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Staff:	Melissa B. Kraemer
Staff Report:	May 30, 2008
Hearing Date:	June 12, 2008
Commission Action:	

STAFF REPORT:

PERMIT AMENDMENT

APPLICATION NUMBER:	**1-86-200-A3**
APPLICANT:	**Humboldt County Public Works Department**
PROJECT LOCATION:	The overall project is located along portions of Old Arcata Road/Myrtle Avenue between Eureka and Arcata, Humboldt County. CDP Amendment No. 1-86-200-A3 affects an approximately 0.22-mile stretch of Myrtle Avenue between Post Mile (PM) 1.33 and PM 1.55 (Hall Avenue to just east of Ryan Slough bridge).
DESCRIPTION OF PROJECT PREVIOUSLY APPROVED:	Reconstruction and widening of 7.37 miles of Old Arcata Road/Myrtle Avenue to a roadway having two 12-foot-wide traffic lanes, two 4-foot wide paved shoulders, and a 3-foot wide sloped unpaved shoulder in most locations, and conversion of 0.75 acres of upland to farmed wetland or freshwater marsh.
DESCRIPTION OF CURRENT AMENDMENT REQUEST	Amend the approved roadway and bridge widening improvements around Ryan Slough to (1) reduce the approved widening of the Ryan Slough bridge from the approved 37 feet (including two 13-ft-wide lanes with 5.5-ft-wide raised walkways on either side) to 34.3 feet (including two 11-ft-wide traffic lanes with 6-ft-wide

shoulders); (2) relocate the Humboldt Community Services District water main from the south side to the north side of the bridge; (3) make minor changes to the road widening plans; (4) remove one ~40-inch dbh redwood tree at Station 2+170; (5) place approximately 56 cubic yards of up to 1-ton rock slope protection (RSP) in an ~840-square-foot upland area at the western abutment of the Ryan Slough bridge to form a buttress protecting the abutment; and (6) replace two failing storm drainage pipes above the western (left) bank of Ryan Slough and place a total of ~18 cubic yards of rock for energy dissipation and erosion control.

OTHER APPROVALS:

1) California Department of Fish & Game Streambed Alteration Agreement No. R1-07-0228 (July 30, 2007)
2) North Coast Regional Water Quality Control Board WDID No. 1B8051WNHU
3) Humboldt Bay Harbor, Recreation, & Conservation District Permit No. 07-07 (October 24, 2007)
4) U.S. Army Corps of Engineers Nationwide Permit No. 18 (Minor Discharges)
5) U.S. Army Corps of Engineers File No. 2007-400711 (August 9, 2007)
6) U.S. Army Corps of Engineers File No. 2000-257310 (March 4, 2008)
7) NOAA.-Fisheries Formal Consultation File No. 151422SWR98AR28 (February 28, 2003)
8) NOAA.-Fisheries "No Effect" Letter File No. 2007/04837 (August 21, 2007)
9) U.S. Fish & Wildlife Service (FWS) Formal Consultation File No. 1-14-2001-875.1 (March 13, 2003)
10) FWS Informal Consultation No. 1-14-2001-0875.2 (August 30, 2007)
11) U.S. Coast Guard Categorical Exclusion (March 13, 2001)
12) Federal Highway Administration Categorical Exclusion (May 28, 2003)
13) Caltrans letter affirming the validity of the May 2003 CE (August 30, 2007)

SUBSTANTIVE FILE DOCUMENTS:

1) Commission CDP File No. 80-P-69 (Humboldt County Public Works Department)
2) Commission CDP File No. 1-86-200-A (Humboldt County Public Works Department)
3) Commission CDP File No. 1-86-200-A2 (Humboldt County Public Works Department)
4) Commission CDP File No. 1-86-200-A4 (Humboldt County Public Works Department)
5) Commission CDP File No. 1-89-31 (California Department of Fish & Game)
6) Commission CDP File No. 1-90-38 (Humboldt County Public Works Department)
7) *Natural Environment Study Report Old Arcata Road/Myrtle Avenue Widening and Rehabilitation Project*. Prepared by Jones & Stokes, June 30, 2001
8) *Draft Environmental Impact Report Old Arcata Road/Myrtle Avenue Widening and Rehabilitation Project*. Prepared by Jones & Stokes, August 2001 (SCN 2001052113)

9) *Final Environmental Impact Report Old Arcata Road/Myrtle Avenue Widening and Rehabilitation Project*. Prepared by Jones & Stokes, October 2001 (SCN 2001052113)

10) Humboldt County Local Coastal Program

SUMMARY OF STAFF RECOMMENDATION

On May 14, 1981, the Commission granted Coastal Development Permit No. 80-P-69 to the Humboldt County Public Works Department to reconstruct and widen 7.37 miles of Old Arcata Road/Myrtle Avenue to a roadway extending from Hall Avenue to the Arcata City limits and having two 12-foot-wide traffic lanes, two 4-foot wide paved shoulders, and a 3-foot wide sloped unpaved shoulder in most locations. The project was originally expected to take 10 years to complete. Approximately 3.5 miles of the project area was widened/ reconstructed between 1978 and 1990, when the project was put on hold due to funding constraints.

The current permit amendment request includes the following project changes: (1) reduce the approved widening of the Ryan Slough bridge from the approved 37 feet (including two 13-ft-wide lanes with 5.5-ft-wide raised walkways on either side) to 34.3 feet (including two 11-ft-wide traffic lanes with 6-ft-wide shoulders); (2) relocate the Humboldt Community Services District water main from the south side to the north side of the bridge; (3) make minor changes to the road widening plans; (4) remove one ~40-inch dbh redwood tree at Station 2+170; (5) place approximately 56 cubic yards of up to 1-ton rock slope protection (RSP) in an ~840-square-foot upland area at the western abutment of the Ryan Slough bridge to form a buttress protecting the abutment; and (6) replace two failing storm drainage pipes above the western (left) bank of Ryan Slough and place a total of ~18 cubic yards of rock for energy dissipation and erosion control.

The portion of the amended development affected by CDP Amendment No. 1-86-200-A3 is located along an approximately 0.22-mile stretch of the Old Arcata Road/Myrtle Avenue corridor from Station 2+120 (Post Mile 1.33) to Station 2+720 (PM 1.55) (see Exhibit Nos. 1 and 2). The boundary between the Commission's area of retained permit jurisdiction and the area covered by the certified Humboldt County Local Coastal Program (LCP) bisects the project area (Exhibit No. 3). The Commission's jurisdiction over the project area extends from Station 2+720 to Station 2+480, (totaling approximately 240 meters or 40 percent of the project area), and approximately 360 meters of the project area (60 percent; from Station 2+120 to Station 2+480, which includes the portion of the project area west of the bridge) occur within an area certified under the Humboldt Bay Area Plan of the LCP.

Existing conditions in the project area include a narrow road corridor bordered by dense vegetation along most of the project stretch. The project site is distant from the ocean and Humboldt Bay, separated from the latter by a substantial area of grazed seasonal wetlands in former tidelands inland of Highway 101. There are no public views to the ocean or the bay.

Staff believes that with the attachment of the recommended special conditions requiring adherence to various construction responsibilities, protection of coastal waters and wetlands,

submittal of a final debris disposal plan, and submittal of a final wetland mitigation monitoring plan, among others, the amended development would remain consistent with the wetland and ESHA protection policies of the Coastal Act, as assured by the Commission in granting the original permit.

Staff believes that the amended development, as conditioned, is consistent with all Coastal Act Chapter 3 policies and the policies of the certified Humboldt County LCP.

The Motion to adopt the Staff Recommendation of Approval with Conditions is on Page 7.

STAFF NOTES:

1. Procedural Note

Section 13166 of the California Code of Regulations states that the Executive Director shall reject an amendment request if: (a) it lessens or avoids the intent of the approved permit; unless (b) the applicant presents newly discovered material information, which he or she could not, with reasonable diligence, have discovered and produced before the permit was granted.

On May 14, 1981, the Commission granted Coastal Development Permit No. 80-P-69 to the Humboldt County Public Works Department to reconstruct and widen 7.37 miles of Old Arcata Road/Myrtle Avenue to a roadway extending from Hall Avenue to the Arcata City limits and having two 12-foot-wide traffic lanes, two 4-foot wide paved shoulders, and a 3-foot wide sloped unpaved shoulder in most locations (see Exhibit No. 10). The approved project included the conversion of 0.75 acres of upland to farmed wetland or freshwater marsh. The project was originally expected to take 10 years to complete. The permit was approved with four special conditions, all of which have been satisfied by the County, including conditions requiring the County to (1) obtain approvals from the California Department of Fish and Game (CDFG) and the North Coast Regional Water Quality Control Board; (2) construct the mitigation sites pursuant to the proposed plans; (3) develop a management plan with CDFG to be ratified by the Regional Commission; and (4) record an open space easement at the mitigation site

On July 13, 1981 the Executive Director granted an immaterial amendment to CDP No. 80-P-69, which reworded the fourth special condition of the original permit to require the permittee to convey an open space easement to the CDFG over the mitigation area rather than just to record an offer to dedicate an open space easement over the site (see Pages 13 and 14 of Exhibit No. 10).

On December 9, 1986, the Commission approved an amendment to the permit (renumbered as CDP Amendment No. 1-86-200-A), which allowed for the filling of an additional approximately one acre of seasonal wetlands in conjunction with the redesign and

construction of an interchange where Myrtle Avenue, Upper Mitchell Road, and Lower Mitchell Road all convene (see Exhibit No. 11). The amendment approval allowed for wetland impacts to be mitigated partially on-site, by removing fill from approximately 0.2 acres of land adjacent to the project site and by restoring the area to freshwater seasonal wetland, as well as partially off-site, by payment of an in-lieu fee to the Coastal Conservancy for general wetland restoration and enhancement purposes. The amendment was approved with one special condition requiring the in lieu fee payment (of eight cents per square foot of wetlands filled) to the Conservancy. The County satisfied this special condition by paying the Conservancy $2,843.44 in January of 1987.

Approximately 3.5 miles of the project area was widened/reconstructed between 1978 and 1990, when the project was put on hold due to funding constraints. Additional federal funds for the project became available in 2001, and in preparation for project resumption and to account for project changes since its original approval, the County prepared an Environmental Impact Report (EIR) (prepared by Jones & Stokes, Draft EIR August 2001, Final EIR October 2001) and submitted a CDP amendment application to the Commission on December 17, 2001. However, CDP Amendment Application No. 1-86-200-A2 was never completed, and ultimately it was withdrawn.

The current permit amendment request includes the following project changes: (1) reduce the approved widening of the Ryan Slough bridge from the approved 37 feet (including two 13-ft-wide lanes with 5.5-ft-wide raised walkways on either side) to 34.3 feet (including two 11-ft-wide traffic lanes with 6-ft-wide shoulders); (2) relocate the Humboldt Community Services District water main from the south side to the north side of the bridge; (3) make minor changes to the road widening plans; (4) remove one ~40-inch dbh redwood tree at Station 2+170; (5) place approximately 56 cubic yards of up to 1-ton rock slope protection (RSP) in an ~840-square-foot upland area at the western abutment of the Ryan Slough bridge to form a buttress protecting the abutment; and (6) replace two failing storm drainage pipes above the western (left) bank of Ryan Slough and place a total of ~18 cubic yards of rock for energy dissipation and erosion control.

In approving the original Old Arcata Road/Myrtle Avenue widening project, the Commission found the project to be consistent with the wetland and ESHA protection policies of the Coastal Act. The project amendments currently proposed are relatively minor and primarily are necessary due to changes in design standards and environmental conditions at the site that have occurred as a result of significant passage of time since original project approval.

The current amendment request necessitates no changes to either the original permit conditions or the conditions of the first permit amendment that pertain to the Mitchell Road area. Staff believes that with the attachment of the four recommended special conditions described below, among others, the amended development would remain consistent with the wetland and ESHA protection policies of the Coastal Act as intended by the Commission in granting the original permit:

- Add Special Condition No. A3-1 to require adherence to various construction responsibilities to protect coastal waters and wetlands;

- Add Special Condition No. A3-2 to require submittal of a final erosion and runoff control plan;
- Add Special Condition No. A3-3 to require submittal of a final debris disposal plan; and
- Add Special Condition No. A3-4 to require submittal of a final wetland mitigation monitoring plan.

Thus, the Executive Director has determined that the proposed amendment as conditioned would not lessen or avoid the intent of the approved permit. Therefore, the Executive Director has accepted the amendment request for processing.

2. Commission Jurisdiction & Standard of Review

The portion of the amended development affected by CDP Amendment No. 1-86-200-A3 is located along an approximately 0.22-mile stretch of the Old Arcata Road/Myrtle Avenue corridor from Station 2+120 (Post Mile 1.33) to Station 2+720 (PM 1.55) (see Exhibit Nos. 1 and 2). The boundary between the Commission's area of retained permit jurisdiction and the area covered by the certified Humboldt County Local Coastal Program (LCP) bisects the project area (Exhibit No. 3). The Commission's jurisdiction over the project area extends from Station 2+720 to Station 2+480, (totaling approximately 240 meters or 40 percent of the project area, including the entire Ryan Slough bridge and the portions of the project area east of the bridge). The standard of review for projects located in the Commission's retained jurisdiction is Chapter 3 of the Coastal Act. Approximately 360 meters of the project area (60 percent; from Station 2+120 to Station 2+480, which includes the portion of the project area west of the bridge) occur within an area certified under the Humboldt Bay Area Plan of the Humboldt County LCP. The standard of review that the Commission must apply to the portion of the project in these certified areas is the certified Humboldt County LCP. Although portions of the project are subject to the Chapter 3 policies of the Coastal Act and portions of the project are subject to the Humboldt County LCP, the relevant Chapter 3 policies have been incorporated as LUP Policies into the Humboldt Bay Area Plan (HBAP). Accordingly, in finding the amended development consistent with the relevant Chapter 3 policies of the Coastal Act, the Commission is also finding the amended development consistent with the identical policies of the HBAP.

3. Scope

This staff report addresses only the coastal resource issues affected by the proposed permit amendment, provides recommended special conditions to reduce and mitigate significant impacts to coastal resources caused by the development, as amended, in order to achieve consistency with the Coastal Act and Humboldt County LCP, as applicable, and provides findings for conditional approval of the amended development. All other analysis, findings, and conditions related to the originally permitted development (CDP No. 80-P-69), the immaterial amendment to CDP No. 80-P-69 granted by the Executive Director, and CDP Amendment No. 1-86-200-A, except as specifically affected by the current permit amendment

request and addressed herein, remain as stated within the staff report for the original permit approval adopted by the Commission on May 14, 1981 attached as Exhibit No. 10, in the July 13, 1981 notice of the immaterial amendment to CDP No. 80-P-69 included as Pages 13 and 14 of attached Exhibit No. 10, and in the revised findings staff report for CDP Amendment No. 1-86-200-A adopted by the Commission on December 9, 1986 attached as Exhibit No. 11.

I. MOTION, STAFF RECOMMENDATION, AND RESOLUTION:

The staff recommends that the Commission adopt the following resolution:

Motion:

I move that the Commission approve the proposed amendment to Coastal Development Permit Amendment No. 1-86-200-A pursuant to the staff recommendation.

Staff Recommendation of Approval:

Staff recommends a **YES** vote. Passage of this motion will result in approval of the permit amendment as conditioned and adoption of the following resolution and findings. The motion passes only by affirmative vote of a majority of the Commissioners present.

Resolution to Approve with Conditions:

The Commission hereby approves the proposed permit amendment and adopts the findings set forth below, subject to the conditions below, on the grounds that the development with the proposed amendment, as conditioned, will be in conformity with the Chapter 3 policies of the Coastal Act and the policies of the certified Humboldt County Local Coastal Program. Approval of the permit complies with the California Environmental Quality Act because all feasible mitigation measures and alternatives have been incorporated to substantially lessen any significant adverse impacts of the development on the environment.

II. STANDARD CONDITIONS: See Attachment A.

III. SPECIAL CONDITIONS:

Note: The original permit contained four special conditions, all of which are reimposed as conditions of this permit amendment and remain in full force and effect. Additionally, CDP Amendment No. 1-86-200-A contained one special condition, which is reimposed as a condition of this permit amendment and remains in full force and effect. Special Condition Nos. A3-1 through A3-6 are new special conditions added to CDP No. 80-P-69. For comparison, the text of the conditions of both the original permit and the first permit

amendment are included in Exhibit Nos. 10 and 11, respectively.

Deleted wording within the modified special conditions is shown in ~~strikethrough~~ text, and new condition language appears as **bold double-underlined** text.

A3-1. Construction Responsibilities for the Development Authorized by CDP Amendment No. 1-86-200-A3:

The permittee shall comply with the following construction-related requirements:

A. No construction materials, debris, or waste shall be placed or stored where it may be subject to entering waters of Ryan Slough or coastal wetlands;

B. All construction activities shall be conducted during the dry season period of April 15 through October 15;

C. If rainfall is forecast during the time construction activities are being performed, any exposed soil areas shall be promptly mulched or covered with plastic sheeting and secured with sand bagging or other appropriate materials before the onset of precipitation;

D. Any and all debris resulting from construction activities shall be removed from the project site within 10 days of project completion in accordance with Special Condition No. A3-3;

E. During construction, all trash shall be properly contained, removed from the work site, and disposed of on a regular basis to avoid contamination of habitat during restoration activities. Following construction, all trash and construction debris shall be removed from work areas and disposed of properly;

F. Any debris discharged into coastal waters shall be recovered immediately and disposed of properly;

G. Any fueling and maintenance of construction equipment shall occur within upland areas outside of environmentally sensitive habitat areas or within designated staging areas. Mechanized heavy equipment and other vehicles used during the construction process shall not be stored or re-fueled within 300 feet of the waters of Ryan Slough; and

H. Fuels, lubricants, and solvents shall not be allowed to enter the coastal waters or wetlands. Hazardous materials management equipment including oil containment booms and absorbent pads shall be available immediately on-hand at the project site, and a registered first-response, professional hazardous materials clean-up/remediation service shall be locally available on call. Any accidental spill shall be rapidly contained

and cleaned up.

A3-2. Final Erosion and Sediment Control Plan for the Development Authorized by CDP Amendment No. 1-86-200-A3:

A. PRIOR TO ISSUANCE OF COASTAL DEVELOPMENT PERMIT AMENDMENT NO. 1-86-200-A3, the applicant shall submit, for the review and approval of the Executive Director, a final plan for erosion and sediment control.

1) The plan shall demonstrate that:

(a) Run-off from the project site shall not increase sedimentation in coastal waters;

(b) Run-off from the project site shall not result in pollutants entering coastal waters;

(c) Best Management Practices (BMPs) shall be used to prevent the entry of polluted stormwater runoff into coastal waters during the construction activities, including but not limited to, the use of relevant BMPs as detailed in the "California Storm Water Best Management Practice Handbooks, developed by Camp, Dresser & McKee, *et al.* for the Storm Water Quality Task Force (see http://www.cabmphandbooks.com); and

(d) The plan shall be consistent with the requirements of all other special conditions, including but not limited to Special Condition No. A3-1 – Construction Responsibilities.

2) The plan shall include, at a minimum, the following components:

(a) A schedule for installation and maintenance of appropriate construction source control best management practices (BMPs); and

(b) An on-site spill prevention and control response program, consisting of best management practices (BMPs) for the storage of clean-up materials, training, designation of responsible individuals, and reporting protocols to the appropriate public and emergency services agencies in the event of a spill, shall be implemented at the project site to capture and clean-up any accidental releases of oil, grease, fuels, lubricants, or other hazardous materials from entering coastal waters.

B. The permittee shall undertake development in accordance with the

approved final plans. Any proposed changes to the approved final plans shall be reported to the Executive Director. No changes to the approved final plans shall occur without a further amendment to Coastal Development Permit No. 80-P-69 (renumbered as CDP No. 1-86-200) as amended, unless the Executive Director determines that no amendment is legally required.

A3-3. Final Debris Disposal Plan for the Development Authorized by CDP Amendment No. 1-86-200-A3:

A. PRIOR TO ISSUANCE OF COASTAL DEVELOPMENT PERMIT AMENDMENT NO. 1-86-200-A3, the applicant shall submit, for the review and approval of the Executive Director, a final plan for the disposal of excess construction related debris including, but not limited to, concrete, vegetation and soil spoils, old culverts, etc. The plan shall describe the manner by which the material will be removed from the construction site and identify a disposal site that is in an upland area where materials may be lawfully disposed.

B. The permittee shall undertake development in accordance with the approved final plan. Any proposed changes to the approved final plan shall be reported to the Executive Director. No changes to the approved final plan shall occur without a further amendment to Coastal Development Permit No. 80-P-69 (renumbered as CDP No. 1-86-200) as amended, unless the Executive Director determines that no amendment is legally required.

A3-4. Final Revegetation and Monitoring Plan for the Development Authorized by CDP Amendment No. 1-86-200-A3:

A. PRIOR TO ISSUANCE OF COASTAL DEVELOPMENT PERMIT AMENDMENT NO. 1-86-200-A3, the applicant shall submit, for the review and approval of the Executive Director, a final plan for revegetation of disturbed ground proposed for the areas between and around the two storm drain pipes to be replaced that substantially conforms with the preliminary revegetation plan prepared by the County dated April 7, 2008 (attached as Exhibit No. 9), except that the final plan shall be revised as follows:

(1) The plan shall demonstrate that:

(a) Only habitat-specific, regionally appropriate native vegetation shall be used. The vegetation to be replanted shall be of local genetic stock, if available. No plant species listed as problematic and/or invasive by the California Native Plant Society, the California Invasive Plant Council, or as may be identified from

time to time by the State of California, shall be installed or allowed to naturalize or persist in the development area. No plant species listed as a "noxious weed" by the governments of the State of California or the United States shall be utilized within the property;

(b) Revegetation shall achieve a standard for success of at least 80 percent survival of plantings or at least 80 percent ground cover for broadcast seeding after a period of 3 years; and

(c) Rodenticides containing any anticoagulant compounds, including, but not limited to, Bromadiolone or Diphacinone, shall not be used;

(2) The plan shall include, at a minimum, the following components:

(a) Specified goals of the plan and performance criteria for evaluating the success of the revegetation goals;

(b) A site plan accompanied by a plant list, which together show the type, size, number, source, and location of all plant materials that will be retained or installed on the disturbed area;

(c) A maintenance plan (e.g., weeding, replacement planting) and monitoring plan to ensure that the specified goals and performance criteria have been satisfied. Restoration sites shall be monitored yearly with at least one site visit during the spring or summer months for a minimum of three years following completion of the project. All plants that have died shall be replaced during the next planting cycle (generally between late fall and early spring) and monitored for a period of three years after planting.

(d) Provisions for submission of a final monitoring report to the Executive Director at the end of the three-year reporting period. The final report must be prepared in conjunction with a qualified wetlands biologist. The report must evaluate whether the revegetation of the site conforms with the goals, objectives, and performance standards set forth in the approved final revegetation and monitoring plan. The report must address all of the monitoring data collected over the three-year period.

B. If the final monitoring report indicates that the revegetation project has been unsuccessful, in part or in whole, based on the approved goals, objectives, and performance standards set forth in the approved final revegetation and monitoring plan, the applicant shall submit a revised or supplemental revegetation plan to compensate for those portions of the

original plan which did not meet the approved goals and objectives. The revised revegetation plan shall be processed as an amendment to this coastal development permit unless the Executive Director determines that no amendment is legally required.

C. The permittee shall undertake development in accordance with the approved final plan. Any proposed changes to the approved final plan shall be reported to the Executive Director. No changes to the approved final plan shall occur without a further amendment to Coastal Development Permit No. 80-P-69 (renumbered as CDP No. 1-86-200) as amended, unless the Executive Director determines that no amendment is legally required.

A3-5. U.S. Army Corps of Engineers Approval for the Development Authorized by CDP Amendment No. 1-86-200-A3:

PRIOR TO COMMENCEMENT OF ANY DEVELOPMENT, the permittee shall provide to the Executive Director a copy of a permit issued by the Army Corps of Engineers, or letter of permission, or evidence that no permit or permission is required. The permittee shall inform the Executive Director of any changes to the project required by the Corps. Such changes shall not be incorporated into the project until the permittee obtains a further amendment to Coastal Development Permit No. 80-P-69 (renumbered as CDP No. 1-86-200) as amended, unless the Executive Director determines that no amendment is legally required.

A3-6. North Coast Regional Water Quality Control Board Approval for the Development Authorized by CDP Amendment No. 1-86-200-A3:

PRIOR TO ISSUANCE OF COASTAL DEVELOPMENT PERMIT AMENDMENT NO. 1-86-200-A3, the applicant shall provide to the Executive Director a copy of a permit issued by the North Coast Regional Water Quality Control Board, or evidence that no permit is required. The applicant shall inform the Executive Director of any changes to the project required by the Board. Such changes shall not be incorporated into the project until the applicant obtains a further amendment to Coastal Development Permit No. 80-P-69 (renumbered as CDP No. 1-86-200) as amended, unless the Executive Director determines that no amendment is legally required.

IV. FINDINGS & DECLARATIONS

The Commission finds and declares the following:

A. PROJECT & SITE DESCRIPTION

1. Background & Project Setting

Myrtle Avenue and its northern extension, Old Arcata Road, comprised the original portion of U.S. Highway 101 that rounded the northern lobe of Humboldt Bay between Eureka and Arcata before being replaced in the mid-1900s by the current expressway that cuts across the former bay tidelands in a more direct route between the two cities. The road was built as a narrow two lane rural highway, and the road retains that character despite the modest increases in development density over the years within the area served by the road. Planning for the Old Arcata Road Widening and Rehabilitation Project began in the 1970s, and the project was initially implemented in the early 1980s (see description of originally approved project below). The stated purpose of the project was twofold: (1) to improve safety along the corridor for motor vehicles, pedestrians, and bicyclists; and (2) to upgrade the road to current County standards. The sections of roadway approved for widening were last improved in 1946 and have travel lanes varying in width between 10 and 12 feet, inadequate or nonexistent shoulders, poor sight distance on curves, non-standard intersections, and ditches and power poles close to the edge of pavement. The substandard road conditions increase the accident potential when drivers are confronted with an emergency and have no room to recover, and there have been a number of injury and fatal accidents in the corridor over the years.

The portion of the amended development affected by CDP Amendment No. 1-86-200-A3 is located along an approximately 0.22-mile stretch of the Old Arcata Road/Myrtle Avenue corridor from Station 2+120 (Post Mile 1.33) to Station 2+720 (PM 1.55) (see Exhibit Nos. 1 and 2). The boundary between the Commission's area of retained permit jurisdiction and the area covered by the certified Humboldt County Local Coastal Program (LCP) bisects the project area (Exhibit No. 3). The Commission's jurisdiction over the project area extends from Station 2+720 to Station 2+480, (totaling approximately 240 meters or 40 percent of the project area, including the entire Ryan Slough bridge and the portions of the project area east of the bridge). The standard of review for projects located in the Commission's retained jurisdiction is Chapter 3 of the Coastal Act. Approximately 360 meters of the project area (60 percent; from Station 2+120 to Station 2+480, which includes the portion of the project area west of the bridge) occur within an area certified under the Humboldt Bay Area Plan of the Humboldt County LCP. The standard of review that the Commission must apply to the portion of the project in these certified areas is the certified Humboldt County LCP.

Existing conditions in the project area include a narrow road corridor bordered by dense vegetation along most of the project stretch. The banks of Ryan Slough are mostly devoid of woody vegetation, lined instead with both freshwater and brackish herbaceous species such as tufted hairgrass (*Deschampsia cespitosa*) and other grasses and herbs. Ryan Slough is tidally influenced in the project area, although salinity levels in the slough vary seasonally in response to varying levels of freshwater inflow from Ryan Creek and other tributaries.

The project site is distant from the ocean and Humboldt Bay, separated from the latter by a substantial area of grazed seasonal wetlands in former tidelands inland of Highway 101. There are no public views to the ocean or the bay, but portions of Ryan Slough extending both north and south from Myrtle Avenue are visible from the roadway. The view to the south looks up a small valley bounded by forested ridges. The existing bridge over Ryan Slough

has a raised sidewalk on the south side and has no walkway or even an appreciable shoulder area on the north side. The bridge has a rusty metal guardrail and railings that detract from the visual appearance of the roadway.

2. Description of Originally Approved Project

On May 14, 1981, the Commission granted CDP No. 80-P-69 to the Humboldt County Public Works Department to reconstruct and widen 7.37 miles of Old Arcata Road/Myrtle Avenue to a roadway extending from Hall Avenue to the Arcata City limits and having two 12-foot-wide traffic lanes, two 4-foot wide paved shoulders, and a 3-foot wide sloped unpaved shoulder in most locations (Exhibit No. 10). The approved project included the conversion of 0.75 acres of upland to farmed wetland or freshwater marsh. In its approval of the project, the Commission allowed 1.28 acres of wetlands to be filled and 1.75 acres of freshwater marsh to be created as mitigation to the wetland fill. The mitigation sites were located at Freshwater Corners and at Post Mile (PM) 6.42 near Rocky Gulch and were developed and managed under an agreement between the County and the California Department of Fish and Game (dated April 1981). The permit was approved with four special conditions, all of which have been satisfied by the County, including conditions requiring the County to (1) obtain approvals from the CDFG and the North Coast Regional Water Quality Control Board; (2) construct the mitigation sites pursuant to the proposed plans; (3) develop a management plan with CDFG to be ratified by the Regional Commission; and (4) record an open space easement at the mitigation site.

On July 13, 1981 the Executive Director granted an immaterial amendment to CDP No. 80-P-69, which reworded the fourth special condition of the original permit to require the permittee to convey an open space easement to the CDFG over the mitigation area rather than just to record an offer to dedicate an open space easement over the site (see Pages 13 and 14 of Exhibit No. 10).

3. Description of Amended Development Approved Under CDP Amendment No. 1-86-200-A

On December 9, 1986, the Commission approved an amendment to the permit (renumbered as CDP Amendment No. 1-86-200-A), which allowed for the filling of an additional approximately one acre of seasonal wetlands in conjunction with the redesign and construction of an interchange where Myrtle Avenue, Upper Mitchell Road, and Lower Mitchell Road all convene (Exhibit No. 11). The amendment approval allowed for wetland impacts to be mitigated partially on-site, by removing fill from approximately 0.2 acres of land adjacent to the project site and by restoring the area to freshwater seasonal wetland, as well as partially off-site, by payment of an in-lieu fee to the Coastal Conservancy for general wetland restoration and enhancement purposes. The amendment was approved with one special condition requiring the in lieu fee payment (of eight cents per square foot of wetlands filled) to the Conservancy. The County satisfied this special condition by paying the Conservancy $2,843.44 in January of 1987.

Approximately 3.5 miles of the project area was widened/reconstructed between 1978 and

1990, when the project was put on hold due to funding constraints. Additional federal funds for the project became available in 2001, and in preparation for project resumption and to account for project changes since its original approval, the County prepared an Environmental Impact Report (EIR) (prepared by Jones & Stokes, Draft EIR August 2001, Final EIR October 2001) and submitted a CDP amendment application to the Commission on December 17, 2001. However, CDP Amendment Application No. 1-86-200-A2 was never completed, and ultimately it was withdrawn.

4. Description of Amended Development Proposed Under CDP Amendment No. 1-86-200-A3

Under the current amendment request, the applicant proposes to further amend the amended development to include the following project changes:

- Reduction of the approved widening of the Ryan Slough bridge from 37 feet (including two 13-ft-wide lanes with 5.5-ft-wide raised walkways on either side) to 34.3 feet (including two 11-ft-wide traffic lanes with 6-ft-wide shoulders). All work will be done from the bridge deck. The existing bridge railings, concrete sidewalk, and curbs will be removed, and the concrete abutments, slab, and bent caps will be widened. Finally the bridge deck will be refinished and the railings replaced. The new railings will be more transparent and more attractive than the existing railings. See various sheets in Exhibit No. 4 for more details.
- Relocation of the Humboldt Community Services District (HCSD) water main from the south side to the north side of the bridge (see Exhibit No. 5 for details).
- Minor modification of the road widening plans, including decreasing shoulder width from 7 feet to 5 feet, deletion of an approved new cribwall at PM 1.45 and cribwall replacement at PM 1.51, and deletion of the approved excavation of a 15-ft high bank from PM 1.41 to 1.44. This shortening of the road width (by 4 feet) will remove the need to excavate into the hillside or create/replace any cribwalls.
- Removal of one ~40-inch dbh redwood tree at Station 2+170 (near the Hall Ave./Myrtle Ave. intersection).
- Placement of approximately 56 cubic yards of up to 1-ton rock slope protection (RSP) in an ~840-square-foot upland area at the western abutment of the Ryan Slough bridge to form a buttress protecting the abutment. The RSP will be keyed in with a 56-ft wide x 2.3-ft deep x 6.5-ft high toe trench excavated immediately below the base of the abutment (~31 cubic yards of excavated material). The area covered by rock will extend out 8 feet from the abutment and ~6.5 feet down the bank (ending approximately 50 feet from ordinary high water) and will be up to 3.3 feet thick. See Exhibit No. 6 (photos) and Sheets 4 and 7 of Exhibit No. 4 for more details.
- Replacement of a failing 12-inch metal culvert where it daylights and discharges midway up the slope from Ryan Slough to the bridge with an 18-inch HDPE plastic pipe just north of the western abutment of the Ryan Slough bridge, and construction of a rock energy dissipater consisting of ~13 cubic yards of 2-ton RSP across the

approximately 136-square-foot wetland outfall area. Approximately 8 cubic yards of embankment fill will be excavated from over the existing pipe resulting in a 33-ft long x 5.5-ft wide x 3-ft deep trench. Excavated material appropriate for backfill will be temporarily stockpiled on site, and remaining excavated material will be transported to an approved disposal facility. The new pipe will be placed in the same alignment as the old. The purpose of the energy dissipater, which will measure 8.2 ft wide x 16.5 ft long, is to prevent future scour and erosion from flowing stormwater, which has eroded the existing slope. The dissipater will terminate approximately 50 feet from the ordinary high water line. See Exhibit Nos. 6, 9, and Pages 4 and 7 of Exhibit No. 4 for more details.

- Removal of a failing 12-inch metal culvert at the left bank of Ryan Slough (downslope from the other failing pipe proposed for replacement), and placement of ~5 cubic yards of RSP at the ~81-square-foot wetland site for bank protection and erosion control purposes. See Exhibit Nos. 6 and 9 for more details.

The bridge abutment and storm drain replacement work will be done with the use of an excavator positioned on a relatively flat bench approximately 20 feet below the top of bank and 50 feet beyond the ordinary high water line. A "bobcat" or mini-excavator may be used to position rocks under the bridge. The bridge abutment and storm drain work is expected to take approximately one week to complete, and the entire project is expected to take approximately three months to complete.

The applicant is proposing the following best management practices and erosion and sediment control measures for work around Ryan Slough:

- The ground-disturbing portions of the project will be done during summer when the chance of rainfall is minimal.
- A containment system, to be designed by the contractor and approved by the applicant, will be suspended beneath the bridge widening work to prevent debris from falling into the slough.
- All disturbed ground will be revegetated by seeding with a fast growing native grass seed mix and mulched with weed-free rice straw. A preliminary revegetation plan also proposes to install coyote brush (*Baccharis pilularis*), slough sedge (*Carex obnupta*), California tule (*Scirpus validus*), and mixed bareroot transplants around and between both culvert replacement areas (see Exhibit No. 9).
- A water pollution control plan will be prepared and implemented according to the Caltrans Stormwater Quality Handbooks (Project Planning and Design Guide, April 2003). The plan will include the use of temporary control measures such as silt fences, fiber rolls, etc., as well as permanent measures incorporated into the project design (see Exhibit No. 8).

B. PROTECTION OF WATER QUALITY, WETLANDS, MARINE RESOURCES, & ENVIRONMENTALLY SENSITVE HABITAT AREAS

1. Coastal Act & Humboldt County Local Coastal Program Policies:

Coastal Act Section 30230 (incorporated also as an LUP Policy in Humboldt Bay Area Plan Section 3.30(B)(8)) states the following (emphasis added):

> *Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.*

Coastal Act Section 30231 (incorporated also as an LUP Policy in Humboldt Bay Area Plan Section 3.30(B)(8)) states the following (emphasis added):

> *The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.*

Coastal Act Section 30233 (incorporated also as an LUP Policy in Humboldt Bay Area Plan Section 3.30) states the following (emphasis added):

> *(a) The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following:*
>
> *(1) New or expanded port, energy, and coastal-dependent industrial facilities, including commercial fishing facilities.*
>
> *(2) Maintaining existing, or restoring previously dredged, depths in existing navigational channels, turning basins, vessel berthing and mooring areas, and boat launching ramps.*
>
> *(3) In open coastal waters, other than wetlands, including streams, estuaries, and lakes, new or expanded boating facilities and the placement of structural pilings for public recreational piers that provide public access and recreational opportunities.*
>
> *(4) Incidental public service purposes, including but not limited to, burying cables and pipes or inspection of piers and maintenance of existing intake and outfall*

lines.

(5) Mineral extraction, including sand for restoring beaches, except in environmentally sensitive areas.

(6) Restoration purposes.

(7) Nature study, aquaculture, or similar resource dependent activities.

(b) Dredging and spoils disposal shall be planned and carried out to avoid significant disruption to marine and wildlife habitats and water circulation. Dredge spoils suitable for beach replenishment should be transported for such purposes to appropriate beaches or into suitable longshore current systems.

(c) In addition to the other provisions of this section, diking, filling, or dredging in existing estuaries and wetlands shall maintain or enhance the functional capacity of the wetland or estuary…

(d) Erosion control and flood control facilities constructed on watercourses can impede the movement of sediment and nutrients which would otherwise be carried by storm runoff into coastal waters. To facilitate the continued delivery of these sediments to the littoral zone, whenever feasible, the material removed from these facilities may be placed at appropriate points on the shoreline in accordance with other applicable provisions of this division, where feasible mitigation measures have been provided to minimize adverse environmental effects. Aspects that shall be considered before issuing a coastal development permit for such purposes are the method of placement, time of year of placement, and sensitivity of the placement area.

2. Consistency with Coastal Act and LCP Policies:

The amended development proposed for the ~240 meters of the project area between Station 2+720 and Station 2+480, including the widening of Ryan Slough bridge, relocation of the HCSD water main, the bridge abutment work, and the storm drain replacement and dissipater work, is located within the Commission's retained jurisdiction. Thus, the standard of review that the Commission must apply to this portion of the project is Chapter 3 of the Coastal Act.

The amended development proposed for the ~360 meters of the project area between Station 2+120 and Station 2+480, including the major vegetation removal and the road widening work from Hall Avenue to just west of the Ryan Slough bridge, is located within an area certified under the Humboldt County LCP. Thus, the standard of review that the Commission must apply to this portion of the project area is the certified Humboldt County LCP. This portion of the project area contains no coastal wetlands or waters. Even so, as stated above, Sections 30230, 30231, and 30233 have been incorporated as an LUP policy in Humboldt Bay Area Plan Section 3.30. In addition, erosion from ground-disturbing activities of this portion of the project could cause sedimentation impacts to the waters and fish habitat of Ryan Slough. Therefore, the ground disturbing activities within the area certified under the LCP must be reviewed for conformance with the water quality and habitat protection policies of the

LCP.

Although portions of the project are subject to the Chapter 3 policies of the Coastal Act and portions of the project are subject to the Humboldt County LCP, the relevant Chapter 3 policies have been incorporated as LUP Policies into the Humboldt Bay Area Plan (HBAP). Accordingly, in finding the amended development consistent with the relevant Chapter 3 policies of the Coastal Act, the Commission is also finding the amended development consistent with the identical policies of the HBAP.

The amended development proposes to fill approximately 240 square feet of wetlands for the replacement of two storm drain pipes and construction of associated energy dissipaters. The wetlands to be filled are considered low quality and not environmentally sensitive due to their degraded nature, the presence of invasive exotic species and the relative lack of native wetland vegetation, and impacts from foot trampling, refuse, and other human waste (see photos, Exhibit No. 6). The 120-square-foot wetland area that would be affected by the proposed work on the upper storm drain pipe is only slightly hydrophytic, dominated by weedy onion (*Allium triquetrum*) with lesser amounts of lady fern (*Athyrium felix-femina*), California blackberry (*Rubus ursinus*), and horsetail (*Equisetum telmateia*). The wetland area is located on a gently sloping bench above the left bank of Ryan Slough. The hydrology of the seasonal wetland is a result of the storm drain outfall itself, as the surrounding bench and hillslope is generally upland in nature. The 120-square-foot wetland area that would be affected by the proposed work on the lower storm drain pipe is severely eroded and thus partially devoid of vegetation (see photos, Exhibit No. 6). The vegetation surrounding the pipe to be replaced is dominated mostly by herbaceous, non- or only slightly hydrophytic grasses and herbs. There is active erosion in a 30-square-foot area within the embankment immediately below the outfall of the lower drain pipe. The pipe itself is completely rusted through and has the potential to continue eroding the bank and contributing sediment to Ryan Slough. A portion of the proposed rock energy dissipater in this area will extend below the ordinary high water mark of Ryan Slough.

Coastal Act Sections 30230, 30231, and 30233 cited above, incorporated as an LUP policy in HBAP Section 3.30, set forth a number of limitations on development in coastal waters, wetlands, and estuaries. For analysis purposes, the limitations can be grouped into four general categories or tests. These tests are as follows:

A. That the purpose of the filling, diking, or dredging is for one of the seven uses allowed under Section 30233;

B. That the project has no feasible less environmentally damaging alternative;

C. That feasible mitigation measures have been provided to minimize adverse environmental effects; and

D. That the biological productivity and functional capacity of the habitat shall be maintained and enhanced where feasible.

Each category is discussed separately below.

A. Permissible Use for Fill

The first test set forth above is that any proposed filling, diking, or dredging in wetlands must be for an allowable purpose as specified under Section 30233 of the Coastal Act. The relevant category of use listed under Section 30233(a) that relates to the proposed construction of the water pipeline is subcategory (4), stated as follows:

> *(4) Incidental public service purposes, including but not limited to, burying cables and pipes or inspection of piers and maintenance of existing intake and outfall lines.*

To determine if the proposed filling is for an incidental public service purpose, the Commission must first determine that the proposed filling is for a public service purpose. The project involves replacing existing storm drain pipes, which function to direct stormwater off of the County road during rain events. Work would be conducted within the County of Humboldt's easement, and the proposed project would be undertaken by a public agency. Therefore, the Commission finds that the fill is for a public service purpose consistent with Section 30233(a)(4).

The Commission must next determine if the fill is for an "incidental" public service purpose. The County proposes to construct rock energy dissipaters within degraded wetlands at the storm pipe outfalls to curtail existing erosion and prevent future erosion and sedimentation into coastal waters and wetlands. The energy dissipaters are incidental to the storm drain pipes and the public road itself in that the dissipaters serve to mitigate the effects of the storm drain runoff from the road discharging from the storm drain outfall, which otherwise erodes the hillslope and embankment of Ryan Slough and directly contributes sediment to Ryan Slough, which adversely affects water quality and fish habitat. Therefore, the Commission finds that the installation of rock energy dissipaters is incidental to maintenance of the storm drain pipes.

In conclusion, the Commission finds that the filling of wetlands for the amended development is for an incidental public service purpose, and thus is an allowable use pursuant to Section 30233(a)(4) of the Coastal Act.

B. Alternatives Analysis

The second test set forth by the Commission's fill policies is that the proposed fill project must have no feasible less environmentally damaging alternative. Coastal Act Section 30108 defines "feasible" as follows:

> *"Feasible" means capable of being accomplished in a successful manner within a reasonable time, taking into account economic, environmental, social, and technological factors.*

The County completed an alternatives analysis (Exhibit No. 7), which examined three

alternatives in addition to the proposed alternative. These include Alternative #1, the no project alternative (leaving the lower pipe as-is), Alternative #2, removing the lower pipe and filling the eroded bank with natural material from the site, and Alternative #3, removing the lower pipe and planting willow sprigs or other brackish water tolerant plants rather than placing RSP as proposed.

The alternatives analysis concludes that the proposed project alternative is the least environmentally damaging feasible alternative because it would replace deteriorated pipes and, with rock energy dissipaters, curtail the existing active bank erosion, which, if left unchecked under the "no project" alternative, would continue to erode the bank and contribute sediment into the slough. Erosion and sedimentation would also continue under the Alternative #2 scenario, which would involve replacing the deteriorated pipes and backfilling the surrounding eroded areas with native soil from the site. As storm water would continue to flow from the pipes during each rain event, even compacted backfill in the outfall areas potentially would begin to erode away with time. Alternative #3, planting the outfall areas with willows or other species rather than filling the areas with RSP as proposed, was deemed infeasible due to the existing environmental conditions at the site. Willows do not occur naturally anywhere along this stretch of Ryan Slough, and successful plantings would not be expected.

Therefore, the Commission finds that there is no less environmentally damaging feasible alternative to the amended development as conditioned, as required by Section 30233(a).

C. Feasible Mitigation Measures

The third test set forth by Section 30233 is whether feasible mitigation measures have been provided to minimize adverse environmental impacts. Portions of the proposed storm drain replacement work would be located within wetlands in the vicinity of Ryan Slough. Depending on the manner in which the proposed project is conducted, the project could have significant adverse impacts on (1) wetland habitat, (2) water quality, and (3) sensitive fish species. The potential impacts and their mitigation are discussed below in the following sections.

(1) Wetland Habitat

As discussed above, approximately 400 square feet of wetlands occur in the project area, approximately 240 square feet of which are proposed to be filled. The total wetland area is considered low quality and not environmentally sensitive due to its degraded nature, the presence of invasive exotic species and the relative lack of native wetland vegetation, and/or impacts from active erosion, foot trampling, refuse, and other human waste (see photos, Exhibit No. 6). The 120-square-foot wetland area that would be affected by the proposed work on the upper storm drain pipe is only slightly hydrophytic, is dominated mostly by invasive species, and is seasonal in nature, with its hydrology a direct result of pipe effluent during the rainy season. The 120-square-foot wetland area that would be affected by the proposed work on the lower storm drain pipe is severely eroded and thus partially devoid of vegetation (see photos, Exhibit No. 6). The vegetation surrounding the pipe to be replaced is

dominated mostly by herbaceous, non- or only slightly hydrophytic grasses and herbs. There is active erosion in a 30-square-foot area within the embankment immediately below the outfall of the lower drain pipe, further reducing the habitat value of this wetland area.

By placing rock slope protection (RSP) as proposed in the pipe outfall areas, the applicant will not only curtail existing erosion problems at the site, thereby benefiting the surrounding aquatic environment, but also the rocked fill sites themselves will enjoy improved habitat value, as in the absence of active erosion vegetation will be able to naturally colonize these areas in the future.

The mitigation measures that have been proposed by the applicant to minimize adverse environmental effects to the wetland habitat include the following: (1) replanting with native species the area below the upper outfall and above the lower drain pipe (see Exhibit No. 9); and (2) the use of various BMPs such as silt fencing along Ryan Slough, placement of a temporary sediment trap below the upper storm drain outfall, temporary drainage inlet protection around all drainage inlets to help minimize sedimentation, and seeding and mulching all disturbed areas after construction activities (see Exhibit No. 8). By replanting the area between and around the two storm drain pipes with coyote brush, slough sedge, California tule, and mixed bareroot transplants as proposed, the applicant will be enhancing an otherwise degraded area and increasing the habitat value of the area for birds and other organisms. The proposed planting also will also help serve as a water quality buffer between the upper outfall and Ryan Slough, and they will replace some of the wetland area that is being lost as a result of the construction of the rock energy dissipaters.

To ensure that the replanting efforts are successful and the surrounding wetland habitat enhanced, the Commission attaches Special Condition No. A3-4. This condition requires the applicant to submit, prior to issuance of the coastal development permit amendment for the review and approval of the Executive Director, a final revegetation and monitoring plan detailing that only habitat-specific, regionally appropriate, native species shall be used, that revegetation shall achieve a success standard of at least 80 percent survival, and rodenticides containing any anticoagulant compounds shall not be used.

The Commission finds that the amended development, as conditioned, includes all feasible mitigation measures to minimize all significant adverse impacts to coastal wetland habitats consistent with Section 30233 of the Coastal Act. The mitigation measures required to minimize impacts to water quality and sensitive fish species, which will further minimize significant adverse impacts to the functional capacity of coastal waters and wetlands, are discussed in sections (2) and (3) below

(2) Water Quality

As discussed above, the proposed project involves construction adjacent to Ryan Slough, and potential adverse impacts to the water quality of this water body could occur in the form of sediment disturbance and transport and from the accidental discharge of hazardous fuels or other substances from the construction equipment to sensitive habitat areas.

As discussed below in section (C)(3) regarding sensitive fish species, the proposed project incorporates various construction measures to minimize the potential for sediment mobilization, which could result in significant adverse water quality impacts in the form of increased turbidity. The County proposes the use of various BMPs to help protect water quality such as silt fencing along Ryan Slough, placement of a temporary sediment trap below the upper storm drain outfall, temporary drainage inlet protection around all drainage inlets to help minimize sedimentation, and seeding and mulching all disturbed areas after construction activities (see Exhibit No. 8). Additionally, the proposed project involves the restoration of the project area by reseeding disturbed areas and planting the areas between and around the storm drains, which would stabilize any exposed soil and prevent sediment from becoming entrained in surface runoff. Furthermore, project construction is proposed to occur during the dry season to minimize the potential for sediment leaving the site as stormwater runoff.

Although the measures proposed are appropriate, in some cases they do not go far enough or are not specific enough to ensure protection of remaining wetlands on site and other coastal resources. For example, the proposed erosion control measures are not specific enough or do not go far enough to assure that no construction materials or spills enter the slough, that all construction debris is properly disposed of, and that erosion control measures are effectively in place for the duration of project activities. Therefore, the Commission attaches Special Condition No. A3-1, which specifies various construction protocols that must be implemented for the duration of the project, including (A) no construction materials, debris, or waste shall be placed where it may be subject to entering coastal waters or wetlands; (B) construction activities shall be restricted to the dry season period of April 15 through October 15; (C) if rainfall is forecast during the time construction activities are being performed any exposed soil areas shall be promptly mulched or covered with plastic sheeting secured with sand bagging or other appropriate materials before the onset of precipitation; (D) any and all debris resulting from construction activities shall be removed from the project site within 10 days of project completion in accordance with Special Condition No. A3-3 (see below); (E) during construction, all trash shall be properly contained, removed, and disposed of regularly and properly; (F) any debris discharged into coastal waters shall be recovered as soon as possible; (G) any fueling and maintenance of construction equipment shall occur outside of sensitive areas or within designated staging areas; and (H) hazardous materials management equipment shall be ready and available on-site and a professional clean-up/remediation service shall be locally available on call if necessary. Additionally, the Commission attaches Special Condition No. A3-3, which requires the applicant to submit to the Executive Director for review and approval (prior to the issuance of the permit amendment) a debris disposal plan demonstrating that all materials including concrete, soil and vegetation spoils, other debris, etc. shall be removed completely from the project area and lawfully disposed of at an approved upland location.

The applicant proposes to produce and implement a Water Pollution Control Plan in accordance with the Caltrans stormwater Quality Handbooks (Project Planning and Design Guide, April 2003). To ensure that this plan is produced as proposed, the Commission attaches Special Condition No. A3-2, which requires submittal of a final erosion and sediment control plan prior to issuance of the permit amendment. The condition requires that the plan demonstrate, among other things, that (a) runoff from the project site shall not increase

sedimentation in coastal waters; (b) runoff from the project site shall not result in pollutants entering coastal waters, and (c) BMPs shall be used to prevent the entry of polluted stormwater runoff into coastal waters during the construction activities.

Therefore, as conditioned, the Commission finds that the amended project will include feasible mitigation measures to minimize adverse environmental impacts on water quality consistent with Section 30233 of the Coastal Act. The Commission further finds that the biological productivity and quality of coastal waters will be maintained and the amended development, as conditioned, is consistent with Sections 30230 and 30231 of the Coastal Act and the identical policies in the certified Humboldt County LCP.

(3) Sensitive Fish Species

The waters of Ryan Slough provide habitat for a number of marine species. The Southern Oregon/Northern California Coast Evolutionary Significant Unit (ESU) of coho salmon and the Coastal California ESU of Chinook salmon are listed under the federal Endangered Species Act (ESA) as "threatened." Chinook (or king) salmon (*Oncorhynchus tshawytscha*) spawns in upstream reaches of stream tributaries to Humboldt Bay, but young fish are believed to spend several months during their first year "rearing" in the estuary. Coho (or silver) salmon (*Oncorhynchus kisutch*) also spawn in upstream reaches, and their young also spend time in the estuary before first entering the ocean. In addition, adults of both species spend time in the estuary when returning to the basin to spawn, "holding" there while waiting for fall rains to bring river levels up enough to allow upstream migration. The third salmonid species of concern in the project vicinity is steelhead (*Oncorhynchus mykiss*), a seagoing trout. Steelhead have a life history similar to that of Chinook and coho, although the steelhead (which is closely related to non-seagoing rainbow trout), find appropriate habitat conditions in smaller streams, and in more upstream reaches than do the larger salmonids. The Northern California steelhead ESU is presently listed under the federal Endangered Species Act as "threatened." An additional fish species of concern in the project area is the coastal cutthroat trout (*Oncorhynchus clarki clarki*), a resident salmonid in coastal streams in northern California and southern Oregon. This species is a "species of special concern" for the Department of Fish and Game, but is not listed under either the federal or state Endangered Species Act. Coastal cutthroat trout have been documented in many streams in the Humboldt Bay basin, and are presumed to be present in all the perennially flowing tributary streams to Humboldt Bay. All of the life requisites for this species are provided by the conditions in the streams in which it resides. Finally, Ryan Slough provides habitat for an additional federally listed fish species, the tidewater goby (*Eucyclogobius newberryi*), a species currently listed as "endangered" under the federal Endangered Species Act. Tidewater gobies occur in near-estuarine tidal stream bottoms, with varying salinities and substrates generally of fine (*i.e.*, silty to clayey mud) materials.

The U.S. Fish and Wildlife Service (FWS) and NOAA-Fisheries both completed formal consultations/biological opinions in 2003 for the project as amended under CDP Application No. 1-86-200-A2 (which was ultimately withdrawn). At that time, the project involved pile driving within Ryan Slough for bridge widening purposes. In those consultations, the agencies anticipated take of gobies and salmonids primarily as a result of pile driving and other in-

water work activities in habitat considered suitable for the species. In its informal consultation for the currently proposed amended development, which eliminates pile driving and other work in the water, the FWS concludes that the proposed project would not likely adversely affect tidewater goby proposed critical habitat (which occurs downstream of the project area in the Fay Slough area, but not within any portion of Ryan Slough or its tributaries). Similarly, NOAA-Fisheries issued a "no effect" letter for the amended project concurring that the revised project will not result in any effects to coho or Chinook salmon or NC steelhead.

As discussed above, the proposed project involves placement of rock slope protection below the ordinary high water line in Ryan Slough as well as construction activities on the banks and bridge above the slough. As further discussed above under the section on water quality, project activities potentially could mobilize sediment in the project area which could become entrained in surface water runoff to Ryan Slough. Sediment is considered a pollutant that affects visibility through the water and affects plant productivity, animal behavior (*e.g.*, foraging) and reproduction, and the ability of animals to obtain adequate oxygen from the water. With respect to potential effects on fish and fish habitat, sediment is often a major pollutant of concern, because fine sediments have been well documented to fill pore spaces between larger gravel and cobble clasts, eliminating the relatively coarse sediments required for egg and fry survival of many freshwater-spawning fish. Additionally, sediments may physically alter or reduce the amount of habitat available in a watercourse by replacing the pre-existing habitat structure with a stream-bottom habitat composed of substrate materials unsuitable for the pre-existing aquatic community. Furthermore, sediment is the medium by which many other pollutants are delivered to aquatic environments, as many pollutants are chemically or physically associated with the sediment particles.

To minimize the potential project effects on water quality, the Commission, as discussed above, requires Special Condition Nos. A3-1, A3-2, and A3-3. Special Condition No. A3-1 requires the permittee to comply with specific construction practices, Special Condition No. A3-2 requires submittal of a final erosion and sediment control plan, and Special Condition No. A3-3 requires submittal of a final debris disposal plan. Combined, these three special conditions will reduce the project's potential to mobilize sediment and other pollutants into Ryan Slough and will protect water for the benefit of sensitive fish species in the area. The Commission finds that these provisions are feasible mitigation measures that will minimize significant adverse impacts to sensitive fish species.

Therefore, the Commission finds that the amended development, as conditioned, includes all feasible mitigation measures to minimize all significant adverse impacts on sensitive fish species consistent with Section 30233 of the Coastal Act and the identical policies of the Humboldt Bay Area Plan Section 3.30.

D. Maintenance & Enhancement of Marine Habitat Values

The fourth general limitation set by Section 30233 and 30231 of the Coastal Act and the identical policies of the Humboldt Bay Area Plan is that any proposed dredging or filling in coastal wetlands must maintain and enhance the biological productivity and functional capacity of the habitat, where feasible.

As discussed above, the conditions of the permit will ensure that the amended development will not have significant adverse impacts on the water quality of Ryan Slough and will ensure that the project construction will not adversely affect the biological productivity and functional capacity coastal waters or wetlands. Therefore, the Commission finds that the amended development, as conditioned, will maintain the biological productivity and functional capacity of the habitat consistent with the requirements of Section 30233, 30230, and 30231 of the Coastal Act and the identical policies of the Humboldt Bay Area Plan.

E. Conclusion

The Commission thus finds that the proposed filling is an allowable use under Section 30233(a) of the Coastal Act, that there is no feasible less environmentally damaging alternative, that feasible mitigation is required to minimize all significant adverse impacts associated with the filling of coastal wetlands, and that the habitat values of coastal waters and wetlands will be enhanced. Therefore, the Commission finds that the amended development, as conditioned, is consistent with Sections 30233, 30230 and 30231 of the Coastal Act and the identical policies of Section 3.30(B)(8) and Section 3.30 of the Humboldt Bay Area Plan.

C. PUBLIC ACCESS

1. Summary of Coastal Act and LCP Policies:

Section 30210 of the Coastal Act (included in Section 3.50 of the Humboldt Bay Area Plan) requires that maximum public access shall be provided consistent with public safety needs and the need to protect natural resource areas from overuse. Section 30212 of the Coastal Act (included in Section 3.50 of the HBAP) requires that access from the nearest public roadway to the shoreline be provided in new development projects except where it is inconsistent with public safety, military security, or protection of fragile coastal resources, or adequate access exists nearby. Section 30211 (included in Section 3.50 of the HBAP) requires that development not interfere with the public's right to access gained by use or legislative authorization. Section 30214 of the Coastal Act provides that the public access policies of the Coastal Act shall be implemented in a manner that takes into account the capacity of the site and the fragility of natural resources in the area.

In addition, Humboldt Bay Area Plan Section 3.50(C) (Access Inventory) states the following (emphasis added):

…

49. OLD ARCATA ROAD – This 10.0 mile route extends from Arcata to Myrtle Avenue and the Eureka City limits.

RECOMMENDATION: The Humboldt County Trails Plan recommends shoulder improvements for this route in order to improve its utility as a horse/bike/hiking route.

…

53. RYAN SLOUGH
These accessways have been deleted due to conflicts with existing agricultural land uses, and adequate access exists nearby. Boating access to these areas is available from City of Eureka.

In applying Sections 30210, 30211, 30212, and 30214 of the Coastal Act and the public access policies of the LCP, the Commission is also limited by the need to show that any denial of a permit application based on these sections, or any decision to grant a permit subject to special conditions requiring public access, is necessary to avoid or offset a project's adverse impact on public access.

2. Consistency with Coastal Act and LCP Policies:

The project site is not located between the sea and the first through public road, which is U.S. Highway 101 located approximately 1.5 miles to the north of the project area. However, the amended project would be consistent with the direction of the Humboldt Bay Area Plan Section 3.50(C) in improving the Old Arcata Road/Myrtle Avenue corridor for the purpose of public access enhancement. Currently, Old Arcata Road along this stretch is deficient in that there is little or no shoulder that pedestrians and bicyclists can utilize for safety and enjoyment. The proposed amended development will improve the roadway corridor by providing 5-ft-wide to 6-ft-wide shoulders on each side of the lanes of traffic, which will enhance pedestrian and bicycle use of the corridor for public access and other purposes.

Furthermore, the amended project would not adversely affect public access. There are no trails or other public roads that provide shoreline access within the vicinity of the project that would be affected by the project. In addition, the amended development would not create any new demand for public access or otherwise create any additional burdens on public access.

Therefore, the Commission finds that the amended development does not have any significant adverse effect on public access, and that the project as proposed, which provides wider shoulders for improved pedestrian and bicyclist safety and enjoyment, is consistent with the requirements of Coastal Act Sections 30210, 30211, 30212, and 30214 and Humboldt Bay Area Plan Section 3.50.

D. VISUAL RESOURCES PROTECTION

1. Summary of Coastal Act and LCP Policies:

Coastal Act Section 30251 (incorporated also as an LUP Policy in Humboldt Bay Area Plan Section 3.40) states the following:

The scenic and visual qualities of 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 such as those designated in the California Coastline Preservation and Recreation Plan prepared by the Department of Parks and Recreation and by local government shall be subordinate to the character of its setting.

2. Consistency with Coastal Act and LCP Policies:

Section 30251 of the Coastal Act (incorporated also as an LUP Policy in Humboldt Bay Area Plan Section 3.40) states that the scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance, and requires, in applicable part, that permitted development be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, and to be visually compatible with the character of surrounding areas. Furthermore, Section 30240(b) of the Coastal Act (included in Section 3.30 of the HBAP) states that development in areas adjacent to parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those recreation areas.

The project area encompasses a public road that passes through agricultural lands, open space, and rural residential development. There are no views to the ocean or Humboldt Bay available from the project area, a portion of which passes through a dense corridor of roadside vegetation. There are views from the Ryan Slough bridge of agricultural pastureland and open space to the north as well as of forested hillsides inland to the south. Other than from the roadway corridor itself, there are few other public vantage points (Mitchell Heights Road being one) available within the project limits.

One component of the amended development includes widening the Ryan Slough bridge, which includes removing and replacing existing guard rails. The existing guard rails will be replaced with see-through guard rails made of galvanized steel, as shown in Exhibit No. 4 (Pages 22 and 23). The new guard rails will be an improvement over the existing rails and will improve views from the bridge to the surrounding open space and agricultural lands to the north and south.

The amended development also proposes to remove the existing Humboldt Community Services District (HCSD) water main during bridge widening activities, and then salvage and reattach the main to the north side of the bridge after widening is completed. Currently, the HCSD main is attached to the south side of the bridge along its length and is not readily visible from the bridge without leaning over the side railing. The existing main is somewhat visible from Mitchell Heights Road and from Ryan Slough itself, which is not a popular recreational destination for kayaking or other boating activities. Once reattached to the north side of the bridge as proposed, the water main will still be visible from Ryan Slough, but will not be visible from any other public vantage points.

As stated previously, Myrtle Avenue/Old Arcata Road is a rural two lane highway that passes through agricultural lands, open space area, and rural residential development. Although the

development as amended will widen the road and replace the bridge railings on the Ryan Slough Bridge, the development as amended will not increase the number of traffic lanes or the capacity of the roadway, and Myrtle Avenue will retain the character of a rural two lane highway.

Therefore, the Commission finds that the amended development is consistent with Section 30251 of the Coastal Act and the identical policy in Section 3.40 of the Humboldt Bay Area Plan, as the amended development would not block views to and along the coast, would not involve any permanent alteration of land forms, and would not result in any change to the visual character of the Humboldt Bay area.

E. OTHER APPROVALS

The amended development requires review and approval by the U.S. Army Corps of Engineers and the North Coast Regional Water Quality Control Board. Pursuant to the Federal Coastal Zone Management Act, any permit issued by a federal agency for activities that affect the coastal zone must be consistent with the coastal zone management program for that state. Under agreements between the Coastal Commission and the U.S. Army Corps of Engineers, the Corps will not issue a permit until the Coastal Commission approves a federal consistency certification for the project or approves a permit. To ensure that the project ultimately approved by the Corps and the Board is the same as the project authorized herein, the Commission attaches Special Condition Nos. A3-5 and A3-6, which require the applicant to submit to the Executive Director evidence of those agencies' approvals of the project prior to the commencement of construction (for the Corps' approval) and prior to permit issuance (for the Board's approval). The conditions require that any project changes resulting from the other agencies' approvals not be incorporated into the project until the applicant obtains any further necessary amendments to this coastal development permit.

F. CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

The County of Humboldt acted as the lead agency for this project for purposes of CEQA review. The County prepared an Environmental Impact Report for the development and adopted the document on October 15, 2001 following public comment.

Section 13096 of the California Code of Regulations requires Coastal Commission approval of coastal development permit applications to be supported by a specific finding showing the application, as modified by any conditions of approval, is consistent with any applicable requirements of CEQA. Section 21080.5(d)(2)(A) of CEQA prohibits a proposed development from being approved if there are feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse effect which the activity may have on the environment.

The Commission incorporates its findings on Coastal Act consistency at this point as if set forth in full, including all associated environmental review documentation and related technical evaluations incorporated-by-reference into this staff report. Those findings address and respond to all public comments regarding potential significant adverse environmental

effects of the amended development that were received prior to preparation of the staff report. As discussed herein, the amended development has been conditioned to be consistent with the policies of the Coastal Act and the Humboldt County Local Coastal Program, as applicable. As specifically discussed in the above findings, which are hereby incorporated by reference, mitigation measures, which will minimize or avoid all significant adverse environmental impacts, have been required. As conditioned, there are no feasible alternatives or feasible mitigation measures available, beyond those required, which would substantially lessen any significant adverse impact that the activity may have on the environment. Therefore, the Commission finds that the amended development, as conditioned to mitigate the identified impacts, can be found consistent with the requirements of the Coastal Act and the Humboldt County LCP (as applicable) and to conform to CEQA.

V. EXHIBITS

1) Regional Location Map
2) Vicinity Map
3) Project Area Map & Jurisdictional Boundaries
4) Project Plans
5) Water Main Relocation Plans
6) Site Photos
7) Alternatives Analysis
8) Erosion Control Site Plan
9) Revegetation Plan
10) Staff Report for Original Permit CDP No. 80-P-69
11) Revised Findings for First Permit Amendment No. 1-86-200-A

ATTACHMENT A

Standard Conditions:

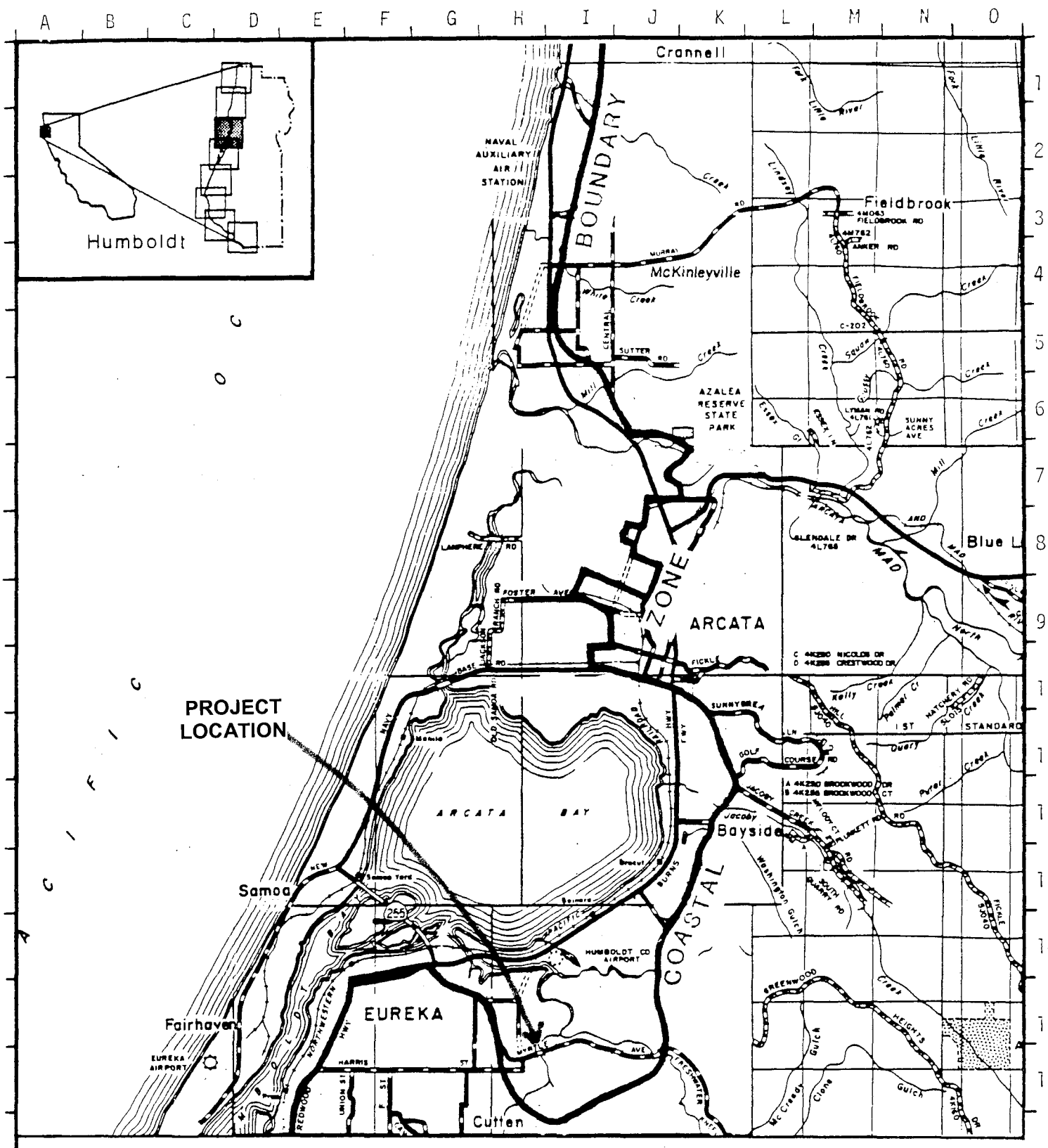
1. Notice of Receipt and Acknowledgment. The permit is not valid and development shall not commence until a copy of the permit, signed by the permittee or authorized agent, acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to the Commission office.

2. Expiration. If development has not commenced, the permit will expire two years from the date on which the Commission voted on the application. Development shall be pursued in a diligent manner and completed in a reasonable period of time. Application for extension of the permit must be made prior to the expiration date.

3. Interpretation. Any questions of intent or interpretation of any condition will be resolved by the Executive Director of the Commission.

4. Assignment. The permit may be assigned to any qualified person, provided assignee files with the Commission an affidavit accepting all terms and conditions of the permit.

5. Terms and Conditions Run with the Land. These terms and conditions shall be perpetual, and it is the intention of the Commission and the permittee to bind all future owners and possessors of the subject property to the terms and conditions.



California Coastal Commission

LOCATION MAP

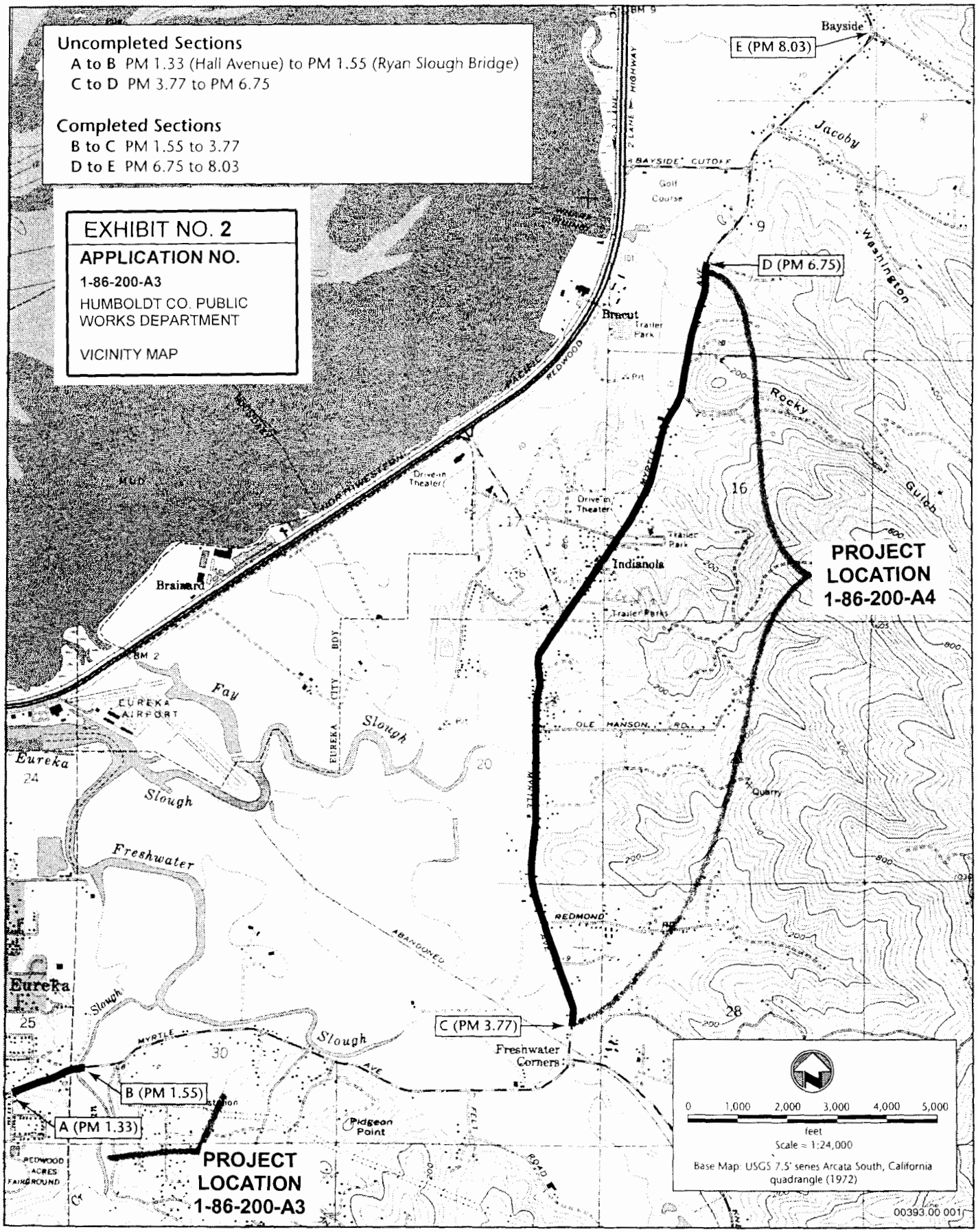
1 0 miles

EXHIBIT NO. 1

APPLICATION NO.
1-86-200-A3
HUMBOLDT CO. PUBLIC WORKS DEPARTMENT

REGIONAL LOCATION MAP

County of Humboldt


Uncompleted Sections
A to B PM 1.33 (Hall Avenue) to PM 1.55 (Ryan Slough Bridge)
C to D PM 3.77 to PM 6.75
Completed Sections
B to C PM 1.55 to 3.77
D to E PM 6.75 to 8.03
EXHIBIT NO. 2
APPLICATION NO.
1-86-200-A3
HUMBOLDT CO. PUBLIC WORKS DEPARTMENT
VICINITY MAP
E (PM 8.03)
Bayside
D (PM 6.75)
Bracut
Indianola
PROJECT LOCATION 1-86-200-A4
C (PM 3.77)
Freshwater Corners
B (PM 1.55)
A (PM 1.33)
PROJECT LOCATION 1-86-200-A3
Eureka
Arcata
Fay Slough
Freshwater Slough
Eureka Slough
Rocky Gulch
Jacoby Creek
Washington
Pidgeon Point
Redwood Acres Fairground
Eureka Airport
Golf Course
Drive-in Theater
Trailer Park
Quarry
Redmond
Ole Hanson Rd.
Myrtle Ave.
Fields Landing Road
Abandoned
Bayside Cutoff
Redwood Highway
Northwestern Pacific
0 1,000 2,000 3,000 4,000 5,000
feet
Scale = 1:24,000
Base Map: USGS 7.5' series Arcata South, California quadrangle (1972)
00393.00 001

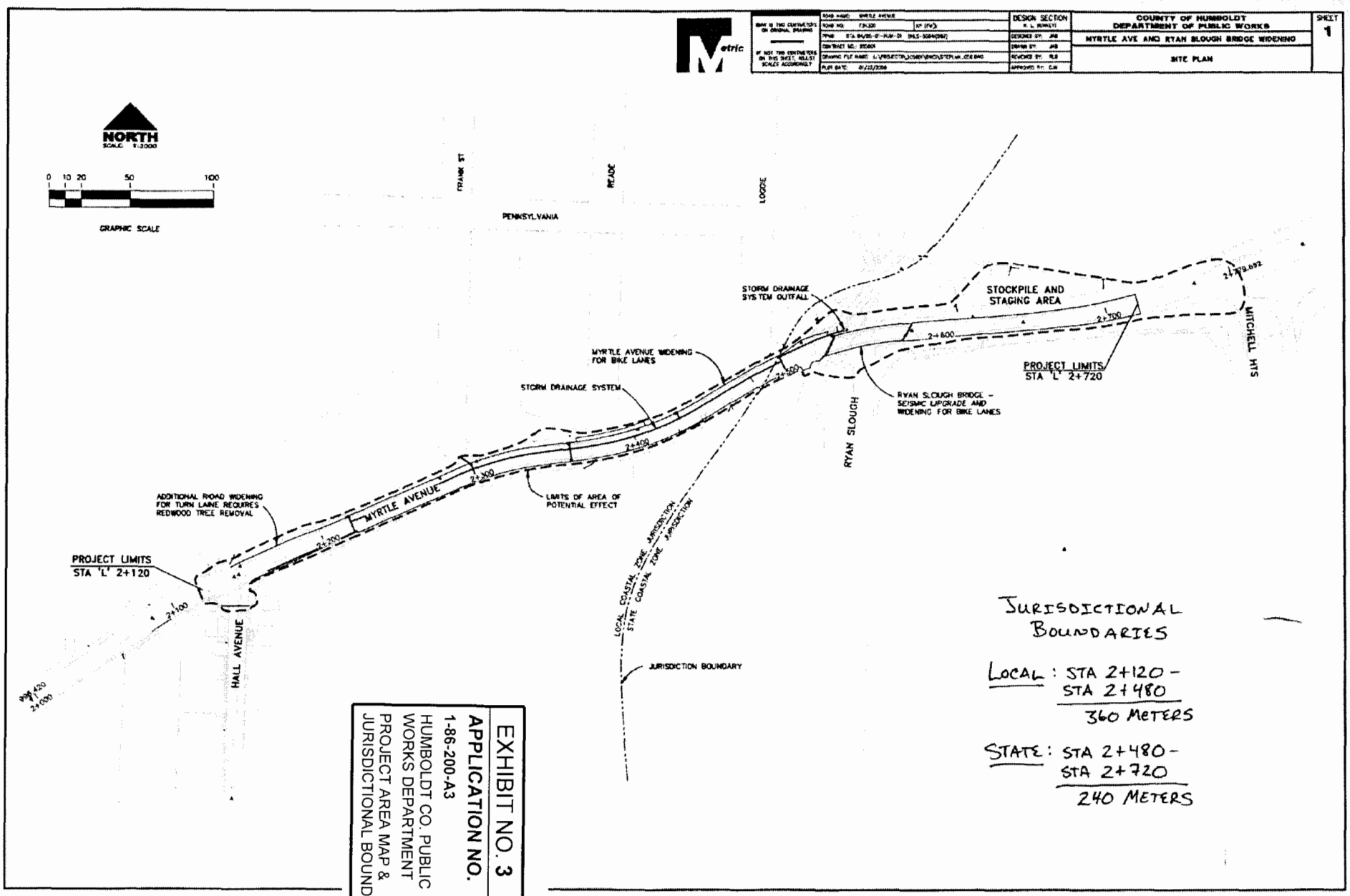


EXHIBIT NO. 3

APPLICATION NO.

1-86-200-A3

HUMBOLDT CO. PUBLIC WORKS DEPARTMENT

PROJECT AREA MAP & JURISDICTIONAL BOUNDARIES

JURISDICTIONAL BOUNDARIES

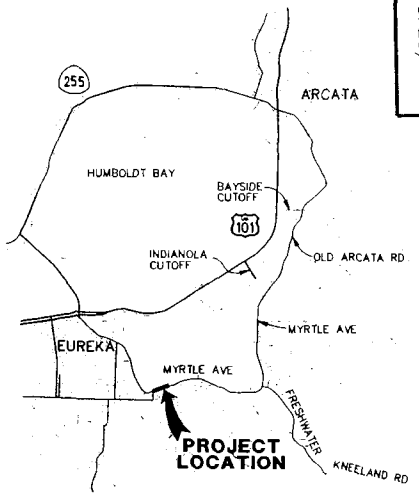
LOCAL: STA 2+120 - STA 2+480
360 METERS

STATE: STA 2+480 - STA 2+720
240 METERS

EXHIBIT NO. 4
APPLICATION NO.
1-86-200-A3
HUMBOLDT CO. PUBLIC WORKS DEPARTMENT
PROJECT PLANS (1 of 23)

BAR IS TWO CENTIMETERS ON ORIGINAL DRAWING. IF NOT TWO CENTIMETERS ON THIS SHEET, ADJUST SCALES ACCORDINGLY	ROAD NAME: MYRTLE AVENUE		DESIGN SECTION R. L. BURNETT	COUNTY OF HUMBOLDT DEPARTMENT OF PUBLIC WORKS
	ROAD NO: F3K300	KP (PM):	DESIGNED BY: JAB	MYRTLE AVE AND RYAN SLOUGH BRIDGE WIDENING
	PPNO: BTA 04/05-01-HUM-01 BHLS-5904(087)		DRAWN BY: JAB	COVER SHEET, SHEET INDEX AND DETAILS
	CONTRACT NO.: 205001		REVIEWED BY: RLB	
	DRAWING FILE NAME: L:\PROJECTS\205001\DWG\CDSN01.DWG		APPROVED BY: CJW	
	PLOT DATE: 01/22/2008			

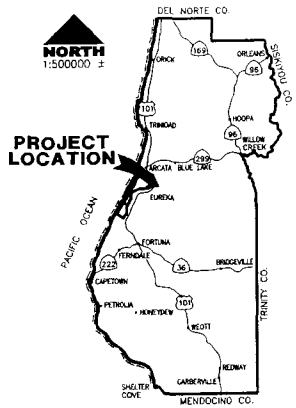
SHEET 1 OF 24



COUNTY OF HUMBOLDT
DEPARTMENT OF PUBLIC WORKS

PROJECT PLANS FOR CONSTRUCTION OF

SHOULDER AND BRIDGE WIDENING ON MYRTLE AVE (F3K300) BETWEEN HALL AVE AND MITCHELL HEIGHTS RD BTA 5904 (001), BHLS 5904 (087) CONTRACT NO. 205001



LOCATION MAP
SCALE: 1:500000 ±

INDEX OF SHEETS

APPLICABLE STANDARD PLANS

REFERENCE TO CALTRANS STANDARD PLANS DATED JULY 2004.

A10A	ABBREVIATIONS
A10B	SYMBOLS
A20A,B	PAVEMENT MARKERS AND TRAFFIC LINES
A62F	EXCAVATION AND BACKFILL CULVERTS
A77A1	MBGR STANDARD RAILING SECTION–WOOD
A77B1	MBGR STANDARD HARDWARE
A77F1	MBGR TYPICAL LAYOUTS FOR STRUCTURE APPROACH
A77F4	MBGR TYPICAL LAYOUTS FOR STRUCTURE DEPARTURE
A77I2	MBGR BURIED POST END ANCHOR
A77J4	MBGR TRANSITION RAILING (TYPE WB)
A77L1	MBGR TERMINAL SYSTEM (TYPE SRT)
A77L3	MBGR TERMINAL SYSTEM (TYPE ET)
A78C1	THRIE BEAM BARRIER–STANDARD HARDWARE
A87B	ASPHALT CONCRETE DIKES
D72	DRAINAGE INLETS
D77B	BICYCLE PROOF GRATE DETAILS
D78A	GUTTER DEPRESSION
D94A	METAL AND PLASTIC FLARED END SECTIONS
T1–T3	TRAFFIC CONTROL SYSTEM
T13	TRAFFIC CONTROL SYSTEM
T51–T59	TEMPORARY WATER POLLUTION CONTROL DETAILS

NOTES

THE CONTRACTOR SHALL HAVE A CLASS "A" LICENSE FOR THIS PROJECT.

RECOMMENDED

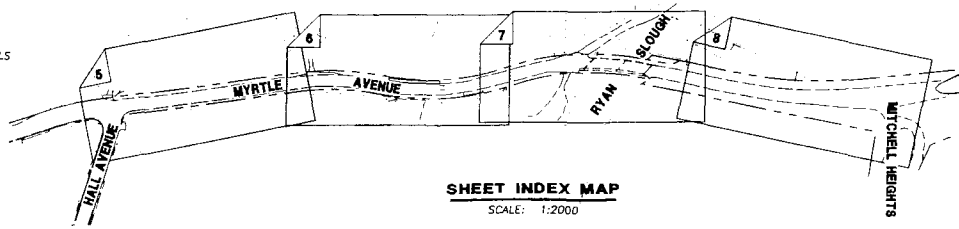
R L Burnett 1-22-08

ROBERT L. BURNETT
RCE 36210, EXP. 06/30/2008

DATE

REGISTERED PROFESSIONAL ENGINEER
ROBERT L. BURNETT
NO. 36210
EXP. 06/30/08
CIVIL
STATE OF CALIFORNIA

NORTH
SCALE: 1:2000



SHEET INDEX MAP
SCALE: 1:2000

APPROVED

Christopher J Whitworth 1/22/08

CHRISTOPHER J. WHITWORTH
RCE 51931, EXP. 6/30/2008

DATE

REGISTERED PROFESSIONAL ENGINEER
CHRISTOPHER J WHITWORTH
NO. 51931
EXP. 06/30/08
CIVIL
STATE OF CALIFORNIA

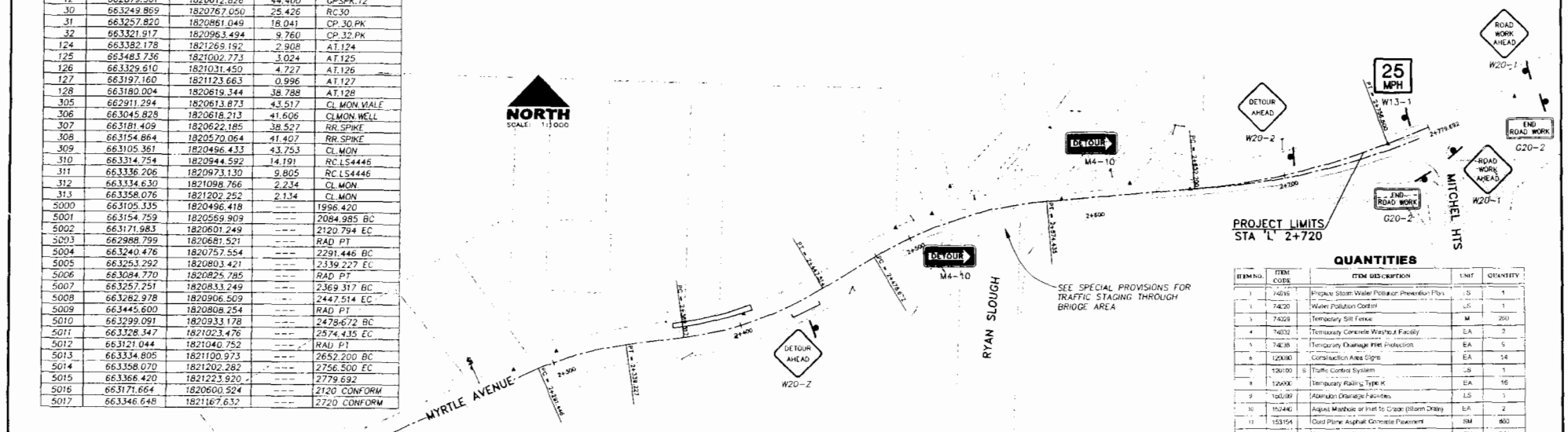
ORIGINAL LOW BID PRICE	CONSTRUCTED BY	RESIDENT ENGINEER
	PROJECT COMPLETED / /	CONSTRUCTION COST $

SURVEY COORDINATE TABLE

⊕	NORTHING	EASTING	ELEV	DESCRIPTION
5	663186.395	1820622.812	38.487	GPSPK.5
7	663337.692	1821067.524	3.024	GPSPK.7
8	663389.537	1821302.696	3.033	GPSPK.8
12	662879.501	1820612.826	44.400	GPSPK.12
30	663249.869	1820767.050	25.426	RC30
31	663257.820	1820861.049	18.041	CP.30.PK
32	663321.917	1820963.494	9.760	CP.32.PK
124	663382.178	1821269.192	2.908	AT.124
125	663483.736	1821002.773	3.024	AT.125
126	663329.610	1821031.450	4.727	AT.126
127	663197.160	1821123.663	0.996	AT.127
128	663180.004	1820619.344	38.788	AT.128
305	662911.294	1820613.873	43.517	CL.MON.WALE
306	663045.828	1820618.213	41.606	CLMON.WELL
307	663181.409	1820622.185	38.527	RR.SPIKE
308	663154.864	1820570.064	41.407	RR.SPIKE
309	663105.361	1820496.433	43.753	CL.MON
310	663314.754	1820944.592	14.191	RC.LS4446
311	663336.206	1820973.130	9.805	RC.LS4446
312	663334.630	1821098.766	2.234	CL.MON
313	663358.076	1821202.252	2.134	CL.MON
5000	663105.335	1820496.418	---	1996.420
5001	663154.759	1820569.909	---	2084.985 BC
5002	663171.983	1820601.249	---	2120.794 EC
5003	662988.799	1820681.521	---	RAD PT
5004	663240.476	1820757.554	---	2291.446 BC
5005	663253.292	1820803.421	---	2339.227 EC
5006	663084.770	1820825.785	---	RAD PT
5007	663257.251	1820833.249	---	2369.317 BC
5008	663262.978	1820906.509	---	2447.514 EC
5009	663445.600	1820808.254	---	RAD PT
5010	663299.091	1820933.178	---	2478.672 BC
5011	663328.347	1821023.476	---	2574.435 EC
5012	663121.044	1821040.752	---	RAD PT
5013	663334.805	1821100.973	---	2652.200 BC
5014	663358.070	1821202.282	---	2756.500 EC
5015	663366.420	1821223.920	---	2779.692
5016	663171.664	1820600.524	---	2120 CONFORM
5017	663346.648	1821167.632	---	2720 CONFORM

Metric

BAR IS TWO CENTIMETERS ON ORIGINAL DRAWING	ROAD NAME: MYRTLE AVENUE	DESIGN SECTION R. L. BURNETT	COUNTY OF HUMBOLDT DEPARTMENT OF PUBLIC WORKS
IF NOT TWO CENTIMETERS ON THIS SHEET, ADJUST SCALES ACCORDINGLY	ROAD NO: F3K300 KP (FM):	DESIGNED BY: JAB	MYRTLE AVE AND RYAN SLOUGH BRIDGE WIDENING
	PPND: BTA 04/05-01-HUM-01 BHLS-5904(087)	DRAWN BY: JAB	CONSTRUCTION AREA SIGNS, QUANTITIES AND DETAILS
	CONTRACT NO.: 205001	REVIEWED BY: RLB	SHEET 2 OF 24
	DRAWING FILE NAME: L:\PROJECTS\205001\DWG\CESH02.DWG	APPROVED BY: CJW	
	PLOT DATE: 01/22/2008		

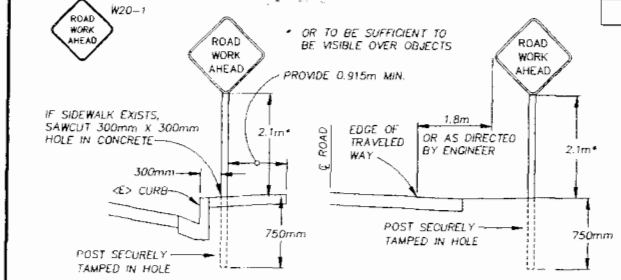


TRAFFIC CONTROL PLAN

SCALE: 1:1000

CONSTRUCTION AREA SIGN SUMMARY

SIGN TYPE	QTY	DESCRIPTION	SIZE	REMARKS	POST SIZE	NUMBER OF POSTS
W13-1	2	25 MPH	450 x 450 mm	--	100 x 100 mm	1
M4-10	2	DETOUR	1200 x 450 mm	COVERED WHEN NOT IN USE	100 x 100 mm	1
W20-2	2	DETOUR AHEAD	1200 x 1200 mm	COVERED WHEN NOT IN USE	100 x 100 mm	1
W20-1	4	ROAD WORK AHEAD	1200 x 1200 mm	--	100 x 100 mm	1
G20-2	4	END ROAD WORK	1200 x 450 mm	--	100 x 100 mm	1



URBAN CONSTRUCTION AREA SIGN

- NOT TO SCALE -

NOTES

1) SIGNS SHALL BE PLACED AS SHOWN ON PLAN OR AS DIRECTED BY THE RESIDENT ENGINEER.
2) FINAL PLACEMENT OF SIGNS SHALL BE APPROVED BY RESIDENT ENGINEER.
3) ADDITIONAL PORTABLE SIGNS SHALL BE USED AS REQUIRED FOR OTHER ROADSIDE WORK.
4) SEE STANDARD PLAN T13 FOR TRAFFIC CONTROL SYSTEM.
5) IN ADDITION TO CONSTRUCTION AREA SIGNS AND WHEN DIRECTED BY THE RESIDENT ENGINEER, THE CONTRACTOR SHALL UTILIZE FLAGMEN AS NECESSARY TO DIRECT TRAFFIC.
6) DISTANCE TO C18/C23 AND C13/C14 MAY BE EXTENDED TO ENCOMPASS SITES WITHIN ONE MILE OF EACH OTHER.

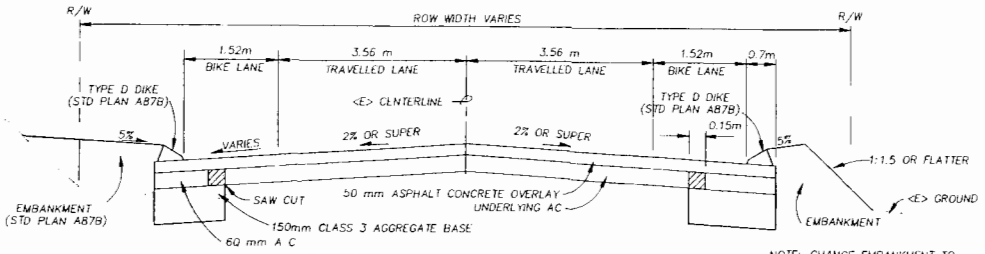
ADDITIVE OPTIONS

AO-1	152460	Adjust Manhole to Grade	EA	1
AO-2	152402	Adjust Water Valve Cover to Grade	EA	1
AO-3	152471	Adjust Meter Box	EA	2

QUANTITIES

ITEM NO.	ITEM CODE		ITEM DESCRIPTION	UNIT	QUANTITY
1	74016		Prepare Storm Water Pollution Prevention Plan	LS	1
2	74020		Water Pollution Control	LS	1
3	74028		Temporary Silt Fence	M	260
4	74032		Temporary Concrete Washout Facility	EA	2
5	74038		Temporary Drainage Inlet Protection	EA	5
6	120090		Construction Area Signs	EA	14
7	120100	S	Traffic Control System	LS	1
8	129000		Temporary Railing, Type K	EA	16
9	150109		Abandon Drainage Facilities	LS	1
10	152490		Adjust Manhole or Inlet to Grade (Storm Drain)	EA	2
11	153154		Cold Plane Asphalt Concrete Pavement	SM	800
12	153230		Grain Bridge Deck	SM	374
13	157560		Bridge Removal (Partial)	LS	1
14	190101		Roadway Excavation	CM	160
15	192003		Structure Excavation (Bridge)	CM	54
16	193003		Structure Backfill (Bridge)	CM	31
17	198050		Embankment	CM	242
18	203016	S	Erosion Control (Type 1)	LS	1
19	260200		Class 3 Aggregate Base	CM	765
20	394093		Asphalt Concrete (Type A)	Tonne	1193
21	394040		Place Asphalt Concrete Dike (Type A)	LM	160
22	394340		Place Asphalt Concrete Dike (Type D)	LM	450
23	394046		Place Asphalt Concrete Dike (Type F)	LM	70
24	510050		Structural Concrete (Bridge)	CM	47
25	510550		Minor Concrete (Minor Structure)	CM	12
26	511106		Drill and Bond Dowel	LM	170
27	515020		Refinish Bridge Deck	SM	127
28	520102		Bar Reinforcing Steel	KG	6760
29	540102		Treat Bridge Deck	SM	374
30	540706		Furnish Bridge Deck Treatment Material	L	600
31	641134		450mm Plastic Pipe	LM	125
32	706535		450mm Alternative Flared End Section	EA	1
33	707051		Drainage Manhole	EA	5
34	720000		Rock Slope Protection	Tonne	110
35	750010		Manhole Frame and Cover	EA	5
36	750052		Inlet Frame and Gate (Bicycle Proof)	EA	9
37	830001	S	Metal Beam Guard Railing	LM	125
38	833093	S	Metal Tube Bridge Railing (Type 117)	LM	115
39	839528	S	Buried Post Anchor	EA	1
40	839530	S	Cable Anchor Assembly	EA	1
41	839540	S	Transition Type WB (L-7.6m	EA	3
42	839540	S	Terminal Section Thrie Beam Flared (Type TC)	EA	5
43	839569	S	Terminal Section (Type C)	EA	2
44	839584	S	Alternative In-line Terminal System	EA	1
45	839585	S	Alternative Flared Terminal System	EA	1
46	840501	S	Thermoplastic Traffic Stripe	LM	2500
47	840515	S	Thermoplastic Pavement Marking	SM	10
48	850142	S	Pavement Marker (Retroflective)	EA	190
49	999990		Mobilization	LS	1

BAR IS TWO CENTIMETERS ON ORIGINAL DRAWING. IF NOT TWO CENTIMETERS ON THIS SHEET, ADJUST SCALES ACCORDINGLY.	ROAD NAME: MYRTLE AVENUE ROAD NO: 139C300 KP (PM): PPNO: BTA 04/05-01-HUM-01 BHLS-5904(087) CONTRACT NO.: 205001 DRAWING FILE NAME: L:\PROJECTS\205001\DWG\CDSH03.DWG PLOT DATE: 01/22/2006	DESIGN SECTION R. L. BURNETT DESIGNED BY: JAB DRAWN BY: JAB REVIEWED BY: RLB APPROVED BY: GW	COUNTY OF HUMBOLDT DEPARTMENT OF PUBLIC WORKS MYRTLE AVE AND RYAN SLOUGH BRIDGE WIDENING WIRE-WALL SECTIONS AND DETAILS	SHEET 3 OF 24

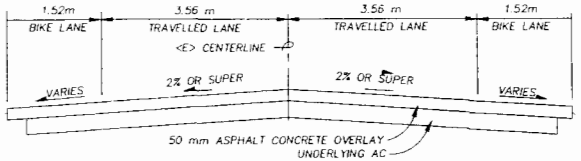


MYRTLE AVE TYPICAL SECTION

STA 2+220 TO STA 2+530 W/ SHOULDER VARIATIONS
STA 2+530 TO STA 2+580 – SEE BRIDGE PLANS

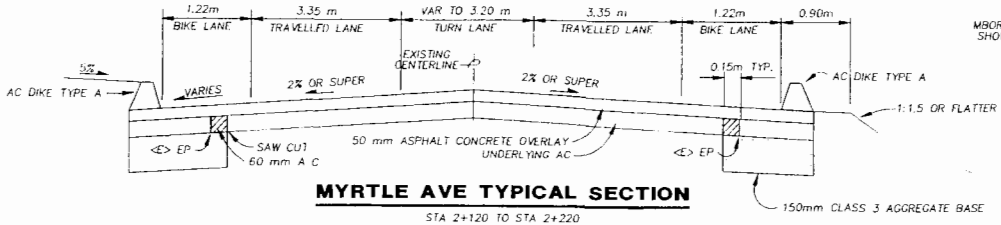
NOTE: CHANGE IN GRADE FROM TRAVELLED WAY TO SHOULDER SHALL NOT EXCEED 8%

NOTE: CHANGE EMBANKMENT TO CASE R IN RESTRICTIVE AREAS.



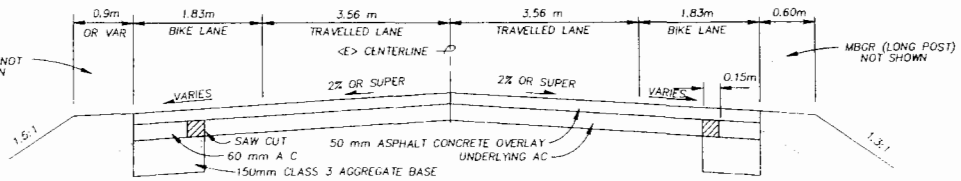
MYRTLE AVE TYPICAL SECTION

STA 2+607 TO STA 2+720



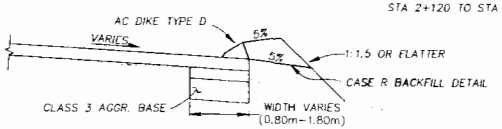
MYRTLE AVE TYPICAL SECTION

STA 2+120 TO STA 2+220



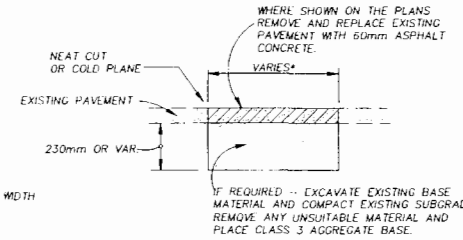
MYRTLE AVE TYPICAL SECTION

STA 2+580 TO STA 2+607



TYPICAL SHOULDER SECTION

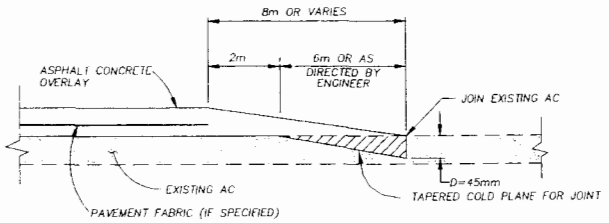
STA 2+220 TO STA 2+500



* LENGTH / WIDTH AS SHOWN ON PLANS OR AS DIRECTED BY THE ENGINEER.

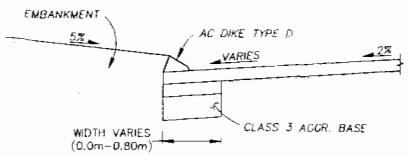
TYPICAL COLD PLANE & REPAIR DETAIL

– NOT TO SCALE –



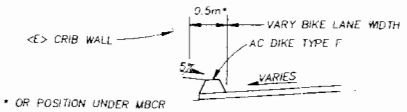
OVERLAY CONFORM DETAIL

– NOT TO SCALE –



TYPICAL SHOULDER SECTION

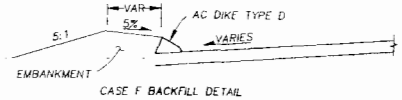
STA 2+220 TO STA 2+260
STA 2+430 TO STA 2+500



* OR POSITION UNDER MBCR

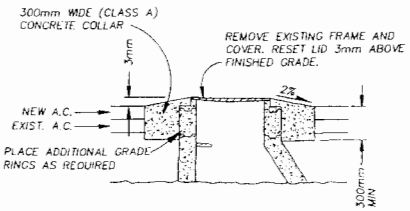
CRIB WALL TYPICAL SECTION

STA 2+360 TO STA 2+430



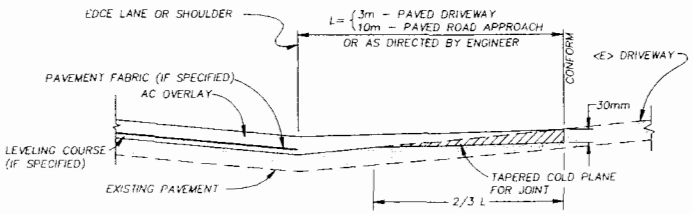
TYPICAL SHOULDER SECTION

STA 2+270 TO STA 2+310



ADJUST MANHOLE COVER TO GRADE DETAIL

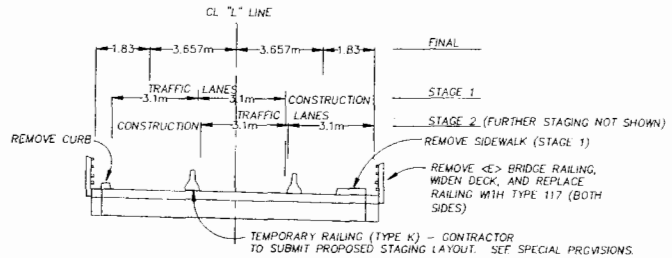
– NOT TO SCALE –



PAVED DRIVEWAY / ROAD APPROACH DETAIL

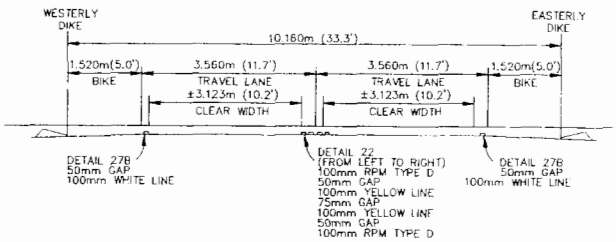
– NOT TO SCALE –

BAR IS TWO CENTIMETERS ON ORIGINAL DRAWING. IF NOT TWO CENTIMETERS ON THIS SHEET, ADJUST SCALES ACCORDINGLY	ROAD NAME: MYRTLE AVENUE		DESIGN SECTION: K. L. BURNETT	COUNTY OF HUMBOLDT DEPARTMENT OF PUBLIC WORKS	SHEET 4 OF 24
	ROAD NO: F36300	KP (PM):	DESIGNED BY: JAB	MYRTLE AVE AND RYAN SLOUGH BRIDGE WIDENING	
	PPNO: BTA 04/05-01-HUM-01 BHLS-5904(087)		DRAWN BY: JAB		
	CONTRACT NO.: 205001		REVIEWED BY: RLB	DETOUR STAGING, DRAINAGE, STRIPING AND MISC. DETAILS	
	DRAWING FILE NAME: L:\PROJECTS\205001\DWG\EDSH04.DWG		APPROVED BY: CJW		
	PLOT DATE: 01/22/2008				



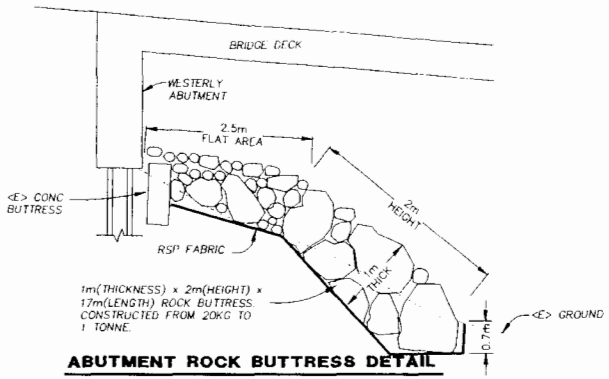
TYPICAL BRIDGE TRAFFIC STAGING & DETOUR

STA 2+530 TO STA 2+580 - SEE BRIDGE PLANS, SHT 2 OF 10



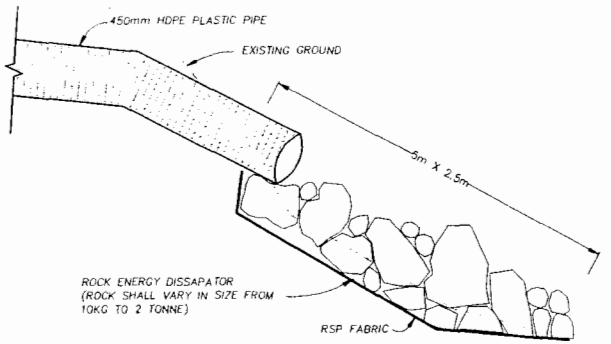
ROADWAY STRIPING DETAIL

- NOT TO SCALE -



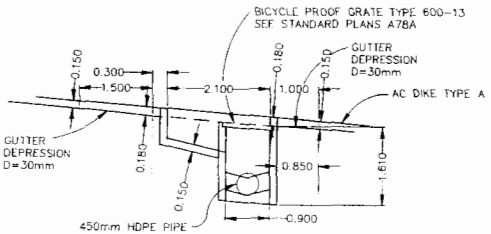
ABUTMENT ROCK BUTTRESS DETAIL

SCALE: NTS



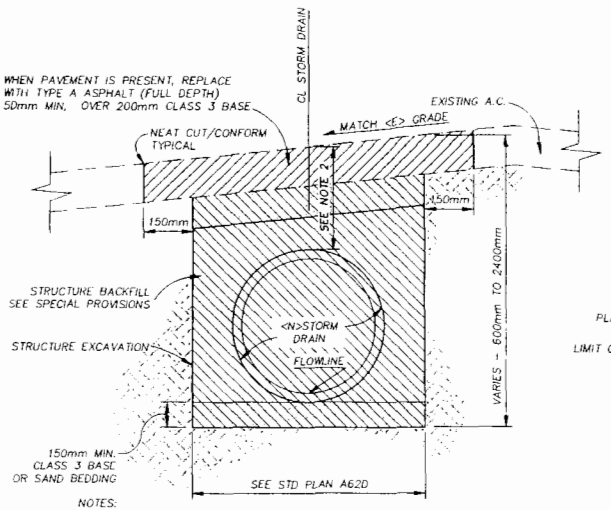
ROCK ENERGY DISSIPATER

SCALE: NTS



DRAINAGE INLET TYPE GOL

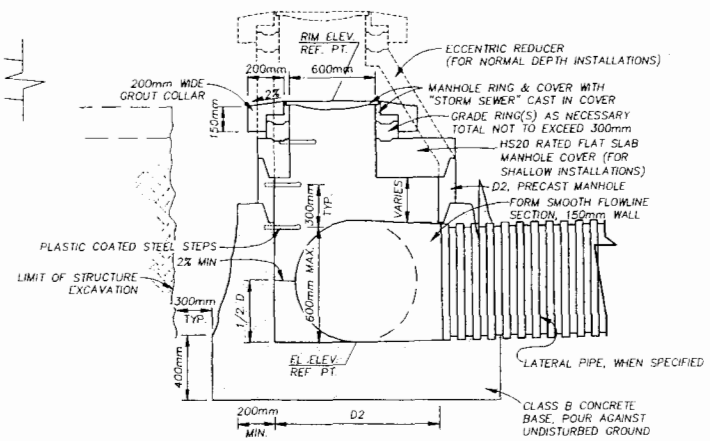
SCALE: 1:50



NOTES:
1. FINAL NEAT CUTS SHALL BE PARALLEL AND PERPENDICULAR TO DIRECTION OF TRAVEL.
2. CONCRETE SLURRY BACKFILL REQUIRED WHEN COVER FROM TOP OF PIPE TO FINISHED GRADE IS LESS THAN 450mm

STORM DRAIN TRENCH SECTION

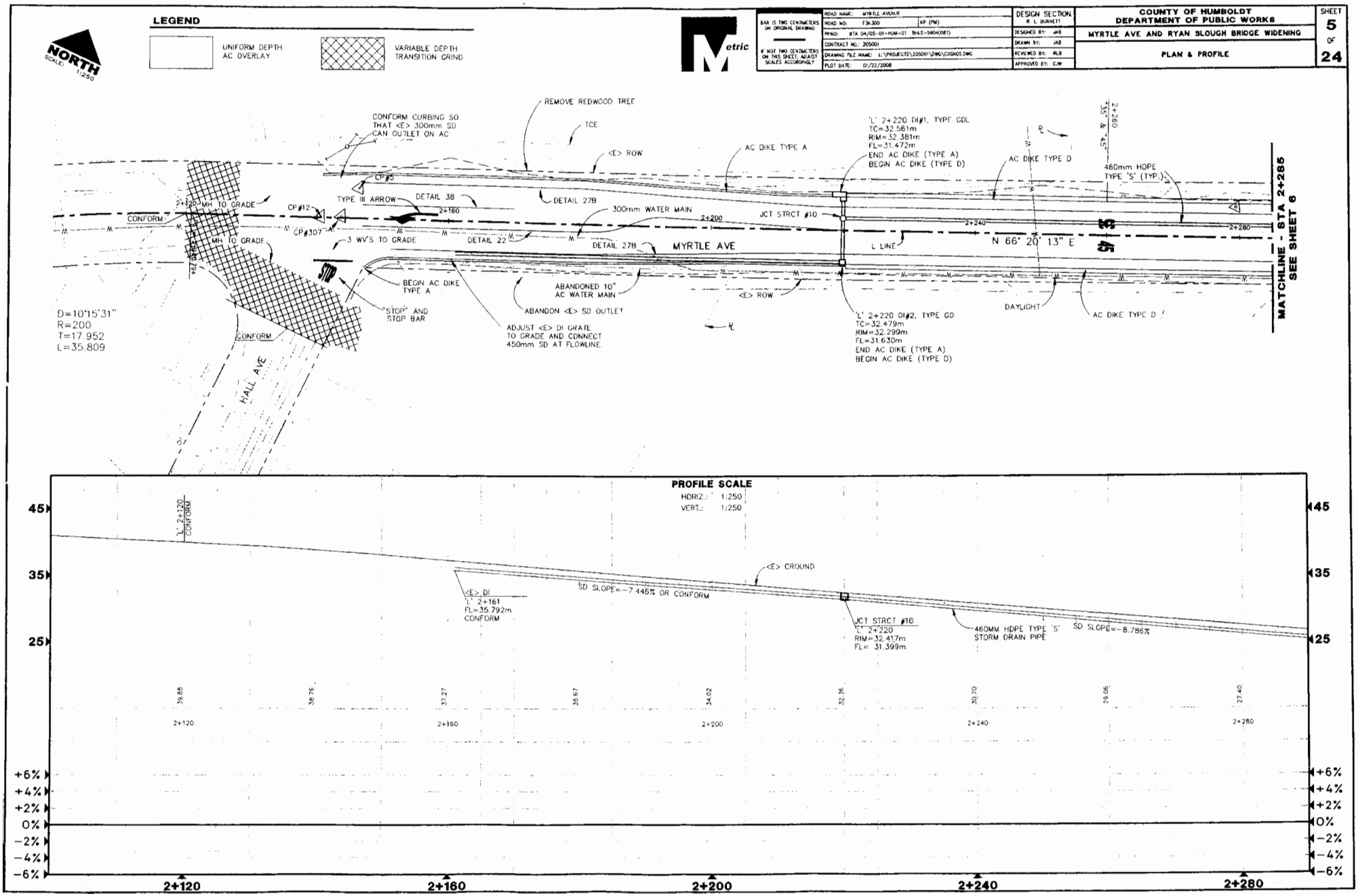
- NOT TO SCALE -



NOTES:
1. D = LARGEST PIPE DIAMETER IN JUNCTION STRUCTURE
2. MANHOLE RIM TO MATCH GRADE OF FINISHED SURFACE.

JUNCTION STRUCTURE DETAIL

- NOT TO SCALE -


LEGEND
UNIFORM DEPTH AC OVERLAY
VARIABLE DEPTH TRANSITION GRIND
NORTH
SCALE: 1:450
Metric
BAR IS TWO CENTIMETERS ON ORIGINAL DRAWING
IF NOT TWO CENTIMETERS ON THIS SHEET, ADJUST SCALES ACCORDINGLY
ROAD NAME: MYRTLE AVENUE
ROAD NO: F.K.300
KP (PM):
PPNO: 01A 04/05-01-HUM-01 TH&S-5904(087)
CONTRACT NO.: 20500I
DRAWING FILE NAME: L:\PROJECTS\20500I\DWG\CDSHO5.DWG
PLOT DATE: 01/22/2008
DESIGN SECTION R. L. BURNETT
DESIGNED BY: JAB
DRAWN BY: JAB
REVIEWED BY: RLB
APPROVED BY: C.W
COUNTY OF HUMBOLDT
DEPARTMENT OF PUBLIC WORKS
MYRTLE AVE AND RYAN SLOUGH BRIDGE WIDENING
PLAN & PROFILE
SHEET 5 OF 24
REMOVE REDWOOD TREE
CONFORM CURBING SO THAT <E> 300mm SD CAN OUTLET ON AC
TCE
<E> ROW
AC DIKE TYPE A
'L' 2+220 DI#1, TYPE GDL
TC=32.561m
RIM=32.381m
FL=31.472m
END AC DIKE (TYPE A)
BEGIN AC DIKE (TYPE D)
AC DIKE TYPE D
460mm HDPE TYPE 'S' (TYP.)
2+280 090
35° & 45°
CP#5
CP#12
CP#307
TYPE III ARROW
DETAIL 38
DETAIL 27B
2+160
300mm WATER MAIN
2+200
JCT STRCT #10
2+240
2+120 MH TO GRADE
CONFORM
MH TO GRADE
3 WV'S TO GRADE
DETAIL 22
DETAIL 27B
MYRTLE AVE
L LINE
N 66° 20' 13" E
MATCHLINE - STA 2+285 SEE SHEET 6
D=10°15'31"
R=200
T=17.952
L=35.809
STOP
"STOP" AND STOP BAR
BEGIN AC DIKE TYPE A
ABANDONED 10" AC WATER MAIN
ABANDON <E> SD OUTLET
ADJUST <E> DI GRATE TO GRADE AND CONNECT 450mm SD AT FLOWLINE
<E> ROW
'L' 2+220 DI#2, TYPE GD
TC=32.479m
RIM=32.299m
FL=31.630m
END AC DIKE (TYPE A)
BEGIN AC DIKE (TYPE D)
DAYLIGHT
AC DIKE TYPE D
CONFORM
HALL AVE
PROFILE SCALE
HDRIZ.: 1:250
VERT.: 1:250
45
35
25
'L' 2+120 CONFORM
<E> GROUND
<E> DI 'L' 2+161 FL=35.792m CONFORM
SD SLOPE=-7.445% OR CONFORM
JCT STRCT #10 'L' 2+220 RIM=32.417m FL= 31.399m
460MM HDPE TYPE 'S' STORM DRAIN PIPE
SD SLOPE=-8.786%
39.88
38.76
37.27
35.67
34.02
32.36
30.70
29.06
27.40
2+120
2+160
2+200
2+240
2+280
+6%
+4%
+2%
0%
-2%
-4%
-6%

LEGEND

UNIFORM DEPTH AC OVERLAY

VARIABLE DEPTH TRANSITION GRIND

NORTH SCALE: 250

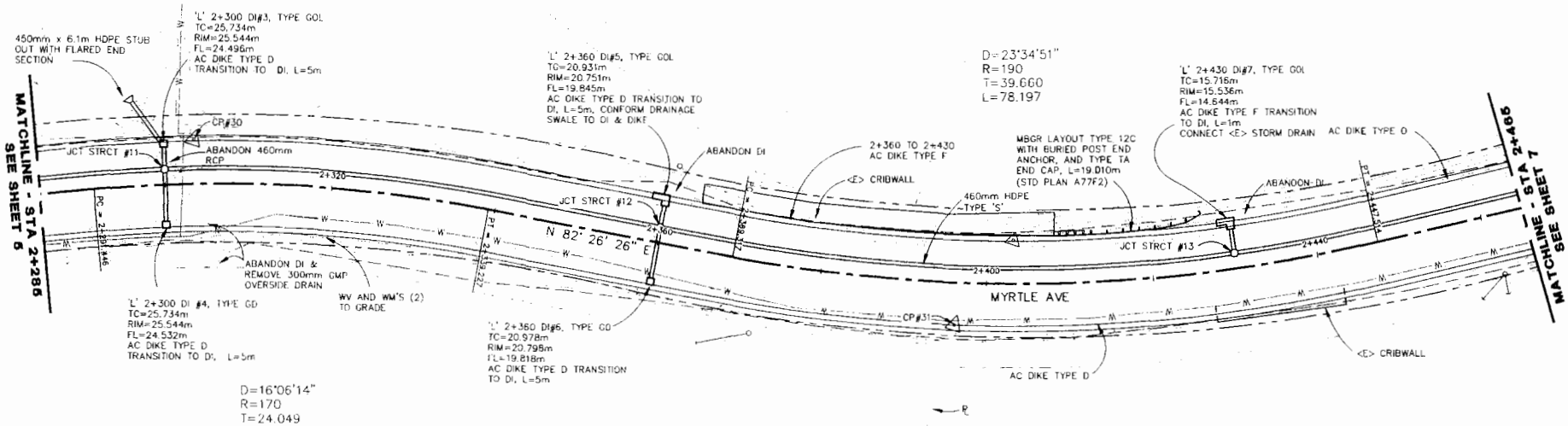
Metric

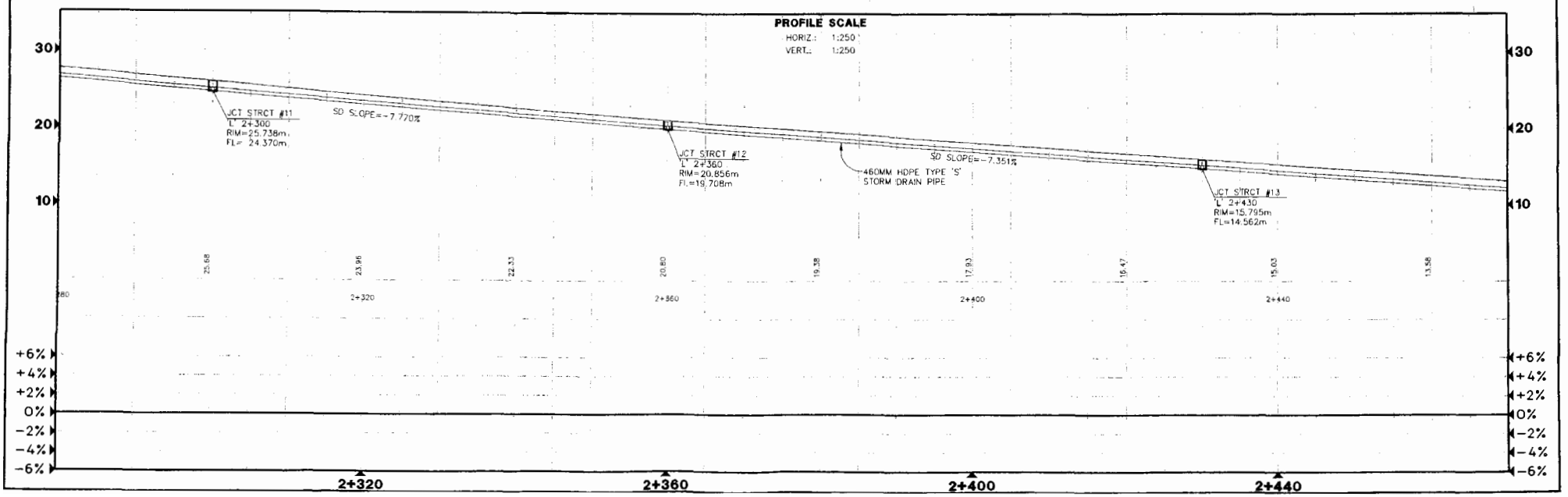
BAR IS TWO CENTIMETERS ON ORIGINAL DRAWING

IF NOT TWO CENTIMETERS ON THIS SHEET, ADJUST SCALES ACCORDINGLY

ROAD NAME: MYRTLE AVENUE		DESIGN SECTION R. L. BURNETT	COUNTY OF HUMBOLDT DEPARTMENT OF PUBLIC WORKS
ROAD NO: 139.300	KP (PM):		MYRTLE AVE AND RYAN SLOUGH BRIDGE WIDENING
PPNO: 04/05-01-HUM-01 BHLS-5904(087)		DESIGNED BY: JAB	
CONTRACT NO: 20500		DRAWN BY: JAB	PLAN & PROFILE
DRAWING FILE NAME: L:\PROJECTS\205001\DWG\CDSN06.DWG		REVIEWED BY: RLB	
PLOT DATE: 01/22/2008		APPROVED BY: CJW	

SHEET 6 OF 24





LEGEND

UNIFORM DEPTH AC OVERLAY

UNIFORM DEPTH COLD PLANE REPAIR

VARIABLE DEPTH TRANSITION GRIND

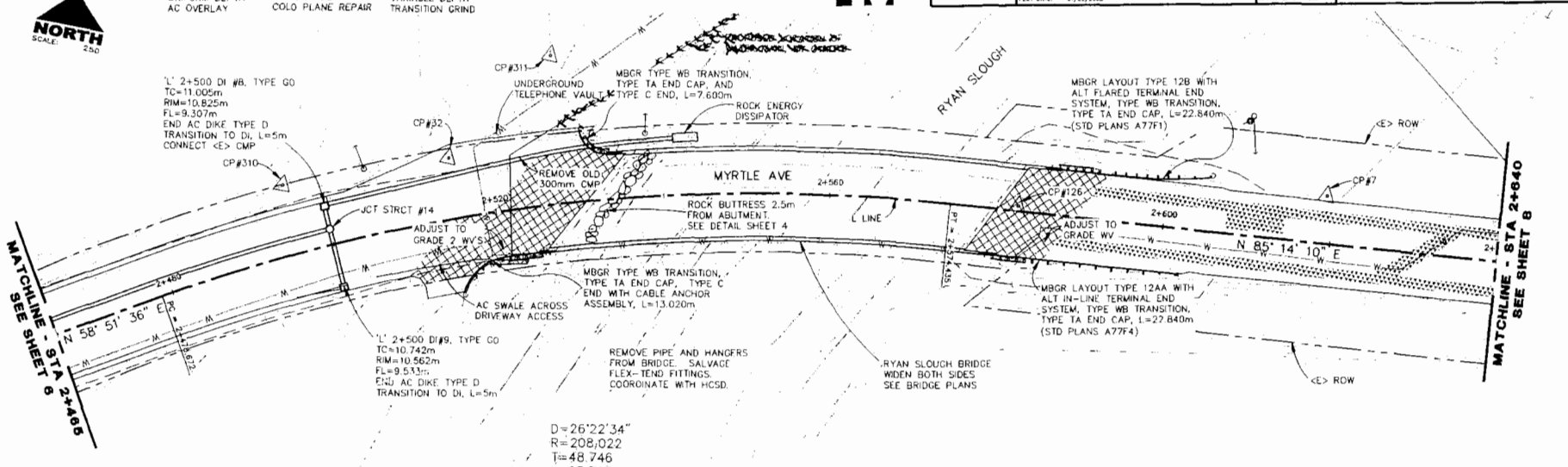
NORTH SCALE: 250

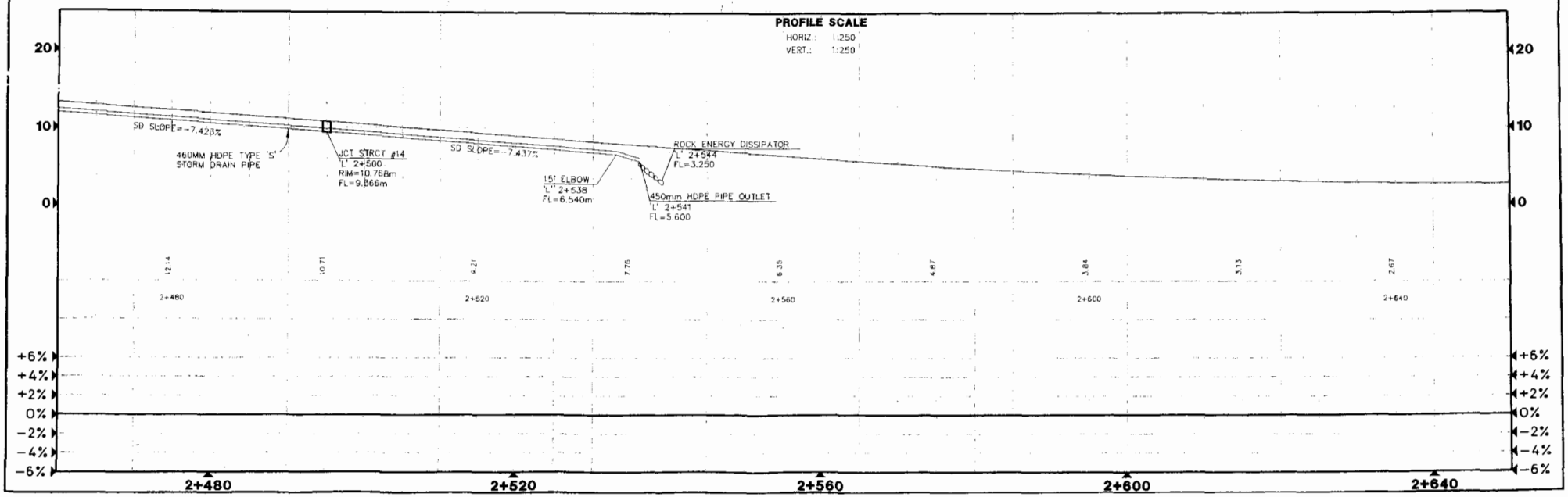
Metric

BAR IS TWO CENTIMETERS ON ORIGINAL DRAWING

IF NOT TWO CENTIMETERS ON THIS SHEET, ADJUST SCALES ACCORDINGLY

ROAD NAME: MYRTLE AVENUE		DESIGN SECTION: R. L. BURNETT	COUNTY OF HUMBOLDT DEPARTMENT OF PUBLIC WORKS
ROAD NO: 536.300	KP (PM):	DESIGNED BY: JAB	MYRTLE AVE AND RYAN SLOUGH BRIDGE WIDENING
PPNO: BTA 04/05-01-NUM-01 BHLS-5904(087)		DRAWN BY: JAB	PLAN & PROFILE
CONTRACT NO.: 205001		REVIEWED BY: RLB	SHEET 7 OF 24
DRAWING FILE NAME: L:\PROJECTS\205001\DWG\CDSH07.DWG		APPROVED BY: CJW	
PLOT DATE: 01/22/2008			





LEGEND

UNIFORM DEPTH AC OVERLAY

UNIFORM DEPTH COLD PLANE REPAIR

VARIABLE DEPTH TRANSITION GRIND

Metric

BAR IS TWO CENTIMETERS ON ORIGINAL DRAWING

IF NOT TWO CENTIMETERS ON THIS SHEET, ADJUST SCALES ACCORDINGLY

ROAD NAME: MYRTLE AVENUE		DESIGN SECTION R. L. BURNETT	COUNTY OF HUMBOLDT DEPARTMENT OF PUBLIC WORKS
ROAD NO: 53K300	KP (PM):	DESIGNED BY: JAB	MYRTLE AVE AND RYAN SLOUGH BRIDGE WIDENING
PPNO: BTA 04/05-01-HUM-01	5H65-5934(087)	DRAWN BY: JAB	PLAN & PROFILE
CONTRACT NO.: 205001		REVIEWED BY: RLB	
DRAWING FILE NAME: L:\PROJECTS\205001\DWG\CDSH08.DWG		APPROVED BY: CJW	
PLOT DATE: 01/22/2008			

SHEET 8 OF 24

D=16°20'18"
R=365.761
T=52.506
L=104.300

NORTH
SCALE: 1" = 50'

MATCHLINE - STA 2+640
SEE SHEET 7

<E> ROW

END AC DIKE

MYRTLE AVE

CP#312

DETAIL 22

2+680

2+720

"L" 2+720
CONFORM

L LINE

2+760

CP#

N 68° 53' 52" E

2+779.692

END AC DIKE

<E> ROW

MITCHELL HEIGHTS

PROFILE SCALE
HORIZ.: 1:250
VERT.: 1:250

30
20
10

"L" 2+720
CONFORM

2.67 2.51 2.48 2.48 2.48 2.59 2.59 2.58

2+640 2+680 2+720 2+760

+6%
+4%
+2%
0%
−2%
−4%
−6%

2+640 2+680 2+720 2+760

Metric

BAR IS TWO CENTIMETERS ON ORIGINAL DRAWING

IF NOT TWO CENTIMETERS ON THIS SHEET, ADJUST SCALES ACCORDINGLY

ROAD NAME: MYRTLE AVENUE
ROAD NO: 1.36300 KP (PM):
PPND: BTA 04/05-01-HUM-01 (BHLS-5904(087))
CONTRACT NO.: 205001
DRAWING FILE NAME: L:\PROJECTS\205001\DWG\COSH09.DWG
PLOT DATE: 01/22/2008

DESIGN SECTION R. L. BURNETT
DESIGNED BY: JAB
DRAWN BY: JAB
REVIEWED BY: RLB
APPROVED BY: CJW

COUNTY OF HUMBOLDT
DEPARTMENT OF PUBLIC WORKS

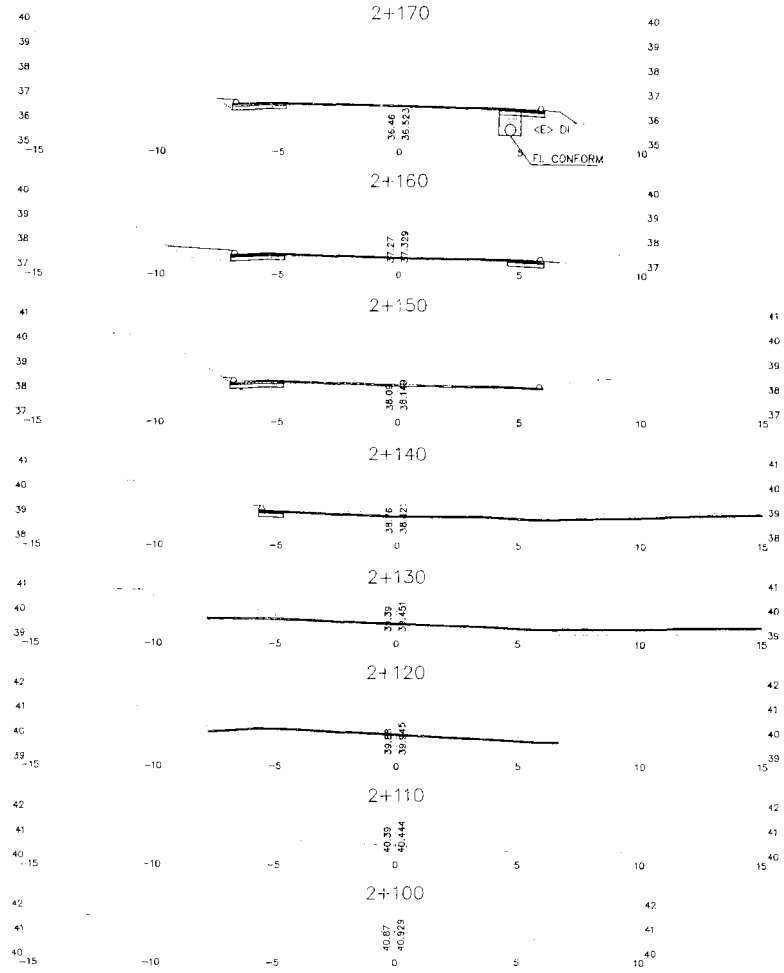
MYRTLE AVE AND RYAN SLOUGH BRIDGE WIDENING

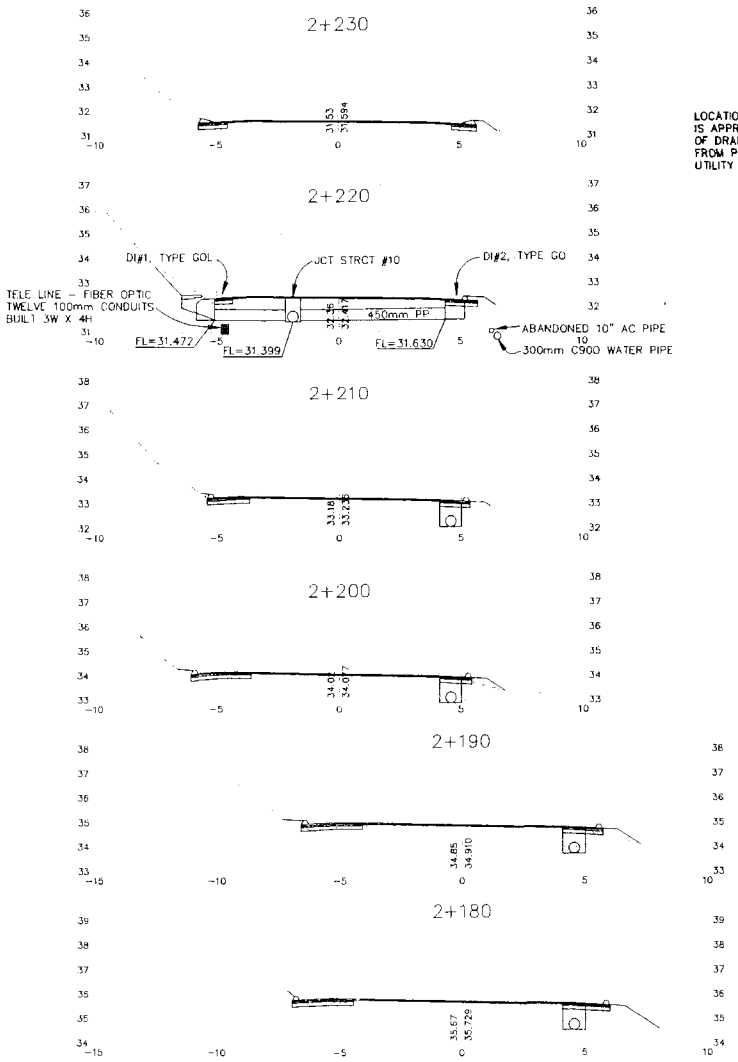
CROSS SECTIONS

SHEET 9 OF 24

SCALE: 1:100
HORZ & VERT

LOCATIONS OF UNDERGROUND UTILITIES IS APPROXIMATE. ACTUAL PLACEMENT OF DRAINAGE FACILITIES MAY DIFFER FROM PLANS DUE TO UNDERGROUND UTILITY CONFLICTS.





Metric

BAR IS TWO CENTIMETERS ON ORIGINAL DRAWING

IF NOT TWO CENTIMETERS ON THIS SHEET ADJUST SCALES ACCORDINGLY

ROAD NAME: MYRTLE AVENUE
ROAD NO: F3K300 KP (PM)
PPNO: BTA 04/05-01-HUM-01 BHLS-5904(087)
CONTRACT NO.: 205001
DRAWING FILE NAME: L:\PROJECTS\205001\DWG\CDSN10.DWG
PLOT DATE: 01/22/2008

DESIGN SECTION R. L. BURNETT
DESIGNED BY: JAB
DRAWN BY: JAB
REVIEWED BY: RLB
APPROVED BY: CJW

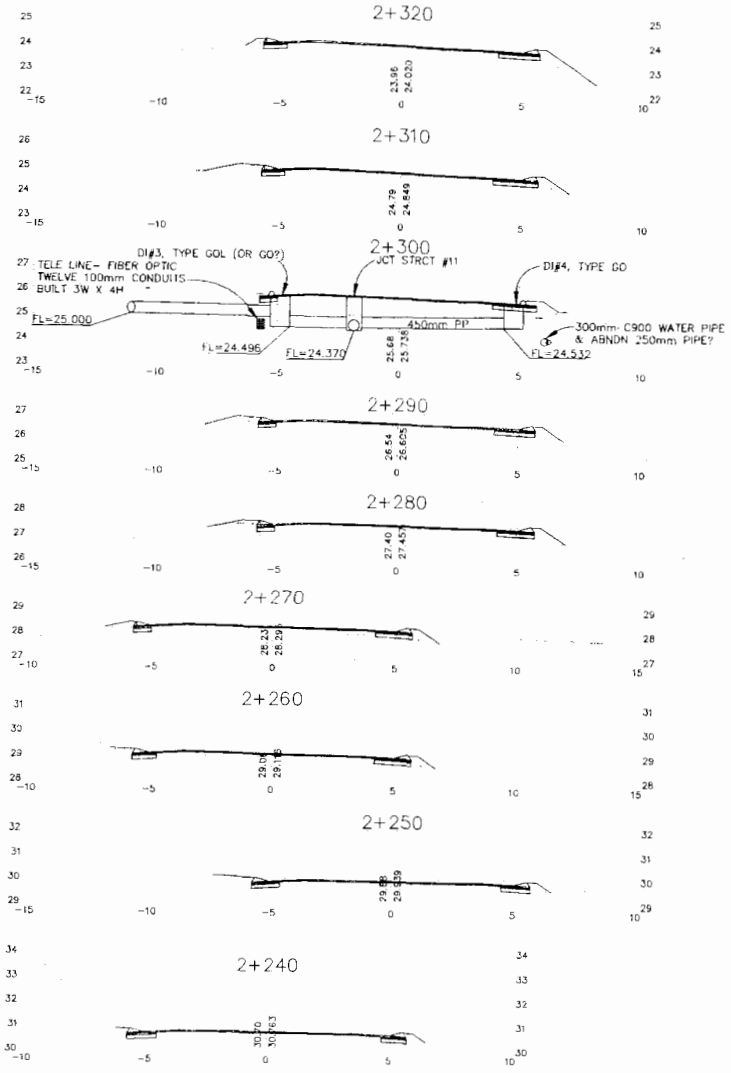
COUNTY OF HUMBOLDT
DEPARTMENT OF PUBLIC WORKS

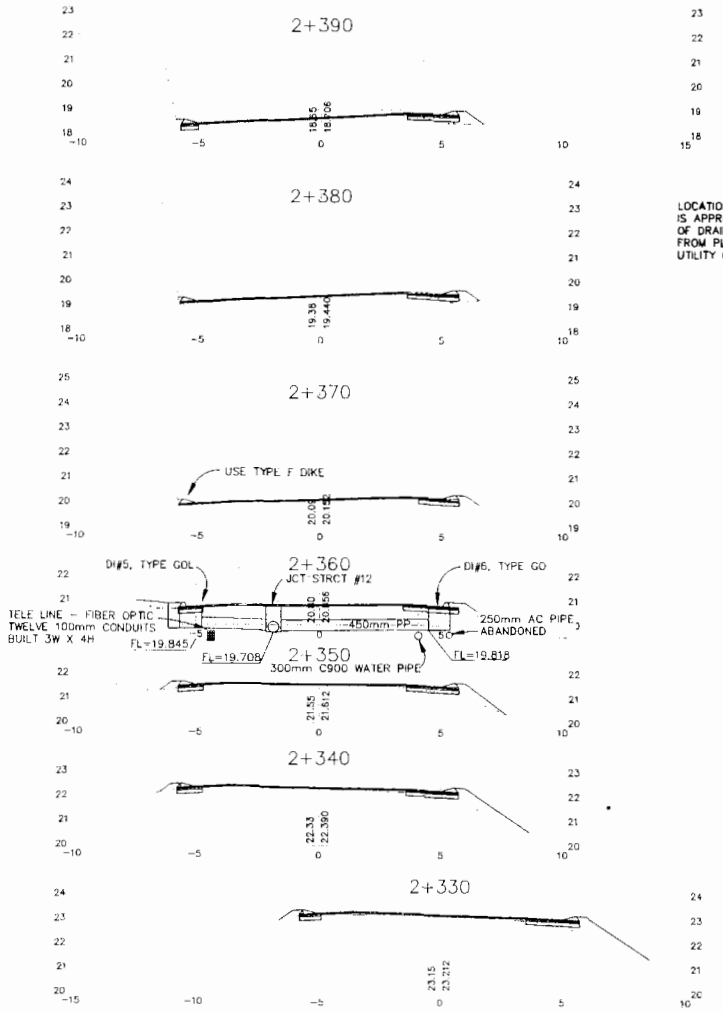
MYRTLE AVE AND RYAN SLOUGH BRIDGE WIDENING

CROSS SECTIONS

SHEET 10 OF 24

SCALE: 1:100
HORZ & VERT





LOCATIONS OF UNDERGROUND UTILITIES IS APPROXIMATE. ACTUAL PLACEMENT OF DRAINAGE FACILITIES MAY DIFFER FROM PLANS DUE TO UNDERGROUND UTILITY CONFLICTS.

BAR IS TWO CENTIMETERS ON ORIGINAL DRAWING IF NOT TWO CENTIMETERS ON THIS SHEET, ADJUST SCALES ACCORDINGLY	ROAD NAME: MYRTLE AVENUE ROAD NO: 13K300 KP (PM): PPNO: BTA 04/05-01-HUM-01 BHLS-5904(087) CONTRACT NO.: 20500 DRAWING FILE NAME: L:\PROJECTS\20500\DWG\CDSHT1.DWG PLOT DATE: 01/22/2006	DESIGN SECTION R. L. BURNETT DESIGNED BY: JAB DRAWN BY: JAB REVIEWED BY: RLB APPROVED BY: CJW	COUNTY OF HUMBOLDT DEPARTMENT OF PUBLIC WORKS MYRTLE AVE AND RYAN SLOUGH BRIDGE WIDENING CROSS SECTIONS	SHEET 11 OF 24

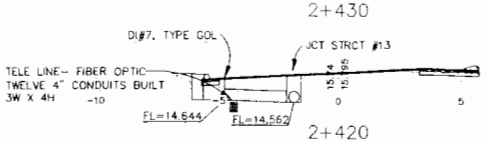
SCALE: 1:100
HORZ & VERT

2+460

2+450

2+440

2+430

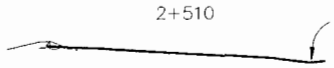


2+420

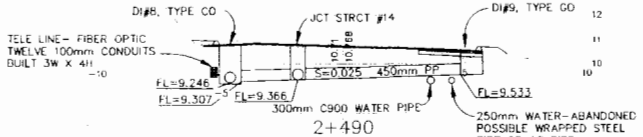
2+410

2+400

2+510



2+500



2+490

2+480

2+470

LOCATIONS OF UNDERGROUND UTILITIES IS APPROXIMATE. ACTUAL PLACEMENT OF DRAINAGE FACILITIES MAY DIFFER FROM PLANS DUE TO UNDERGROUND UTILITY CONFLICTS.

Metric

BAR IS TWO CENTIMETERS ON ORIGINAL DRAWING

IF NOT TWO CENTIMETERS ON THIS SHEET, ADJUST SCALES ACCORDINGLY

ROAD NAME: MYRTLE AVENUE
ROAD NO: 139300 KP (PM):
PPNO: BTA 04/05-01-HUM-01 BHLS-5904(087)
CONTRACT NO.: 205001
DRAWING FILE NAME: L:\PROJECTS\205001\DWG\CDSH12.DWG
PLOT DATE: 01/22/2008

DESIGN SECTION: R. L. BURNETT
DESIGNED BY: JAB
DRAWN BY: JAB
REVIEWED BY: RLB
APPROVED BY: CJW

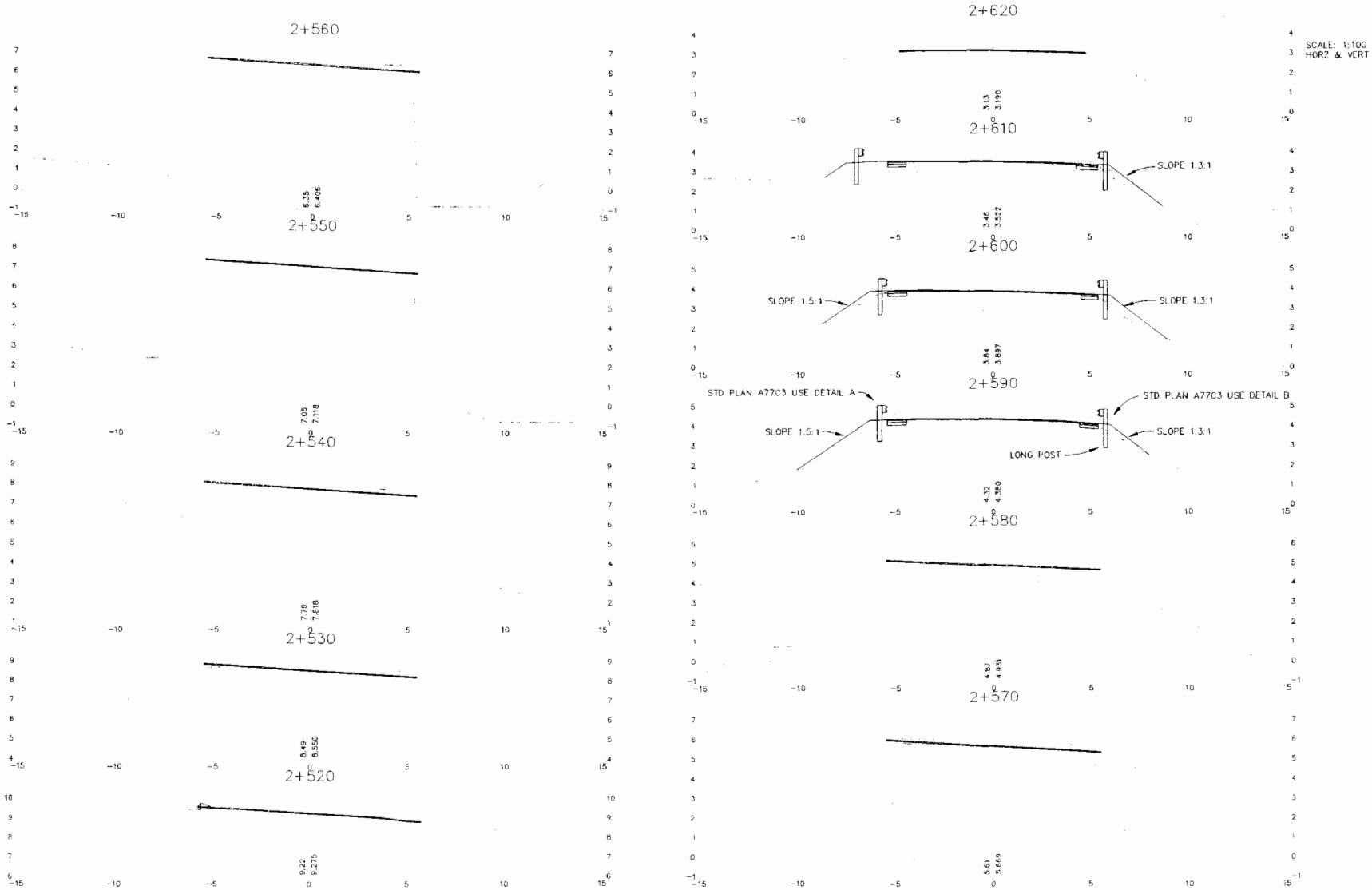
COUNTY OF HUMBOLDT
DEPARTMENT OF PUBLIC WORKS

MYRTLE AVE AND RTAN SLOUGH BRIDGE WIDENING

CROSS SECTIONS

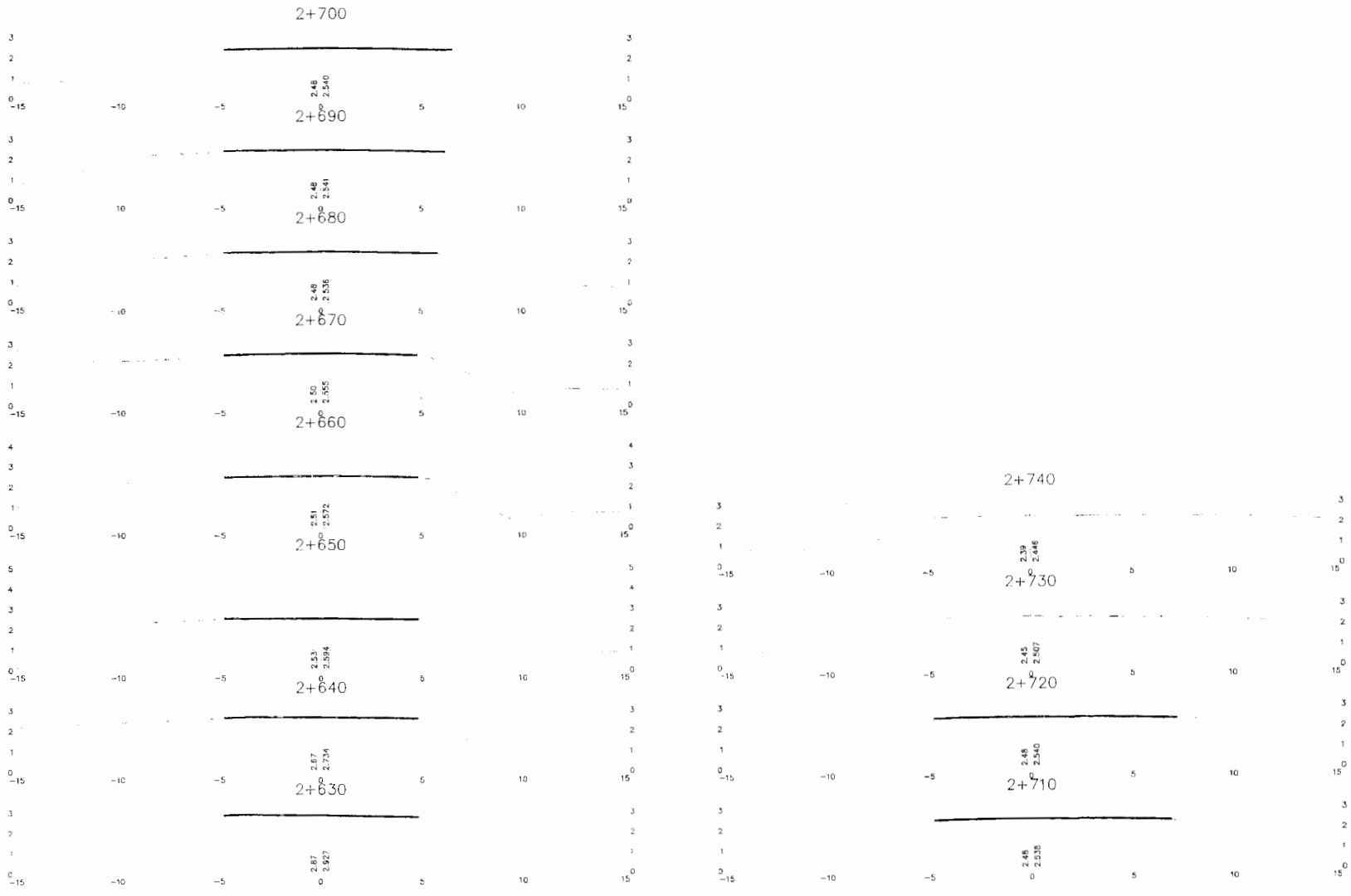
SHEET 12 OF 24

SCALE: 1:100
HORZ & VERT



BAR IS TWO CENTIMETERS ON ORIGINAL DRAWING IF NOT TWO CENTIMETERS ON THIS SHEET, ADJUST SCALES ACCORDINGLY	ROAD NAME: MYRTLE AVENUE ROAD NO: F.M.300 KP (PM): PPNO: BTA 04/05-01-HUM-01 BHLS-5904(057) CONTRACT NO.: 205001 DRAWING FILE NAME: L:\PROJECTS\205001\DWG\CDSH13.DWG PLOT DATE: 01/22/2008	DESIGN SECTION R. L. BURNETT DESIGNED BY: JAB DRAWN BY: JAB REVIEWED BY: RLB APPROVED BY: CJW	COUNTY OF HUMBOLDT DEPARTMENT OF PUBLIC WORKS MYRTLE AVE AND RYAN SLOUGH BRIDGE WIDENING CROSS SECTIONS	SHEET 13 OF 24

SCALE: 1:100
HORZ & VERT



DIST.	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
01	Hum	3K300	9.74(6.05)	15	24

REGISTERED ENGINEER - STRUCTURAL

1/17/08

PLAN APPROVAL DATE

Registered Professional Engineer — Robert Morrison, Jr. — No. S3577 — Exp. 3-31-09 — Structural — State of California

PREPARED BY:
MORRISON STRUCTURES, INC
1050 West Street
Redding, CA 96001

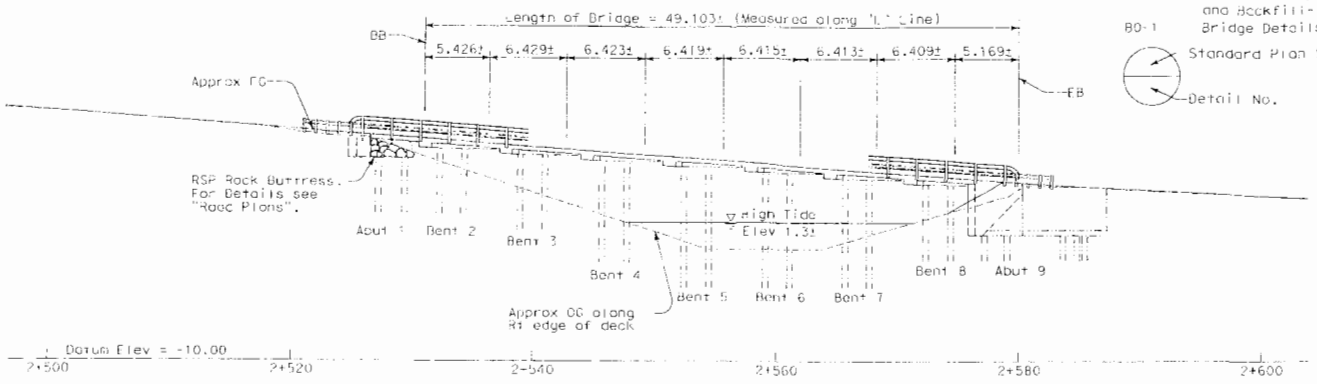
PREPARED FOR:
County of Humboldt Department of Public Works
1106 Second Street
Eureka, California 95501

STANDARD PLAN LIST

Dated July 2004

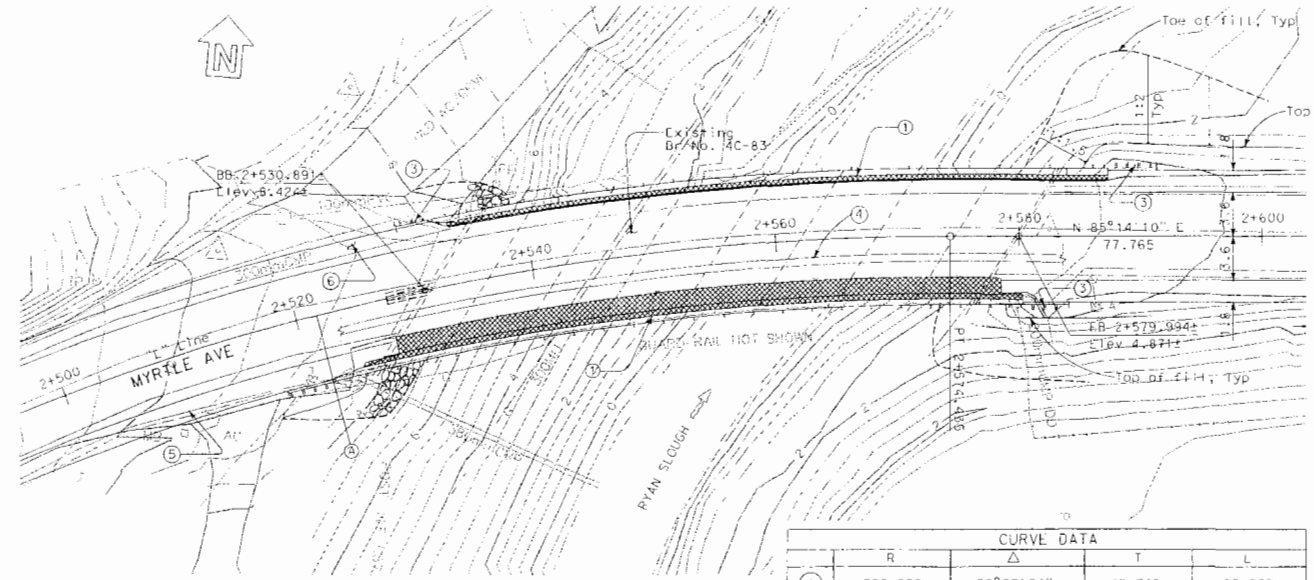
A-10A Abbreviations
A-10B Symbols
A62C Limits of Payment for Excavation and Backfill - Bridge
B0-1 Bridge Details

Standard Plan Sheet No.
Detail No.



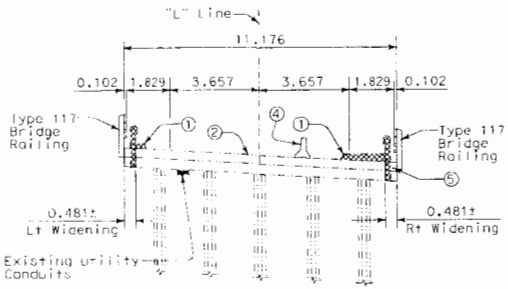
ELEVATION

1:200



PLAN

1:200



TYPICAL SECTION

1:100

NOTES:

1. Remove existing bridge (portion) curb, railings and sidewalk.
2. Clean and treat existing bridge deck.
3. MBGR, for details see "Road Plans".
4. Temporary Railing (Type K) see "Road Plans".
5. Existing waterline to be removed and salvaged. See "Road Plans".
6. Existing CMP to be removed. See "Road Plans".

INDEX TO BRIDGE PLANS

LEGEND

Denotes existing construction
Indicates new construction.
Bridge Removal (Portion)

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

Contractor shall verify all controlling field dimensions before ordering or fabrication any materials.

MORRISON STRUCTURES

DESIGN	BY Robert Morrison Jr.	CHECKED D. Roesner	LOAD FACTOR DESIGN	LIVE LOADING HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD	
DETAILS	BY R.E. Uhlmann	CHECKED Robert Morrison Jr.	LAYOUT	BY Robert Morrison Jr.	CHECKED D. Roesner
QUANTITIES	BY Janet Gallino	CHECKED Robert Morrison Jr.	SPECIFICATIONS	BY Robert Morrison Jr.	PLANS AND SPECS COMPARED Robert Morrison Jr.

Robert Morrison Jr.
PROJECT ENGINEER

CU
EA

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

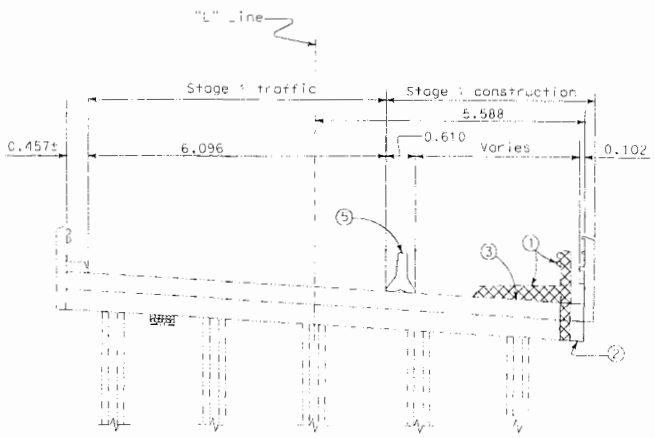
BRIDGE NO.	RYAN SLOUGH BRIDGE ON MYRTLE AVE (WIDEN)
4C-83	
KP (PM)	GENERAL PLAN
9.74(6.05)	

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

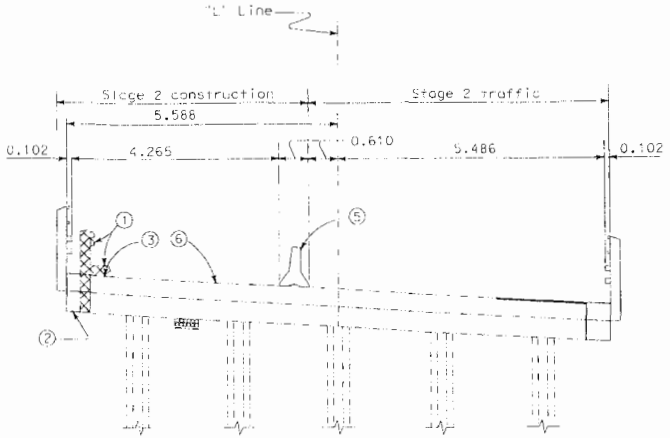
REVISION DATES (PRELIMINARY STAGE ONLY)

1/17/08						

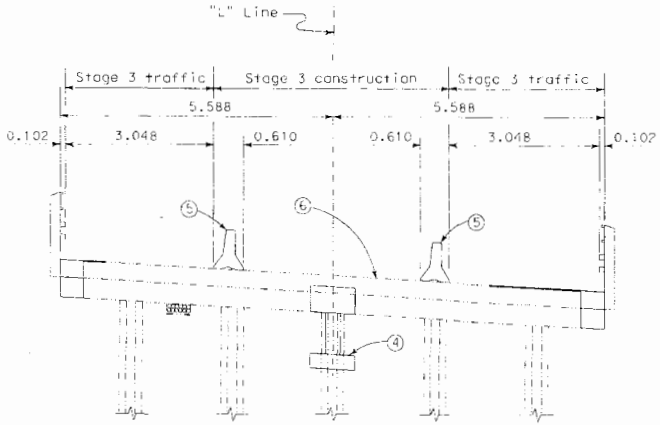
SHEET 1 OF 10



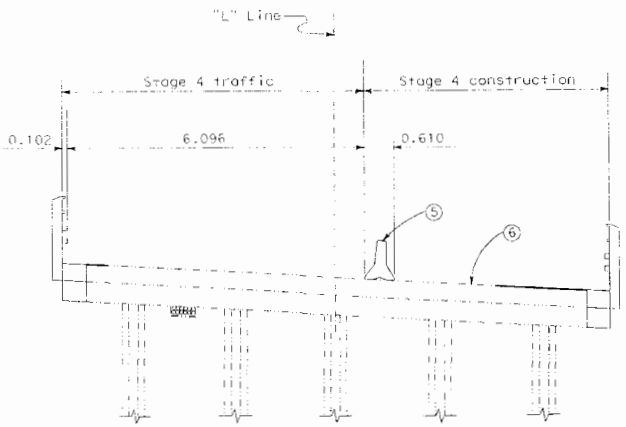
STAGE 1
1:50



STAGE 2
1:50



STAGE 3
1:50



STAGE 4
1:50

Notes:

(1) Remove existing bridge railing, concrete sidewalk and curb.

(2) Widen concrete abutments, slab and bent caps.

(3) Refinish bridge deck.

(4) Construct interior wing wall at Abut. 1.

(5) Temporary Railing (Type K), see "Road Plans."

(6) Clean and treat bridge deck.

DIST.	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
01	Hum	F3K300	9.74(6.05)	16	24

REGISTERED ENGINEER - STRUCTURAL

1/17/08
PLAN APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Robert Morrison, JR. — No. S3577 — Exp. 3-31-09 — STRUCTURAL — STATE OF CALIFORNIA

PREPARED BY:
MORRISON STRUCTURES, INC
1050 West Street
Redding, CA 96001

PREPARED FOR:
County of Humboldt Department of Public Works
1106 Second Street
Eureka, California 95501

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

Contractor shall verify all controlling field dimensions before ordering or fabricating any materials.

MORRISON STRUCTURES

	BY	CHECKED
DESIGN	Robert Morrison Jr.	Robert Morrison Jr.
DETAILS	Janet Gallino	Robert Morrison Jr.
QUANTITIES	Janet Gallino	Robert Morrison Jr.

Robert Morrison Jr.
PROJECT ENGINEER

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

CU
EA

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES (PRELIMINARY STAGE ONLY)

BRIDGE NO.	4C-83
KP (PM)	9.74(6.05)

RYAN SLOUGH BRIDGE ON MYRTLE AVE (WIDEN)

STAGING DETAILS

SHEET 2 OF 10

Notes:
1. Exist sidewalk and curb to be removed is not shown.
2. Wing wall is located on "L" line curve. Wing wall may be constructed on tangent (Bearing).

LEGEND

Indicates Bridge Removal (Portion)

Indicates Existing Structure

DIST.	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
01	Hum	F3K300	9.74(6.05)	17	24

REGISTERED ENGINEER - STRUCTURAL

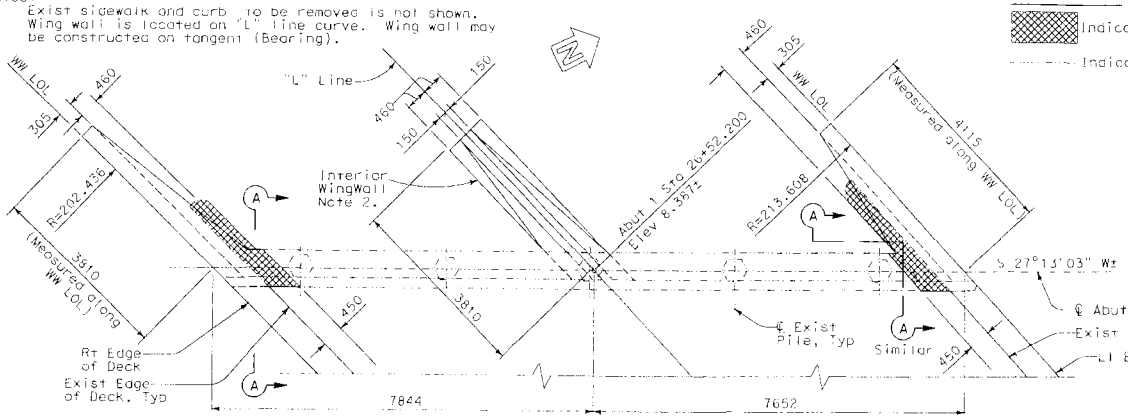
1/17/08

PLAN APPROVAL DATE

Robert Morrison, Jr. No. S3577 Exp. 3-31-09 REGISTERED PROFESSIONAL ENGINEER STRUCTURAL STATE OF CALIFORNIA

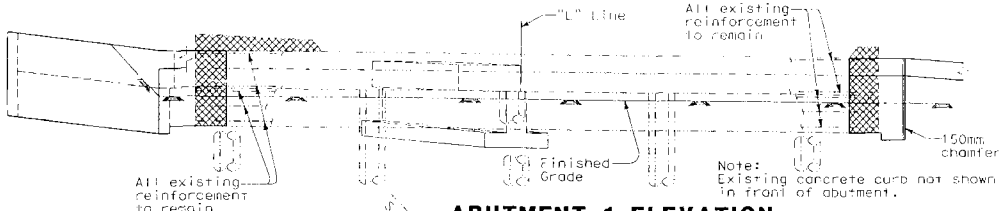
PREPARED BY:
MORRISON STRUCTURES, INC
1050 West Street
Redding, CA 96001

PREPARED FOR:
County of Humboldt Department of Public Works
1106 Second Street
Eureka, California 95501



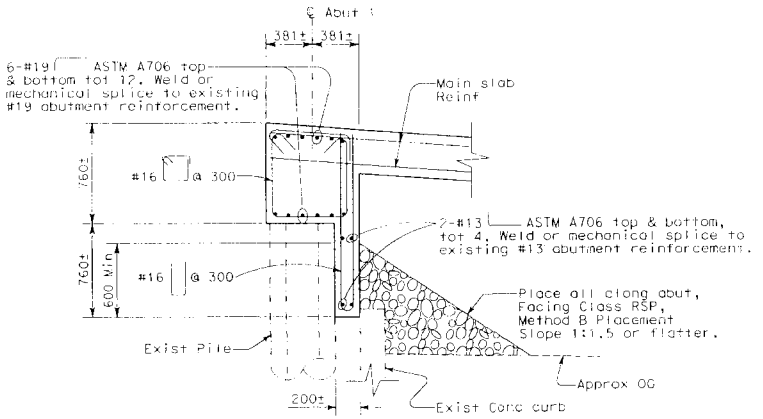
ABUTMENT 1 PLAN

Scale: 1:50



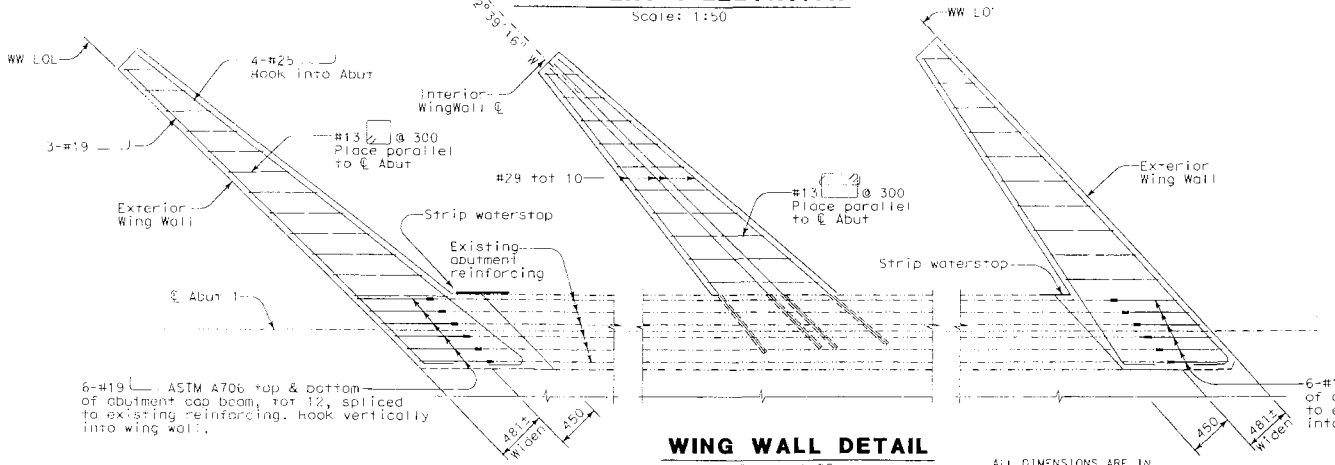
ABUTMENT 1 ELEVATION

Scale: 1:50



SECTION A-A

Scale: 1:20



WING WALL DETAIL

Scale: 1:25

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

Contractor shall verify all controlling field dimensions before ordering or fabricating any materials.

MORRISON STRUCTURES

	BY	CHECKED
DESIGN	Robert Morrison Jr.	Robert Morrison Jr.
DETAILS	R.E. Uhlmann	Robert Morrison Jr.
QUANTITIES	Janet Gallino	Robert Morrison Jr.

Robert Morrison Jr.
PROJECT ENGINEER

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

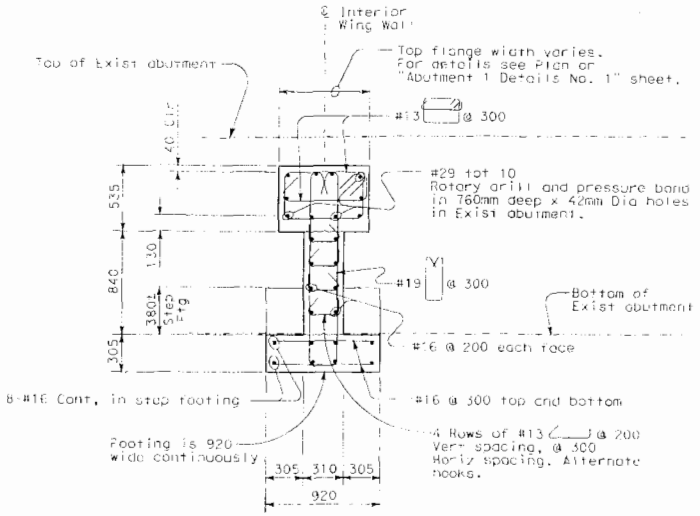
CU
EA

BRIDGE NO.	RYAN SLOUGH BRIDGE ON MYRTLE AVE (WIDEN)
4C-83	
KP (PM)	ABUTMENT 1 DETAILS NO. 1
9.74(6,05)	

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

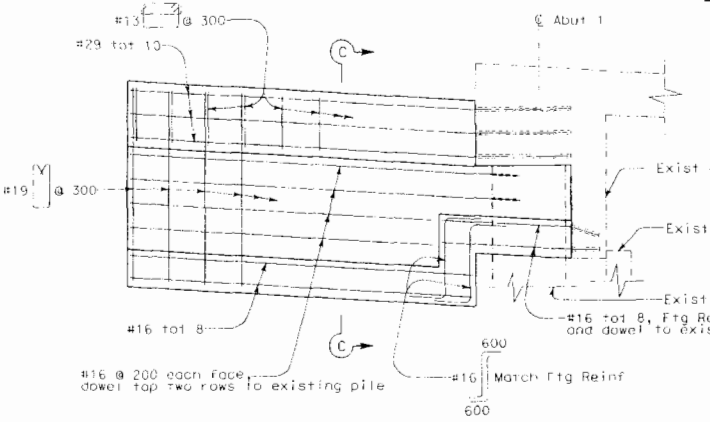
REVISION DATES (PRELIMINARY STAGE ONLY)
1/17/08

SHEET	OF
3	10



SECTION C-C

Scale: 1:20

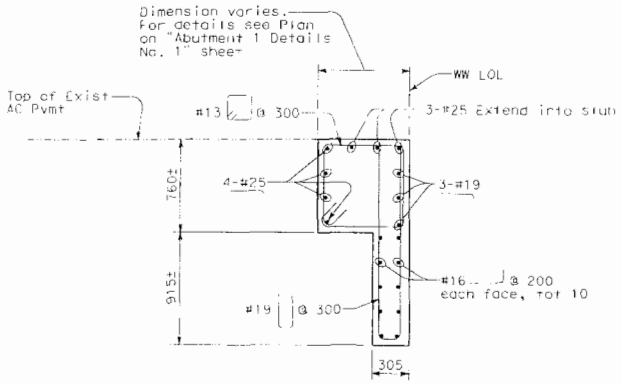


INTERIOR WING WALL ELEVATION

Scale: 1:20

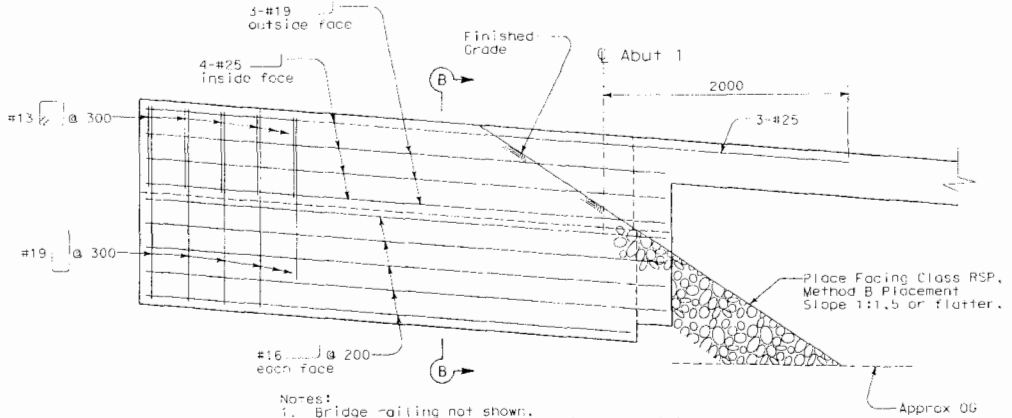
Notes:

1. Pressure bonding procedures shall be approved by the engineer. Pressure bond holes prior to placing concrete.
2. The contractor shall verify all controlling field dimensions prior to ordering or fabricating any material.
3. Roughen contact surfaces of old concrete prior to placing new concrete. Contact surfaces shall be clean of all debris.



SECTION B-B

Scale: 1:20



Notes:
1. Bridge railing not shown.
2. Right wing wall shown, left wing wall similar.

EXTERIOR WING WALL ELEVATION

Scale: 1:20

DIST.	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
01	Hum	F3K300	9.74(6.05)	18	24

REGISTERED ENGINEER - STRUCTURAL

1/17/08

PLAN APPROVAL DATE

Robert Morrison, Jr. No. S3677 Exp. 3-31-09 REGISTERED PROFESSIONAL ENGINEER STRUCTURAL STATE OF CALIFORNIA

PREPARED BY:
MORRISON STRUCTURES, INC
1050 West Street
Redding, CA 96001

PREPARED FOR:
County of Humboldt Department of Public Works
1106 Second Street
Eureka, California 95501

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

Contractor shall verify all controlling field dimensions before ordering or fabricating any material(s).

MORRISON STRUCTURES

	BY	CHECKED
DESIGN	Robert Morrison Jr.	Robert Morrison Jr.
DETAILS	R.Uhlmann	Robert Morrison Jr.
QUANTITIES	Janet Gallino	Robert Morrison Jr.

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

CU
EA

Robert Morrison Jr.
PROJECT ENGINEER

BRIDGE NO.	RYAN SLOUGH BRIDGE ON MYRTLE AVE (WIDEN)
4C-83	
KP (PM)	ABUTMENT 1 DETAILS NO. 2
9.74(6.05)	

D-SHEGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY)

6/2006	1/17/08										

SHEET 4 OF 10

DIST.	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
01	Hum	F3K300	9.74(6.05)	19	24

REGISTERED ENGINEER - STRUCTURAL

1/17/08

PLAN APPROVAL DATE

Robert Morrison, Jr. No. S3577 Exp. 3-31-09 STRUCTURAL REGISTERED PROFESSIONAL ENGINEER STATE OF CALIFORNIA

PREPARED BY:

MORRISON STRUCTURES, INC
1050 West Street
Redding, CA 96001

PREPARED FOR:

County of Humboldt Department of Public Works
1106 Second Street
Eureka, California 95501

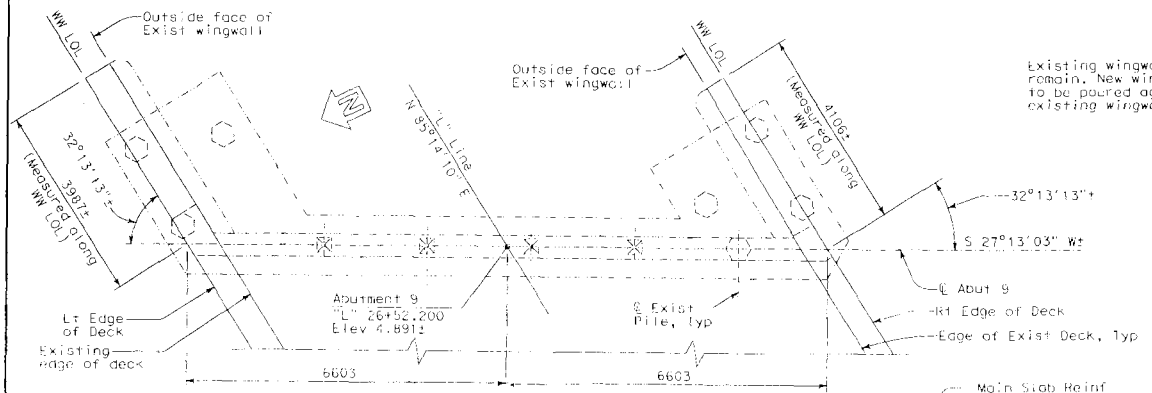
Metric

LEGEND

Indicates Bridge Removal (Portion)

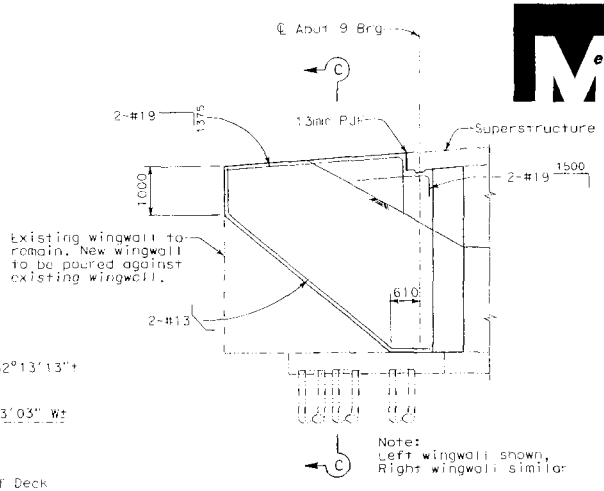
Indicates Existing Structure

Note:
Exist sidewalk and curb to be removed is not shown.



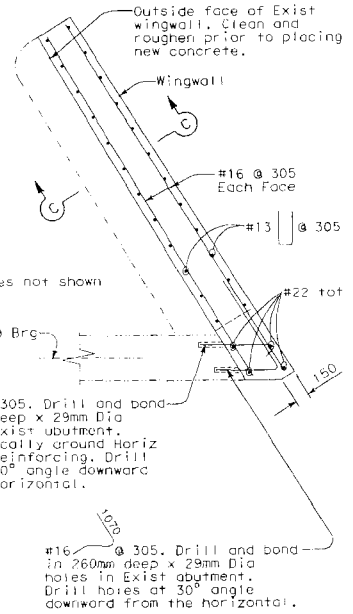
ABUTMENT 9 PLAN

Scale: 1:50



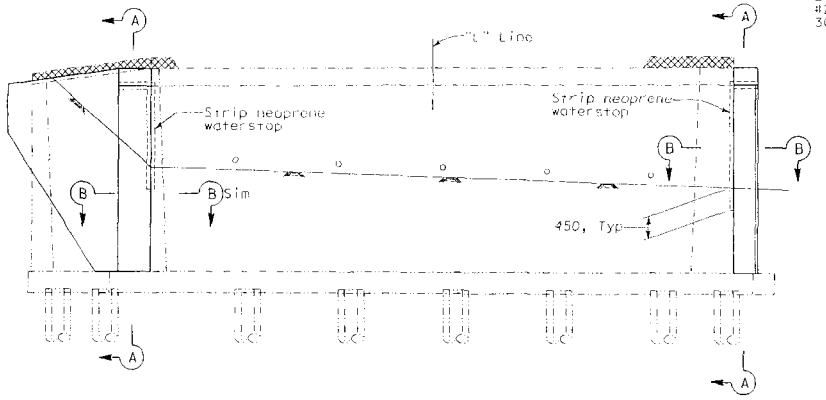
WINGWALL ELEVATION

Scale: 1:50



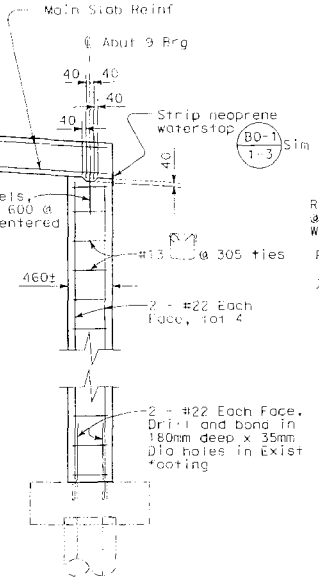
SECTION B-B

Scale: 1:25



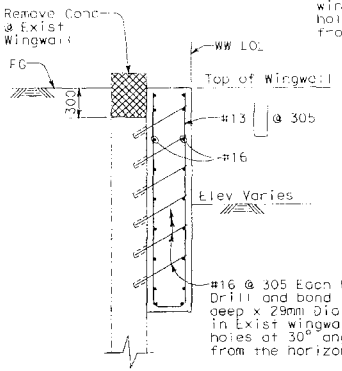
ABUTMENT 9 ELEVATION

Scale: 1:50



SECTION A-A

Scale: 1:25



SECTION C-C

Scale: 1:25

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

Contractor shall verify all controlling field dimensions before ordering or fabricating any materials.

MORRISON STRUCTURES

	BY	CHECKED
DESIGN	Robert Morrison Jr.	Robert Morrison Jr.
DETAILS	R.E. Uhlmann	Robert Morrison Jr.
QUANTITIES	Janet Gollino	Robert Morrison Jr.

Robert Morrison Jr.
PROJECT ENGINEER

CU
EA

BRIDGE NO.	RYAN SLOUGH BRIDGE ON MYRTLE AVE (WIDEN)
4C-83	
KP (PM)	ABUTMENT 9 DETAILS
9.74(6.05)	

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY)

1/17/08						

SHEET 5 OF 10

DIST.	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
01	Hum	F3K300	9.74(6.05)	20	24

Metric

REGISTERED ENGINEER - STRUCTURAL

1/17/08

PLAN APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Robert Morrison, Jr. — No. S3577 — Exp. 3-31-09 — STRUCTURAL — STATE OF CALIFORNIA

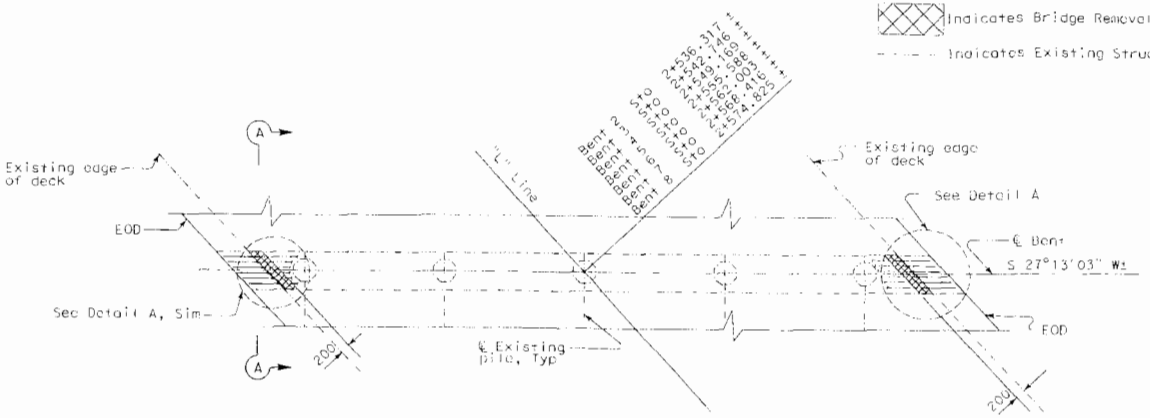
PREPARED BY:
MORRISON STRUCTURES, INC
1050 West Street
Redding, CA 96001

PREPARED FOR:
County of Humboldt Department of Public Works
1106 Second Street
Eureka, California 95501

LEGEND

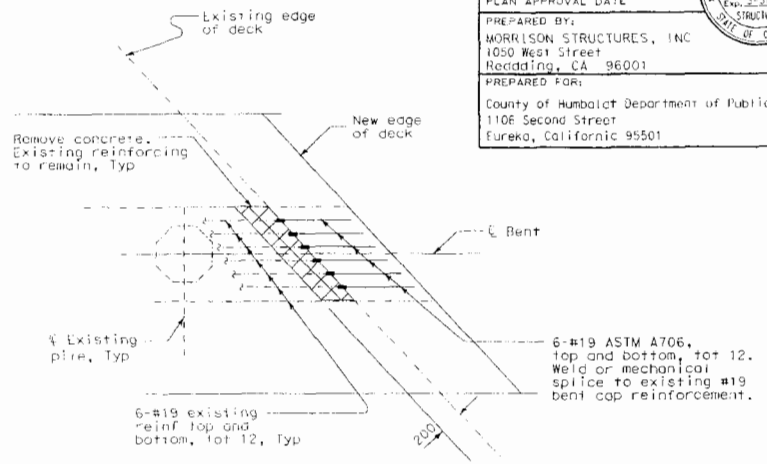
Indicates Bridge Removal (Portion)

Indicates Existing Structure

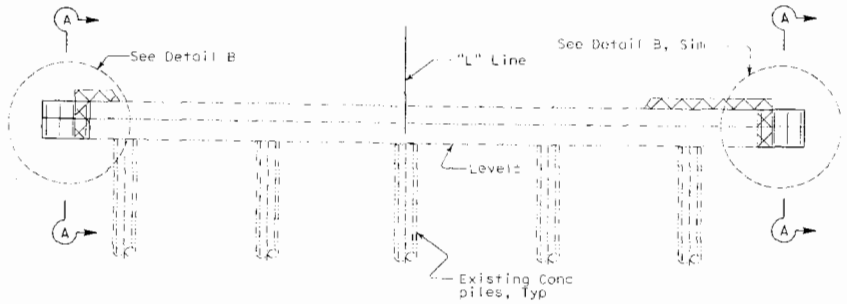


Note:
Sidewalk and curb on top of exisiting deck to be removed is not shown.

PLAN
Scale: 1:50

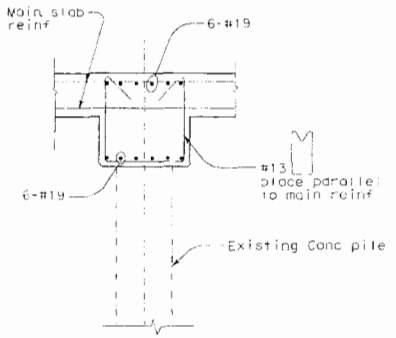


DETAIL A
Scale: 1:20

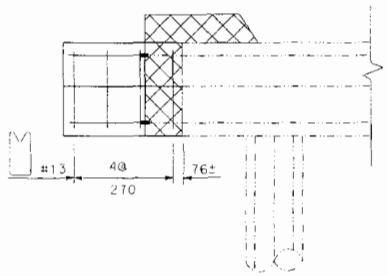


Note:
Bent No. 2 elevation shown
Bents No. 3, 4, 5, 6, 7, and 8 similar.

ELEVATION
Scale: 1:50



SECTION A-A
Scale: 1:20



DETAIL B
Scale: 1:20

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

Contractor shall verify all controlling field dimensions before ordering or fabricating any materials.

MORRISON STRUCTURES

	BY	CHECKED
DESIGN	Robert Morrison Jr.	Robert Morrison Jr.
DETAILS	Janet Gallino	Robert Morrison Jr.
QUANTITIES	Janet Gallino	Robert Morrison Jr.

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

Robert Morrison Jr.
PROJECT ENGINEER

CU
EA

BRIDGE NO.	ROUTE
4C-83	9.74(6.05)

RYAN SLOUGH BRIDGE ON MYRTLE AVE (WIDEN)
BENT DETAILS

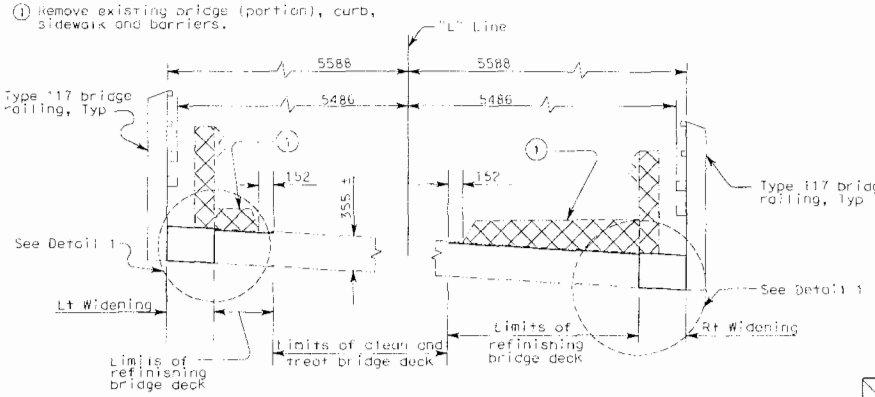
DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES PRELIMINARY STAGE ONLY!

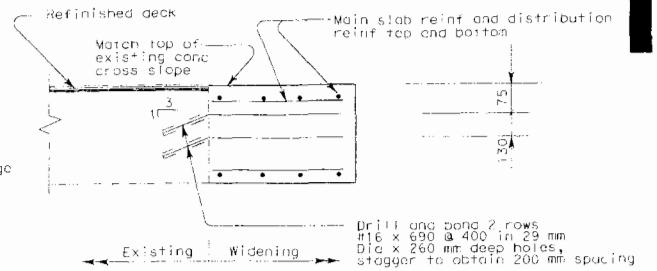
1/17/08									

SHEET 6 OF 10

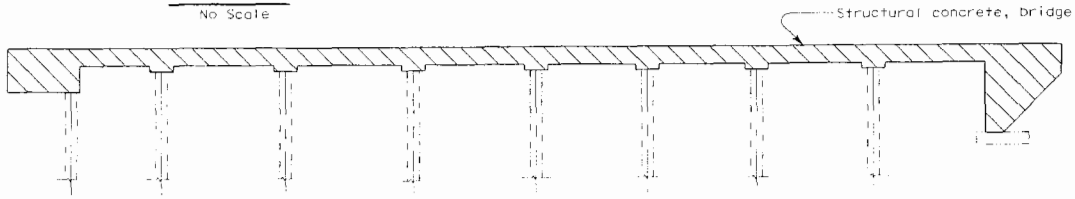
Note:
① Remove existing bridge (portion), curb, sidewalk and barriers.



TYPICAL SECTION
Scale: 1:25

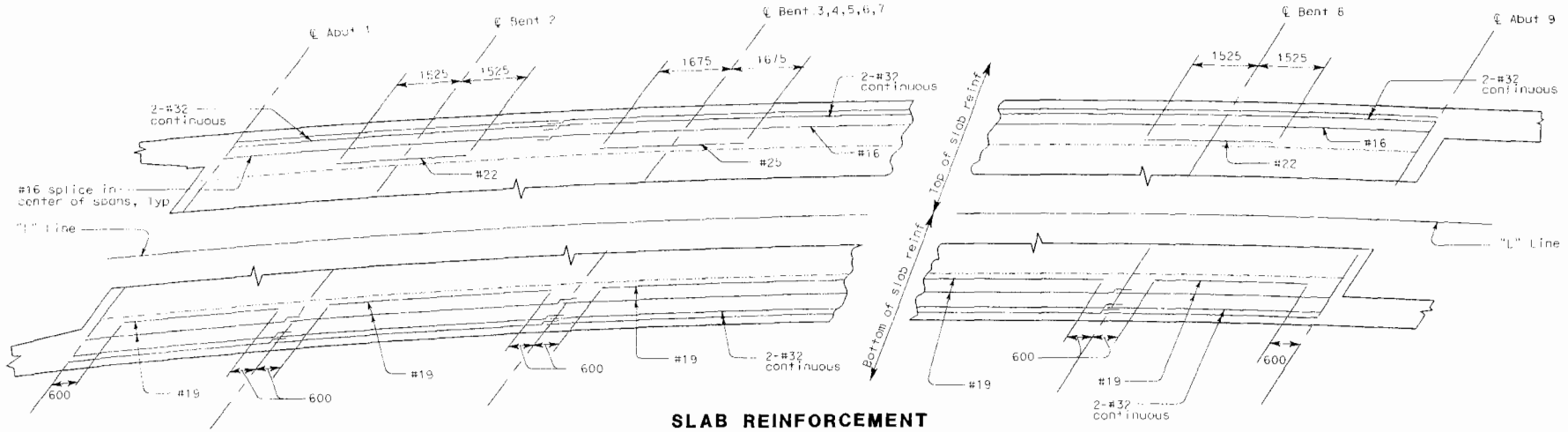


DETAIL 1
No Scale



CONCRETE TYPE AND LIMITS
No Scale

LEGEND
- Denotes existing construction
- Indicates new construction.
- Remove existing curb, sidwalk and railings



SLAB REINFORCEMENT
No Scale

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

Contractor shall verify all controlling field dimensions before ordering or fabricating any materials.

DIST.	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
01	Hum	13K300	9.74(6.05)	21	24

REGISTERED ENGINEER - STRUCTURAL
1/17/08
PLAN APPROVAL DATE
Robert Morrison, Jr. No. S3577 Exp. 3-31-09 STRUCTURAL STATE OF CALIFORNIA

PREPARED BY:
MORRISON STRUCTURES, INC
1050 West Street
Redding, CA 96001

PREPARED FOR:
County of Humboldt Department of Public Works
1106 Second Street
Eureka, California 95501

MORRISON STRUCTURES

	BY	CHECKED
DESIGN	Robert Morrison Jr.	Robert Morrison Jr.
DETAILS	Janet Gallino	Robert Morrison Jr.
QUANTITIES	Janet Gallino	Robert Morrison Jr.

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

Robert Morrison Jr.
PROJECT ENGINEER

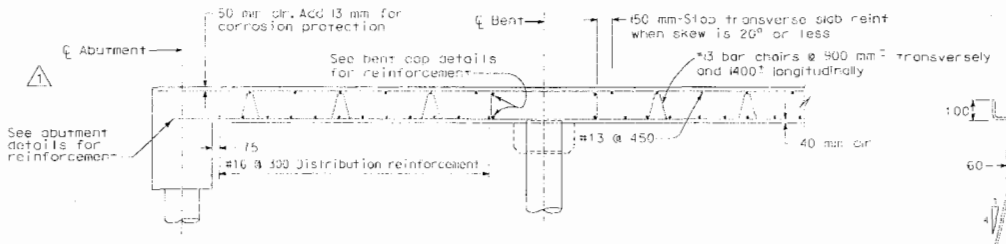
CU
EA

BRIDGE NO.	RYAN SLOUGH BRIDGE ON MYRTLE AVE (WIDEN)
40-63	DECK REINFORCING DETAILS
KP (PM)	
9.74(6.05)	

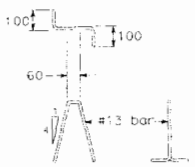
DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES (PRELIMINARY STAGE ONLY)
6/2006 1/17/08

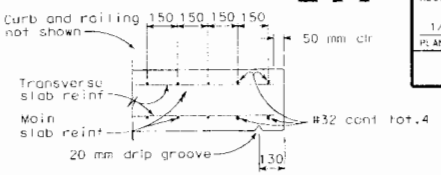
SHEET 7 OF 10



LONGITUDINAL SECTION



BAR CHAIR DETAIL



EDGE OF SLAB DETAILS

DIST.	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
01	HUM	F3K300	9.74 (6.05)	22	24

REGISTERED ENGINEER - STRUCTURAL

Robert Morrison, Jr. No. S3577 Exp. 3-31-09 STRUCTURAL

1/17/08

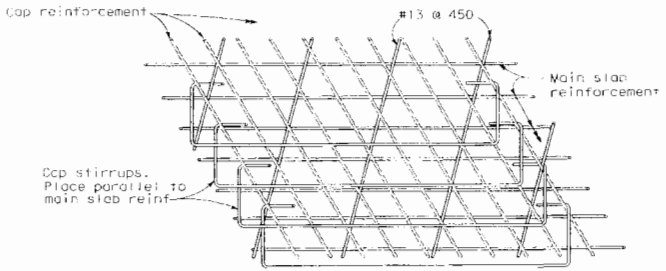
PLANS APPROVAL DATE

BAR SPLICE LENGTH

Bar size	#13	#16	#19	#22	#25	#29	#32	#36
All bars, except top bars in spans over 7 m	580	710	860	990	1140	1730	1930	2160
Top bars in spans over 7 m	580	710	860	1350	1520	1960	2460	3050

REINFORCEMENT NOTES:

Splices in top main bars to be located near center of span.
Splices in bottom main bars to be located near bent.
Spacing of all transverse bars is measured along ℄ roadway.
Skew 0°to 20°: Place all transverse bars parallel to bent.
Skew over 20°: Place transverse slab bars perpendicular to ℄ bridge. See details at right and below.



TOP SLAB REINFORCEMENT AT BENT

Note: View for main span over 7 m.
Bar placement similar for spans under 7 m.

GENERAL NOTES
LOAD FACTOR DESIGN

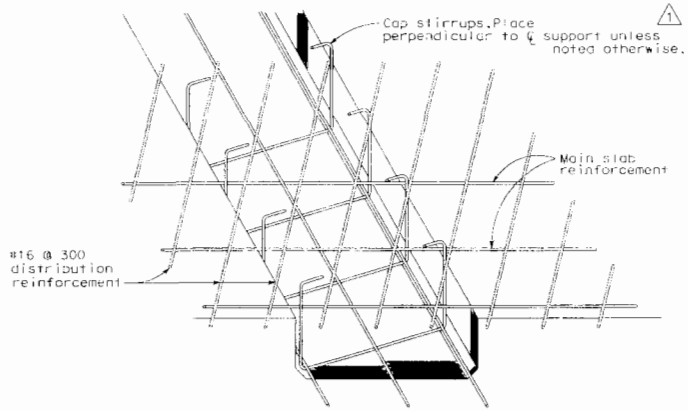
Design: Bridge Design Specifications (1983 AASHTO with Interims and revisions by CALTRANS)

Dead load: Includes 1680 Pa for future wearing surface.

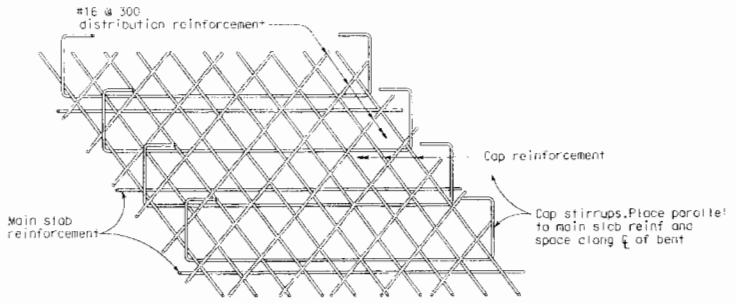
Live loading: HS20-44 and alternative and permit design load.

Reinforced concrete: fy = 420 MPa
f'c = 22 Mpa
n = 9

1 Seismic design:
Peck rock deceleration = 0.4 g
Soil profile - Type E



DROPPED CAP



FLUSH CAP

BOTTOM SLAB REINFORCEMENT AT BENT

NO SCALE
ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

STANDARD DRAWING

RELEASE DATE 8/26/97 | FILE NO. X81-220

DESIGN BY L.Y. LEE | CHECKED T. HANNAN
DETAILS BY R. YEE | CHECKED T. FARNAN
SUBMITTED BY R.S. WATANABE | DRAWING DATE 8/88

RELEASED BY

OFFICE CHIEF

DS 050 21474 (METRIC) (REV. 2/25/97)

1 Modified dropped cap, modified general notes, modified longit. section

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

CU
EA

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

BRIDGE NO. 40-83
KILOMETER POST 9.74

RYAN SLOUGH BRIDGE ON MYRTLE AVE. (WIDEN)

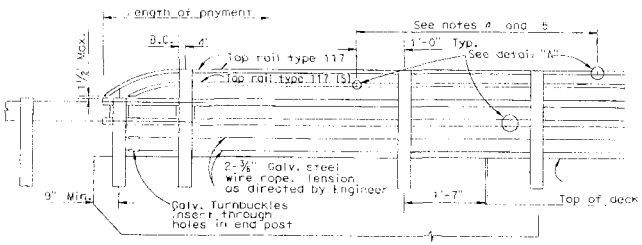
SLAB REINFORCEMENT DETAILS

DISREGARD PRINTS BEARING EARLIER REVISION DATES

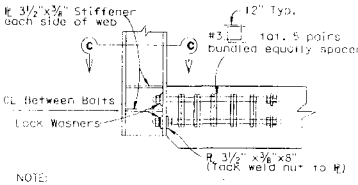
REVISION DATES (PRELIMINARY STAGE ONLY)

SHEET 8 OF 10

PLAN

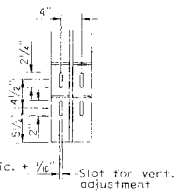


ELEVATION

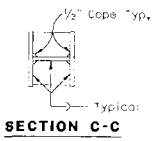


NOTE:
#3 stirrups may be substituted for W 3.5 wire at 3" pitch around anchor bolts.
For details not shown see Rail Post Detail Thin Slab.

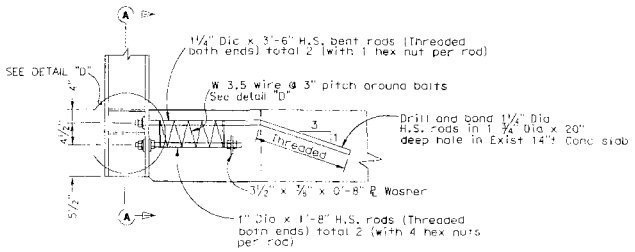
DETAIL D



SECTION A-A

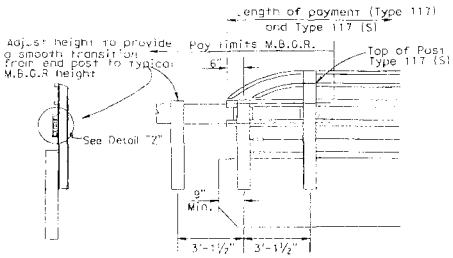


SECTION C-C



RAIL POST DETAIL THIN SLAB

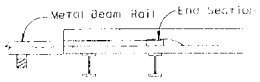
NOT TO SCALE



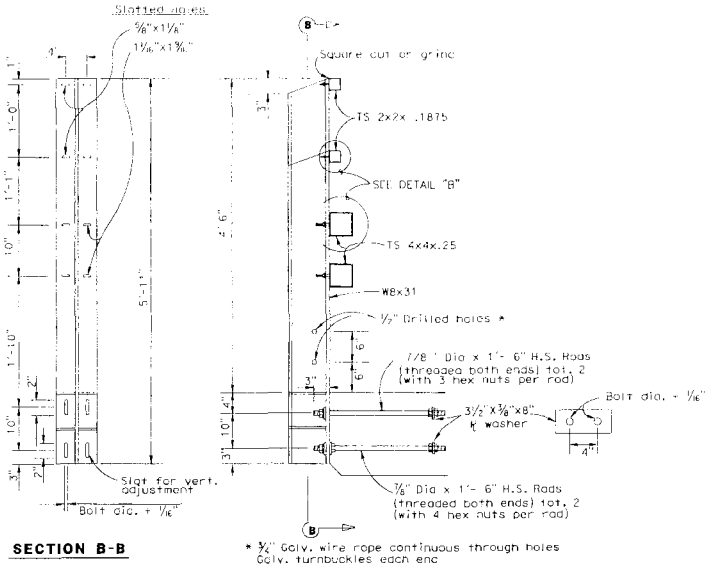
SECTION **ELEVATION**

METAL BEAM APPROACH

NOT TO SCALE



PLAN



SECTION B-B

* ½" Galv. wire rope continuous through holes Galv. turnbuckles each end

RAIL POST DETAILS

NOT TO SCALE

NOTES:

1. Posts shall be vertical.
2. Tubing shall be shop bent to fit horizontal curve when curve radius is less than 950'.
3. Tubing shall be parallel to vertical alignment.
4. Tubing shall be continuous over not less than 3 intermediate posts, with a minimum length of 3 panels except as noted.
5. No more than one tube splice per panel is permitted, except as noted.
6. Space posts to provide 1'-6" min. clear between expansion joints and ℄ of post.
7. Rail joints in top and bottom tubes at deck expansion joints shall provide allowance for movement equal to width of deck joint with corresponding increase in length of sleeve.
8. Railing on bridge wingwalls to be placed after walls are backfilled.
9. ¾" stud bolt nuts shall be torqued to 175 ft. lbs. ⅜" stud bolts shall be wrench tight.
10. Anchor bolt nuts shall be wrench tight.
11. Galvanize rail assembly after fabrication
12. Designed by AASHTO dated 1973 and Interim Specifications dated 1974,1975,and 1976
13. Design height of rail is based on a future overlay of 3 inches maximum.
14. For details not shown, see "Type 117 Bridge Railing Details No. 2" sheet.

Metric

DIST.	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
01	HUM	F3K300	9.74(6.05)	23	24

REGISTERED ENGINEER - STRUCTURAL

1/17/08

PLAN APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER Robert Morrison, Jr. No. S3577 Exp. 3-31-09 STRUCTURAL STATE OF CALIFORNIA

PREPARED BY:
MORRISON STRUCTURES, INC
1050 West Street
Redding, CA 96001

PREPARED FOR:
County of Humboldt Department of Public Works
1106 Second Street
Eureka, California 95501

Note:
All dimensions are in feet and inches unless otherwise shown.

Contractor shall verify all controlling field dimensions before ordering or fabricating any materials.

MORRISON STRUCTURES

	BY	CHECKED
DESIGN	Robert Morrison Jr.	Robert Morrison Jr.
DETAILS	R.E. Uhlmann	Robert Morrison Jr.
QUANTITIES	Janet Gallino	Robert Morrison Jr.

Robert Morrison Jr.
PROJECT ENGINEER

CU
EA

BRIDGE NO.	RYAN SLOUGH BRIDGE ON MYRTLE AVE (WIDEN)
4C-83	
KP (PM)	BRIDGE RAILING - TYPE 117 DETAILS NO. 1
9.74(6.05)	

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES (PRELIMINARY STAGE ONLY)

SHEET 9 OF 10

DIST.	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
01	Hum	F3K300	9.74(6.05)	24	24

REGISTERED ENGINEER - STRUCTURAL

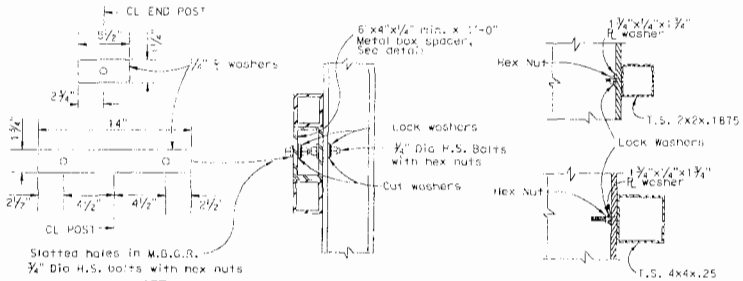
1/17/08

PLAN APPROVAL DATE

Robert Morrison, Jr. No. S3577 Exp. 3-31-09 REGISTERED PROFESSIONAL ENGINEER STRUCTURAL STATE OF CALIFORNIA

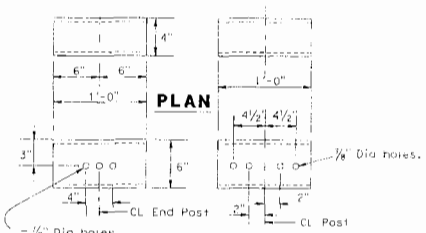
PREPARED BY:
MORRISON STRUCTURES, INC
1050 West Street
Redding, CA 96001

PREPARED FOR:
County of Humboldt Department of Public Works
1106 Second Street
Eureka, California 95501



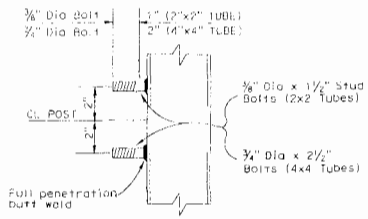
DETAIL Z

DETAIL B

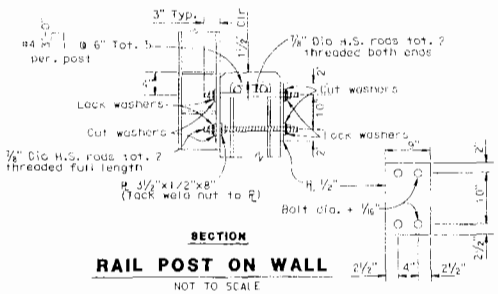


ELEVATION

RAIL CAP
(T.S. 2X2X.1875 SIMILAR)



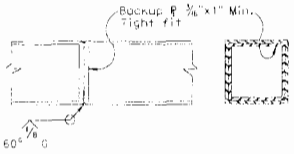
PLAN



SECTION

RAIL POST ON WALL

NOT TO SCALE

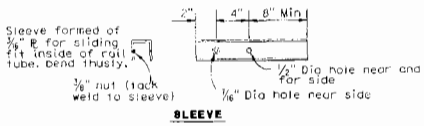


SHOP FABRICATION - WELDED TUBE SPLICE

NOT TO SCALE

NOTES:

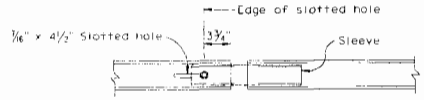
1. For details not shown, see "Type 117 Bridge Railing Details No. 1" sheet.



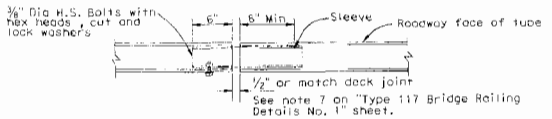
SLEEVE

DETAIL "A" - TUBE SPLICE

NOTE: ⅜" nut may be replaced with with drilled and tapped hole in sleeve.



ELEVATION



PLAN

Note:
All dimensions are in feet and inches unless otherwise shown.

Contractor shall verify all controlling field dimensions before ordering or fabricating any materials.

MORRISON STRUCTURES

	BY	CHECKED
DESIGN	Robert Morrison Jr.	Robert Morrison Jr.
DETAILS	R.E. Uhlmann	Robert Morrison Jr.
QUANTITIES	Janet Gallino	Robert Morrison Jr.

REUSE OF DOCUMENTS

THIS DOCUMENT, AND THE IDEAS AND DESIGN INCORPORATED HEREIN, AS AN INSTRUMENT OF PROFESSIONAL SERVICE, IS PROPERTY OF MORRISON STRUCTURES, INC. AND IS NOT TO BE USED, IN WHOLE OR PART, FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF MORRISON STRUCTURES, INC.

©MORRISON STRUCTURES, INC.

Robert Morrison Jr.
PROJECT ENGINEER

CU
EA

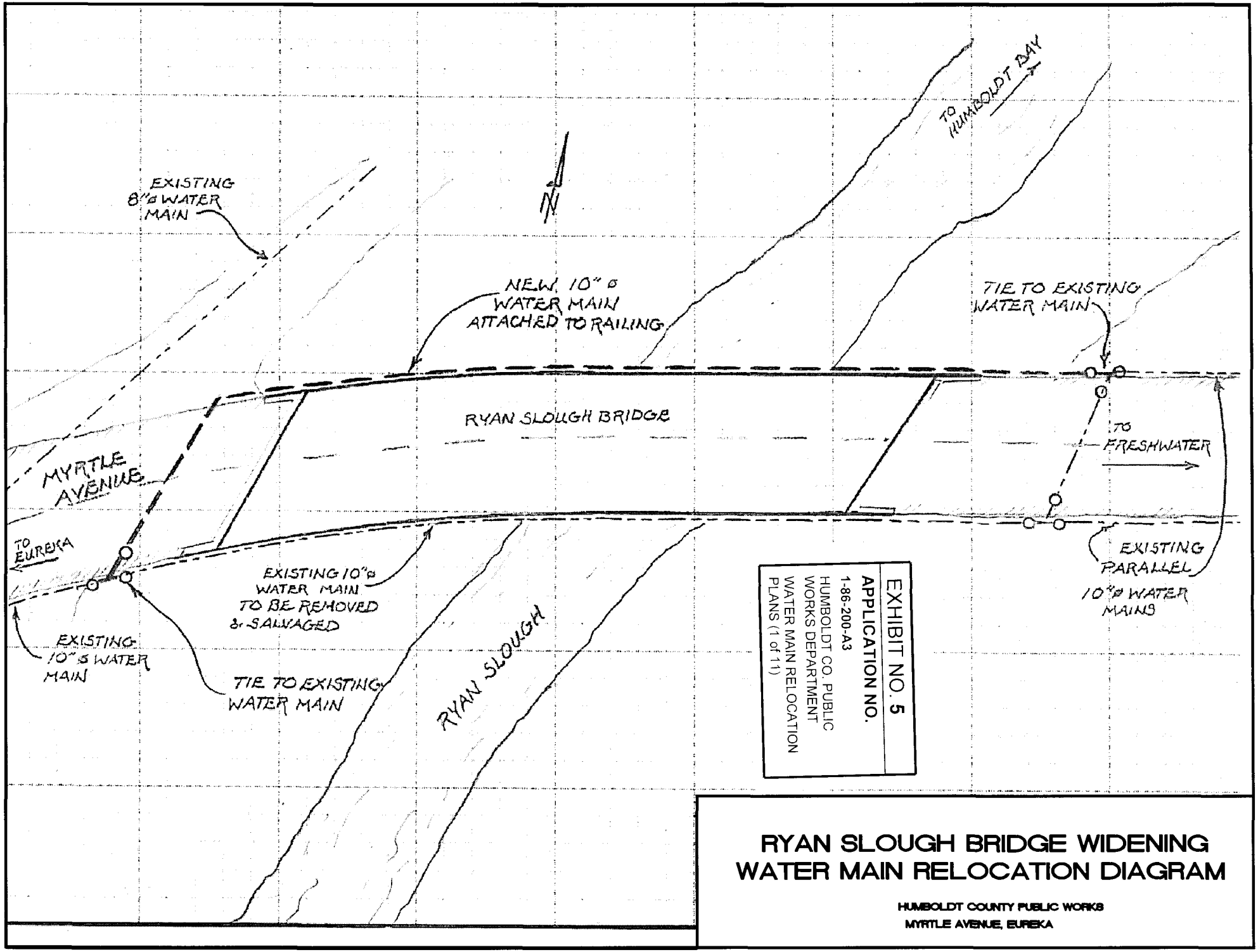
BRIDGE NO.	
4C-83	RYAN SLOUGH BRIDGE ON MYRTLE AVE (WIDEN)
KP (PM)	
9.74(6.05)	BRIDGE RAILING - TYPE 117 DETAILS NO. 2

DISHLGAHD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES (PRELIMINARY STAGE ONLY)

1/17/08

SHEET	OF
10	10



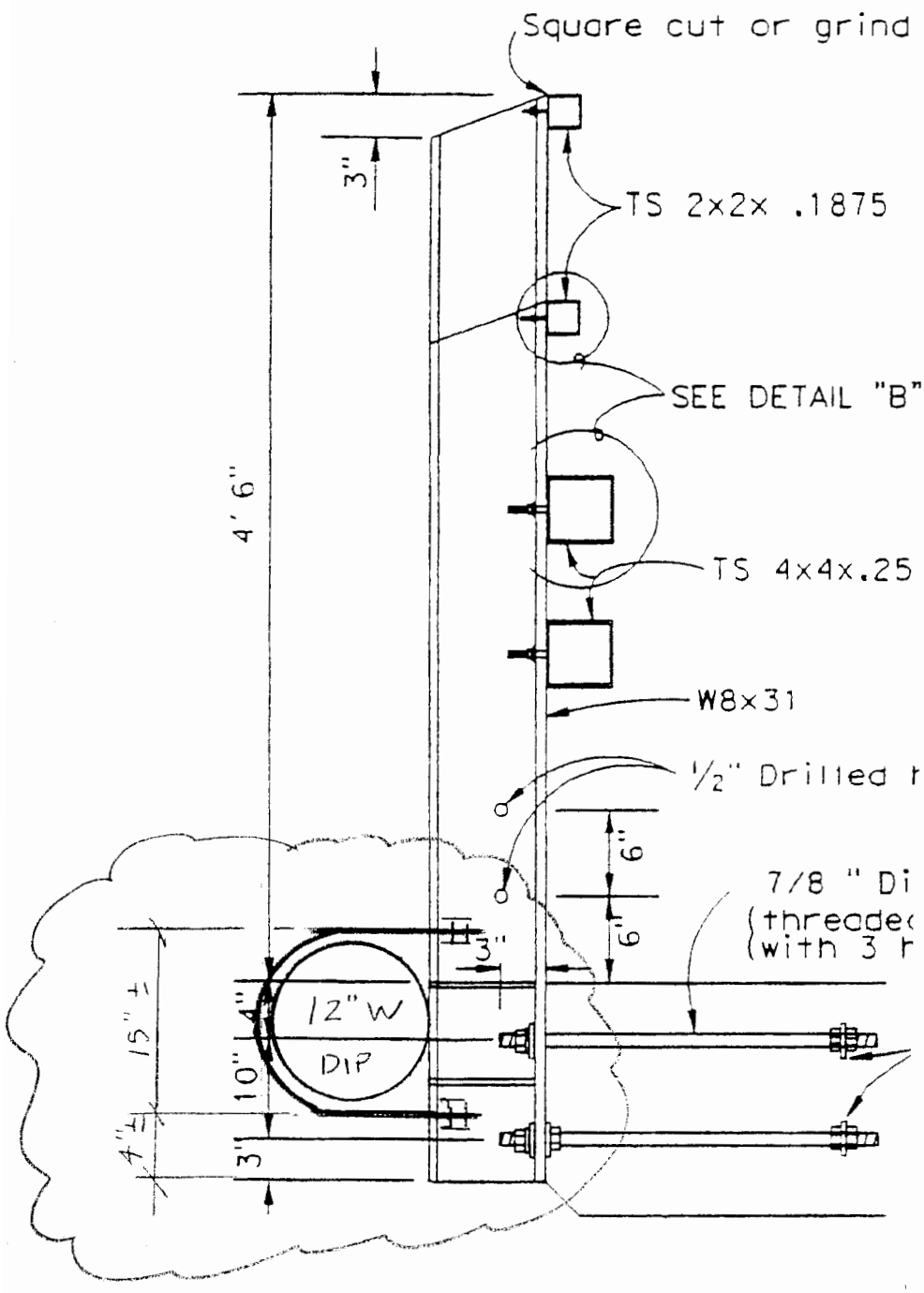
RYAN SLOUGH BRIDGE WIDENING
WATER MAIN RELOCATION DIAGRAM

HUMBOLDT COUNTY PUBLIC WORKS
MYRTLE AVENUE, EUREKA

Reset Water Main (Additive Bid Item) – The Contractor shall stage the Bridge widening beginning on the downstream side of the existing bridge, leaving the existing water main in service on the upstream side of the bridge. After downstream bridge widening, wingwall construction and bridge rail installation and approval, the Contractor shall install the District furnished new water main on the contractor installed bridge rail to match the existing upstream design (see attached details). The Humboldt Community Services District (HCSD) shall furnish Contractor new 12-inch Ductile Iron Pipe "Thrust-Lock" boltless restrained joint pipe and fittings, Grinnell Fig 137, 7/8-inch diameter U-bolts and nuts and N-Buna rubber gasket wrap. The Contractor shall drill the bridge rails and chlorinate and install the pipe and U-bolts on said downstream bridge rail to match the existing upstream installation. After the pipe has been installed and pressure tested by Contractor, the Contractor shall disassemble the two existing "Ebba-Iron Flextend" seismic joints, wingwall brackets and air release valve and re-install and re-connect them (drill & set) at each end of the Contractor installed water main and wingwall. The Contractor shall cut and cap the existing water main beyond the new wingwall construction with a District furnished "Romac" restrained joint grip ring cap. The Contractor shall have a maximum of 24-hours to relocate both Flextend seismic joint assemblies. The District shall make the final connections between the end of the contractor installed Flextends and the existing underground water main and install the new concrete thrust blocks. If the Flextends are not completely relocated by Contractor within the stated 24-hour period, the Contractor shall provide an 8-inch (minimum) diameter water main bypass, at his expense, complete including temporary connections to the existing water main. After the new water main is installed, approved and in-service, the Contractor shall disassemble the existing (upstream-side) ductile iron pipe water main and brackets to the District Corporation yard (5055 Walnut Drive, Cutten).

The Contractor shall coordinate with District and County and resolve any conflicts between the new water main installation and the storm drainage and guardrail construction.

ADDENDUM No.2 2/9



CONTRACTOR INSTALLED NEW 12" WATER ON

RAIL POST DETAILS (DOWNSTREAM SIDE)

NOT TO SCALE

NOTES:

1) CONTRACTOR TO INSTALL HESD FURNISHED 12" DIP, FITTINGS, U-BOLTS & NUTS.

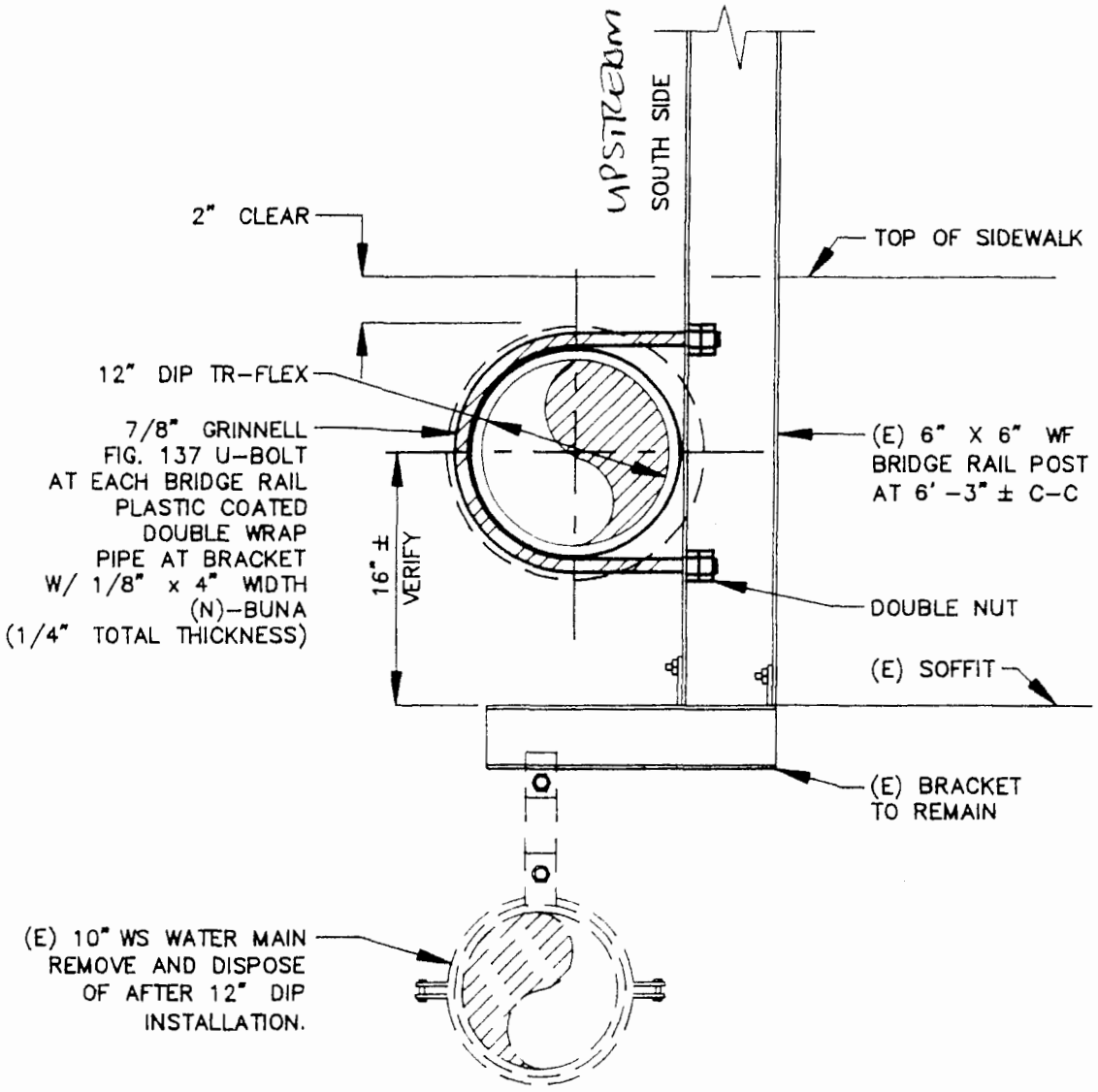
2) CONTRACTOR TO DRILL RAIL & INSTALL PIPE

3) CONTRACTOR TO RELOCATE (E) "FLEXTEND" SEISMIC JOINT(S) W/IN 24-HR PERIOD. SEE SPECS & ATTACHED DETAILS

4) NEW WATER MAIN INSTALLATION TO MATCH (E)

5) (E) WATER MAIN TO REMAIN IN SERVICE UNTIL NEW CONTRACTOR INSTALLED WATER IS ACCEPTED & PLACED IN-SERVICE.

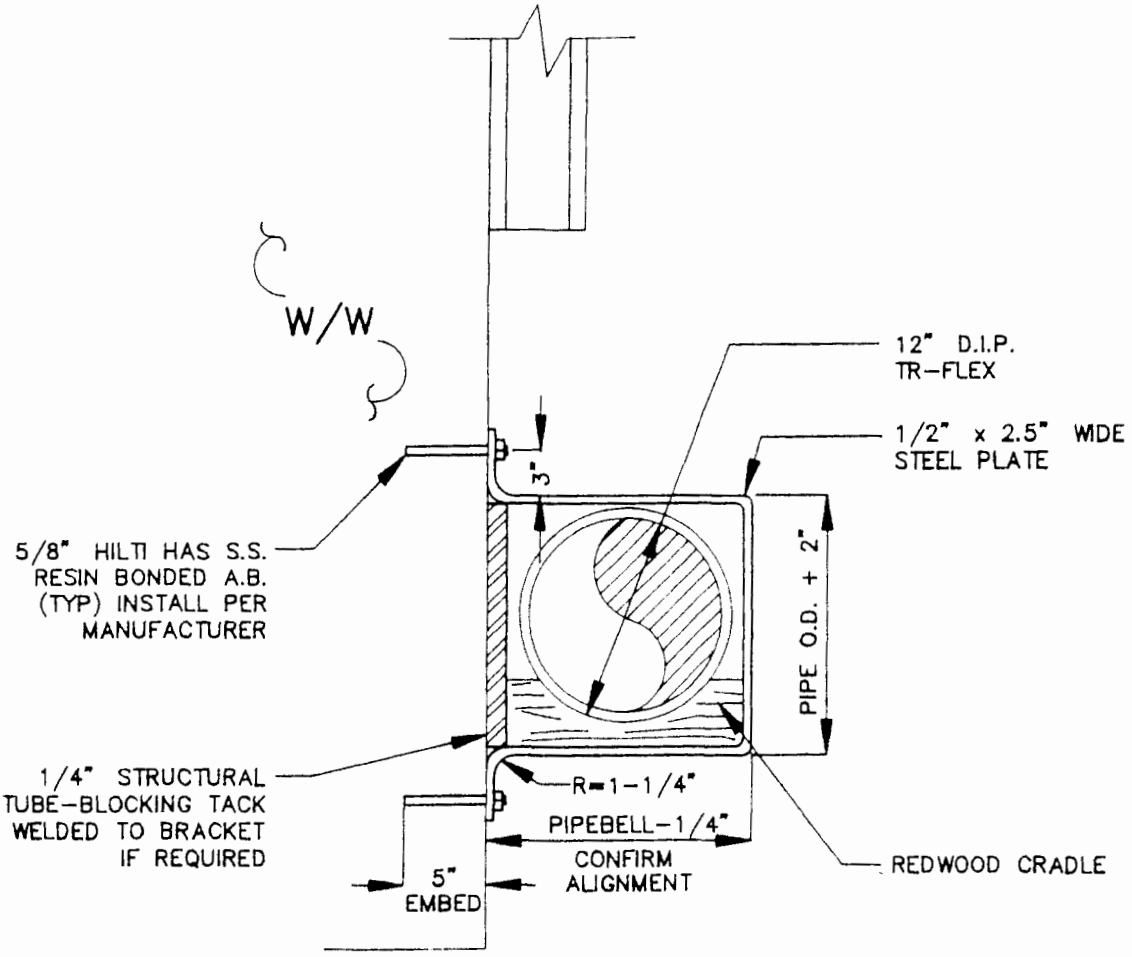
ADDENDUM No. 2 | 3/9



EXISTING

BB/3,4 BRIDGE RAIL BRACKET DETAIL NTS

GENERAL NOTES



EXISTING
FIELD VERIFY

WB — WINGWALL BRACKET DETAIL NTS

PIPE SCHEDULE

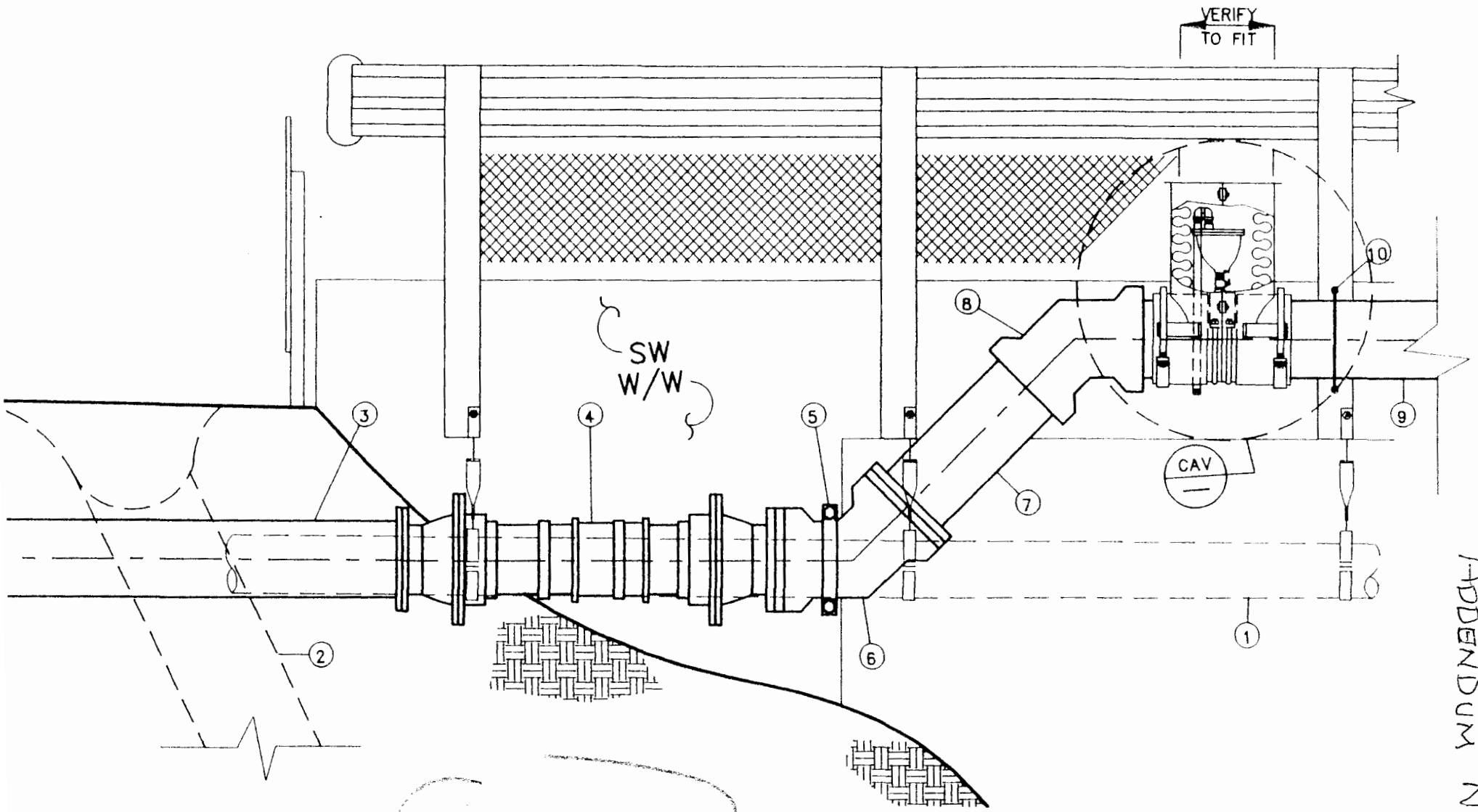
(1) REMOVE EXISTING 10" WRAPPED STEEL PIPE

(2) REMOVE AND REPLACE OR TUNNEL (E)

PROJE

1. ALL
" TR-

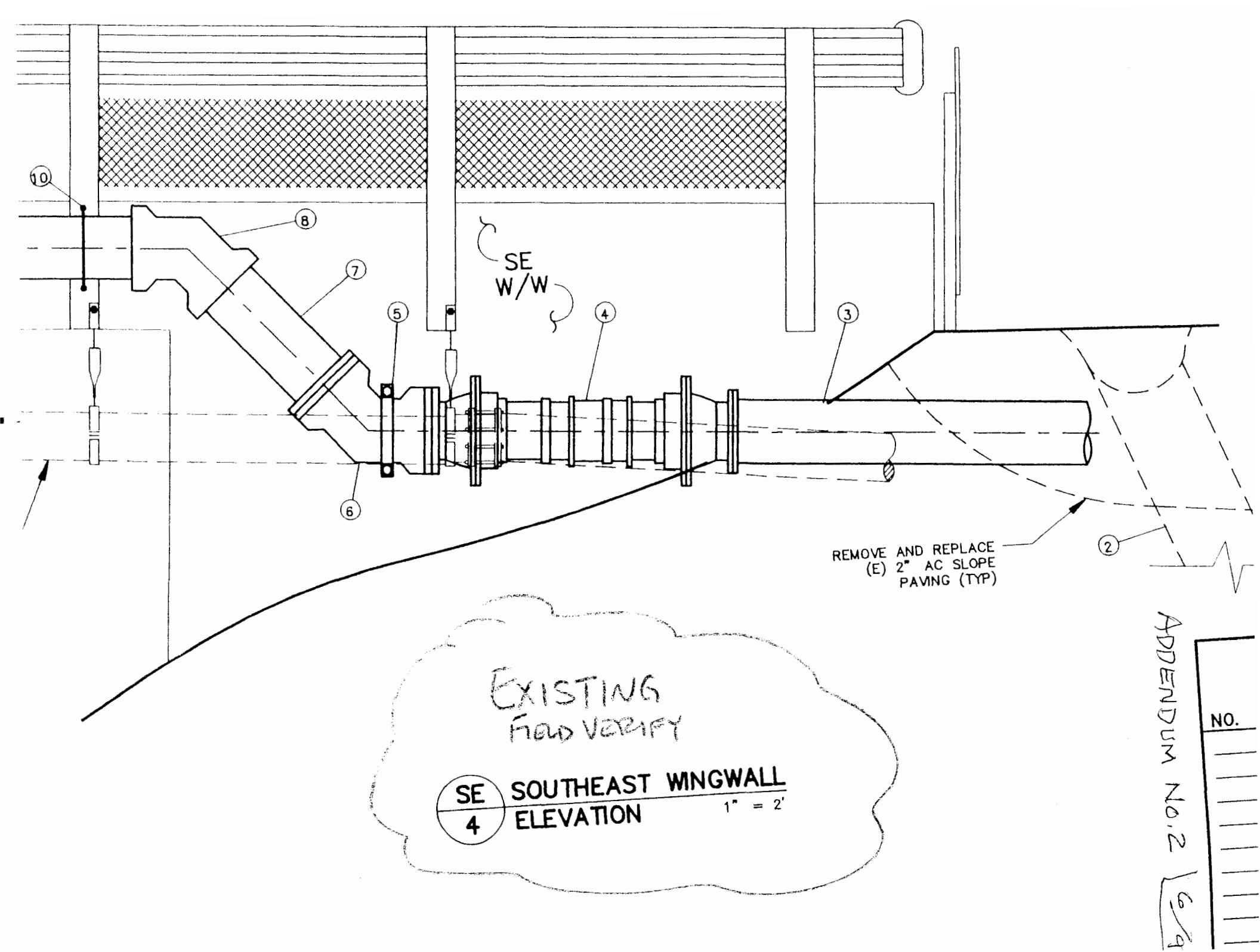
2 PIPEL



EXISTING
FIELD VERIFY
SW WINGWALL

ADDENDUM No. 2

5



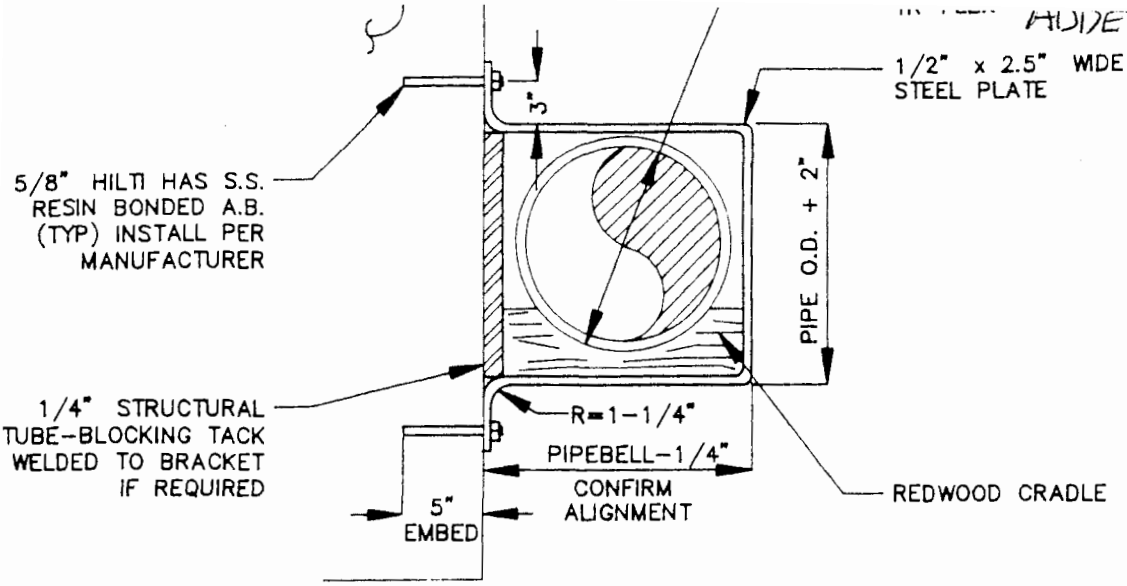
EXISTING
FIELD VERIFY

SE 4 SOUTHEAST WINGWALL ELEVATION 1" = 2'

ADDENDUM NO. 2 6/9

NO.

ADDENDUM NO. 2



WB — WINGWALL BRACKET DETAIL NTS

EXISTING

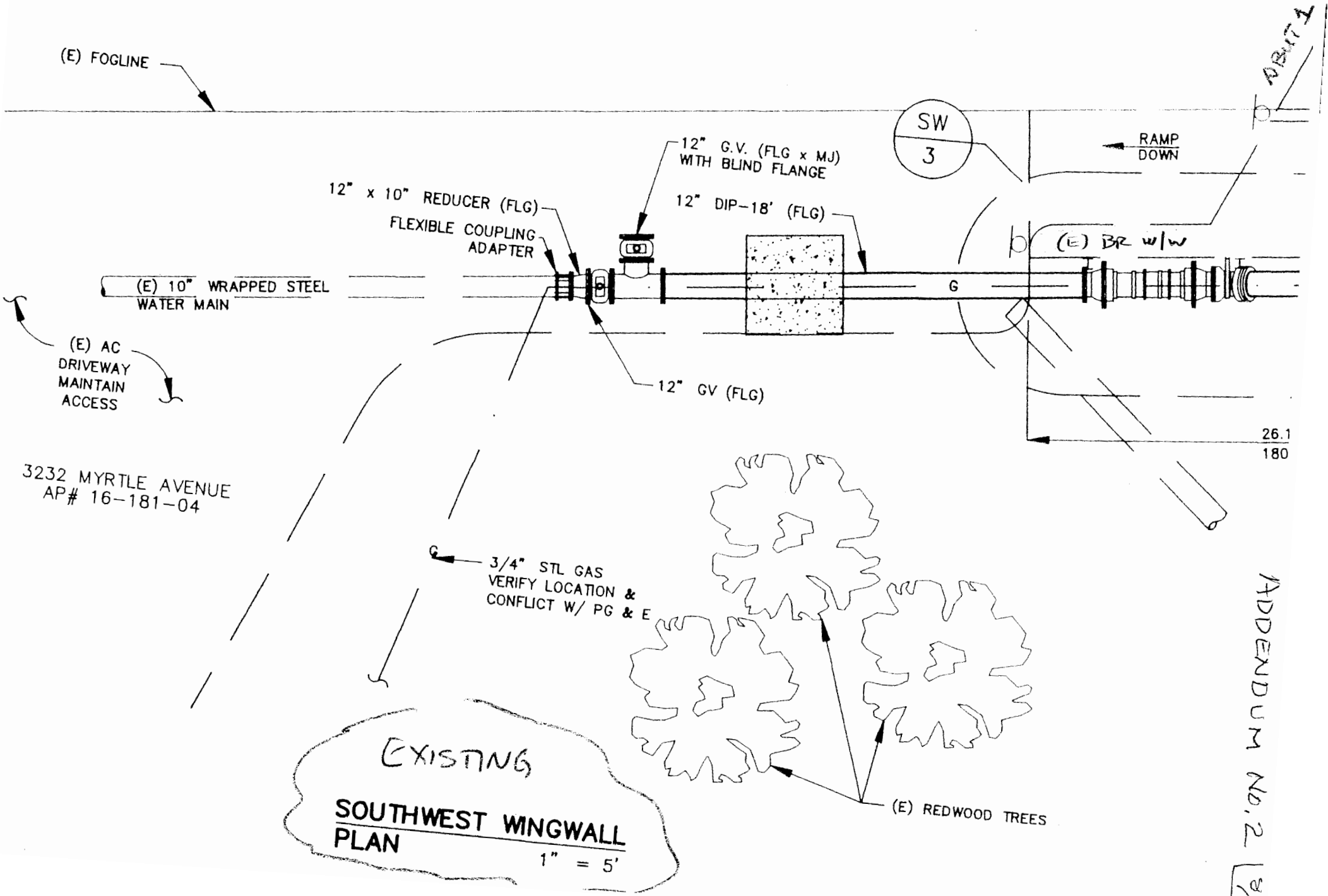
PIPE SCHEDULE

1. REMOVE EXISTING 10" WRAPPED STEEL PIPE
2. REMOVE AND REPLACE OR TUNNEL (E) STORMDRAIN, FES & 2" AC/ 8" AB @ 95%RC
3. 12" DIP – FLG x PE (SE), x FLG (SW), W/ INTERMEDIATE THRUST BLOCK–SEE PLAN DWG. 3
4. 12" FLEX–TEND (L=58.5")
5. 1/2" x 2.5" WINGWALL BRACKET PER DETAIL WB — INSTALL AFTER TR–FLEX ELONGATION
6. 12" 45° ELL.–FLG x FLG. (VERIFY BRACKET SIZE)
7. 12" DIP FLG x PE W/ GRIPPER RING ON PE END
8. 12" 45° TR–FLEX ELL.
9. 12" TR–FLEX DIP
10. U–BOLT BRIDGE RAIL BRACKET PER DETAIL BB

PROJECT NO

1. ALL PIPING SH/ " TR–FLEX" RE
2. PIPELINE LAYOU BRIDGE RAIL P LAYOUT, LOCAT CURVALINEAR E LESS THAN ST/
3. THE CONTRACT ERECTION PLAN PROVISIONS FO
4. ALL CONSTRUC ORDERS, CALIF RELATIONS. TI SHALL BE REQ BRIDGE OVER
5. THE EXISTING FEEDING THE M SYSTEMS. THE UNTIL NEW SYS MAXIMUM SHUT EXISTING SYSTI MAXIMUM BYPA 96 HOURS FOR LIQUIDATED DA

MYRTLE AVENUE

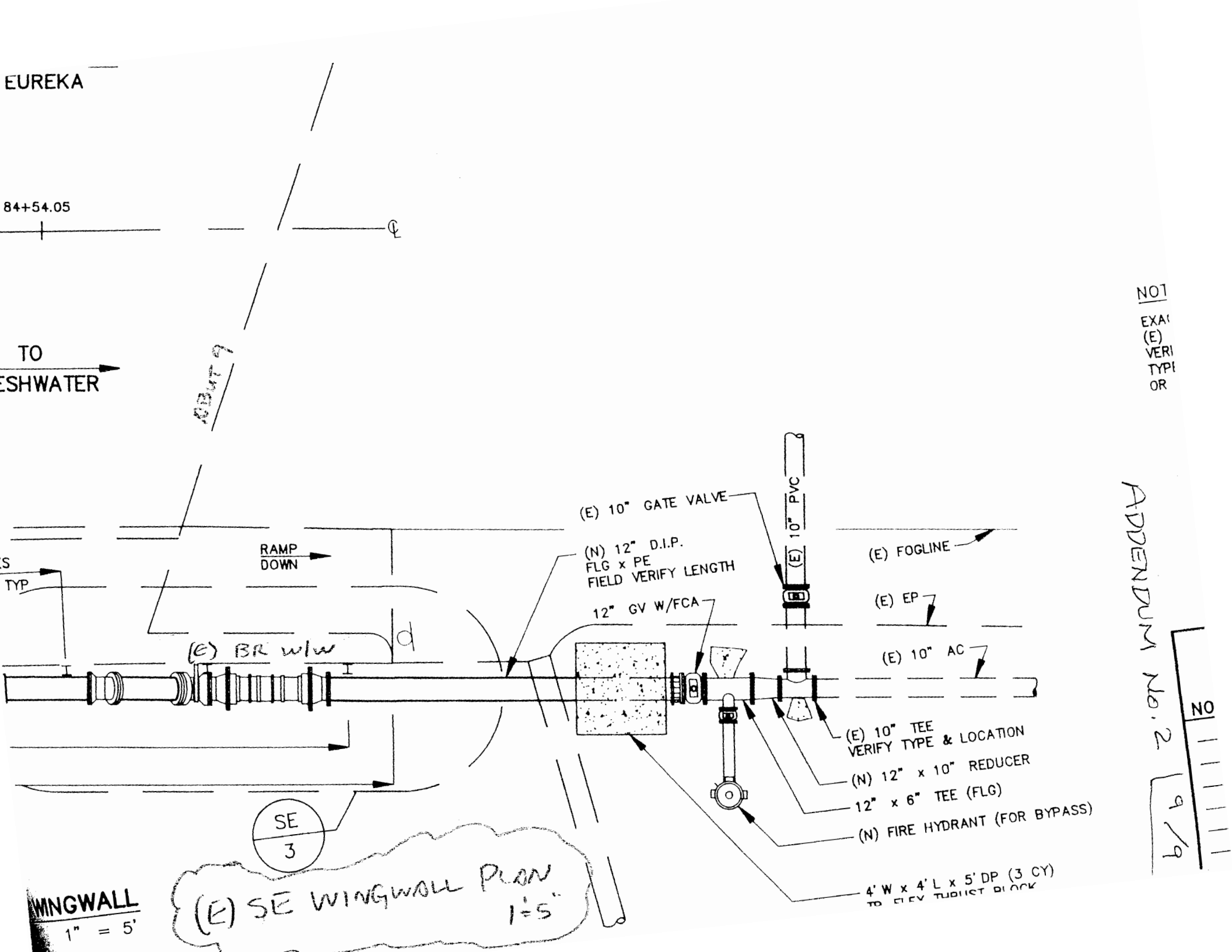


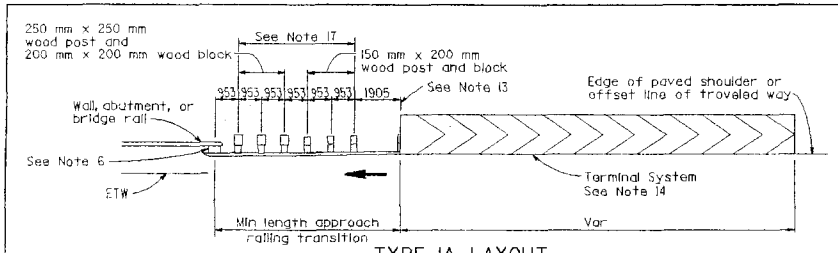
EXISTING

SOUTHWEST WINGWALL PLAN

1" = 5'

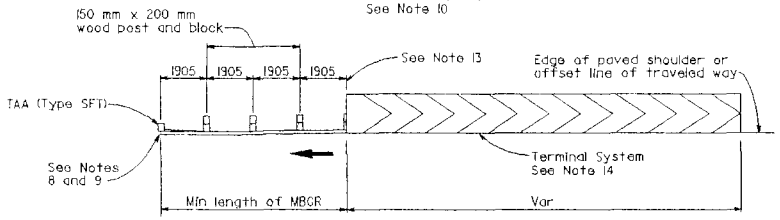
ADDENDUM NO. 2 8/9


EUREKA
84+54.05
TO
ESHWATER
RAMP
DOWN
TYP
(E) BR w/w
(E) 10" GATE VALVE
(N) 12" D.I.P.
FLG x PE
FIELD VERIFY LENGTH
12" GV W/FCA
(E) 10" PVC
(E) FOGLINE
(E) EP
(E) 10" AC
(E) 10" TEE
VERIFY TYPE & LOCATION
(N) 12" x 10" REDUCER
12" x 6" TEE (FLG)
(N) FIRE HYDRANT (FOR BYPASS)
4' W x 4' L x 5' DP (3 CY)
SE
3
(E) SE WINGWALL PLAN
1"=5"
WINGWALL
1" = 5'
NOT
EXA
(E)
VERI
TYP
OR
ADDENDUM No. 2
NO



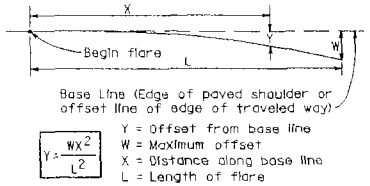
TYPE 1A LAYOUT

(TYPICAL STRUCTURE APPROACH INSTALLATION) See Note 10

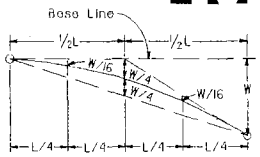


TYPE 1B LAYOUT

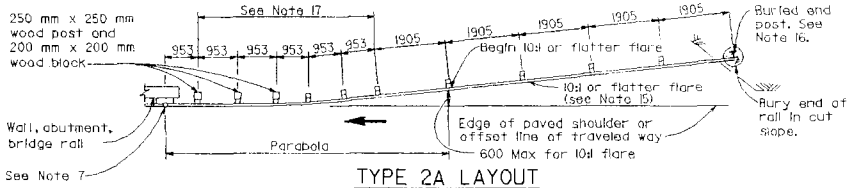
(TYPICAL EMBANKMENT INSTALLATION) See Note 10



PARABOLIC FLARE OFFSETS

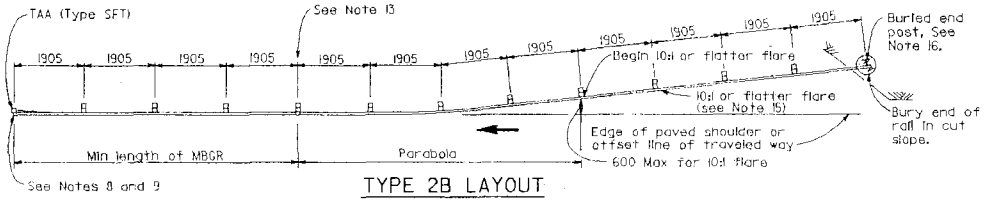


TYPICAL PARABOLIC LAYOUT



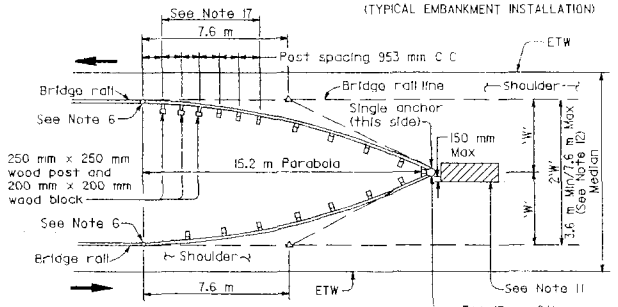
TYPE 2A LAYOUT

(TYPICAL STRUCTURE APPROACH INSTALLATION)

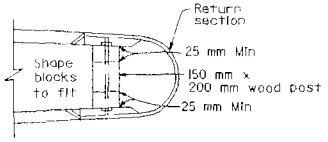


TYPE 2B LAYOUT

(TYPICAL EMBANKMENT INSTALLATION)



TYPE 3A LAYOUT



DETAIL A

NOTES

1. Post, blocks and hardware to be used are shown on Standard Plans A77B, A77C and A77CA.
2. Guard rail post spacing to be 1905 mm center to center, except as otherwise noted.
3. Except as noted, posts shown are 150 mm x 200 mm wood. MW 150 x 14 steel posts with 200 mm x 200 mm notched wood blocks may be used for 150 mm x 200 mm wood posts and blocks where applicable and when specified.
4. Rail elements to be installed as shown on Standard Plan A77A for wood post and wood blocks installations and as shown on Standard Plan A77AA for steel post and wood block installations.
5. Direction of traffic indicated by ➡
6. For connection details see Standard Plan A77J or A77K.
7. For terminal anchor assembly (Type CA) details, see Standard Plan A77I. Where a crash cushion is required as specified in Note 11 and the crash cushion attaches to the ends of the guard railing, the terminal anchor assembly (Type CA) and return section may not be required (see Project Plans).
8. For terminal anchor assembly (Type SFT) details, see Standard Plan A77G. Terminal Sections not to be installed on trailing end of guard railing constructed adjacent to one-way roadways.
9. On two-way roadways less than 18 m in width, a terminal system is to be used in place of the terminal anchor assembly (Type SFT) at the trailing end of guard railing for embankment installations.
10. For details of a terminal system typically used as a flared end treatment on Type 1A and Type 1B Layouts, see Standard Plan A77L. For details of terminal system typically used on Type 1A and Type 1B Layouts where site conditions will not accommodate a flared end treatment, see Standard Plans A77M and A77N. For embankment widening details to accommodate terminal system end treatments, see Standard Plan A77F.
11. A crash cushion is required for Type 3A layout, when the end of the guard railing is within 9.0 m of the edge of traveled way (ETW) of approaching traffic. For the type of crash cushion to be used, see Project Plans and the Special Provisions.
12. When width 'W' exceeds 3.8 m; to calculate the length of parabolic flare use "L=3W" and round to nearest 3.8 m.
13. As site conditions dictate, additional 3.8 m lengths of guard railing with post spacing at 1905 mm may be required at the point shown.
14. For the type of terminal system to be used, see Project Plans and the Special Provisions.
15. The 10:1 or flatter flare is based on the edge of the paved shoulder or offset line of edge of traveled way. The length of guard railing within the 10:1 or flatter flare may be increased by 3.8 m lengths, as site conditions dictate.
16. For buried end anchor details, see Standard Plan A77IA.
17. Use a flat plate washer on the rail face when attaching rail element to these posts. Wood post with wood block are only to be used for these posts and block.

TAA = Terminal Anchor Assembly

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

Ellis Kuhrt
REGISTERED CIVIL ENGINEER

July 1, 1999
PLANS APPROVAL DATE

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

REGISTERED PROFESSIONAL ENGINEER — Ellis Kuhrt — No. C17926 — Exp. 6-30-01 — CIVIL — STATE OF CALIFORNIA

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

METAL BEAM GUARD RAILING TYPICAL LAYOUTS

NO SCALE

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

A77D

1999 STD. PLAN A77D

ADDENDUM NO. 2

1/1

Ryan Slou' Bridge Widening Project: Storm Drain ' 'fall Component
Eureka, CA
March 2007

Photo #1: Shows both outfalls from above.

Photo #2: Shows lower drain pipe to be removed. Rock is to be placed within eroded bank.

EXHIBIT NO. 6
APPLICATION NO.
1-86-200-A3
HUMBOLDT CO. PUBLIC WORKS DEPARTMENT
SITE PHOTOS (1 of 5)

Photo #3: Shows both outfalls. Upper outfall will be replaced and rock dissipater will be placed below new outfall. Lower outfall pipe to be removed and eroded bank to be protected with large rock.

FIGURE 1

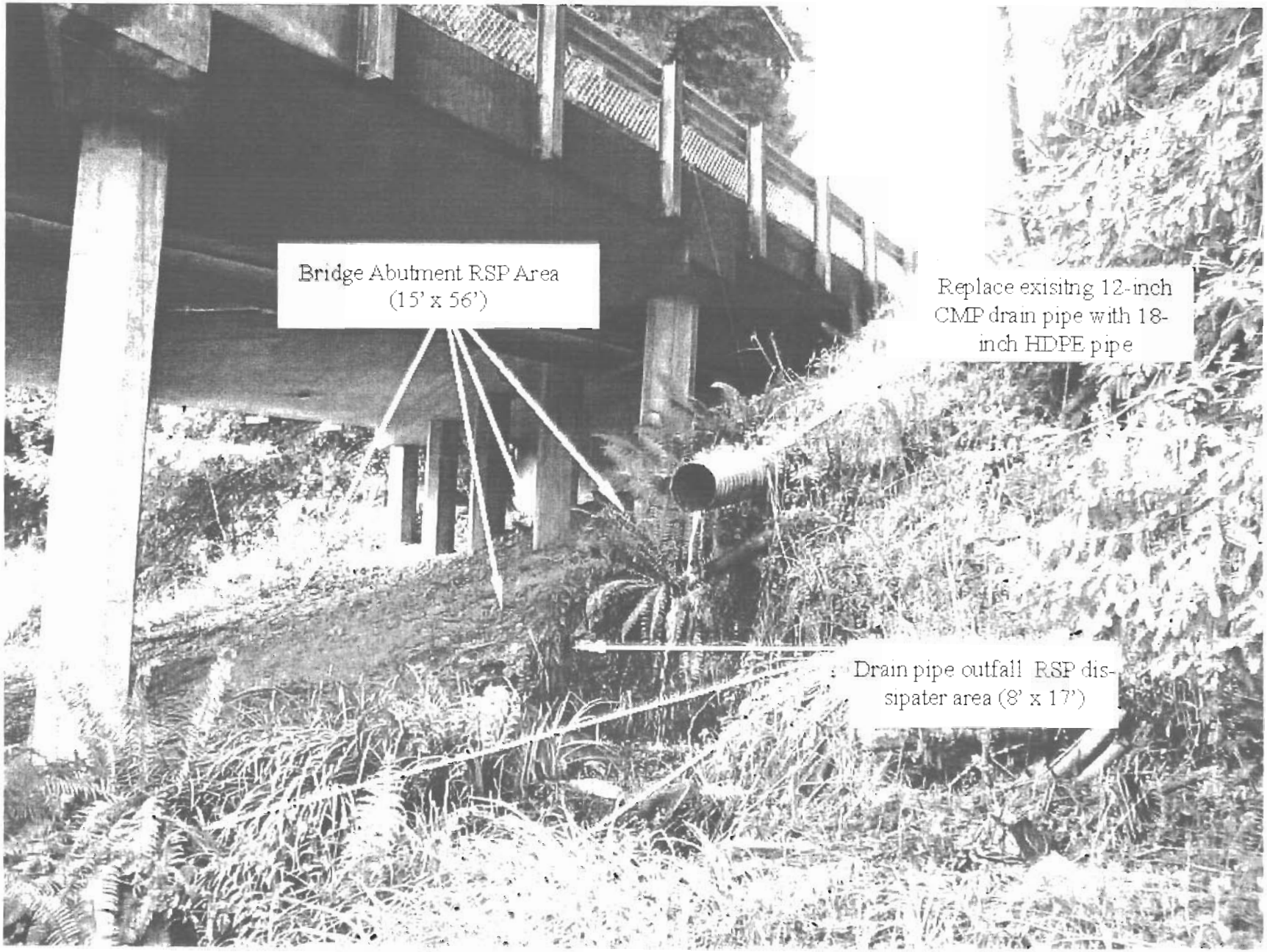

Bridge Abutment RSP Area
(15' x 56')
Replace exisitng 12-inch CMP drain pipe with 18-inch HDPE pipe
Drain pipe outfall RSP dis-sipater area (8' x 17')

FIGURE 3

COUNTY OF HUMBOLDT

DEPARTMENT OF PUBLIC WORKS
NATURAL RESOURCES DIVISION

1106 SECOND STREET
EUREKA, CA 95501-0579
707.445.7741 / FAX 445-7409

Alternatives Analysis for Proposed Storm Drain Work as Part of the Shoulder and Bridge Widening on Myrtle Avenue Between Hall Ave and Mitchell Heights Road Project

May 7, 2008

Project: Shoulder and Bridge Widening on Myrtle Avenue Between Hall Ave and Mitchell Heights Road (Project).

Summary: A component of the Project deals with the replacement of an 18-inch-diameter storm drain pipe and placing large rock under the outfall to act as an energy dissipater. There is also a lower storm drain that is fed by an upper storm drain. The lower storm drain pipe is very rusted and is eroding the bank of Ryan Slough directly at the outfall. The County sent a proposed addendum to the Project on April 23, 2008 that described the work to remove the deteriorating pipe and place five cubic yards of rock within the eroded. An email dated 5-2-2008 from the Commission stated that additional information was needed in order to process the proposed removal of the lower drain pipe. A component of the requested information included the need for an Alternatives Analysis to determine the least environmentally damaging feasible alternative.

Alternatives Analysis

Findings:
Pictures (attached) indicate that most plant species do not (or are unable to?) grow near the streambank edge of Ryan Slough within the project vicinity. This could be for many reasons including: soil type and chemistry, salinity of water and soil, or the influence from tidal fluctuations. An aerial from Google Earth shows that there is no substantial riparian growth along both banks of Ryan Slough from the confluence with Freshwater Slough (0.50 miles downstream from project site) to approximately 0.60 miles upstream of the project site. Very little to no vegetation other than grass species is observed within this one-mile stretch of slough.

A 2003 study conducted by the Natural Resource Conservation Service (NRCS) showed that willow species (Arroyo and Red) and cottonwood, which are frequently used tree species for streambank restoration efforts, did not grow well at four locations along the Napa River Flood Management area that are influenced by brackish waters. The 2003 study has been attached as reference material.

Fill is only being placed where removal of natural fill (streambank) once existed. The net increase of additional fill is insubstantial.

Alternative 1: *Do nothing; leave lower pipe as-is.*
This is not a preferred alternative. As described above, leaving the lower drain pipe untreated will allow continued erosion and sedimentation to occur. Eventually the pipe will completely rust through and could lead to bank failure. This would add sediment to the already highly silted Ryan Slough estuary. Furthermore, existing wetlands would be lost due to further erosion and bank failure.

Alternative 2: *Remove lower pipe and fill eroded bank with natural material from site location.*
This is not the preferred alternative, but is an option. The existing streambanks along this section of Ryan Slough contains soils high in clay content. It is heavily compacted and fairly resistant to erosion (unless a drain pipe is constantly pouring water onto it). Once the pipe is removed, the eroded area would be backfilled with native bank material excavated during proposed work near the upper outfall pipe. The backfill would then be compacted to prevent susceptibility to further erosion. Since this area is affected by tidal influence, seeding and mulching in the disturbed area would be futile. There is the potential that the backfilled area could once again erode due to the area still being in the path of the stormwater runoff. However, during an April site visit, very little water was exiting the upper outfall pipe. In all likelihood, the storm drain pipe will be dry during the summer months and water would not commence again until the first rains. This may be enough time for the backfilled area to cure naturally.

Alternative 3: *Remove lower pipe; instead of placing RSP, plant willow sprigs or other brackish water tolerant plants.*
As discussed above and as shown in the attached NCRS study, planting willows and other species of brackish water tolerant plants was not successful as a bank stability revegetation plan along portions of the Napa River. Although soil and water conditions differ between Ryan Slough and the Napa River, the outcome was not promising. Also, it appeared by the report that plant species that were planted were found naturally occurring throughout the area, leading the filed staff conducting the study to believe that revegetation of the native plant species would be successful. Environmental conditions at the four sites tested along the Napa River appeared to be optimal, however, growth results were discouraging. An important point to note is that the environmental conditions in and around the Ryan Slough vicinity appears to be worse. As previously described and shown in the attached photos, riparian vegetation in the immediate project area and within a one-mile stretch both up- and down-stream of the project site is void of riparian vegetation. Numerous factors could be the cause of this – from the chemistry of the soil and water to the influence of tidal fluctuations and salinity of the slough water. Due to the existing site conditions and the 2003 NCRS study, the County believes that planting willows or other brackish water tolerant plants within the eroded streambank would most likely be unsuccessful.

Conclusion
The County believes that the original proposal of removing the lower deteriorating storm drain pipe is the least environmentally damaging feasible alternative. The lower drain pipe is currently eroding a 30-square-foot area within the embankment immediately below the outfall. The pipe is completely rusted through and has the potential to continue eroding the bank and contributing sediment into Ryan Slough. Eventually, if left untreated, the drain pipe will continue to erode the bank and destroy the wetlands that surround it. Removing the failing storm drain pipe, placing rock within the existing eroding bank, and re-planting the impacted area with native plant species will result in an

overall benefit to the environment. By placing a small amount of rock, the eroded area will be protected from further erosion. Alternative 2 could also possibly be a successful alternative by using natural bank material as backfill instead of imported rock. However, there is still a chance that the backfilled area could give way once winter storms and increased stormwater runoff resumes over the affected area.

Attachments:

1) Photos and Google Earth map
2) 2003 NCRS Study on revegetation efforts in brackish waters.


Glenwood Court
Ohio Street
Erie Street
Myrtletown
Myrtle Avenue
Wellington Street
Viale Avenue
Mitchell Road
Florence Place
Ocean Drive
Main Street
Cummings Road
Image © 2008 DigitalGlobe
© 2008 Tele Atlas
1301 ft
Google

EXHIBIT NO. 8

APPLICATION NO.

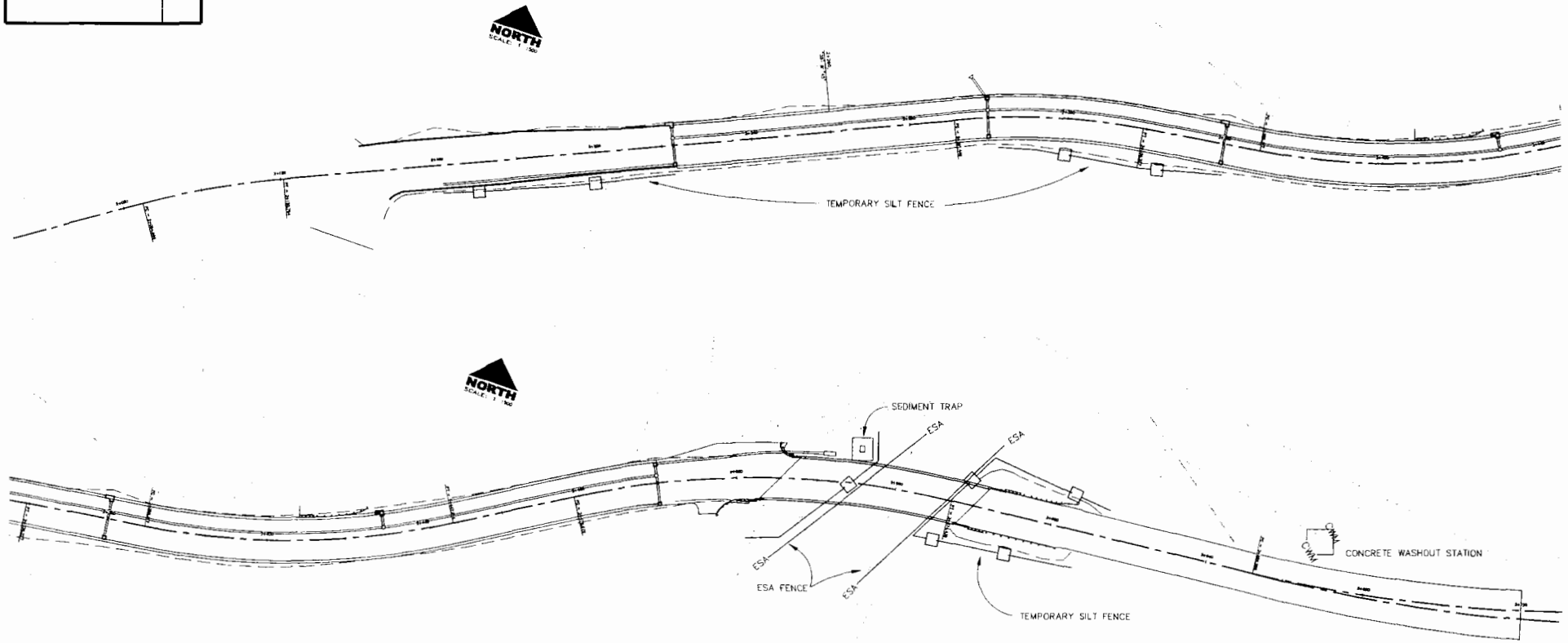
1-86-200-A3

HUMBOLDT CO. PUBLIC WORKS DEPARTMENT

EROSION CONTROL SITE PLAN

Metric

BAR IS TWO CENTIMETERS ON ORIGINAL DRAWING	ROAD NAME: MYRTLE AVENUE	DESIGN SECTION A. L. BARNETT	COUNTY OF HUMBOLDT DEPARTMENT OF PUBLIC WORKS
IF NOT TWO CENTIMETERS ON THIS SHEET, ADJUST SCALES ACCORDINGLY	ROAD NO: 1.5K300 KP (PM)	DESIGNED BY: JAB	MYRTLE AVE AND RYAN SLOUGH BRIDGE WIDENING
	HPMS: BTA 04/05-01-HUM-01 BHLS-5904(087)	DRAWN BY: JAB	WATER POLLUTION CONTROL SUMMARY PLAN AND DETAILS
	CONTRACT NO.: 205001	REVIEWED BY: RLB	SHEET 14 OF 24
	DRAWING FILE NAME: L:\PROJECTS\205001\DWG\CESN14.DWG	APPROVED BY: CJW	
	PLOT DATE: 01/22/2008		



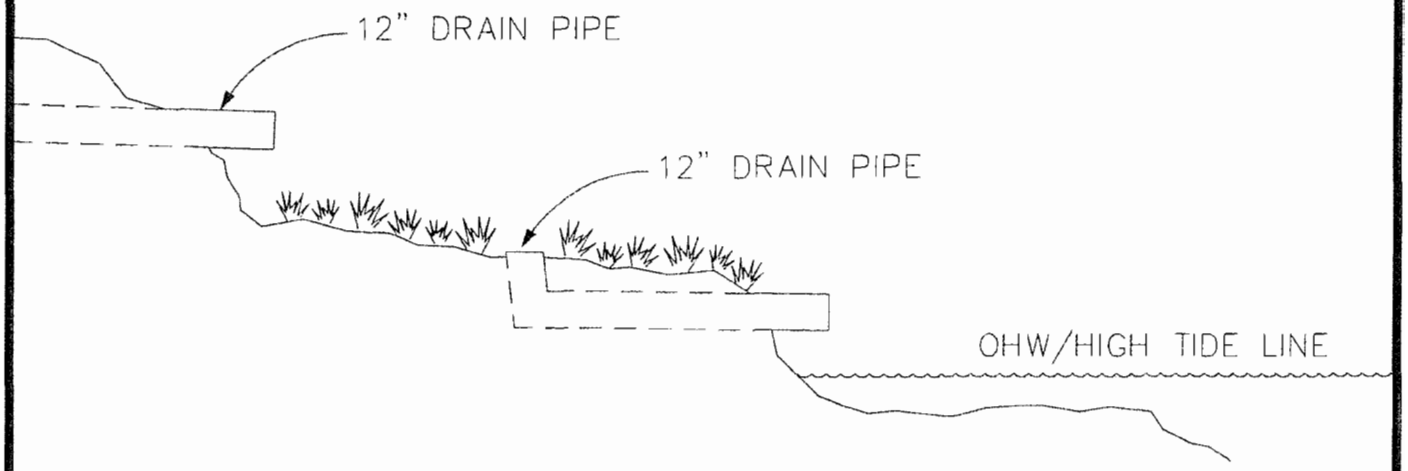
LEGEND

ESA	ENVIRONMENTAL SENSITIVE AREA
FR	FIBER ROLE
	SILT FENCE
D	SEDIMENT TRAP
CWM CWM	CONCRETE WASTE MANAGEMENT

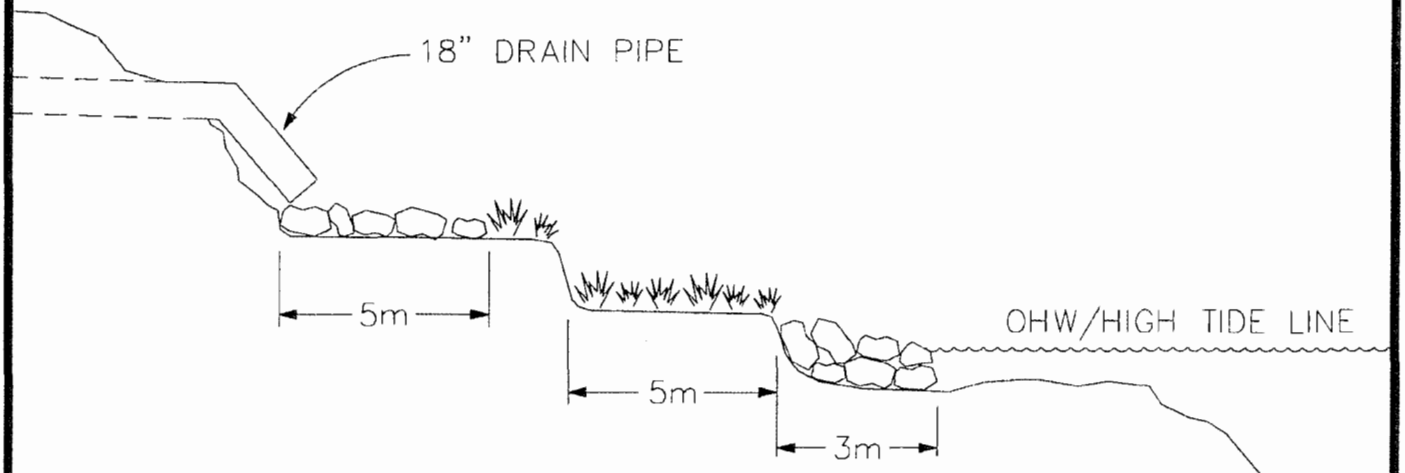
CONSTRUCTION SITE BMPs

LOCATION	TEMPORARY SOIL STABILIZATION	UNIT	QUANTITY
2+560 (RYAN SLOUGH)	SS-2 TEMPORARY ESA FENCING	M	75
	TEMPORARY SEDIMENT CONTROL		
VARIOUS	SC-1 TEMPORARY SILT FENCE	M	260
2+555 LT	SC-3 SEDIMENT TRAP	EA	1
ALL DRAINAGE INLETS	SC-10 TEMPORARY DRAINAGE INLET PROTECTION	EA	9
	TEMPORARY WASTE MANAGEMENT & MATERIALS HANDLING		
2+650 LT	WM-8 TEMPORARY CONCRETE WASHOUT	EA	2

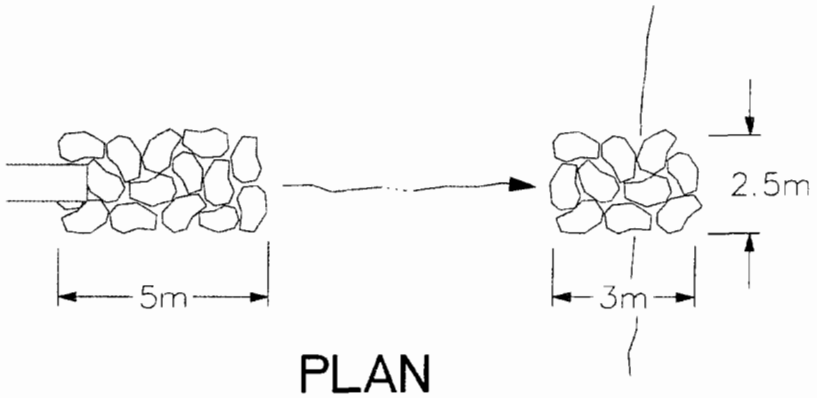
THESE CONSTRUCTION SITE BMP LAYOUTS PLANS, ALSO REFERRED TO AS DEPLOYMENT PLANS (D-PLANS), ARE ADVISERY ONLY AND ARE NOT INTENDED TO BE A COMPLETE OR FINITE REPRESENTATION OF THE ACTUAL BMP DEPLOYMENT REQUIRED DURING CONSTRUCTION.



BEFORE



AFTER



PLAN

REVEGETATION SPECIES

- Coyote Brush (Baccharis pilularis)
- Slough Sedge (Carex obnupta)
- California Tule (Scirpus validus) mixed bareroot transplants

COUNTY OF HUMBOLDT
DEPARTMENT OF PUBLIC WORKS
NATURAL RESOURCES DIVISION
1106 SECOND STREET * EUREKA * CA * 95501
TEL (707) 445-7377 * FAX (707) 445-7409

EXHIBIT NO. 9
APPLICATION NO.
1-86-200-A3
HUMBOLDT CO. PUBLIC WORKS DEPARTMENT
REVEGETATION PLAN

PLOT DATE: 4/7/08 FILE NAME: L:\Projects\Ryan Slough Bridge Bridge\dwg\Figure 1.dwg PROJECT No.:

DESIGNED BY: DRAWN BY: MDG REVIEWED BY:

STATE OF CALIFORNIA
CALIFORNIA COASTAL COMMISSION
NORTH COAST REGION
1656 UNION STREET, ROOM 150
P.O. BOX 4946
EUREKA, CALIFORNIA 95501
(707) 443-1623

STAFF REPORT
PUBLIC HEARING AGENDA

Application No: 80-P-69
Date Filed: 1-2-80
A. P. No:
Summary Date:

I. APPLICATION SUMMARY

Applicant: County of Humboldt
Department of Public Works
1106 Second Street
Eureka, CA 95501

Agent:

Development Description: Reconstruction and widening of 7.37 miles of Old Arcata Road-Myrtle Avenue to a roadway having two 12' wide traffic lanes, two 4' wide paved shoulders, and a 3' wide sloped unpaved shoulder in most locations and conversion of .75 acres of upland to farmed wetland or freshwater marsh. (The amount and location of proposed fill and mitigation areas are shown in Figure #3).

Development Location: The proposed project will be the reconstruction and widening of Old Arcata Road-Myrtle Avenue from Hall Avenue (1.4 miles northeast of the intersection of Myrtle Avenue and Harrison Avenue) to the Arcata city limits.

Approvals Received: The proposed project is estimated to take approximately 10 years to complete. The requirement for all preliminary permits to be in file prior to the filing of the application has been waived by the Executive Director pursuant to CAC Section 13053, finding that the degree of additional review required could more feasibly be accomplished on a permit by permit basis over the ten year construction period. These permits are required as a condition of approval.

II. STAFF RECOMMENDATION SEE ADDENDUM

The staff recommends that the commission adopt the following resolution:

A. Approval with Conditions

The commission hereby grants a permit for the proposed development subject to the conditions below on the grounds that, as conditioned, the development will be in conformity with the provisions of Chapter 3 of the California Coastal Act of 1976, is not located between the sea and the nearest public road, and as conditioned, will be in conformity with the public access and public recreation policies of Chapter 3, will not prejudice the ability of the local government having jurisdiction over the area to prepare a local coastal program conforming to the provisions of Chapter 3 of the Coastal Act, and will not have any significant adverse impacts on the environment within the meaning of the California Environmental Quality Act.

III. CONDITIONS OF APPROVAL

1. Prior to development taking place, the applicant shall obtain all necessary permits or waivers from the Department of Fish and Game and the Regional Water Quality Control Board.

2. The applicant shall construct the mitigation site in accordance with the submitted mitigation plan. Any deviation from the proposed mitigation plan would require an amendment to this permit.

IV. FINDINGS & DECLARATIONS

SEE ADDENDUM

A. Project Description: The proposed project is a reconstruction and widening of 7.37 miles of existing rural roadway. The proposed roadway would have two 12' wide traffic lanes, two 4' wide paved shoulders that could serve as bicycle lanes, and a 3' wide unpaved shoulder. In some locations the unpaved shoulder will be eliminated or reduced by the construction of curbs or retaining walls. The project also includes the removal and retaining of approximately 9,000 sq. ft. of riparian vegetation and the creation of 1.75 acres of freshwater marsh as mitigation for 1.29 acres of farmed wetland that are proposed to be filled as a part of the proposed project

B. Wetlands: The primary issue raised by the proposed project is whether, and under what conditions, wetlands within the project limits can be filled consistent with the requirements of Section 30233 of the Coastal Act. To accomplish the proposed road widening the applicant plans to fill approximately 1.29 acres of farmed wetlands along the route of the proposed project. Section 30233 states that:

> "(a) The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following:
>
> (1) New or expanded port, energy, and coastal-dependent industrial facilities, including commercial fishing facilities.
>
> (2) Maintaining existing or restoring previously dredged, depths in existing navigational channels, turning basins, vessel berthing and mooring areas, and boat launching ramps.
>
> (3) In wetland areas only, entrance channels for new or expanded boating facilities; and in a degraded wetland, identified by the Department of Fish and Game pursuant to subdivision (b) of Section 30411, for boating facilities if, in conjunction with such boating facilities, a substantial portion of the degraded wetland is restored and maintained as a biologically productive wetland; provided, however, that in no event shall the size of the wetland area used for such boating facility, including berthing space, turning basins, necessary navigation channels, and any necessary support service facilities, be greater than 25 percent of the total wetland area to be restored.
>
> (4) In open coastal waters, other than wetlands, including streams, estuaries, and lakes, new or expanded boating facilities.
>
> (5) Incidental public service purposes, including, but not limited to, burying cables and pipes or inspection of piers and maintenance of existing intake and outfall lines.
>
> (6) Mineral extraction, including sand for restoring beaches, except in environmentally sensitive areas.
>
> (7) Restoration purposes.

(8) Nature study, aquaculture, or similar resource-dependent activities.

(b) Dredging and spoils disposal shall be planned and carried out to avoid significant disruption to marine and wildlife habitats and water circulation. Dredge spoils suitable for beach replenishment should be transported for such purposes to appropriate beaches or into suitable longshore current systems.

(c) In addition to the other provisions of this section, diking, filling or dredging in existing estuaries and wetlands shall maintain or enhance the functional capacity of the wetland or estuary. Any alteration of coastal wetlands identified by the Department of Fish and Game, including, but not limited to, the 19 coastal wetlands identified in its report entitled, "Acquisition Priorities for the Coastal Wetlands of California", shall be limited to very minor incidental public facilities, restorative measures, nature study, commercial fishing facilities in Bodega Bay, and development in already developed parts of south San Diego Bay, if otherwise in accordance with this division.

For the purposes of this section, "commercial fishing facilities in Bodega Bay" means that no less than 80 percent of all boating facilities proposed to be developed or improved, where such improvement would create additional berths in Bodega Bay, shall be designed and used for commercial fishing activities."

To be consistent with the provisions of Section 30233 a wetlands fill project must meet these four primary tests: (1) the use proposed in the wetland must be one of those permissable uses enumerated in Section 30233(a); (2) there should be no feasible less environmentally damaging alternative to the proposed project; (3) mitigation should be provided to minimize adverse environmental effects; and (4) the functional capacity of the wetland should be maintained or enhanced.

The Commission finds that the proposed project is consistent with these criteria. The proposed project is an incidental public service project in that it is a road widening project that is intended to provide safer travel for pedestrians, equestrians, and bicyclists. In addition, the proposed project will add to the public safety by improving sight distances on curves and at intersections. The Statewide Interpretive Guidelines for wetlands and wet environmentally sensitive habitat areas specifically state that while new road construction does not qualify as an "incidental" public service:

"When no other alternative exists, and when consistent with other provisions of this section, limited expansion of roadbeds and bridges necessary to maintain existing traffic capacity may be permitted."

The key phase here is "necessary to maintain existing existing traffic capacity." The proposed project is consistent with these guidelines since it consists of no additional lanes and is intended only to provide for a safer flow of traffic along the project route.

The proposed project also meets the requirement that no feasible less environmentally damaging alternative be available to the applicant. Alternatives in terms of location are limited since the project proposed is for an improvement of an existing route.

Changes in the design of the proposed project were made in preliminary planning stages where feasible, to eliminate unnecessary fill of wetlands.

The Commission finds that the proposed project will maintain the functional capacity of the wetland being filled. The area to be filled for the most part is farmed wetland or former tidal marshes that have been diked. The historic tidelands around Humboldt Bay number in the thousands of acres. The areas proposed to be filled are located along the upland boundaries of these wetlands. The proposed fill will not impair the long term stability of the Humboldt Bay ecosystem due to its relatively small size and non-critical location and due to the mitigation measures that are provided as a part of the project proposal.

Section 30233 of the Coastal Act requires that feasible mitigation measures be provided to minimize adverse environmental effects, in this case the filling and net loss of primarily farmed wetlands. The Commission, in past actions, has found that a feasible means of mitigating for this loss is the creation of wetlands in another locale. The Commission finds that the proposed project is consistent with this requirement since, as a part of the project proposal, the applicant proposes to create approximately 1.75 acres of freshwater (possibly brackish) marsh. The acreage created as mitigation will exceed by approximately .46 acres the area proposed to be filled. The Commission finds this to be an adequate replacement or mitigation since the area proposed to be filled is farmed wetland and has a relatively lower value in terms of productivity than the freshwater/brackish marsh that is proposed to be created as a part of the proposed project.

Environmentally Sensitive Habitat Areas: Section 30240 of the Coastal Act states:

> "(a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on such resources shall be allowed within such areas.
>
> (b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade such areas, and shall be compatible with the continuance of such habitat areas.

The proposed project will result in the removal of approximately 9,000 sq. ft. of riparian vegetation due to the road widening and to a realignment in certain locations of the roadway. This removal is consistent with policies reviewed by the State Commission when they reviewed Humboldt County's Coastal Land Use Policies and Standards. Those policies allow for roadway improvement projects in riparian areas where it can be found that those projects are limited to operational improvements such as curve corrections, expansion of substandard roadway shoulders, and construction of bikeways; all elements of the proposed project.

The Commission further finds that mitigation measures that have been incorporated into the project design to reduce sedimentation will provide the level of protection mandated by Section 30210(b) for development in areas adjacent to environmentally sensitive habitat areas.

California Environmental Quality Act: The Commission finds that the proposed project will have no significant adverse environmental effects within the meaning of the California Environmental Quality Act in that feasible less environmentally damaging alternatives to the proposed project were considered and incorporated

into the project design. In addition, mitigation measures designed to minimize disturbance in areas adjacent to environmentally sensitive areas have been included in the project proposal. The creation of 1.75 acres of wetland has been proposed to mitigate the loss by fill of 1.29 acres of farmed wetland.

The Commission further finds that the proposed project is a roadway safety improvement that will not increase roadway capacity and will not thereby significantly act as an inducement to growth in the rural areas served by Myrtle Avenue/Old Arcata Road. The proposal is therfore consistent with the provisions of Section 30254 of the Coastal Act which requires public works to be sited and designed to accommodate only development permitted consistent with Coastal Act policies.

Local Coastal Program: The Commission finds that the approval of the proposed project will not prejudice the ability of Humboldt County to prepare a local coastal program in conformance with the requirements of Chapter 3 of the Coastal Act. The project, as proposed with mitigation measures included as part of the project proposal, is consistent with the policies set forth in Humboldt County's Coastal Land Use and Policies Standards. Specifically, policies that address the removal of riparian vegetation for roadway construction purposes; filling of wetlands for incidental public service purposes; and mitigation measures for development adjacent to environmentally sensitive habitat areas.

ADDENDUM

County of Humboldt
Dept. of Public Works
80-P-69

Staff Note: Since the original staff report was prepared, the applicant's proposal has been amended to reflect concerns of Department of Fish and Game staff and commission staff which arose during an inspection of the proposed project site. The amendments made include changes made in the site plan at the mitigation site at Freshwater Corners as well as the delineation of additional wetlands that will be filled as a result of the proposed project.

The following conditions and findings shall amend and in some cases add to the conditions and findings enumerated in the original staff report.

Conditions of Approval

3. Wetlands Mitigation

Prior to the issuance of the permit, and therefore prior to construction, the applicant shall execute a development and management plan in cooperation with the Department of Fish and Game and ratified by the North Coast Regional Coastal Commission or its successor agency for restoration of the land identified in the project proposal as mitigation area to freshwater marsh and wetland habitat and retention of the area in perpetuity for fish and wildlife purposes. The mitigation area has been proposed as compensation for the loss of farmed wetlands as a result of development pursuant to this permit. The development and management plan shall include: Site plan; specifications as to the time and manner in which the work shall be completed; a description of the expected revegetation after a specific time period; and provisions for additional work at the site to remedy, where possible, areas having inadequate revegetation.

In addition, the plan shall include contingency plans that provide for an additional mitigation area of 0.50 acres if adequate revegetation does not take place on the portion of the Freshwater Corners mitigation area adjacent to the existing channel and having an elevation of 1.0± msl.

4. Open Space Easement

Prior to the issuance of this permit, and therefore construction, the applicant shall record an offer to dedicate to a public agency or private association approved by the executive director an open space easement over the mitigation areas delineated in the mitigation plans on file in the commission offices. The offer to dedicate shall be recorded free of prior liens and encumbrances except tax liens, shall be irrevocable for a period of 21 years running from the date of recordation, and shall run with the land binding the landowner, his/her heirs, assigns, and successors in interest to the subject property. Prior to recordation, the form and content of the document shall be reviewed and approved by the executive director of the commission.

Said easement shall provide for continuing maintenance activities or any alterations that may be necessary to ensure protection or enhancement of the mitigations areas wetland habitat values.

Findings and Declarations

F. Project Description:

Since the original submission of the permit application and mitigation plan, the applicants representative, commission staff and the representative of the Department of Fish and Game made a site inspection to attempt to further resolve potential conflicts with Coastal Act policies. That site inspection resulted in minor changes in the project design as well as the delineation of additional areas of wetland fill along the project route. Changes in project design include the retention of additional riparian vegetation along the western boundary of mitigation area adjoining Freshwater Creek and changes in the grading plan at the mitigation area that will result in the creation of additional freshwater marsh acreage. These changes are illustrated in revised mitigation area plan and are reflected in Exhibit 4(a) which shall replace Exhibit 4 in the original staff report.

G. Wetlands Mitigation

The commission finds the proposed project, as conditioned, is consistent with Coastal Act policies and precedents set in previous commission actions, requiring the provision of mitigation measures designed to minimize adverse environmental effects. The adverse environmental effect being the loss, by fill, of farmed wetlands and the mitigation being the creation of 1.68 acres of freshwater wetlands at Freshwater Corners and along Old Arcata Road at P.M. 6.42.

The commission finds that the condition requiring an open sapce easement and a management plan for the mitigation sites will insure the long-term protection of wetland habitat values on the proposed sites. The commission further finds that the terms of the management agreement, by requiring contingency plans to provide additional mitigation if wetland vegetation does not become established on the 0.50 acres of the mitigation area that is located adjacent to Freshwater Creek and at elevation 1± foot above mean seal level, provides safeguards that will insure that wetlands habitat values after project completion are, at a minimum, equal to or greater than those wetlands values existing prior to commencement of permitted activities.

H. Flood Control

Section 30236 of the Coastal Act states:

> Channelizations, dams, or other substantial alterations of rivers and streams shall incorporate the best mitigation measures feasible, and be limited to (1) necessary water supply projects, (2) flood control projects where no other method for protecting existing structures in the flood plain is feasible and where such protection is necessary for public safety or to protect existing development, or (3) developments where the primary function is the improvement of fish and wildlife habitat.

The commission finds that the widening of the channel of Freshwater Creek to the west of, and adjacent to, Freshwater Corners bridge is consistent with the provisions of Section 30236 of the Coastal Act in that the project as proposed is necessary to protect existing development in the Freshwater Corners area, that is periodically flooded by the waters of Freshwater Creek. The commission further finds that no feasible alternative exists that is less environmentally damaging.

I. Alternative to Wetlands Fill

The commission finds that, where feasible, fill of wetlands along the proposed project route has been avoided or minimized. Exhibits 5 (a-c) reflect the analysis that was made by the applicant regarding the feasibility of avoiding the filling of farmed wetlands along the project route at the locations specified in those exhibits.

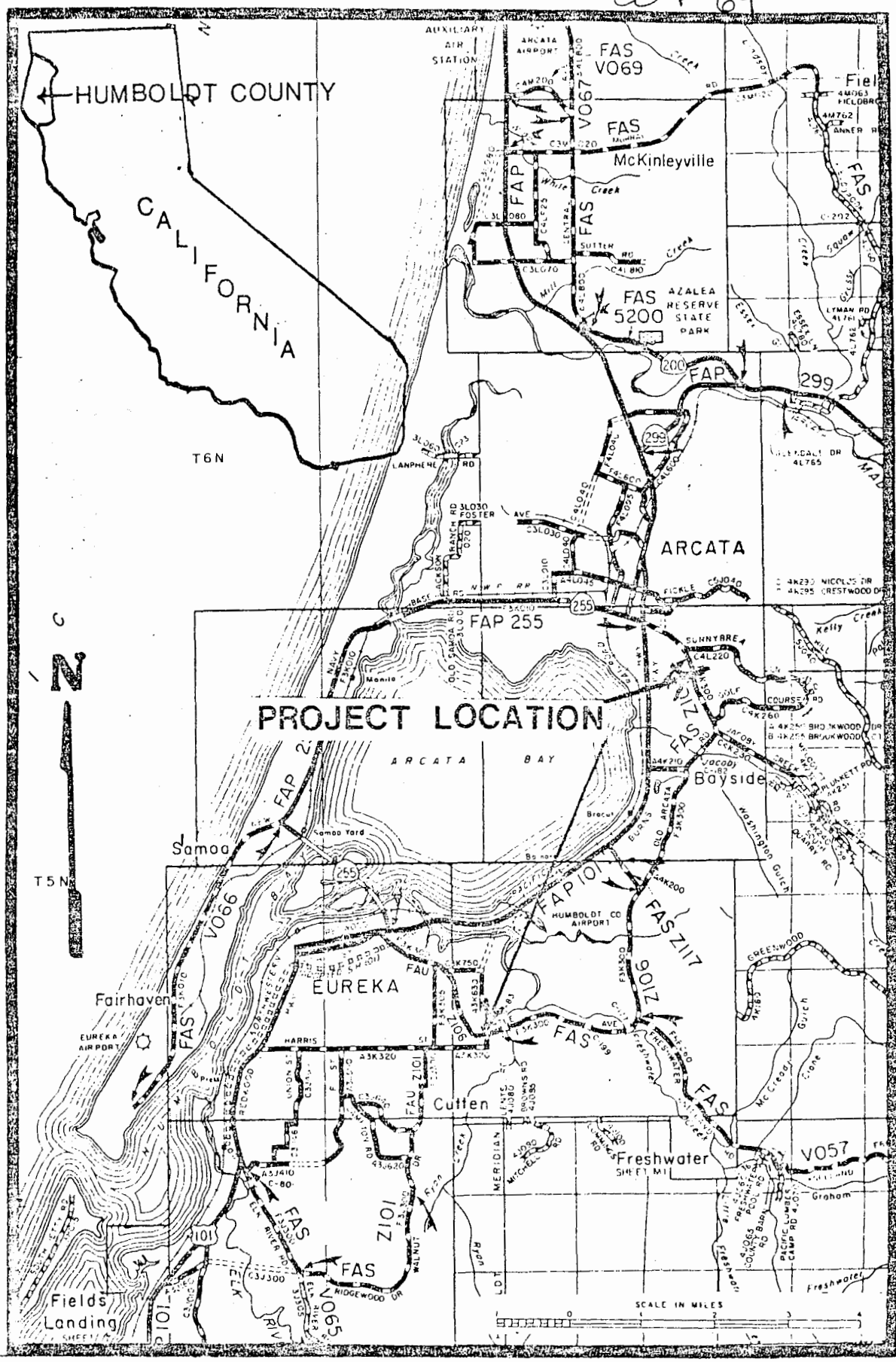


Figure 1. Old Arcata Road/Myrtle Avenue Widening Project Location.

EXHIBIT #1

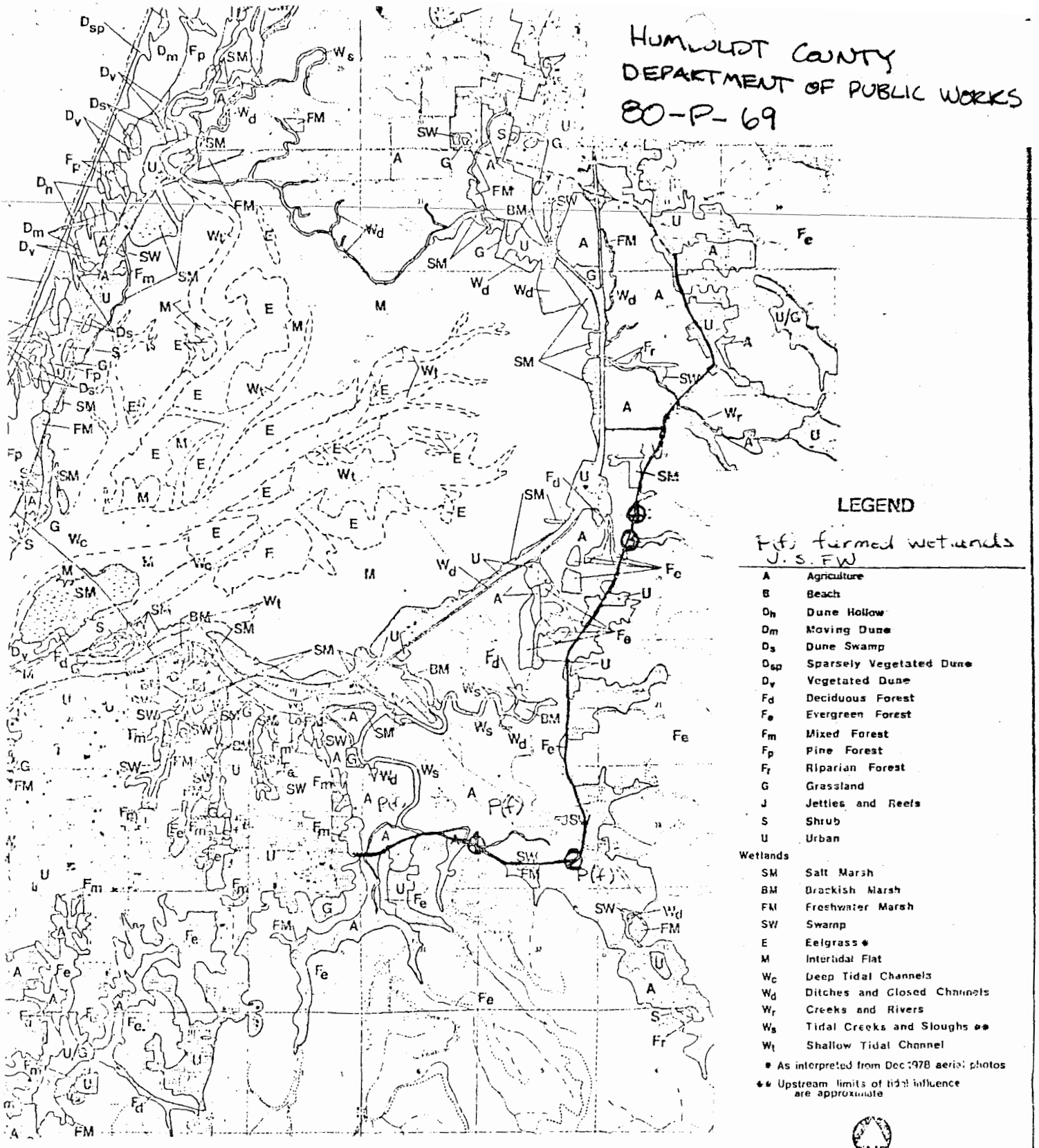


Figure 5. Old Arcata Road/Myrtle Avenue Widening Project Habitat Types and Wetlands.

EXHIBIT #2

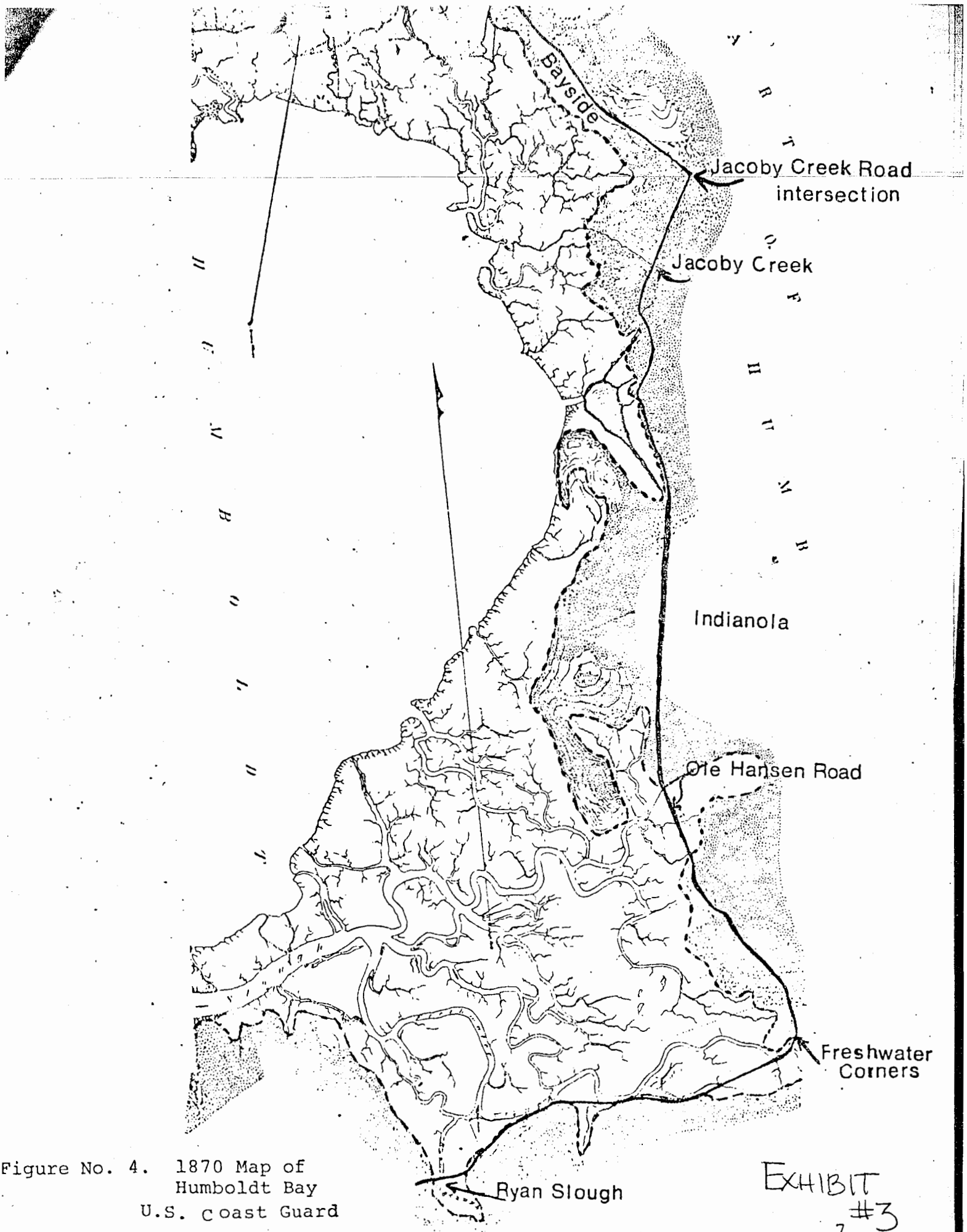


Figure No. 4. 1870 Map of
Humboldt Bay
U.S. Coast Guard

EXHIBIT #3

TABLE 1. Location, quantity and type of wetlands involved in the Old Arcata Road/Myrtle Avenue Widening Project.

LOCATION	POST MILE	ACRES	WETLAND TYPE	PREDOMINANT VEGETATION	SOIL
Freshwater Corners	3.15-3.59	1.19	farmed wetland	white clover, red clover fescue, rye grass	(Lo 3) Loleta loam (Ru 7) Russ fine sandy loam
Pigeon Point Road	2.73-2.90	.05	farmed wetland	rye grass, white clover	(Ba 3) Bayside silty clay loam
Rocky Gulch	6.16-6.22	.03	farmed wetland (Alluvial)	rye grass, white clover	(Ru 2) Russ silt loam
	6.46-6.53	.01	freshwater marsh	sedge, spike rush, bull rush, hairgrass, nit grass	(Ru 2) Russ silt loam
Total Wetlands Filled		1.28			
				Predicted Vegetation	
Freshwater Corners	3.15-3.59	1.53	Farmed wetland freshwater marsh sublittoral marsh riparian woodland	Willow, alder, sedge, spikerush, bullrush, farmed wetland	
	6.42	0.22	freshwater marsh	sedge, rush	
Total Wetlands Mitigated		1.75			

EXHIBIT #4

State of California, Edmund G. Bro[illegible]r., Governor

California Coastal Commission
North Coast Region
1656 Union Street, Room 151
P.O. Box 4946
Eureka, California 95501
(707) 443-1623

July 13, 1981

Mr. Don Tuttle
County of Humboldt
1106 Second Street
Eureka, CA. 95501

RE: Immaterial Amendment to
Permit No. 80-P-69

Dear Mr. Tuttle:

The District Director of the California State Coastal Commission, North Coast District, hereby grants an immaterial amendment to the above captioned permit pursuant to the California Administrative Code, Title 14, Sections 13164-13168.

The original permit provided for the reconstruction and widening of 7.37 miles of Old Arcata Road-Myrtle Avenue.

The immaterial amendment will grant the applicant permission to re-word condition four.

Sincerely,

RICHARD G. RAYBURN
District Director

RGR:lp

PUBLIC NOTICE

The Humboldt County Department of Public Works has requested a non-administrative amendment to the Old Arcata Road - Myrtle Avenue Coastal Permit No. 80-P-69 Condition No. 4. The wording of the condition would be changed from "Prior to the issuance of this permit, and therefore construction, the applicant shall record an offer to dedicate...an open space easement..." to "Prior to construction the applicant shall convey an open space easement to the California Department of Fish and Game over the mitigation areas delineated in the plans on file in the Commission office."

CALIFORNIA COASTAL COMMISSION
NORTH COAST AREA
631 HOWARD STREET, 4TH FLOOR
SAN FRANCISCO, CA 94105
(415) 543-8555

Project Approved: May 14, 1981
Amendment Request Filed: Nov. 6, 1986
Staff: Linda Locklin
Hearing Date: December 9, 1986
Revised Findings: Feb. 5, 1987
Hearing Date: February 25, 1987
Commission Revised Findings 2/25/87

REVISED FINDINGS TO REFLECT COMMISSION ACTION OF DECEMBER 9, 1986

PROJECT DESCRIPTION

APPLICANT: County of Humboldt, Department of Public Works

PERMIT NO. 1-86-200-A (Formerly 80-P-69)

PROJECT LOCATION: Myrtle Avenue, at Mitchell Road intersection, adjacent to Ryan Slough.

PROJECT DESCRIPTION: Amendment to previously approved project, 80-P-69, which allowed the reconstruction and widening of 7.37 miles of Old Arcata Road-Myrtle Avenue. The proposed project is to widen Myrtle Avenue and will result in the filling of 44,329 square feet of wetland.

LOCAL APPROVALS RECEIVED: Humboldt County Negative Declaration, June 10, 1986

SUBSTANTIVE FILE DOCUMENTS: Humboldt County certified Local Coastal Program

COMMISSIONERS ELIGIBLE TO VOTE: Contreras, Garrett, King, MacElvaine, Malcolm, McInnis, McMurray, Nathanson, McCabe, Wright and Wornum

Doc. No. 0916P

EXHIBIT NO. 11
APPLICATION NO.
1-86-200-A3 - HUMBOLDT CO. PUBLIC WORKS DEPARTMENT
REVISED FINDINGS FOR FIRST PERMIT AMENDMENT
1-86-200-A (1 of 8)

RECOMMENDATION

Approval with Conditions

The Commission hereby approves a permit for the proposed amendment, subject to the conditions below, on the grounds that, as conditioned, the development will be in conformity with the provisions of Chapter 3 of the California Coastal Act of 1976, will not prejudice the ability of the local government having jurisdiction over the area to prepare a Local Coastal program conforming to the provisions of Chapter 3 of the Coastal Act, and will not have any significant adverse impacts on the environment within the meaning of the California Environmental Quality Act.

STANDARD CONDITIONS: See Conditions attached.

SPECIAL CONDITION:

1. Prior to commencement of construction, applicant shall pay to the State Coastal Conservancy, $0.08 per square foot for each square foot of wetland that is filled by this project. This money is to be used to restore and enhance wetlands. Evidence of this payment shall be submitted to the Executive Director.

FINDINGS AND DECLARATION

1. Project Description

The proposed project is to improve the intersection of Myrtle Avenue with Upper and Lower Mitchell Avenues, in the County of Humboldt. The proposed widening of the road will result in filling over one acre near Ryan Slough, which constitutes a portion of the slough margin classified as a farmed wetland. The purpose of the project is to improve the traffic safety of the area, by redesigning the intersection to current design standards.

2. Background

In 1980, the North Coast Regional Commission approved the reconstruction and widening of 7.37 miles of Old Arcata Road - Myrtle Avenue. The project was projected to take ten years to complete. The Commission allowed 1.28 acres of wetland to be filled, and the applicant included the creation of 1.75 acres of freshwater marsh as mitigation to the wetland fill.

The project upgraded the road, an arterial collector between Eureka and Arcata, to provide safer travel. Improvements included shoulder widening, increased sight distance, and consistent roadway widths. The project met Federal Highway Standards and was partially funded by the federal government. (see Exhibit 2)

3. Wetland Resources

As proposed, the project will result in the fill of over one acre of wetland adjacent to Ryan Slough: 44,329 sq. ft. or 1.023 acres. The project includes both on-site mitigation, (removal of 8,786 sq. ft. of the existing fill to the

west of the project site) and the payment of $0.08 per square foot for the remaining 35,543 sq. feet to the California Coastal Conservancy.

The existing roadway is 300 feet south of Ryan Slough. The slough, one of the larger in Humboldt Bay, connects to Eureka Slough and thence to Humboldt Bay. The slough is an important habitat area. The proposed area for fill is currently used for grazing land.

Section 30233 of the Coastal Act states in part:

> (a) The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following:
>
> > (5) Incidental public service purposes, including but not limited to, burying cables and pipes or inspection of piers and maintenance of existing intake and outfall lines.
> >
> > (7) Restoration purposes.
> >
> > (8) Nature study, aquaculture, or similar resource dependent activities.
>
> (c) In addition to the other provisions of this section, diking, filling, or dredging in existing estuaries and wetlands shall maintain or enhance the functional capacity of the wetland or estuary. Any alteration of coastal wetlands identified by the Department of Fish and Game, including, but not limited to, the 19 coastal wetlands identified in its report entitled, "Acquisition Priorities for the Coastal Wetlands of California", shall be limited to very minor incidental public facilities, restorative measures, nature study, commercial fishing facilities in Bodega Bay, and development in already developed parts of south San Diego Bay, if otherwise in accordance with this division.

The Commission's "Statewide Interpretive Guidelines for Wetlands and Other Wet Environmentally Sensitive Habitat Areas" help to interpret the wetland resource policies of the Coastal Act. The guidelines, which provide background information only, acknowledge Section 30233(5) which allows the installation of incidental public services, but only when they create temporary impacts. Only when no other alternatives exist, and when consistent with the other provisions of Section 30233, limited expansion of roadbeds and bridges necessary to maintain existing traffic capacity may be permitted.

Section 30240 of the Coastal Act states:

> (a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on such resources shall be allowed within such areas.

(b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade such areas, and shall be compatible with the continuance of such habitat areas.

Coastal Act Section 30121 defines wetlands as land "which may be covered periodically or permanently with shallow water." Wetland areas, which include marshes, mudflats and lagoons, serve many functions: to serve as nutrient sources and genetic reservoirs; to provide some of the world's richest wildlife habitats; and to absorb pollutants and storm energy.

Wetlands are highly diversive and productive. The combination of shallow and deep water, and the variety of vegetation and substrates produce far greater possibilities for wildlife feeding, nesting and resting than is found in less diverse areas. Individual wetlands may be inhabited by hundreds of species of birds, mammals, fish and smaller organisms. Abundant microorganisms serve as food for crabs, clams, oysters, and mussels which live in the tidal flats.

Wetlands' natural abundance draws people for recreation such as clamming, bird watching and fishing. Fish such as the king and silver salmon and steelhead trout live much of their lives in the ocean but return to freshwater to spawn. Commercially important fish such as herring, anchovy and California halibut are also found in California's estuaries.

The agricultural bottomlands, such as those at Ryan Slough, provide feeding, resting, and nesting habitats for a large variety of birds. Species have been estimated between 176 (ERC, 1974) and 129 (Hoff, 1979). The agricultural lands are especially important to shorebirds, waterbirds, raptors, upland game birds, and songbirds. In the Eureka-Arcata bottoms, plowed fields, heavily grazed pasture, croplands, sloughs, and marshes have been found to support the highest diversity and abundance of birds (Hoff, 1979). Waterfowl commonly use pastures for feeding and nesting, particularly during wet periods. The agricultural bottomlands and grasslands also provide habitat for a variety of mammals including raccoon, beaver, muskrat, bats, meadow sole, moles, gophers, rabbits, grey fox, skunk and black-tailed deer.

The certified Humboldt County Local Coastal Program contains the following Natural Resources Protection Policies and Standards:

A. PLANNED USES

Humboldt Bay is the largest wetland and estuarine habitat in the coastal zone, containing approximately 23% of the coastal wetlands in California. Its waters hold a diverse fish fauna with 106 species, including anchovies, coho and silver salmon, steelhead, cutthroat troat, smelts, surfperch, rockfishes, sandab, flounder and sole. Thirty-six species of fish utilize the Bay as a spawning area or nursery ground. The invertebrate biota of the Bay include species in sixteen major invertebrate groups, including gaper, Washington, littleneck, and softshell clams, and Dungeness crabs. Approximately 750 acres of the Bay's bottom and channels are utilized for commercial oyster production providing approximately 70% of California's total oyster production. Its rich channels, mudflats and marshes annually support over 5.8 million days of use by waterfowl and 7.7 million days of use by shorebirds.

Peregrine falcon hunt over its marshes and farmlands, and rare plants grow in brackish and saltwater marshes.

These fish and wildlife resources support more than 30,000 days of recreational angling and approximately 18,000 days of waterfowl hunting annually. For these reasons, the Bay is one of the prime marine resources, wetland and estuarine areas in the entire coastal zone.

Within this planning area it is estimated that there are approximately 970 acres of freshwater marsh, 250 acres of brackish marsh, 180 acres of freshwater marsh, 185 acres of swamp, 300 acres of intertidal mudflat, 760 acres of beaches, 3460 acres of dunes, and approximately 6500 acres of "farmed wetland." While the sheer extent of these habitats provides important natural resource values, the mix of these habitats is a significant feature of the Humboldt Bay area. Many wildlife and fish species use a variety of habitats during their lifetime, or even during the course of a single day. The availability of different habitats is essential to the survival of these organisms.

The LCP designates all transitional agricultural lands, such as the project site, Agriculture Exclusive. The transitional agricultural lands policies are designed to maintain existing agricultural land uses while preventing practices that would adversely affect existing wildlife habitats. The LCP also designates Ryan Slough as an environmentally sensitive habitat area.

Section 3.30B2 of the LCP also states:

Allowable Uses in Transitional Agricultural lands

Within transitional agriculture lands planned for Agriculture Exclusive, agriculture is the principal use in these areas, but shall maintain long term habitat values and minimize short term habitat degradation by ensuring new development is consistent with the provisions of this policy. Close cooperation among the County, Coastal Commission, Agricultural Stabilization and Soil Conservation Service, Agricultural Extension, farm organizations, and fish and wildlife agencies will be necessary in order to ensure that new agricultural development will be permitted consistent with these objectives. Changing agricultural practices may require periodic review and modification of this policy.

b) Diking and filling for new development within transitional agricultural lands shall be limited to the principal uses in the Agriculture Exclusive (AE) land use designation, including construction of spillways and modification or repair of existing dikes threatened by erosion; oil and gas wells (consistent with Section 3.27 of this plan and 30607.1 of the Coastal Act); and incidental public service purposes.

The proposed project is consistent with the County's LCP Policies. The Plan calls for the long term protection of habitat values. It also limits filling in farmed wetlands to uses to support continued agriculture. The road is necessary for the transport of agricultural products. Habitat values of farmed wetlands will continue to exist as long as cattle continue to graze on pastures.

In completing the Negative Declaration for the project, the County reviewed four alternatives to improve that roadway intersection. (see attached Negative Declaration, Exhibit 1). The County states that the road way needs upgrading to correct a bad intersection which results from two residential roads (Upper and Lower Mitchell Roads) exiting in close proximity onto Myrtle Avenue. Reported accidents at this intersection between 1975 and 1986 involved 25 vehicles and has caused ten injuries.

The County states that the improvements to Myrtle Avenue approved under 80-P-69, of which this amendment site is in the middle of the stretch of roadway improvements, will result in increased speeds of 5-10 mph. Also, as the nearby community develops, additional traffic will be generated, thus adding to the use of the intersection. One concern that the poor geometry of the intersection causes is a turning maneuvering by the school bus that has it crossing the center line into opposing traffic flow. This situation will be exacerbated when the traffic level increases. Lower Mitchell Road serves not only residential traffic, but also provides access to a landfill. Given the existing traffic level, the County believes that the intersection needs to be redesigned to current standards.

The Negative Declaration reviews four alternatives. All four involve wetland fill, varying from .1, .7, .8, and 1.02 acres each. The County found that the other alternatives were not less environmentally damaging for various reasons. The following summarizes the alternatives (see Exhibit 1 for detailed analysis):

> Alternative #1 - Removal of 1-1/2 acres of forest habitat. Potential for creating unstable slopes and increased soil erosion.
>
> Alternative #2 - Cuts through potentially unstable slopes and would require $95,400 to buy a large right of way.
>
> Alternative #3 - Involves cut in unstable slopes through 4.1 acres of forest habitat, and an increased road angle resulting in more energy consumption for vehicles.
>
> Alternative #4 - involves widening the intersection by moving Myrtle Avenue 60 feet toward Freshwater Slough. This is the chosen alternative. Fills 1.02 acres of wetland.

Aside from improving the intersection to reduce the traffic hazard, the County has two other concerns. First, as the amendment site is located in the middle of the 7 mile-long stretch of roadway improvement currently underway, the County wants the upgraded roadway to physically match with the Myrtle Avenue/Mitchell Avenue intersection. Also, as the road project is partially federally funded, the new intersection must meet federal standards to qualify for funding. The three alternative road improvements reviewed in the Negative Declaration meet federal standards but are thus not reimbursable due to the distance these improvements are from the FAS route.

In approving the original road improvement project, the Commission found that the filling of 1.29 acres over a stretch of seven miles was consistent with Coastal Act Section 30233(5). The Commission found that there were no feasible less environmentally damaging alternatives, that the project was an improvement of an existing route, that the project was necessary to maintain existing traffic capacity (a safer flow of traffic), and that the creation of 1.75 acres of wetland mitigated the loss. It is for these same reasons that the Commission finds the amendment consistent with the Coastal Act. Additionally, the Commission finds that given the small area of the fill, less than one acre, it is appropriate to allow in-lieu payment to the State Coastal Conservancy. This fee will provide off-site mitigation which will restore and enhance wetland resources. The Commission finds that the payment of $0.08 per square foot is representative of land acquisition costs for mitigation projects in the area.

Section 30607.1 of the Coastal Act states in part:

> "Where any dike and fill development is permitted in wetlands in conformity with this division, mitigation measures shall include, at a minimum, either acquisition of equivalent areas of equal or greater biological productivity or opening up equivalent areas to tidal action; provided, however, that if no appropriate restoration site is available, an in-lieu fee sufficient to provide an area of equivalent productive value or surface areas shall be dedicated to an appropriate public agency, or such replacement site shall be purchased before the dike or fill development may proceed."

As there is no significant on-site area for restoration (other than the proposed removal of 8,786 sq. ft. of fill), it is appropriate to allow the applicant to pay an in-lieu fee to the State Coastal Conservancy. As so conditioned, the project is consistent with Section 30607.1 of the Coastal Act.

The Commission also finds that the proposed project, as conditioned, is consistent with the wetland policies of the Coastal Act. The project is the least environmentally damaging alternative and it is an incidental public service. Therefore, the Commission finds that the project as conditioned, is consistent with Section 30233 and 30240 of the Coastal Act, as the project will not result in loss of wetland habitat or environmentally sensitive habitat areas.

CEQA/LCP

As outlined in the findings above, there are no feasible less environmentally damaging alternatives available. As noted above, the Commission must balance traffic safety with resource protection. Therefore, the Commission finds that the project would not create significant adverse impacts as defined within the meaning of the California Environmental Quality Act.

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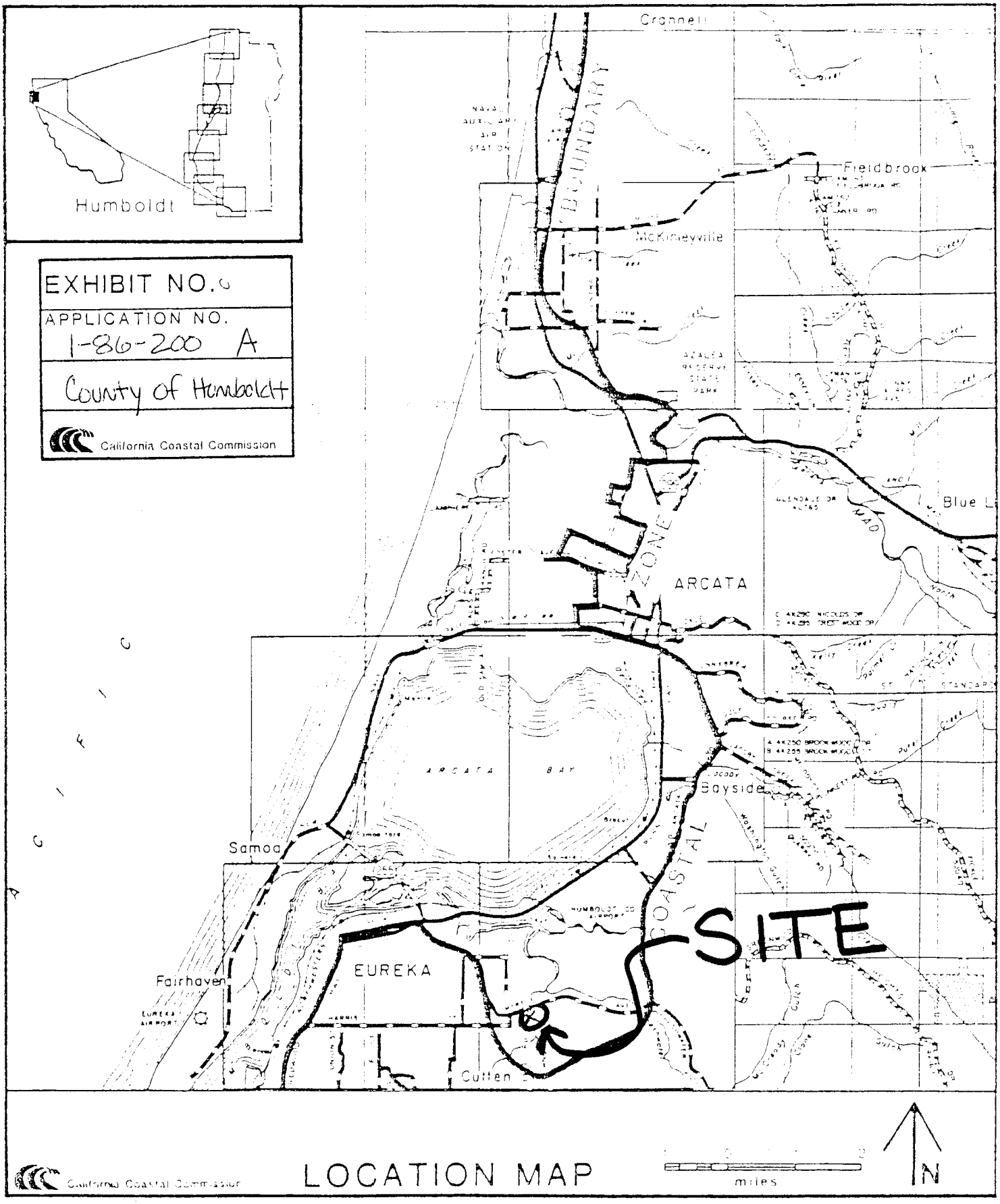

County of Humboldt

Sheet 3 of 8