

**ADDENDUM NO. 2**

**CONTRACT NO. PH4 2010-01  
FOR CONSTRUCTION OF**

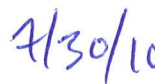
**TRLIA PHASE 4  
YUBA RIVER SOUTH LEVEE  
UPPER YUBA LEVEE IMPROVEMENT PROJECT  
PLM 2.2 TO 6.1/STA 102+00 TO 303+59**

**July 30, 2010**



---

Daniel M Jabbour  
Technical Lead



---

Date

**TO ALL PROSPECTIVE BIDDERS:**

All prospective bidders are hereby notified that this addendum includes amendments to the Contract Documents, for the above noted project, that were issued on June 21, 2010. The bidders are to review all of the amendments listed herein, and acknowledge receipt of this addendum in the appropriate section of the Proposal Sheet.

## **ELECTRONIC DOCUMENTS**

An electronic copy of Addendum #2 is available to download. Email [stella.gardenour@hdrinc.com](mailto:stella.gardenour@hdrinc.com) regarding access information.

A list of the Requests for Information, received to date, and responses is now available on the FTP site.

## **AMENDMENTS TO CONTRACT DOCUMENTS**

### **NOTICE TO CONTRACTORS**

Revised notice attached, which reflects the following revisions:

- Extended bid due date to August 26, 2010
- Revised the Acceptance of Bid verbiage at the bottom of page 2

### **SPECIAL PROVISIONS**

#### **SP-07, Schedule Constraints Relating Access**

Delete SP-07 in its entirety and replace with the following:

The Contractor shall note that access to the following segments of work will not be available until the dates shown below:

<b>SEGMENT</b>	<b>LOCATION</b>	<b>AVAILABLE DATE</b>
1	Station 102+00 to Station 136+50	September 15, 2010
2	Station 136+50 to Station 163+50	April 15, 2011
3	Station 163+50 to Station 220+00	April 15, 2011
4	Station 220+00 to Station 303+59	April 15, 2011
-	Borrow Sites	April 15, 2011
-	Staging Area south east of the levee on Dantoni Road	April 15, 2011
-	Haul Roads (Public Roadways)	September 15, 2010
-	Haul Roads (Private Roadways)	April 15, 2011

Additionally, haul traffic and construction equipment access into or through Segment 3 will only be allowed during construction of Segment 3. Prior to and after construction of Segment 3, access to this segment will not be allowed.

Contractor shall stage all work accordingly and in such a manner as to minimize disturbance to the adjacent land owners.

#### **SP-08, Time of Completion**

Delete SP-08 in its entirety and replace with the following:

As set forth in Section 7 of the General Provisions, the time of completion for this contract, which shall include all segments of work to be completed in their entirety and in accordance with the project plans and these specifications, shall be as outlined below.

<b>Base Bid (Includes Bid Schedule A and Bid Schedule B)</b>	<b><u>Completion Milestones</u></b>
A. Engineer's Office Facility	Installed and ready for occupancy no later than five (5) days prior to the start of excavation or no later than 15 days after Notice to Proceed, which ever comes first
B. Levee and Cutoff Wall Construction (All Segments)	August 1, 2011
C. Crown aggregate surface, erosion control seeding of levee, berm, staging, and all other disturbed areas (All Segments)	August 14, 2011
D. Demobilization and Site Cleanup (All Segments)	November 1, 2011

**Add Alternate:**

The Add Alternate shall include all work associated with completing Segment 1 as shown on the project plans and as specified in these specifications, in its entirety, and in accordance with the following completion milestones:

<b>Add Alternate</b>	<b><u>Completion Milestones</u></b>
A. Levee Construction (Segment 1)	November 1, 2010
B. Crown aggregate surface, erosion control seeding of levee, berm, staging, and all other disturbed areas (Segment 1)	November 14, 2010
C. Demobilization and Site Cleanup (Segment 1)	December 1, 2010

**SP-09, Liquidated Damages for Delay**

Delete SP-09 in it's entirety and replace with the following:

As set forth in Section 8 of the General Provisions, the liquidated damages for this contract shall be the sum of Tow Thousand Dollars (\$2,000) per calendar day for the following missed milestone completion dates set forth in these Special Provisions.

<b>Base Bid Schedule (Includes Bid Schedule A and Bid Schedule B)</b>	<b><u>Completion Milestones</u></b>	<b><u>Liquidated Damages</u></b>
A. Engineer's Office Facility	Installed and ready for occupancy no later than five (5) days prior to the start of excavation or no later than 15 days after Notice to Proceed, which ever comes first	\$500/Day
B. Levee and Cutoff Wall Construction (All Segments)	August 1, 2011	\$2,000/Day
C. Crown aggregate surface, erosion control seeding of levee, berm, staging, and all other disturbed areas (All Segments)	August 14, 2011	\$2,000/Day

If the Add Alternate is chosen:

<b>Add Alternate</b>	<b><u>Completion Milestones</u></b>	<b><u>Liquidated Damages</u></b>
A. Levee Construction (Segment 1)	November 1, 2010	\$2,000/Day
B. Crown aggregate surface, erosion control seeding of levee, berm, staging, and all other disturbed areas (Segment 1)	November 14, 2010	\$2,000/Day

### **SP-30, Traffic Control Plan**

Last paragraph, third sentence, revise "Shadpad Road" to "Simpson-Dantoni Road".

### **SP-44, Time of Award**

The first sentence of Section 3-2 of the General Provisions shall be amended as follows:

The award, if made, will be made by March 31, 2011.

### **SP-45, Preconstruction Video**

The preconstruction video may be submitted on CD or DVD in lieu of VHS tape. Refer to Section 11-2 of the General Requirements regarding content and quality requirements.

## **TECHNICAL SPECIFICATIONS**

### **Section 01 22 00.00 10**

Insert new pay item 1.2.21 for Irrigation Services as follows (Revised Section 01 22 00.00 10 attached):

#### 1.2.21 12" Irrigation Service and 18" Irrigation Service

##### 1.2.21.1 Measurement

The length of irrigation service to be paid for will be determined by measuring along the center line from connection point to connection point. No deduction will be made for space occupied by fittings.

##### 1.2.21.2 Payment

Payment will be made at the contract unit price per linear foot for "12" IRRIGATION SERVICE", where 12" irrigation pipe is specified, and for "18" IRRIGATION SERVICE", where 18" irrigation pipe is specified, and will constitute full payment for all pipes, joints, specials, fittings, complete and in place. Payment shall include the furnishing of all testing, labor, plant, and materials and incidentals necessary to complete the work specified.

##### 1.2.21.3 Unit of Measure

Unit of Measure: Linear Foot

### **Section 01 33 00.00 41**

Updated submittal register attached

### **Section 31 25 13.00 41**

Replace with attached Section 31 25 13.00 41

## **PROPOSAL FORM**

Revise Page 1 to include "Date Received" and "Contractor's Initials" for Addendum No. 2 as follows:

**Addendum No. 2 (Date Received):** \_\_\_\_\_ **Contractor's Initials:** \_\_\_\_\_

The revised page is attached

## **Bid Schedules**

Delete Bid Schedule A, B, and C and replace with the attached. The Bid Schedules have been updated to include Addendum No. 1 revisions, to reflect the revisions outlined in SP-08 and SP-09, and the following:

Added Item 8.1, Slurry Wall Trench Spoils  
Added Item 13.1, 12" Irrigation Service  
Added Item 13.2, 18" Irrigation Service  
Revised quantities for RSP (Bid Schedule B)

## **SWPPP**

Revised WDID number: 5F20C358771 (A new SWPPP will be provided after contract award).

## **PROJECT PLANS**

**Replace the following sheets:**

G-000  
C-328

# THREE RIVERS LEVEE IMPROVEMENT AUTHORITY

---

## NOTICE TO CONTRACTORS

---

### CONTRACT NO. PH4 2010-01

### TRLIA PHASE 4 YUBA RIVER SOUTH LEVEE UPPER YUBA LEVEE IMPROVEMENT PROJECT PLM 2.2 to 6.1/ STA 102+00 TO 303+59

Sealed proposals for the work described herein, and in the following Contract Documents:

- The Technical Specifications entitled **TRLIA PHASE 4, YUBA RIVER SOUTH LEVEE, UPPER YUBA LEVEE IMPROVEMENT PROJECT, PLM 2.2 to 6.1/STA 102+00 TO 303+59 TECHNICAL SPECIFICATIONS ISSUED FOR BID**, dated June 2010,
- The corresponding construction drawings entitled **TRLIA PHASE 4, YUBA RIVER SOUTH LEVEE, UPPER YUBA LEVEE IMPROVEMENT PROJECT PLM 2.2 to 6.1/STA 102+00 to 303+59 IMPROVEMENT PLANS ISSUED FOR BID**, dated June 21, 2010,
- The corresponding Storm Water Pollution Prevention Plan (SWPPP) entitled **TRLIA PHASE 4, YUBA RIVER SOUTH LEVEE, UPPER YUBA LEVEE IMPROVEMENT PROJECT PLM 2.2 to 6.1/STA 102+00 to 303+59 STORM WATER POLLUTION PREVENTION PLAN ISSUED FOR BID**, dated June 21, 2010,
- A Mandatory Pre-Bid Meeting will be held on Wednesday, July 7, 2010, from 1 p.m. to 3 p.m. at 1114 Yuba Street, Marysville, CA 95901, in the "Beckworth Room" (Room 213).

will be received on behalf of the **Three Rivers Levee Improvement Authority (TRLIA)**, by **HDR Engineering** located at **2365 Iron Point Road, Suite 300, Folsom, California 95630**, until **3:00 p.m. on August 26, 2010** at which time they will be publicly opened and read aloud. The envelope enclosing the bid submittal shall be clearly marked "Bid For..." followed by the title of this project and the date and hour for opening of bids.

**Contract Documents** will be available to the public starting **June 21, 2010** at HDR Engineering, 2365 Iron Point Road, Suite 300, Folsom, California 95630 (916) 817-4700 between the hours of 8:00 a.m. and 5:00 p.m., Monday through Friday. **Contact PH4 2010-01**. The cost for each set is \$100.00 (non-refundable). Delivery and Shipping costs are at the Bidder's expense. **Checks should be payable to HDR Engineering.**

General work description: The work will consist of levee geometry corrections, levee crown degrade and restoration, roadway degrade and restoration, cutoff wall construction, seepage berm and stability berm fill placement, rock slope protection placement, and other related tasks including site preparation, temporary access roads, traffic control, safety and security, site cleanup, etc.

TRLIA reserves the right after opening the bids to reject any or all bids, to waive any informality in a bid or bid submittal, and to award to the lowest responsive, responsible bidder, as it may, in TRLIA's opinion, best serve the interests of the project.

The Contractor shall ensure that Disadvantaged Business Enterprises (DBEs) have the maximum opportunity to participate in the performance of this contract.

Bids are required for the entire work described herein. Each bid shall be accompanied by a certified cashier's check, or bid bond, in the amount of 10 percent of the total bid price, payable to the Three Rivers Levee Improvement Authority, as a guarantee that the bidder, if its bid is accepted, will promptly execute the

CONTRACT DOCUMENTS

Agreement. The bidder shall guarantee the total bid price for a period of 180 days from the date of the bid opening.

For design information, contact the following:

HDR Engineering, Inc.  
Attn: Daniel Jabbour  
2365 Iron Point Road, Suite 300  
Folsom, CA 95630  
(916) 817-4943, fax (916) 817-4747  
Daniel.jabbour@hdrinc.com

As a condition of award, the successful bidder will be required to provide a payment bond, a performance bond, and insurance certificates prior to the execution of the agreement by TRLIA.

This contract is subject to state contract nondiscrimination and compliance requirements pursuant to Government Code, Section 12990.

In accordance with the provisions of California Public Contract Code Section 3300, TRLIA has determined that the contractor shall possess a valid Class A, General Engineering, contractor's license(s) at the time that the Contract is awarded. Failure to possess the specified license shall render the bid as non-responsive and shall act as a bar to award of the Contract to any bidder not possessing said license(s) at the time of award.

Pursuant to Section 1773 of the Labor Code, the general prevailing wage rates in the county in which the work is to be done have been determined by the Director of the California Department of Industrial Relations. A copy of said wage rates is on file with the Yuba County Department of Public Works. The contractor and any of its subcontractors shall pay not less than said specified wage rates to all workers employed by them in the execution of the Work.

The contractor may elect to substitute securities for any monies withheld by TRLIA to insure performance under the contract in accordance with the provisions of Section 22300 of the Public contract Codes. At the request and expense of the contractor, securities equivalent to the amount withheld shall be deposited with TRLIA, or a state or federally chartered bank as the escrow agent, who shall then pay such withheld monies to the Contractor. Upon satisfactory completion of the Contract, the securities will be returned to the contractor. Such securities, if deposited by the Contractor, shall be valued by TRLIA, whose decision on valuation of the securities shall be final. Securities eligible for deposit hereunder shall be limited to those listed in Section 16430 of the Government Code, or bank or savings and loan certificates of deposit.

### **Acceptance of Bid**

**Contractor must submit bids for both the Base Bid (Schedule A & Schedule B) and the Add Alternate. Refer to Special Provision (SP-8) for completion milestones.**

**TRLIA will select the lowest responsible bidder based on the Base Bid (Schedule A and Schedule B) plus the Add Alternate of TRLIA's choice.**

**TRLIA reserves the right to accept or reject any and all proposals with or without prior discussion with the Bidder. TRLIA may:**

- 1. Make the award on the basis of the proposals received without discussion of the proposals.**
- 2. Contact one or more Bidders for clarification of their proposal(s).**
- 3. Reject all proposals.**

**Based on the availability of funding and the permits as of the date of Contract award, TRLIA will award the Contract to the lowest responsive Bidder.**

SECTION TABLE OF CONTENTS

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01 22 00.00 10

MEASUREMENT AND PAYMENT

04/06

PART 1 GENERAL

- 1.1 SUBMITTALS
- 1.2 LUMP SUM PAYMENT ITEMS
  - 1.2.1 Mobilization and Demobilization
    - 1.2.1.1 Measurement and Payment
  - 1.2.2 Temporary Construction Facilities
    - 1.2.2.1 Measurement and Payment
  - 1.2.3 Quality Control System
    - 1.2.3.1 Measurement and Payment
  - 1.2.4 Traffic Control
    - 1.2.4.1 Measurement and Payment
  - 1.2.5 SWPPP Silt Fence
    - 1.2.5.1 Measurement
    - 1.2.5.2 Payment
    - 1.2.5.3 Unit of Measure
  - 1.2.6 SWPPP Straw Wattle
    - 1.2.6.1 Measurement
    - 1.2.6.2 Payment
    - 1.2.6.3 Unit of Measure
  - 1.2.7 SWPPP Stabilized Construction Entrance
    - 1.2.7.1 Measurement
    - 1.2.7.2 Payment
    - 1.2.7.3 Unit of Measure
  - 1.2.8 Erosion Control (Borrow Site)
    - 1.2.8.1 Measurement and Payment
  - 1.2.9 K-Rail
    - 1.2.9.1 Measurement
    - 1.2.9.2 Payment
    - 1.2.9.3 Unit of Measure
  - 1.2.10 Clearing and Grubbing
    - 1.2.10.1 Measurement and Payment
  - 1.2.11 Topsoil Stripping (Levee and Berm Area)
    - 1.2.11.1 Measurement
    - 1.2.11.2 Payment
    - 1.2.11.3 Unit of Measure
  - 1.2.12 Levee Excavation (Levee Degrade and Initial Cap)
    - 1.2.12.1 Measurement
    - 1.2.12.2 Payment
    - 1.2.12.3 Unit of Measure
  - 1.2.13 Temporary Water Main
    - 1.2.13.1 Measurement and Payment
  - 1.2.14 Seepage and Stability Berm - Fill
    - 1.2.14.1 Measurement
    - 1.2.14.2 Payment
  - 1.2.15 Slurry Wall Construction

- 1.2.15.1 Measurement
- 1.2.15.2 Payment
- 1.2.15.3 Unit of Measure
- 1.2.16 Excavation and Haul (Borrow Site)
  - 1.2.16.1 Measurement
  - 1.2.16.2 Payment
  - 1.2.16.3 Unit of Measure
- 1.2.17 Fill - Levee Embankment (From Borrow Site)
  - 1.2.17.1 Measurement
  - 1.2.17.2 Payment
  - 1.2.17.3 Unit of Measure
- 1.2.18 Fill - Levee Embankment (From Import)
  - 1.2.18.1 Measurement
  - 1.2.18.2 Payment
  - 1.2.18.3 Unit of Measure
- 1.2.19 Subsurface Drilling, Sampling, and Testing
  - 1.2.19.1 Measurement and Payment
- 1.2.20 Ductile Iron Pipe (DIP) Water Main
  - 1.2.20.1 Measurement
  - 1.2.20.2 Payment
  - 1.2.20.3 Unit of Measure
- 1.2.21 12" Irrigation Service and 18" Irrigation Service
  - 1.2.21.1 Measurement
  - 1.2.21.2 Payment
  - 1.2.21.3 Unit of Measure
- 1.2.22 Controlled Low Strength Material (CLSM)
  - 1.2.22.1 Measurement
  - 1.2.22.2 Payment
- 1.2.23 Dantoni Road - Sawcut
  - 1.2.23.1 Measurement
  - 1.2.23.2 Payment
- 1.2.24 Dantoni Road - AC/AB Demolition
  - 1.2.24.1 Measurement
  - 1.2.24.2 Payment
- 1.2.25 Dantoni Road - Lime Treatment
  - 1.2.25.1 Lime Stabilization Measurement
  - 1.2.25.2 Payment
  - 1.2.25.3 Unit of Measure
- 1.2.26 Dantoni Road - Bituminous Concrete Pavement
  - 1.2.26.1 Measurement
  - 1.2.26.2 Payment
  - 1.2.26.3 Unit of Measure
- 1.2.27 Aggregate Base
  - 1.2.27.1 Measurement
  - 1.2.27.2 Payment
- 1.2.28 Pipe Gates
  - 1.2.28.1 Measurement and Payment
- 1.2.29 Signage
  - 1.2.29.1 Measurement
  - 1.2.29.2 Payment
  - 1.2.29.3 Unit of Measure
- 1.2.30 Erosion Control Seeding
  - 1.2.30.1 Measurement
  - 1.2.30.2 Payment
  - 1.2.30.3 Unit of Measure
- 1.2.31 Permanent Fencing
  - 1.2.31.1 Measurement
  - 1.2.31.2 Payment
  - 1.2.31.3 Unit of Measure

- 1.2.32 Reclaim Borrow Site
  - 1.2.32.1 Measurement and Payment
- 1.2.33 Haul & Waste (Unsuitable Material)
  - 1.2.33.1 Measurement
  - 1.2.33.2 Payment
  - 1.2.33.3 Unit of Measure
- 1.2.34 Geotextile Fabric
  - 1.2.34.1 Measurement
  - 1.2.34.2 Payment
  - 1.2.34.3 Unit of Measure
- 1.2.35 Bedding Material
  - 1.2.35.1 Measurement
  - 1.2.35.2 Payment
  - 1.2.35.3 Unit of Measure
- 1.2.36 Rock Slope Protection
  - 1.2.36.1 Measurement
  - 1.2.36.2 Payment
  - 1.2.36.3 Unit of Measure
- 1.2.37 General Signage and Safety
  - 1.2.37.1 Measurement
  - 1.2.37.2 Payment
- 1.2.38 Surveying
- 1.3 UNIT PRICE PAYMENT ITEMS

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

-- End of Section Table of Contents --

SECTION 01 22 00.00 10

MEASUREMENT AND PAYMENT  
04/06

PART 1 GENERAL

1.1 SUBMITTALS

The following shall be submitted in accordance with Section 01 33 00.00 41  
SUBMITTAL PROCEDURES:

SD-03 Product Data

Weight Certificates

Submit certified weight certificates for Riprap.

Rock Slope Protection Materials

Quarry source and a statement of materials and gradation tests on  
the rock source intended for use.

1.2 LUMP SUM PAYMENT ITEMS

Payment items for work which will be completed on a lump sum basis are listed in the BIDDING SCHEDULE. All costs for items of work, which are not specifically mentioned to be included in a particular lump sum or unit price payment item, shall be included in the listed lump sum item most closely associated with the work involved. The lump sum price and payment made for each item listed shall constitute full compensation for furnishing all plant, labor, materials, and equipment, and performing any associated Contractor quality control, environmental protection, meeting safety requirements, tests and reports, and for performing all work required for which separate payment is not otherwise provided.

1.2.1 Mobilization and Demobilization

1.2.1.1 Measurement and Payment

Measurement and payment for mobilization, demobilization, staging areas, temporary construction facilities, and for all other work covered by this section of the Specifications shall be made at the contract lump-sum price for item "MOBILIZATION AND DEMOBILIZATION"; which payment shall constitute full compensation for all work covered by this section of the specifications, as shown on the drawings and as specified by the Agency.

1.2.2 Temporary Construction Facilities

1.2.2.1 Measurement and Payment

Separate payment will not be made for providing temporary construction facilities, temporary signage, related labor and materials; and all costs associated therewith and shall be included in the bid schedule bid item MOBILIZATION AND DEMOBILIZATION.

1.2.3 Quality Control System

1.2.3.1 Measurement and Payment

Separate payment will not be made for providing and maintaining a Quality Control System, and all costs associated therewith shall be included in the applicable unit prices of lump-sum prices contained in the Bidding Schedule.

1.2.4 Traffic Control

1.2.4.1 Measurement and Payment

Measurement and payment for providing traffic control, traffic control signage, related labor and materials; and all costs associated therewith shall be included in the Bid Schedule Bid Item for TRAFFIC CONTROL; which payment shall constitute full compensation for all work covered by this section of the specifications, as shown on the drawings and as specified by the Agency.

1.2.5 SWPPP Silt Fence

1.2.5.1 Measurement

SWPPP silt fence and related work shall be measured by the linear foot installed per these specification, the project plans, and as directed by the Agency.

1.2.5.2 Payment

Payment will be made for SWPPP silt fence as outlined in these specifications, on the project plans, and as directed by the Agency at the contact linear foot price for "SWPPP SILT FENCING". Payment shall constitute full compensation for furnishing all supplies, labor, equipment, materials, and for performing all operation necessary for installing and maintaining silt fencing for the duration of the project.

1.2.5.3 Unit of Measure

Unit of Measure: Linear Foot

1.2.6 SWPPP Straw Wattle

1.2.6.1 Measurement

SWPPP straw wattle and related work shall be measured by the linear foot installed per these specification, the project plans, and as directed by the Agency.

1.2.6.2 Payment

Payment will be made for SWPPP straw wattle as outlined in these specifications, on the project plans, and as directed by the Agency at the contact linear foot price for "SWPPP STRAW WATTLE". Payment shall constitute full compensation for furnishing all supplies, labor, equipment, materials, and for performing all operation necessary for installing and maintaining straw wattles for the duration of the project.

1.2.6.3 Unit of Measure

Unit of Measure: Linear Foot

1.2.7 SWPPP Stabilized Construction Entrance

1.2.7.1 Measurement

SWPPP stabilized construction entrance and related work shall be measured by the number installed per these specification, the project plans, and as directed by the Agency.

1.2.7.2 Payment

Payment will be made for SWPPP stabilized construction entrance as outlined in these specifications, on the project plans, and as directed by the Agency at the contract unit price for each "SWPPP STABILIZED CONSTRUCTION ENTRANCE". Payment shall constitute full compensation for furnishing all supplies, labor, equipment, materials, and for performing all operation necessary for installing and maintaining straw wattles for the duration of the project.

1.2.7.3 Unit of Measure

Unit of Measure: Each

1.2.8 Erosion Control (Borrow Site)

1.2.8.1 Measurement and Payment

Measurement and payment for EROSION CONTROL (BORROW SITE) shall be made the contract lump sum price. Payment shall constitute full compensation for all erosion control related work as defined in the project SWPPP, in these specifications, on the project plans, and as directed by the Agency.

1.2.9 K-Rail

1.2.9.1 Measurement

K-Rail and related work will be measured by the linear foot installed as shown on the plan.

1.2.9.2 Payment

K-Rail will be paid for at the contract unit price for "K-RAIL", which will be payment in full for furnishing all labor, materials, tools, equipment, transport, installation, maintenance, removal, restoration of areas disturbed by K-Rail, and all incidentals as necessary to complete the work specified.

1.2.9.3 Unit of Measure

Unit of Measure: Linear Foot

1.2.10 Clearing and Grubbing

1.2.10.1 Measurement and Payment

Clearing and grubbing, and the disposal of the materials from this

operation and for all other work stated in the "CLEARING AND GRUBBING" section of the Specifications shall be measured and paid at the contract lump sum price for "CLEARING AND GRUBBING". This price shall constitute full compensation for furnishing all labor, materials, equipment and incidentals, and doing all work necessary to complete the clearing and grubbing, as specified in the Specifications, including disposal or salvage of materials, and restoring all ground surfaces. Clearing and grubbing of the project site and borrow sites shall be included in at the contract lump sum price for "CLEARING AND GRUBBING".

1.2.11 Topsoil Stripping (Levee and Berm Area)

1.2.11.1 Measurement

Topsoil Stripping, Removal and Spread of the materials from this operation will be measured by horizontal area surveys.

1.2.11.2 Payment

Payment for Stripping will be made at the contract unit price for "TOPSOIL STRIPPING (LEVEE AND BERM AREA)". This price shall constitute full compensation for all equipment, labor, materials and incidentals necessary to complete the work as specified in the Specifications and as shown on the plans. No separate or direct payment will be made for stockpiling, transportation, loading, unloading, or dust control of stripped materials. All costs in connection therewith shall be included in the unit price for TOPSOIL STRIPPING.

1.2.11.3 Unit of Measure

Unit of Measure: Acre

1.2.12 Levee Excavation (Levee Degrade and Initial Cap)

1.2.12.1 Measurement

Levee Excavation (Levee Degrade and Initial Cap) and related work shall be measured by the cubic yard from the dimensions shown on the plans. Measurement will be by the Average End Area Method.

1.2.12.2 Payment

Payment for Levee Excavation (Levee Degrade and Initial Cap) will be paid at the at the contract unit price for "LEVEE EXCAVATION (LEVEE DEGRADE AND INITIAL CAP)" This price shall constitute full compensation for all equipment, labor, materials, hauling excavated materials to and from on-site stockpile locations or other point of use, and all incidentals necessary to complete the work specified.

1.2.12.3 Unit of Measure

Unit of Measure: Cubic Yard, to the nearest 1.0 cubic yard.

1.2.13 Temporary Water Main

1.2.13.1 Measurement and Payment

Measurement and payment for temporary water main and for all other costs associated therewith shall be made at the contract lump-sum price for item

"TEMPORARY WATER MAIN"; which payment shall constitute full compensation for all work covered by this section of the specifications, as shown on the drawings, and as specified by the Agency.

1.2.14 Seepage and Stability Berm - Fill

1.2.14.1 Measurement

Materials specified for seepage and stability berm (Soil Type 2 Fill) will be measured for payment by the cubic yard, in place, and quantities will be determined by the average end area method. The basis for measurement will be cross sections of the areas to be filled taken after berm placement operations and the actual cross sections constructed within the specified tolerance. Cross sections shall be performed at significant breaks in grade except that the maximum distance between cross sections shall not exceed the distance specified in the General Specifications. Seepage and stability berms not constructed to design grade and section including allowable tolerance as indicated on the Contractor's compliance survey will not be accepted.

1.2.14.2 Payment

Payment will be made for seepage and stability berm (Soil Type 2) fill where shown on the Plans at the contract unit price for "SEEPAGE AND STABILITY BERM - FILL." Payment shall constitute full compensation for furnishing all plant, labor, equipment and material, and performing all operations necessary for foundation preparation and placing and compacting the material, materials testing, and moisture control.

1.2.15 Slurry Wall Construction

1.2.15.1 Measurement

Measurement for Slurry Wall Construction shall be based on the area in square feet of wall measured in a vertical plane through the centerline of the cutoff wall as established by the working surface indicated on the Plans, the bottom of the cutoff wall and vertical lines at each end of the cutoff wall. Measurement shall be based on surveys and measurements taken at the site as directed and approved by the Agency or the Agency's Representative.

1.2.15.2 Payment

Payment for the Slurry Wall Construction shall be made at the contract price per square foot of Bid Item, "SLURRY WALL CONSTRUCTION". Such price shall include all costs of slurry wall construction, stockpiling or spoiling materials generated during the slurry wall construction, providing backfill materials from excavations or the supplemental borrow area, for the backfill, mixing, blending, and all other items incidental to the construction, testing and completion of the slurry wall. No separate payment will be made for lead in trenches or materials including bentonite, additives, soil, equipment and mixing, handling and cleaning the slurry, diking around the open trench, and overtime during continuous operations, cleanup, assistance in the collection and maintenance of records and quality control testing; such items being included in the price of the slurry wall construction. Final acceptance of the slurry wall construction will be based on meeting all the requirements as described in these Technical Specifications.

1.2.15.3 Unit of Measure

Unit of Measure: Square Foot.

1.2.16 Excavation and Haul (Borrow Site)

1.2.16.1 Measurement

Excavation and Haul (Borrow Site) will be measured for payment by use of the average end area method. The basis of measurement will be a survey of the area prior to the excavation, and a second survey of the same area after the completion of the excavation. Slides caused by fault of the contractor, over excavation, and excavation performed for the convenience of the contractor shall not be measured for payment. Hauling shall be included in the borrow site excavation.

1.2.16.2 Payment

Excavation of the Borrow Site and hauling of the material shall be paid for at the contract price paid for EXCAVATION AND HAUL (BORROW SITE), which will be payment in full for furnishing all labor, materials, tools, equipment, and incidentals and doing all work necessary to complete the excavations as specified including dewatering and water control, blending, moisture conditioning materials, stockpiling, transporting material to and from stockpile locations, field ramp construction, haul road construction and improvements, haul road maintenance, haul road removal of surface restoration, construction access associated with borrow sites, temporary haul road construction in the proximity of borrow site, stabilized entrance construction, drainage grading, dust control, traffic control at borrow sites, existing utility locations and potholing, any roadway relocations indicated in the proximity of the borrow sites, sediment control at the borrow sites, any required embankments, v-ditches or swales at the borrow site, surveys needed for quantity verification, and all incidentals and doing all work necessary to complete the borrow excavations and hauling as specified.

1.2.16.3 Unit of Measure

Unit of measure: Cubic Yard

1.2.17 Fill - Levee Embankment (From Borrow Site)

1.2.17.1 Measurement

Materials specified for levee embankment (Soil Type 1) will be measured for payment by the cubic yard, in place, and quantities will be determined by the average end area method. The basis for measurement will be cross sections of the areas to be filled taken after levee excavation operations and the actual cross sections of the embankments constructed within the specified tolerance. Cross sections shall be performed at significant breaks in grade except that the maximum distance between cross sections shall not exceed the distance specified in the General Specifications. Embankments not constructed to design grade and section including allowable tolerance as indicated on the Contractor's compliance survey will not be accepted. Volumes occupied by drainage structures and/or the temporary cap will not be included in measurement of embankment for payment.

1.2.17.2 Payment

Payment will be made for levee embankment (from borrow site) placed as required in levee and ramp embankments and Dantoni Road as indicated in these specifications and on the Plans at the contract unit price for "FILL - LEVEE EMBANKMENT (FROM BORROW SITE)." Payment shall constitute full compensation for furnishing all plant, labor, equipment and material, and performing all operations necessary for foundation preparation and placing and compacting the material, materials testing, surveying, and moisture control.

1.2.17.3 Unit of Measure

Unit of Measure: Cubic Yard

1.2.18 Fill - Levee Embankment (From Import)

1.2.18.1 Measurement

Material specified for levee embankment (Soil Type 1 from Import) will be measured for payment by the cubic yard, in place, and quantities will be determined by the average end area method. The basis for measurement will be cross sections of the areas to be filled taken before and after levee excavation operations and embankment construction to the specified tolerances. Cross sections shall be performed at significant breaks in grade except that the maximum distance between cross sections shall not exceed the distance specified in the General Specifications. Embankments not constructed to design grade and section including allowable tolerance as indicated on the Contractor's compliance survey will not be accepted. Volumes occupied by drainage structures and/or the temporary cap will not be included in measurement of embankment for payment.

1.2.18.2 Payment

Payment will be made for levee embankment imported and placed as required in levee embankments as indicated in these specifications and on the Plans at the contract unit price for "FILL - LEVEE EMBANKMENT (FROM IMPORT)." Payment shall constitute full compensation for furnishing all plant, labor, equipment, materials, and performing all operations necessary for foundation preparation and placing and compacting the material, materials testing, surveying, and moisture control.

1.2.18.3 Unit of Measure

Unit of Measure: Cubic Yard

1.2.19 Subsurface Drilling, Sampling, and Testing

1.2.19.1 Measurement and Payment

Separate payment will not be made for Subsurface Drilling, Sampling, and Testing, and all costs associated therewith shall be included in the Bid Schedule Bid Item for Levee Embankment

1.2.20 Ductile Iron Pipe (DIP) Water Main

1.2.20.1 Measurement

The length of water main to be paid for will be determined by measuring

along the center line from connection point to connection point. No deduction will be made for space occupied by fittings.

1.2.20.2 Payment

Payment will be made at the contract unit price per linear foot for "DIP WATER MAINS" and will constitute full payment for all pipes, joints, specials, fittings, complete and in place. Payment shall include the furnishing of all testing, labor, plant, and materials and incidentals necessary to complete the work specified.

1.2.20.3 Unit of Measure

Unit of Measure: Linear Foot

1.2.21 12" Irrigation Service and 18" Irrigation Service

1.2.21.1 Measurement

The length of irrigation service to be paid for will be determined by measuring along the center line from connection point to connection point. No deduction will be made for space occupied by fittings.

1.2.21.2 Payment

Payment will be made at the contract unit price per linear foot for "12" IRRIGATION SERVICE", where 12" irrigation pipe is specified, and for "18" IRRIGATION SERVICE", where 18" irrigation pipe is specified, and will constitute full payment for all pipes, joints, specials, fittings, complete and in place. Payment shall include the furnishing of all testing, labor, plant, and materials and incidentals necessary to complete the work specified.

1.2.21.3 Unit of Measure

Unit of Measure: Linear Foot

1.2.22 Controlled Low Strength Material (CLSM)

1.2.22.1 Measurement

Controlled Low Strength Material (CLSM) will not be measured for payment.

1.2.22.2 Payment

No separate payment will be made for providing and installing Controlled Low Strength Material (CLSM), and all costs associated therewith shall be included in the applicable unit prices for ductile iron pipe water main and other pipe as shown on the Plans.

1.2.23 Dantoni Road - Sawcut

1.2.23.1 Measurement

Measurement for this item will be based on the number of linear feet of cut made by an approved method to the lines delineated on the plans or as directed by the Agency.

1.2.23.2 Payment

Payment for this item will be based on the contract unit prices per Linear Foot for "DANTONI - ROAD SAWCUT", completed and accepted including all labor, materials, tools, testing, and equipment necessary to complete the work as specified.

1.2.24 Dantoni Road - AC/AB Demolition

1.2.24.1 Measurement

AC/AB Demolition will be measured for payment by use of the Square Yard. The basis of measurement will be based upon the square yard the area after the removal of asphalt concrete and/or cement concrete pavements and associated aggregate base material after excavation.

1.2.24.2 Payment

Payment will be made for AC/AB Demolition at the contract unit square yard price for "DANTONI ROAD - AC/AB DEMOLITION", which includes full compensation for all equipment, labor, transportation, materials, hauling excavated materials to and from on-site stockpile locations, hauling waste site, dewatering, and incidentals necessary to complete the work specified. No separate payment will be made for stockpiling or loading material from the stockpile.

1.2.25 Dantoni Road - Lime Treatment

1.2.25.1 Lime Stabilization Measurement

Lime stabilization shall be measured by the cubic yard, determined from horizontal measurements of the planned surface of the lime stabilized material.

1.2.25.2 Payment

Payment will be made for lime treatment at the contract unit cubic yard price for "DANTONI - LIME TREATMENT", which includes full compensation for furnishing all labor, materials, tools, equipment, and incidental, and for doing all the work involved in constructing the lime stabilization complete, in place, as shown on the plans, as specified in the Technical Specifications, and as specified by the Agency.

1.2.25.3 Unit of Measure

Unit of Measure: Cubic Yard

1.2.26 Dantoni Road - Bituminous Concrete Pavement

1.2.26.1 Measurement

The quantity of Bituminous Concrete Pavement completed and accepted as determined by the Agency or the Agency's Representative shall be measured by ton to the nearest 1.0 tons.

1.2.26.2 Payment

Quantities of bituminous concrete pavement as measured above, will be paid for at the respective contract unit price under Bid Item "DANTONI -

BITUMINOUS CONCRETE PAVEMENT". Payment will constitute full compensation for the construction and completion of the bituminous concrete pavement, including material, pavement reinforcement fabric, Dantoni Road AC Dike, paint pavement striping, and furnishing all labor and incidentals necessary to complete the work required as shown on the Plans, as specified in the Technical Specifications, and as directed by the Agency.

1.2.26.3 Unit of Measure

Unit of Measure: Ton

1.2.27 Aggregate Base

1.2.27.1 Measurement

Aggregate Base Course will be measured for payment by the ton, to the nearest 1.0 ton. Quantities for payment will be certified by individual truck weight tickets delivered to the Agency or the Agency's Representative at the time of delivery of each truckload of material. Moisture content not exceeding six percent by weight will be acceptable in determining payment quantities. Deductions will be made from the certified weight for moisture in excess of this amount and for materials in excess of the allowable thickness.

1.2.27.2 Payment

Aggregate Base will be paid for at the contract unit price under Bid Item "AGGREGATE BASE". Payment will constitute full compensation for the construction and completion of the Aggregate Base including material, SUBGRADE PREPARATION, and furnishing all labor and incidentals necessary to complete the work required as shown on the Plans, as specified in these Specifications, shown on the plans, and as directed by the Agency or the Agency's Representative.

1.2.28 Pipe Gates

1.2.28.1 Measurement and Payment

Payment for pipe gate removal, salvage, and installation will be made at the unit price for "PIPE GATES"; which shall include full compensation for furnishing all supplies, labor, equipment and material, and performing all operation necessary for removing, salvaging, and reinstalling pipe gates as specified on the plans.

1.2.29 Signage

1.2.29.1 Measurement

Signage shall be measured for payment by the number of Signs installed per the Plans and these Specifications.

1.2.29.2 Payment

Payment will be made for Signage as shown on the Plans at the contract unit price for each "SIGNAGE". Payment shall constitute full compensation for furnishing all supplies, labor, equipment and material, and performing all operations necessary for installing each Sign.

1.2.29.3 Unit of Measure

Unit of Measure: Each

1.2.30 Erosion Control Seeding

1.2.30.1 Measurement

Erosion Control Seeding as shown on the Plans, and as described in these Specifications, will be measured by the Acre.

1.2.30.2 Payment

Erosion Control Seeding as shown on the plans, and as described in these specifications, will be paid for at the contract Acre unit price for "EROSION CONTROL SEEDING"; which shall include installation, watering, labor, equipment and material, and performing all operations to establish Erosion Control Seeding. Erosion Control Seeding measures, which are required to be repeated due to the Contractor's negligence, carelessness, neglect, failure to install or maintain Permanent Erosion Control Seeding properly, will be performed by the Contractor at no expense to the Agency.

1.2.30.3 Unit of Measure

Unit of Measure: Acre

1.2.31 Permanent Fencing

1.2.31.1 Measurement

Permanent fencing will be measured by the linear foot installed per the Plans and as directed by the Agency.

1.2.31.2 Payment

Payment will be made for Permanent Fencing as shown on the Plans at the contract linear foot price for "PERMANENT FENCING". Payment shall constitute full compensation for furnishing all supplies, labor, equipment and materials, and for performing all operations necessary for installing permanent fencing.

1.2.31.3 Unit of Measure

Unit of Measure: Linear Foot

1.2.32 Reclaim Borrow Site

1.2.32.1 Measurement and Payment

Measurement and payment for Reclaim Borrow Site and for all work covered by this section of the Specifications shall be made at the contract lump-sum price for item "RECLAIM BORROW SITE"; which payment for shall constitute full compensation for all work covered by this section of the specifications, as shown on the drawings, and as specified by the Agency.

1.2.33 Haul & Waste (Unsuitable Material)

1.2.33.1 Measurement

Haul & Waste (Unsuitable Material) will be measured for payment by use of the Cubic Yard removed. The basis of measurement will be based upon the cubic yard volume after the removal of unsuitable material and debris after excavation.

1.2.33.2 Payment

Payment will be made for Haul & Waste (Unsuitable Material) at the contract unit cubic yard price for "HAUL & WASTE (UNSUITABLE MATERIAL)", which includes full compensation for all equipment, labor, transportation, materials, hauling excavated materials from on-site locations including the borrow site and all areas within the limit of construction shown on the Plans, to waste site, and incidentals necessary to complete the work specified. No separate payment will be made for loading or unloading material.

1.2.33.3 Unit of Measure

Unit of Measure: Cubic Yard

1.2.34 Geotextile Fabric

1.2.34.1 Measurement

Geotextile Fabric will be measured for payment by the square yard, to the nearest 1.0 yard. Measurement will be calculated from the dimensions as shown on the Plans or as directed by the agency's representative.

1.2.34.2 Payment

Geotextile Fabric will be paid for at the contract price for "GEOTEXTILE FABRIC", which will be payment in full for furnishing all labor, materials, tools, equipment, and incidentals necessary to complete the work, including subgrade preparation, processing work, and fabric placement.

1.2.34.3 Unit of Measure

Unit of Measure: Square Yard

1.2.35 Bedding Material

1.2.35.1 Measurement

Bedding Material will be measured for payment by the ton, to the nearest 1.0 ton. Measurement will be calculated from the dimensions as shown on the plans or as directed by the Agency.

1.2.35.2 Payment

Bedding material will be paid for at the contract price for "BEDDING MATERIAL", which will be payment in full for furnishing all labor, materials, tools, equipment, and incidentals necessary to complete the work, including subgrade preparation, processing work, rock placement, backfill of voids, excavation and fill.

1.2.35.3 Unit of Measure

Unit of Measure: Ton.

1.2.36 Rock Slope Protection

1.2.36.1 Measurement

Rock slope protection will be measured for payment by the ton, to the nearest 1.0 ton. Measurement will be calculated from the dimensions as shown on the Plans or as directed by the Agency.

1.2.36.2 Payment

Rock slope protection will be paid for at the contract price for "ROCK SLOPE PROTECTION", which will be payment in full for furnishing all labor, materials, tools, equipment, and incidentals necessary to complete the work, including subgrade preparation, processing work, rock placement, backfill of voids, excavation and fill.

1.2.36.3 Unit of Measure

Unit of Measure: Ton.

1.2.37 General Signage and Safety

1.2.37.1 Measurement

The Contractors compliance with this section will not be measured for payment.

1.2.37.2 Payment

No separate payment will be made for the work covered under this section and all costs in connection therewith will be considered a subsidiary obligation of the Contract.

1.2.38 Surveying

No separate payment will be made for providing surveying services, and all costs associated therewith shall be included in the applicable unit prices or lump sum prices contained in the Bid Schedule.

1.3 UNIT PRICE PAYMENT ITEMS

Payment items for the work of this contract on which the contract unit price payments will be made are listed in the BIDDING SCHEDULE. The unit price and payment made for each item listed shall constitute full compensation for furnishing all plant, labor, materials, and equipment, and performing any associated Contractor quality control, environmental protection, meeting safety requirements, tests and reports, and for performing all work required for each of the unit price items.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

-- End of Section --













SECTION TABLE OF CONTENTS

DIVISION 31 - EARTHWORK

SECTION 31 25 13.00 41

EROSION CONTROL SEEDING

PART 1 GENERAL

- 1.1 SCOPE
- 1.2 QUALITY ASSURANCE
- 1.3 SUBMITTALS

PART 2 PRODUCTS

- 2.1 MATERIALS
  - 2.1.1 Seed
    - 2.1.1.1 Seed Species and Planting Rates
  - 2.1.2 Fertilizer
  - 2.1.3 Fiber Mulch
  - 2.1.4 Straw Mulch
  - 2.1.5 Water
  - 2.1.6 Stabilizing Emulsion (Tackifier)

PART 3 EXECUTION

- 3.1 PREPARATION
  - 3.1.1 General
  - 3.1.2 Debris Removal
  - 3.1.3 Surface Preparation
- 3.2 METHOD OF SEEDING
  - 3.2.1 Hydroseeding
- 3.3 ESTABLISHMENT
  - 3.3.1 Period
  - 3.3.2 Protection
- 3.4 REPAIR
  - 3.4.1 General
  - 3.4.2 Reseeding
  - 3.4.3 Replacement of Straw Mulch
- 3.5 FIELD QUALITY CONTROL

-- End of Section Table of Contents --

SECTION 31 25 13.00 41

EROSION CONTROL SEEDING

PART 1 GENERAL

1.1 SCOPE

Perform erosion control seeding on reconstructed levee side slopes, borrow site side slopes, seepage berms, and restored access and haul roads and staging areas as specified herein, as shown on the Plans, or as otherwise directed by the Agency.

1.2 QUALITY ASSURANCE

There shall be no substitutions of seed species or variety as shown in seed mix tables unless authorized by the Agency.

Seed materials, including the seed mix, fertilizer, and mulch, shall be delivered by the Contractor to the job site with durable, waterproof labels indicating the correct species, variety, percent live seed (PLS) and other certifications, and the supplier's name, in conformance to these Specifications. The Agency will observe the seed mix, fertilizer, and mulch material as it is being delivered to the site for conformity to these Specifications. Such approvals shall not impair the right of additional observations during further progress of the work.

The Contractor shall be responsible for storing and maintaining the seed mix, fertilizer, and mulch as delivered throughout the Construction Period.

1.3 SUBMITTALS

The following shall be submitted in accordance with Section 01 33 00.00 41 SUBMITTAL PROCEDURES

SD-04 Samples

SEED MATERIALS

The Agency may at any time, request, test, and analyze seed materials including the seed mix, fertilizer, or mulch to ensure their conformance to these Specifications. The Contractor shall furnish, at no additional cost, the requested materials for the Agency's use. Seed materials not meeting the Agency's approval shall immediately be removed from the project site at the Contractor's expense. The Contractor shall incur any additional expenses required because of materials not meeting the requirements of these Specifications. The following shall be submitted by the Contractor according to submittal procedures included in the Contract. The Contractor shall furnish, at no additional cost, the requested materials for the Agency's approval.

1. Seed mix verification by way of certified mix labels from supplier in sealed seed mix bags. In addition, the Contractor shall submit a 5 pound bag of the seed mix for approval before any seeding operations.

2. Before delivery of the straw and fertilizer material to the project site, the Contractor shall provide the material order and the name, address and telephone number of the material supplier. In addition, the Contractor shall submit mulch and fertilizer material samples in 5 pound bags, each, for approval before any seeding operations.

SD-07 Certificates

Invoices

Duplicate copies of invoices for all materials. Invoices for fertilizer shall show the grade furnished.

PART 2 PRODUCTS

2.1 MATERIALS

2.1.1 Seed

2.1.1.1 Seed Species and Planting Rates

The following native grass seeds shall be applied at the following Pure rates.

<b>Botanical Name</b>	<u>Common Name</u>	<b>Qty</b>
Achillea millefolium	Yarrow	5 lbs/acre
Bromus carinatus	California brome	5 lbs/acre
Eschscholzia californica	California poppy	5 lbs/acre
Grindelia camporum	Gum plant	5 lbs/acre
Hordeum brachyantherum ssp. californicum	California barley	10 lbs/acre
Leymus triticoides	Creeping wildrye	20 lbs/acre
Lupinus bicolor	Miniature lupine	5 lbs/acre
Nassella cernua	Nodding needlegrass	10 lbs/acre
Nassella pulchra	Purple needlegrass	10 lbs/acre
Trifolium wildenovii	Tomcat clover	5 lbs/acre
Vulpia microstachys	Three week fescue	10 lbs/acre

### 2.1.2 Fertilizer

Fertilizer shall be liquid, of the concentrations indicated below:

<u>Item</u>	<u>Ratio</u>
Nitrogen (nitrate)	8
Phosphorus (Ammonium Polyphosphate)	24
Potassium (Potassium Sulfate)	3
Zinc (Zinc Sulfate)	0.25
Sulfur (Ammonium Thiosulfate)	2.5

Fertilizer shall be delivered in containers labeled in accordance with applicable State regulations and bearing the warranty of the producer for the grade furnished.

### 2.1.3 Fiber Mulch

Fiber mulch shall be dyed wood cellulose fiber specially prepared for hydroseeding.

### 2.1.4 Straw Mulch

Straw mulch shall be derived from rice, seedless wheat or native grass hay. The Contractor shall furnish evidence that clearance has been obtained from the County Agricultural Commissioner, as required by law, before straw obtained from outside the county in which it is to be used is delivered to the site of the work. Straw that has been used for stable bedding shall not be used. Straw shall be free of mold. Straw shall be cured and dry with no water added after baling.

### 2.1.5 Water

Water shall be furnished by the Contractor, in conformance with these Specifications, and shall be free of chemicals detrimental to the seed mixture.

### 2.1.6 Stabilizing Emulsion (Tackifier)

Stabilizing emulsion shall be in a dry powder form, may be re-emulsifiable and shall be a processed organic derivative of *Plantago insularis* used as a soil binder.

## PART 3 EXECUTION

### 3.1 PREPARATION

#### 3.1.1 General

The contractor shall be responsible for coordinating all site preparation and seeding operations with daily/monthly tidal cycles and seasonal water levels(see tidal data).

#### 3.1.2 Debris Removal

Prior to ground surface preparation operations remove and dispose of all wire, rubbish, stones, and other material that might hinder proper grading and subsequent maintenance. .

### 3.1.3 Surface Preparation

Surfaces that are too hard and smooth, or compacted to accept the seeding, as determined by the Agency, shall be broken up by methods approved by the Agency until the condition of the soil is acceptable. When conditions are such, by reason of excessive moisture or other factors, that satisfactory results are not likely to be obtained, the work shall be stopped and shall be resumed only when directed.

## 3.2 METHOD OF SEEDING

### 3.2.1 Hydroseeding

The seed and fertilizer shall be mixed with cellulose fiber and water to form a slurry. Mix the slurry in tanks having continuous agitation so that a homogeneous mixture is discharged hydraulically through hoses on the area to be seeded.

- a. Apply seed, fertilizer, and mulch in suspension at the following rates:

Seed - At rates specified in the Seed Mix Tables

Fertilizer - 150 pounds per acre

Fiber Mulch - 2,000 pounds per acre

- b. Following the application of seed mix, straw mulch shall be pneumatically applied to the area seeded, at a rate of 3,000 pounds per acre.
- c. Following the application of straw mulch, a stabilizing emulsion and fiber mulch mixture shall be hydraulically applied to the area strawed, at the following rates:

Stabilizing emulsion - 100 pounds per acre

Fiber Mulch - 1,000 pounds per acre

## 3.3 ESTABLISHMENT

### 3.3.1 Period

The Contractor shall be responsible for the proper care of the seeded areas until May 1 of the year following the seeding, or until the desired stand of vegetation is established. The desired stand of vegetation is defined as a minimum of 85 percent coverage of the area seeded. The need for repairing and reseeding (as described herein) within the establishment period shall be as determined by the Agency.

### 3.3.2 Protection

Protect areas susceptible to vehicular or heavy foot traffic by erecting suitable barricades immediately after seeding is completed and/or by placing warning signs of a type approved by the Agency.

### 3.4 REPAIR

#### 3.4.1 General

When any portion of the ground surface becomes gullied or otherwise damaged following seeding within the period of Contractor's responsibility, repair the affected portion to re-establish the condition and grade of the soil prior to planting and then reseed as specified for initial planting, all at no cost to the Agency.

#### 3.4.2 Reseeding

When it becomes evident that the seeding has been unsuccessful, the Agency will require that these areas be reseeded with the same seed and quantity as specified for the initial seeding. Complete reseeded within fifteen (15) days following notification. Prepare the area to be reseeded as directed by the Agency, to receive the reseeded. Reseeding due to damaged or deficient seed material or improper application will be completed at no additional cost to the Agency.

#### 3.4.3 Replacement of Straw Mulch

Slopes of 3:1 or steeper where erosion has occurred, or where straw mulch has blown or washed away within the period of Contractor's responsibility shall have straw reapplied at the rate and method described in Sections 3.3.1.b and 3.3.1.c at no additional cost to the Agency.

### 3.5 FIELD QUALITY CONTROL

During the course of work or upon completion of the Project, a check of the quantities of materials will be made against the areas treated, and if the minimum rates of application have not been met, the Agency will require the distribution of additional quantities of those materials to make up the minimum applications specified.

-- End of Section --

**PROPOSAL TO THE THREE RIVERS LEVEE IMPROVEMENT AUTHORITY**

**TRLIA PHASE 4  
YUBA RIVER SOUTH LEVEE  
UPPER YUBA LEVEE IMPROVEMENT PROJECT  
PLM 2.2 to 6.1/ STA 102+00 TO 303+59**

**CONTRACT NO. PH4 2010-01**

NAME OF BIDDER \_\_\_\_\_  
BUSINESS ADDRESS \_\_\_\_\_  
TELEPHONE NO. ( ) \_\_\_\_\_

The work to be done and referred to herein is in Yuba County, State of California:

**TRLIA PHASE 4  
YUBA RIVER SOUTH LEVEE  
UPPER YUBA LEVEE IMPROVEMENT PROJECT  
PLM 2.2 to 6.1/ STA 102+00 TO 303+59**

**CONTRACT NO. PH4 2010-01**

The project shall be constructed in accordance with the aforementioned Contract Documents and the provisions stated herein (including the payment of not less than the minimum wage rates set forth herein). Labor Surcharge and Equipment Rental Rates to be used under this contract shall be listed in the State of California Department of Transportation Division of Construction publication entitled, "Labor Surcharge and Equipment Rental Rates," that are in effect when the work is accomplished and the current applicable General Prevailing Wage Rates of the State of California Department of Industrial Relations.

**Addendum No. 1 (Date Received):** \_\_\_\_\_ **Contractor's Initials:** \_\_\_\_\_

**Addendum No. 2 (Date Received):** \_\_\_\_\_ **Contractor's Initials:** \_\_\_\_\_

The work to be done is specified in the attached Contract Documents.

**TRLIA PHASE 4  
YUBA RIVER SOUTH LEVEE  
UPPER YUBA LEVEE IMPROVEMENT PROJECT  
PLM 2.2 to 6.1/ STA 102+00 TO 303+59**

**CONTRACT NO. PH4 2010-01**

Bids are to be submitted for the entire work. The amount of the bid for comparison purposes will be the total of all items. The total of unit basis items will be determined by extension of the item price bid on the basis of the estimated quantity set forth for the item.

The bidder shall set forth for each item of work, in clearly legible figures, an item price and a total for the item in the respective spaces provided for this purpose. In the case of unit basis items, the amount set forth under the "total" column shall be the extension of the item price bid on the basis of the estimated quantity for the item.

In case of discrepancy between the item price and the total set forth for a unit basis item, the unit item price shall prevail, except as provided in (a) or (b), as follows:

- (a). If the amount set forth as a unit price is unreadable or otherwise unclear, or is omitted, or is the same as the amount as the entry in the item total column, then the amount set forth in the item total column for the item shall prevail and shall be divided by the estimated quantity for the item and the price thus obtained shall be the unit price.
- (b). (Decimal Errors) If the product of the entered unit price and the estimated quantity is exactly off by a factor of ten, one hundred, etc., or one-tenth, or one-hundredth, etc. from the entered total, the discrepancy will be resolved by using the entered unit price or item total, whichever most closely approximates percentage wise the unit price or item total in the Departments Final Estimate of cost.

If this Proposal shall be accepted and the undersigned fails to enter into the Contract and to give the two bonds in the sums to be determined as aforesaid, with surety satisfactory to the TRLIA within 8 days, not including Sundays and legal holidays, after the bidder has received notice from the TRLIA that the Contract has been awarded, the TRLIA may, at its option, determine that the bidder has abandoned the Contract, and thereupon this Proposal and the acceptance thereof shall be null and void and the forfeiture of such security accompanying this Proposal shall operate and the same shall be the property of the TRLIA.

The undersigned, as bidder, declares that the only persons or parties interested in this Proposal as principals are those names herein; that this Proposal is made without collusion with any other person, firm, or corporation, and in submitting this Proposal, the undersigned bidder agrees that if it is determined that he is the successful bidder, he will execute the non-collusion affidavit required by the Federal requirements set forth in these Special Provisions; that he has carefully examined the location of the proposed work, the annexed proposed form of Contract, and the plans therein referred to; and he proposes, and agrees if this Proposal is accepted, that he will contract with the TRLIA of Yuba in the form of the copy of the Contract annexed hereto, to provide all necessary machinery, tools, apparatus, and other means of construction, and to do all the work and furnish all the materials specified in the Contract, in the manner and time therein prescribed, and according to the requirements of the Engineer as therein set forth, and that he will take in full payment therefore the following item prices, to wit:

**Three Rivers Levee Improvement Authority**

**Upper Yuba Levee Improvement Project (South Levee) - Simpson Lane to Yuba Goldfields**

**BASE BID (SCHEDULE A)**

July 30, 2010

Line Item	Item Description	Estimated Quantity	Units	Unit Price	Total
A1	Mobilization and Demobilization	1	LS		
A2	Traffic Control	1	LS		
A3.1	SWPPP Silt Fence	45,000	LF		
A3.2	SWPPP Straw Wattle	10,000	LF		
A3.3	SWPPP Stabilized Construction Entrance	4	EA		
A3.4	Erosion Control (Borrow Site)	1	LS		
A3.5	K-Rail	140	LF		
A4	Clearing and Grubbing	1	LS		
A5	Topsoil Stripping (Levee and Berm Area)	29,886	CY		
A6	Levee Excavation (Levee Degrade and Initial Cap)	135,479	CY		
A7	Temporary Water Main	1	LS		
A8	Seepage and Stability Berm	52,829	CY		
A8.1	Slurry Wall Trench Spoils	50,000	CY		
A9	Slurry Wall Construction [S]	897,500	SF		
A10	Excavation and Haul (Borrow Site)	144,803	CY		
A11	Fill - Levee Embankment (From Borrow Site)	144,803	CY		
A12	Fill - Levee Embankment (From Import)	36,201	CY		
A13	DIP Watermain	140	LF		
A13.1	12-inch Irrigation Service	177	LF		
A13.2	18-inch Irrigation Service	170	LF		
A14	Dantoni Road - Sawcut	75	LF		
A15	Dantoni Road - AC/AB Demolition	353	SY		
A16	Dantoni Road - Lime Treatment	353	SY		
A17	Dantoni Road - Bituminous Concrete Pavement	487	TN		
A18	Aggregate Base	13,081	TN		
A19	Pipe Gates	13	EA		
A20	Signage	6	EA		
A21	Erosion Control Seeding	150	AC		
A22	Permanent Fencing	17,600	LF		
A23	Reclaim Borrow Site	1	LS		
A24	Haul & Waste (Unsuitable Material)	556	CY		
<b>SUBTOTAL BASE BID (SCHEDULE A):</b>					

[S] - SPECIALTY ITEM, REFER TO SECTION 2-8 OF THE GENERAL REQUIREMENTS.

<b>ADD ALTERNATE</b>	1	LS		
----------------------	---	----	--	--

**Three Rivers Levee Improvement Authority****Upper Yuba Levee Improvement Project (South Levee) - Simpson Lane to Yuba Goldfields****BASE BID (SCHEDULE B)****July 30, 2010**

<b>Line Item</b>	<b>Item Description</b>	<b>Estimated Quantity</b>	<b>Units</b>	<b>Unit Price</b>	<b>Total</b>
B1	Geotextile Fabric	12,879	SY		
B2	Bedding Material	3,220	TN		
B3	Rock Slope Protection	16,777	TN		
<b>SUBTOTAL BASE BID (SCHEDULE B):</b>					

<b>SUBTOTAL BASE BID (SCHEDULE A)</b>	
<b>SUBTOTAL BASE BID (SCHEDULE B)</b>	
<b>TOTAL BASE BID (SCHEDULE A PLUS SCHEDULE B)</b>	
<b>ADD ALTERNATE</b>	
<b>TOTAL BASE BID (SCHEDULE A PLUS SCHEDULE B) AND ADD ALTERNATE</b>	

Contract Drawings For:

**TRLIA Phase 4  
Yuba River South Levee  
Upper Yuba Levee Improvement Project  
(PLM 2.2 to 6.1 / STA. 102+00 to 303+59)**

Prepared for:  
**Three Rivers Levee Improvement Authority**

HDR Project Number: 201064-091273-141  
TRLIA Contract Number: PH4 2010-01

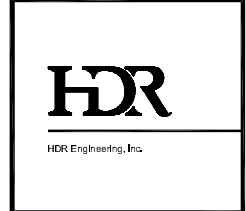


HDR Engineering Inc.  
2365 Iron Point Rd. Suite 300  
Folsom, CA 95630

2

**WDID: 5F20C358771**  
Import Volume: Approx. 36,500 c.y.  
Borrow Site Excavation: Approx. 145,000 c.y.

**ISSUED FOR BID  
JUNE 21, 2010**



ISSUE	DATE	DESCRIPTION
2	07/30/10	ADDENDUM 2
1	07/16/10	ADDENDUM 1

PROJECT MANAGER	J. MACK
DESIGNED BY	L. JONES
DRAWN BY	R. DOUGLAS
CHECKED BY	B. JOHNSON
TECHNICAL LEAD	D. JABBOUR
PROJECT NUMBER	201064-91273



Three Rivers Levee Improvement Authority  
TRLIA Phase 4  
Yuba River South Levee  
Upper Yuba Levee Improvement Project  
(PLM 2.2 to 6.1 / STA 102+00 to 303+59)

COVER SHEET		
FILENAME	00G-000.dwg	SHEET
SCALE	NONE	G-000

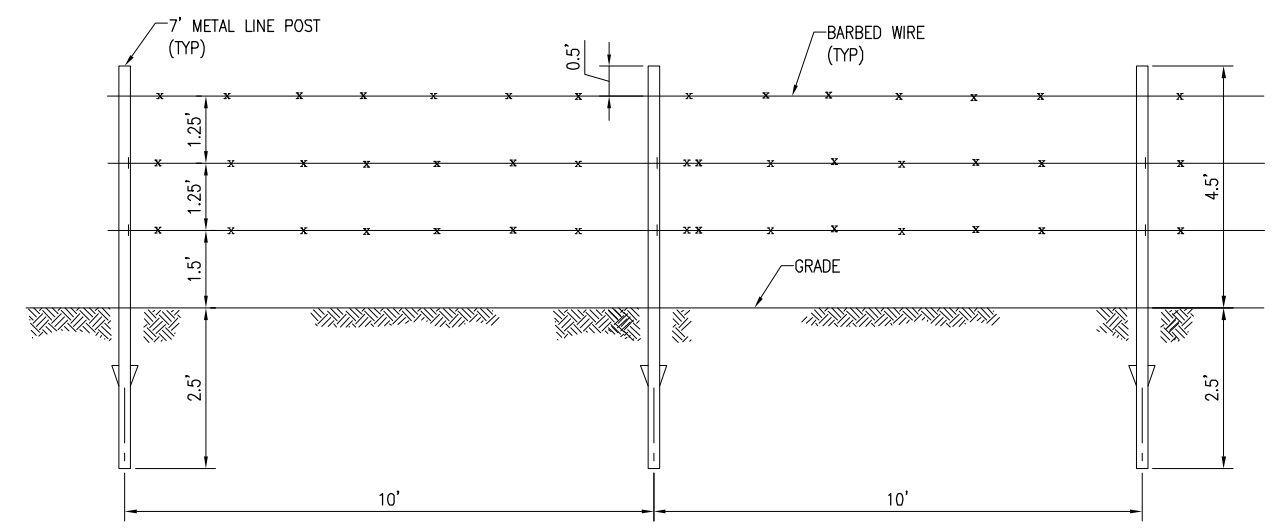
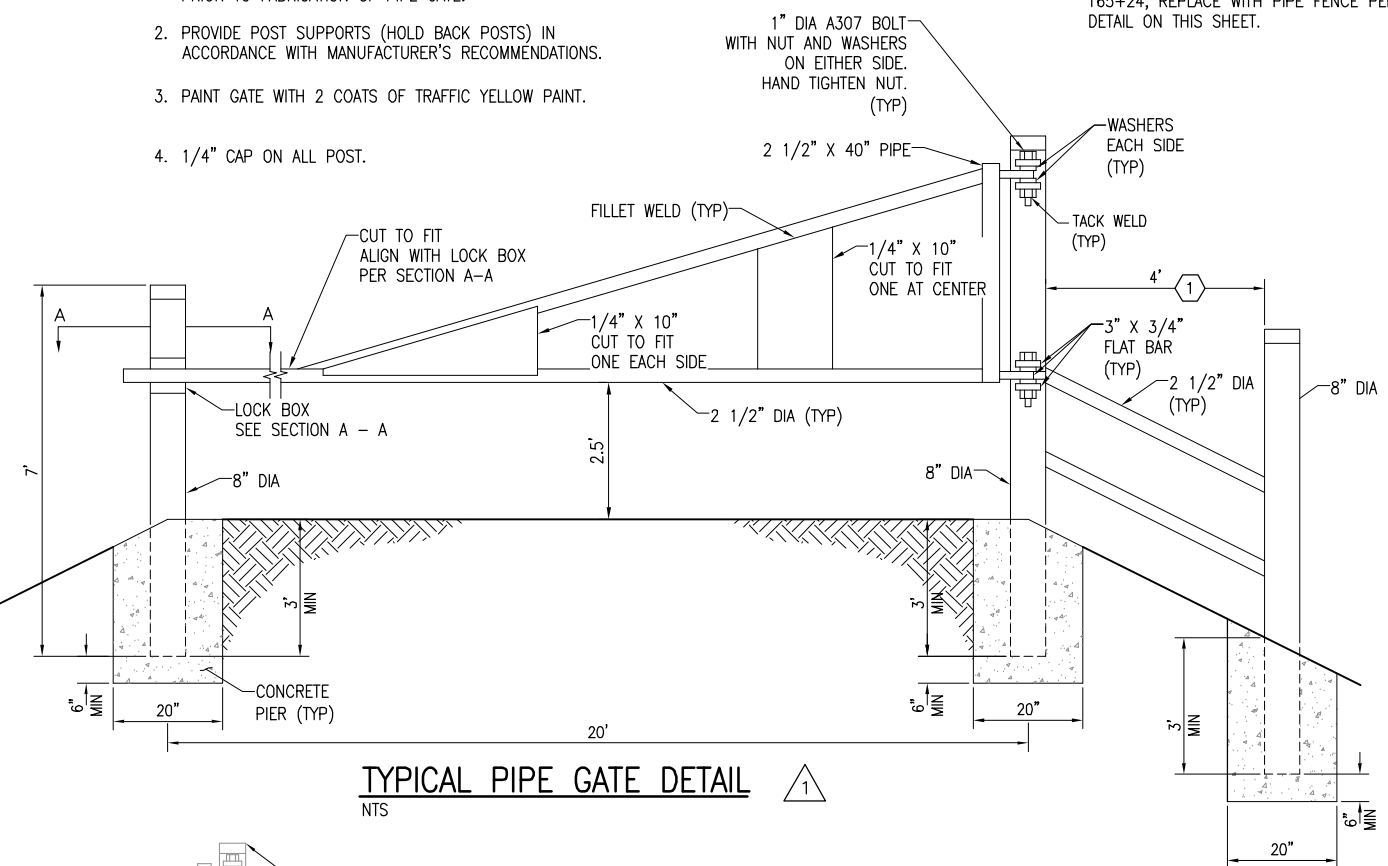
1

**PIPE GATE NOTES:**

1. CONTRACTOR SHALL CONFIRM LAYOUT AND SIDE SLOPES PRIOR TO FABRICATION OF PIPE GATE.
2. PROVIDE POST SUPPORTS (HOLD BACK POSTS) IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
3. PAINT GATE WITH 2 COATS OF TRAFFIC YELLOW PAINT.
4. 1/4" CAP ON ALL POST.

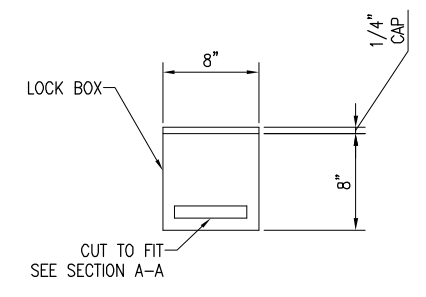
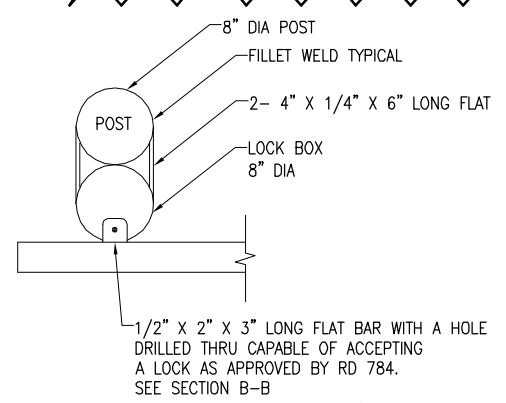
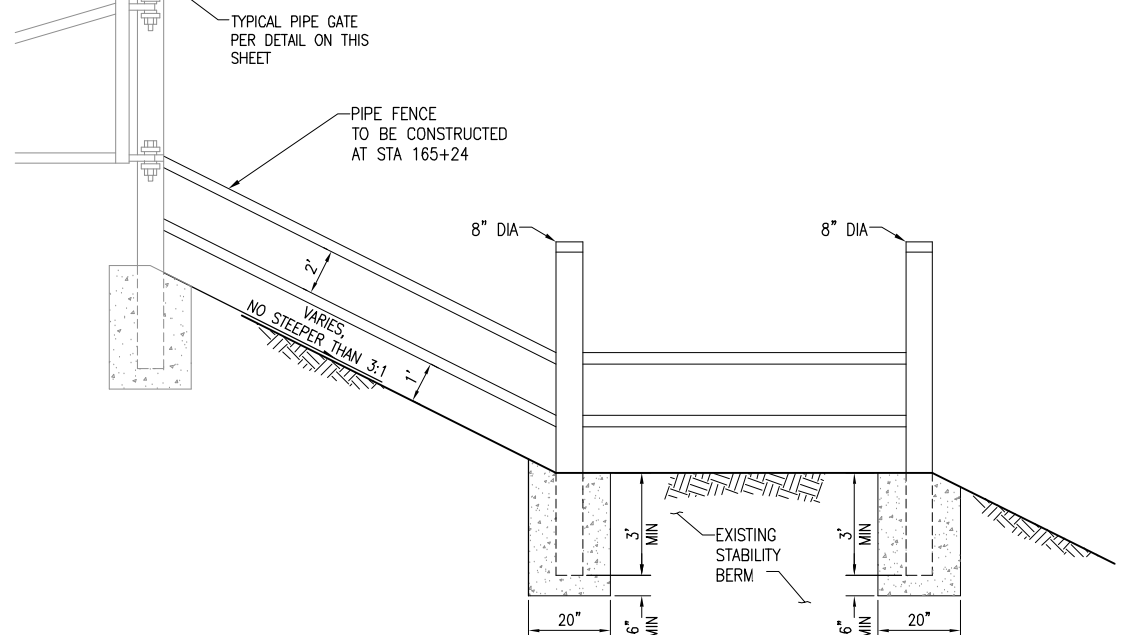
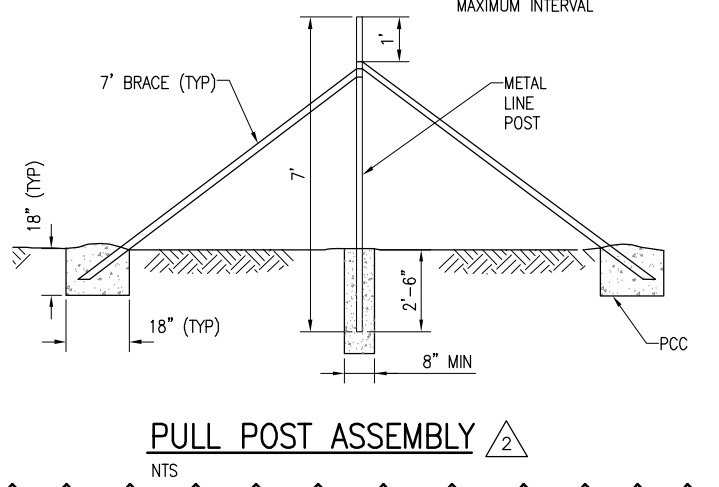
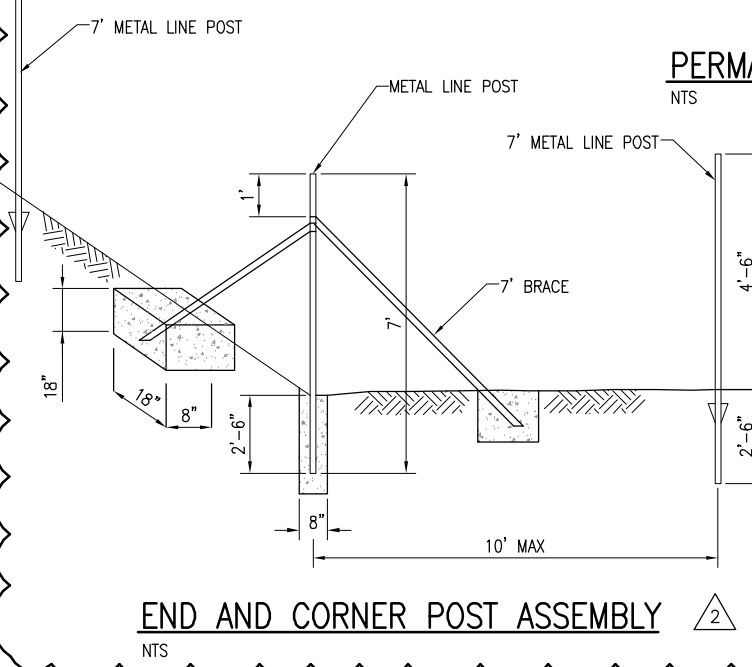
1 KEY NOTE:

GATE SIDE SUPPORT ONLY REQUIRED FOR LEVEE PIPE GATES LOCATED ON THE LEVEE CROWN OR AT LEVEE RAMPS. AT STA 165+24, REPLACE WITH PIPE FENCE PER DETAIL ON THIS SHEET.



2 FENCE NOTES:

1. BARBED WIRE SHALL BE 3 STRANDS OF GALVANIZED 4 POINT WIRE.
2. PULL POST ASSEMBLY AT 1300' MAXIMUM INTERVAL



**ISSUED FOR BID  
JUNE 21, 2010**



ISSUE	DATE	DESCRIPTION
2	07/30/10	ADDENDUM 2
1	07/16/10	ADDENDUM 1

PROJECT MANAGER	J. MACK
DESIGNED BY	L. JONES
DRAWN BY	R. DOUGLAS
CHECKED BY	B. JOHNSON
TECHNICAL LEAD	D. JABBOUR
PROJECT NUMBER	201064-91273



Three Rivers Levee Improvement Authority  
TRLIA Phase 4  
Yuba River South Levee  
Upper Yuba Levee Improvement Project  
(PLM 2.2 to 6.1 / STA 102+00 to 303+59)

TYPICAL FENCING DETAILS		SHEET
FILENAME	OOC-328.dwg	C-328
SCALE	NONE	