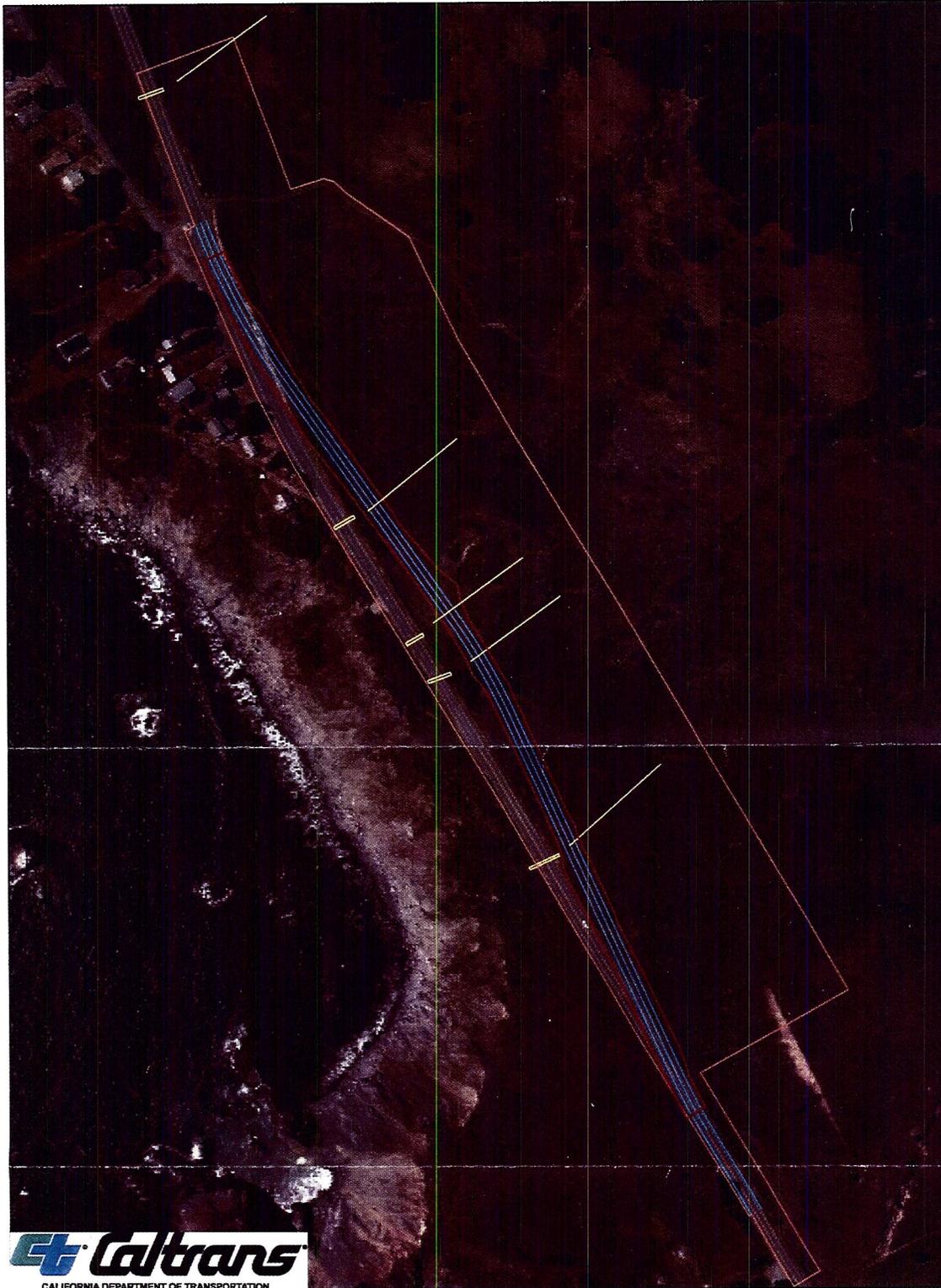
(Permittee)

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(Date)

Return to:

Laurie Monarres  
U.S. Army, Corps of Engineers  
San Francisco District  
Regulatory Division, CESPEN-R  
1455 Market Street  
San Francisco, CA 94103-1398



**Aerial Map**  
**Caltrans Mendocino 1 Coast Highway**  
**Storm Damage Project**  
**EA: 01-474800**

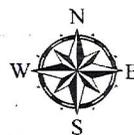
Elk USGS 7.5-Minute Quadrangle  
 At: State Route 1, Post Miles 38.5-38.75  
 County of: Mendocino State of: California

Map Prepared By:  
 Michael Cane, Caltrans Biologist  
 on October 13th, 2010

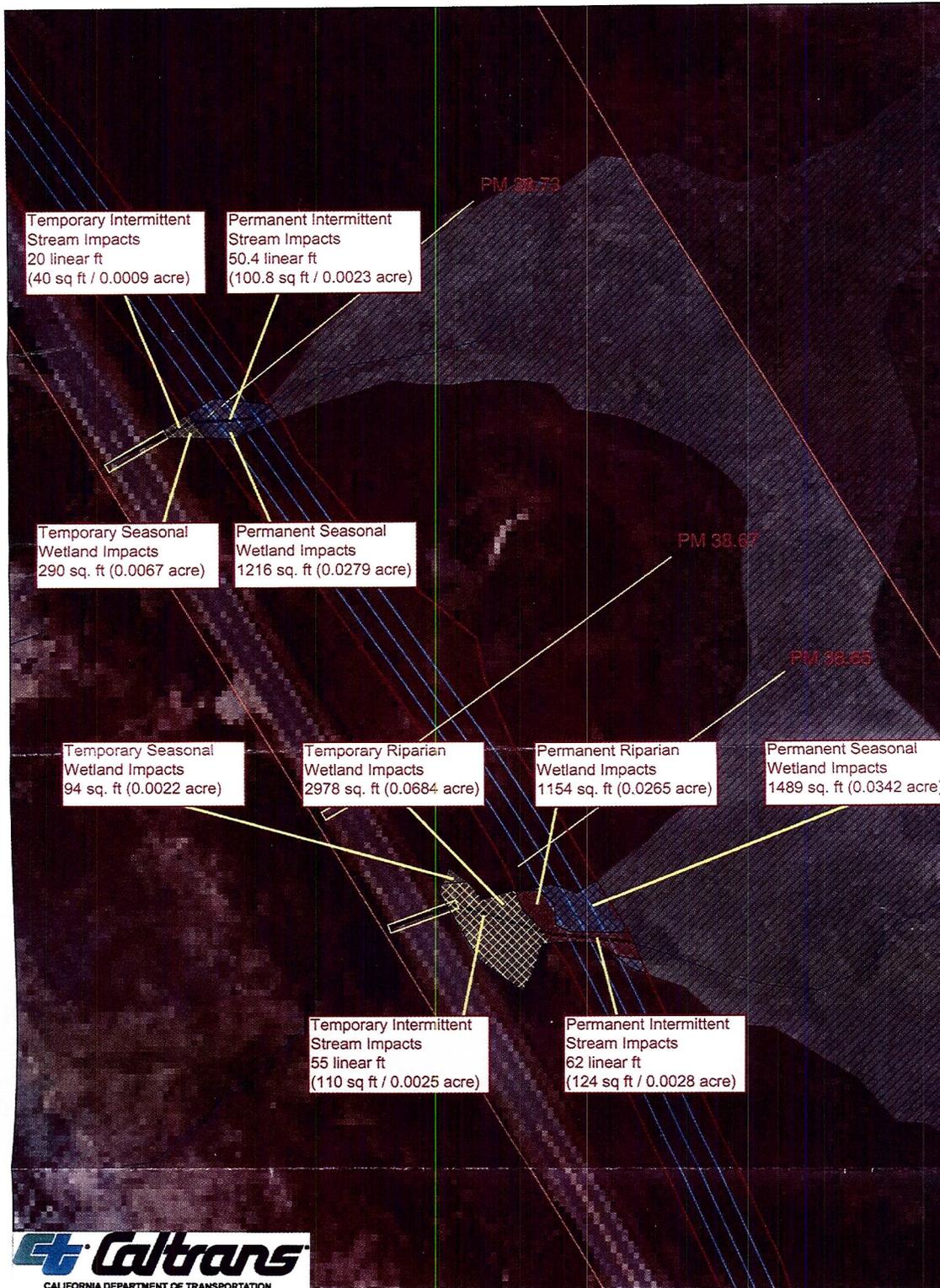


Legend	
	Proposed Alignment
	Cut and Fill
	Study Area
	Culverts

1:2,400  
 1 inch = 200 feet



Navarro Bluff Re-Alignment Project Drawing  
 March 17, 2011



Temporary Intermittent Stream Impacts  
20 linear ft  
(40 sq ft / 0.0009 acre)

Permanent Intermittent Stream Impacts  
50.4 linear ft  
(100.8 sq ft / 0.0023 acre)

Temporary Seasonal Wetland Impacts  
290 sq. ft (0.0067 acre)

Permanent Seasonal Wetland Impacts  
1216 sq. ft (0.0279 acre)

Temporary Seasonal Wetland Impacts  
94 sq. ft (0.0022 acre)

Temporary Riparian Wetland Impacts  
2978 sq. ft (0.0684 acre)

Permanent Riparian Wetland Impacts  
1154 sq. ft (0.0265 acre)

Permanent Seasonal Wetland Impacts  
1489 sq. ft (0.0342 acre)

Temporary Intermittent Stream Impacts  
55 linear ft  
(110 sq ft / 0.0025 acre)

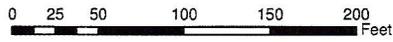
Permanent Intermittent Stream Impacts  
62 linear ft  
(124 sq ft / 0.0028 acre)



**Aerial Map**  
Caltrans Mendocino 1 Coast Highway  
Storm Damage Project  
EA: 01-474800

Elk USGS 7.5-Minute Quadrangle  
At: State Route 1, Post Miles 38.5-38.75  
County of: Mendocino State of: California

Map Prepared By:  
Michael Canc, Caltrans Biologist  
on October 13th, 2010

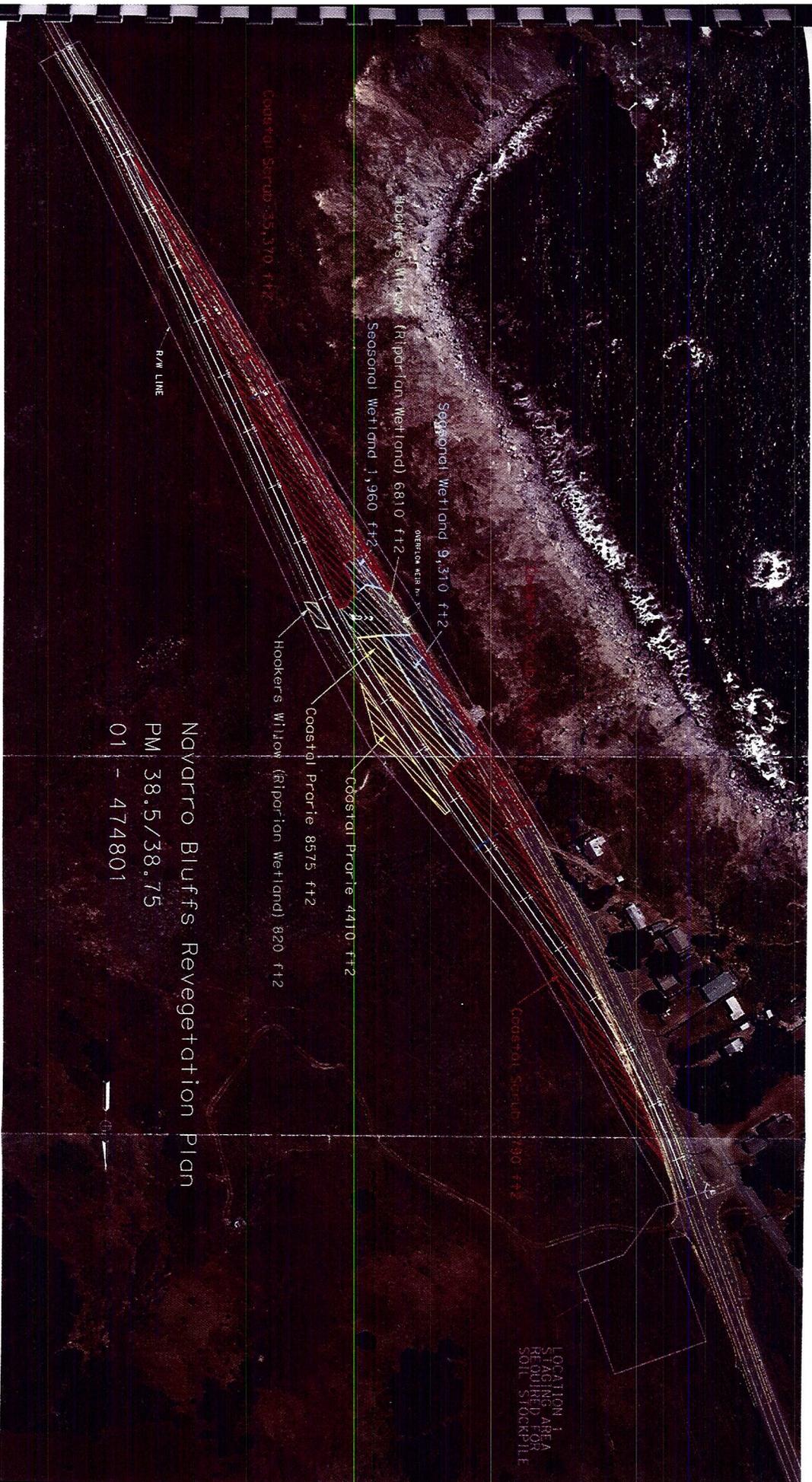


Legend	
	Proposed Alignment
	Cut and Fill
	Study Area
	Culverts
	Streams
	Impacted Streams
	Wetlands
	Permanent Riparian Wetland Impacts
	Temporary Riparian Wetland Impacts
	Temporary Seasonal Wetland Impacts
	Permanent Seasonal Wetland Impacts

1:800  
1 inch = 67 feet



Navarro Bluff Re-Alignment Project Impact Map  
March 17, 2011



Navarro Bluffs Revegetation Plan  
PM 38.5/38.75  
01 - 474801

**WATER QUALITY**

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
NORTH COAST REGION**

WDID No. 1B11031WNME  
401 CERTIFICATION



Linda S. Adams  
Acting Secretary for  
Environmental Protection

**California Regional Water Quality Control Board  
North Coast Region  
Geoffrey M. Hales, Chairman**

www.waterboards.ca.gov/northcoast  
5550 Skylane Boulevard, Suite A, Santa Rosa, California 95403  
Phone: (877) 721-9203 (toll free) • Office: (707) 576-2220 • FAX: (707) 523-0135



Edmund G. Brown, Jr.  
Governor

June 13, 2011

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In the Matter of

**Water Quality Certification**

for the

**California Department of Transportation  
Highway 1 – Navarro Bluffs Retreat Project  
WDID No. 1B11031WNME**

APPLICANT: California Department of Transportation  
RECEIVING WATER: Wetlands and Unnamed Drainages  
HYDROLOGIC AREA: Mendocino Coast Hydrologic Unit No. 113.00  
COUNTY: Mendocino  
FILE NAME: CDOT - HWY 1, Navarro Bluffs Retreat Project

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BY THE EXECUTIVE OFFICER:

1. On March 18, 2011, the North Coast Regional Water Quality Control Board (Regional Water Board) received an application from the California Department of Transportation (Caltrans), requesting Federal Clean Water Act (CWA), section 401, Water Quality Certification for activities related to the proposed Highway 1, Navarro Bluffs Retreat Project (project). Additional project information was received on May 10, 2011. The proposed project will cause disturbances to waters of the United States (U.S.) and waters of the State associated with wetlands and drainages within the Mendocino Coast Hydrologic Unit, No.113.00. The Regional Water Board provided public notice of the application pursuant to title 23, California Code of Regulations, section 3858 on February 9, 2011, and posted information describing the project on the Regional Water Board's website. No comments were received.
2. The proposed project includes three drainage systems (culverts) located in Mendocino County, on Highway 1 from post mile (PM) 38.38 to PM 38.92.

**California Environmental Protection Agency**

Recycled Paper

Caltrans inspections indicate extensive cracking and roadway subsidence. In general, the slope appears to be moving downward and westerly toward the ocean. The purpose of this realignment is to stabilize the roadway by retreating eastward away from the failure area. This project proposes to realign the roadway to the east of the current alignment from 0 to approximately 100 feet. The new alignment will include 12-foot lanes and 4-foot shoulders. The existing roadway, where no longer needed, will be obliterated, removed, regraded and replanted. Drainage work will include installation of new culverts where needed and the removal of existing culverts and restoration of existing drainage as part of the decommissioning of the existing roadway. Rock slope protection at the new culvert outlets will be installed as needed. Existing utilities will be relocated as needed. Existing fencing of adjoining properties will be replaced by new fencing along new right of way.

3. Caltrans has determined that total project permanent impacts to streams identified as waters of the U.S. and State will be approximately 0.0051 acres (225 feet<sup>2</sup>, 113 linear feet). The temporary project impacts to streams identified as waters of the U.S. and State will be approximately 0.0034 acres (150 feet<sup>2</sup>, 75 linear feet). In addition, the project will result in a temporary impact to wetlands of 0.077 acres (3,362 feet<sup>2</sup>) and a permanent impact to wetlands of 0.089 acres (3,859 feet<sup>2</sup>).
4. The project will result in a net increase of impervious surface area of approximately 0.5 acres. On-site storm water treatment controls will primarily include two bioswales located adjacent to the east side of the highway. The bio-swales are designed to improve water quality by treating storm water runoff from approximately 0.8 acres of impervious surface along the highway prior to its discharge into waters of the State.
5. As mitigation to compensate for impacts associated with this project, Caltrans proposes on-site revegetation following construction for all temporary impacts. In addition, the project will create 0.1732 acres (7,544 feet<sup>2</sup>) of wetlands and restore 0.0102 acres (444 feet<sup>2</sup>) of stream channel habitat. The mitigation project will be conducted in accordance with the Caltrans-Prepared *Waters of the United States Habitat Mitigation and Monitoring Plan for the California Department of Transportation's Navarro Bluff Re-Alignment Project*, received March 18, 2011.
6. Project activities are anticipated to take 200 days to complete and construction will be conducted in the wet season; however, work in the drainages will only be conducted in the dry season between May 15 and October 15. Caltrans' contractor will be required to implement Best Management Practices (BMPs) for construction and post-construction phases of the project to provide erosion and sediment control and pollution prevention throughout the project area. All graded areas within the project affected by the construction activities will be appropriately

stabilized and BMPs will be implemented to ensure erosion is minimized and controlled.

7. Caltrans has applied for authorization from the United States Army Corps of Engineers to perform the project under their Nationwide Permits No. 14 (linear transportation projects) pursuant to Clean Water Act, section 404. In addition, Caltrans has applied for a 1602 Lake and Streambed Alteration Agreement from the California Department of Fish and Game and a Coastal Development Permit from the County of Mendocino. In order to comply with the California Environmental Quality Act, Caltrans certified a Focused Initial Study with Mitigated Negative Declaration in January, 2009 (State Clearing House No. 2008102096). The Regional Water Board has considered the environmental documents and any proposed changes incorporated into the project or required as a condition of approval to avoid significant effects to the environment.
8. To ensure compliance with sediment, temperature and other related Water Quality Objectives within the Basin Plan, adequate wetland and riparian protection and stringent requirements to avoid, minimize, and mitigate the sediment and temperature impacts associated with the proposed project will be incorporated as enforceable conditions of this Water Quality Certification. In addition, Caltrans will be required to conduct surface water monitoring, sampling, and analysis in accordance with the conditions of the Water Quality Certification. Additionally, storm water runoff monitoring, sampling, and analysis will be conducted as required by the State Water Resources Control Board (SWRCB) National Pollutant Discharge Elimination System (NPDES) Permit for Storm Water Discharges from the State of California, Department of Transportation (Caltrans) Properties, Facilities and Activities Order No. 99 – 06 - DWQ. The surface water data collected will be utilized to assess the adequacy of BMPs during construction as well as site specific mitigation measures proposed to minimize impacts to the environment, including sediment and temperature impacts.
9. The federal antidegradation policy requires that state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings. The Regional Water Board's Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies. This Order is consistent with applicable federal and State antidegradation policies, as it does not authorize the discharge of increased concentrations of pollutants or increased volumes of treated wastewater, and does not otherwise authorize degradation of the waters affected by this project.

Receiving Waters: Wetlands and Unnamed Drainages  
Mendocino Coast Hydrologic Unit No. 113.00

Filled or Excavated Areas: Permanent – streams: 0.0051 acres (225 feet<sup>2</sup>)  
Permanent - wetlands: 0.089 acres (3,859 feet<sup>2</sup>)

Temporary – streams: 0.0034 acres (150 feet<sup>2</sup>)  
Temporary – wetlands: 0.077 acres (3,362 feet<sup>2</sup>)

Total Linear Impacts: Permanent - streams: 113 linear ft  
Temporary - streams: 75 linear ft

Dredge Volume : None

Latitude/Longitude: 39.1049 N / 123.4508 W

ACCORDINGLY, BASED ON ITS INDEPENDENT REVIEW OF THE RECORD, THE REGIONAL WATER BOARD CERTIFIES THAT THE CALTRANS HIGHWAY 1 NAVARRO BLUFFS RETREAT PROJECT (FACILITY NO. 1B11031WNME), as described in the application will comply with sections 301, 302, 303, 306 and 307 of the Clean Water Act, and with applicable provisions of state law, provided that the Caltrans complies with the following terms and conditions:

**All conditions of this order apply to Caltrans (and all its employees) and all contractors (and their employees), sub-contractors (and their employees), and any other entity or agency that performs activities or work on the project (including the off-site mitigation lands) as related to this Water Quality Certification.**

1. This certification action is subject to modification or revocation upon administrative or judicial review; including review and amendment pursuant to Water Code section 13330 and title 23, California Code of Regulations, section 3867.
2. This certification action is not intended and shall not be construed to apply to any discharge from any activity involving a hydroelectric facility requiring a Federal Energy Regulatory Commission (FERC) license or an amendment to a FERC license unless the pertinent certification application was filed pursuant to title 23, California Code of Regulations, section 3855, subdivision (b) and the application specifically identified that a FERC license or amendment to a FERC license for a hydroelectric facility was being sought.

3. The validity this certification is conditioned upon total payment of any fee required under title 23, California Code of Regulations, section 3833, and owed by the applicant.
4. Except as may be modified by any preceding conditions, all certification actions are contingent on: a) the discharge being limited, and all proposed revegetation, avoidance, minimization, and mitigation measures being completed, in strict compliance with the applicant's project description and CEQA documentation, as approved herein, and b) compliance with all applicable water quality requirements and water quality control plans including the requirements of the Basin Plan, and amendments thereto.
5. All conditions required by this Order shall be included in the Plans and Specifications prepared by Caltrans for the Contractor. In addition, Caltrans shall require compliance with all conditions included in this Order in the bid contract for this project.
6. Caltrans shall construct the project in accordance with the project described in the application and the findings above, and shall comply with all applicable water quality standards as detailed in the Basin Plan.
7. Any change in the design or implementation of the project that would have a significant or material effect on the findings, conclusions, or conditions of this Order must be submitted to the Executive Officer of the Regional Water Board for prior review, consideration, and written concurrence.
8. Caltrans shall provide a copy of this Order and State Water Resources Control Board (SWRCB) Order No. 2003-0017-DWQ to the contractor, all subcontractors, and all utility companies conducting the work, and require that copies remain in their possession at the work site. Caltrans shall be responsible for work conducted by its contractor, subcontractors, or utility companies.
9. The Regional Water Board shall be notified in writing each year at least five working days (working days are Monday – Friday) prior to the commencement of channel, vegetation or ground disturbing activities, dewatering activities, or water diversion activities with details regarding the construction schedule, in order to allow Regional Water Board staff to be present on-site during installation and removal activities, and to answer any public inquiries that may arise regarding the project. Caltrans shall provide Regional Water Board staff access to the project site to document compliance with this order.
10. The Resident Engineer (or appropriately authorized agent) shall hold on-site water quality permit compliance meetings (similar to tailgate safety meetings) to discuss

permit compliance, including instructions on how to avoid violations and procedures for reporting violations. The meetings shall be held at least every other week, before forecasted storm events, and when a new contractor or subcontractor arrives to begin work at the site. The contractors, subcontractors and their employees, as well as any inspectors or monitors assigned to the project, shall be present at the meetings. Caltrans shall maintain dated sign-in sheets for attendees at these meetings, and shall make them available to the Regional Water Board on request.

11. All activities and best management practices (BMPs) shall be implemented according to the submitted application and the conditions in this certification. BMPs for erosion, sediment, turbidity and pollutant control shall be implemented and in place at commencement of, during, and after any ground clearing activities, construction activities, or any other project activities that could result in erosion, sediment, or other pollutant discharges to waters of the State. The BMPs shall be implemented in accordance with the Caltrans Construction Site Best Management Practice Manual (CCSBMPM) and all contractors and subcontractors shall comply with the CCSBMPM. In addition, BMPs for erosion and sediment control shall be utilized year round, regardless of season or time of year. Caltrans shall stage erosion and sediment control materials at the work site. All BMPs shall be installed properly and in accordance with the manufacturer's specifications. If the project Resident Engineer elects to install alternative BMPs for use on the project, Caltrans shall submit a proposal to Regional Water Board staff for review and concurrence.
12. Caltrans shall prioritize the use of wildlife-friendly biodegradable (not photo-degradable) erosion control products wherever feasible. Caltrans shall not use or allow the use of erosion control products that contain synthetic netting for permanent erosion control (i.e. erosion control materials to be left in place for two years or after the completion date of the project). If Caltrans finds that erosion control netting or products have entrapped or harmed wildlife, personnel shall remove the netting or product and replace it with wildlife-friendly biodegradable products. Caltrans shall not use or allow the use of erosion control products that contain synthetic materials within waters of the United States or waters of the State at any time. Caltrans shall request approval from the Regional Water Board if an exception from this requirement is needed for a specific location.
13. Work in flowing or standing surface waters, unless otherwise proposed in the project description and approved by the Regional Water Board, is prohibited. If construction dewatering of groundwater is found to be necessary, Caltrans shall use a method of water disposal other than disposal to surface waters (such as land disposal) or Caltrans shall apply for coverage under the Low Threat Discharge Permit or an individual National Pollutant Discharge Elimination System (NPDES)

Permit and receive notification of coverage to discharge to surface waters, prior to the discharge.

14. Caltrans is prohibited from discharging waste to waters of the State, unless explicitly authorized by this Order. For example, no debris, soil, silt, sand, bark, slash, sawdust, rubbish, cement or concrete or concrete washings, welding slag, oil or petroleum products, pesticides, herbicides, fertilizers or other organic or earthen material from any construction or associated activity of whatever nature, other than that authorized by this Order, shall be allowed to enter into waters of the State. In addition, none of the materials listed above shall be placed within 150 linear feet of waters of the State or where the materials may be washed by rainfall into waters of the State.
15. If, at any time, an unauthorized discharge to surface water (including wetlands, rivers or streams) occurs, or any water quality problem arises, the associated project activities shall cease immediately until adequate BMPs are implemented. The Regional Water Board shall be notified promptly and in no case more than 24 hours after the unauthorized discharge or water quality problem arises.
16. Caltrans and their contractor are not authorized to discharge wastewater (e.g., water that has contacted uncured concrete or cement, or asphalt) to surface waters, ground waters, or land. Wastewater may only be disposed of to a sanitary waste water collection system/facility (with authorization from the facility's owner or operator) or a properly-licensed disposal or reuse facility. If Caltrans or their contractor proposes an alternate disposal method, Caltrans or their contractor shall apply for a permit from the Regional Water Board. Plans to reuse or recycle wastewater require written approval from Regional Water Board staff.
17. Caltrans shall submit, subject to approval by the Regional Water Board staff, a dewatering and/or diversion plan that appropriately describe the dewatered or diverted areas and how those areas will be handled during construction. The diversion/dewatering plans shall be submitted no later than 30 days prior to conducting the proposed activity. Information submitted shall include the area or work to be diverted or dewatered and method of the proposed activity. All diversion or dewatering activities shall be designed to minimize the impact to waters of the State and maintain natural flows upstream and downstream. All dewatering or diversion structures shall be installed in a manner that does not cause sedimentation, siltation or erosion upstream or downstream. All dewatering or diversion structures shall be removed immediately upon completion of project activities. The in-channel work will only be conducted between May 15<sup>th</sup> and October 15<sup>th</sup>. This Water Quality Certification does not authorize Caltrans to draft surface waters.

18. Fueling, lubrication, maintenance, storage and staging of vehicles and equipment shall be outside of waters of the U.S. and the State. Fueling, lubrication, maintenance, storage and staging of vehicles and equipment shall not result in a discharge or a threatened discharge to any waters of the State or the U.S. At no time shall Caltrans use any vehicle or equipment which leaks any substance that may impact water quality.
19. Caltrans shall implement appropriate BMPs to prevent the discharge of equipment fluids to the stream channel. The minimum requirements will include: storing hazardous materials at least 150 linear feet outside of the stream banks; checking equipment for leaks and preventing the use of equipment with leaks; pressure washing or steam cleaning equipment to remove fluid residue on any of its surfaces prior to its entering any stream channel in a manner that does not result in a discharge to waters of the State.
20. Caltrans shall provide analysis and verification that placing non-hazardous waste or inert materials (which may include discarded product or recycled materials) will not result in degradation of water quality, human health, or the environment. All project-generated waste shall be handled, transported, and disposed in strict compliance with all applicable State and Federal laws and regulations. When operations are complete, any excess material or debris shall be removed from the work area and disposed of properly and in accordance with the Special Provisions for the project and/or Standard Specification 7-1.13, Disposal of Material Outside the Highway Right of Way. Caltrans shall submit to the Regional Water Board the satisfactory evidence provided to the Caltrans Engineer by the Contractor referenced in Standard Specification 7-1.13. In accordance with State and Federal laws and regulations, Caltrans is liable and responsible for the proper disposal of waste generated by their project.
21. All imported fill material shall be clean and free of pollutants. All fill material shall be imported from a source that has the appropriate environmental clearances and permits. The reuse of low-level contaminated solids as fill on-site shall be performed in accordance with all State and Federal policies and established guidelines and must be submitted to the Regional Water Board for review and concurrence.
22. Only clean washed spawning gravel (0.5" – 4") with a cleanliness value of at least 85, using the Cleanliness Value Test Method for California Test No. 227 will be placed in the streams. Gravel bag fabric shall be nonwoven polypropylene geotextile (or comparable polymer) and shall conform to the following requirements:

- Mass per unit area, grams per square meter, min ASTM Designation: D 5261 – 270
  - Grab tensile strength (25-mm grip), kilonewtons, min. ASTM Designation: D4632\* 0.89
  - Ultraviolet stability, percent tensile strength retained after 500 hours, ASTM Designation: D4355, xenon arc lamp method 70 or appropriate test method for specific polymer
  - Gravel bags shall be between 600 mm and 800 mm in length, and between 400 mm and 500 mm in width.
  - Yarn used in construction of the gravel bags shall be as recommended by the manufacturer or bag supplier and shall be of a contrasting color. Gravel shall be between 0.5” – 4” in diameter, and shall be clean and free from clay balls, organic matter, and other deleterious materials. The opening of gravel-filled bags shall be secured to prevent gravel from escaping. Gravel-filled bags shall be between 13 kg and 22 kg in mass.
  - Caltrans shall request approval from the Regional Water Board if an exception from this requirement is needed for a specific location.
23. Surface water monitoring shall be conducted whenever a project activity is conducted within waters of the State (e.g. demolition, pier construction, stream diversions). Surface water monitoring shall be conducted when any project activity has, or has the potential to, mobilize sediment and/or alter background conditions within waters of the State. In order to demonstrate compliance with receiving water limitations and applicable water quality standards, field measurements shall be collected whenever a project activity may alter background conditions.
24. Caltrans shall establish effluent, upstream (background) and downstream monitoring locations to demonstrate compliance with all applicable water quality objectives as detailed in the Basin Plan. The downstream location shall be no more than 50 feet from the effluent location. Field measurements shall be taken from each location four times daily for flow, pH, temperature, dissolved oxygen, total dissolved solids, turbidity and specific conductance. In addition, visual observations shall be made four times daily and include the appearance of the discharge including color, turbidity, floating or suspended matter or debris, appearance of the receiving water at the point of discharge (occurrence of erosion and scouring, turbidity, solids deposition, unusual aquatic growth, etc), and observations about the receiving water, such as the presence of aquatic life. Measurements shall be collected from each sampling location four times daily while work is being conducted within waters of the State.

25. Whenever, as a result of project activities, downstream measurements exceed the following water quality objectives, appropriate measurements shall be collected from all monitoring locations every hour during the period of increase, and shall continue until measurements demonstrate compliance with receiving water limitations and the water quality parameters are no longer increasing as a result of project activities.

pH	<6.5 or >8.5 (any changes >0.5 units)
temperature	>0.5°F above background
dissolved oxygen	<7 milligrams per liter (mg/L)
turbidity	20% above natural background

If any measurements are beyond the water quality objectives 50 feet downstream of the source(s), all necessary steps shall be taken to install, repair, and/or modify BMPs to control the source(s). In addition, the overall distance from the source(s) to the downstream extent of the exceedance shall be measured.

Monitoring results shall be reported to appropriate Regional Water Board staff person by telephone within one hour of taking any measurements that exceed the limits detailed above (turbidity only if it is higher than 20 NTU as well). Upstream and downstream pictures within the working and/or disturbed area shall be taken and submitted to the appropriate Regional Water Board staff via e-mail or fax within 24 hours of the incident. All other monitoring data shall be reported on a monthly basis and is due to the Regional Water Board by the 15<sup>th</sup> of the following month.

26. Rainy Day Reports: Caltrans shall take photos of all areas disturbed by project activities, including all excess materials disposal areas, after rainfall events that generate visible runoff from these areas in order to demonstrate that erosion control and revegetation measures are present and have been installed appropriately and successfully. A brief report containing these photos shall be submitted within 30 days of the rainfall event that generated runoff from the disturbed areas. Once the site has demonstrated appropriate and effective erosion and sediment control, Caltrans may request a reprieve from this condition from the Regional Water Board.
27. As mitigation to compensate for impacts associated with this project, Caltrans proposes on-site revegetation following construction for all temporary impacts. Caltrans shall create 0.1732 acres (7,544 feet<sup>2</sup>) of wetlands and restore 0.0102 acres (444 feet<sup>2</sup>) of stream channel habitat. The mitigation project shall be conducted in accordance with the Caltrans-Prepared *Waters of the United States Habitat Mitigation and Monitoring Plan for the California Department of Transportation's Navarro Bluff Re-Alignment Project*, received March 18, 2011.

The on-site mitigation project shall be completed in the year the construction project is completed. Caltrans shall submit mitigation monitoring reports to the Regional Water Board annually on December 31, for at least five years after the completion of the project.

28. Caltrans shall construct the on-site storm water treatment controls in accordance with the information submitted in the application. The bioswales shall be entered into the Caltrans BMP maintenance tracking system and shall be regularly maintained. The swales shall have well established vegetation at least 90% absolute cover, and when mowed shall be at least 2 inches higher than the calculated depth of flow. These bioswales shall be permanently preserved under Caltrans right-of-way as storm water treatment controls and shall not be considered waters of the State. The use of pesticides, herbicides, and fertilizers within the bioswales is prohibited.
29. In the event of any violation or threatened violation of the conditions of this Order, the violation or threatened violation shall be subject to any remedies, penalties, process or sanctions as provided for under applicable state or federal law. For the purposes of section 401(d) of the Clean Water Act, the applicability of any state law authorizing remedies, penalties, process or sanctions for the violation or threatened violation constitutes a limitation necessary to assure compliance with the water quality standards and other pertinent requirements incorporated into this Order. In response to a suspected violation of any condition of this certification, the State Water Board may require the holder of any federal permit or license subject to this Order to furnish, under penalty of perjury, any technical or monitoring reports the State Water Board deems appropriate, provided that the burden, including costs, of the reports shall bear a reasonable relationship to the need for the reports and the benefits to be obtained from the reports. In response to any violation of the conditions of this Order, the Regional Water Board may add to or modify the conditions of this Order as appropriate to ensure compliance.
30. The Regional Water Board may add to or modify the conditions of this Order, as appropriate, and to implement any new or revised water quality standards and implementation plans adopted or approved pursuant to the Porter-Cologne Water Quality Control Act or section 303 of the Clean Water Act.
31. This Order is not transferable. In the event of any change in control of ownership of land presently owned or controlled by Caltrans, Caltrans shall notify the successor-in-interest of the existence of this Order by letter and shall forward a copy of the letter to the Regional Water Board. The successor-in-interest must send to the Regional Water Board Executive Officer a written request for transfer of this Order to discharge dredged or fill material under this Order. The request must contain the following:

- a. requesting entity's full legal name
  - b. the state of incorporation, if a corporation
  - c. address and phone number of contact person
  - d. description of any changes to the project or confirmation that the successor-in-interest intends to implement the project as described in this Order.
32. The authorization of this certification for any dredge and fill activities expires on June 13, 2016. Conditions and monitoring requirements outlined in this Order are not subject to the expiration date outlined above, and remain in full effect and are enforceable.
33. Please contact our staff Environmental Specialist / Caltrans Liaison Jeremiah Puget at (707) 576-2835 or [jpuget@waterboards.ca.gov](mailto:jpuget@waterboards.ca.gov) if you have any questions.

  
for Catherine Kuhlman  
Executive Officer

110613\_JJP\_CDOT\_Hwy1\_NavarroBluffsRetreat\_401Cert

Weblink: State Water Resources Control Board Order No. 2003-0017 -DWQ, General Waste Discharge Requirements for Dredge and Fill Discharges That Have Received State Water Quality Certification can be found at:  
[http://www.waterboards.ca.gov/board\\_decisions/adopted\\_orders/water\\_quality/2003/wqo/wqo2003-0017.pdf](http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2003/wqo/wqo2003-0017.pdf)

Original sent to: Ms. Sandra Rosas, California Department of Transportation,  
P.O. 911, Marysville, CA 95901

Copies sent to: Mr. Michael Cane, California Department of Transportation,  
P.O. 911, Marysville, CA 95901  
Ms. Jane Hicks, U.S. Army Corps of Engineers, Regulatory  
Functions, 1455 Market Street, San Francisco, CA 94103-1398  
U.S. Army Corps of Engineers, District Engineer, 601 Startare Drive,  
Box 14, Eureka, CA 95501

# **STREAMBED ALTERATION**

STATE OF CALIFORNIA  
DEPARTMENT OF FISH AND GAME

NOTIFICATION NO. 1600-2011-0079-R1  
1602 CERTIFICATION

**CALIFORNIA DEPARTMENT OF FISH AND GAME**  
NORTHERN REGION  
601 LOCUST STREET  
REDDING, CALIFORNIA 96001



**LAKE OR STREAMBED ALTERATION AGREEMENT**

NOTIFICATION No. 1600-2011-0079-R1

Unnamed Tributaries to the Pacific Ocean Near the Town of Elk  
**2 Encroachments**

Mr. Frank Demling representing Caltrans  
STATE HIGHWAY 1 ROAD REALIGNMENT AND CULVERT REPLACEMENTS AT PM  
38.65 AND PM 38.73

This Lake or Streambed Alteration Agreement (Agreement) is entered into between the California Department of Fish and Game (DFG) and Mr. Frank Demling (Permittee) representing the California Department of Transportation (Caltrans).

**RECITALS**

WHEREAS, pursuant to Fish and Game Code (FGC) section 1602, Permittee notified DFG on April 14, 2011 that Permittee intends to complete the project described herein.

WHEREAS, pursuant to FGC section 1602, DFG has determined that the project could substantially adversely affect existing fish or wildlife resources and has included measures in the Agreement necessary to protect those resources.

WHEREAS, Permittee has reviewed the Agreement and accepts its terms and conditions, including the measures to protect fish and wildlife resources.

NOW THEREFORE, Permittee agrees to complete the project in accordance with the Agreement.

**PROJECT LOCATION**

The project sites are located on State Route 1 at PMs 38.65 and 38.72, affecting two Unnamed Tributaries to the Pacific Ocean in the County of Mendocino, State of California; Sections 15 and 22, Township 15N, Range 17W; Mount Diablo Base and Meridian, in the Elk 7.5-minute quadrangle, U.S. Geological Survey (USGS) map, APNs 126-15-002, 126-17-0RW, 126-16-005, 126-16-003 and 126-15-001.

**PROJECT DESCRIPTION**

The project include two encroachments: On State Route 1 (at PMs 38.65 and 38.72), realign roadway, remove and install new culverts, restore existing drainages, decommission old roadway install rock slope protection at culvert outlets. Project will have short-term and permanent impacts to wetland habitats. One small grand fir will be

removed. Short-term and permanent wetland habitats will have mitigation at ratios of 1:1 and 3:1 respectfully.

## **PROJECT IMPACTS**

Existing fish or wildlife resources the project could substantially adversely affect include: wetland and other aquatic and riparian species.

The adverse effects the project could have on the fish or wildlife resources identified above include: direct and/or incidental take, impede up- and/or down-stream migration, damage to spawning and/or rearing habitat and potential cumulative impacts.

## **MEASURES TO PROTECT FISH AND WILDLIFE RESOURCES**

### **1. Administrative Measures**

Permittee shall meet each administrative requirement described below.

- 1.1 Documentation at Project Site. Permittee shall make the Agreement, any extensions and amendments to the Agreement, and all related notification materials and California Environmental Quality Act (CEQA) documents, readily available at the project site at all times and shall be presented to DFG personnel, or personnel from another state, federal, or local agency upon request.
- 1.2 Providing Agreement to Persons at Project Site. Permittee shall provide copies of the Agreement and any extensions and amendments to the Agreement to all persons who will be working on the project at the project site on behalf of Permittee, including but not limited to contractors, subcontractors, inspectors, and monitors.
- 1.3 Notification of Conflicting Provisions. Permittee shall notify DFG if Permittee determines or learns that a provision in the Agreement might conflict with a provision imposed on the project by another local, state, or federal agency. In that event, DFG shall contact Permittee to resolve any conflict.
- 1.4 Project Site Entry. Permittee agrees that DFG personnel may enter the project site at any time to verify compliance with the Agreement.

### **2. Avoidance and Minimization Measures**

To avoid or minimize adverse impacts to fish and wildlife resources identified above, Permittee shall implement each measure listed below.

- 2.1 Except where otherwise stipulated in this Agreement, all work shall be in accordance with the forms, work plans, maps and drawings submitted with Notification No. 1600-2011-0079, as modified or amended as of April 14, 2011.
- 2.2 This agreement pertains to two encroachments (realign and replace two culvert drainage systems) at Post Mile (PM) 38.65 and 38.72 along State Route 1 approximately four miles north of the town of Elk in Mendocino County, California.
- 2.3 All work within the bed, bank and channel shall be confined to the period June 15 through October 15 of each year and when the affected channel reach is void of surface water. Work may be conducted in or near the stream during the late season work period October 15 through November 1, provided adherence to all conditions in this Agreement and a) – e) below.
  - a) The affected channel reach is void of surface water.
  - b) The Permittee shall complete any unfinished encroachment work, including erosion control measures, within 24 hours of DFG directing the Permittee to do so.
  - c) Prior to any work at a site, the Permittee shall stock-pile erosion control materials at the site. All bare mineral soil exposed in conjunction with crossing construction, deconstruction, maintenance or repair or removal shall be treated for erosion immediately upon completion of work on the crossing, and prior to the onset of precipitation capable of generating runoff.
  - d) Road construction leading directly into or out of a proposed stream crossing shall only be performed when soils are sufficiently dry so that sediment is not discharged into streams.
  - e) When a 7-day National Weather Service forecast of rain includes a minimum of 5 consecutive days with any chance of precipitation, 3 consecutive days with a 30% or greater chance of precipitation, or 2 consecutive days of 50% or greater chance of precipitation, the Permittee shall finish work underway at encroachment and refrain from starting any new work at encroachment prior to the rain event.
- 2.4 No fill material shall be placed within a stream except as specified in this Agreement.
- 2.5 Any equipment or vehicles driven and/or operated within or adjacent to the stream channel shall be checked and maintained in a manner which prevents materials that, if introduced to water, could be deleterious to aquatic life, wildlife, or riparian habitat.

- 2.6 Disturbance or removal of vegetation shall not exceed the minimum necessary to complete operations. The disturbed portions of any stream channel within the high water mark of the stream be restored to as near their original condition as possible. Restoration shall include re-vegetation of areas stripped or exposed by project activities. Slash pack, rock, or other erosion protection suitable to DFG shall be placed in areas where vegetation cannot reasonably be expected to become reestablished.
- 2.7 Adequate and effective erosion and siltation control measures shall be used to prevent sediment or turbid or silt-laden water from entering streams. Where needed, the Permittee shall use native vegetation or other treatments including native slash, jute netting, straw wattles, and geotextiles to protect and stabilize soils.
- 2.8 All bare mineral soil exposed in conjunction with crossing construction, deconstruction, maintenance or repair, shall be treated for erosion prior to the onset of precipitation capable of generating run-off or the end of the yearly work period, whichever comes first. Restoration shall include using native slash or seeding and mulching of all bare mineral soil exposed in conjunction with encroachment work. Erosion control shall consist of at least 2 to 4 inches of certified weed-free straw mulch and 100 lbs/acre equivalent barley seed. No annual (Italian) ryegrass (*Lolium multiflorum*) shall be used.
- 2.9 Encroachments and associated structures, fills, and other exposed soils shall be armored as needed to protect fill, abutments, and the stream channel and banks from erosion.
- 2.10 The Permittee shall provide site maintenance including, but not limited to, re-applying erosion control to minimize surface erosion and ensuring drainage structures, streambeds and banks remain sufficiently armored and/or stable.
- 2.11 Structures and associated materials not designed to withstand high seasonal flows shall be removed to areas above the ordinary high water mark before such flows occur or the end of the yearly work period, whichever comes first.
- 2.12 Refueling of equipment and vehicles and storing, adding or draining lubricants, coolants or hydraulic fluids shall not take place within or adjacent to any stream. All such fluids and containers shall be disposed of properly. Heavy equipment parked within or adjacent to the stream shall use drip pans or other devices (i.e., absorbent blankets, sheet barriers or other materials) as needed to prevent soil and water contamination.
- 2.13 All activities performed in the field which involve the use of petroleum or oil based substances shall employ absorbent material designated for spill containment and clean up activity on site for use in case of accidental spill. Clean-up of all spills

shall begin immediately. The Permittee shall immediately notify the State Office of Emergency Services at 1-800-852-7550. DFG shall be notified by the Permittee and consulted regarding clean-up procedures.

- 2.14 No debris, soil, silt, sand, bark, slash, sawdust, rubbish, cement or concrete washings, oil or petroleum products, or other organic or earthen material from construction work, or associated activity of whatever nature shall be allowed to enter into, or be placed where it may be washed by rainfall or runoff into Waters of the State. When operations are completed, any excess materials or debris shall be removed from the work area. (Not applicable to material installed permanently or temporarily as part of the project activities).
- 2.15 Upon DFG determination that turbidity/siltation levels resulting from project related activities constitute a threat to aquatic life, activities associated with the turbidity/siltation, shall be halted until effective Department approved control devices are installed, or abatement procedures are initiated.

### **3. Reporting Measures**

Permittee shall meet each reporting requirement described below.

- 3.1 Permittee shall notify the Department, in writing, at least five (5) days prior to initiation of construction (project) activities and at least five (5) days prior to completion of construction (project) activities. Notification shall be faxed to the Department at (707) 441-2021, Attn: Rick Macedo, Staff Environmental Scientist, or via e-mail at [rmacedo@dfg.ca.gov](mailto:rmacedo@dfg.ca.gov).
- 3.2 To comply with measure 2.17, above, the Permittee shall contact DFG: a) after the trees have been planted and b) at the end of the three year monitoring period.

## **CONTACT INFORMATION**

Any communication that Permittee or DFG submits to the other shall be in writing and any communication or documentation shall be delivered to the address below by U.S. mail, fax, or email, or to such other address as Permittee or DFG specifies by written notice to the other.

### To Permittee:

Mr. Frank Demling  
Caltrans, Northern Region Environmental Services  
Post Office Box 3700  
Eureka, California 95502-3700  
Office Phone: 707-445-6554  
Fax: 707-441-5733  
Email: [frank\\_demling@dot.ca.gov](mailto:frank_demling@dot.ca.gov)

### To DFG:

Department of Fish and Game  
Region 1  
619 Second Street  
Eureka, California 95501  
Attn: Lake and Streambed Alteration Program – Laurie Harnsberger  
Notification #1600-2011-0079-R1  
Fax: 441-2021  
Email: [lharnsberger@dfg.ca.gov](mailto:lharnsberger@dfg.ca.gov)

## **LIABILITY**

Permittee shall be solely liable for any violations of the Agreement, whether committed by Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents or contractors and subcontractors, to complete the project or any activity related to it that the Agreement authorizes.

This Agreement does not constitute DFG's endorsement of, or require Permittee to proceed with the project. The decision to proceed with the project is Permittee's alone.

## **SUSPENSION AND REVOCATION**

DFG may suspend or revoke in its entirety the Agreement if it determines that Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, is not in compliance with the Agreement.

Before DFG suspends or revokes the Agreement, it shall provide Permittee written notice by certified or registered mail that it intends to suspend or revoke. The notice shall state the reason(s) for the proposed suspension or revocation, provide Permittee an opportunity to correct any deficiency before DFG suspends or revokes the Agreement, and include instructions to Permittee, if necessary, including but not limited to a directive to immediately cease the specific activity or activities that caused DFG to issue the notice.

## **ENFORCEMENT**

Nothing in the Agreement precludes DFG from pursuing an enforcement action against Permittee instead of, or in addition to, suspending or revoking the Agreement.

Nothing in the Agreement limits or otherwise affects DFG's enforcement authority or that of its enforcement personnel.

## **OTHER LEGAL OBLIGATIONS**

This Agreement does not relieve Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, from obtaining any other permits or authorizations that might be required under other federal, state, or local laws or regulations before beginning the project or an activity related to it.

This Agreement does not relieve Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, from complying with other applicable statutes in the FGC including, but not limited to, FGC sections 2050 et seq. (threatened and endangered species), 3503 (bird nests and eggs), 3503.5 (birds of prey), 5650 (water pollution), 5652 (refuse disposal into water), 5901 (fish passage), 5937 (sufficient water for fish), and 5948 (obstruction of stream).

Nothing in the Agreement authorizes Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, to trespass.

## **AMENDMENT**

DFG may amend the Agreement at any time during its term if DFG determines the amendment is necessary to protect an existing fish or wildlife resource.

Permittee may amend the Agreement at any time during its term, provided the amendment is mutually agreed to in writing by DFG and Permittee. To request an amendment, Permittee shall submit to DFG a completed DFG "Request to Amend Lake

or Streambed Alteration" form and include with the completed form payment of the corresponding amendment fee identified in DFG's current fee schedule (see Cal. Code Regs., tit. 14, § 699.5).

## **TRANSFER AND ASSIGNMENT**

This Agreement may not be transferred or assigned to another entity, and any purported transfer or assignment of the Agreement to another entity shall not be valid or effective, unless the transfer or assignment is requested by Permittee in writing, as specified below, and thereafter DFG approves the transfer or assignment in writing.

The transfer or assignment of the Agreement to another entity shall constitute a minor amendment, and therefore to request a transfer or assignment, Permittee shall submit to DFG a completed DFG "Request to Amend Lake or Streambed Alteration" form and include with the completed form payment of the minor amendment fee identified in DFG's current fee schedule (see Cal. Code Regs., tit. 14, § 699.5).

## **EXTENSIONS**

In accordance with FGC section 1605(b), Permittee may request one extension of the Agreement, provided the request is made prior to the expiration of the Agreement's term. To request an extension, Permittee shall submit to DFG a completed DFG "Request to Extend Lake or Streambed Alteration" form and include with the completed form payment of the extension fee identified in DFG's current fee schedule (see Cal. Code Regs., tit. 14, § 699.5). DFG shall process the extension request in accordance with FGC 1605(b) through (e).

If Permittee fails to submit a request to extend the Agreement prior to its expiration, Permittee must submit a new notification and notification fee before beginning or continuing the project the Agreement covers (Fish & G. Code, § 1605, subd. (f)).

## **EFFECTIVE DATE**

The Agreement becomes effective on the date of DFG's signature, which shall be: 1) after Permittee's signature; 2) after DFG complies with all applicable requirements under the California Environmental Quality Act (CEQA); and 3) after payment of the applicable FGC section 711.4 filing fee listed at [http://www.dfg.ca.gov/habcon/ceqa/ceqa\\_changes.html](http://www.dfg.ca.gov/habcon/ceqa/ceqa_changes.html).

## **TERM**

This Agreement shall expire on December 31, 2015, unless it is terminated or extended before then. All provisions in the Agreement shall remain in force throughout its term. Permittee shall remain responsible for implementing any provisions specified herein to

protect fish and wildlife resources after the Agreement expires or is terminated, as FGC section 1605(a)(2) requires.

### AUTHORITY

If the person signing the Agreement (signatory) is doing so as a representative of Permittee, the signatory hereby acknowledges that he or she is doing so on Permittee's behalf and represents and warrants that he or she has the authority to legally bind Permittee to the provisions herein.

### AUTHORIZATION

This Agreement authorizes only the project described herein. If Permittee begins or completes a project different from the project the Agreement authorizes, Permittee may be subject to civil or criminal prosecution for failing to notify DFG in accordance with FGC section 1602.

### CONCURRENCE

The undersigned accepts and agrees to comply with all provisions contained herein.

### FOR FRANK DEMLING

Mike Youcheff (for Frank Demling) 6/21/11  
Name MIKE YANCHEFF Date  
Title PROJECT MANAGER

### FOR DEPARTMENT OF FISH AND GAME

T. BABCOCK 6/21/11  
for Name Curt Babcock Date  
Environmental Program Manager

Prepared by: Rick Macedo  
Staff Environmental Scientist  
6-16-11

**COASTAL DEVELOPMENT STANDARD PERMIT**

CDP# 36-2010



June 20, 2011

**COASTAL DEVELOPMENT STANDARD PERMIT**

**CASE#:** CDP #36-2010  
**OWNER:** California Department of Transportation  
**AGENT:** Larry M. Chia  
**REQUEST:** Road realignment, moving the road inland approximately 100 feet, due to slope failure. The project includes culvert replacements.  
**LOCATION:** In the Coastal Zone, ¼ mile south of the Navarro River, on Highway One at the intersection of Highway One and Navarro Bluff Road (Post Mile 38.5 to 38.8).  
**PROJECT COORDINATOR:** Teresa Spade

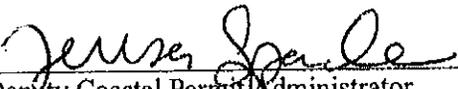
**ACTION:** Approved with Conditions.

**COASTAL PERMIT EFFECTIVE DATE:** June 20, 2011

**COASTAL PERMIT EXPIRATION DATE:** June 20, 2013

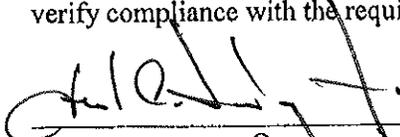
**CONDITIONS OF APPROVAL:** See Coastal Permit Administrator Action Sheet for conditions.

**Department of Planning and Building Services Statement:** I hereby certify that all conditions which must be met prior to use or occupancy of this permit have been met and that this permit is deemed by the Department of Planning and Building Services to be a valid permit subject to all conditions of approval.

  
 Deputy Coastal Permit Administrator

June 20, 2011  
 Date

**Owner's Statement:** I am the owner of the property subject to this permit (or his/her authorized agent) and I hereby certify that I have reviewed the conditions of approval and will establish and continue the use in compliance with the specified conditions and applicable sections of the Mendocino County Code. I further grant permission for County staff to enter upon the premises for which the permit is issued to verify compliance with the required conditions.

  
 Owner

JUNE 27, 2011  
 Date

FRANK C. DEMLING, PLS  
 PROJECT MANAGER, CALTRANS

Please sign and return one copy of this permit to the Department of Planning and Building Services at the above address.

**STAFF REPORT FOR COASTAL DEVELOPMENT  
STANDARD PERMIT**

**CDP# 36-2010 (Caltrans)  
April 28, 2011  
CPA-1**

**OWNER/APPLICANT:** California Department of Transportation  
District 3  
703 B Street  
Marysville, CA 95901

**AGENT:** Caltrans contact:  
Larry M. Chiea  
Environmental Management Branch, M2  
703 B Street  
Marysville, CA 95901

**REQUEST:** Road realignment, moving the road inland  
approximately 100 feet, due to slope failure. The project  
includes culvert replacements.

**LOCATION:** In the Coastal Zone,  $\frac{3}{4}$  mile south of the Navarro River,  
on Highway One at the intersection of Highway One and  
Navarro Bluff Road (Post Mile 38.5 to 38.8).

**APPEALABLE AREA:** Yes - ESHA

**PERMIT TYPE:** Standard

**GENERAL PLAN:** ROW

**ZONING:** ROW

**EXISTING USES:** State Highway

**ADJACENT ZONING:** North, South & East: RL: L-160  
West: RL: L-160 & RR: L-5[RR: L-1]

**SURROUNDING LAND USES:** Residential and Agricultural

**SUPERVISORIAL DISTRICT:** 5

**CA COASTAL RECORDS PROJECT:** Image [200904088](#)

**ENVIRONMENTAL DETERMINATION:** The California Department of Transportation (Caltrans) is the lead agency responsible for project compliance with the California Environmental Quality Act (CEQA). Caltrans has prepared a Final Mitigated Negative Declaration (MND) (located in the project file). The MND, as amended, includes mitigation measures that are recommended as a condition of approval of the project.

Special Condition Number 1 is recommended to emphasize that all applicable mitigation measures specified in the Final Mitigated Negative Declaration, as amended, are conditions of CDP 36-2010.

**OTHER RELATED APPLICATIONS:** [CDU 18-2006](#) approved by the Planning Commission on March 20, 2008, allowed removal of a failing crib wall and construction of 656 length feet of new soldier

pile tieback wall, up to 26 feet high, constructed below highway grade. Associated development included culvert replacement, telephone line relocation, staging area, slope cutting, and off-site fill disposal. As shown in the [Coastal Records Project image](#), this project was constructed in 2009 just south of the subject project from mile post 37.8 to 38.2.

**PROJECT DESCRIPTION:** The project, known as the Little Geyserville Landslide (aka Kristofferson Property) is described by Caltrans as follows:

During the winter of 2006 heavy rainfall saturated the coastal bluff on which Route 1 runs, causing approximately 1,500 feet of Route 1 to fail. Onsite inspection showed extensive cracking and roadway subsidence. In general, the slope appears to be moving downward and westerly toward the ocean. The purpose of this realignment is to stabilize the roadway by retreating eastward away from the failure area. This project proposes to realign the roadway by retreating to the east of the current alignment from 0 to approximately 100 feet. The new alignment will include 12-foot lanes and 4-foot shoulders. Maximum cut and fill slopes will range from approximately 2:1 to 3:1. The existing roadway where no longer needed, will be excavated and the area re-graded and planted. The asphalt concrete (AC) and aggregate base of the decommissioned roadway will be removed and either sent to a recycle facility or an approved disposal site. The top soil layer in the new alignment will be removed and stored and then spread over the re-graded decommissioned roadway to preserve seed stock and other soil organisms. Drainage work will include installation of new culverts where needed and the removal of existing culverts and restoration of existing drainage as part of the decommissioning of the existing roadway. The new drainage structures will generally be aligned with the existing drainage structures. Rock slope protection at the new culvert outlets will be installed as needed. Existing utilities (phone and electricity) will be relocated as needed. New right of way fencing will be constructed along the new right of way alignment (Caltrans 2010).

**LOCAL COASTAL PROGRAM CONSISTENCY RECOMMENDATION:** The Final Mitigated Negative Declaration prepared by the Department of Transportation describes design features and mitigation measures incorporated into the project to reduce potential impacts to a level of insignificance as required by CEQA. In addition, the project must also comply with policies in the County's Coastal Plan and regulations in the County's Coastal Zoning Code that impose specific requirements which in some cases may exceed those necessary to satisfy CEQA. Following is a discussion of requirements found in the County's Local Coastal Plan and Zoning Code, along with conditions recommended where necessary to achieve compliance. The following section also addresses any comments received from agencies in response to the County's referrals. With the addition of the recommended conditions, the project is consistent with the applicable goals and policies of the Local Coastal Program (LCP) as described below.

### **Land Use**

Coastal Element Policy 3.8-6 states,

*It shall be a goal of the Transportation Section to achieve, where possible and consistent with other objectives of The Coastal Act and plan policies for Highway 1, a road bed with a vehicle lane width of 16 feet including the shoulder to achieve a 32 foot paved roadway (12-foot vehicle lane and 4-foot paved shoulder). The minimum objective shall be a 14-foot vehicle lane width (10-foot vehicle lane and 4-foot paved shoulder). New widening projects shall be allocated, first to safety and improved capacity needs and secondly to paved shoulders.*

Coastal Element Policy 3.6-20 states,

*Paved 4 foot shoulders should be provided by Caltrans along the entire length of Highway 1 wherever construction is feasible without unacceptable environmental effects.*

The proposed project is consistent with the applicable Coastal Element policies.

Project components, including re-alignment and temporary staging, would occur within parcels 126-150-02 and 126-160-03, zoned Range Lands 160, currently under Williamson Act contract. Caltrans notified the Department of Conservation's Division of Resource Protection of the proposed development, and responded by indicating that public agencies cannot locate improvements in agricultural preserves unless the following findings can be made per Government Code:

The location is not based primarily on a consideration of the lower cost of acquiring land in an agricultural preserve (§51292(a)).

If the land is agricultural land covered under a contract pursuant to this chapter for any public improvement, that there is no other land within or outside the preserve on which it is reasonably feasible to locate the public improvement (§51292(b)).

The location of the project was chosen because the road is being eroded by the ocean and must be moved inland, and Williamson Act property is the only feasible location for the re-alignment and staging area.

### **Public Access**

The Land Use Map shows a proposed public access along Navarro Bluff Road (CR 517A).

Policy 3.6-18 of the Coastal Element states:

*Along sections of the highway where development intensity will result in pedestrian use, or where this is the siting of the County designated coastal trail, a 15-foot accessway measured from the right-of-way of Highway 1 shall be offered for dedication as a condition of permit approval if the topography is deemed suitable for pathway development. Coastal trail includes trails identified in Table 3.6-1 and portions of Highway 1 and Usal Road that are necessary to connect these trail segments. All such access offers that have been recorded shall be offered to Caltrans for acceptance. Prevailing acquisition methods for acquiring public right of- way by Caltrans shall apply to this section.*

Section 20.528.010(D) of the Mendocino County Coastal Zoning Code reiterates as follows:

*Along sections of the highway where development intensity will result in pedestrian use, or where this is the siting of the County designated coastal trail, a fifteen (15) foot accessway along both sides of the highway, measured from the right of way of Highway 1 shall be offered as a condition of permit approval, if the topography is suitable.*

The west side of the highway has been identified by the County as the priority location for the Coastal Trail, as most pedestrians and bicyclists prefer the west side. Caltrans has worked with the County by identifying a 15 foot easement area on the west side of the project area that meets minimum distance requirements from the highway. The location has not been analyzed in terms of geotechnical stability, and no analysis has been conducted regarding impacts to natural resources – studies will need to be conducted when trail construction is proposed. Special Condition Number 2 is included to indicate that the County

or other responsible entity approved by Caltrans needs to enter into a maintenance agreement for the trail encroachment before trail construction.

### **Hazards**

The property is in an area that has a “moderate” fire hazard severity rating as determined by the California Department of Forestry and Fire Prevention.

The existing highway alignment is located in an area of an active landslide. The Caltrans Geotechnical Preliminary Recommendation Report (geotechnical report) notes:

A review of aerial photographs suggests this landslide has experienced significant movement for decades, if not longer, creating the need for Caltrans Maintenance crews to routinely repair cracks and subsiding sections of the highway and shoulders with cold mix asphalt. While the exact thickness of the accumulated pavement is unknown, a review of recent maintenance records suggests it likely to be twenty feet or more (Kiesse 2008).

The report later states that “Approximately 1500 feet of the roadway is failing and falling into the ocean.”

Realignment or retreat away from the bluff face is proposed as the preferred alternative to address landslide conditions. The landslide has been found to extend much farther inland than the proposed realignment, so the new alignment will still be founded on unstable ground. The retreat inland will improve drainage and significantly reduce future highway maintenance costs.

The Caltrans geotechnical report notes the San Andreas Fault Line is mapped several miles offshore, and indicates observations of a row of landslides with the same northwesterly trend and the San Andreas Fault Line, which may indicate evidence of past fault activity. The geotechnical engineer notes that this potential fault area is beyond the scope of the subject review. Figure 1 from the geotechnical report shows the landslide area and possible fault relative to the existing highway alignment and coastal bluff.

The existing section of highway and proposed alignment are both located outside of the 100 year flood zone and tsunami zone as shown in Exhibit D.

The Caltrans Mitigated Negative Declaration indicates that the project will not have an impact relative to geology and soils (based on the Geotechnical Preliminary Recommendation Report, May 2008) or hazards and hazardous materials (based on review of the Initial Site Assessment, December 2006).

### **Visual Resources**

The project vicinity is composed largely of undeveloped range lands. There is a weathered natural wood post and rail fence in the northerly portion of the project area on the east side of the highway, and a wood post and wire fence along the remainder of the east side of the highway. There are above ground utility poles present on both sides of the highway. Existing culverts are unpainted metal. There are no guard rails existing or proposed. The asphalt concrete and aggregate base of the decommissioned roadway are to be removed, and areas to be regraded and covered with topsoil from excavated areas. Rock slope protection is to be installed at the new culvert outlets as needed. Fences are to be rebuilt farther east to accommodate the realignment, and the utility poles on the east side (AT&T) would also be moved further east to accommodate the realignment. Caltrans does not know at this point whether the above ground utilities on

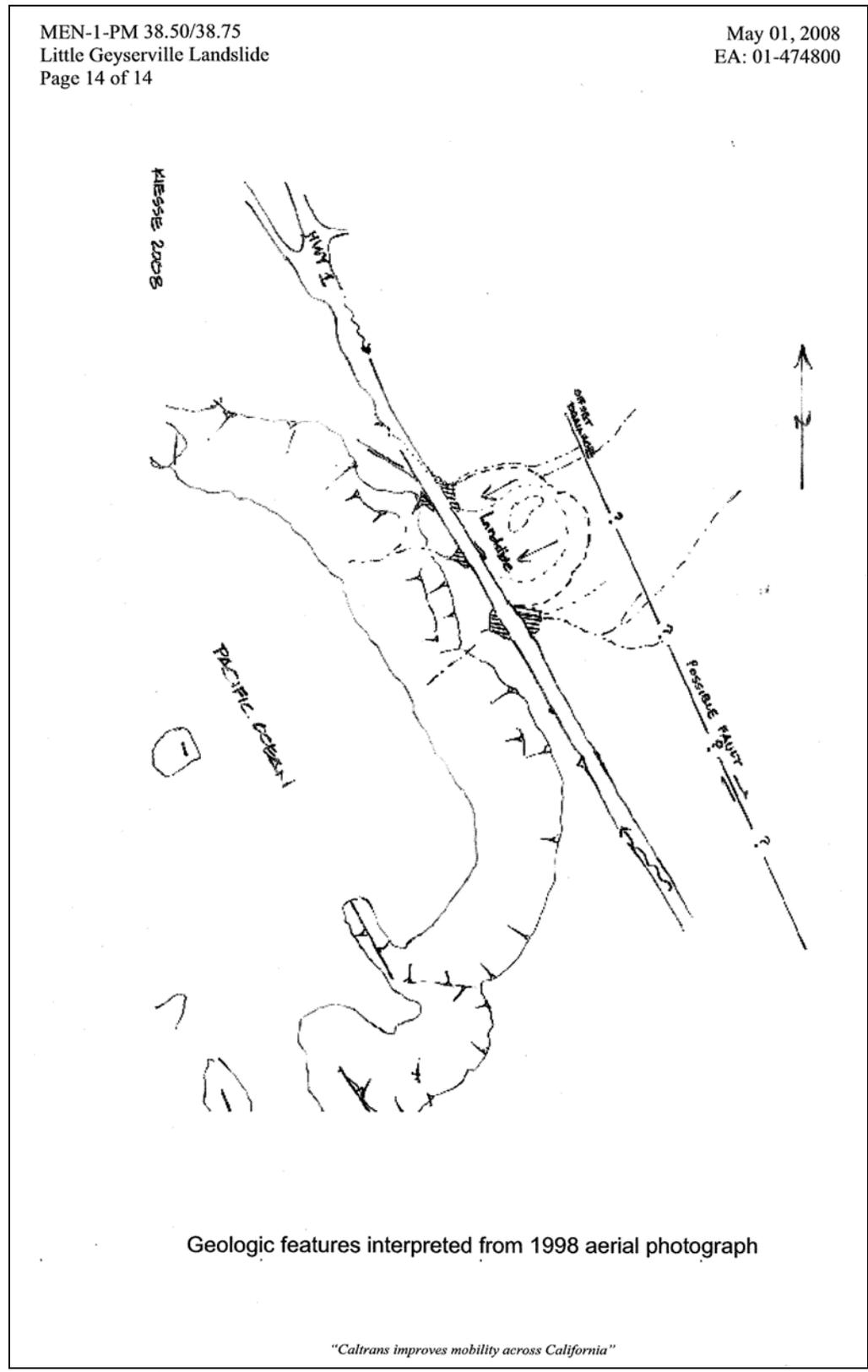


Figure 1. Landslide area and possible fault location.

the west side (PG&E) would be impacted by the project, but if they are, they would occupy the same relocated above ground poles on the east side.

The project would occur in a designated “Highly Scenic Area” and the proposed project is subject to the following development criteria:

Coastal Element Policy 3.5-1 provides general guidelines for all development in the coastal zone, requiring that:

*The scenic and visual qualities of Mendocino County coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas and, where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas designated by the County of Mendocino Coastal Element shall be subordinate to the character of its setting.*

Policy 3.5-3 of the Coastal Element states:

*Any development permitted in (highly scenic) areas shall provide for the protection of ocean and coastal views from public areas including highways, roads, coastal trails, vista points, beaches, parks, coastal streams, and waters used for recreational purposes.*

*In addition to other visual policy requirements, new development west of Highway One in designated “highly scenic areas” is limited to one-story (above natural grade) unless an increase in height would not affect public views to the ocean or be out of character with surrounding structures.*

Section 20.504.015(C)(3) of the Mendocino County Coastal Zoning Code requires:

*New development shall be subordinate to the natural setting and minimize reflective surfaces. In highly scenic areas, building materials including siding and roof material shall be selected to blend in hue and brightness with their surroundings.*

Section 20.504.015(C)(12) of the Mendocino County Coastal Zoning Code requires:

*Power transmission lines shall be placed underground in designated “highly scenic areas” west of Highway 1 and in new subdivisions. East of Highway 1, power lines shall be placed below ridgelines if technically feasible.*

Caltrans provided a landscape architecture analysis with the application, which describes the highly scenic nature of the proposed development area and includes recommendations to minimize visual impacts.

The analysis provided by Caltrans indicates that the proposed realignment would not cause headlight glare to be an issue for residences in the vicinity.

The analysis indicates that views to the ocean from traveling vehicles may be slightly impacted as some views below the bluffs may be lost, however overall views toward the ocean will not be impacted.

Measures recommended by the Caltrans Landscape Architect are as follows:

- Any downdrain pipe visible from the Pacific Ocean should be colored. Black or dark brown are most recommended.

- Cut slopes visible from the highway should be graded to mimic the adjacent topography. Any cut slopes that rise 3 feet or greater above the highway should be 4:1 or flatter.
- Revegetation of native species should occur per the recommendations of the project biologist and permitting agencies.
- Any temporary access road proposed should be graded to a natural contour and revegetated with native species.
- Regarding the temporary construction staging area, any alterations to the existing contour created by the contractor should be graded to previous conditions and revegetated with native species.
- Any removed barbed wire fencing should be replaced with similar materials including weathered posts and standard barbed wire fencing (Hibbert 2008).

No new above ground utilities would be placed on the west side of the highway. With the proposed measures, the project is not likely to result in significant permanent impacts to visual resources. Special Condition Number 3 is recommended to require the recommendations as a condition of approval, as these recommendations are not included as measures in the negative declaration.

**Natural Resources**

The project is located on the terrace adjacent to the coastal bluff. Residential development is present along the northwest side, and the remainder of the project area is dominated by undeveloped range lands. The project area was surveyed for natural resources of concern by Caltrans staff, and analyses are outlined in two main documents that have been provided to planning staff: *The Focused Initial Study with Proposed Mitigated Negative Declaration* (October 2008), and *Coastal Wetland/ESHA Study for the Route 1 Realignment Project, Post Mile 38.38/38.92 in Mendocino County EA 01-47480* (October 2010)(ESHA study).

The project will result in unavoidable impacts to wetlands, streams, and a single potential rare plant species. Mitigation measures are proposed by Caltrans to reduce impacts to a less than significant level.

The County of Mendocino Coastal Element describes an Environmentally Sensitive Habitat Area (ESHA) as follows:

*Any areas in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments.*

Areas identified by Caltrans as ESHAs are outlined in Table 1, taken from the ESHA Study, page 2, and also illustrated in Figure 2, an attachment to the ESHA Study.

Table 1. ESHA Size and Impact Summary.

ESHA Site#	Size (ft <sup>2</sup> )	Area of Impact (ft <sup>2</sup> )		Comments
		Permanent	Temporary	
1	132,482	3,859	3,362	This ESHA consists of a seep wetland which borders the two intermittent streams in the ESL and straddles a bedrock upland. This bedrock upland splits the wetland into northern and southern section. The northern section provides water to ESHA 4 and the southern section is adjacent to ESHA 5. With this ESHA are two wetland vegetation types, one dominated by annual grasses, rushes and sedges with scattered forbs and the other dominated by Hookers' willow with a sparse understory.

**STAFF REPORT FOR COASTAL DEVELOPMENT  
STANDARD PERMIT**

**CDP# 36-2010 (Caltrans)  
April 28, 2011  
CPA-8**

2	1711	0	0	A small wetland dominated by North Coast Willow Scrub. This ESHA is essentially an extension of the southern portion of ESHA 1, but it is separated by Highway 1. ESHA 5 flows through a culvert under Highway 1, through this wetland and soon after into the Pacific Ocean. This ESHA is a coastal wetland and does not contain the soil characteristics required to be USACE jurisdictional wetlands.
3	9849	0	0	A small seep wetland dominated by annual grasses, rushes and sedges with scattered forbs.
4	600	101	40	Intermittent stream which originates out of the northern section of ESHA 1. It flows west under Highway 1 and directly flows into the Pacific Ocean within several hundred feet of origination.
5	1040	124	110	Intermittent stream which originates in the hills east of ESHA 1. This stream flows into, provides water to and eventually drains the southern section of ESHA 1. It continues under Highway 1 and flows into the Pacific Ocean.
6	1	1	0	An orchid was found to be present within the ESL. This plat was identified to family by the distinctive vegetative characteristics. It did not flower in 2010 and could not be identified to species, however, for the purposes of this report we will consider it <i>Piperia candida</i> , and therefore an ESHA.
<b>Total</b>	<b>145,683</b> <b>(3,344</b> <b>acre)</b>	<b>4,083</b> <b>(0.094</b> <b>acre)</b>	<b>3,512</b> <b>(0.081</b> <b>acre)</b>	

The ESHA study discusses impacts to ESHAs in detail, and outlines mitigation measures proposed.

ESHA #1 is a seasonal three parameter wetland largely located east of the project area. The project will go through this wetland at two locations which coincide with streams to be culverted. As shown on the site plan the re-alignment would occur in the least impacting feasible location relative to the subject wetland. Still, 3,363 sq. feet of the wetland would be temporarily impacted, and 3,859 sq. feet of the wetland would be permanently impacted. Mitigation measures include replanting temporary impact areas at a ratio of 1:1, and wetland creation at a 2:1 ratio for areas to be permanently impacted.

ESHA #2 is a 1,711 sq. foot riparian area associated with the southernmost stream, on the west side of the highway. This ESHA will be fenced off and no impacts are expected.

ESHA #3 is a 9,849 sq. foot three parameter Coastal Freshwater Marsh wetland on the east side. The re-aligned highway would be within 40 feet. The staging area has been proposed within 100 feet of this wetland, however Caltrans indicates in a letter to staff dated February 15, 2011 that Environmentally Sensitive Area (ESA) fencing will be placed on the edge of the 100 foot buffer to avoid impacts in the buffer area to this wetland from project staging. No impacts to this ESHA are expected.

ESHA #4 is a seasonal stream associated with a culvert replacement at PM 38.73, which crosses both the existing and proposed alignment. The realignment will permanently impact 50.4 linear feet of the stream and will temporarily impact 20 linear feet of the stream. Temporary impact areas are to be replanted, and new stream areas will be created at a 1:1 ratio for areas to be permanently impacted.

ESHA #5 is a seasonal to year round stream associated with a culvert replacement at PM 38.65, which crosses both the existing and proposed alignment. The realignment permanently impacts 62 linear feet of

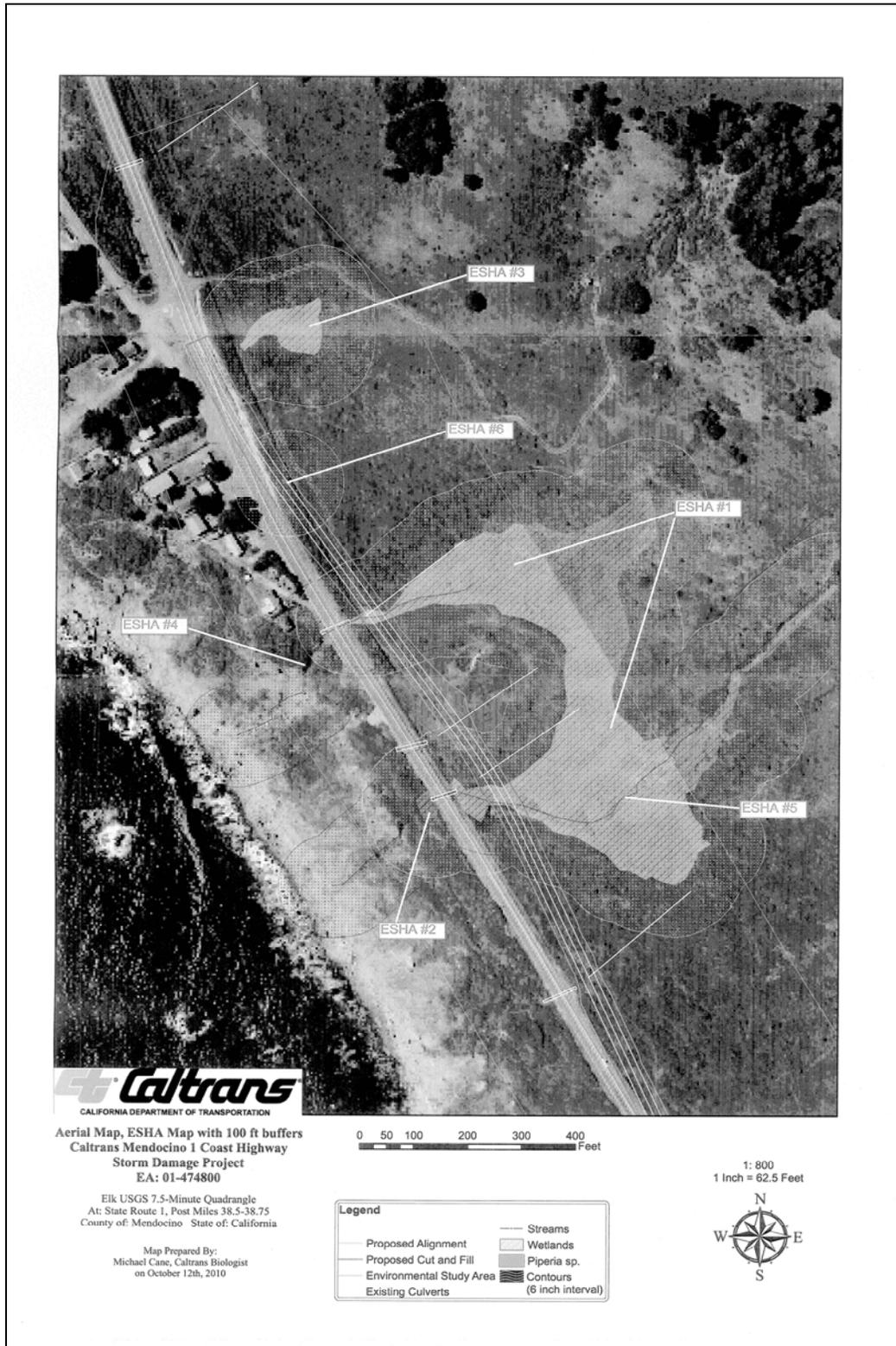


Figure 2. Caltrans ESHA map.

**STAFF REPORT FOR COASTAL DEVELOPMENT  
STANDARD PERMIT**

**CDP# 36-2010 (Caltrans)  
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the stream and will temporarily impact 55 linear feet of the stream. Temporary impact areas are to be replanted, and new stream areas will be created at a 1:1 ratio for areas to be permanently impacted.

ESHA #6 is a single orchid plant that could not be identified to species level because it did not bloom last year. It is assumed to be a rare white flowered rein orchid (*Piperia candida*) since it cannot be proven otherwise, although it is unlikely, since all documented occurrences are further inland, with the closest documented account approximately 12.5 miles away. The project will result in unavoidable permanent impacts as the new alignment would occur in this location and transplanting is not likely to be successful. No mitigation measures are proposed.

Revegetation is to be facilitated by reserving topsoil from areas of the new alignment and placing it in the old alignment location. Plants to be used would be native plants appropriate to the communities present on-site.

The project was referred to the California Department of Fish and Game and the US Fish and Wildlife Service for comment. The US Fish and Wildlife Service responded by indicating that the project is located in the range of Federally Endangered Behren's silverspot butterfly and California red-legged frog, however the project area does not contain suitable habitat for these species, and would have no effect on these listed species. Staff did not receive a response from the Department of Fish and Game.

Section 20.496.020(A)(1) of the Mendocino County Coastal Zoning Code requires that an appropriate buffer area be determined and applied to Environmentally Sensitive Habitat Areas. Due to the nature of the project, it is not possible to apply a buffer area as development must occur within ESHAs to accommodate the realignment, and complete avoidance is not possible.

Section 20.496.020(A)(4) discusses criteria and conditions for allowable development in a buffer area as considered in Table 2.

Table 2. Analysis of Development Permitted in the Buffer Area.

<b>(4) Permitted Development.</b> Development permitted within the buffer area shall comply at a minimum with the following standards:	
(a) Development shall be compatible with the continuance of the adjacent habitat area by maintaining the functional capacity, their ability to be self-sustaining and maintain natural species diversity.	The proposed realignment will result in the same level of function as existing.
(b) Structures will be allowed within the buffer area only if there is no other feasible site available on the parcel.	There is no less impacting alternative.

**STAFF REPORT FOR COASTAL DEVELOPMENT  
STANDARD PERMIT**

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<p>(c) Development shall be sited and designed to prevent impacts which would degrade adjacent habitat areas. The determination of the best site shall include consideration of drainage, access, soil type, vegetation, hydrological characteristics, elevation, topography, and distance from natural stream channels. The term "best site" shall be defined as the site having the least impact on the maintenance of the biological and physical integrity of the buffer strip or critical habitat protection area and on the maintenance of the hydrologic capacity of these areas to pass a one hundred (100) year flood without increased damage to the coastal zone natural environment or human systems.</p>	<p>The proposed development is located in the "best site."</p>
<p>(d) Development shall be compatible with the continuance of such habitat areas by maintaining their functional capacity and their ability to be self-sustaining and to maintain natural species diversity.</p>	<p>The proposed realignment will result in the same level of function as existing.</p>
<p>(e) Structures will be allowed within the buffer area only if there is no other feasible site available on the parcel. Mitigation measures, such as planting riparian vegetation, shall be required to replace the protective values of the buffer area on the parcel, at a minimum ratio of 1:1, which are lost as a result of development under this solution.</p>	<p>There is no other feasible less impacting location, and mitigation measures at a minimum ratio of 1:1 are proposed.</p>
<p>(f) Development shall minimize the following: impervious surfaces, removal of vegetation, amount of bare soil, noise, dust, artificial light, nutrient runoff, air pollution, and human intrusion into the wetland and minimize alteration of natural landforms.</p>	<p>The proposed realignment would have the minimum impact feasible.</p>
<p>(g) Where riparian vegetation is lost due to development, such vegetation shall be replaced at a minimum ratio of one to one (1:1) to restore the protective values of the buffer area.</p>	<p>Vegetation is to be replaced at a minimum ratio of 1:1.</p>
<p>(h) Aboveground structures shall allow peak surface water flows from a one hundred (100) year flood to pass with no significant impediment.</p>	<p>The project is not located in a 100 year flood zone.</p>
<p>(i) Hydraulic capacity, subsurface flow patterns, biological diversity, and/or biological or hydrological processes, either terrestrial or aquatic, shall be protected.</p>	<p>Biological and hydrological processes are protected to the extent feasible.</p>
<p>(j) Priority for drainage conveyance from a development site shall be through the natural stream environment zones, if any exist, in the development area. In the drainage system design report or development plan, the capacity of natural stream environment zones to convey runoff from the completed development shall be evaluated and integrated with the drainage system wherever possible. No structure shall interrupt the flow of groundwater within a buffer strip. Foundations shall be situated with the long axis of interrupted</p>	<p>Drainage is conveyed in natural stream locations, and minimally disrupted by necessary culverts.</p>

<p>impermeable vertical surfaces oriented parallel to the groundwater flow direction. Piers may be allowed on a case by case basis.</p>	
<p>(k) If findings are made that the effects of developing an ESHA buffer area may result in significant adverse impacts to the ESHA, mitigation measures will be required as a condition of project approval. Noise barriers, buffer areas in permanent open space, land dedication for erosion control, and wetland restoration, including off-site drainage improvements, may be required as mitigation measures for developments adjacent to environmentally sensitive habitats. (<i>Ord. No. 3785 (part), adopted 1991</i>)</p>	<p>Mitigation measures are proposed to reduce impacts to a level of less than significant. These measures are required as a condition of permit approval.</p>

In addition to mitigation measures outlined in Table 1, Caltrans outlines additional measures in the Mitigated Negative Declaration including:

1. Avoidance and minimization of Environmentally Sensitive Areas, including use of temporary construction fencing, and restriction of equipment and materials into Environmentally Sensitive Areas.
2. Minimization of native vegetation removal to minimize impacts to birds protected by the Bird Treaty Act, and restriction of timing of vegetation removal, if feasible to between September 1 and February 14<sup>th</sup>, after fledging and before the initiation of breeding activities. If infeasible, bird nest surveys will be performed. If nests are found, Caltrans will consult with USFWS and DFG and comply with requirements for protection.
3. Disturbance to wetlands will be minimized.
4. All wetland and riparian areas temporarily affected will be restored, and new areas created at a minimum 1:1 ratio for areas permanently lost.
5. A Storm Water Pollution Prevention Plan (SWPPP) will be submitted and followed, which will outline Best Management Practices to be followed, including measures to be employed to prevent construction materials, debris or petroleum products from entering surface waters, and prevent erosion.

Special Condition Number 1 is recommended to require proposed measures as a condition of approval of the Coastal Development Permit.

Section 20.532.100 of the Mendocino County Coastal Zoning Code states as follows:

*Sec. 20.532.100 Supplemental Findings.*

*In addition to required findings, the approving authority may approve or conditionally approve an application for a permit or variance within the Coastal Zone only if the following findings, as applicable, are made:*

*(A) Resource Protection Impact Findings.*

*(1) Development in Environmentally Sensitive Habitat Areas. No development shall be allowed in an ESHA unless the following findings are made:*

*(a) The resource as identified will not be significantly degraded by the proposed development.*

*(b) There is no feasible less environmentally damaging alternative.*

*(c) All feasible mitigation measures capable of reducing or eliminating project related impacts have been adopted.*

The project meets the requirements outlined above in that there is no feasible, less environmentally damaging alternative to the project proposed, and that mitigation measures have been provided to minimize adverse environmental effects. The supplemental findings are included as findings at the end of this report.

### **Archaeological/Cultural Resources**

Caltrans submitted an archaeological survey report with the application. The survey report was reviewed and accepted by the Mendocino County Archaeological Commission on March 9, 2011, noting that no cultural, historical or archaeological sites were observed. Standard Condition Number 8 is recommended, advising the applicant of the requirements of the County's Archaeological Ordinance (Chapter 22.12 of the Mendocino County Code) in the event that archaeological or cultural materials are unearthed during site preparation or construction activities.

### **Air Quality**

The project was referred to the Air Quality Management District who responded by commenting that diesel equipment must be CARB compliant, and portable equipment must be properly permitted. Caltrans responded by indicating that the requirement will be covered by a standard spec as outlined, and will additionally make note of the requirement in an Environmental Redbook so that construction will be reminded of it.

#### **SECTION 7: LEGAL RELATIONS AND RESPONSIBILITY 7-1.01 LAWS TO BE OBSERVED**

.. The Contractor shall keep fully informed of all existing and future State and Federal laws and county and municipal ordinances and regulations which in any manner affect those engaged or employed in the work, or the materials used in the work, or which in any way affect the conduct of the work, and of all orders and decrees of bodies or tribunals having any jurisdiction or authority over the same. The Contractor shall at all times observe and comply with, and shall cause all the Contractor's agents and employees to observe and comply with all existing and future laws, ordinances, regulations, orders and decrees of bodies or tribunals having any jurisdiction or authority over the work; and shall protect and indemnify the State of California, and all officers and employees thereof connected with the work, including but not limited to the Director and the Engineer, against any claim or liability arising from or based on the violation of any law, ordinance, regulation, order or decree, whether by the Contractor or the Contractor's employees. If any discrepancy or inconsistency is discovered in the plans, drawings, specifications or contract for the work in relation to any law, ordinance, regulation, order or decree, the Contractor shall forthwith report the same to the Engineer in writing.

Caltrans additionally notes that the Mendocino County Air Quality Management District will enforce compliance by site inspections (unique to this district). Furthermore, their web site clearly states the conditions on <http://www.co.mendocino.ca.us/aqmd/Diesel.htm>. Standard Condition Number 3 is included to additionally insure compliance.

### **Groundwater Resources**

The site is located within an area designated as a Critical Water Resources area (CWR) as shown in the 1982 Coastal Groundwater Study prepared by the Department of Water Resources.

The application was referred to the Division of Environmental Health, who commented that they can clear the project. No adverse impacts to groundwater resources are anticipated.

**Transportation/Circulation**

The purpose of the project is to maintain the roadway in working order in the least disruptive fashion.

Impacts to circulation resulting from construction activities should be minimal. Caltrans will construct the new alignment, and when that is completed, they will switch traffic to the new alignment, and then take out the old alignment. When the switch over takes place there might be a 24 hour interruption until the changeover is completed. The staging area is located on the East side of the highway and should have minimal impacts to traffic aside from trucks entering the staging area.

The project was referred to the County Department of Transportation (DoT) who responded by recommending a condition of approval requiring an encroachment permit and protection of the road approach if Caltrans is to work within the County right of way. The condition is included as Special Condition Number 4.

**Zoning Requirements**

The project complies with the zoning requirements for the Range Lands District set forth in Chapter 20.368, and with all other zoning requirements of Division II of Title 20 of the Mendocino County Code.

**PROJECT FINDINGS AND CONDITIONS:** Pursuant to the provisions of Chapter 20.532 and Chapter 20.536 of the Mendocino County Code, the Coastal Permit Administrator approves the proposed project, and adopts the following findings and conditions.

**FINDINGS:**

1. The proposed development is in conformity with the certified Local Coastal Program; and
2. The proposed development will be provided with adequate utilities, access roads, drainage and other necessary facilities; and
3. The proposed development is consistent with the purpose and intent of the applicable zoning district, as well as all other provisions of Division II, and preserves the integrity of the zoning district; and
4. A Mitigated Negative Declaration has been conducted by Caltrans, and the County is in agreement that the proposed development, if constructed in compliance with the conditions of approval, will not have any significant adverse impacts on the environment within the meaning of the California Environmental Quality Act; and
5. The proposed development will not have any adverse impacts on any known archaeological or paleontological resource; and
6. Other public services, including but not limited to, solid waste and public roadway capacity have been considered and are adequate to serve the proposed development.

7. The proposed development is in conformity with the public access and public recreation policies of Chapter 3 of the California Coastal Act and Coastal Element of the General Plan.
8. As conditioned, the following findings can be made for development proposed within Environmentally Sensitive Habitat Areas:
  - (a) The resource as identified will not be significantly degraded by the proposed development.
  - (b) There is no feasible less environmentally damaging alternative.
  - (c) All feasible mitigation measures capable of reducing or eliminating project related impacts have been adopted.

**STANDARD CONDITIONS:**

1. This action shall become final on the 11<sup>th</sup> day following the decision unless an appeal is filed pursuant to Section 20.544.015 of the Mendocino County Code. The permit shall become effective after the ten working day appeal period to the Coastal Commission has expired and no appeal has been filed with the Coastal Commission. The permit shall expire and become null and void at the expiration of two years after the effective date except where construction and use of the property in reliance on such permit has been initiated prior to its expiration.
2. The application, along with supplemental exhibits and related material, shall be considered elements of this permit, and that compliance therewith is mandatory, unless an amendment has been approved by the Coastal Permit Administrator.
3. This permit shall be subject to the securing of all necessary permits for the proposed development from County, State and Federal agencies having jurisdiction.
4. The applicant shall secure all required building permits for the proposed project as required by the Building Inspection Division of the Department of Planning and Building Services.
5. This permit shall be subject to revocation or modification upon a finding of any one or more of the following:
  - a. The permit was obtained or extended by fraud.
  - b. One or more of the conditions upon which the permit was granted have been violated.
  - c. The use for which the permit was granted is conducted so as to be detrimental to the public health, welfare or safety, or to be a nuisance.
  - d. A final judgment of a court of competent jurisdiction has declared one or more conditions to be void or ineffective, or has enjoined or otherwise prohibited the enforcement or operation of one or more such conditions.

6. If any archaeological sites or artifacts are discovered during site excavation or construction activities, the applicant shall cease and desist from all further excavation and disturbances within one hundred (100) feet of the discovery, and make notification of the discovery to the Director of the Department of Planning and Building Services. The Director will coordinate further actions for the protection of the archaeological resources in accordance with Section 22.12.090 of the Mendocino County Code.

**SPECIAL CONDITIONS:**

1. The proposed project shall comply with the all of the applicable mitigation measures contained in the *Mitigated Negative Declaration and Initial Study (EA 01-47480)*, prepared by the State of California Department of Transportation, October 2008 (Appendix A), as amended (Appendix C), and in the *Coastal Wetland/ESHA Study for the Route 1 Realignment Project, Post Mile 38.8/38.92 in Mendocino County, EA 47480, October 2010*.

It shall be the responsibility of the applicant to provide a copy of the mitigation measures adopted as a part of the Mitigated Negative Declaration, together with copies of any other required conditions of approval of CDP 36-2010, to any contractors, organizations, or volunteer groups engaged to perform work on the site in order that they are fully aware of the conditions of this permit and that all work performed is in compliance with all applicable mitigation measures and conditions.

2. At such time as an adjoining section of the California Coastal Trail is accepted by a management entity or the County is otherwise ready to develop the section of Coastal Trail associated with the subject project, the County shall enter into a maintenance agreement with Caltrans allowing for a trail encroachment in the 15 foot wide easement location identified within the Caltrans right of way as shown in Exhibit N, or as revised by engineering and/or natural resource studies at the time of development.
3. The following measures, adapted from measures recommended by the Caltrans Landscape Architect, are included as conditions of approval of the Coastal Development Permit as follows:
  - a. Any downdrain pipe visible from the roadway shall be colored to blend with surroundings. Black or dark brown are most recommended.
  - b. As feasible, cut slopes visible from the highway shall be graded to mimic the adjacent topography. Any cut slopes that rise 3 feet or greater above the highway should have a 4:1 slope or flatter.
  - c. Any temporary access road proposed shall be graded to a natural contour and revegetated with native species as soon as possible after project completion.
  - d. Regarding the temporary construction staging area, any alterations to the existing contour created by the contractor shall be graded to previous conditions and revegetated with native species as soon as possible after project completion.
  - e. As feasible, any removed barbed wire fencing should be replaced with similar materials including weathered posts and standard barbed wire fencing.
4. In conformance with encroachment permit procedures administered by the Mendocino County Department of Transportation, the applicant shall obtain an encroachment permit

**STAFF REPORT FOR COASTAL DEVELOPMENT  
STANDARD PERMIT**

**CDP# 36-2010 (Caltrans)  
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CPA-17**

from the Department if any construction activities are planned within the County Maintained Road Right of Way. The applicant shall protect the approach onto Navarro Bluff Road (CR 517A).

Staff Report Prepared By:

April 18, 2011

Date

(Original Signed)

Teresa Spade  
Planner II

Attachments: Exhibit A Location Map  
Exhibit B Project Area Map  
Exhibit C Zoning Display Map  
Exhibit D California Natural Diversity Database Map  
Exhibit E 100 Year Flood Zone and Coastal Flood Velocity (Wave Action) Map  
Exhibit F Orthophoto  
Exhibit G Coastal Records Project Photo  
Exhibit H Contour Grading Plan and Profile  
Exhibit I Construction Details  
Exhibit J Right of Way Map A  
Exhibit K Right of Way Map B  
Exhibit L Wetland Impacts Map  
Exhibit M Revegetation Map  
Exhibit N Conceptual Plan for Coastal Trail Corridor  
Appendix A Mitigated Negative Declaration and Addendum

Appeal Period: Ten calendar days for the Mendocino County Board of Supervisors, followed by ten working days for the California Coastal Commission following the Commission's receipt of the Notice of Final Action from the County.

Appeal Fee: \$945 (For an appeal to the Mendocino County Board of Supervisors.)

**SUMMARY OF REFERRAL AGENCY COMMENTS:**

Planning – Ukiah	No comment.
Department of Transportation	Encroachment permit needed if any improvements would be within the County road right of way. County road to be protected during construction.
Environmental Health – Fort Bragg	DEH can clear this CDP.
Building Inspection – Fort Bragg	No comment.
Assessor	No response.
Air Quality Management District	Diesel equipment must be carb compliant. Portable diesel equipment must be properly permitted.
Department of Fish & Game	No response.
USFWS	Within range of Behrens silverspot butterfly and CRLF.
Native Plant Society	No response.

**STAFF REPORT FOR COASTAL DEVELOPMENT  
STANDARD PERMIT**

**CDP# 36-2010 (Caltrans)  
April 28, 2011  
CPA-18**

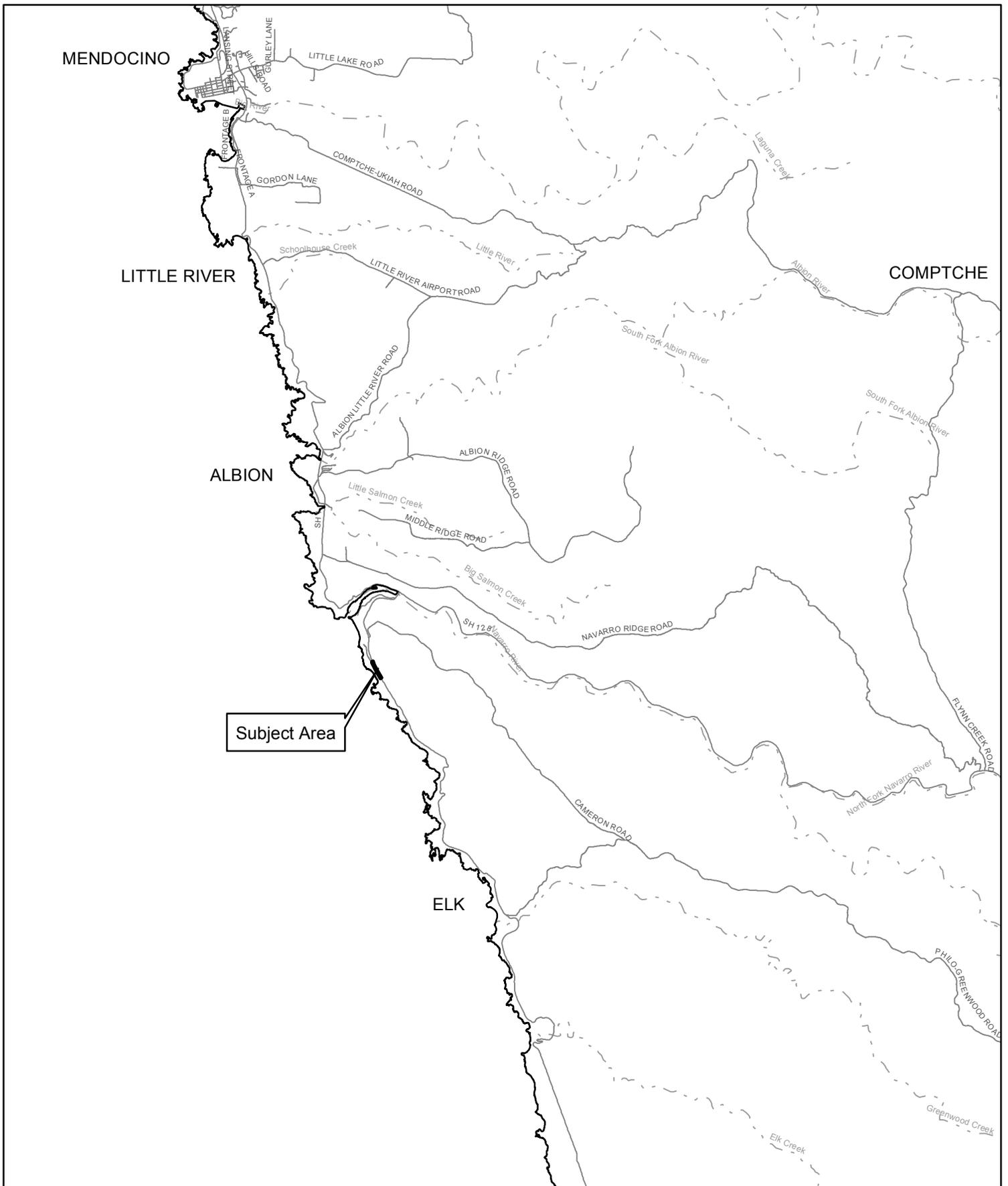
Coastal Commission

Concerns including possible avoidance of wetlands, highly scenic area, and geotechnical stability.

Army Corps of Engineers  
Ag Commissioner

No response.

No response.

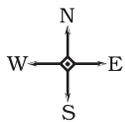


OWNER: CALTRANS  
CASE: CDP 32-2010  
MILE POST: BETWEEN MILE POST 38.5 TO 38.8

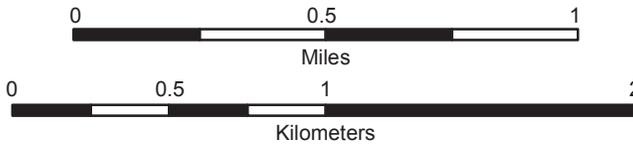
**LOCATION MAP**

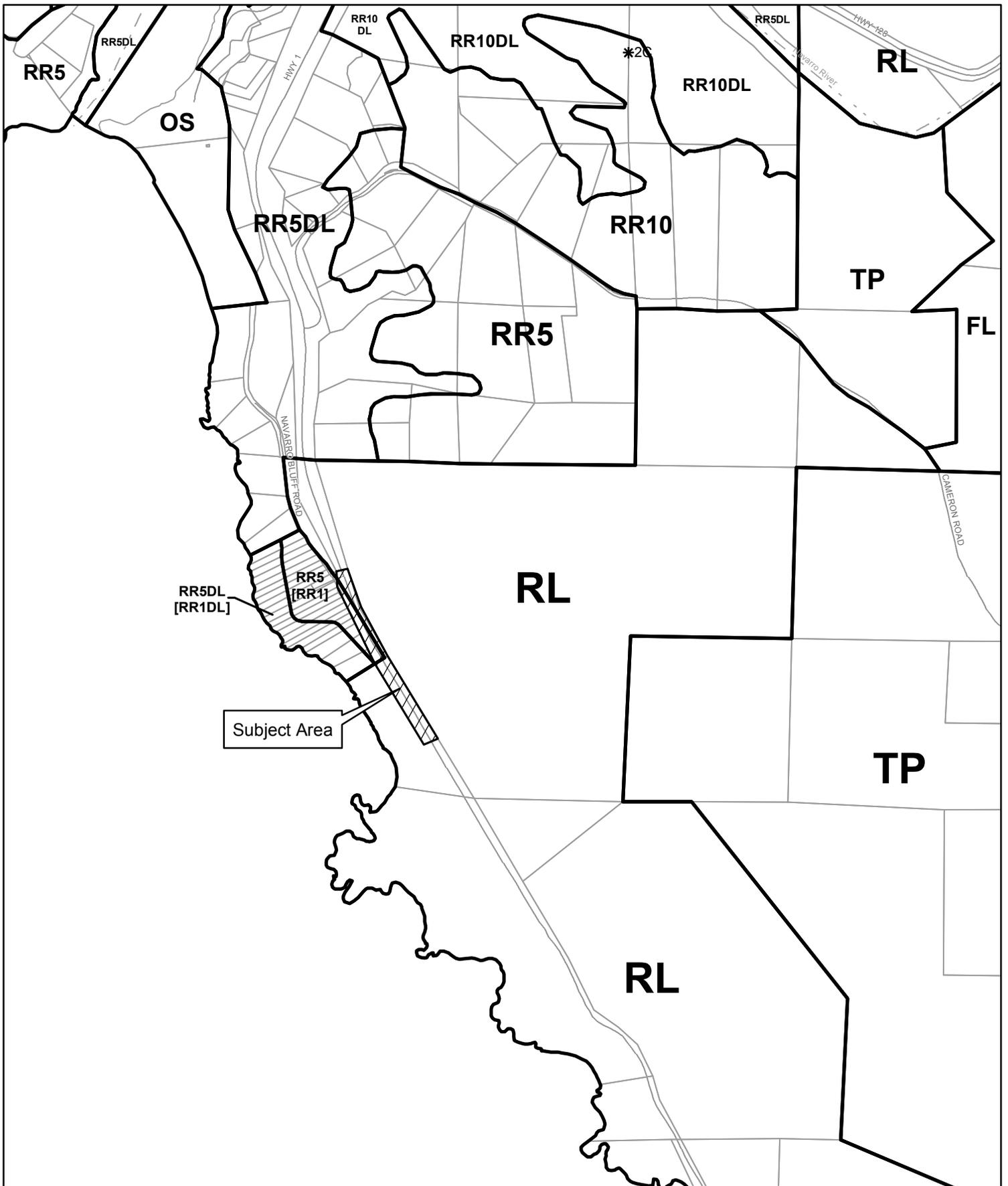
Parcel lines are approximate. Parcel lines on this map are NOT SURVEY LINES, they are for viewing purposes only and should not be used to determine legal boundary lines. Parcel line can be over 200 feet off. (Parcel lines are as of October 2009)





PORTIONS OF ALBION AND ELK  
7.5 MINUTE QUADRANGLES



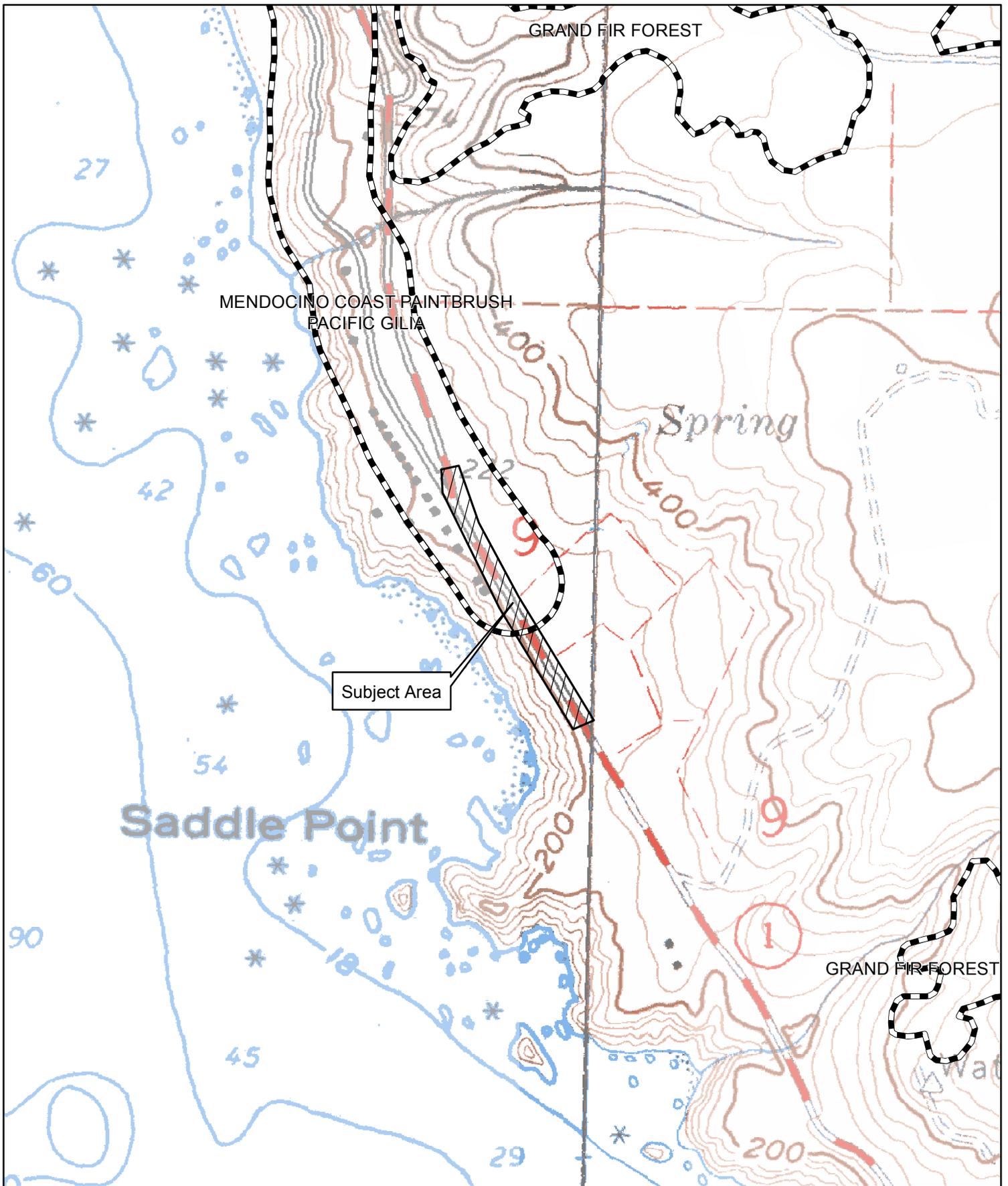


OWNER: CALTRANS  
CASE: CDP 36-2010  
MILE POST: BETWEEN MILE POST 38.5 TO 38.8

**ZONING DISPLAY MAP**

Parcel lines are approximate. Parcel lines on this map are NOT SURVEY LINES, they are for viewing purposes only and should not be used to determine legal boundary lines. Parcel line can be over 200 feet off. (Parcel lines are as of October 2009)



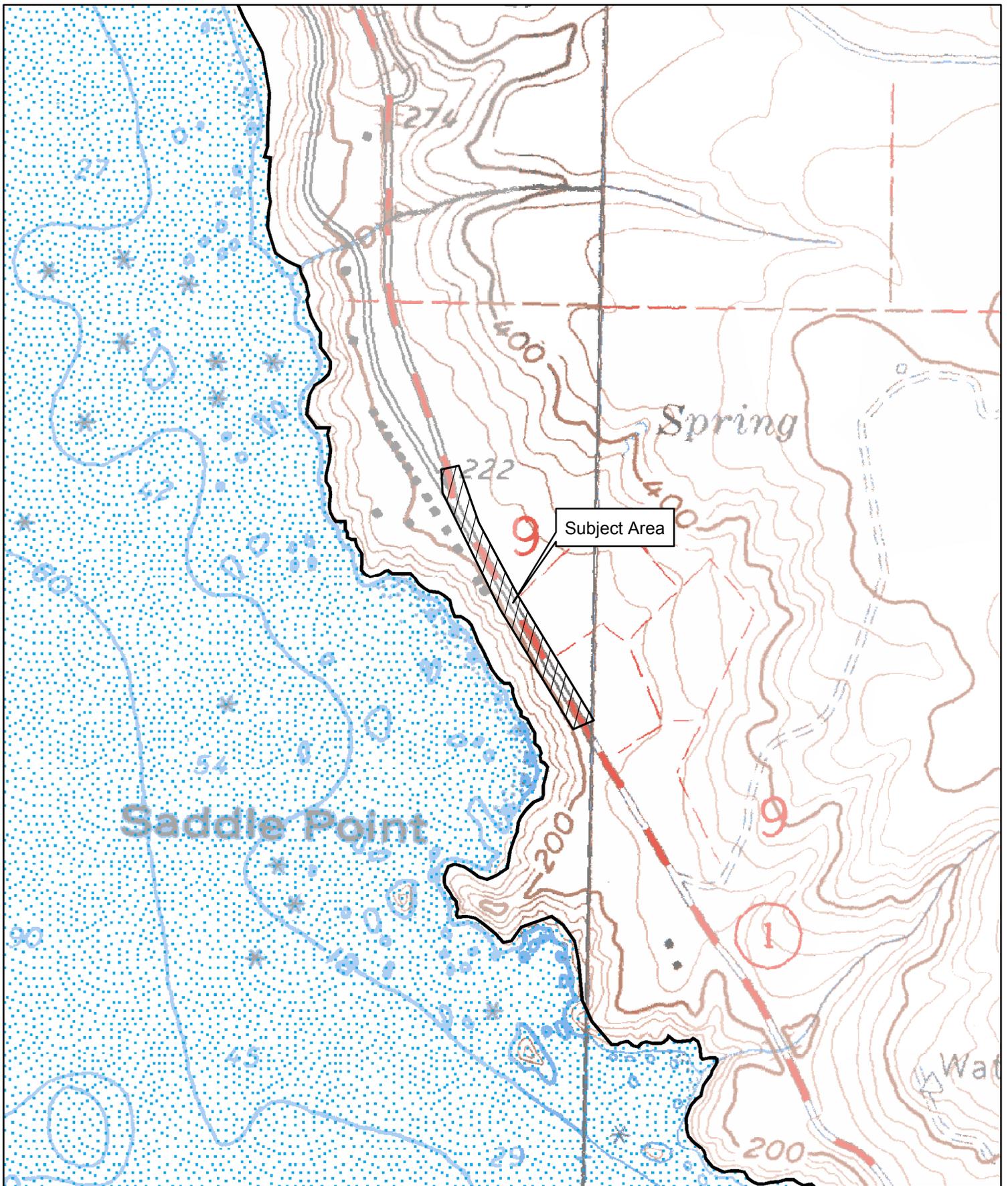


OWNER: CALTRANS  
CASE: CDP 36-2010  
MILE POST: BETWEEN MILE POST 38.5 TO 38.8

**CALIFORNIA NATURAL DIVERSITY  
DATABASE RAREFIND** Januray 2011

Parcel lines are approximate. Parcel lines on this map are NOT SURVEY LINES, they are for viewing purposes only and should not be used to determine legal boundary lines. Parcel line can be over 200 feet off. (Parcel lines are as of October 2009)





OWNER: CALTRANS  
CASE: CDP 36-2010  
MILE POST: BETWEEN MILE POST 38.5 TO 38.8

 **100 YEAR FLOOD ZONE and COASTAL FLOOD VELOCITY (WAVE ACTION)**

Parcel lines are approximate. Parcel lines on this map are NOT SURVEY LINES, they are for viewing purposes only and should not be used to determine legal boundary lines. Parcel line can be over 200 feet off. (Parcel lines are as of October 2009)

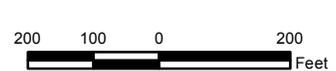


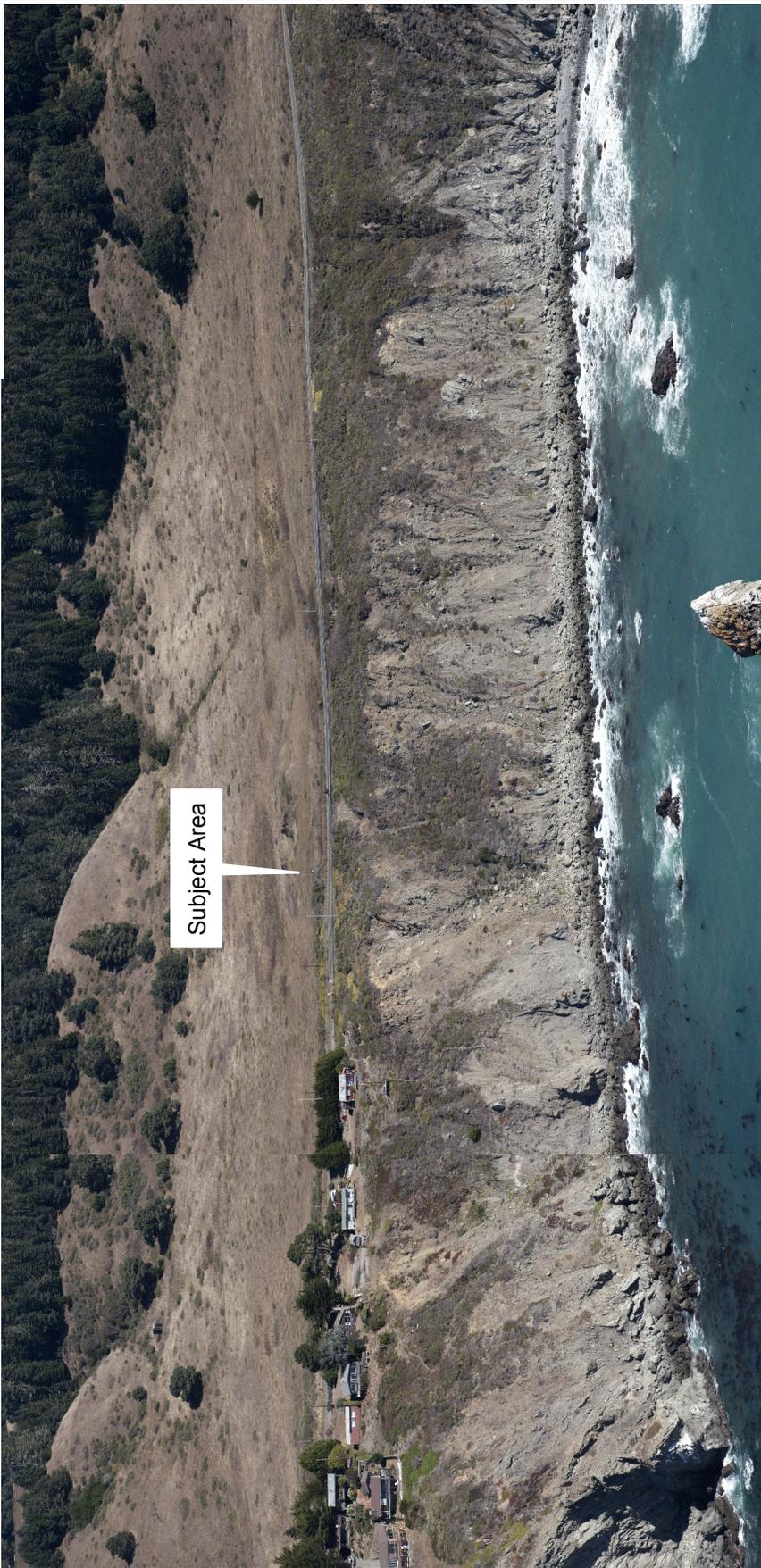


OWNER: CALTRANS  
CASE: CDP 36-2010  
MILE POST: BETWEEN MILE POST 38.5 TO 38.8

**ORTHOPHOTO - June 2010**

Parcel lines are approximate. Parcel lines on this map are NOT SURVEY LINES, they are for viewing purposes only and should not be used to determine legal boundary lines. Parcel line can be over 200 feet off. (Parcel lines are as of October 2009)





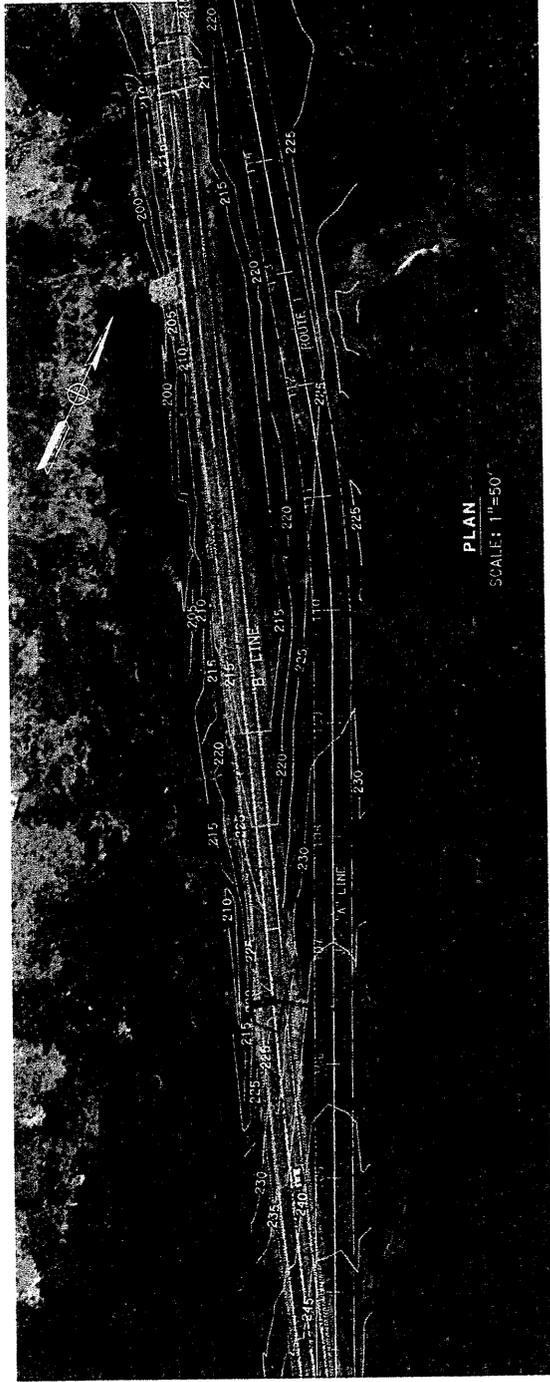
OWNER: CALTRANS  
CASE: CDP 36-2010  
MILE POST: BETWEEN MILE POST 38.5 TO 38.8

**PHOTO OCTOBER 2009**  
CALIFORNIA COASTAL RECORDS PROJECT  
COPYRIGHT resourcestrategies@usa.net

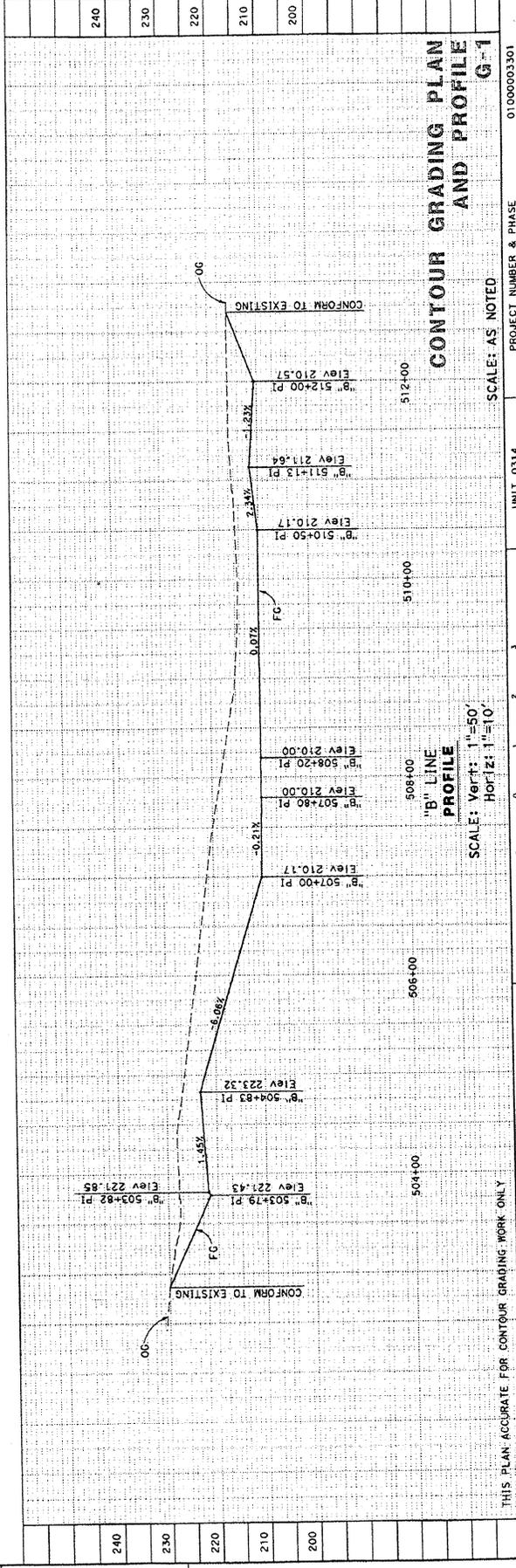
Not To Scale



POST MILES TOTAL PROJECT NO. SHEETS  
 01 Meth 1 38.5/38.8



PLAN  
 SCALE: 1"=50'



"B" LINE  
 PROFILE  
 SCALE: Vert: 1"=50'  
 Horiz: 1"=10'

CONTOUR GRADING PLAN  
 AND PROFILE  
 G-1

SCALE: AS NOTED  
 PROJECT NUMBER & PHASE  
 UNIT 0314  
 0100003301

CHECKED BY	DATE REVISD
DESIGNED BY	REVISD BY
DESIGNED BY	REVISD BY
CHECKED BY	DATE REVISD
CHECKER	
ERIC SHADA	

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 FUNCTIONAL SUPERVISOR  
 LUCY KOSTRZEMA  
 DESIGN  
 10-05-10 DATE PLOTTED => 19-OCT-2010  
 TIME PLOTTED => 12:08

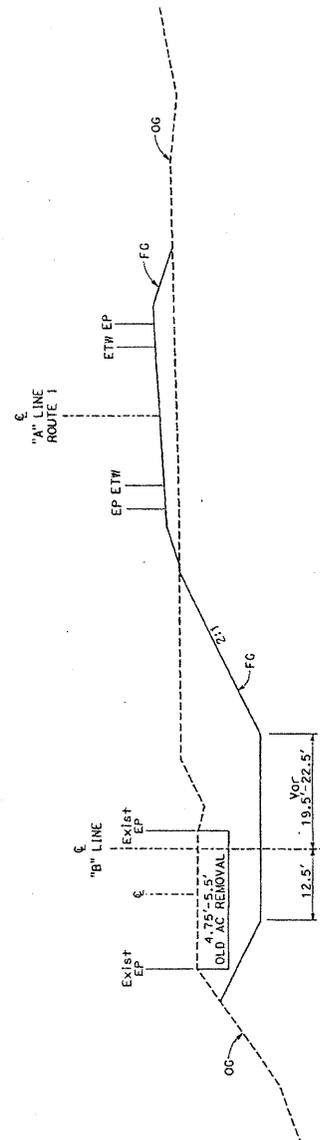
THIS PLAN ACCURATE FOR CONTOUR GRADING WORK ONLY  
 BORDER LAST REVISED 7/2/2010  
 DRAWING NO. 11111  
 PLOT FILE => 1174800001\_COLOR.dgn

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
01	Men	1	38.5/38.8		

REGISTERED CIVIL ENGINEER  
**DESIGN STUDY**  
 DATE \_\_\_\_\_  
 PROJECT NO. \_\_\_\_\_  
 THE ENGINEER'S FIRM SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OF THIS INFORMATION FOR



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN	FUNCTIONAL SUPERVISOR	LUCY KOSTRZEMA	CHECKED BY	DATE REVISED	REVISIONS
Eric Shada	Eric Shada	Eric Shada	Eric Shada	Eric Shada	Eric Shada	Eric Shada



**GRADING DETAIL**  
 "B" 504+83 TO "B" 511+13

**CONSTRUCTION DETAILS**  
**C-1**

NOT TO SCALE

PROJECT NUMBER & PHASE  
 UNIT 0314

RELATIVE HORISZ. SCALE  
 1" = 15' HORIZONTAL

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 BOP FILE => 1474800001.dgn

BORDER LAST REVISED 7/2/2010

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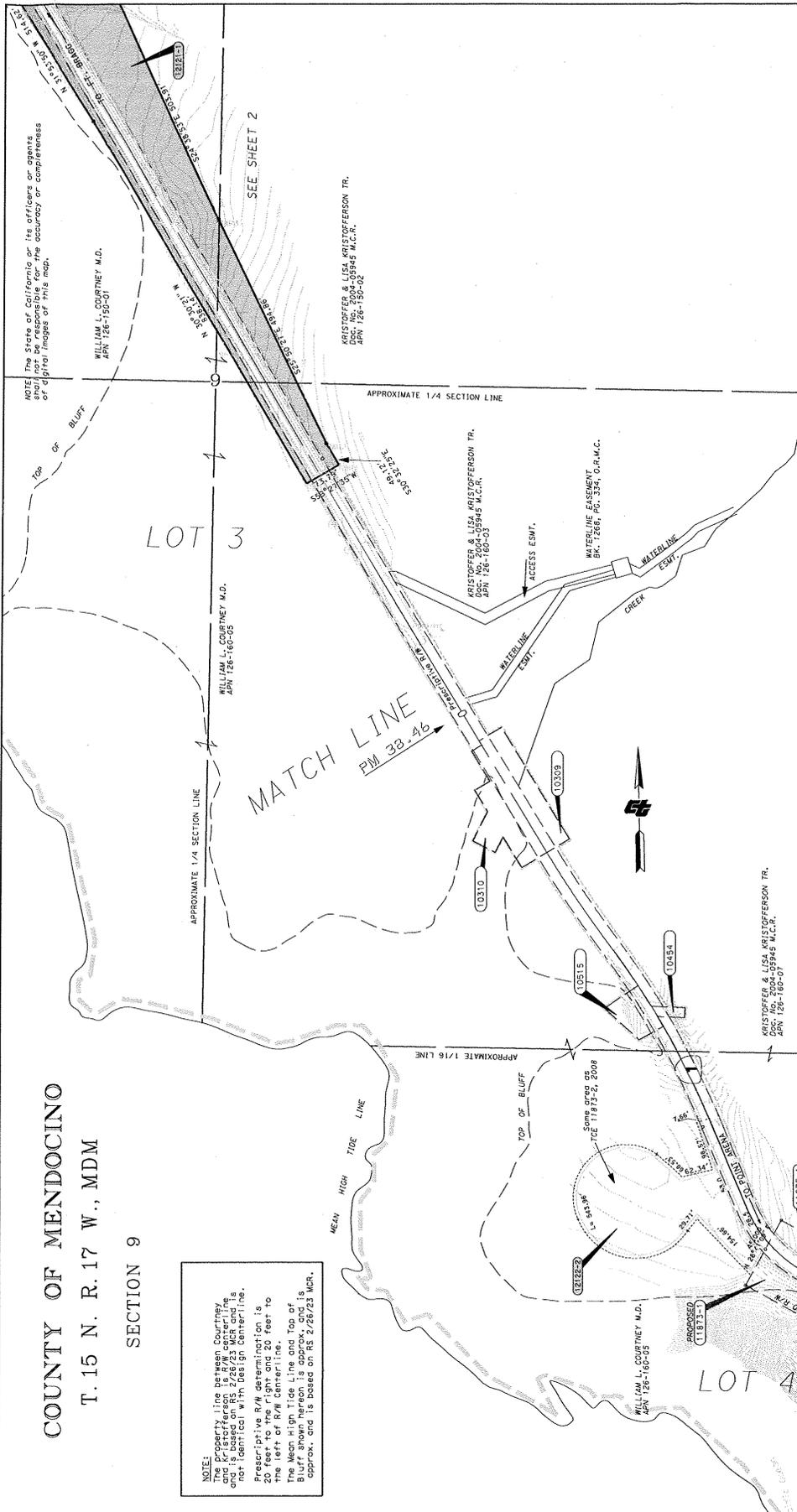


# COUNTY OF MENDOCINO

## T. 15 N. R. 17 W., MDM

### SECTION 9

**NOTES:**  
 The property line between Courtney and Kristofferson is 16' 23" wider than the R/W centerline and is not identical with the Design Center Line. Prescriptive R/W determination is 20 feet to the right and 20 feet to the left of R/W centerline. The Mean High Tide Line and Top of Bluff are shown for information only and are approx. and is based on RS 2/26/23 MCR.



**STATE OF CALIFORNIA**  
**BUSINESS, TRANSPORTATION AND HOUSING AGENCY**  
**DEPARTMENT OF TRANSPORTATION**  
**RIGHT OF WAY**  
**APPRAISAL MAP**  
**MAP NO. 01-MEN1FM38.46**  
 FOR PREVIOUS R/W INFORMATION SEE  
 MAPS 01 - MEN - 1 (DAST File 0933)

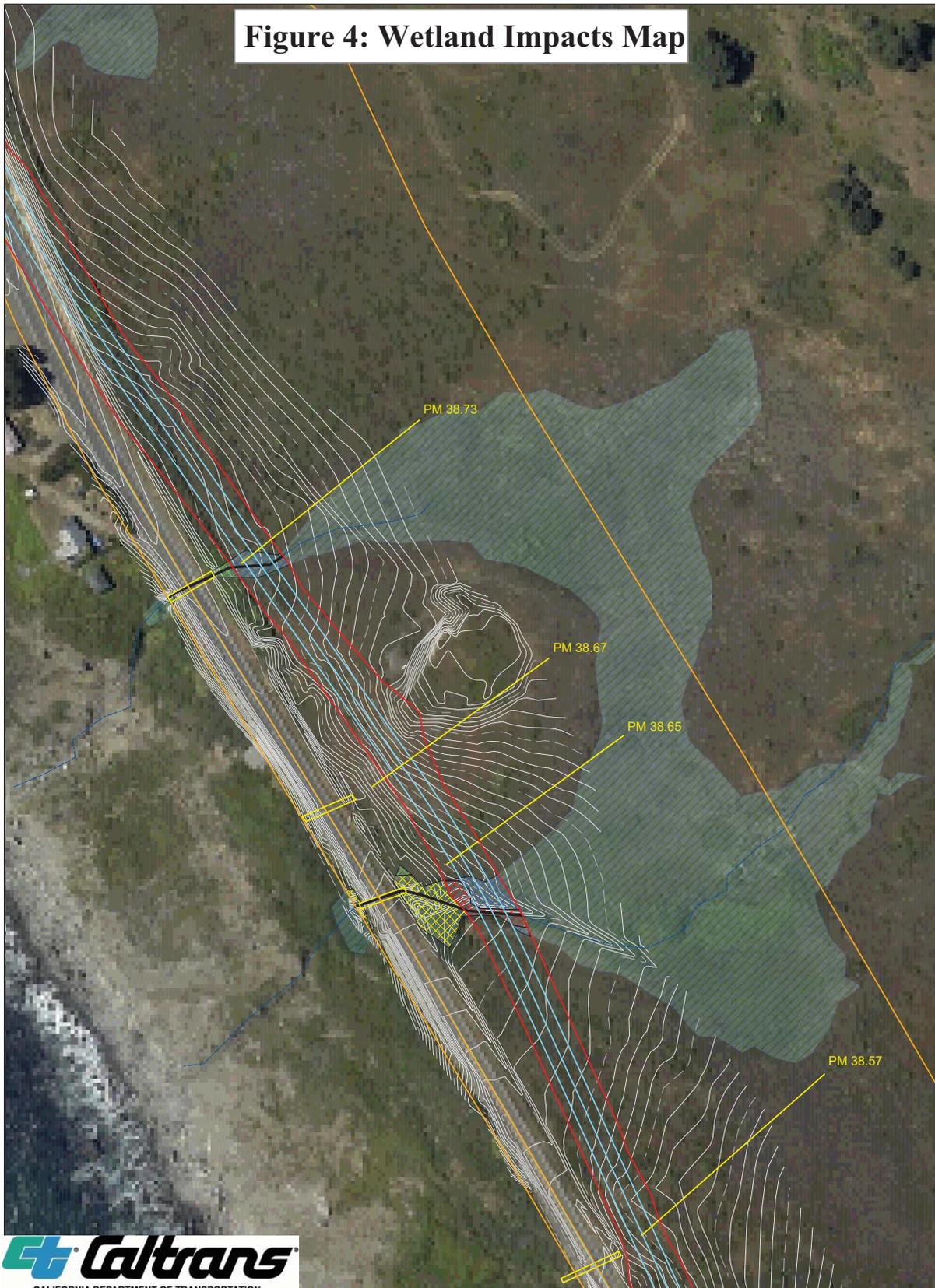
**GRANTOR NOTES:**  
 1. Areas in the adjoining public way.  
 2. Indicate Unservicing Fee (UF) Area.  
 3. Indicate Unimproved Area (UA).  
 4. All dimensions are in feet unless otherwise noted.

**LEGEND:**  
 - - - - - Access Prohibited  
 - - - - - Existing R/W Superimposed  
 - - - - - Access Opening (Private)  
 - - - - - Indicate Found Monument  
 - - - - - Indicate Contour  
 - - - - - point, above not float  
 - - - - - Title to State  
 - - - - - Document or Instrument number

PARCEL#	GRANTOR	AREAS (SQUARE FEET OF GS NOTED)	REMARKS
		TOTAL	REQUIRED [UF] EXCESS [UF] REMAINDER
12121-2	WILLIAM L. COURTNEY M.D.	59 AC	0.24 AC
12121-1	WILLIAM L. COURTNEY M.D.	519 AC	0.81 AC
12121-2	KRISTOFFERSON REVOCABLE TR.	519 AC	0.81 AC
12121-3	KRISTOFFERSON REVOCABLE TR.	0.70 AC	

DATE	REVISIONS	SHEET NO.	TOTAL SHEETS
8-13-09	BY	1	2

**Figure 4: Wetland Impacts Map**



**Aerial Map, Wetland Map  
Caltrans Mendocino 1 Coast Highway  
Storm Damage Project**

**EA: 01-474800**

Elk USGS 7.5-Minute Quadrangle  
In: Un-named Intermittent Streams  
running directly into the Pacific Ocean  
At: State Route 1, Post Miles 38.5-38.75  
County of: Mendocino State of: California

Delineation Performed According to 1987 Delineation Manual By:  
Michael Cane, Caltrans Biologist  
on May 9th, 2008

Map Prepared By:  
Michael Cane, Caltrans Biologist  
on May 16th, 2008



Legend	
Proposed Alignment	Permanent Wetland Impacts
Proposed Cut and Fill	Temporary Wetland Impacts
Environmental Study Area	Permanent Riparian Impacts
Existing Culverts	Temporary Riparian Impacts
Impacted Streams	Wetlands
Streams	Contours (6 inch interval)

1:1,200  
1 Inch = 100 Feet





Coastal Scrub 16,170 ft<sup>2</sup>

Coastal Scrub 7790 ft<sup>2</sup>

LOCATION 1  
STAGING AREA  
REQUIRED FOR  
SOIL STOCKPILE

Seasonal Wetland 9,310 ft<sup>2</sup>

Hookers Willow (Riparian Wetland) 6810 ft<sup>2</sup>

Seasonal Wetland 1,960 ft<sup>2</sup>

Coastal Prairie 4410 ft<sup>2</sup>

Coastal Prairie 8575 ft<sup>2</sup>

Hookers Willow (Riparian Wetland) 820 ft<sup>2</sup>

Coastal Scrub 35,370 ft<sup>2</sup>

OVERFLOW WEIR h= 3'

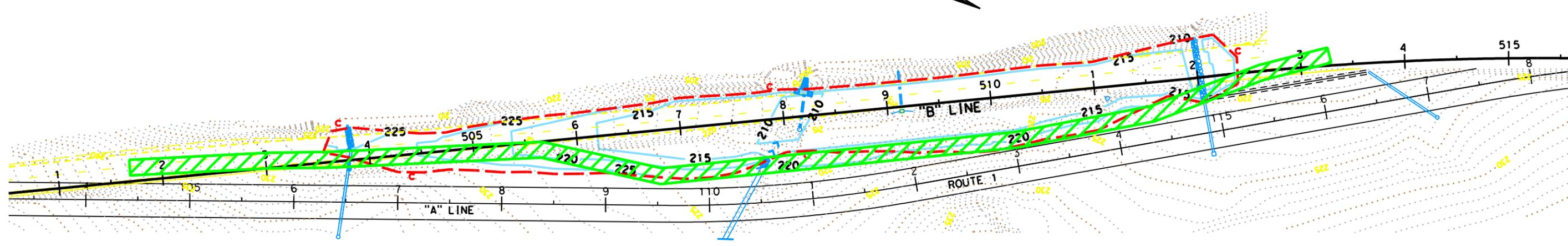
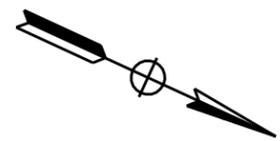
R/W LINE

Navarro Bluffs Revegetation Plan

PM 38.5/38.75

01 - 474801





 CONCEPTUAL TRAIL LOCATION 15' WIDE

**PLAN**  
NO SCALE

## CONCEPTUAL PLAN FOR COASTAL TRAIL CORRIDOR

APRIL 15, 2011  
01-47480

## **Appendix A**

# Highway 1 Realignment Project

Mendocino County, California

01-MEN-1-(PM 38.38-38.92)

EA 01-47480

## Focused Initial Study with Proposed Mitigated Negative Declaration



Prepared by the  
State of California Department of Transportation  
October 2008

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



# General Information About This Document

## *What's in this document?*

The California Department of Transportation (Caltrans) has prepared this Initial Study, which examines the potential environmental impacts of alternatives being considered for the proposed project located in Mendocino County, California. The document describes why the project is being proposed, the existing environment that could be affected by the project, and the proposed avoidance, minimization, and/or mitigation measures.

## *What you should do?*

- Please read this Initial Study. Additional copies of this document as well as the technical studies are available for review at the Caltrans District 3 Office of Environmental Management (S-4) located at 2389 Gateway Oaks Drive, Room 100, Sacramento, CA 95833 and at the Mendocino Library 10591 William Street, Mendocino, CA 95460
- We welcome your comments. If you have any concerns regarding the proposed project, send your written comments to Caltrans by the deadline. Submit comments via U.S. mail to Caltrans at the following address:

Mr. Lupe Jiménez  
Environmental Branch Chief  
California Department of Transportation  
P.O. Box 942874  
Sacramento, CA 94274-0001

Submit comments via e-mail to: [Lupe\\_Jimenez@dot.ca.gov](mailto:Lupe_Jimenez@dot.ca.gov)

Submit comments by the deadline: November 26, 2008.

## *What happens next?*

After comments are received from the public and reviewing agencies, Caltrans may 1) give environmental approval to the proposed project, 2) do additional environmental studies, or 3) abandon the project. If the project is given environmental approval and funding is appropriated, Caltrans could design and construct all or part of the project.

For individuals with sensory disabilities, this document is available in Braille, large print, on audiocassette, or computer disk. To obtain a copy in one of these alternate formats, please call or write to Caltrans, Attn: Lupe Jiménez, Environmental Branch Chief, California Department of Transportation, P.O. Box 942874, Sacramento, CA 94274-0001; (916) 274-0584 Voice, or use the California Relay Service TTY number, 1-800-735-2929.

SCH:  
01-MEN-1-(PM 38.38-38.92)  
EA 01-47480

Highway 1 Realignment Project  
01-MEN-1-(PM 38.38-38.92)  
EA 01-47480

**FOCUSED INITIAL STUDY with Proposed Mitigated Negative Declaration**

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

THE STATE OF CALIFORNIA  
Department of Transportation

10/24/08  
Date of Approval



John Webb, Chief  
Chief, Office of Environmental Services  
North Region Environmental Planning  
California Department of Transportation

## Proposed Mitigated Negative Declaration

Pursuant to: Division 13, Public Resources Code

### **Project Description**

The California Department of Transportation (Caltrans), in conjunction with the Federal Highway Administration (FHWA), proposes to realign a section of Highway 1 that was damaged during the 2005/2006 storms in Mendocino County. The project is located in Mendocino County on Highway 1 near Albion between post mile (PM) 38.38 and 38.92. The scope of this project consists of realigning the roadway to the east and decommissioning the existing roadway. The asphalt concrete (AC) and aggregate base of the decommissioned roadway will be removed. Drainage work will consist of removal and relocation of culverts with placement of rock slope protection at the outlets.

### **Determination**

This Proposed Mitigated Negative Declaration is included to give notice to interested agencies and the public that it is Caltrans' intent to adopt a Mitigated Negative Declaration for this project. This does not mean that Caltrans' decision regarding the project is final. This Mitigated Negative Declaration is subject to modification based on comments received by interested agencies and the public.

Caltrans has prepared an Initial Study for this project and, pending public review, expects to determine from this study that the proposed project would not have a significant effect on the environment for the following reasons:

The proposed project would have no effect on visual aesthetics, agricultural resources, air quality, cultural resources, floodplain, geology/soils, land use/planning, mineral resources, noise, population/housing, hazardous materials, public services, recreation, transportation/traffic, or utilities/service systems.

In addition, the proposed project would have no significant effect on hydrology/water quality.

In addition, the proposed project would have no significantly adverse effect on Biology because the following mitigation measures would reduce potential effects to insignificance:

- Wetlands in the project area cannot be avoided due to the need to realign Highway 1 for safety reasons and to fulfill the project's purpose and need. Permanent impacts will most likely be mitigated on site at a minimum of 1:1 ratio, or if not then by off-site mitigation or by participating in an in-lieu fee program or other program deemed acceptable by the California Coastal Commission and the United States Army Corps of Engineers.
- Restoration for riparian habitat, temporarily affected wetlands, and other temporarily affected waters of the US will occur on-site at a minimum of 1:1 ratio, or other ratio deemed appropriate by the USACE and the California Coastal Commission.

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John D. Webb  
Chief, Office of Environmental Services  
North Region Environmental Planning  
California Department of Transportation

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Date

# Initial Study

## **Project Title**

Highway 1 Realignment Project MEN 1 PM 38.38-38.92

## **Lead Agency Name, Address and Contact Person**

California Department of Transportation, District 3  
2389 Gateway Oaks Drive, Suite 100, Sacramento CA 95833  
Mr. Lupe Jimenez, Environmental Branch Chief S-4  
Phone (916) 274-0557

## **Project Location**

The California Department of Transportation (Caltrans), in conjunction with the Federal Highway Administration (FHWA), proposes repairs to Highway 1 as a result of the 2005/2006 storms in Mendocino County. The project is located in Mendocino County on Highway 1 near Albion between post mile (PM) 38.38 and 38.92.

## **Project Sponsor's Name and Address**

John Webb, Chief, North Region Environmental Management Services  
California Department of Transportation, District 3  
2389 Gateway Oaks Drive, Suite 100, Sacramento CA 95833

## **Purpose**

The purpose of this realignment is to stabilize the roadway by retreating Highway 1 east from the failure area.

## **Need**

This project is needed to maintain the mobility performance of Highway 1 from PM 38.38 to PM 28.92 that has failed due to saturation from heavy winter rains.

## **Description of Project**

During the winter of 2006 heavy rainfall saturated the coastal bluff on which Route 1 runs, causing approximately 1,500 feet of Route 1 to fail. Onsite inspection showed extensive cracking and roadway subsidence. In general, the slope appears to be moving downward and westerly toward the ocean. The purpose of this realignment is to stabilize the roadway by retreating eastward away from the failure area. This project proposes to realign the roadway by retreating to the east of the current alignment from 0 to approximately 100 feet. The new alignment will include 12-foot lanes and 4-foot shoulders. Maximum cut and fill slopes will range from approximately 2:1 to 3:1. The existing roadway, where no longer needed, will be excavated to a depth of five feet and the area re-graded and planted. The asphalt concrete (AC) and aggregate base of the decommissioned roadway will be removed and either sent to a recycle facility or an approved disposal site. The top soil layer in the new alignment will be removed and stored and then spread over the regarded decommissioned roadway to preserve seed stock and other soil organisms. Drainage work will include installation of new culverts where needed and the removal of existing culverts and restoration of existing drainage as part of the decommissioning of the existing roadway. The new drainage structures will generally be aligned with the existing drainage structures. Rock slope protection at the new culvert outlets

will be installed as needed. Existing utilities (phone and electricity) will be relocated as needed. New right of way fencing will be constructed along the new right of way alignment.

### ***Surrounding Land Uses and Setting***

The project area is approximately 6 feet above sea level overlooking the Pacific Ocean in Mendocino County. The community of Elk is located 3.5 miles south of the project area and Point Arena is approximately 19 miles south of the project area. Views within the project area range from expansive views westward of the Pacific Ocean, the coastal bluffs to the north and south and the Coast Range which rises above the shoreline to the east.

The cold waters of the Pacific Ocean moderate the climate along the coast. Summers are often foggy and cool with daily high temperatures ranging from the mid-60s Fahrenheit during the day to the 50s F at night. Although there is little rainfall during summer, dense fog often coats everything with a light covering of moisture. Winters are slightly cooler and often rainy. Temperatures range from 50s F during the day and 40s F at night. The area receives an average of 40.8 inches of rainfall annually most of which occurs between October and April.

Vegetation coverage within the project area is classified as the coastal prairie plant community which includes mostly perennial bunch grasses with other herbaceous plants common on the landscape. Most of the shrubs and trees including cypress and shore pine visible in the project area were planted by local residents and are not native to the coastal bluff ecosystem. The forest edge is visible in the middle and background. To the north, riparian woodlands which include redwood, Douglas fir, big leaf maple, willow, and alder follow the major stream corridors and the redwood forest is visible farther inland towards the east. The area is residential and agricultural.

### ***Permits and Approvals Needed***

The following environmental permits are required for the project:

- A Coastal Development Use Permit from the County of Mendocino
- A 401 Water Quality Certification from the North Coast Regional Water Quality Control Board
- A Section 404 Nationwide permit #14 from the U.S. Army Corps of Engineers
- A Section 1602 Streambed Alteration Agreement from the California Department of Fish and Game
- Notice of Construction (NOC) filed for the CA Construction General Permit
- Caltrans Statewide NPDES Permit

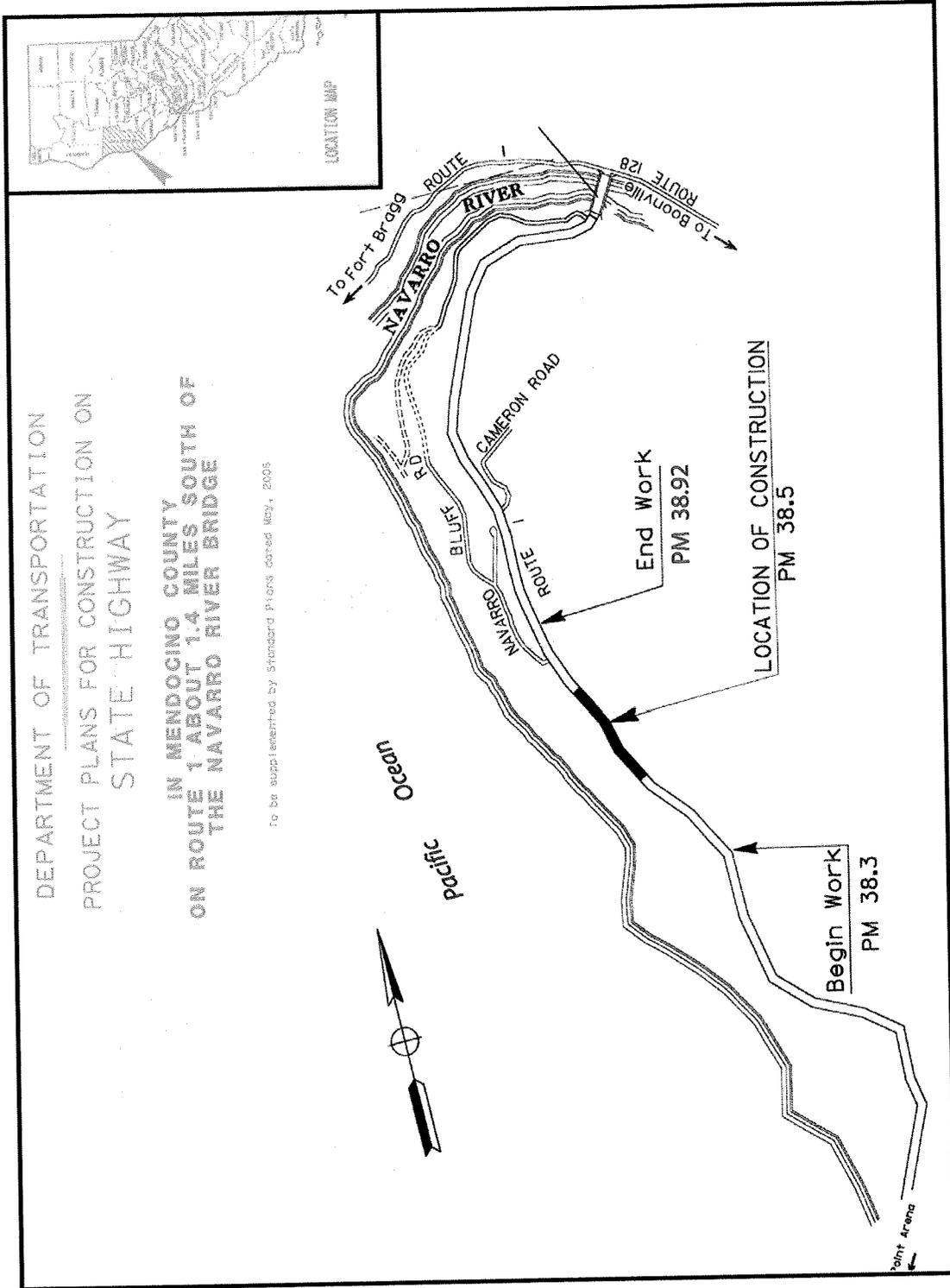
### ***Zoning***

The proposed project parcel is zoned, code sec. 20-540 Variances<sup>1</sup>

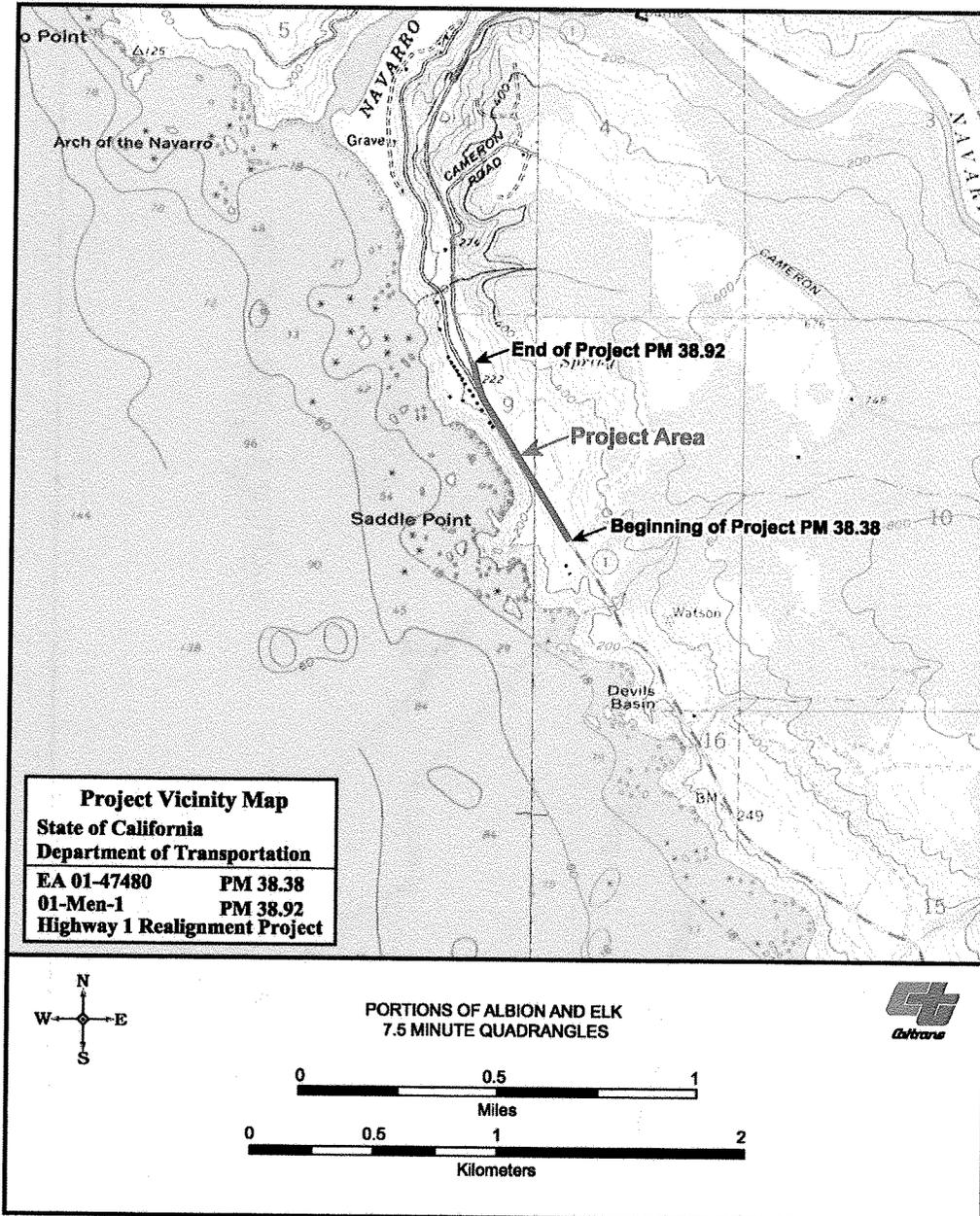
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<sup>1</sup> *A variance is an exception from zone restrictions granted by the Coastal Permit Administrator upon application when, because of special circumstances applicable to the property, including size, shape, topography, location, or surroundings, the strict application of the zoning ordinance deprives the property of privileges enjoyed by other property in the vicinity and under identical zoning classification. Variances shall not be granted to authorize uses or activities which are not otherwise expressly authorized by the regulations of this Division. (Ord. No. 3785 (part), adopted 1991)*

# Project Location Map



# Project Vicinity Map



# Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is "Less than significant impacts with mitigation" as indicated by the checklist on the following pages.

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

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# Impacts Checklist

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The impacts checklist starting on the next page identifies physical, biological, social, and economic factors that might be affected by the proposed project. The California Environmental Quality Act impact levels include “potentially significant impact,” “less than significant impact with mitigation,” “less than significant impact,” and “no impact.”

A brief explanation of each California Environmental Quality Act checklist determination follows each checklist item. The checklist is followed by a focused discussion of Biological and Water Quality issues relating to this project.

Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
--------------------------------	----------------------------------------------	------------------------------	-----------

**I. AESTHETICS** — Would the project:

- a) Have a substantial adverse effect on a scenic vista?     X  
Hydro-seeding/mulching is to used where necessary to minimize storm water impacts.
- b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?     X
- c) Substantially degrade the existing visual character or quality of the site and its surroundings?     X
- d) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?     X

*"No Impact" determination in this section is based on the Visual Impact Assessment, February 2007.*

**II. AGRICULTURE 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 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?     X
- b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?     X
- 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?     X

*"No Impact" determinations in this section are based on various field reviews in 2007 and 2008.*

**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?     X
- b) Violate any air quality standard or contribute

Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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substantially to an existing or projected air quality violation?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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d) Expose sensitive receptors to substantial pollutant concentrations?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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e) Create objectionable odors affecting a substantial number of people?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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***This project is exempt from all air quality conformity analysis requirements per Table 2 of 40 Code of Federal Regulations (CFR) §93.126, subsection Other (“Repair of damage caused by natural disasters...”). No further analysis is required.***

***The proposed project is re-aligning Highway 1 by constructing a two lane highway to replace the old two lane alignment and therefore is not capacity increasing and will not increase operational CO2 emissions.***

**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"/>
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***Discussion of impacts starts at the Biological/Coastal section of this Initial Study.***

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and 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"/>
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***Discussion of impacts starts at the Biological/Coastal section of this Initial Study.***

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"/>
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***Discussion of impacts starts at the Biological/Coastal section of this Initial Study.***

Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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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 type="checkbox"/>	<input checked="" type="checkbox"/>
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e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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**Discussion of impacts starts at the Biological/Coastal section of this Initial Study.**

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"/>
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**"No Impact" determinations in this section are based on the Natural Environmental Study (NES), June 2008.**

**V. CULTURAL RESOURCES — Would the project:**

a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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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"/>
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d) Disturb any human remains, including those interred outside of formal cemeteries?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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**"No Impact" determinations in this section are based on the Historic Property Survey Report, May 2008.**

**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:

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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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.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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 onsite or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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"/>

***"No Impact" determinations in this section are based on the Geotechnical Preliminary Recommendation Report, May 2008.***

**VII. 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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
--------------------------------	----------------------------------------------	------------------------------	-----------

it create a significant hazard to the public or the environment?

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?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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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"/>
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g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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*"No Impact" determination in this section is based on review of the Initial Site Assessment, December 2006.*

**VIII. 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"/>
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*Discussion of impacts starts at the Water Quality and Storm Water Runoff section of this Initial Study.*

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 that 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"/>
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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 that would result in substantial erosion or siltation on- or offsite?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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*Discussion of impacts starts at the Water Quality and Storm Water Runoff section of this Initial Study.*

Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
--------------------------------	----------------------------------------------	------------------------------	-----------

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 that would result in flooding on- or offsite?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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e) Create or contribute runoff water that 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"/>
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***Discussion of impacts starts at the Water Quality and Storm Water Runoff section of this Initial Study.***

f) Otherwise substantially degrade water quality?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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***Discussion of impacts starts at the Water Quality and Storm Water Runoff section of this Initial Study.***

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 that would impede or redirect flood flows?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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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 type="checkbox"/>	<input checked="" type="checkbox"/>
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j) Result in inundation by a seiche, tsunami, or mudflow?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	--------------------------	-------------------------------------

***"No Impact" determinations in this section are based on the Water Quality report, September 2008.***

**IX. LAND USE AND PLANNING — Would the project:**

a) Physically divide an established community?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	--------------------------	-------------------------------------

c) Conflict with any applicable...

Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
--------------------------------	----------------------------------------------	------------------------------	-----------

plan or natural community conservation plan?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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***"No Impact" determinations in this section are based on the Community Impacts technical memorandum, July 2007.***

**X. MINERAL RESOURCES** — Would the project:

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?

<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"/>
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**XI. 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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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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"/>
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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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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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?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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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"/>
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***"No Impact" determinations in this section are based on the Noise Study Report, May 2007.***

**XII. POPULATION AND HOUSING** — Would the project:

Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
--------------------------------	----------------------------------------------	------------------------------	-----------

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"/>
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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"/>
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***“No Impact” determinations in this section are based on the Community Impacts technical memorandum, July 2007.***

### **XIII. PUBLIC SERVICES —**

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?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Police protection?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	--------------------------	-------------------------------------

Schools?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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"/>
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***“No Impact” determinations in this section are based on the Community Impacts technical memorandum, July 2007.***

### **XIV. RECREATION —**

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"/>
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b) Does the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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***"No Impact" determinations in this section are based on the Community Impacts technical memorandum, July 2007.***

**XV. TRANSPORTATION/TRAFFIC** — Would the project:

a) Cause an increase in traffic that 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)?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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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"/>
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d) Substantially increase hazards due 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"/>
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e) Result in inadequate emergency access?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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f) Result in inadequate parking capacity?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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***"No Impact" determinations in this section are based on conversations with the CIA Specialist, August 2008.***

**XVI. UTILITY AND SERVICE SYSTEMS** — Would the project:

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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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?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	--------------------------	-------------------------------------

Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
--------------------------------	----------------------------------------------	------------------------------	-----------

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?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	--------------------------	-------------------------------------

d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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e) Result in a determination by the wastewater treatment provider that 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?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	--------------------------	-------------------------------------

f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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g) Comply with federal, state, and local statutes and regulations related to solid waste?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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***"No Impact" determinations in this section are based on conversations with Project Engineer, August 2008.***

**XVII. MANDATORY FINDINGS OF SIGNIFICANCE —**

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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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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 type="checkbox"/>	<input checked="" type="checkbox"/>
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c) Does the project have environmental effects that

Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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will cause substantial adverse effects on human beings, either directly or indirectly?

# Affected Environment, Environmental Consequences, and Mitigation Measures

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## **Biological Resources**

### ***Regulatory Setting***

Because the proposed project is located adjacent to the Pacific Ocean, there are several federal, state, and local agencies that have jurisdiction over the project site. The Clean Water Act (CWA) established the basic mandates for regulating discharges of pollutants into the waters of the United States. The CWA set requirements for water quality standards for all contaminants in surface waters. In 1999, the State Water Resources Control Board (SWRCB) issued a National Pollution Discharge Elimination System (NPDES) Permit (NPDES NO. CAS000003) that regulates storm water discharges from Caltrans facilities. The permit requires Caltrans to maintain and implement an effective Storm Water Management Plan (SWMP) that identifies and describes the Best Management Practices (BMPs) used to control the discharge of pollutants to waters of the United States.

Upon completion of the final design for this project, the North Coast Regional Water Quality Control Board and Mendocino County Planning Department will be contacted to obtain their jurisdictional permits or approvals. A Notice of Construction will be filed a minimum of 30-days prior to construction to obtain coverage for the project under the California Construction General Permit (General Permit NO. CAS000002) statewide NPDES permit.

## **WETLANDS AND OTHER WATERS**

### ***Regulatory Setting***

Wetlands and other waters are protected under a number of laws and regulations. At the federal level, the Clean Water Act (33 U.S.C. 1344) is the primary law regulating wetlands and waters. The Clean Water Act regulates the discharge of dredged or fill material into waters of the United States, including wetlands. Waters of the United States include navigable waters, interstate waters, territorial seas and other waters that may be used in interstate or foreign commerce. To classify wetlands for the purposes of the Clean Water Act, a three-parameter approach is used that includes the presence of hydrophytic (water-loving) vegetation, wetland hydrology, and hydric soils (soils subject to saturation/inundation). All three parameters must be present, under normal circumstances, for an area to be designated as a jurisdictional wetland under the Clean Water Act.

Section 404 of the Clean Water Act establishes a regulatory program that provides that no discharge of dredged or fill material can be permitted if a practicable alternative exists that is less damaging to the aquatic environment or if the nation's waters would be significantly degraded. The Section 404 permit program is run by

the U.S. Army Corps of Engineers (USACE) with oversight by the Environmental Protection Agency (EPA).

The Executive Order for the Protection of Wetlands (E.O. 11990) also regulates the activities of federal agencies with regard to wetlands. Essentially, this executive order states that a federal agency, such as the Federal Highway Administration, cannot undertake or provide assistance for new construction located in wetlands unless the head of the agency finds: 1) that there is no practicable alternative to the construction and 2) the proposed project includes all practicable measures to minimize harm.

At the state level, wetlands and waters are regulated primarily by the Department of Fish and Game (CDFG) and the Regional Water Quality Control Boards (RWQCB). In certain circumstances, the Coastal Commission (or Bay Conservation and Development Commission) may also be involved. Sections 1600-1607 of the Fish and Game Code require any agency that proposes a project that will substantially divert or obstruct the natural flow of or substantially change the bed or bank of a river, stream, or lake to notify CDFG before beginning construction. If DFG determines that the project may substantially and adversely affect fish or wildlife resources, a Lake or Streambed Alteration Agreement will be required. CDFG jurisdictional limits are usually defined by the tops of the stream or lake banks, or the outer edge of riparian vegetation, whichever is wider. Wetlands under jurisdiction of the ACOE may or may not be included in the area covered by a Streambed Alteration Agreement obtained from the CDFG.

The Regional Water Quality Control Boards were established under the Porter-Cologne Water Quality Control Act to oversee water quality. The RWQCB also issues water quality certifications in compliance with Section 401 of the Clean Water Act.

### ***Affected Environment***

The highway cross-culverts located at PM 38.65 and 38.73 drain two un-named intermittent tributaries into the Pacific Ocean. The current project proposes to remove the existing roadway between PMs 38.38 and 38.92 with the associated cross culverts and construct a new realigned road approximately 100 ft to the east. At this location, Highway 1 runs through a marine terrace bordered by a coastal bluff and coastal mountains. Both *Gilia capitata ssp Pacifica* (Globe Gilia) and *Castilleja mendocinensis* (Mendocino Coast Indian Paintbrush) are California Native Plant Society List 1B species which have been reported as occurring inside the Environmental Study Limits (ESL's) based upon the CNDDDB (attachment 2). During field investigations throughout the flowering season only *Castilleja mendocinensis* was found within the ESL.

The proposed storm damage repair project will result in effects to vegetation communities in which sensitive plant species occur. Surveys for special status plant species have been conducted monthly throughout the flowering season in 2008. The

CDFG is being consulted to insure that potential impacts to CNPS List 1B plants are avoided or minimized, and that project activities do not inhibit long-term conservation efforts for the survival of special status plant species.

Implementation of the proposed storm damage repair project would result in the temporary disturbance and permanent loss of riparian and grassland that provides potential breeding and foraging habitat for a number of bird species protected under the Migratory Bird Treaty Act, or classified as California species of special concern, California fully protected species, or breeding raptors (See Attachment 1). The removal of woody shrubs (coyote bush; *Baccharis pilularis* and Willow; *Salix sp.*) may be required for the removal and realignment of the existing roadway.

### **Potential Impacts**

The highway cross-culverts located at PM 38.65 and 38.73 drain un-named intermittent streams directly into the Pacific Ocean. The intermittent streams are connected by a wetland (Wetland #1) which occupies depressions surrounding an area of persistent bedrock uplands. Another wetland located within the Environmental Study Limit (Wetland #2), will not be impacted (Attachment 3). The current project proposes realigning the highway such that the new highway will cross these streams and associated wetlands approximately 100 feet further east than the current path of the highway. The proposed action will result in permanent impacts and temporary impacts to Wetland # 1 and both un-named intermittent streams located at PM 38.65 and 38.73 (See Table 1 and Attachment 3 for impacts).

Temporary impacts at this site include areas between the existing road and the proposed realignment where construction work will occur on both sides. Some minimal impacts are expected to occur in these areas because of the extent and close proximity of the proposed realignment work. These impacts may include, but are not limited to, changes in hydrologic flow during construction, minimal infiltration of particulate matter (dust) created during construction, the removal of nearby vegetation, and altered wildlife usage patterns.

The proposed action will result in temporary impacts to approximately 98 linear feet of culverted intermittent stream, 100 linear feet of natural flowing intermittent stream as well as permanent impacts to 121 linear feet of natural flowing intermittent stream. The realignment will result in the placement of 810 cubic yards of fill in the stream and the adjacent wetlands located at PM 38.65 and at PM 38.73. The intermittent stream and adjacent wetlands will have 130 cubic yards of excavation removed and will have 2 cubic yards of fill added during construction.

Table 1: Wetland and other Waters of the US impacts.

	<b>PM 38.65</b>	<b>PM 38.73</b>	<b>Total</b>
<b>Permanent Riparian Wetland Impacts</b>	1,154 ft <sup>2</sup>	0 ft <sup>2</sup>	1154 ft <sup>2</sup>
	0.027 acre	0 acre	0.027 acre
<b>Temporary Riparian Wetland Impacts</b>	3,261 ft <sup>2</sup>	0 ft <sup>2</sup>	3,261 ft <sup>2</sup>
	0.075 acre	0 acre	0.075 acre
<b>Permanent Wetland Impacts</b>	1,515 ft <sup>2</sup>	1,217 ft <sup>2</sup>	2,732 ft <sup>2</sup>
	0.035 acre	0.028	0.063 acre
<b>Temporary Wetland Impacts</b>	94 ft <sup>2</sup>	331 ft <sup>2</sup>	425 ft <sup>2</sup>
	0.002 acre	0.008 acre	0.01 acre
<b>Culverted Stream Impacts</b>	50 linear ft	48 linear ft	98 linear ft
<b>Permanent Naturally Flowing Stream Impacts</b>	75 linear ft	25 linear ft	100 linear ft
<b>Temporary Naturally Flowing Stream Impacts</b>	64 linear ft	57 linear ft	121 linear ft

***Avoidance and Minimization***

The following measures will be required for the project.

**1: Establish Environmentally Sensitive Areas**

- Sensitive natural resource features occurring outside of the expected construction impact area will be avoided or minimized by designating these features as “environmentally sensitive areas” (ESAs) on project plans and in project specifications.
- ESA information will be shown on contract plans and discussed in the Special Provisions. ESA provisions may include, but are not limited to, the use of temporary orange fencing to delineate the proposed limit of work in areas adjacent to sensitive resources, or to delineate and exclude sensitive resources from potential construction impacts.
- Contractor encroachment into ESAs will be restricted (including the staging/operation of heavy equipment or casting of excavation materials). ESA provisions shall be implemented as a first order of work, and remain in place until all construction activities are complete.

**2: Comply with Migratory Bird Treaty Act (MBTA)**

- Implementation of the proposed storm damage repair project would result in the temporary disturbance and permanent loss of wooded and grassland that provides potential breeding and foraging habitat for a number of bird species protected under the MBTA, or classified as California species of special concern, California fully protected species, or breeding raptors. The following measures are recommended to reduce project impacts on bird species:

- Minimize removal of native vegetation by locating staging areas and access routes in previously disturbed areas and establishing ESAs;

### 3: Restrict Timing of Vegetation Removal

- If feasible, removal of vegetation shall be conducted in the fall and winter (between September 1<sup>st</sup> and February 14<sup>th</sup>) after fledging and before the initiation of breeding activities.

### 4: Pre-Construction Nesting Bird Surveys

- If vegetation removal during migratory (non-nesting season is determined unfeasible, then pre-construction bird nest surveys shall be performed in spring to determine the location of nest sites within the proposed storm damage repair project areas.
- If active bird nests are found, Caltrans shall consult with USFWS regarding appropriate action to comply with the Migratory Bird Treaty Act of 1918, and with CDFG to comply with provisions of the Fish and Game Code of California.
- If a lapse in project related work of fifteen (15) days or longer occurs, another survey and, if required, consultation with USFWS and CDFG will be required before the work can be reinitiated.

### 5: Minimize Disturbance to Jurisdictional Waters

- All waters and wetlands adjacent to the construction zone that will not be filled as a result of the project will be designated as ESAs, and shall be fenced and signed to assure no inadvertent damage to these resources will occur.
- Disruption of the wetlands, streambeds, and adjacent riparian corridors will be minimized, and vegetation removal shall be limited to the absolute minimum amount required for construction.

### 6: On-site Restoration for all Riparian Habitat, Temporarily Affected Wetlands, and Other Temporarily Affected Waters of the US

- Restoration for riparian habitat, temporarily affected wetlands, and other temporarily affected waters of the US will occur on-site at a minimum of 1:1 ratio if not then by off site mitigation or by participating in an in-lieu fee program or other program deemed acceptable by the California Coastal Commission and the United States Army Corps of Engineers. The North Coast RWQCB also regulates riparian and wetland habitat through the 401 Certification.

### 7: Containment Measures / Best Management Practices

- Caltrans Standard Specifications require the contractor to submit a Storm Water Pollution Prevention Plan (SWPPP). This plan must meet the standards and objectives to minimize water pollution impacts set forth in section 7-1.01G of Caltrans Standard Specifications. These standards/objectives are at times referred to as Best Management Practices

(BMPs).

- Measures will be employed to prevent any construction material, debris, or petroleum products associated with equipment from entering surface waters. BMPs for erosion control will be implemented and in place prior to, during, and after construction in order to prevent silt, sediment, backfill, or petroleum products from entering surface waters.

The SWPPP must also be in compliance with the goals and restrictions identified in the State Water Quality Control Board's Basin Plan for the project area.

### ***Mitigation Measures***

Wetlands in the project area cannot be avoided due to the need to realign Highway 1 for safety reasons and to fulfill the project's purpose and need. Permanent impacts will most likely be mitigated on site at a minimum of 1:1 ratio, or if not then by off site mitigation or by participating in an in-lieu fee program or other program deemed acceptable by the California Coastal Commission, and the United States Army Corps of Engineers, and the North Coast RWQCB.

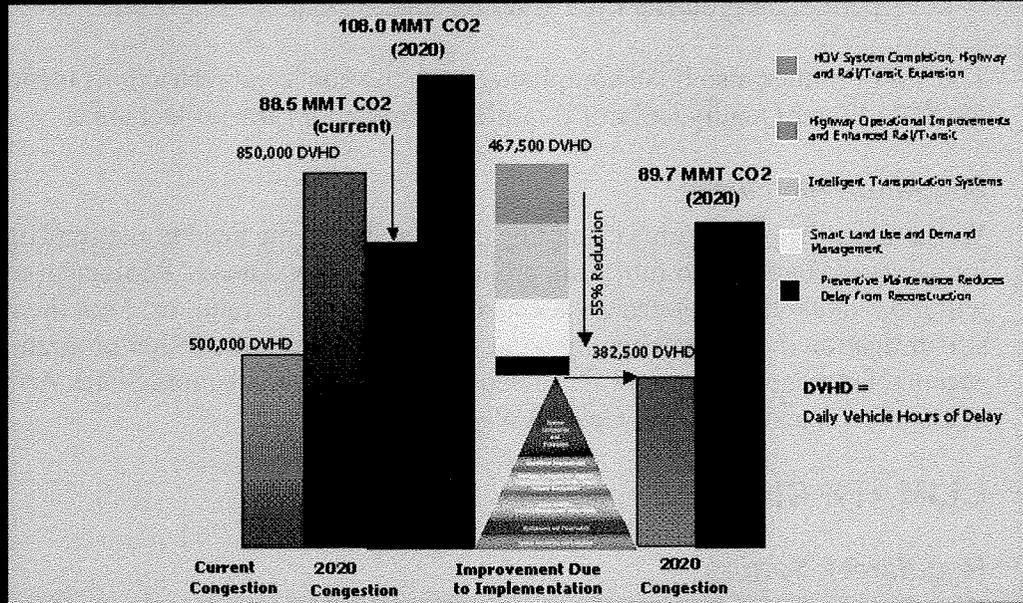
## **CLIMATE CHANGE**

### ***Regulatory Setting***

The propose project is stabilizing and re-aligning Highway 1 by constructing a two lane highway to replace the existing failed two lane alignment and therefore is not capacity increasing and will not increase operational CO2 emissions. This proposed project would therefore have low to no potential for climate change impacts.

The Department continues to be actively involved on the Governor's Climate Action Team as ARB works to implement AB 1493 and help achieve the targets set forth in AB 32. Many of the strategies the Department is using to help meet the targets in AB 32 come from the California Strategic Growth Plan, which is updated each year. Governor Arnold Schwarzenegger's Strategic Growth Plan (SGP) calls for a \$222 billion infrastructure improvement program to fortify the state's transportation system, education, housing, and waterways, including \$107 in transportation funding during the next decade. As shown on the figure below, the SGP targets a significant decrease in traffic congestion below today's level and a corresponding reduction in GHG emissions. The SGP proposes to do this while accommodating growth in population and the economy. A suite of investment options has been created that combined together yield the promised reduction in congestion. The SGP relies on a complete systems approach of a variety of strategies: system monitoring and evaluation, maintenance and preservation, smart land use and demand management, and operational improvements.

## Outcome of Strategic Growth Plan



Conceptual Framework for Reducing Congestion that Needs to be Verified Through Experience

\* Numbers reflect SHWY system

## WATER QUALITY AND STORM WATER RUNOFF

### Regulatory Setting

Section 401 of the Clean Water Act (CWA) requires water quality certification from the State Water Resources Control Board (SWRCB) or from a Regional Water Quality Control Board (RWQCB) when the project requires a CWA Section 404 permit. Section 404 of the CWA requires a permit from the U.S. Army Corps of Engineers (Corps) to discharge dredged or fill material into waters of the United States.

Along with CWA Section 401, CWA Section 402 establishes the National Pollutant Discharge Elimination System (NPDES) permit for the discharge of any pollutant into waters of the United States. The federal Environmental Protection Agency has delegated administration of the NPDES program to the SWRCB and nine RWQCBs. The SWRCB and RWQCB also regulate other waste discharges to land within

California through the issuance of waste discharge requirements under authority of the Porter-Cologne Water Quality Act.

The SWRCB adopted a Statewide NPDES Permit to regulate storm water discharges from all Department owned rights-of-way, properties, facilities and activities. Department construction projects are regulated under the California Construction General Permit and the Department's Statewide NPDES Permit. All construction projects over 1 acre require a Storm Water Pollution Prevention Plan (SWPPP) to be prepared and implemented during construction. Department activities less than 1 acre are required to develop a Water Pollution Control Program in accordance with the Department's Standard Specifications.

### ***Affected Environment***

For the purpose of this project, the water quality study limits are located on State Route 1 from PM 38.38-38.92. All locations are in the Mendocino Coast Hydrologic Unit (HU), Point Arena Hydrologic Area (HA), Greenwood Creek Hydrologic Sub-Area (HSA)113.61. The location is within the jurisdictional boundary of the North Coast Regional Water Quality Control Board (Regional Board). The Regional Board has the authority to implement water quality protection standards through the issuance of permits to protect waters of the State of California. Water Quality Objectives for the North Coast Region are specified in the Water Quality Control Plan for the North Coast Region (Basin Plan) prepared in compliance with the Federal Clean Water Act and the State Porter-Cologne Water Quality Control Act. The Basin Plan establishes water quality objectives and implementation programs to meet stated objectives and to protect the beneficial uses of both surface waters and groundwater.

The receiving waters for the project limits are coastal wetlands, and an unnamed tributary to the Pacific Ocean, which discharges to the Pacific Ocean. The beneficial uses of any specifically identified water body generally apply to all its tributaries. The project lies within the Greenwood Creek Hydrologic Sub-Area (HSA). The beneficial uses for the Greenwood Creek HSA as listed in the Basin Plan are the following:

- Municipal and Domestic Supply (existing)
- Agricultural Supply (existing)
- Industrial Service Supply (existing)
- Groundwater Recharge (existing)
- Freshwater Replenishment (existing)
- Navigation (existing)
- Water Contact Recreation (existing)
- Non-Contact Recreation (existing)
- Commercial and Sport Fishing (existing)
- Cold Freshwater Habitat (existing)
- Wildlife Habitat (existing)
- Rare, Threatened, or Endangered Species (existing)
- Migration of Aquatic Organisms (existing)

- Spawning, Reproduction, and/or Early Development (existing)
- Aquaculture (existing)

The receiving waters are not included on the Clean Water Act 303(d) list for impairments associated with excessive sediment and high temperatures.

The North Coast RWQCB's 401 Certification Application requires a storm water treatment BMP feasibility plan to fulfill Non-Compensatory Mitigation requirements for all projects that impact riparian vegetation. The application requests the methods proposed to treat storm water runoff from the project site prior to entering the storm drainage system, wetlands, streams, etc, and to include proper design calculations to indicate that the proposed methods will treat runoff from the 85<sup>th</sup> percentile/24-hour storm event.

### ***Potential Impacts***

The Pacific Ocean, coastal wetlands and an unnamed tributary to the Pacific Ocean are the receiving waters for this project. There are jurisdictional drainages within the project limits; Section 401 Water Quality Certification / Waste Discharge Requirements or a waiver of Waste Discharge Requirements will be required. The project proposes to increase impervious surface, and therefore will generate an increase in storm water runoff. Given the existing and proposed storm water drainage systems within the project limits and the regional water quality concerns associated with this area, the following water quality concerns were identified related to the project: sediment and other discharges related to construction and operation, dredge, and fill impacts to the existing jurisdictional waters.

### ***Avoidance and Minimization Measures***

The primary constituent of concern for the project is sediment. During construction there could be temporary adverse impacts due to increased erosion that could transport sediment into receiving waters. However, the project will be constructed with necessary erosion and water quality control practices to minimize the potential for sedimentation through the use of construction BMPs identified in the Department's Water Quality Handbook, *Construction Site BMPs Manual*. The Department's approved construction BMPs applicable to this project include measures for temporary sediment control (e.g. silt fences, fiber rolls, straw bale barriers) and temporary soil stabilization (e.g. hydraulic mulching, hydroseeding, straw mulch). There is also a potential for spills and leaks of lubricant, oil and grease, and other fluids associated with vehicles and equipment during construction. An accidental release of these materials may pose a threat to water quality if contaminants enter the drainage system. A spill on the roadway would trigger immediate response actions to report, contain, and mitigate the incident. The Department has contingency plans, procedures, and emergency response crews trained for incident response. These procedures designate a chain of command for notification, evacuation, response, and cleanup of spills resulting from the use and/or transport of hazardous materials.

The project will result in a disturbed soil area greater than one acre, and therefore shall be regulated under the Department's Statewide NPDES Permit, which includes by reference the Statewide Construction General Permit. A Notice of Construction (NOC) will be filed with the Regional Board a minimum of 30 days prior to construction to obtain coverage for the project under the Statewide Construction General Permit. To comply with the conditions of the Department's Statewide NPDES Permit, and to address the potential temporary water quality impacts resulting from construction activities, Standard Special Provision (SSP) 07-345 will be included as part of the Plans, Specifications, and Estimates. SSP 07-345 will address water pollution control work and implementation of a Storm Water Pollution Prevention Plan (SWPPP) during construction. Source control issues will be addressed through SSP 07-346, Construction Site Management that sets forth handling procedures and BMPs for potential sources not addressed by line items in the contract special provisions.

### ***Mitigation Measures***

No mitigation for Water Quality is required for this project.

## **COASTAL ZONE**

### ***Regulatory Setting***

This project is in the coastal zone. The Coastal Zone Management Act of 1972 (CZMA) is the primary federal law enacted to preserve and protect coastal resources. The CZMA sets up a program under which coastal states are encouraged to develop coastal management programs. States with an approved coastal management plan are able to review federal permits and activities to determine if they are consistent with the state's management plan.

California has developed a coastal zone management plan and has enacted its own law, the California Coastal Act of 1976, to protect the coastline. The policies established by the California Coastal Act are similar to those for the CZMA; they include the protection and expansion of public access and recreation, the protection, enhancement and restoration of environmentally sensitive areas, protection of agricultural lands, the protection of scenic beauty, and the protection of property and life from coastal hazards. The California Coastal Commission is responsible for implementation and oversight under the California Coastal Act.

Just as the federal CZMA delegates power to coastal states to develop their own coastal management plans, the California Coastal Act delegates power to local governments (15 coastal counties and 58 cities) to enact their own local coastal programs (LCPs). LCPs determine the short- and long-term use of coastal resources in their jurisdiction consistent with the California Coastal Act goals.

## ***Affected Environment***

Within the Mendocino County LCP, Chapter 20.496 of the coastal zoning code includes policies that apply to Environmentally Sensitive Habitat Area (ESHAs). Buffer areas are described and defined in section 20.496.020 as an area that shall be established adjacent to all ESHAs. The purpose of a buffer area shall be to provide for a sufficient area to protect the ESHA from degradation resulting from future developments. The width of the buffer area shall be a minimum of 100 feet, unless an applicant can demonstrate, after consultation and agreement with the California Department of Fish and Game (if applicable), and Mendocino County Planning Department, that 100 feet is not necessary to protect the resources of that particular habitat area and the adjacent upland transitional habitat function of the buffer from possible significant disruption caused by the proposed development. The buffer area shall be measured from the outside edge of the ESHA and shall not be less than 50 feet in width. This section describes a variety of standards for determining the allowable width of the buffer area, including standards for the determining the allowable width of the buffer area, including standards for development permitted within the buffer area. Mendocino County Code Section 20.496.025(7) further specifies development that is allowed in wetlands, including incidental public service purposes.

## ***Potential Impacts***

The highway cross-culverts located at PM 38.65 and 38.73 drain un-named intermittent streams directly into the Pacific Ocean. The intermittent streams are connected by a wetland (ESHA #1) which occupies depressions surrounding an area of persistent bedrock uplands. Another wetland is in the Environmental Study Limit (ESHA #2); however, it will not be impacted. The current project proposes realigning the highway such that the new highway will cross these streams and associated wetlands approximately 100 feet further east than the current path of the highway. The proposed project will result in permanent impacts and temporary impacts to ESHA # 1 and both un-named intermittent streams at PM 38.65 and PM 38.73 (Refer to Table 1 and Attachment 4). Temporary impacts at this site include areas between the existing road and the proposed realignment where construction work will occur on both sides. Some minimal impacts are expected to occur in these areas because of the extent and close proximity of the proposed realignment work. These impacts may include, but are not limited to, changes in hydrologic flow during construction, minimal infiltration of particulate matter (dust) created during construction, the removal of nearby vegetation, and altered wildlife usage patterns. ESHA #3 is located along the banks of the un-named intermittent stream at PM 38.65 adjacent to both sides of Highway 1. This area is characterized by having riparian vegetation consisting mainly of willows (*Salix lasiocarpus*) and elderberry (*Sambucus racemosa*). It encompasses 5,169 square feet (0.119 acre) and will have both permanent direct impacts (1,154 sq. ft / 0.027 acre) and temporary indirect impacts (3,261 sq. ft / 0.075 acre) due to construction activities. Impacts from construction may include, but are not limited to, the removal of vegetation, alteration of

hydrology, excavation, and placement of fill within this ESHA.

***Avoidance, Minimization, and/or Mitigation Measures***

All Avoidance, Minimization and Mitigation Measures are listed in the Biological Resources section.

## List of Preparers

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The following Caltrans North Region staff contributed to the preparation of this Initial Study:

**Larry M. Chiea**, Environmental Planner. Contribution: Environmental Study Coordinator and Document Writer.

**Jennifer Heichel**, Associate Environmental Planner. Contribution: Environmental Document Writer.

**Lupe Jimenez**, Senior Environmental Planner. Contribution: Environmental Branch Chief.

**Erick Wulf**, Associate Environmental Planner (Archaeology). Contribution: Historic Property Survey report.

**Michael Cane**, Environmental Planner (Natural Science). Contribution: Project Biologist, Natural Environmental Study (NES).

**Eric Lund**, Project Engineer. Contribution: Preparation of Design Plans.

**Frank Demling**, Project Manager. Contribution: Project Coordination.

**Mark Melani**, Transportation Engineer. Contribution: Hazardous Waste Initial Site Assessment.

**Jim Hibbert**, Landscape Architect. Contribution: Visual Impact Analysis.

**Sharon Tang**, Air/Noise Specialist. Contribution: Air Quality and Noise Reports.

**Alex Arevalo**, Civil Transportation Engineer. Contribution: Water Quality Analysis and NPDES Storm Water Coordinator.

**Fernando Manzanera**, Hydraulics Engineer. Contribution: Floodplain Study.

**Aaron Mckeon**, Community Impact Analyst. Contribution: Community Impacts Study.

**Troy Arseneau**, Traffic Engineer. Contribution: Traffic Management Plan.

**Marcia Kiese**, Engineering Geologist. Contribution: Geotechnical Report.

# Attachment 1

## Regional Species of Concern

**Sensitive Biological Resources Considered as Part of  
Environmental Review**

**Animals Potentially occurring 01-47480 Men 1 PM 38.5/38.8**

Common Name Scientific Name	Legal Status*	Federal/State	Distribution	Habitat Associations	Potential to Occur at the Project Site	Potential to be impacted by project
Behren's silverspot butterfly <i>Speyeria zerene behrensi</i>	E/--		Pacific side of the Coast Ranges from Point Arena County to Cape Mendocino, Mendocino County	Habitats with larval food sources (violets) are required; specific habitat unknown	Low	Low, none seen during field investigations at project site
Lotis blue butterfly <i>Lycaeides argyrognomon lotis</i>	E/--		In and around a few sphagnum bogs near Mendocino, Mendocino County; Mendocino Pygmy Forest	Coastal peat bogs and pygmy conifer forest inland from coastal sand	None	None, no habitat present
Coho salmon Southern Oregon/California Coastal ESU <i>Oncorhynchus kisutch</i>	T/SC		Arctic and Pacific drainages from Point Hope, Alaska to Monterey Bay, California	Requires beds of loose, silt free, coarse gravel for spawning. Also needs cover, cool water and sufficient dissolved oxygen.	None	None, intermittent streams inaccessible to migrating fish
Coho salmon Central California Coast <i>Oncorhynchus kisutch</i>	T/C		Punta Gorda in northern California south to and including the San Lorenzo River in Central California, tributaries to San Francisco Bay, excluding the Sacramento-San Joaquin River	Cool freshwater streams and rivers, require sand and gravel for	None	None, intermittent streams inaccessible to migrating fish

## Animals Potentially occurring 01-47480 Men 1 PM 38.5/38.8

Common Name Scientific Name	Legal Status*	Federal/State	Distribution	Habitat Associations	Potential to Occur at the Project Site	Potential to be impacted by project
Chinook salmon - Central valley spring-run ESU <i>Oncorhynchus tshawytscha</i>	T/--		Sacramento and San Joaquin Rivers and their tributaries	Spawns in deeper water and larger gravel sizes (cantaloupe) than other salmon. Most spawning and rearing activity take place in the main stream channels above the saltwater limit or hundreds of miles upstream.	None	None, intermittent streams inaccessible to migrating fish
Chinook salmon California Coast ESU <i>Oncorhynchus tshawytscha</i>	T/--		From the Redwood Creek in Humboldt County to the Russian River in Sonoma County	Spawns in deeper water and larger gravel sizes (cantaloupe) than other salmon. Most spawning and rearing activity take place in the main stream channels above the saltwater limit or hundreds of miles upstream	None	None, intermittent streams inaccessible to migrating fish
Steelhead Northern California ESU <i>Oncorhynchus mykiss</i>	T/SC		Coastal steelhead occur from Alaska to southern California	Cool freshwater streams and rivers, require sand and gravel for	None	None, intermittent streams inaccessible to migrating fish
Tidewater goby <i>Encyclogobius newberryi</i>	PD/SC		Shallow water along Pacific coastal streams and lagoons.	On bottom or existing on submerged plants in shallow weedy areas of coastal lagoons and estuaries.	None	None, no habitat present

## Animals Potentially occurring 01-47480 Men 1 PM 38.5/38.8

Common Name Scientific Name	Legal Status*	Federal/State	Distribution	Habitat Associations	Potential to Occur at the Project Site	Potential to be impacted by project
Steelhead Central California Coast ESU <i>Oncorhynchus mykiss</i>		T/-	Russian River to Aptos Creek, and the drainages of San Francisco and San Pablo Bays eastward to the Napa River (inclusive), excluding the Sacramento-San Joaquin River Basin	Cool freshwater streams and rivers, require sand and gravel for	None	None, intermittent streams inaccessible to migrating fish
Leatherback turtle <i>Dermochelys coriacea</i>		E/	Worldwide in open oceans	Nests on tropical and sub-tropical sandy beaches	None	None, Habitat not present
Olive (=Pacific) ridley seas turtle <i>Lepidochelys olivacea</i>		T/	A wide ranging turtle on the open ocean, usually stays to the warmer parts of the Pacific and Indian oceans	Nests on beaches on the Pacific Coast from the tip of Baja Calif. to Northern Peru, as well as on other warmer coasts worldwide	None	None, Habitat not present
Loggerhead turtle <i>Caretta caretta</i>		T/	A wide ranging turtle on the open ocean, stays to the warmer parts of the ocean. Enters bays, lagoons, estuaries, salt marshes, and river mouths to forage and breed.	Nests on gently sloping sandy beaches, singly or in groups	None	None, Habitat not present
Green turtle <i>Chelonia mydas (incl. agassizii)</i>		T/	Worldwide in warm seas. On Pacific Coast, common as far North as San Quinton Bay, Baja California; Occasionally in San Diego bay and elsewhere along coast of California.	Usually aquatic, sometimes comes out on land to sleep on rocky sandy shores; lays eggs on gently sloping sandy shore that are habitually used for nesting.	None	None, Habitat not present
Brown pelican <i>Pelecanus occidentalis</i>		E/E	Present along the entire coastline, but does not breed north of Monterey County; extremely rare inland	Typically in littoral ocean zones, just outside the surf line; nests on offshore islands	Low	None, Habitat not present

## Animals Potentially occurring 01-47480 Men 1 PM 38.5/38.8

Common Name Scientific Name	Legal Status*	Federal/State	Distribution	Habitat Associations	Potential to Occur at the Project Site	Potential to be impacted by project
Bald Eagle <i>Haliaeetus leucocephalus</i>	T/E, FP		Nests in Siskiyou, Modoc, Trinity, Shasta, Lassen, Plumas, Butte, Tehama, Lake, and Mendocino Counties and in the Lake Tahoe Basin; reintroduced into central coast. Winter range includes the rest of California, except the southeastern deserts, very high altitudes in the Sierras, and east of the Sierra Nevada south of Mono County; range expanding	In western North America, nests and roosts in coniferous forests within 1.6 km of a lake, reservoir, stream, or the ocean	Low	None, no nesting habitat present
American peregrine falcon <i>Falco peregrinus anatum (nesting)</i>	--/E		Permanent resident along the north and south Coast Ranges; may summer in the Cascade and Klamath Ranges and through the Sierra Nevada to Madera County. Winters in the Central Valley south through the Transverse and Peninsular Ranges and the plains east of the Cascade Ranges	Nests and roosts on protected ledges of high cliffs, usually adjacent to lakes, rivers, or marshes that support large prey populations	None	None, Habitat not present
Western snowy plover (coastal) <i>Charadrius alexandrinus nivosus (nesting)</i>	T/SC		Winters along the coast from Del Norte County to San Diego County; breeding sites within this range are very limited. Nests at inland lakes throughout northeastern, central, and southern	Coastal beaches above the normal high tide limit with wood or other debris for cover. Inland shores of salt ponds and alkali or brackish inland lakes	None	None, Habitat not present
Marbled murrelet <i>Brachyramphus marmoratus</i>	T/E		Nesting sites from the Oregon border to Eureka and between Santa Cruz and Half Moon Bay; winters in nearshore and offshore waters along the entire California	Mature, coastal coniferous forests for nesting; nearby coastal water for foraging; nests in conifer stands greater than 150 years old and may be found up to 35 miles inland; winters on subtidal and pelagic waters often well offshore	None	None, Habitat not present

**Animals Potentially occurring 01-47480 Men 1 PM 38.5/38.8**

Common Name Scientific Name	Legal Status*	Federal/State	Distribution	Habitat Associations	Potential to Occur at the Project Site	Potential to be impacted by project
Western Yellow-billed Cuckoo <i>Coccyzus americanus occidentalis</i>	--/E		Nests along the Upper Sacramento, Lower Feather, South Fork of the Kern, Amargosa, Santa Ana, and Colorado Rivers.	Wide, dense riparian forests with a thick understory of willows for nesting; sites with a dominant cottonwood overstay are preferred for foraging; may avoid valley-oak riparian habitats where scrub jays are abundant.	None	None, Habitat not present
Northern Spotted Owl <i>Strix occidentalis caurina</i>	T/SC		A permanent resident throughout its range; found in the north Coast, Klamath, and western Cascade Range from Del Norte County to Marin County	Dense old-growth or mature forests dominated by conifers with topped trees or oaks available for nesting crevices	None	None, Habitat not present
Point Arena mountain beaver <i>Aplodontia rufa nigra</i>	E/SC		Known only from Alder Creek in the Point Arena area of Mendocino County	North-facing, wooded slopes of ridges or gullies where there is abundant moisture, thick under-growth, and soft soil.	None	None, Habitat not present
Pacific fisher <i>Martes pennanti pacifica</i>	SC/SC		Coastal mountains from Del Norte County to Sonoma Counties, east through the Cascades to Lassen County, and south in the Sierra Nevada to Kern County.	Late successional coniferous forests and montane riparian habitats.	None	None, Habitat not present

# Attachment 2

## Plant List

**Plants potentially occurring 01-474800 Men 1 PM 38.5/38.8**

Scientific Name Common Name	Federal/State/CNPS	Distribution	Habitat Associations	Period (Blooms)	Potential to Occur at the Project Site	Potential to be impacted by project
<i>ARABIS MACDONALDIANA</i> McDonald's rock cress	E/E/1B	Del Norte, Mendocino, Siskiyou, Trinity, OR	Lower montane coniferous forest, Upper montane coniferous forest / serpentine	May-Jun	None	None, Habitat not present
<i>CHORIZANTHE HOWELLII</i> Howell's spineflower	E/T/1B	Mendocino	Coastal dunes, Coastal prairie, Coastal scrub / sandy	May-Jul	Low	None, not found in Environmental Study Limit
<i>ERIOGONUM KELLOGGII</i> Kellogg's buckwheat	C/E/1B	Mendocino County	Lower montane coniferous forest (rocky, serpentine)	May-Aug	None	None, not found in Environmental Study Limit
<i>ERYSIMUM MENZIESII</i> SSP. <i>MENZIESII</i> Menzies's wallflower	E/E/1B	Mendocino, Monterey	Coastal dunes	Mar-Jun	None	None, Habitat not present
<i>FRITILLARIA RODERICKII</i> Roderick's fritillary	--/E/1B	Mendocino	Coastal bluff scrub, Coastal prairie, Valley and foothill grassland	Mar-May	Moderate	None, not found in Environmental Study Limit
<i>HOWELLIA AQUATILIS</i> water howellia	T/--/1A	Mendocino*, ID, OR*, WA	Marshes and Swamps (freshwater)	Jun	None	None, Habitat not present
<i>LASTHENIA BURKEI</i> Burke's goldfields	E/E/1B	Lake, Mendocino and Sonoma Counties	Meadows (mesic), vernal pools, 15-580 m elevation.	Apr-Jun	Low	None, not found in Environmental Study Limit
<i>LASTHENIA CONJUGANS</i> Contra Costa goldfields	E/--/1B	Solano and Napa counties	Vernal pools	April-May	None	None, Habitat not present
<i>LIMNANTHES BAKERII</i> Baker's meadowfoam	SC/R/1B	Mendocino	Meadows, marshes and swamps (freshwater), valley and foothill grassland (vernally mesic), vernal pools, 175-910 m elevation.	Apr-May	Low	None, habitat not present

<i>PLEUROPOGON HOOVERIANUS</i> North Coast semaphore	SCCE/1B	Mendocino, Marin and Sonoma Counties	Broadleaved upland forest, meadows, North Coast coniferous forest, vernal pools / mesic	May-Aug	Moderate	None, not found in Environmental Study Limit
<i>SEDUM EASTWOODIAE</i> Red Mtn. stonecrop	C/--/1B	Mendocino County	Lower montane coniferous forest (serpentine soils)	May-July	None	None, Habitat not present
<i>TRIFOLIUM AMOENUM</i> Showy Indian clover	E/--/1B	Sonoma County	Low, rich fields and swales	Apr-Jun	None	None, Habitat not present

**\* Status Explanations:**

**Federal**

- = No status definition.
- E = listed as endangered under the federal Endangered Species Act.
- PD = proposed for delisting
- SC = species of concern; species for which existing information indicates it may warrant listing but for which substantial biological information to support a proposed rule is lacking.
- T = listed as threatened under the federal Endangered Species Act.

**State**

- = No status definition.
- E = Listed as endangered under the California Endangered Species Act.
- FP = Fully protected species may not be taken or possessed without a permit from the FG Commission and/or the DFG. Information on Fully Protected species can be found in DFG Code Sections 3511, 4700, 5050, and 5515.

**SC = Species of special concern in California.**

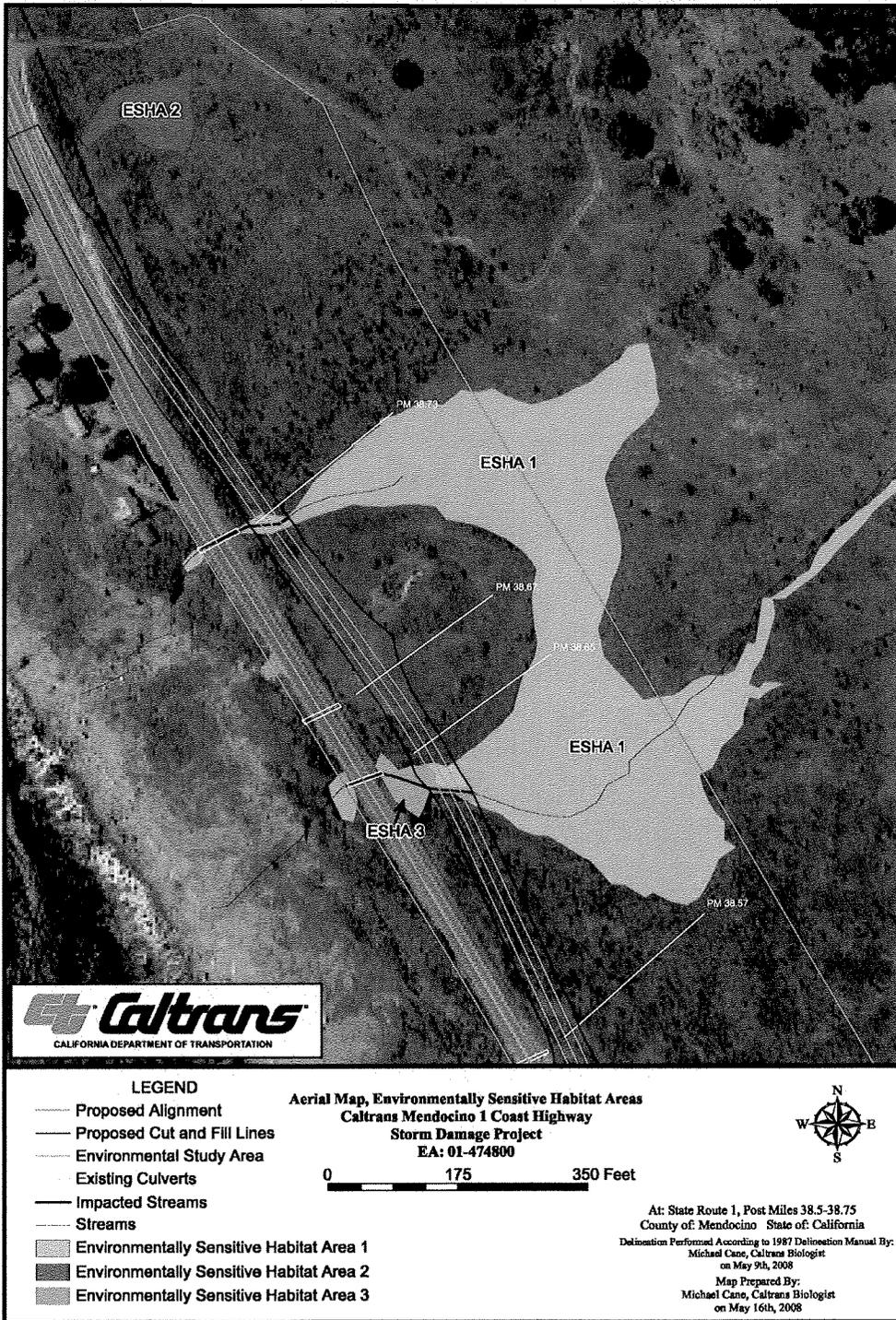
# Attachment 3

## Wetlands Impact Map



# Attachment 4

## Environmentally Sensitive Habitat Area Map





**Addendum to the  
Highway 1 Realignment Project  
Negative Declaration**

**01-Men-01, PM 38.5-38.8  
EA 01-47480**



**State of California Department of Transportation**

**April 2011**

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## 1.0 Purpose of this Addendum

This document is an Addendum to the California Environmental Quality Act (CEQA) Mitigated Negative Declaration (MND) that was approved on January 23, 2009 for the Highway 1 Realignment project on State Route 1, post mile 38.5-38.8, approximately three and one half mile north of Elk in Mendocino County. This Addendum has been prepared in accordance with CEQA Guidelines.

CEQA Guidelines state that, generally, only one Negative Declaration (ND) is adopted for a project. If changes occur to a project subsequent to the adoption of an ND and if none of the conditions triggering a subsequent ND are present, the agency may prepare an addendum to the adopted ND. Providing that the changes being proposed for the project will not result in any new significant environmental effects or any substantial increases in the severity of previously identified effects, the conditions listed in Section 15162 will have been avoided and a subsequent ND will not be required. An addendum need not be circulated for public review but may be included in or attached to the adopted ND. The lead agency shall consider the information contained in the addendum before making a decision on the project.

The intent of this Addendum is twofold:

- 1) to briefly summarize the changes in project description and associated environmental impacts that have occurred since the ND was approved in 2009 and
- 2) to demonstrate that no new significant effects or substantial increases in the severity of previously identified effects have occurred.

## 2.0 Project History

This project has State and federal funding. Therefore, the environmental documents that have been prepared comply with both CEQA and the National Environmental Policy Act (NEPA). The NEPA document will be re-validated in a separate document.

The Initial Study (IS/MND) that was circulated for public and regulatory agency review in 2009 evaluated two alternatives: Highway 1 Realignment alternative (Alternative 1), and the No Build alternative (Alternative 2). Alternative 1 was chosen because it satisfied the purpose and need. The placement of Alternative 1 was designed to have the least environmental impact of any other alignment location in the project area. The project will still require a California Department of Fish and Game 1602 permit, a Clean Water Act section 404 permit from the United States Army Corps of Engineers (USACE) and a section 401 Water Quality Certification from the North Coast Regional Water Quality Control Board (NRWQCB). This project is located in the Coastal Zone and will therefore require a Coastal Development permit from the Mendocino County Coastal Commission.

## 3.0 Description of Project Changes

### 3.1 BIOLOGICAL RESOURCES

California Natural diversity Database (CNDDDB) Records depict *Gilia capitata* ssp. *pacifica* and *Castilleja mendocinensis* as occurring within the Environmental Study Limits (ESL) (Map 1.CNDDDB Map). During preliminary field visits *Castilleja wightii* was misidentified as *Castilleja mendocinensis*, however, after several subsequent botanical surveys of the ESL no *Castilleja mendocinensis* or *Gilia capitata* ssp. *pacifica* were found.

During a botanical survey in April 2010 a single orchid leaf was found under a lone Douglas fir within the ESL. This orchid was visited on multiple occasions (April, June and August) throughout the flowering season in 2010 to determine the species, however, it did not flower. Due to the uncertainty of the species and the potential for *Piperia candida* (a California Native Plant Society (CNPS) List 1B.2 species) to occur in the area, Caltrans is assuming that the orchid is *Piperia candida* for the purposes of the Environmental Document. *Piperia candida* has been found within Mendocino County and occurs within broadleaved upland forest, lower montaine coniferous forest and North Coast coniferous forest between 30 and 1310 meters above sea level. The overall range of this species extends from Southern Alaska to Santa Cruz County in California. There are 115 botanical records in California. In Mendocino County there are 16 recorded occurrences, the closest of which is over 15 miles from the ESL (Map 2. CNPS Occurrence). The CNPS listing states that it is difficult to determine the rarity of this species as some populations rarely flower and populations often have small numbers. The CNPS also states that the greatest threat to this species is logging.

The alignment of the highway is located in a way to minimize the impacts to seep wetlands in the area, however, the alignment would require the removal of the assumed *Piperia candida*. In order to avoid the *Piperia candida* this project would greatly increase the impacts to these wetlands making this unfeasible. Due to the orchid's fungal associations in the soil and sensitivity in nature, replanting would most likely be unsuccessful. As this single orchid is located in the Caltrans right of way in fragmented Douglas fir habitat, the species has a large range with many known occurrences in California and that the CNPS listing states that rarity in this species is difficult to determine, Caltrans finds that the removal of this individual would not be significant to the species population as a whole and therefore is not significant through CEQA.

## **3.2 COASTAL ZONE**

### **Coastal Trail**

The California Department of Transportation was asked by the Mendocino Coastal Commission to look into accommodating a 15 foot wide easement for the Coastal Trail on the west side of Highway 1 within the project area. The most feasible location for the coastal trail from a safety stand point is between the new highway alignment and wetland mitigation area (Map 3. Conceptual Plan for Coastal Trail Corridor). Caltrans will accommodate the construction and maintenance of the coastal trail under the encroachment permit process. The County, at this point, is not in a position to accept maintenance and liability for the proposed coastal trail facility; Although, the County would have the authority to assign that responsibility to a third party, i.e., land trust, Coastal Conservancy, etc. It is also understood that the County would be responsible for preparing the appropriate environmental document needed to construct the future coastal trail and that any mitigation requirements resulting from possible impacts to wetlands would be the responsibility of the County of Mendocino.

## **3.3 WILLIAMSON ACT**

### **FARMLANDS**

#### **Regulatory Setting**

The National Environmental Policy Act (NEPA) and the Farmland Protection Policy Act (FPPA, 7 USC 4201-4209; and its regulations, 7 CFR Part 658) require federal agencies, such as FHWA, to coordinate with the Natural Resources Conservation Service (NRCS) if their activities may irreversibly convert farmland (directly or indirectly) to nonagricultural use. For purposes of the FPPA, farmland includes prime farmland, unique farmland, and land of statewide or local importance.

The California Environmental Quality Act requires the review of projects that would convert Williamson Act contract land to non-agricultural uses. The main purposes of the Williamson Act are to preserve agricultural land and to encourage open space preservation and efficient urban growth. The Williamson Act provides incentives to landowners through reduced property taxes to deter the early conversion of agricultural and open space lands to other uses.

#### **Affected Environment**

The MND (dated January 23, 2009) indicates that there are no impacts to Agricultural Resources. On further investigation the project will cause a net loss of 4.57 acres of non-prime agricultural land. The property that is being affected by this

new realignment contains a total of 153.54 acres. The loss of 4.57 acres equates to 3% of the total land from the property affected. Surrounding Williamson Act land within 1 mile from the project area amounts to 533.05 acres and with the removal of 4.57 acres is only .9% of non-prime agricultural in the area to be affected. The project will not convert any “prime” or “unique” agricultural land to non-agricultural, use or impair the agricultural productivity or cancel any Williamson Act contract.

Consultation with the Department of Conservation was initiated on January 24, 2011 and information was sent for their review. A letter was received from the Department of Conservation on February 3, 2011 confirming the project and the required findings which completed consultation with the Department of Conservation. The two Findings were as follows:

1. *“The Location is not based primarily on a consideration of the lower cost of acquiring land in an agricultural preserve (51292(a)).”*
2. *“If the land is agricultural land covered under a contract pursuant to the chapter for any public improvement, that there is no other land within or outside the preserve on which it is reasonably feasible to locate the public improvement (51292(b)).”*

The Department of Conservation must be notified of any proposed, significant changes to the project. The Department must also be notified within 10 days when the property is actually acquired (Government Code 51291(c)). If Caltrans determines not to locate the proposed public improvement on the subject property, before returning the land to private ownership, it must notify the Department and Mendocino County, and the land must be reenrolled in a new contract or encumbered by an enforceable restriction at least as restrictive as that provided by the Williamson Act (Government Code 51295).

## **4.0 New Impacts**

No new significant impacts to endangered species or special status plants are associated with the changes in the project description for the Highway 1 Realignment Mitigated Negative Declaration signed on January 23, 2009.

## **5.0 Avoidance/Minimization/Mitigation Measures**

No new mitigation measures are proposed for the project.

## **6.0 Conclusion**

An Addendum is the appropriate environmental document for summarizing and assessing the changes that have occurred since the January 23, 2009 MND because no new significant effects or substantial increases in the severity of previously identified effects have occurred.

## **7.0 Permits Required by Project**

California Department of Fish and Game (CDFG): 1602 Lake and Streambed Alteration Agreement

North Coast Regional Water Quality Control Board (NCRWQCB): 401 water quality certification

United States Army Corps of Engineers (USACE): 404 permit

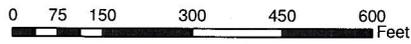
Mendocino County Department of Planning and Building Services: Local Coastal Development Permit



**Aerial Map**  
**Caltrans Mendocino 1 Coast Highway**  
**Storm Damage Project**  
**EA: 01-474800**

Elk USGS 7.5-Minute Quadrangle  
 At: State Route 1, Post Miles 38.5-38.75  
 County of: Mendocino State of: California

Map Prepared By:  
 Michael Cane, Caltrans Biologist  
 on November 18th, 2010



Legend	
	Proposed Alignment
	Cut and Fill
	Study Area
	Exist Hydrology
	Streams
	Wetlands

1:2,400  
 1 inch = 200 feet



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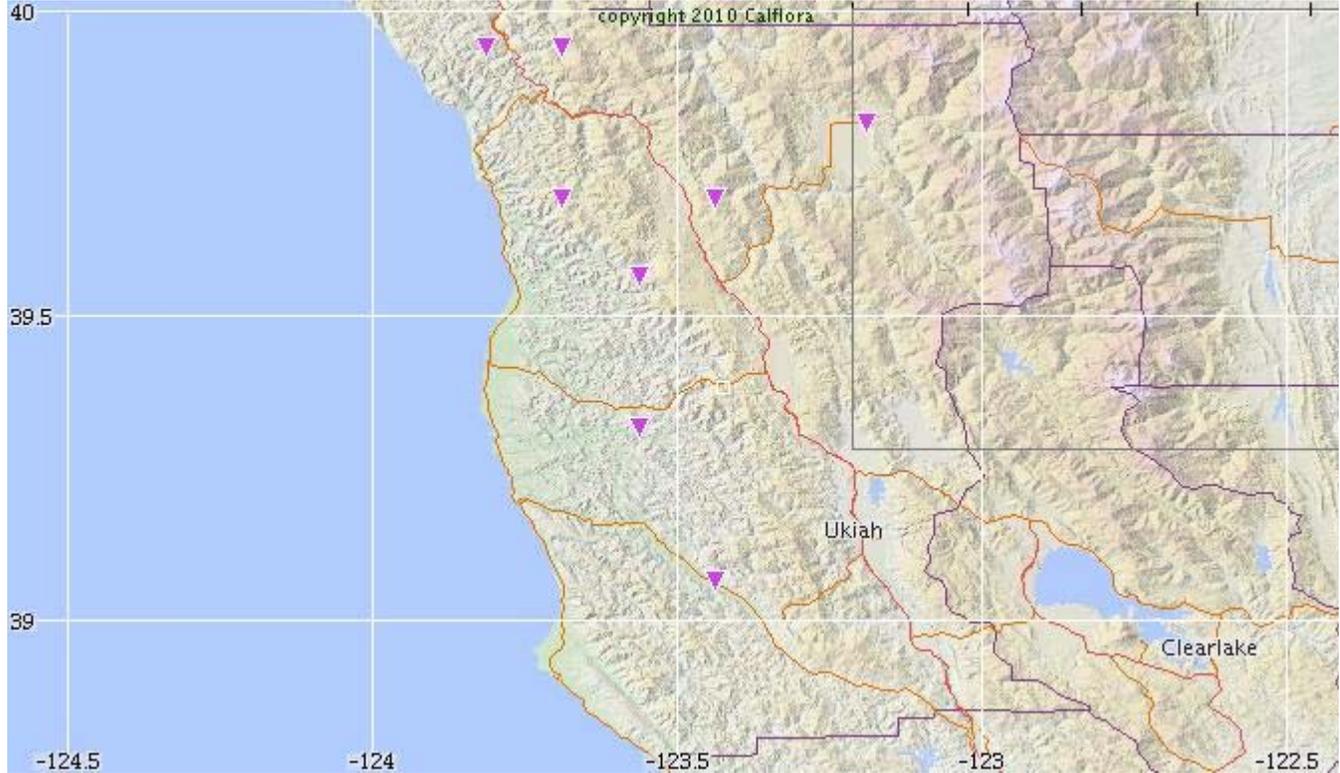
## Search for Plant Occurrence Records

[About Calflora](#)

**Synonyms:** This query searched for records under the following name. Click on a name to see its status.

*Piperia candida*

### Map of Observations, Mendocino County



16 matching records, not including CCH records

### Observation Summary

For observation details, click on the **RECORD NUMBER**

	<b>RECORD NUMBER</b>	<b>Observer</b>	<b>Source</b>	<b>Name in Current Use</b> <small>Name as reported, if different</small>	<b>County</b>	<b>Date</b>
specimen	Find records from the <a href="#">Consortium of California Herbaria (CCH)</a> website that meet these criteria					
literature	cb1865		CA Dept of Fish and Game Natural Diversity Database	<a href="#">Piperia candida</a>	Mendocino	
literature	cn1736		CNPS Inventory Database	<a href="#">Piperia candida</a>	Mendocino	
literature	cb1879		CA Dept of Fish and Game Natural Diversity Database	<a href="#">Piperia candida</a>	Mendocino	
literature	cn1802		CNPS Inventory Database	<a href="#">Piperia candida</a>	Mendocino	
literature	cb1893		CA Dept of Fish and Game	<a href="#">Piperia candida</a>	Mendocino	

			Natural Diversity Database			
literature	cn1860		CNPS Inventory Database	<a href="#">Piperia candida</a>	Mendocino	
literature	cb1899		CA Dept of Fish and Game Natural Diversity Database	<a href="#">Piperia candida</a>	Mendocino	
literature	cn1854		CNPS Inventory Database	<a href="#">Piperia candida</a>	Mendocino	
literature	cb1901		CA Dept of Fish and Game Natural Diversity Database	<a href="#">Piperia candida</a>	Mendocino	
literature	cn1858		CNPS Inventory Database	<a href="#">Piperia candida</a>	Mendocino	
literature	cn1911		"	<a href="#">Piperia candida</a>	Mendocino	
literature	cb1913		CA Dept of Fish and Game Natural Diversity Database	<a href="#">Piperia candida</a>	Mendocino	
literature	cn1916		CNPS Inventory Database	<a href="#">Piperia candida</a>	Mendocino	
literature	cb1914		CA Dept of Fish and Game Natural Diversity Database	<a href="#">Piperia candida</a>	Mendocino	
literature	cn1919		CNPS Inventory Database	<a href="#">Piperia candida</a>	Mendocino	
documented	xr282903	Coleman, R.	USDA NRCS-National Plants Data Center: Botanical Literature	<a href="#">Piperia candida</a>	Mendocino	1995-01-

Note that Calflora presents observation data from diverse sources. Some records may be multiple observations of the same plant populations or duplicate reports from different sources. Please carefully and critically review data for your particular application.

#### Citation

[Calflora](#): Information on California plants for education, research and conservation, based on data contributed by dozens of public and private institutions and individuals, including the Consortium of Calif. Herbaria. [web application]. 2011. Berkeley, California: The Calflora Database [a non-profit organization]. Available: <http://www.calflora.org/> (Accessed: Feb 10, 2011).

Please acknowledge **Sources** (institutions and individual observers) mentioned in the table above.

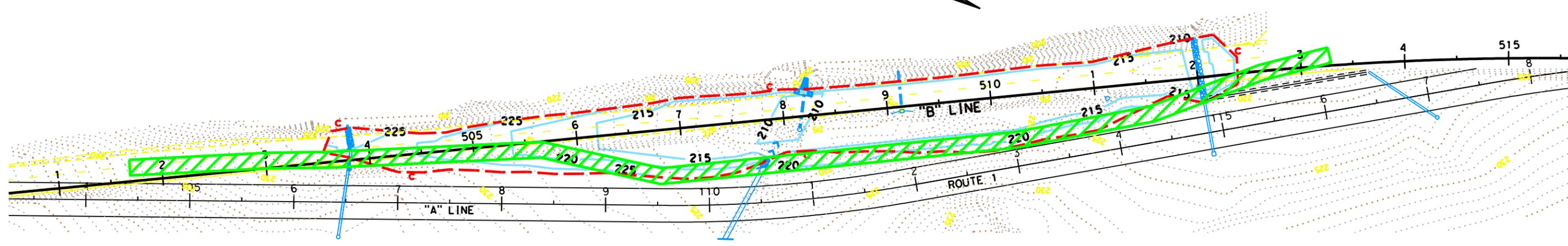
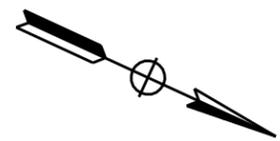
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 CONCEPTUAL TRAIL LOCATION 15' WIDE

**PLAN**  
NO SCALE

## CONCEPTUAL PLAN FOR COASTAL TRAIL CORRIDOR

APRIL 15, 2011  
01-47480

# **GROUND PENETRATING RADAR SURVEY REPORT**

## Memorandum

*Flex your power!  
Be energy efficient!*

To: DOUGLAS BRITTSAN  
Geotechnical Design North

Date: Feb 9, 2009  
File: 01-MEN-1-38.5/38.8

Attn: Marcia Kiese

EA: 01-474801

From: DEPARTMENT OF TRANSPORTATION  
DIVISION OF ENGINEERING SERVICES  
GEOTECHNICAL SERVICES-MS#5

Subject: Ground Penetrating Radar Survey Report for 01-MEN-1-38.5/38.8

### Introduction

This report summarizes the results and interpretation of nondestructive geophysical survey, Ground Penetrating Radar (GPR), conducted on December 3, 2008 for the Kristofferson Realignment project at State Route 1, Post Miles 38.5-38.8, in Mendocino County, California. At this location the roadway has failed, resulting in roadway settlement, pavement distress, and possible deep-seated foundation failure, requiring excessive roadway repair and maintenance. Years of repaving have resulted in a significant but unknown thickness of multiple bound and unbound courses that are scheduled to be excavated as part of the realignment. Examination of logs of test borings (LOTBs) drilled by Caltrans in 2004 indicated ground penetrating radar could be used to estimate material volumes. GPR was the method of choice adopted for this survey, because it can be used to detect subsurface anomalies indicative of soil layers, voids, and void-fills at shallow depth without damage to pavement. Figure 1 is an aerial photograph of the project area for this study. Figure 2 shows the extent of roadway settlement and pavement distress within the proposed project area.

### Results and Conclusions

A 250 Mhz. antenna was used for this survey target. The maximum depth of investigation for this investigation was about 2.2 meters (7.2 feet). Under favorable conditions, the 250 Mhz antenna can investigate to depths of about 5 meters (16.4 feet). However, in the presence of clayey and other conductive materials (including most pavement materials), the depth of penetration can be significantly reduced, as shown in this GPR investigation.

Plate 1 (bottom) provides an example of a typical GPR depth section from the existing roadway. It includes a location sketch of all profiles collected for this survey (top,) and shows the roadway surface elevation (middle) and test boring locations used for correlation. Four corrugated metal pipe (CMP) drains crossing the highway at PM 38.57, PM 38.65, PM 38.67, and PM 38.72 are also shown.

The GPR profile in Plate 1 is a processed data set, filtered to remove background noise and enhance the radar signal. Reflections from multiple pavement courses, likely consisting of hot-mix asphalt (HMA) and aggregate base (AB), can easily and clearly be defined from the filtered data. Our analysis indicates that the thickness of the pavement section is highly variable, ranging from about 1.1 meters (3.5 feet) at its thinnest to greater than 1.7 meters (5.6 feet) between position 60 to 125 meters on the profile. Within that zone, maximum thickness is uncertain due to severe attenuation of the GPR reflections, suggesting the presence of significant moisture within the pavement section, causing increased material conductivity (and loss of GPR signal) over that interval. (A known culvert is within that interval; we recommend its condition be evaluated.) Below the pavement section, within original ground (OG,) GPR signals are strongly attenuated, with nearly complete loss of signal below 1.7 meters over the entire section. Severe GPR attenuation within soils is associated with clayey soil composition and moderate to high moisture content, and is corroborated by the field notes from the 2004 Caltrans study.

Based on our review of drilling notes from seven test borings, the thickness of the pavement section (HMA and AB) within the project limits ranges between 1.1 to 1.9 meters (shown in green on Plate 1, middle.) This generally correlates well with our observed GPR data (see Plate 1, bottom). Some deviations between drilling data and GPR profiles were noted and are believed caused by the accuracy limits of the hollow-stem auger drilling method used at the time, which is not well-suited for sampling the coarse aggregates within the pavement section. It is also important to note that, at that time, description of the pavement section was not a primary goal, so the log descriptions of the pavement section from that drilling program are (understandably) imprecise.

Table 1 shows the average depth of roadway pavement (HMA and AB) and pavement volumes along the alignment. Based on the review of the table, the range of average pavement thicknesses used to calculate pavement volume is between 1.1 to 1.72 meters, and the total volume of the pavement (HMA and AB) within the project limits is estimated at 3553 m<sup>3</sup>.

### **Data Acquisition**

For this survey, a Sensors and Software PulseEKKO Pro acquisition system with a 250 Mhz antenna was used. A survey grid 363 x 7.3 meters (1190 x 24 feet) in dimension (shown in Plate 3) was established covering most of distressed areas of the pavement. GPR data were collected along profiles (from south to north) parallel to the alignment of the highway at intervals of roughly 1.8 m (6 feet.). The data were stored on compact flash drive in a digital video logger (DVL). At the office, these data were transferred to a computer for processing using EKKO Mapper and EKKO View Deluxe (software from Sensors and Software, Inc.)

The figures and plates presented in this report provide representative examples of the anomalies at this site. The data used to develop those profiles and other records obtained from the investigation are available upon request.

Thank you for the opportunity to work on this project. For any questions or suggestions, please call me at 916.227.1258 or Bill Owen at 916.227.0227.

Report by:

*Yue Wu*

Yue Wu, PE 65429  
Transportation Engineer (Civil),  
Geophysics and Geology Branch

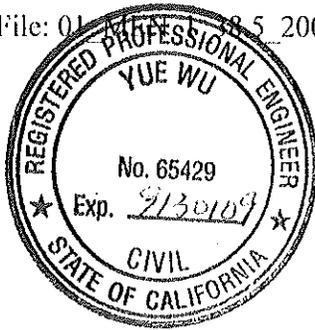
Reviewed By:

*William Owen*

William Owen,  
Chief, Geophysics and Geology Branch

Attachments: Figure 1&2, Plate 1, and Table 1

C: Project File: 01... 8 5 2008 GPR





EA: 01-474801  
 Date: Jan. 2009

**AERIAL PHOTOGRAPH OF PROJECT AREA**

EA: 01-474801  
 Date: Jan. 2009

CALTRANS  
 Division of Engineering Services  
 Geotechnical Services  
 Geophysics and Geology Branch



01-MEN-1 PM 38.5/38.75  
 GROUND PENETRATION RADAR SURVEY REPORT

Figure  
 1



EA: 01-474801

Date: Jan. 2009

ROADWAY PAVEMENT DISTRESS

Figure  
2

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01-MEN-1 PM 38.5/38.75

GROUND PENETRATION RADAR SURVEY REPORT



Table 1. Average Depth of roadway pavement (HMA and AB) and pavement volumes along alignment

Line Distance (m)	line 00			line 01			line 04			line 05			line 06		
	Depth (m)	Width(m)	Vol. (m <sup>3</sup> )	Depth (m)	Width(m)	Vol. (m <sup>3</sup> )	Depth (m)	Width(m)	Vol. (m <sup>3</sup> )	Depth (m)	Width(m)	Vol. (m <sup>3</sup> )	Depth (m)	Width(m)	Vol. (m <sup>3</sup> )
0-9	1.26	0.92	10.43	1.23	1.83	20.26	1.26	1.83	20.75	1.26	1.83	20.75	1.29	0.92	10.68
9-18	1.31	0.92	10.85	1.33	1.83	21.91	1.33	1.83	21.91	1.36	1.83	22.40	1.32	0.92	10.93
18-27	1.51	0.92	12.50	1.41	1.83	23.22	1.51	1.83	24.87	1.43	1.83	23.55	1.37	0.92	11.34
27-36	1.7	0.92	14.08	1.46	1.83	24.05	1.49	1.83	24.54	1.51	1.83	24.87	1.41	0.92	11.67
36-45	1.67	0.92	13.83	1.53	1.83	25.20	1.41	1.83	23.22	1.43	1.83	23.55	1.48	0.92	12.25
45-54	1.65	0.92	13.66	1.6	1.83	26.35	1.4	1.83	23.06	1.44	1.83	23.72	1.51	0.92	12.50
54-63	1.65	0.92	13.66	1.48	1.83	24.38	1.44	1.83	23.72	1.47	1.83	24.21	1.6	0.92	13.25
63-72	1.69	0.92	13.99	1.51	1.83	24.87	1.47	1.83	24.21	1.49	1.83	24.54	1.7	0.92	14.08
72-81	1.72	0.92	14.24	1.62	1.83	26.68	1.48	1.83	24.38	1.44	1.83	23.72	1.68	0.92	13.91
81-90	1.67	0.92	13.83	1.53	1.83	25.20	1.4	1.83	23.06	1.43	1.83	23.55	1.63	0.92	13.50
90-99	1.55	0.92	13.66	1.51	1.83	24.87	1.46	1.83	24.05	1.58	1.83	26.02	1.54	0.92	12.75
99-108	1.64	0.92	13.58	1.46	1.83	24.05	1.46	1.83	24.05	1.6	1.83	26.35	1.47	0.92	12.17
108-117	1.62	0.92	13.41	1.5	1.83	24.71	1.54	1.83	25.36	1.41	1.83	23.22	1.24	0.92	10.27
117-126	1.57	0.92	13.00	1.45	1.83	23.88	1.39	1.83	22.89	1.31	1.83	21.58	1.19	0.92	9.85
126-135	1.3	0.92	10.76	1.24	1.83	20.42	1.26	1.83	20.75	1.09	1.83	17.95	1.11	0.92	9.19
135-144	1.12	0.92	9.27	1.12	1.83	18.45	1.1	1.83	18.12	1.07	1.83	17.62	1.24	0.92	10.27
144-153	1.15	0.92	9.52	1.1	1.83	18.12	1.1	1.83	18.12	1.1	1.83	18.12	1.36	0.92	11.26
153-162	1.13	0.92	9.36	1.1	1.83	18.12	1.09	1.83	17.95	1.1	1.83	18.12	1.33	0.92	11.01
162-171	1.22	0.92	10.10	1.12	1.83	18.45	1.11	1.83	18.28	1.17	1.83	19.27	1.12	0.92	9.27
171-180	1.36	0.92	11.26	1.31	1.83	21.58	1.26	1.83	20.75	1.29	1.83	21.25	1.35	0.92	11.18
180-189	1.38	0.92	11.43	1.51	1.83	24.87	1.48	1.83	24.38	1.24	1.83	20.42	1.32	0.92	10.93
189-198	1.4	0.92	11.59	1.36	1.83	22.40	1.34	1.83	22.07	1.28	1.83	21.08	1.34	0.92	11.10
198-207	1.42	0.92	11.76	1.38	1.83	22.73	1.26	1.83	20.75	1.27	1.83	20.92	1.38	0.92	11.43
207-216	1.38	0.92	11.43	1.19	1.83	19.60	1.2	1.83	19.76	1.26	1.83	20.75	1.4	0.92	11.59
216-225	1.31	0.92	10.85	1.14	1.83	18.78	1.15	1.83	18.94	1.2	1.83	19.76	1.39	0.92	11.51
225-234	1.3	0.92	10.76	1.3	1.83	21.41	1.29	1.83	21.25	1.41	1.83	23.22	1.41	0.92	11.67
234-243	1.47	0.92	12.17	1.58	1.83	26.02	1.4	1.83	23.06	1.4	1.83	23.06	1.48	0.92	12.25

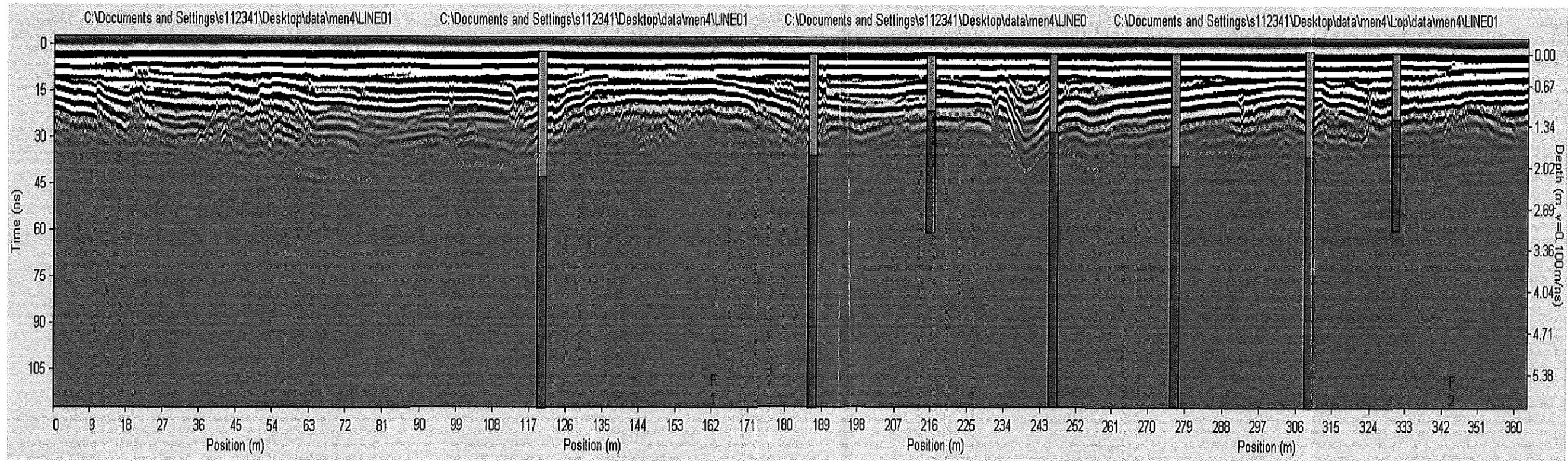
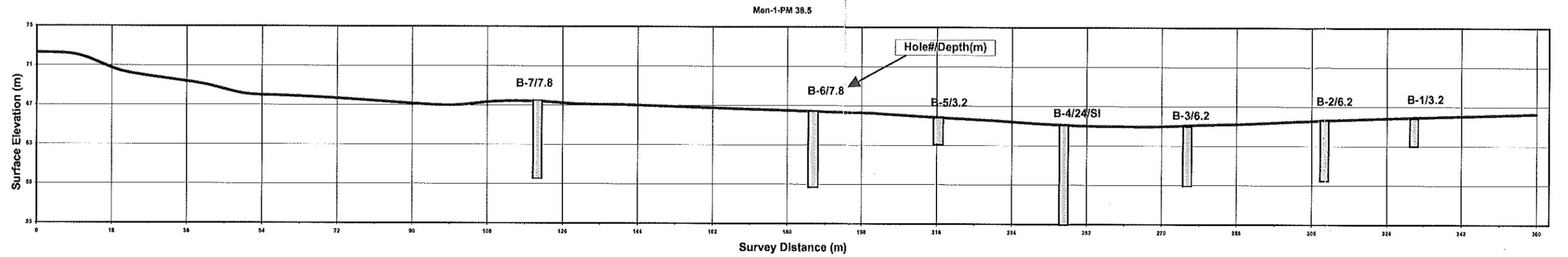
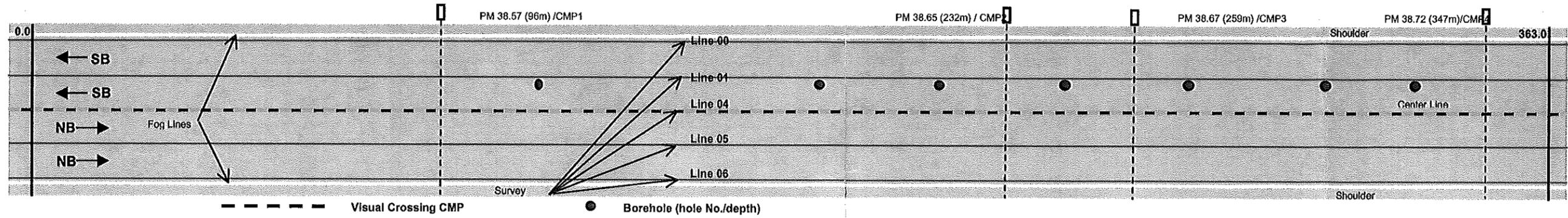
**Table 1. Average Depth of roadway pavement (HMA and AB) and pavement volumes along alignment**

Line Distance (m)	line 00			line 01			line 04			line 05			line 06		
	Depth (m)	Width(m)	Vol. (m <sup>3</sup> )	Depth (m)	Width(m)	Vol. (m <sup>3</sup> )	Depth (m)	Width(m)	Vol. (m <sup>3</sup> )	Depth (m)	Width(m)	Vol. (m <sup>3</sup> )	Depth (m)	Width(m)	Vol. (m <sup>3</sup> )
243-252	1.42	0.92	11.76	1.48	1.83	24.38	1.46	1.83	24.05	1.36	1.83	22.40	1.54	0.92	12.75
252-261	1.47	0.92	12.17	1.42	1.83	23.39	1.41	1.83	23.22	1.48	1.83	24.38	1.46	0.92	12.09
261-270	1.45	0.92	12.01	1.41	1.83	23.22	1.36	1.83	22.40	1.5	1.83	24.71	1.31	0.92	10.85
270-279	1.42	0.92	11.76	1.39	1.83	22.89	1.28	1.83	21.08	1.45	1.83	23.88	1.37	0.92	11.34
279-288	1.4	0.92	11.59	1.35	1.83	22.23	1.15	1.83	18.94	1.37	1.83	22.56	1.25	0.92	10.35
288-297	1.39	0.92	11.51	1.38	1.83	22.73	1.08	1.83	17.79	1.28	1.83	21.08	1.26	0.92	10.43
297-306	1.32	0.92	10.93	1.32	1.83	21.74	1.12	1.83	18.45	1.24	1.83	20.42	1.22	0.92	10.10
306-315	1.3	0.92	10.76	1.39	1.83	22.89	1.26	1.83	20.75	1.39	1.83	22.89	1.33	0.92	11.01
315-324	1.21	0.92	10.02	1.45	1.83	23.88	1.42	1.83	23.39	1.36	1.83	22.40	1.34	0.92	11.10
324-333	1.2	0.92	9.94	1.26	1.83	20.75	1.28	1.83	21.08	1.29	1.83	21.25	1.3	0.92	10.76
333-342	1.2	0.92	9.94	1.21	1.83	19.93	1.22	1.83	20.09	1.19	1.83	19.60	1.25	0.92	10.35
342-351	1.11	0.92	9.19	1.12	1.83	18.45	1.18	1.83	19.43	1.11	1.83	18.28	1.2	0.92	9.94
351-363	1.13	0.92	9.36	1.13	1.83	18.61	1.1	1.83	18.12	1.08	1.83	17.79	1.24	0.92	10.27
	<b>Subtotal volume (m<sup>3</sup>)</b>		<b>465.92</b>	<b>Subtotal volume (m<sup>3</sup>)</b>		<b>895.64</b>	<b>Subtotal volume (m<sup>3</sup>)</b>		<b>863.03</b>	<b>Subtotal volume (m<sup>3</sup>)</b>		<b>875.22</b>	<b>Subtotal volume (m<sup>3</sup>)</b>		<b>453.16</b>

**Notes:**

- 1). The ranges of the thickness of roadway pavement (HMA and AB) for each survey line to be about from 1.1 to 1.7 meters as shown in this table.
- 2). The width of 0.92 meters for Line 00 and Line 06 and 1.83 meters for Line 01, 04, and 05 used to calculate the subtotal volume as indicated in the table above.
- 3). Based on total width of roadway, 7.32 meters (24 feet), the total volume of the pavement (HMA and AB) should be approximately 3553 m<sup>3</sup> within the project limits.

Plate 1. Typical depth section of the proposed roadway segment, including sketch survey map (upper), the roadway surface elevations (middle), and the GPR survey profile (lower).



Notes: The orange line indicates interpreted bottom of pavement section from GPR survey data, green borehole segments indicate pavement thickness from drilling logs. Data suggest deeper layers of uncertain composition at the limits of detection and are queried where indicated.

# **DRAINAGE REPORT**

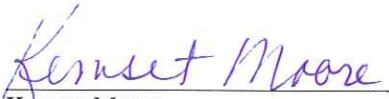
# DRAINAGE REPORT

MEN - 1 – PM 38.5 / 38.9

Navarro Bluffs Retreat

474801

Wednesday, December 15, 2010

  
Kemset Moore  
Hydraulics

15 Dec 2010  
DATE

  
Eric Lund  
REGISTERED CIVIL ENGINEER

15/Dec/2010  
DATE



**Background:**

This project is located on MEN-1- PM 38.5/38.75, where the two lane highway traverses marine terraces along the Pacific Ocean in Mendocino County, approximately one mile south of the Navarro River. A slope failure has experienced significant movement for decades requiring Caltrans Maintenance crews to repeatedly repair cracks and subsiding sections of the highway and shoulders. A roadway retreat has been determined to be the best strategy to deal with this location. This project will also remove the existing roadway and convert the site to a wetland to mitigate for project impacts.

**Project Site Description:**

The site drains westerly to the Pacific Ocean. The general topography is hills slopping down to a marine terrace. The roadway is a 2-lane conventional highway with a ditch on the east side and culverts across the road. Drainage from the westerly side of the road sheet flows toward the ocean. Roadway drainage that moves easterly is collected in ditches and passed to culverts that drain to the ocean down small steep ephemeral water courses. Within the project is a deep seated slope failure that is moving westerly toward the ocean. The movement has and continues to cause distress to the roadway. This project will reduce the problem by moving the road easterly away from the slope failure.

**General Drainage Plan:**

The proposed work includes roadway realignment away from the coastal bluff. The project also includes removal of the existing roadway. The existing roadway site will be used for on-site mitigation for wetland impacts. Culverts under the existing roadway will be relocated and drainage channels established at those locations. The amount of impervious area from the roadway will increase slightly when the project is complete due to the addition of 4' shoulders to accommodate non-motorized transportation. Maintenance was consulted and reported no reoccurring problems related to culvert size.

**Summary of Drainage improvement Locations:**

Drainage System 1 (PM 38.57)

The current 24" culvert will be removed and relocated. A new 24" culvert will be placed upstream under the new roadway with a drain inlet and endwall. The drain inlet will be moved up gradient 60 feet and a rock energy dissipater will be installed at the outlet to mitigate for the additional length of culvert. Additionally a top of cut ditch will be placed to intercept water before it reaches the roadway.

Drainage System 2 (PM 38.65)

An existing 36" culvert will be removed and relocated upstream as a 48" culvert under the proposed roadway. A headwall and endwall will be required. This pipe was checked and found adequate by Glenn Hurlburt using a 10 year and a 100 year storm. The calculations are provided in Appendix A. A wetland site will be constructed below this culvert to mitigate for the impacts to wetland caused by the roadway realignment. The wetland will be fed by the 48" culvert. The water depth within the wetland will be held to a maximum depth of three inches by a weir at the outlet. The wetland site will attenuate the increase in water caused by the removal of the culvert at PM 38.73 and reduce the flow velocity.

**Drainage System 3 (PM 38.67)**

This 24" culvert will be removed and the water will be redirected to the PM 38.65 culvert. Topography at this location provides little or no runoff to the culvert. The culvert mainly conveys roadway drainage. A new roadside dike will convey the runoff from this location to the upsized PM 38.65 culvert. The water will flow into the wetland mitigation site before discharging into the existing drainage channel at PM 38.65.

**Drainage System 4 (PM 38.73)**

The current 24" culvert will be removed and replaced with a rock lined ditch. The water currently feeding this culvert will instead be conveyed by the new culvert at PM 38.85. The new culvert was placed to catch water at a new low point.

**Drainage System 5 (PM 38.85)**

With the addition of a curve at this location and sag created by the curves super-elevation, a 24" culvert will be installed to convey the water to the release point at PM 38.73. This culvert was sized based on the existing size of the culvert at PM 38.73. The current culvert has not been reported to have any problems and without additional area the 24" size is assumed to be adequate. The water expected to feed this new culvert is presently fed to the drainage at PM 38.73 via a roadside ditch.

**Regulatory Setting:**

Wetland in the project area cannot be avoided due to the need to realign Highway 1 to fulfill the project's purpose and need. Permanent impacts will be mitigated on site as required by the California Coastal Commission and US Army Corps of Engineers (USACE).

**Stormwater Pollution Prevention:**

This project will require BMP treatments. Temporary erosion control measures to avoid and reduce potential impacts from the work area will be specified in the Storm Water pollution Control Plan (SWPPP), developed by the contractor and submitted to Caltrans prior to start of work. The SWPPP will incorporate applicable temporary construction BMPs for the project.

**Floodplain Analysis:**

A floodplain analysis was performed by Fernando Manzanera. The project was plotted on the Flood Insurance Rate Map (FIRM) in Zone C (areas of minimal flooding, no shading). No significant impacts or increases in floodwater elevations are expected due to this project. Attached in Appendix B is the floodplain Evaluation Report.

---

1-MEN-PM 38.5/38.75  
01-474801  
Storm Damage Repair

## APPENDIX A

### PM 38.65 Culvert Calculations

# Men 1 PM 38.65

## RATIONAL METHOD MODEL WITH ONE BASIN ROUTING

PREPARED BY: Glenn Hurlburt  
DATE: April 27, 2010

REVIEWED BY:  
DATE:

DESCRIPTION: Drainage Area Men 1 PM 38.65

I-D-F Curves coefficients from the Caltrans IDF32 program (attach printout for completeness):

	<u>Tr</u>	<u>RP(Tr)</u>	
	2	<u>0.63</u>	The IDF equation used is: $Int = RP * Dur^E$ , where RP and E are parameters provided by IDF32.  Return Periods for these Rational Method Calculations (years): <u>10</u> <u>100</u>
	10	<u>0.99</u>	
	25	<u>1.17</u>	
	50	<u>1.29</u>	
	100	<u>1.41</u>	
	1000	<u>2.14</u>	
	1000	<u>2.14</u>	
Slope (E):	<u>-0.512</u>	Minimum time of concentration to use (5 or 10 minutes):	<u>10</u>

Obtained from the Point Arena Rainfall Station

### ROUTING FLOW THROUGH AREA FOR Tr =10

Land use: Grasslands

Men 1 PM 38.65

	elevation	Length L (ft):	<u>1800</u>	
Upstream node:	<u>600</u>	Area (ac):	<u>33</u>	C FACTOR: <u>0.49</u>
Downstream node:	<u>200</u>			Slope S (ft/ft): <u>0.222</u>
	Area discharge Q=CIA:	<u>40.06</u>		<b>Results for Tr = 10:</b>
	Average Q to route through the subarea:	<u>20.03</u>		Time of concentration tc (minutes): <u>3.37</u>
Type of conveyance:	Trapezoidal Channel			At downstream node: I(in/hr) = <u>2.48</u>
	n = 0.045, b = 2.5 ft, z = 2, Dn = 0.61 ft, Fr = 2.32			Tc(minutes) = <u>3.37</u>
	V (fps) = <u>8.90</u> , S = 0.222, T = 4.93ft, Q(cfs) = 20.03			Qt(cfs) = <u>40.06</u>
				Ratio Q/At = <u>1.21</u>

Iterate until they are equal

### ROUTING FLOW THROUGH AREA FOR Tr =100

Land use: Grasslands

Men 1 PM 38.65

	elevation	Length L (ft):	<u>1800</u>	
Upstream node:	<u>600</u>	Area (ac):	<u>33</u>	C FACTOR: <u>0.45</u>
Downstream node:	<u>200</u>			Slope S (ft/ft): <u>0.222</u>
	Area discharge Q=CIA:	<u>52.40</u>		<b>Results for Tr = 100:</b>
	Average Q to route through the subarea:	<u>26.20</u>		Time of concentration tc (minutes): <u>3.12</u>
Type of conveyance:	Trapezoidal Channel			At downstream node: I(in/hr) = <u>3.53</u>
	n = 0.045, b = 2.5 ft, z = 2, Dn = 0.7 ft, Fr = 2.36			Tc(minutes) = <u>3.12</u>
	V (fps) = <u>9.60</u> , S = 0.222, T = 5.3ft, Q(cfs) = 26.2			Qt(cfs) = <u>52.40</u>
				Ratio Q/At = <u>1.59</u>

Iterate until they are equal

## Culvert Calculator Report Worksheet-1

Solve For: Headwater Elevation

Culvert Summary			
Allowable HW Elevation	108.00 ft	Headwater Depth/Height	0.87
Computed Headwater Elev.	103.47 ft	Discharge	52.00 cfs
Inlet Control HW Elev.	103.07 ft	Tailwater Elevation	0.00 ft
Outlet Control HW Elev.	103.47 ft	Control Type	Entrance Control

Grades			
Upstream Invert	100.00 ft	Downstream Invert	96.60 ft
Length	68.00 ft	Constructed Slope	0.050000 ft/ft

Hydraulic Profile			
Profile	S2	Depth, Downstream	1.50 ft
Slope Type	Steep	Normal Depth	1.50 ft
Flow Regime	Supercritical	Critical Depth	2.17 ft
Velocity Downstream	12.09 ft/s	Critical Slope	0.013707 ft/ft

Section			
Section Shape	Circular	Mannings Coefficient	0.024
Section Material	CMP	Span	4.00 ft
Section Size	48 inch	Rise	4.00 ft
Number Sections	1		

Outlet Control Properties			
Outlet Control HW Elev.	103.47 ft	Upstream Velocity Head	0.87 ft
Ke	0.50	Entrance Loss	0.44 ft

Inlet Control Properties			
Inlet Control HW Elev.	103.07 ft	Flow Control	Unsubmerged
Inlet Type	Headwall	Area Full	12.6 ft <sup>2</sup>
K	0.00780	HDS 5 Chart	2
M	2.00000	HDS 5 Scale	1
C	0.03790	Equation Form	1
Y	0.69000		

1-MEN-PM 38.5/38.75  
01-474801  
Storm Damage Repair

## APPENDIX B

# Floodplain Evaluation Report

Original

# Memorandum

To: Larry M. Chiea  
Environmental Coordinator  
Caltrans District 03

Date: September 19, 2007  
File: 01-MEN-1-PM 38.5/38.8  
EA47480

From: Fernando Manzanera, P.E.  
District 1, Hydraulics

Subject: Floodplain Evaluation Report

## PROJECT DESCRIPTION

Realign the roadway with a retreat to the east of the current alignment. The new alignment will include 12-foot lanes and 4-foot shoulders. The existing roadway will be decommissioned. Drainage work will include removal and relocation of culverts with placement of rock slope protection at the outlets.

## PURPOSE AND NEED STATEMENT

A Damage Assessment Form completed in April 2006 determined that approximately 1500 feet of Highway 1, saturated due to heavy winter rains, had failed. On site inspection showed multiple patches and overlays of asphalt from previous years of failures. The purpose of this realignment is to stabilize the roadway by retreating from the failure area.

## FLOODPLAIN INFORMATION

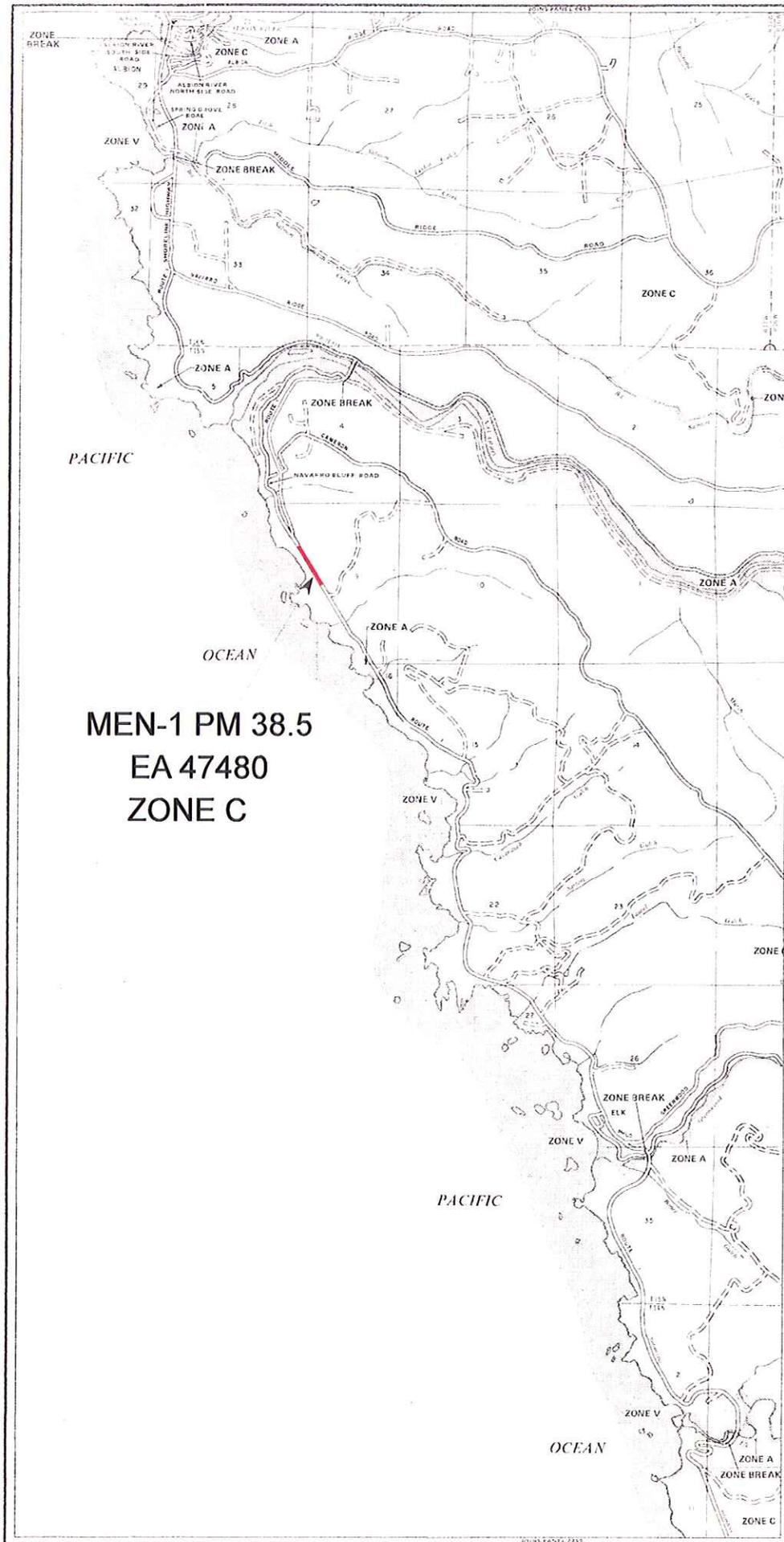
The project location was plotted on the Flood Insurance Rate Map (FIRM) #060183 0750-B with effective date of June 1, 1983 (attached). It falls within Zone C (areas of minimal flooding, no shading). Therefore, no significant impacts or increases in floodwater elevations are expected due to this project. A signed and stamped Floodplain Evaluation Report Summary (FERS) is included with this letter.

If you have any questions or concerns regarding this information, please contact this office at 707-445-5322 (Calnet 8-538-5322).



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Fernando Manzanera, M.S., P.E.  
District 1, Hydraulics



**MEN-1 PM 38.5  
EA 47480  
ZONE C**

**KEY TO MAP**

**SPECIAL FLOOD HAZARD AREA**

**ZONE A**  
**ZONE B**

Zone A Boundary: ———— 513  
 Zone B Boundary: - - - - - 513  
 Zone C Boundary: - - - - - 513  
 Zone V Boundary: - - - - - 513

Zone A Boundary: ———— 513  
 Zone B Boundary: - - - - - 513  
 Zone C Boundary: - - - - - 513  
 Zone V Boundary: - - - - - 513

Zone A Boundary: ———— 513  
 Zone B Boundary: - - - - - 513  
 Zone C Boundary: - - - - - 513  
 Zone V Boundary: - - - - - 513

**EXPLANATION OF ZONE DESIGNATIONS**

ZONE	EXPLANATION
A	Area of 100-year flood zone (peak elevations and flood hazard factors determined)
A0	Area of 100-year shallow flooding where depths are between one (1) and three (3) feet (average depths of inundation are shown, but no flood hazard factors are determined)
A1	Area of 100-year shallow flooding where depths are between one (1) and three (3) feet (average depths of inundation are shown, but no flood hazard factors are determined)
A1A30	Area of 100-year flood zone (peak elevations and flood hazard factors determined)
A99	Area of 100-year flood to be protected by flood protection system, peak elevations, flow, flood frequency and flood hazard factors not determined
B	Area between zero and the 100-year flood and 100-year flood or other areas subject to shallow flooding with average depths less than one (1) foot where the source of the flooding is not known, but the source may be an area protected by levees from the flood (100-year flood)
C	Area of special flooding - No Designation
D	Area of arid land, but possible flood hazard
V	Area of 100-year coastal flood with velocity factor not shown, but flood hazard factors not determined
V1933	Area of 100-year coastal flood with velocity factor not shown, but flood hazard factors not determined

**NOTES TO USER**

Certain areas not in the special flood hazard zones (A and V) may be protected by flood control works.  
 The map is for flood insurance purposes only. It does not necessarily show all areas subject to flooding or other community or other hazards or features outside special flood hazard areas.  
 For zoning map details, see separately printed sheet, No. Map 1933.  
 Coastal base flood elevations apply only to areas of the shoreline shown on this map.

INITIAL DESIGNATION: 1  
 DATE: JANUARY 2, 1974  
 FLOOD INSURANCE RATE MAP REVISIONS: APRIL 25, 1978  
 FLOOD INSURANCE RATE MAP REVISIONS: JUNE 1, 1983  
 FLOOD INSURANCE RATE MAP REVISIONS:

Note: This FLOOD INSURANCE RATE MAP effective date shown on this map is to determine when a policy is to be issued in the community where the area is shown on this map. It does not necessarily show all areas subject to flooding or other community or other hazards or features outside special flood hazard areas.  
 For zoning map details, see separately printed sheet, No. Map 1933.  
 Coastal base flood elevations apply only to areas of the shoreline shown on this map.



**NATIONAL FLOOD INSURANCE PROGRAM**

**FIRM FLOOD INSURANCE RATE MAP**

**MENDOCINO COUNTY, CALIFORNIA (UNINCORPORATED AREAS)**

PANEL 750 OF 11001  
(SEE MAP INDEX FOR PANELS NOT PRINTED)

**COMMUNITY-PANEL NUMBER 060183 0750 B**

**EFFECTIVE DATE: JUNE 1, 1983**

Federal Emergency Management Agency

## Floodplain Evaluation Report Summary

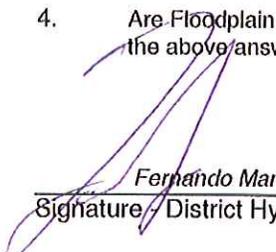
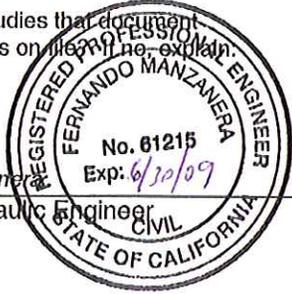
Dist Caltrans D1 Co. Mendocino Rte. 1 PM 38.5 / 38.8

Project No. EA 01-474800 Bridge No. N/A

**Limits & Description:** Realign the roadway with a retreat to the east of the current alignment. The new alignment will include 12-foot lanes and 4-foot shoulders. The existing roadway will be decommissioned. Drainage work will include removal and relocation of culverts with placement of rock slope protection at the outlets.

**Floodplain Description:** This location is outside of the FEMA designated floodplain (Zone C: Areas of minimal flooding, FEMA FIRM Map 060 183 0750 B; June 1, 1983). No significant impacts or increases in floodwater elevations are expected due to the stated project.

- |                                                                                                                                   | Yes                  | No                   |
|-----------------------------------------------------------------------------------------------------------------------------------|----------------------|----------------------|
| 1. Is the proposed action a longitudinal encroachment of the base floodplain?                                                     | _____                | _____ <b>x</b> _____ |
| 2. Are the risks associated with the implementation of the proposed action significant as defined in 23 CFR, Section 650.105 (o)? | _____                | _____ <b>x</b> _____ |
| 3. Does the proposed action constitute a significant floodplain encroachment as defined in 23 CFR, Section 650.105(q:1,2)?        | _____                | _____ <b>x</b> _____ |
| 4. Are Floodplain Studies that document the above answers on file? If no, explain                                                 | _____ <b>x</b> _____ | _____                |

Signature: Fernando Manzanera, District Hydraulic Engineer Date: 9/20/2007

- |                                                                                                                                                                                                                                                   |       |       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-------|
| 1. Will the proposed action support probable incompatible floodplain development?                                                                                                                                                                 | _____ | _____ |
| 2. Are there any significant impacts on natural and beneficial floodplain values?                                                                                                                                                                 | _____ | _____ |
| 3. Routine construction procedures are required to minimize impacts on the floodplain. Are there any special mitigation measures necessary to minimize impacts or restore and preserve natural and beneficial floodplain values? If yes, explain. | _____ | _____ |
| 4. Does the proposed action constitute a significant floodplain encroachment as defined in 23 CFR, Section 650.105(q:3)?                                                                                                                          | _____ | _____ |
| 5. Are Location Hydraulics Studies that document the above answers on file? If no, explain                                                                                                                                                        | _____ | _____ |

Signature - Environmental Branch Chief \_\_\_\_\_ Date \_\_\_\_\_

Concurrence:

Signature - Project Engineer \_\_\_\_\_ Date \_\_\_\_\_

**OPTIONAL DISPOSAL SITE**

DISPOSAL AGREEMENT NO. 201028-BEACON

DISTRICT	COUNTY	ROUTE	POST MILE	E.A.
1	MEN	01	33/34	5F4000
<b>DISPOSAL AGREEMENT NO. 201028-BEACON</b>				

**THIS AGREEMENT**, dated February 01, 2011, between R.D. Beacon, hereinafter called "Owner", and the State of California, acting by and through the Department of Transportation, hereinafter called "State".

**WITNESSETH THAT:**

For and in consideration of the sum of One Hundred Fifty Dollars (\$150.00), receipt of which is hereby acknowledged, and of the covenants hereinafter set forth, the parties hereto agree as follows:

1. Owner represents and warrants that he is the Owner in fee simple of the following described land situated in the County of Mendocino, State of California, Assessor's Parcel Number 130-040-01, 03 & 04, 130-030-01 and 127-290-01 and more specifically that property outlined in red on the map marked "Exhibit A" attached hereto and made a part hereof, and that they have the exclusive right to enter into this Agreement and to receive for his own use and benefit any royalty or other consideration payable, or that may become payable, hereunder.
2. Owner grants the State the right, at any time, and from time to time during the period of 5 years from and after the date of this Agreement, and for such further period as may be required under paragraph 12 hereof, to enter upon the following described portion of the aforesaid land and to dispose of excess materials, if, as, and when desired by State, such materials to be deposited at such times and in such quantities as the State may deem necessary, but not to exceed the maximum quantity of 100,000 ± cubic yards. Said materials shall consist of cut fill, crushed concrete and material originating from the maintenance, repair and building of the State Highways and shall be compacted as dumped in order to preclude sliding at the disposal site. The portion of the aforesaid land referred to above is specifically that area shown in yellow on the attached map marked "Exhibit A" attached to and made a part hereof, with the actual area to be delineated on site.
3. Upon delivery of excess materials, said property owner becomes the sole and exclusive owner of those excess materials for all purposes and will indemnify and hold Caltrans harmless from any claims or injuries occurring as a consequence of that storage and any subsequent reuse of the materials.
4. Owner grants to State the right of ingress and egress to and from the area described in paragraph 2 hereof over and across the following route: Owners existing asphalt road to the gravel road to the disposal site. This route is to be maintained by Caltrans at its current condition.

5. The consideration of One Hundred Fifty Dollars (\$150.00) as heretofore agreed, and the "per cubic yard" royalty contained in Clause 13 of the Agreement, shall represent the total payment for the materials placed on the disposal site insofar as State is concerned.
6. The State, its agents, or any subcontractor shall ensure that only authorized personnel are allowed on the property and the State's contractor shall agree with the State to indemnify Owner against loss of any kind sustained by Owner or any personal injury or property damage to others occasioned by or as a direct result of State's contractor's operations under this Agreement.
7. Owner waives any and all claims by reason of the State not disposing the maximum quantities of materials hereinabove stated. Further, this Agreement becomes operative when any additional permits that may be required by the County of Mendocino are secured. Each party shall render such reasonable assistance to the other as is necessary to obtain any such permits as may be required.
8. State agrees that, if any of the rights and privileges granted herein shall be exercised, then State agrees to hold the Owner harmless from all claims for injury to persons, damage to property, and/or loss or damage to the State's equipment resulting from aforementioned disposal operations on Owner's property.
9. Either party hereto may terminate this Agreement at any time upon giving the other party sixty (60) days written notice, or said Agreement may be otherwise amended or modified upon the mutual written consent of the parties hereto.
10. The rights and privileges hereby granted or reserved to State, may, at the option of the State, be exercised by any agent or contractor of State.
11. It is agreed that the State may conduct disposal operations on the property 24 hours a day.
12. If, at the expiration of the terms of this Agreement, State has commenced but has not completed operations in connection with disposal of materials on the portion of Owner's property described in paragraph 2 hereof, then this Agreement shall not terminate on said expiration date but shall remain in full force and effect until such disposal operations have been completed by the State or until State notifies Owner that State has completed operation on Owner's property, whichever shall first occur, provided, however, anything herein to the contrary notwithstanding, this Agreement shall terminate no later than 5 years and 60 days after the date of this Agreement unless such termination date is extended in writing by mutual agreement between the State and Owner.

13. The State agrees to pay, or cause to be paid, to the Owner for all rights herein granted, a royalty of \$0.85 per cubic yard for material deposited on said property. State shall have the option of electing one of the following methods of measuring the amount of materials placed upon the disposal site:

- (a) By cubic yard at point of delivery or
- (b) By weight or
- (c) By cubic yard measured by survey in place on the disposal site.

Payment of royalty shall be based upon the amount of materials placed upon said property and said payment of royalty shall be made in accordance with the State's established procedure for paying such obligation. For the purpose of progress payments, Owner shall be furnished a monthly statement showing the amount of material placed during the month.

14. Owner grants State exclusive use of this disposal area and State agrees to separate and stockpile asphalt grindings generated by State in a separate area on the aforementioned property. Owner becomes the sole and exclusive owner of said asphalt grindings and will indemnify and hold Caltrans harmless from any claims or injuries occurring as a consequence of that storage and any subsequent reuse of said asphalt grindings.

IN WITNESS WHEREOF, this Agreement has been executed.

  
\_\_\_\_\_  
R.D. BEACON, Owner

1-13-2011  
Date

**RECOMMENDED FOR APPROVAL:**

  
\_\_\_\_\_  
SAMMY R. GENTLE  
Right of Way Agent

1-18-11  
Date

**ACCEPTED:  
STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION**

  
\_\_\_\_\_  
MARK L. SUCHANEK  
Deputy District Director  
Maintenance & Operations

1/19/11  
Date

  
\_\_\_\_\_  
LEOTA K. LOVELACE  
Senior Right of Way Agent  
Project Delivery, Eureka

21 JAN '11  
Date

# PHOTO SHEET

RW District Form (01/01)

**CONFIDENTIAL**  
This document contains personal information, and pursuant to Civil Code 1798.21, it shall be kept confidential in order to protect against unauthorized disclosure.

---

	01-12-2011	1	MEN	01	33/34	SF4000		
REPORT NO	DATE	DISTRICT	CO	RTE	PM	EXP AUTH	PARCEL	FEDERAL PROJECT NO

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