

INDEX OF PLANS

| SHEET No. | DESCRIPTION                                      |
|-----------|--|
| 1         | TITLE AND LOCATION MAP                           |
| 2         | LAYOUTS  |
| 3         | CONSTRUCTION DETAILS                             |
| 4-6       | DRAINAGE PLANS, PROFILES, DETAILS AND QUANTITIES |
| 7         | SUMMARY OF QUANTITIES                            |
| 8-22      | REVISED AND NEW STANDARD PLANS                   |

BUILDING PLANS

|       |                     |
|-------|---------------------|
| 23    | GENERAL PLAN        |
| 24-30 | ARCHITECTURAL PLANS |
| 31-45 | STRUCTURAL PLANS    |
| 46    | MECHANICAL PLAN     |
| 47-52 | ELECTRICAL PLANS    |

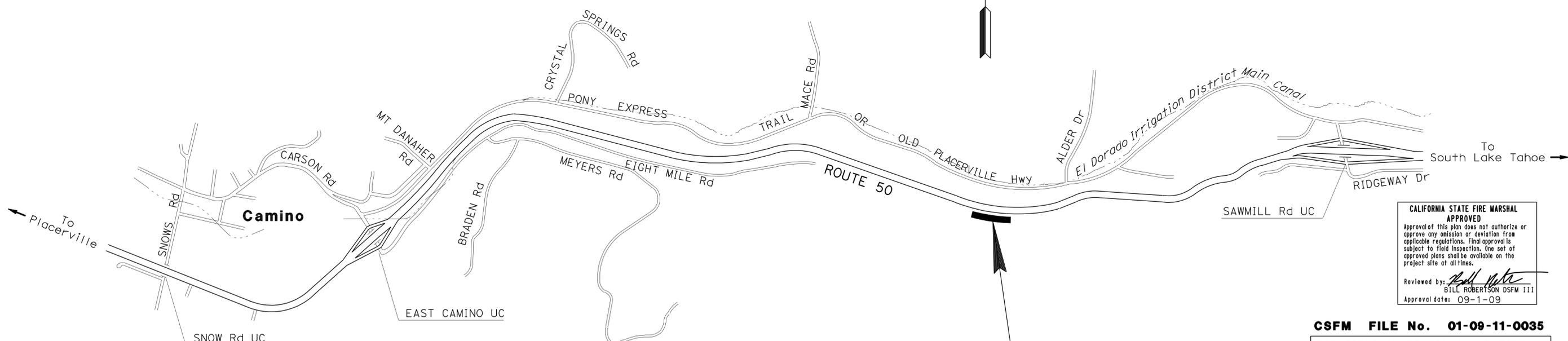
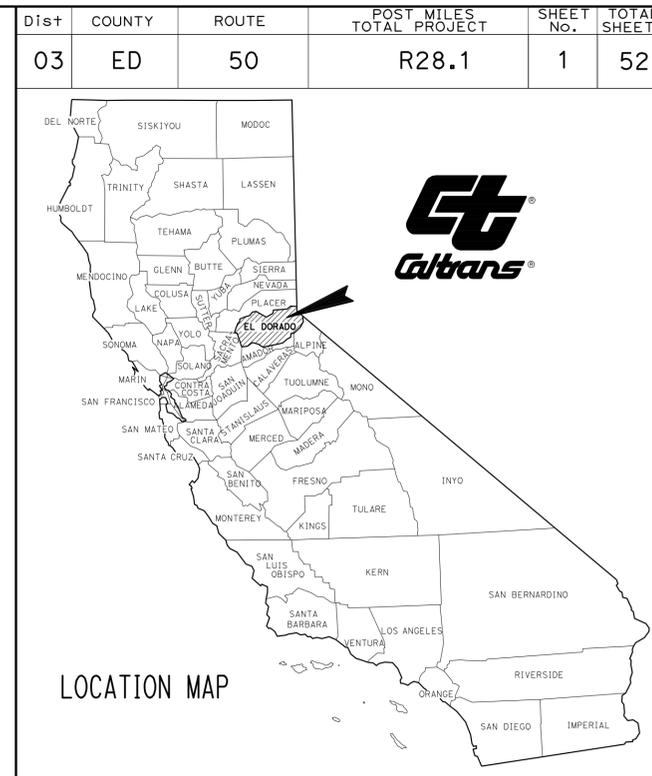
THE STANDARD PLANS LIST APPLICABLE TO THIS CONTRACT IS INCLUDED IN THE NOTICE TO BIDDERS AND SPECIAL PROVISIONS BOOK.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

PROJECT PLANS FOR BUILDING CONSTRUCTION ON  
STATE HIGHWAY

IN EL DORADO COUNTY  
NEAR CAMINO  
AT CAMINO SAND STORAGE FACILITY

TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006



**CALIFORNIA STATE FIRE MARSHAL**  
**APPROVED**  
Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.  
Reviewed by: *[Signature]*  
BILL ROBERTSON DSFM 111  
Approval date: 09-1-09

**CSFM FILE No. 01-09-11-0035**

FOR FIELD INSPECTIONS AND FIRE PROTECTION SYSTEM ACCEPTANCE TESTING CONTACT DEPUTY JOHN GUHL AT 916-445-8314 TO SCHEDULE AN APPOINTMENT

*[Signature]* 6-19-09  
PROJECT ENGINEER DATE  
REGISTERED CIVIL ENGINEER  
November 16, 2009  
PLANS APPROVAL DATE  
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



**LOCATION OF CONSTRUCTION  
CAMINO SAND STORAGE FACILITY  
FACILITY No. 19M5737  
PM R28.1**

NO SCALE

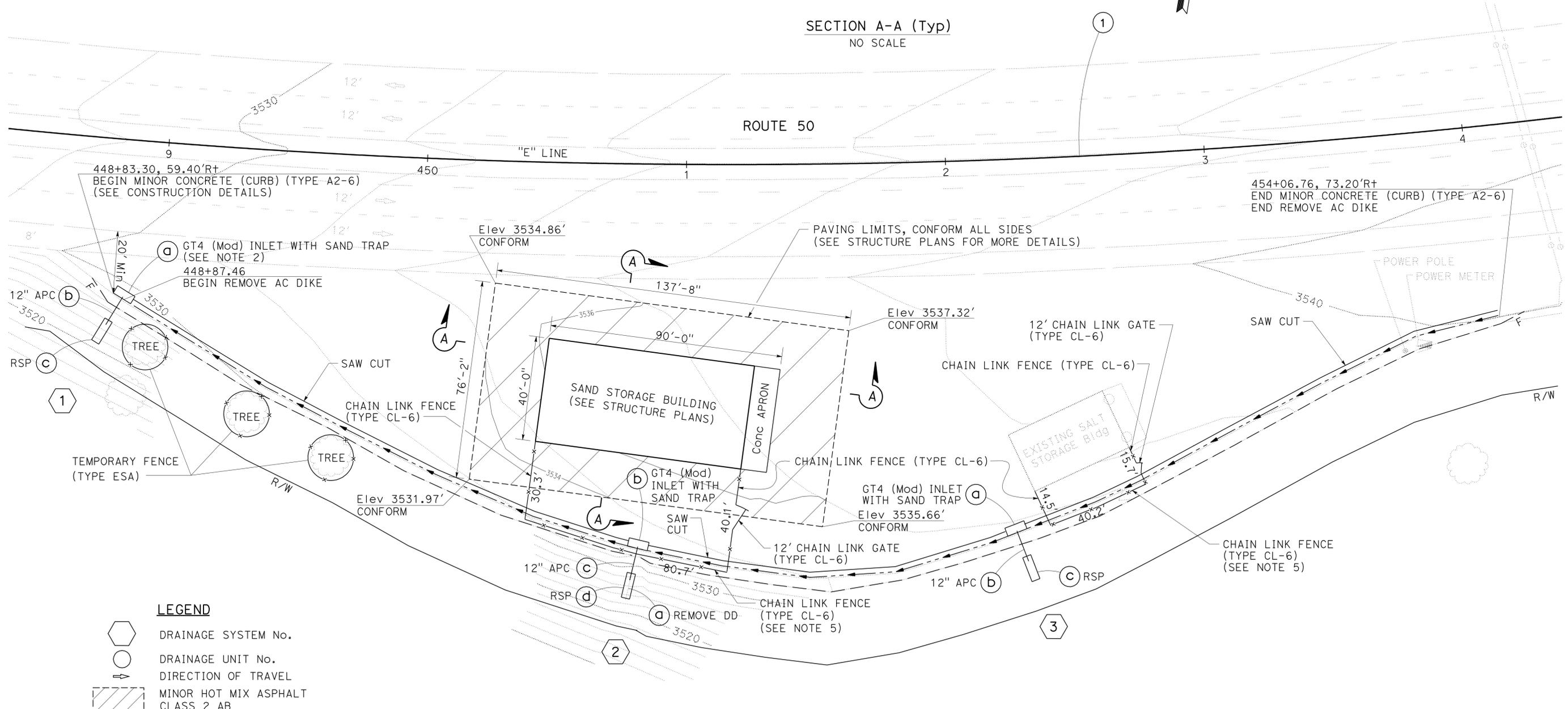
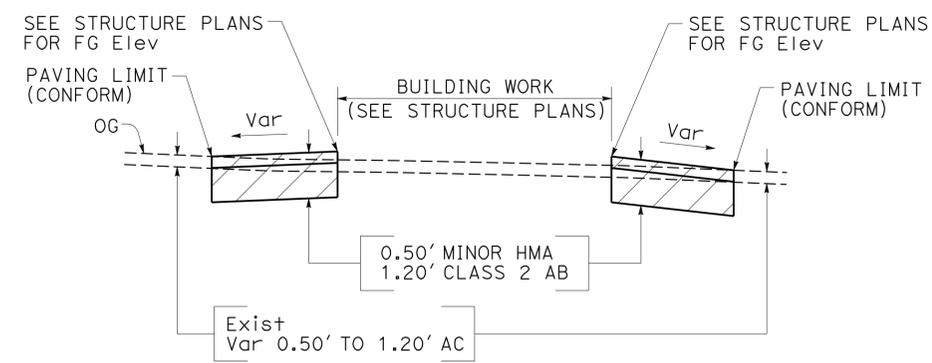
THE CONTRACTOR SHALL POSSESS THE CLASS (OR CLASSES) OF LICENSE AS SPECIFIED IN THE "NOTICE TO BIDDERS."

PROJECT MANAGER  
ROSS FOON  
DESIGN ENGINEER  
JIM ELDER

|   |        |       |                          |           |              |
|---|--------|-------|--------------------------|-----------|--------------|
| Dist  | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
| 03  | ED     | 50    | R28.1                    | 2         | 52           |
|   |        |       | 6-19-09                  | DATE      |              |
| REGISTERED CIVIL ENGINEER   |        |       | DATE                     |           |              |
| 11-16-09  |        |       | PLANS APPROVAL DATE      |           |              |
| THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET. |        |       |                          |           |              |



- NOTES:**
- DIMENSIONS OF THE PAVEMENT STRUCTURES (STRUCTURAL SECTIONS) ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
  - SUPERELEVATION AS SHOWN OR AS DIRECTED BY THE ENGINEER.
  - FOR ACCURATE RIGHT OF WAY, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
  - SYSTEM No. ① SHALL BE INSTALLED A MINIMUM OF 12' AWAY FROM TREE TRUNK.
  - INSTALL FENCE ALONG THE BACK SIDE OF CURB.



- LEGEND**
- DRAINAGE SYSTEM No.
  - DRAINAGE UNIT No.
  - DIRECTION OF TRAVEL
  - MINOR HOT MIX ASPHALT CLASS 2 AB
- ABBREVIATION**
- ESA ENVIRONMENTALLY SENSITIVE AREA

**CURVE DATA**

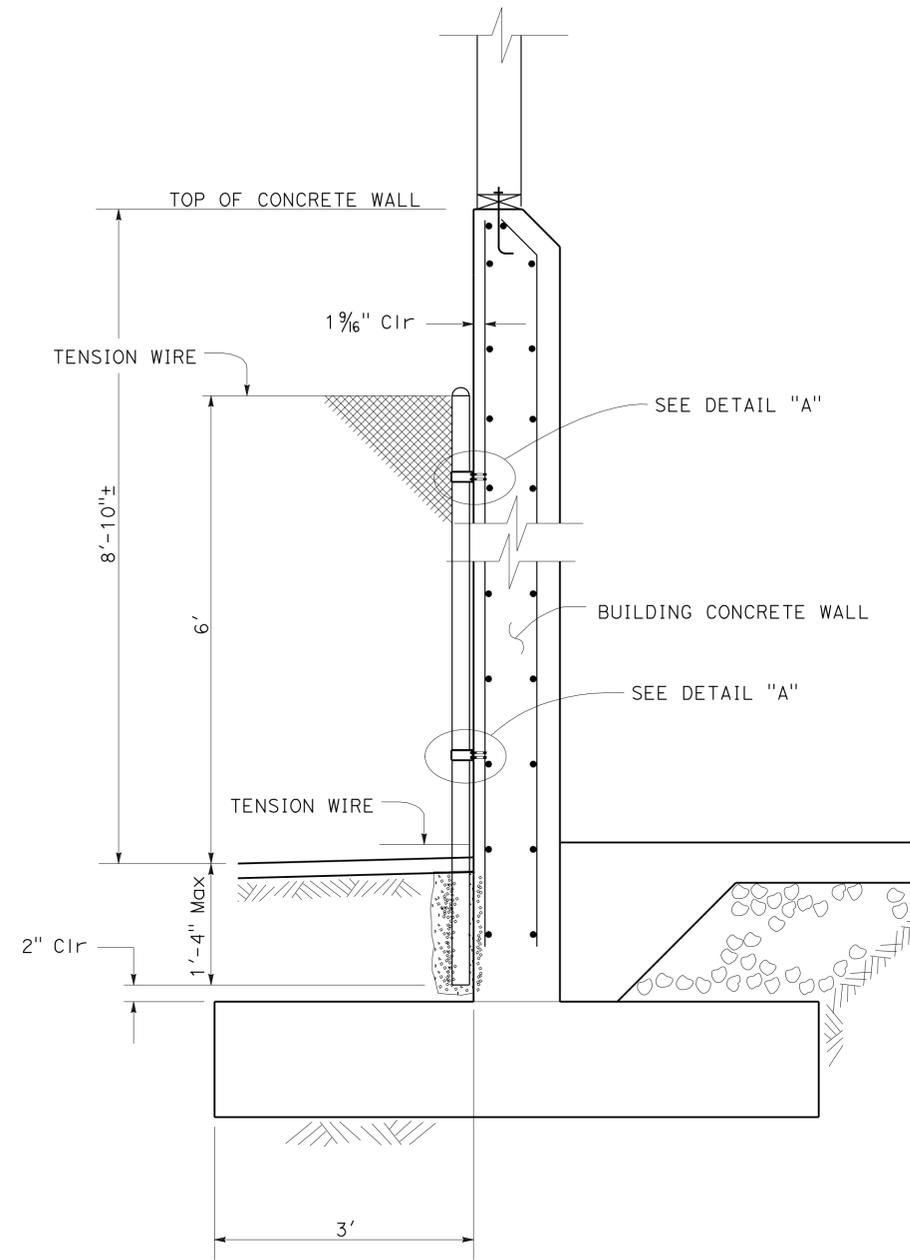
| No. | R         | Δ              | T        | L         |
|-----|-----------|----------------|----------|-----------|
| ①   | 2821.522' | 33° 18' 46.25" | 844.160' | 1640.486' |

**LAYOUT**  
SCALE: 1"=20'

**L-1**

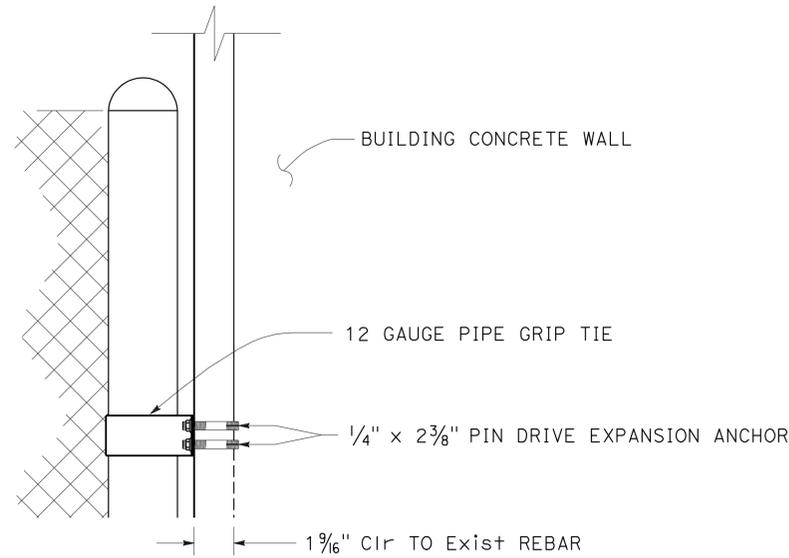
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 NORTH REGION  
 OFFICE OF DESIGN, SOUTH DESIGN BRANCH S11  
 S. CHAN  
 J. ELDER  
 JAMES M. ELDER  
 Et Caltrans

|   |        |       |                             |                                |                 |
|---|--------|-------|-----------------------------|--------------------------------|-----------------|
| Dist  | COUNTY | ROUTE | POST MILES<br>TOTAL PROJECT | SHEET<br>No.                   | TOTAL<br>SHEETS |
| 03  | ED     | 50    | R28.1                       | 3                              | 52              |
|   |        |       | 6-19-09                     | REGISTERED CIVIL ENGINEER DATE |                 |
|   |        |       | 11-16-09                    | PLANS APPROVAL DATE            |                 |
|   |        |       |                             |                                |                 |
| THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET. |        |       |                             |                                |                 |

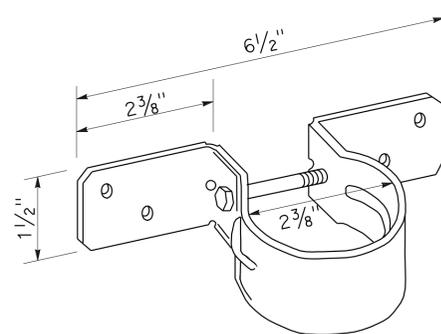


**CHAIN LINK FENCE DETAIL  
FOR CONNECTION TO CONCRETE WALL  
OF EXISTING AND NEW STORAGE BUILDING**

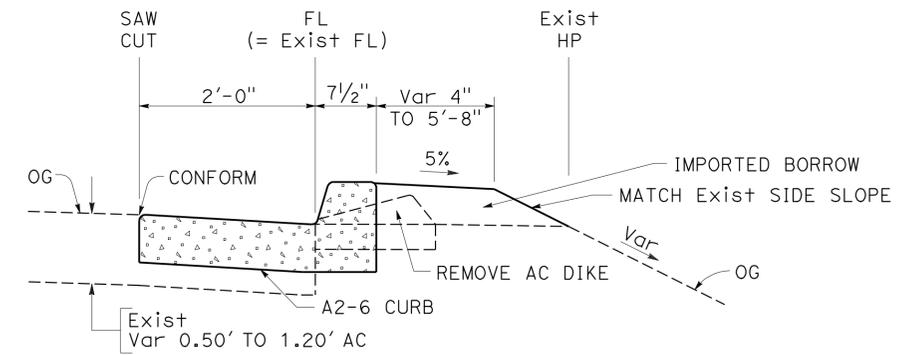
(FOR FENCE DETAILS NOT SHOWN, SEE S+d PLAN A85)



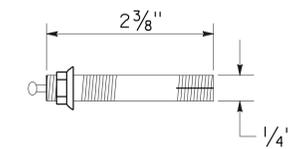
**DETAIL "A"**



**PIPE GRIP TIE DETAIL**



**MINOR CONCRETE (CURB) DETAIL**



BEFORE EXPANSION



AFTER EXPANSION

**EXPANSION ANCHOR DETAIL**

**CONSTRUCTION DETAILS**

NO SCALE

**C-1**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 NORTH REGION  
 OFFICE OF DESIGN, SOUTH  
 DESIGN BRANCH S11

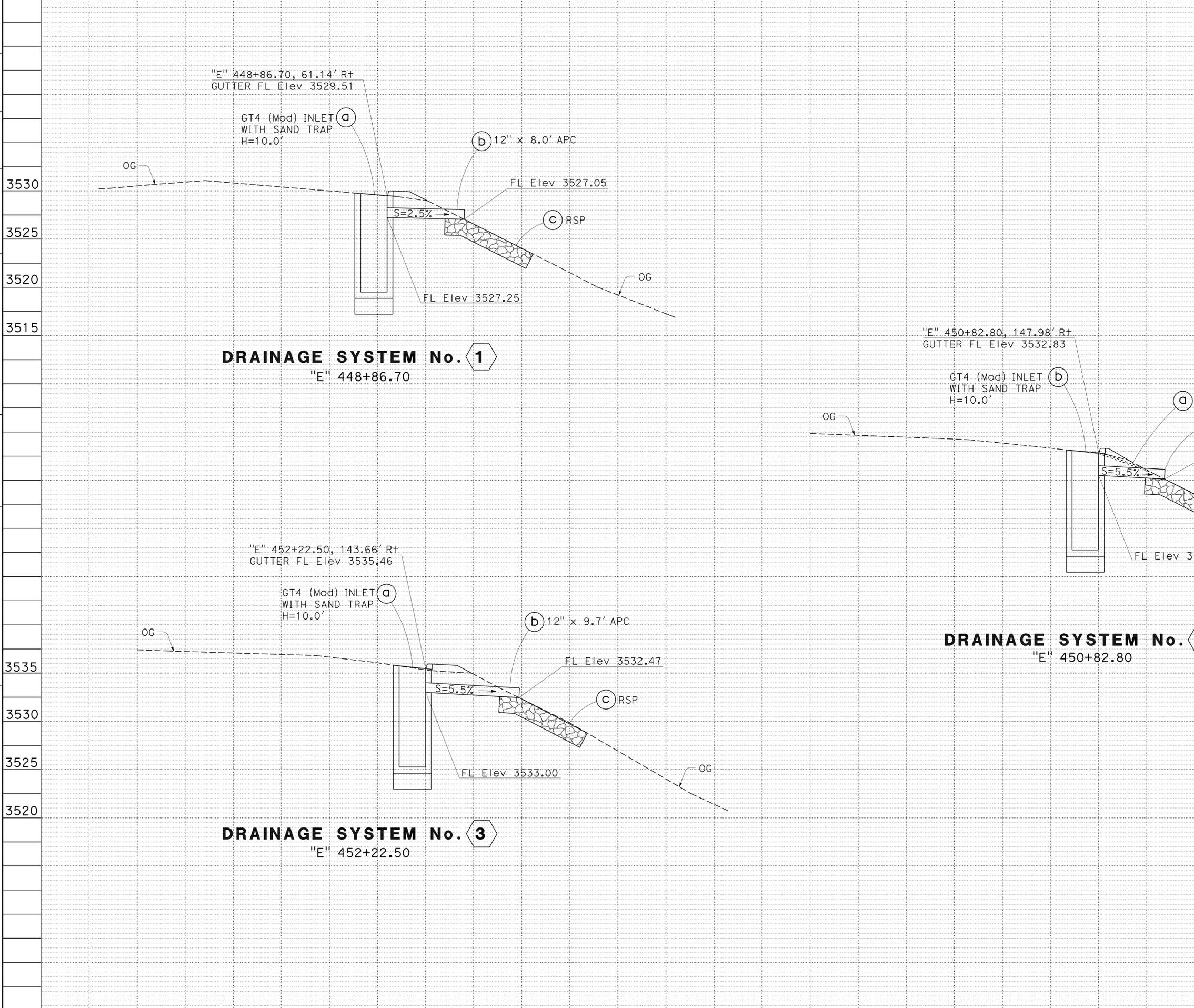


FUNCTIONAL SUPERVISOR  
 JAMES M. ELDER

S. CHAN  
 J. ELDER

REVISOR  
 DATE

CALCULATED-DESIGNED BY  
 CHECKED BY



|      |        |       |                           |           |              |
|------|--------|-------|---------------------------|-----------|--------------|
| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT  | SHEET No. | TOTAL SHEETS |
| 03   | ED     | 50    | R28.1                     | 4         | 52           |
|      |        |       | REGISTERED CIVIL ENGINEER | DATE      |              |
|      |        |       | 11-16-09                  | 6-19-09   |              |
|      |        |       | PLANS APPROVAL DATE       |           |              |



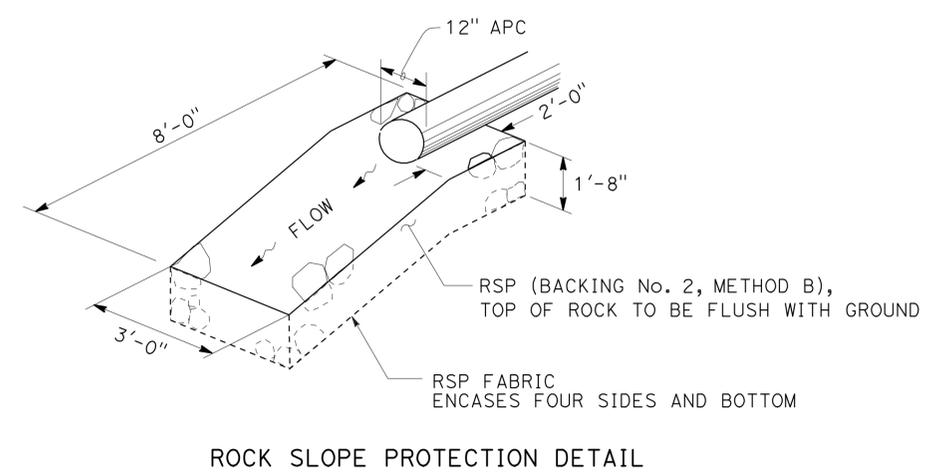
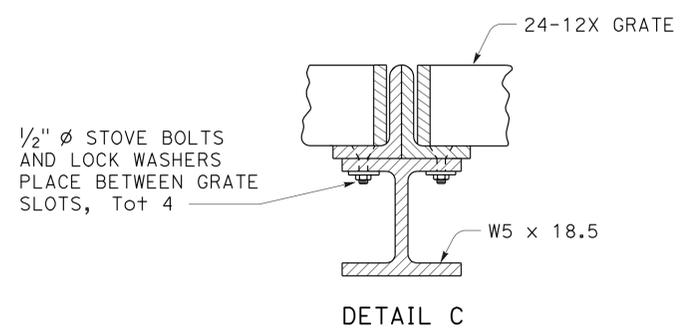
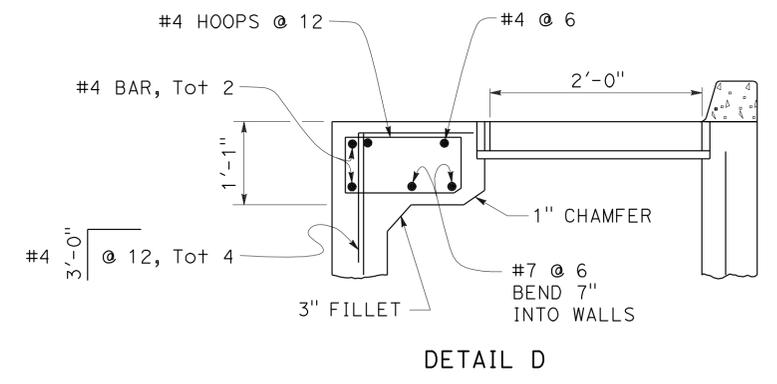
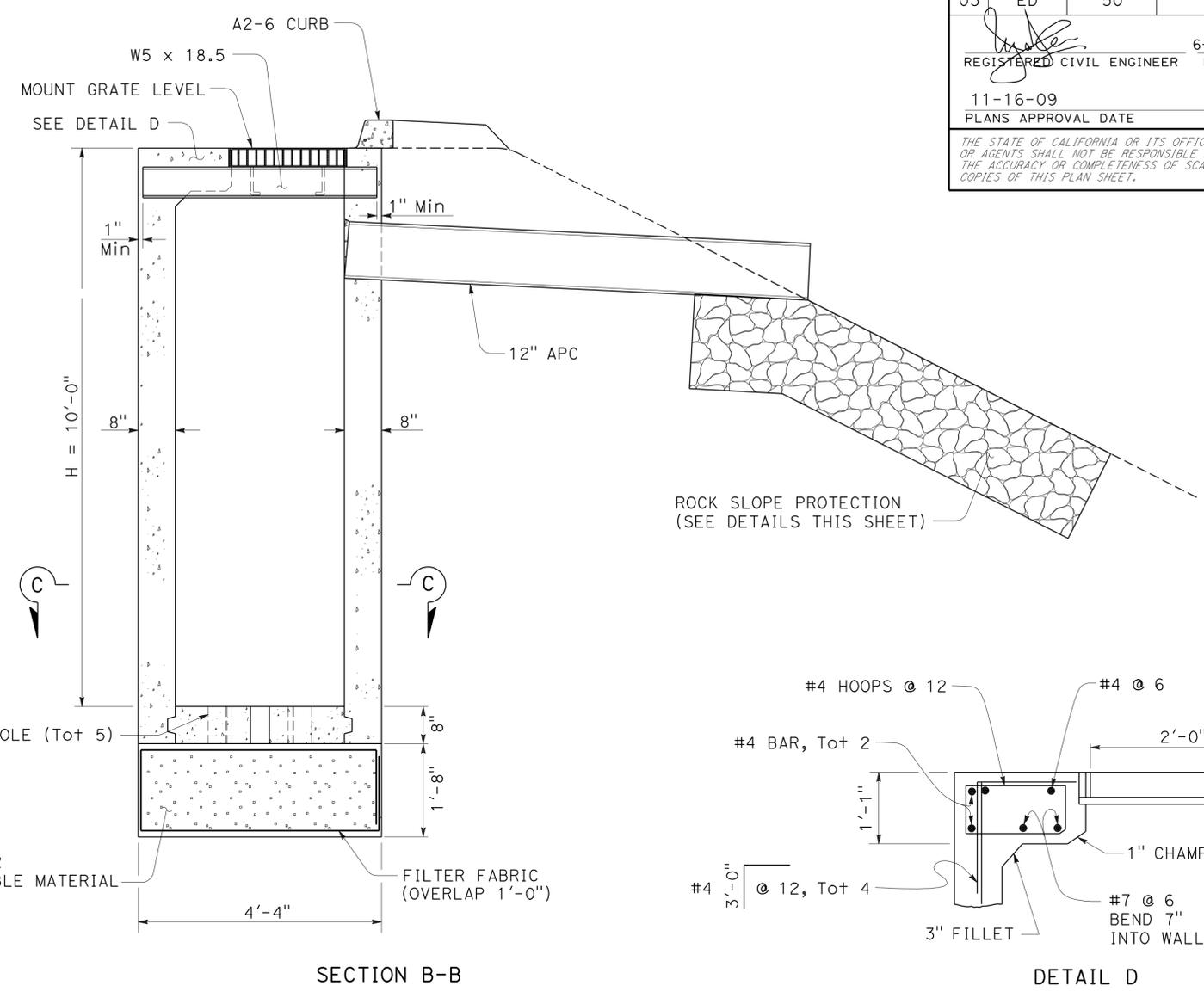
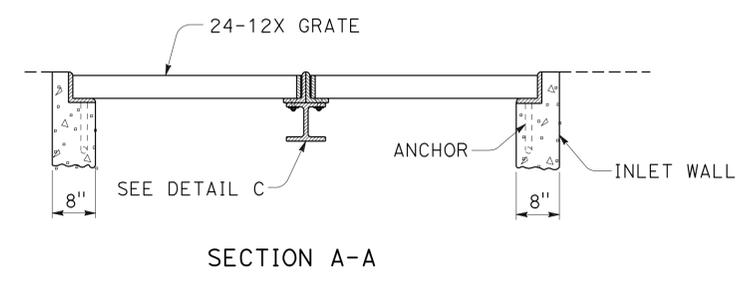
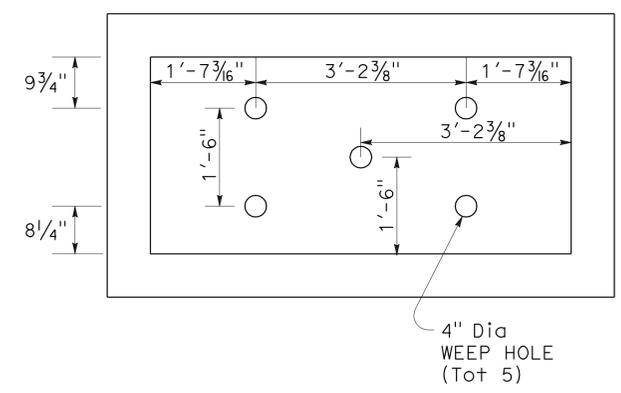
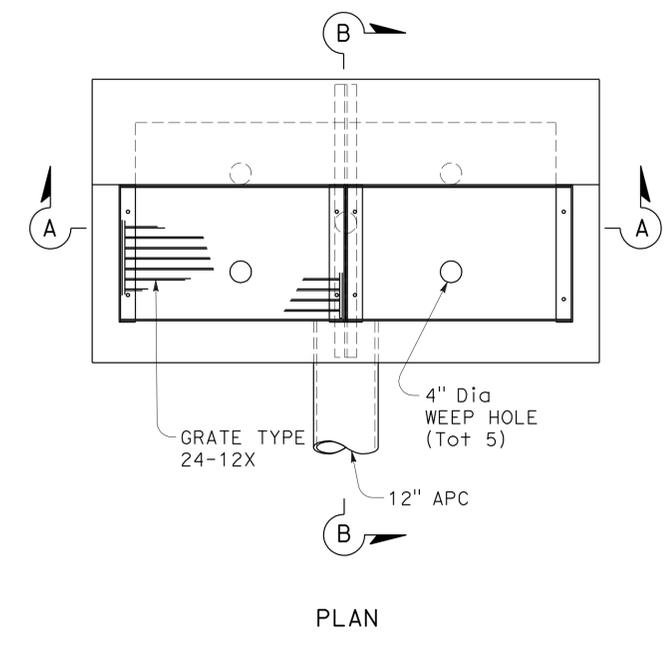
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**DRAINAGE PROFILES**

SCALE: Horiz 1"=5'  
 Vert 1"=5'

**DP-1**

|   |        |       |                          |           |              |
|---|--------|-------|--------------------------|-----------|--------------|
| Dist  | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
| 03  | ED     | 50    | R28.1                    | 5         | 52           |
| REGISTERED CIVIL ENGINEER   |        |       | DATE                     | 6-19-09   |              |
| 11-16-09  |        |       | PLANS APPROVAL DATE      |           |              |
| THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET. |        |       |                          |           |              |
| REGISTERED PROFESSIONAL ENGINEER<br>SYLVIA CHAN<br>No. 67770<br>Exp. 6-30-11<br>CIVIL<br>STATE OF CALIFORNIA                                      |        |       |                          |           |              |



**GT4 (Mod) INLET WITH SAND TRAP DETAILS**  
 (FOR DETAILS NOT SHOWN, SEE S+D PLAN D74A)

**DRAINAGE DETAILS**  
 NO SCALE

**DD-1**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - NORTH REGION, SOUTH OFFICE OF DESIGN, SOUTH DESIGN BRANCH S11

FUNCTIONAL SUPERVISOR: JAMES M. ELDER

DESIGNED BY: S. CHAN

CHECKED BY: J. ELDER

REVISOR: S. CHAN

DATE: 11-16-09

DESIGNER: J. ELDER

DATE: 11-16-09

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 NORTH REGION  
 OFFICE OF DESIGN, SOUTH  
 DESIGN BRANCH S11

FUNCTIONAL SUPERVISOR  
 JAMES M. ELDER

CALCULATED-DESIGNED BY  
 CHECKED BY

S. CHAN  
 J. ELDER

REVISED BY  
 DATE REVISED

**NOTE:**

1. PLASTIC PIPE SHALL BE SMOOTH INTERIOR WALL TYPE.

**ABBREVIATIONS**

- S - STANDARD JOINT TYPE
- AL2 - ALUMINIZED STEEL COATING (TYPE 2)
- BC - BITUMINOUS COATING
- BCI - BITUMINOUS COATING WITH INVERT PAVING
- PA - POLYMERIZED ASPHALT
- PS - POLYMERIC SHEET COATING

|      |        |       |                             |              |                 |
|------|--------|-------|-----------------------------|--------------|-----------------|
| Dist | COUNTY | ROUTE | POST MILES<br>TOTAL PROJECT | SHEET<br>No. | TOTAL<br>SHEETS |
| 03   | ED     | 50    | R28.1                       | 6            | 52              |

REGISTERED CIVIL ENGINEER DATE 6-19-09  
 11-16-09  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 SYLVIA CHAN  
 No. 67770  
 Exp. 6-30-11  
 CIVIL

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**ALTERNATE PIPE CULVERTS - ALLOWABLE PIPE MATERIALS**

| CULVERT TYPE  | DESCRIPTION                                 |
|---|---|
| CSP (HELICAL 2 $\frac{2}{3}$ " X 1/2" CORRUGATIONS)             | AL2, BC, BCI, PA OR PS COATED, 0.064" THICK |
| CAP (HELICAL OR ANNULAR, 2 $\frac{2}{3}$ " X 1/2" CORRUGATIONS) | 0.060" THICK                                |
| PLASTIC   | PVC CORRUGATED                              |

**DRAINAGE QUANTITIES**

| SHEET No. | DRAINAGE SYSTEM No. | DRAINAGE UNIT | REMOVE DOWNDRAIN | 12" ALTERNATIVE PIPE<br>CULVERT | (N) | (N) | MINOR CONCRETE<br>(MINOR STRUCTURE) | MISCELLANEOUS<br>IRON AND STEEL | (N)  | ROCK SLOPE PROTECTION<br>(BACKING No. 2, METHOD B) | ROCK SLOPE PROTECTION<br>FABRIC | CLASS 2<br>PERMEABLE MATERIAL | FILTER FABRIC | JOINT CLASSIFICATION | DESCRIPTION                                      | STATION                   | DRAINAGE SYSTEM No. | DRAINAGE UNIT | SHEET No. |    |
|-----------|---------------------|---------------|------------------|---------------------------------|-----|-----|-------------------------------------|---------------------------------|------|--|---------------------------------|-------------------------------|---------------|----------------------|--|---------------------------|---------------------|---------------|-----------|----|
|           |                     |               | EA               | LF                              | EA  | EA  |                                     |                                 | LF   |  |                                 |                               |               |                      |  |                           |                     |               |           | CY |
| L-1       | 1                   | a             |                  |                                 | 2   | 1   | 6.43                                | 478                             | 10.0 |  |                                 | 2.1                           | 12.1          |                      | GT4 (Mod) DI WITH SAND TRAP<br>GRATE TYPE 24-12X | "E" 448+86.70, 61.14' Rt  | 1                   | a             | L-1       |    |
|           |                     | b             |                  | 8.0                             |     |     |                                     |                                 |      | 1.5  | 6.8                             |                               |               | S                    | 12" APC  |                           |                     | b             |           |    |
|           |                     | c             |                  |                                 |     |     |                                     |                                 |      |  |                                 |                               |               |                      | RSP WITH FABRIC                                  |                           |                     | c             |           |    |
| L-1       | 2                   | a             | 1                |                                 |     |     |                                     |                                 |      |  |                                 |                               |               |                      | REMOVE DOWNDRAIN                                 | "E" 450+82.80, 147.98' Rt | 2                   | a             | L-1       |    |
|           |                     | b             |                  |                                 | 2   | 1   | 6.43                                | 478                             | 10.0 |  |                                 | 2.1                           | 12.1          |                      | GT4 (Mod) DI WITH SAND TRAP<br>GRATE TYPE 24-12X |                           |                     | b             |           |    |
|           |                     | c             |                  | 6.9                             |     |     |                                     |                                 |      |  | 1.5                             | 6.8                           |               |                      | S  | 12" APC                   |                     |               |           | c  |
|           |                     | d             |                  |                                 |     |     |                                     |                                 |      |  |                                 |                               |               |                      | RSP WITH FABRIC                                  |                           |                     | d             |           |    |
| L-1       | 3                   | a             |                  |                                 | 2   | 1   | 6.43                                | 478                             | 10.0 |  |                                 | 2.1                           | 12.1          |                      | GT4 (Mod) DI WITH SAND TRAP<br>GRATE TYPE 24-12X | "E" 452+22.50, 143.66' Rt | 3                   | a             | L-1       |    |
|           |                     | b             |                  | 9.7                             |     |     |                                     |                                 |      |  |                                 |                               |               | S                    | 12" APC  |                           |                     | b             |           |    |
|           |                     | c             |                  |                                 |     |     |                                     |                                 |      |  | 1.5                             | 6.8                           |               |                      | RSP WITH FABRIC                                  |                           |                     | c             |           |    |
| TOTAL     |                     |               | 1                | 24.6                            | 6   | 3   | 19.29                               | 1434                            |      | 4.5  | 20.4                            | 6.3                           | 36.3          |                      |  |                           |                     |               |           |    |

(N) NOT A SEPARATE PAY ITEM, FOR INFORMATION ONLY.

**DRAINAGE QUANTITIES**

**DQ-1**



|      |        |       |                             |              |                 |
|------|--------|-------|-----------------------------|--------------|-----------------|
| Dist | COUNTY | ROUTE | POST MILES<br>TOTAL PROJECT | SHEET<br>No. | TOTAL<br>SHEETS |
| 03   | ED     | 50    | R28.1                       | 7            | 52              |

REGISTERED CIVIL ENGINEER DATE 6-19-09  
 11-16-09  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 SYLVIA CHAN  
 No. 67770  
 Exp. 6-30-11  
 CIVIL

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### ROADWAY QUANTITIES

| STATION                          | CHAIN LINK FENCE<br>(TYPE CL-6) | 12' CHAIN LINK GATE<br>(TYPE CL-6) | MINOR CONCRETE (CURB) | IMPORTED BORROW | REMOVE AC DIKE | TEMPORARY FENCE (TYPE ESA) | ROADWAY EXCAVATION | MINOR HOT MIX ASPHALT | CLASS 2 AGGREGATE BASE | REMARKS                             |
|----------------------------------|---------------------------------|------------------------------------|-----------------------|-----------------|----------------|----------------------------|--------------------|-----------------------|------------------------|-------------------------------------|
|                                  | LF                              | EA                                 | LF                    | CY              | LF             | LF                         | CY                 | TON                   | CY                     |                                     |
| "E" 450+43 R+                    | 30.3                            |                                    |                       |                 |                |                            |                    |                       |                        |                                     |
| "E" 450+43 R+ TO 451+19 R+       | 80.7                            |                                    |                       |                 |                |                            |                    |                       |                        |                                     |
| "E" 451+19 R+                    | 28.1                            | 1                                  |                       |                 |                |                            |                    |                       |                        |                                     |
| "E" 452+32 R+                    | 14.5                            |                                    |                       |                 |                |                            |                    |                       |                        |                                     |
| "E" 452+32 R+ TO 452+68 R+       | 40.2                            |                                    |                       |                 |                |                            |                    |                       |                        |                                     |
| "E" 452+68 R+                    | 3.7                             | 1                                  |                       |                 |                |                            |                    |                       |                        |                                     |
| "E" 448+87.46 R+ TO 454+06.76 R+ |                                 |                                    |                       |                 | 575            |                            |                    |                       |                        |                                     |
| "E" 448+83.30 R+ TO 454+06.76 R+ |                                 |                                    | 580                   | 33              |                |                            | 29                 |                       |                        | TYPE A2-6 CURB                      |
| "E" 448+80 R+ TO 450+00 R+       |                                 |                                    |                       |                 |                | 180                        |                    |                       |                        | FENCE AROUND THREE TREES            |
| "E" 450+20 R+ TO 451+62 R+       |                                 |                                    |                       |                 |                |                            | 377                | 275.5                 | 306                    | PAVING AROUND SAND STORAGE BUILDING |
| TOTAL                            | 197.5                           | 2                                  | 580                   | 33              | 575            | 180                        | 406                | 275.5                 | 306                    |                                     |

### EROSION CONTROL (HYDROSEED) (SQFT)

| STATION                    | AREA | REMARKS  |
|----------------------------|------|--|
|                            | SQFT |  |
| "E" 448+75 R+ TO 454+20 R+ | 2500 | FOR DISTURBED SOIL AREA NOT COVERED BY ASPHALT, RSP OR SHOULDER BACKING. |

### TEMPORARY WATER POLLUTION CONTROL QUANTITIES

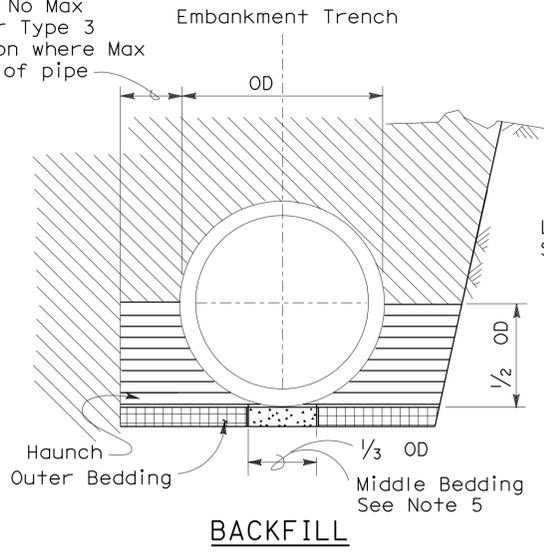
| TEMPORARY FIBER ROLL | TEMPORARY SILT FENCE | TEMPORARY DRAINAGE INLET PROTECTION |
|----------------------|----------------------|-------------------------------------|
| LF                   | LF                   | EA                                  |
| 400                  | 400                  | 3                                   |

## SUMMARY OF QUANTITIES

Q-1

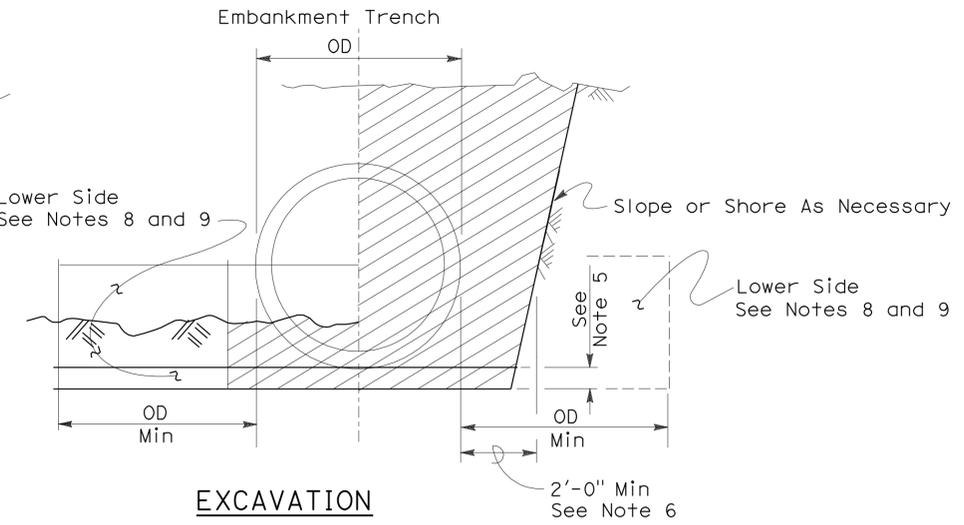
To accompany plans dated 11-16-09

2'-0" Min; No Max except for Type 3 Installation where Max Equals OD of pipe



**BACKFILL**

- Roadway Embankment
- Structure Backfill (Culvert) See Note 6
- Structure Backfill (Culvert) See Note 6
- Loose Backfill



**EXCAVATION**

- Excavation Structure (Culvert)

**TYPE 1 INSTALLATION:**

The haunch and outer bedding shall be compacted to a minimum 90 percent relative compaction. In addition, the minimum sand equivalent in these areas shall be 30 and the maximum percentage passing the 75 μm sieve size shall be 12.

**TYPE 2 INSTALLATION:**

The haunch and outer bedding shall be compacted to a minimum 90 percent relative compaction. In addition, the minimum sand equivalent in these areas shall be 25.

**TYPE 3 INSTALLATION:**

The haunch and outer bedding shall be compacted to a minimum 85 percent relative compaction. 90 percent relative compaction will be required where the fill over the pipe is less than 4'-0" or 1/2 OD.

**NOTES:**

- Unless otherwise shown on the plans or specified in the special provision, the Contractor shall have the option of selecting the class of RCP and the type of installation to be used, provided the height of cover does not exceed the value shown for the RCP selected.  
 Example: 24" RCP culvert with maximum cover of 19'-0" the options are:
  - Class III or stronger with Installation Type 1.
  - Class III Special or stronger with Installation Type 2.
  - Class IV Special or stronger with Installation Type 3.
 Cover is defined as the maximum vertical distance from top of the pipe to finished grade within the length of any given culvert.
- The class of RCP and Installation Type selected shall be the same throughout the length of any given culvert.
- The "length of any culvert" is defined as the culvert between:
  - Successive drainage structure (inlets, junction boxes, headwalls, etc.).
  - A drainage structure and the inlet or outlet end of the culvert.
  - The inlet and outlet end of the culvert when there are no intervening drainage structures.
- Oval and arch shaped RCP shall not be used.
- 1/25 OD Min, not less than 3".
- Slurry cement backfill may be substituted for backfill in the outer bedding and haunch areas. If slurry is used the outer and middle beddings shall be omitted. Prior to installation the soil under the middle 1/3 of the outside diameter of the pipe shall be softened by scarifying or other means to a minimum depth of 1/25 OD, but not less than 3". Where slurry cement backfill is used clear distance to trench wall may be reduced as set forth in Section 19-3.062 of the Standard Specifications.
- Backfill shall be placed full width of excavation except where dimensions are shown for backfill width or thickness. Dimensions shown are minimums.
- Lower side shall be suitable material as determined by the Engineer. Otherwise it shall be considered unsuitable as set forth in Section 19-2.02 of the Standard Specifications. See Note 9.
- Where the pipe is placed in a trench, if the trench walls are sloped at 5 vertical to 1 horizontal or steeper for at least 90 percent of the trench height or up to not less than 12" from the grading plane, the firmness of the soil in the lower side need not be considered.
- Non-reinforced precast concrete pipe sizes 3'-0" or smaller may be placed under installation Types 1, 2 or 3.

**INSTALLATION TYPE 1**

| MINIMUM CLASS AND D-LOAD | COVER                |               |
|--------------------------|----------------------|---------------|
|                          | 108" Dia AND SMALLER | OVER 108" Dia |
| Class II 1000D           | 14.9'                | 12.9'         |
| Class III 1350D          | 15.0' - 20.9'        | 13.0' - 18.9' |
| Class III Special 1700D  | 21.0' - 26.9'        | 19.0' - 24.9' |
| Class IV 2000D           | 27.0' - 31.9'        | 25.0' - 29.9' |
| Class IV Special 2500D   | 32.0' - 40.9'        | 30.0' - 38.9' |
| Class V 3000D            | 41.0' - 49.9'        | 39.0' - 46.9' |
| Class V Special 3600D    | 50.0' - 59.0'        | 47.0' - 58.0' |

**INSTALLATION TYPE 2**

| MINIMUM CLASS AND D-LOAD | COVER         |
|--------------------------|---------------|
| Class II 1000D           | 9.9'          |
| Class III 1350D          | 10.0' - 14.9' |
| Class III Special 1700D  | 15.0' - 19.9' |
| Class IV 2000D           | 20.0' - 24.9' |
| Class IV Special 2500D   | 25.0' - 31.9' |
| Class V 3000D            | 32.0' - 38.9' |
| Class V Special 3600D    | 39.0' - 47.0' |

**INSTALLATION TYPE 3**

| MINIMUM CLASS AND D-LOAD | COVER               |               |
|--------------------------|---------------------|---------------|
|                          | 48" Dia AND SMALLER | OVER 48" Dia  |
| Class II 1000D           | 7.9'                | 5.9'          |
| Class III 1350D          | 8.0' - 10.9'        | 6.0' - 8.9'   |
| Class III Special 1700D  | 11.0' - 14.9'       | 9.0' - 12.9'  |
| Class IV 2000D           | 15.0' - 17.9'       | 13.0' - 15.9' |
| Class IV Special 2500D   | 18.0' - 21.9'       | 16.0' - 19.9' |
| Class V 3000D            | 22.0' - 26.9'       | 20.0' - 24.9' |
| Class V Special 3600D    | 30.0' - 33.0'       | 25.0' - 31.0' |

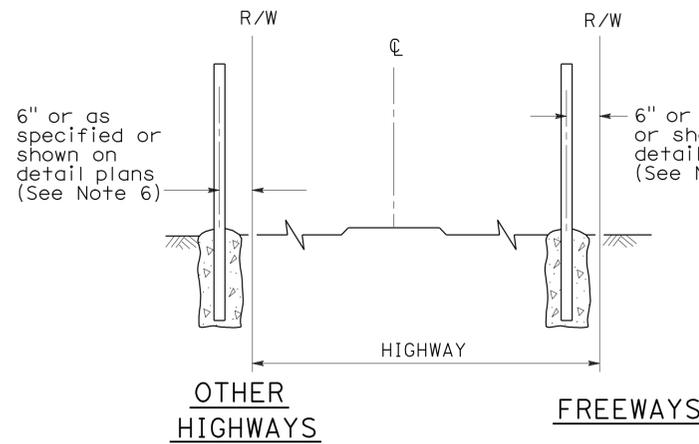
STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**EXCAVATION AND BACKFILL  
CONCRETE PIPE CULVERTS**

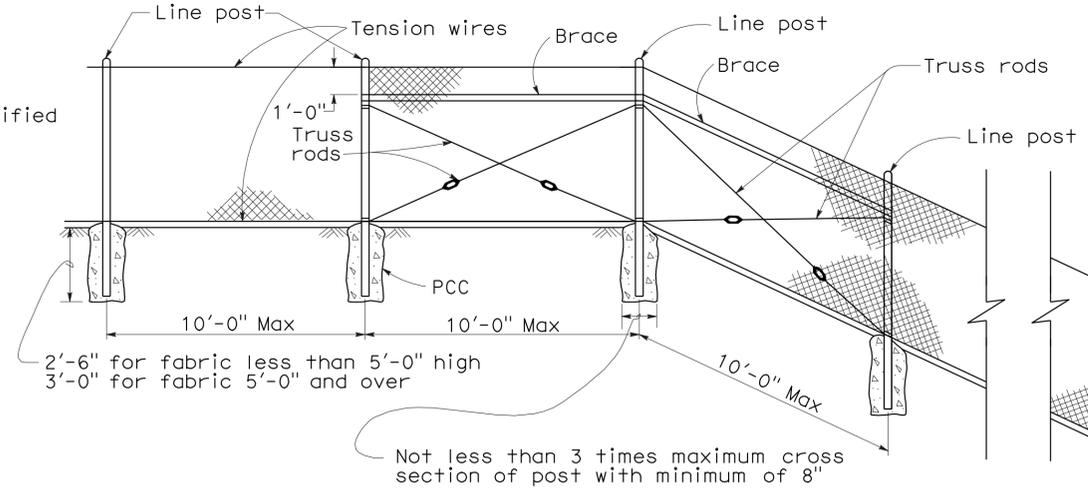
NO SCALE

RSP A62DA DATED NOVEMBER 17, 2006 SUPERSEDES STANDARD PLAN A62DA DATED MAY 1, 2006 - PAGE 20 OF THE STANDARD PLANS BOOK DATED MAY 2006.

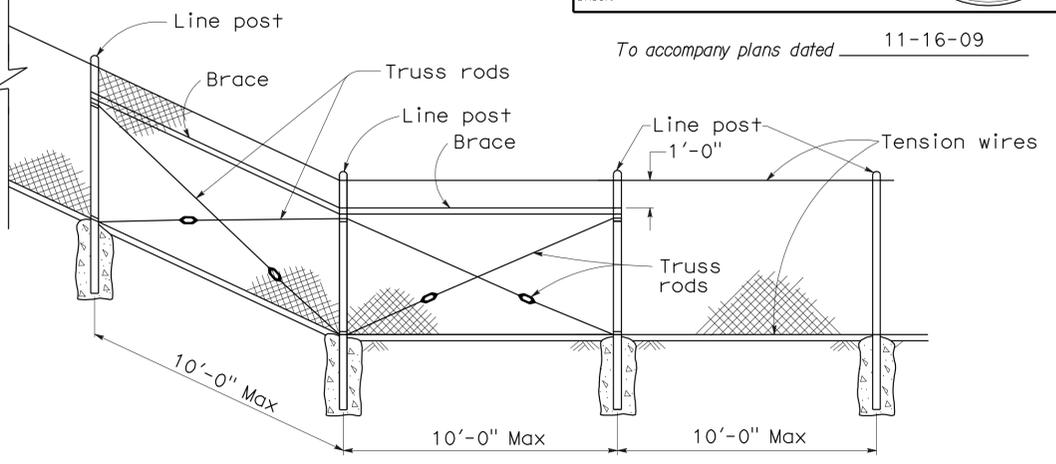
2006 REVISED STANDARD PLAN RSP A62DA



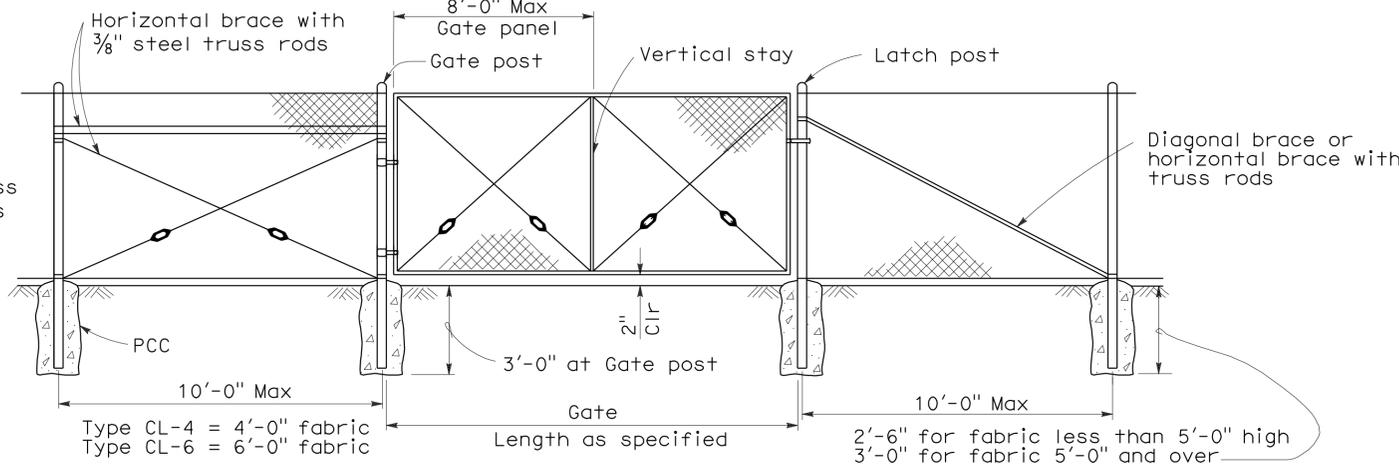
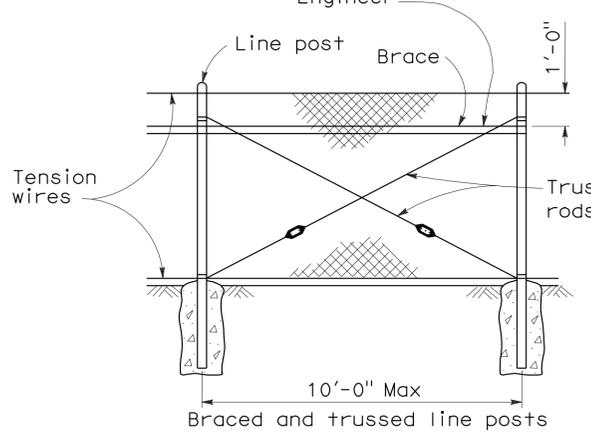
**FENCE LOCATION**



**CHAIN LINK FENCE ON SHARP BREAK IN GRADE**



Brace to be removed after all other fence construction is completed unless otherwise directed by the Engineer.



**CHAIN LINK GATE INSTALLATION**

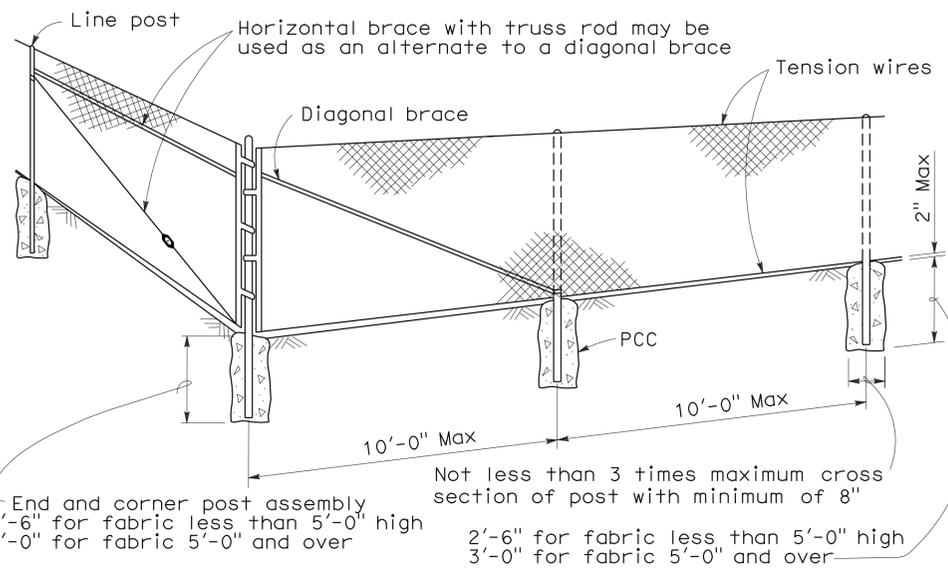
| GATE POST      |                           |            |                 |
|----------------|---------------------------|------------|-----------------|
| FENCE HEIGHT   | GATE WIDTHS               | NOMINAL ID | WEIGHT PER FOOT |
| 6'-0" and Less | Up thru 6'-0"             | 2 1/2"     | 4.95 LB         |
|                | Over 6'-0" thru 12'-0"    | 4"         | 10.79 LB        |
|                | Over 12'-0" thru 18'-0"   | 5"         | 14.62 LB        |
|                | Over 18'-0" to 24'-0" Max | 6"         | 18.97 LB        |
| Over 6'-0"     | Up thru 6'-0"             | 3"         | 7.58 LB         |
|                | Over 6'-0" thru 12'-0"    | 5"         | 14.62 LB        |
|                | Over 12'-0" thru 18'-0"   | 6"         | 18.97 LB        |
|                | Over 18'-0" to 24'-0" Max | 8"         | 28.55 LB        |

Above post dimensions and weights are minimums. Larger sizes may be used on approval of the Engineer.

**NOTES:**

- The below table shows examples of post and brace sections which may comply with the Specifications.
- Sections shown in the tables must also comply with the strength requirements and other provisions of the Specifications.
- Other sections which comply with the strength requirements and other provisions of the Specifications may be used on approval of the Engineer.
- Options exercised shall be uniform on any one project.
- Dimensions shown are nominal.
- Offset to be 2'-0" at monument locations, measured at right angles to R/W lines. Taper to achieve offset to be at least 20'-0" long.

| FENCE HEIGHT | TYPICAL MEMBER DIMENSIONS (See Notes) |                 |                 |                           |                 |                 |          |                  |                 |                 |
|--------------|---------------------------------------|-----------------|-----------------|---------------------------|-----------------|-----------------|----------|------------------|-----------------|-----------------|
|              | LINE POSTS                            |                 |                 | END, LATCH & CORNER POSTS |                 |                 | BRACES   |                  |                 |                 |
|              | ROUND ID                              | H               | ROLL FORMED     | ROUND ID                  | ROLL FORMED     |                 | ROUND ID | H                | ROLL FORMED     |                 |
| 6' & less    | 1 1/2"                                | 1 7/8" x 1 5/8" | 1 7/8" x 1 5/8" | 2"                        | 3 1/2" x 3 1/2" | 2" x 1 3/4"     | 1 1/4"   | 1 1/2" x 1 5/16" | 1 5/8" x 1 1/4" | 1 3/4" x 1 1/4" |
| Over 6'      | 2"                                    | 2 1/4" x 2"     | 2" x 1 3/4"     | 2 1/2"                    | 3 1/2" x 3 1/2" | 2 1/2" x 2 1/2" | 1 1/4"   | 1 1/2" x 1 5/16" | 1 5/8" x 1 1/4" | 1 3/4" x 1 1/4" |



**CORNER POST**

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**CHAIN LINK FENCE**  
 NO SCALE

RSP A85 DATED JUNE 5, 2009 SUPERSEDES STANDARD PLAN A85  
 DATED MAY 1, 2006 - PAGE 111 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP A85**

2006 REVISED STANDARD PLAN RSP A85

| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|------|--------|-------|--------------------------|-----------|--------------|
| 03   | ED     | 50    | R28.1                    | 10        | 52           |

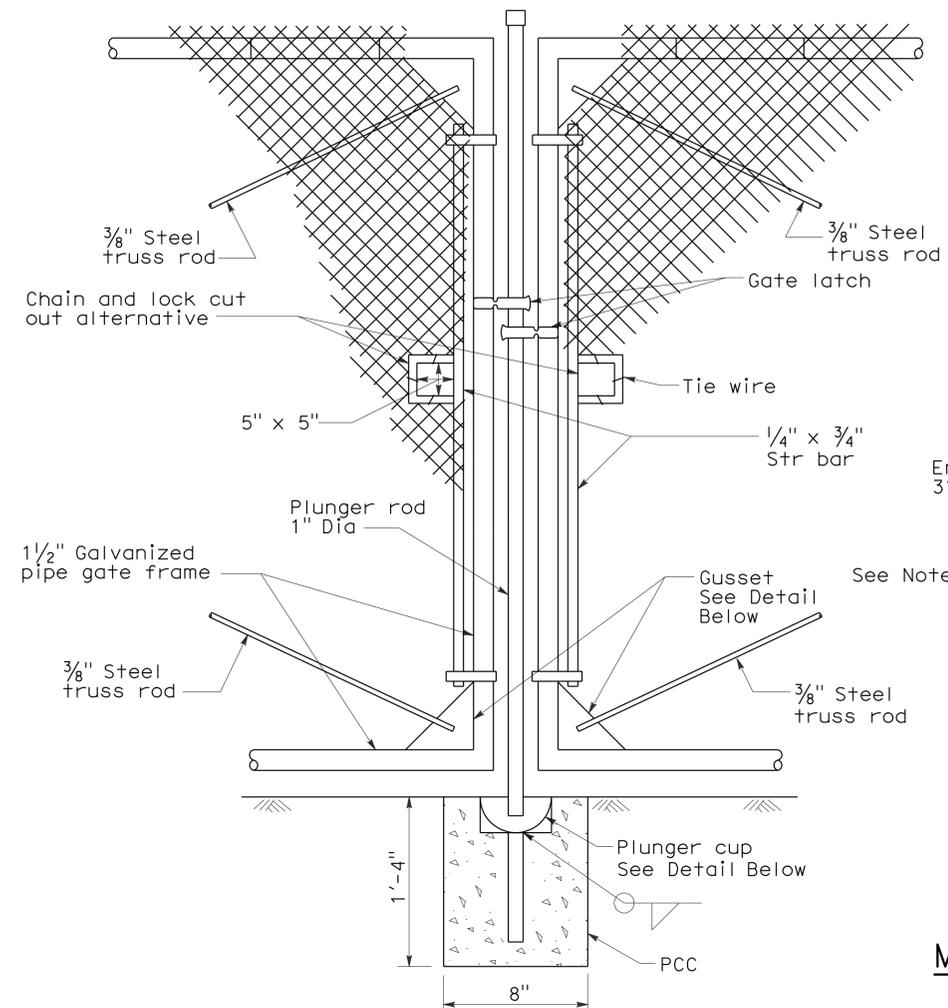
Glenn DeCou  
 REGISTERED CIVIL ENGINEER  
 No. C34547  
 Exp. 9-30-09  
 CIVIL  
 STATE OF CALIFORNIA

June 5, 2009  
 PLANS APPROVAL DATE

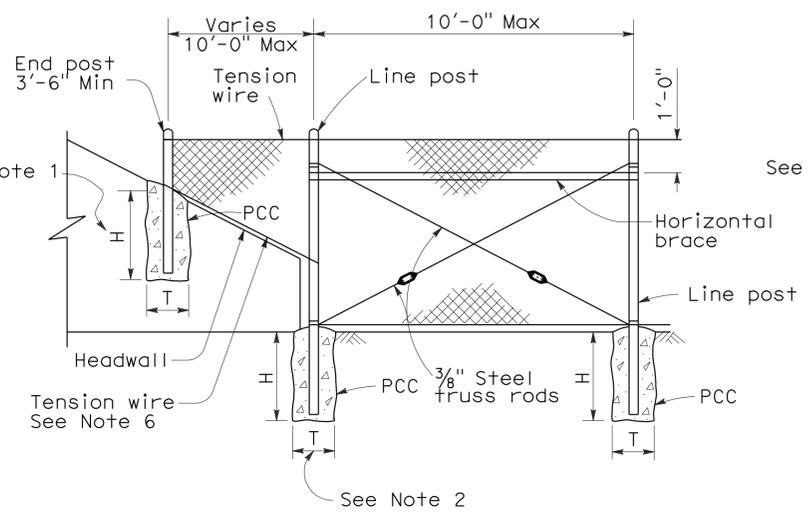
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To accompany plans dated 11-16-09

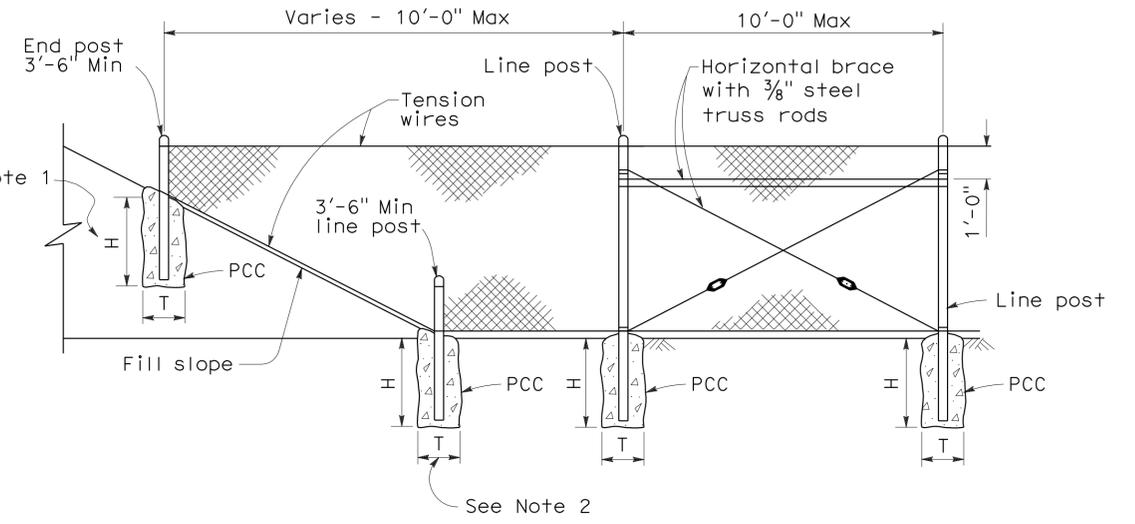
- NOTES:**
- H is 2'-6" for fabric less than 5'-0" high.  
H is 3'-0" for fabric 5'-0" and over.
  - T is not less than 3 times maximum cross section of post with minimum of 8".
  - Arms with barbed wire to be used where shown on plans.
  - See Revised Standard Plan RSP A85 for Chain Link Fencing dimensions.
  - Reinforcing must comply with ASTM A 706.
  - See Detail A on New Standard Plan NSP A86B for connection at headwall.



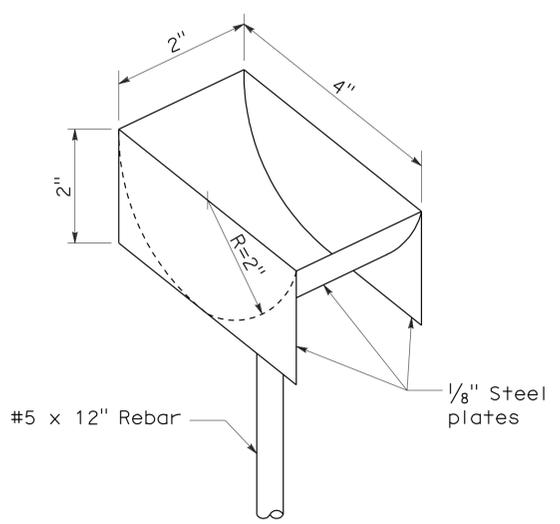
**TYPICAL DOUBLE GATE  
REMOVABLE CENTER POST**



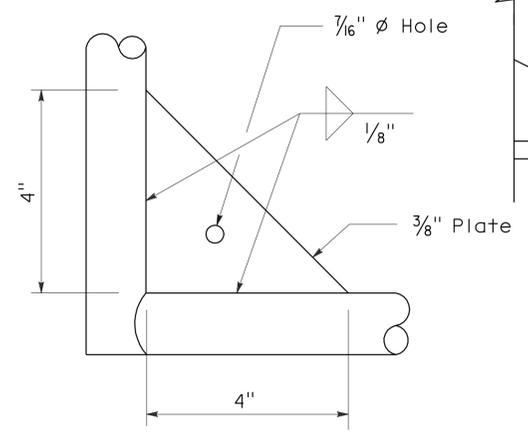
**METHOD OF TYING FENCE TO HEADWALL**



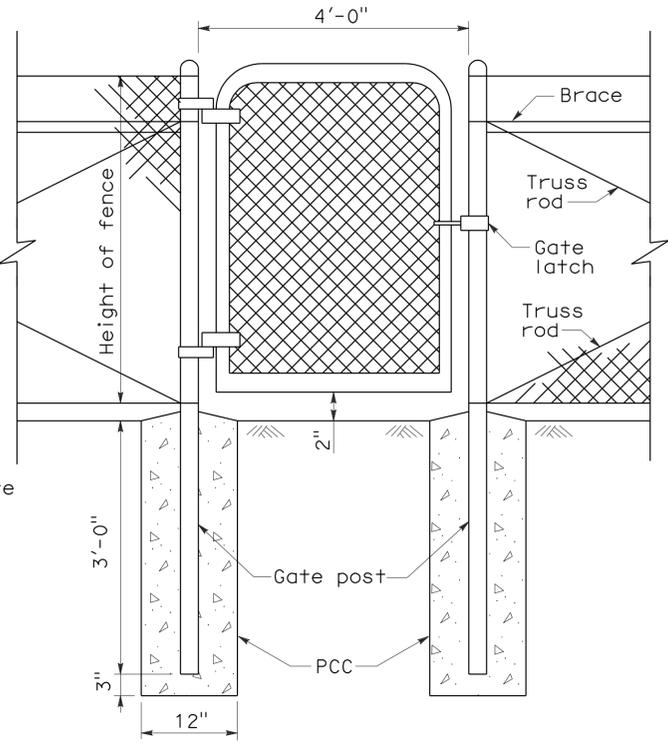
**METHOD OF ERECTING FENCE FOR FILL SLOPE**



**PLUNGER CUP DETAIL**



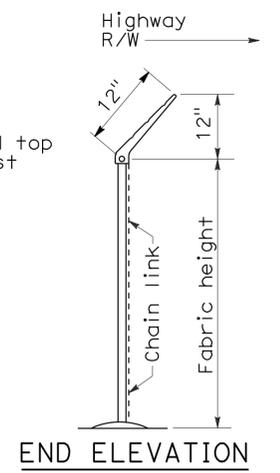
**GUSSET DETAIL**



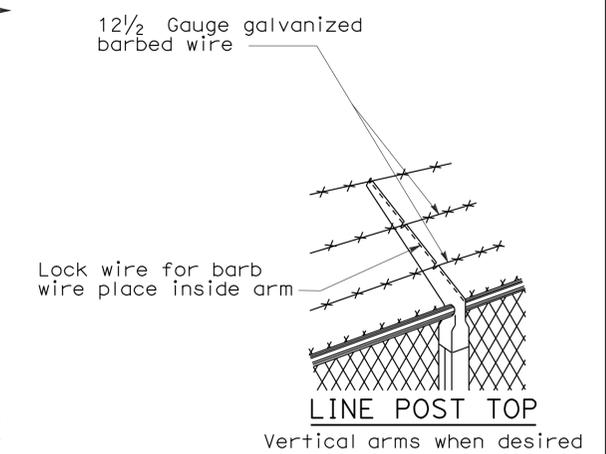
**WALK GATE**



**POST TOP END**



**BARBED WIRE POST TOP**  
See Note 3



**LINE POST TOP**  
Vertical arms when desired

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**CHAIN LINK FENCE DETAILS**  
NO SCALE

NSP A85A DATED JUNE 5, 2009 SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

**NEW STANDARD PLAN NSP A85A**

**2006 NEW STANDARD PLAN NSP A85A**

|      |        |       |                          |           |              |
|------|--------|-------|--------------------------|-----------|--------------|
| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
| 03   | ED     | 50    | R28.1                    | 11        | 52           |

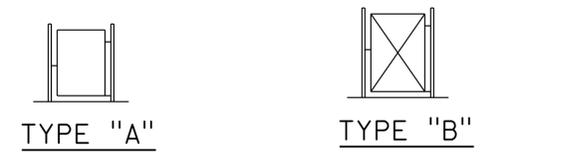
Glenn DeCou  
REGISTERED CIVIL ENGINEER

June 5, 2009  
PLANS APPROVAL DATE

Glenn DeCou  
No. C34547  
Exp. 9-30-09  
REGISTERED PROFESSIONAL ENGINEER  
STATE OF CALIFORNIA

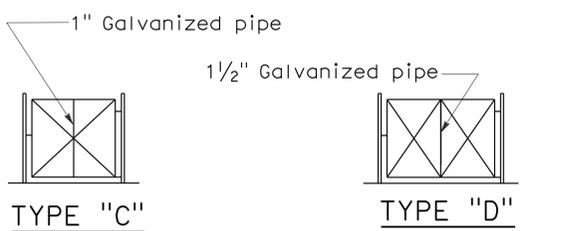
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To accompany plans dated 11-16-09



**TYPE "A"**  
3' and 6' Single  
6' and 12' Double

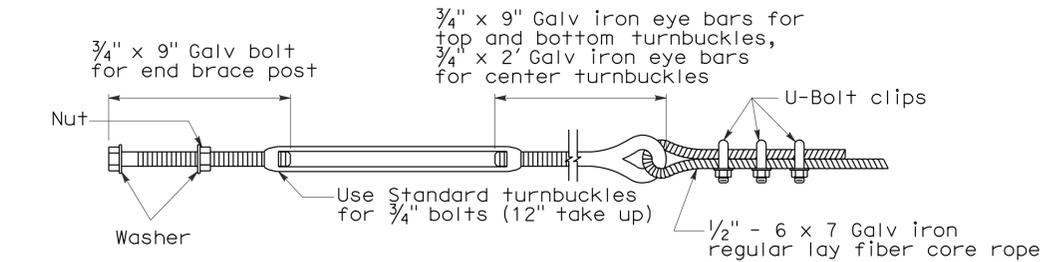
**TYPE "B"**  
Over 6' to 12' Single.  
Over 12' to 24' Double



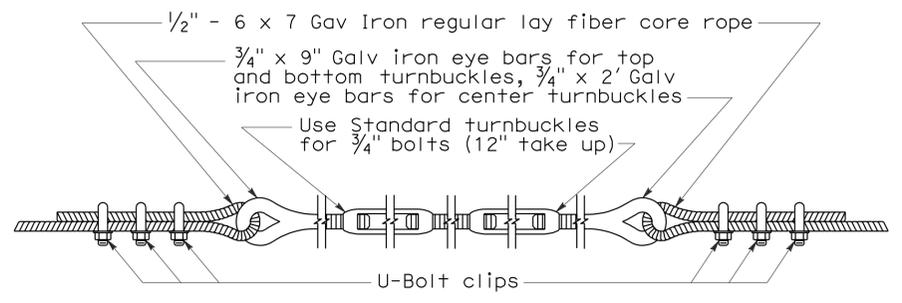
**TYPE "C"**  
Over 12' to 18' Single  
Over 24' to 36' Double.

**TYPE "D"**  
Over 18' to 24' Single  
Over 36' to 48' Double

**TYPICAL FRAMEWORK SHOWING NUMBER OF BAYS IN GATE**



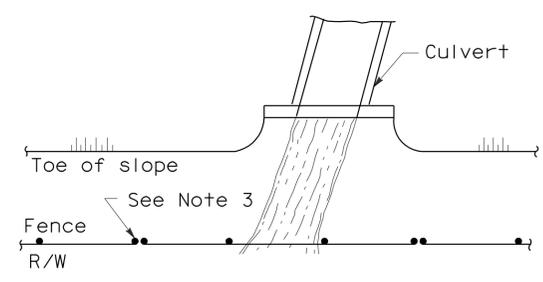
**TURNBUCKLE A**



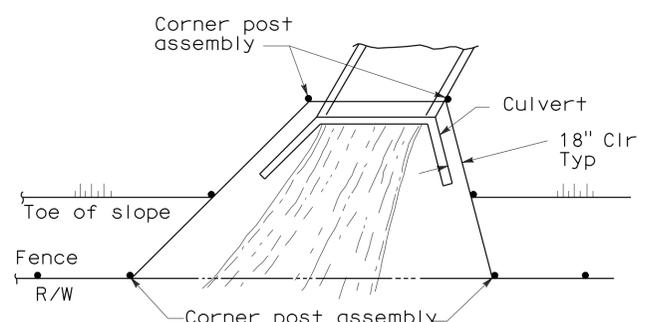
**TURNBUCKLE B**

**NOTES:**

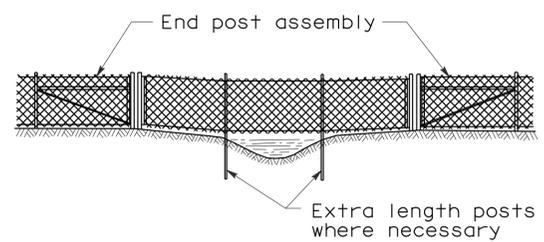
1. All material for abutment connection to be galvanized.
2. The chain link fabric shall be replaced by barbed wire strands at 12" maximum centers between the double posts.
3. When the width of the culvert makes it necessary to anchor a post to the top of the culvert, a cast iron shoe or other device approved by the Engineer shall be used.
4. Fencing over stream and around headwall may also use Barbed Wire or Wire Mesh fencing with either wood post or steel post installation.
5. See Revised Standard Plan RSP A85 for Chain Link fence dimensions. See Standard Plan A86 for Barbed Wire and Wire Mesh fence dimensions and for wood post and steel post installation.



**PLAN**

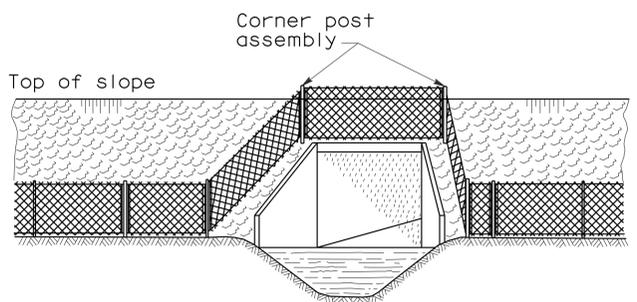


**PLAN**



**ELEVATION**

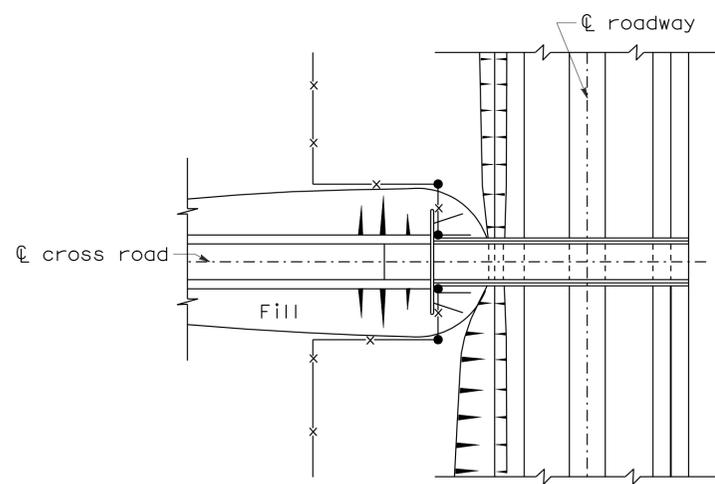
**INSTALLATION OVER STREAM**



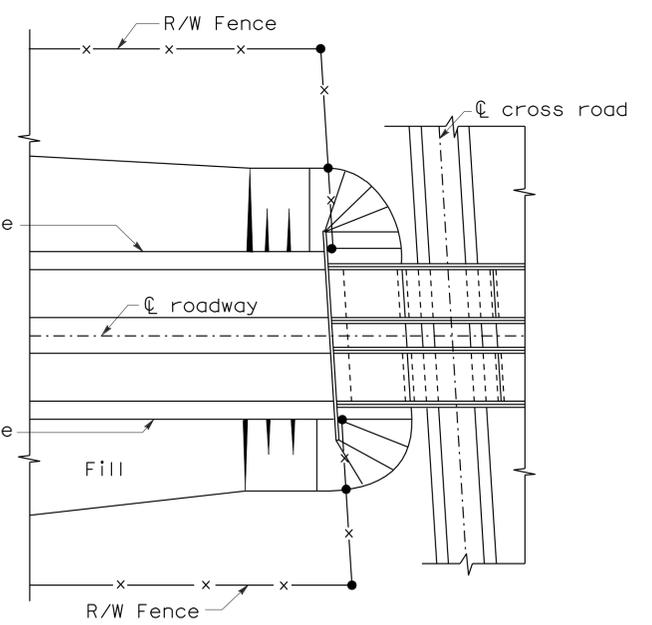
**ELEVATION**

**INSTALLATION AROUND HEADWALL**

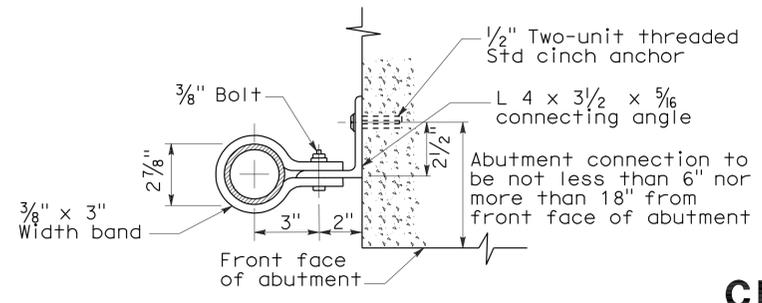
See Note 4



**PLAN OF ROADWAY - UNDERPASS**



**PLAN OF ROADWAY - OVERPASS**



**ABUTMENT CONNECTION**

**TYPICAL INSTALLATION AT BRIDGES**

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**CHAIN LINK FENCE DETAILS**

NO SCALE

NSP A85B DATED JUNE 5, 2009 SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

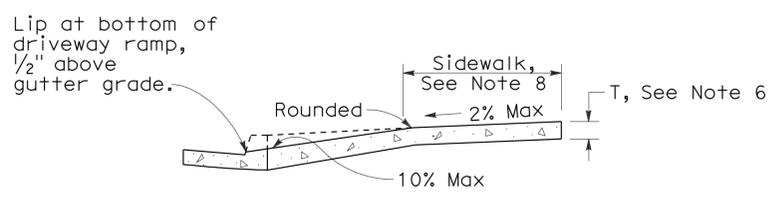
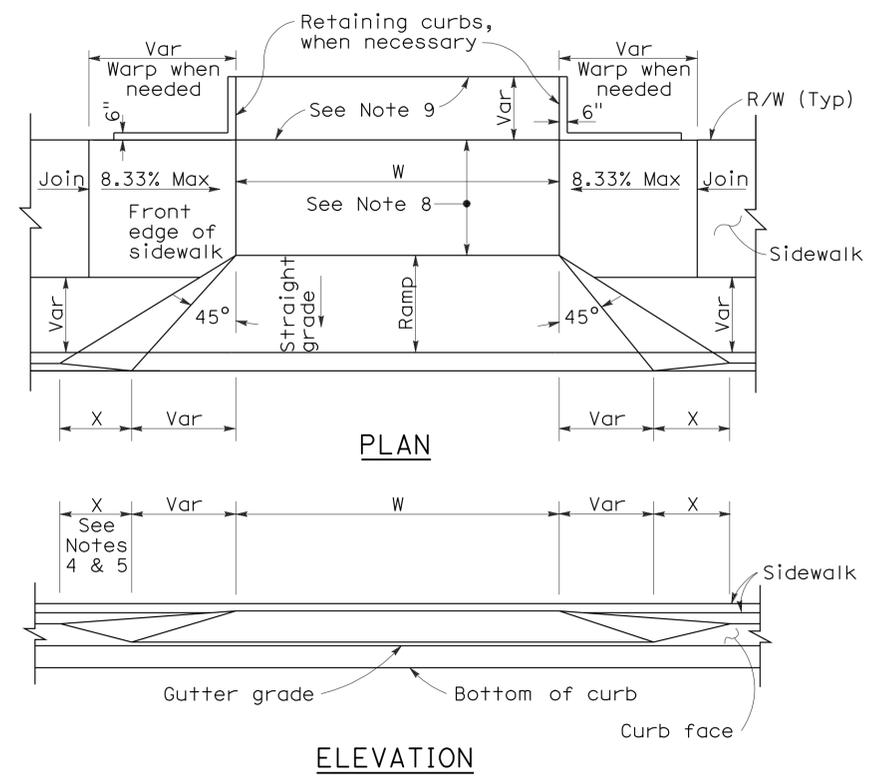
**NEW STANDARD PLAN NSP A85B**

2006 NEW STANDARD PLAN NSP A85B

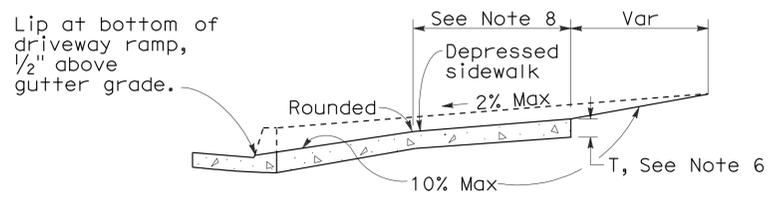
|      |        |       |                          |           |              |
|------|--------|-------|--------------------------|-----------|--------------|
| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
| 03   | ED     | 50    | R28.1                    | 12        | 52           |

REGISTERED CIVIL ENGINEER  
 November 17, 2006  
 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.

2006 REVISED STANDARD PLAN RSP A87A



**CASE A**  
Typical driveway, sidewalk not depressed



**CASE B**  
Driveway with depressed sidewalk

**SECTIONS**

**CURB QUANTITIES**

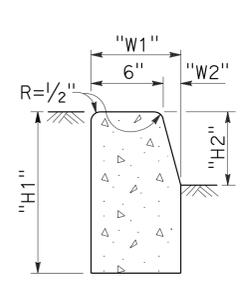
| TYPE | CUBIC YARDS PER LINEAR FOOT |
|------|-----------------------------|
| A1-6 | 0.02585                     |
| A1-8 | 0.03084                     |
| A2-6 | 0.05903                     |
| A2-8 | 0.06379                     |
| A3-6 | 0.01036                     |
| A3-8 | 0.01435                     |
| B1-4 | 0.02185                     |
| B1-6 | 0.02930                     |
| B2-4 | 0.05515                     |
| B2-6 | 0.06171                     |
| B3-4 | 0.00641                     |
| B3-6 | 0.01074                     |
| B4   | 0.05709                     |
| D-4  | 0.04083                     |
| D-6  | 0.06804                     |
| E    | 0.06661                     |

**TABLE A**

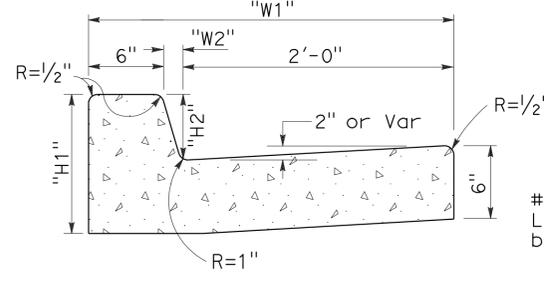
| CURB TYPE | DIMENSIONS |      |           |        |
|-----------|------------|------|-----------|--------|
|           | "H1"       | "H2" | "W1"      | "W2"   |
| A1-6      | 1'-2"      | 6"   | 7 1/2"    | 1 1/2" |
| A1-8      | 1'-4"      | 8"   | 8"        | 2"     |
| A2-6      | 1'-0"      | 6"   | 2'-7 1/2" | 1 1/2" |
| A2-8      | 1'-2"      | 8"   | 2'-8"     | 2"     |
| A3-6      | 6"         | 5"   | 7 1/4"    | 1 1/4" |
| A3-8      | 8"         | 7"   | 7 3/4"    | 1 3/4" |
| B1-4      | 1'-0"      | 4"   | 7 1/2"    | 2 1/2" |
| B1-6      | 1'-2"      | 6"   | 9"        | 4"     |
| B2-4      | 10"        | 4"   | 2'-7 1/2" | 2 1/2" |
| B2-6      | 1'-0"      | 6"   | 2'-9"     | 4"     |
| B3-4      | 4"         | 3"   | 7"        | 2"     |
| B3-6      | 6"         | 5"   | 8 1/2"    | 3 1/2" |
| D-4       | 10"        | 4"   | 1'-6"     | 1'-1"  |
| D-6       | 1'-0"      | 6"   | 2'-2"     | 1'-8"  |

To accompany plans dated 11-16-09

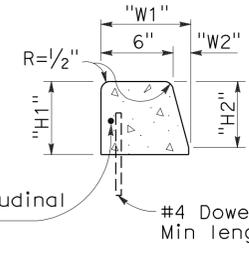
**DRIVEWAYS**



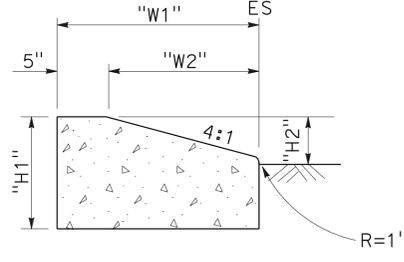
**TYPE A1 CURBS**  
See Table A



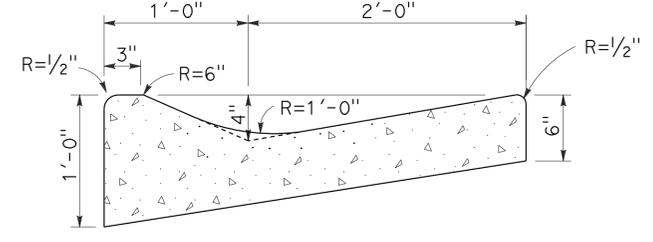
**TYPE A2 CURBS**  
See Table A



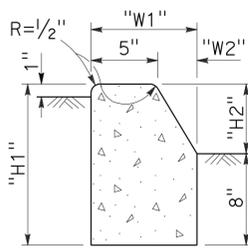
**TYPE A3 CURBS**  
Superimposed on existing pavement  
See Table A



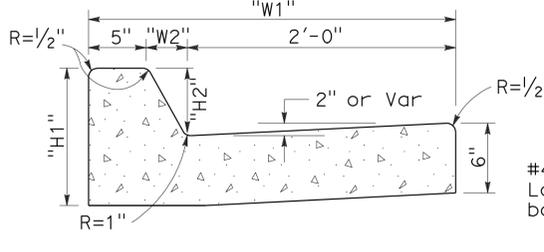
**TYPE D CURBS**  
See Table A



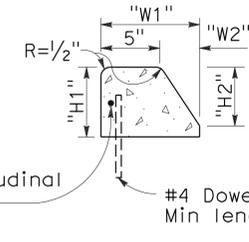
**TYPE E CURB**



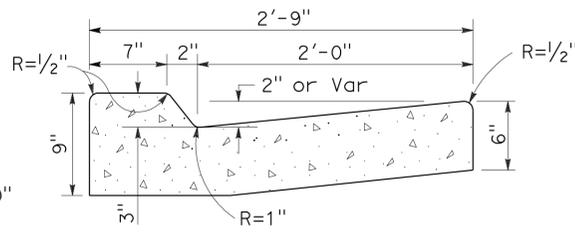
**TYPE B1 CURBS**  
See Table A



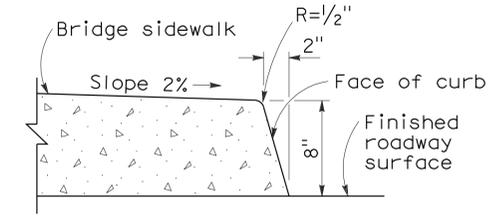
**TYPE B2 CURBS**  
See Table A



**TYPE B3 CURBS**  
Superimposed on existing pavement  
See Table A



**TYPE B4 CURBS**



**TYPE H CURB**  
On Bridges

**NOTES:**

- Case A driveway section typically applies.
- Use Case B driveway section when ramp slopes would exceed 10% in Case A.
- Use Case B driveway section when sidewalk cross slope would exceed 2% in Case A.
- X=3'-0" except for curb heights over 10" where 4:1 slopes shall be used on curb slope.
- X is a variable when sidewalk is located where wheelchairs may traverse the surface. Slopes shall not exceed 8.33%.
- Sidewalk and ramp thickness "T" at driveway shall be 4" for residential and 6" for commercial.
- Difference in slope of the driveway ramp and the slope of a line between the gutter and a point on the roadway 5'-0" from gutter line shall not exceed 15%. Reduce driveway ramp slope, not gutter slope, where required.
- Minimum width of clear passageway for sidewalk shall be 4'-0".
- Retaining curbs and acquisition of construction easement may be necessary for narrow sidewalks or curb heights in excess of 6".
- Across the pedestrian route at curb ramp locations, the gutter pan slope shall not exceed 1" of depth for each 2'-0" of width.

**CURBS**

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**CURBS AND DRIVEWAYS**

NO SCALE

**REVISED STANDARD PLAN RSP A87A**

RSP A87A DATED NOVEMBER 17, 2006 SUPERSEDES STANDARD PLAN A87A  
DATED MAY 1, 2006 - PAGE 113 OF THE STANDARD PLANS BOOK DATED MAY 2006.

ANNULAR AND HELICAL PROFILE

| COUPLING TYPE             | PIPE CORRUGATION | PIPE SIZE   | W OR A   | PIPE WALL THICKNESS |               |        |        | BAR AND STRAP (CSP ONLY) |           |         |                    | ANGLE                   |                         |                  |        |                      |        |                          |        |
|---------------------------|------------------|-------------|----------|---------------------|---------------|--------|--------|--------------------------|-----------|---------|--------------------|-------------------------|-------------------------|------------------|--------|----------------------|--------|--------------------------|--------|
|                           |                  |             |          | CSP                 |               | CAP    |        | STRAP THICKNESS          | BOLTS Dia | BAR Dia | BAR YIELD STRENGTH | DIMENSIONS              |                         | BOLTS (No.- Dia) |        | RIVETS ANGLE TO BAND |        | SPOT WELDS ANGLE TO BAND |        |
|                           |                  |             |          | CSP                 | CAP           | CSP    | CAP    |                          |           |         |                    | CSP                     | CAP                     | CSP              | CAP    | CSP                  | CAP    | CSP                      |        |
| TWO PIECE INTEGRAL FLANGE | 1 1/2' x 1/4"    | 6"-10"      | 7"       | 0.052"-0.079"       | 0.048"-0.060" | 0.052" | 0.060" |                          |           |         |                    |                         |                         | 2-3/8"           | 2-3/8" |                      |        |                          |        |
|                           |                  | 12"-18"     | 7"       | 0.052"-0.079"       |               | 0.064" |        |                          |           |         |                    |                         |                         |                  | 2-1/2" |                      |        |                          |        |
|                           | 2 2/3" x 1/2"    | 12"-24"     | 7"       | 0.052"-0.079"       | 0.060"-0.105" | 0.064" | 0.060" |                          |           |         |                    |                         |                         | 2-1/2"           | 2-1/2" |                      |        |                          |        |
| UNIVERSAL                 | 2 2/3" x 1/2"    | THROUGH 36" | 12"      | 0.052"-0.138"       | 0.060"-0.135" | 0.052" | 0.060" |                          |           |         |                    |                         | 2" x 2" x 3/16"         | 2" x 2" x 3/16"  | 3-1/2" | 3-1/2"               | 3-3/8" | 3-3/8"                   | 3-1/2" |
|                           |                  | 42"-60"     | 12"      | 0.052"-0.168"       | 0.075"-0.164" | 0.052" | 0.060" |                          |           |         |                    |                         | 2" x 2" x 3/16"         | 2" x 2" x 3/16"  | 3-1/2" | 3-1/2"               | 3-3/8" | 3-3/8"                   | 5-1/2" |
|                           |                  | THROUGH 72" | 12"      | 0.052"-0.168"       | 0.164"        | 0.052" | 0.105" | 0.079"                   | 1/2"      | 7/8"    | 32 ksi             | 2" x 2" x 3/16"         | 2" x 2" x 3/16"         | 3-1/2"           | 3-1/2" | 3-3/8"               | 3-3/8" | 5-1/2"                   |        |
|                           |                  | 78"-84"     | 16 1/4"  | 0.168"              |               | 0.079" |        | DOUBLE 0.079"            | 1/2"      | 7/8"    | 32 ksi             |                         |                         |                  |        |                      |        |                          |        |
| ANNULAR                   | 2 2/3" x 1/2"    | THROUGH 36" | 7"       | 0.064"-0.138"       | 0.060"-0.135" | 0.052" | 0.060" | 0.079"                   | 1/2"      | 7/8"    | 32 ksi             | 2" x 2" x 3/16"         | 2" x 2" x 3/16"         | 2-1/2"           | 2-1/2" | 3-3/8"               | 3-3/8" | 3-1/2"                   |        |
|                           |                  | 42"-72"     | 12"      | 0.064"-0.168"       | 0.075"-0.164" | 0.052" | 0.105" | 0.079"                   | 1/2"      | 7/8"    | 32 ksi             | 2" x 2" x 3/16"         | 2" x 2" x 3/16"         | 3-1/2"           | 3-1/2" | 3-3/8"               | 3-3/8" | 5-1/2"                   |        |
|                           |                  | 78"-84"     | 12"      | 0.168"              |               | 0.079" |        | 0.109"                   | 1/2"      | 7/8"    | 45 ksi             | 2" x 2" x 3/16"         |                         | 3-1/2"           |        | 3-3/8"               |        | 5-1/2"                   |        |
|                           | 3" x 1"          | 48"-90"     | 14"      | 0.064"-0.109"       |               | 0.052" |        | 0.079"                   | 1/2"      | 7/8"    | 32 ksi             | 2" x 2" x 3/16"         |                         | 3-1/2"           |        | 3-3/8"               |        | 5-1/2"                   |        |
|                           |                  | 96"-120"    | 14"      | 0.079"-0.109"       |               | 0.052" |        | 0.109"                   | 1/2"      | 7/8"    | 45 ksi             | 2" x 2" x 3/16"         |                         | 3-1/2"           |        | 4-3/8"               |        |                          |        |
|                           |                  | 42"-108"    | 14"      |                     | 0.060"-0.135" |        | 0.060" |                          |           |         |                    | 2" x 2" x 3/16"         |                         | 3-1/2"           |        | 3-3/8"               |        |                          |        |
| HELICAL                   | 2 2/3" x 1/2"    | THROUGH 36" | 12"      | 0.052"-0.138"       | 0.060"-0.135" | 0.052" | 0.060" | 0.079"                   | 1/2"      | 7/8"    | 32 ksi             | 2" x 2" x 3/16"         | 2" x 2" x 3/16"         | 3-1/2"           | 3-1/2" | 3-3/8"               | 3-3/8" | 3-1/2"                   |        |
|                           |                  | 42"-72"     | 12"      | 0.052"-0.168"       | 0.075"-0.164" | 0.052" | 0.060" | 0.079"                   | 1/2"      | 7/8"    | 32 ksi             | 2" x 2" x 3/16"         | 2" x 2" x 3/16"         | 3-1/2"           | 3-1/2" | 3-3/8"               | 3-3/8" | 5-1/2"                   |        |
|                           |                  | 78"-84"     | 12"      | 0.168"              |               | 0.079" |        | 0.109"                   | 1/2"      | 7/8"    | 45 ksi             | 2" x 2" x 3/16"         |                         | 3-1/2"           |        | 3-3/8"               |        | 5-1/2"                   |        |
|                           | 3" x 1"          | 48"-90"     | 14"      | 0.064"-0.109"       |               | 0.052" |        | 0.079"                   | 1/2"      | 7/8"    | 32 ksi             | 2" x 2" x 3/16"         |                         | 3-1/2"           |        | 3-3/8"               |        | 5-1/2"                   |        |
|                           |                  | 96"-120"    | 14"      | 0.079"-0.109"       |               | 0.052" |        | 0.109"                   | 1/2"      | 7/8"    | 45 ksi             | 2" x 2" x 3/16"         |                         | 3-1/2"           |        | 4-3/8"               |        |                          |        |
|                           |                  | 42"-108"    | 14"      |                     | 0.060"-0.135" |        | 0.060" |                          |           |         |                    | 2" x 2" x 3/16"         |                         | 3-1/2"           |        | 3-3/8"               |        |                          |        |
| HUGGER                    | 2 2/3" x 1/2"    | 12"-54"     | 4"       | 0.052"-0.109"       |               | 0.052" |        |                          |           |         |                    | 2 1/2" x 1 1/2" x 3/16" | 2 1/2" x 1 1/2" x 3/16" | 1-1/2"           |        |                      |        | 3-1/2"                   |        |
|                           |                  | 60"-66"     | 4"       | 0.109"              |               | 0.064" |        |                          |           |         |                    | 2 1/2" x 1 1/2" x 3/16" | 2 1/2" x 1 1/2" x 3/16" | 1-1/2"           |        |                      |        | 3-1/2"                   |        |
|                           |                  | 36"-48"     | 4"       | 0.138"              |               | 0.064" |        |                          |           |         |                    | 2 1/2" x 1 1/2" x 3/16" | 2 1/2" x 1 1/2" x 3/16" | 1-1/2"           |        |                      |        | 3-1/2"                   |        |
|                           |                  | THROUGH 72" | 10 1/2"  | 0.052"-0.168"       |               | 0.052" |        | 0.079"                   | 1/2"      | 7/8"    | 32 ksi             |                         |                         |                  |        |                      |        |                          |        |
|                           | 3" x 1"          | 48"-90"     | 10 1/2"  | 0.064"-0.109"       |               | 0.052" |        | 0.079"                   | 1/2"      | 7/8"    | 32 ksi             |                         |                         |                  |        |                      |        |                          |        |
|                           |                  | 96"-120"    | 10 1/2"  | 0.079"-0.109"       |               | 0.052" |        | 0.109"                   | 1/2"      | 7/8"    | 45 ksi             |                         |                         |                  |        |                      |        |                          |        |
|                           | 5" x 1"          | 48"-66"     | 7 1/2"   | 0.064"-0.109"       |               | 0.064" |        | 0.079"                   | 1/2"      | 7/8"    | 32 ksi             | 2 1/2" x 1 1/2" x 3/16" | 2 1/2" x 1 1/2" x 3/16" | 1-1/2"           |        |                      |        | 3-1/2"                   |        |
|                           |                  | 72"-90"     | 7 1/2"   | 0.064"-0.079"       |               | 0.064" |        | 0.079"                   | 1/2"      | 7/8"    | 32 ksi             | 2 1/2" x 1 1/2" x 3/16" | 2 1/2" x 1 1/2" x 3/16" | 1-1/2"           |        |                      |        | 3-1/2"                   |        |
|                           |                  | 48"-90"     | 7 1/2"   | 0.064"-0.138"       |               | 0.064" |        | 0.079"                   | 1/2"      | 7/8"    | 32 ksi             |                         |                         |                  |        |                      |        |                          |        |
|                           |                  | 48"-120"    | 12" SEE  | 0.064"-0.109"       |               | 0.064" |        | 0.079"                   | 1/2"      | 7/8"    | 32 ksi             |                         |                         |                  |        |                      |        |                          |        |
|                           |                  | 48"-84"     | 12" NOTE | 0.138"              |               | 0.064" |        | 0.079"                   | 1/2"      | 7/8"    | 32 ksi             |                         |                         |                  |        |                      |        |                          |        |
|                           |                  | 90"-120"    | 12" 11   | 0.138"              |               | 0.064" |        | DOUBLE 0.079"            | 1/2"      | 7/8"    | 32 ksi             |                         |                         |                  |        |                      |        |                          |        |

SPIRAL RIB PROFILE

| COUPLING TYPE | PIPE CORRUGATION             | PIPE SIZE | W       | PIPE WALL THICKNESS |               |        |        | BAR AND STRAP (SSRP ONLY) |           |         |                    | ANGLE           |                 |                  |        |                      |        |                          |
|---------------|------------------------------|-----------|---------|---------------------|---------------|--------|--------|---------------------------|-----------|---------|--------------------|-----------------|-----------------|------------------|--------|----------------------|--------|--------------------------|
|               |                              |           |         | SSRP                |               | ASRP   |        | STRAP THICKNESS           | BOLTS Dia | BAR Dia | BAR YIELD STRENGTH | DIMENSIONS      |                 | BOLTS (No.- Dia) |        | RIVETS ANGLE TO BAND |        | SPOT WELDS ANGLE TO BAND |
|               |                              |           |         | SSRP                | ASRP          | SSRP   | ASRP   |                           |           |         |                    | SSRP            | ASRP            | SSRP             | ASRP   | SSRP                 | ASRP   | SSRP                     |
| ANNULAR       | 2 2/3" x 1/2" * REROLLED END | 24"-36"   | 12"     | 0.064"-0.109"       | 0.060"-0.105" | 0.052" | 0.060" | 0.079"                    | 1/2"      | 7/8"    | 32 ksi             | 2" x 2" x 3/16" | 2" x 2" x 3/16" | 3-1/2"           | 3-1/2" | 3-3/8"               | 3-3/8" | 5-1/2"                   |
|               |                              | 42"-60"   | 12"     | 0.064"-0.109"       | 0.075"-0.105" | 0.052" | 0.105" | 0.079"                    | 1/2"      | 7/8"    | 32 ksi             | 2" x 2" x 3/16" | 2" x 2" x 3/16" | 3-1/2"           | 3-1/2" | 3-3/8"               | 3-3/8" | 5-1/2"                   |
|               |                              | 66"-72"   | 12"     | 0.064"-0.109"       |               | 0.052" |        | 0.079"                    | 1/2"      | 7/8"    | 32 ksi             | 2" x 2" x 3/16" | 2" x 2" x 3/16" | 3-1/2"           | 3-1/2" | 3-3/8"               | 3-3/8" | 5-1/2"                   |
|               |                              | 78"-114"  | 12"     | 0.079"-0.109"       |               | 0.079" |        | 0.109"                    | 1/2"      | 7/8"    | 45 ksi             | 2" x 2" x 3/16" | 2" x 2" x 3/16" | 3-1/2"           | 3-1/2" | 3-3/8"               | 3-3/8" | 5-1/2"                   |
| HUGGER        | 2 2/3" x 1/2" * REROLLED END | 24"-72"   | 10 1/2" | 0.064"-0.109"       |               | 0.052" |        | 0.079"                    | 1/2"      | 7/8"    | 32 ksi             |                 |                 |                  |        |                      |        |                          |
|               |                              | 78"-84"   | 10 1/2" | 0.109"              |               | 0.079" |        | 0.109"                    | 1/2"      | 7/8"    | 45 ksi             |                 |                 |                  |        |                      |        |                          |

\* See Note 14.

14. All profiles of Spiral Rib Pipe (3/4" x 3/4" ribs at 7 1/2" pitch and 3/4" x 1" ribs at 11 1/2" pitch in both steel and aluminum and 3/4" x 1" ribs at 8 1/2" pitch in steel only) shall be manufactured with rerolled ends. Corrugation profile of the rerolled ends shall be 2 2/3" x 1/2" annual corrugations with a minimum of two full corrugations at each end.

- NOTES:** To accompany plans dated 11-16-09
- All ferrous metal coupling band connection hardware shall be galvanized or electro-plated in accordance with the Standard Specifications.
  - For helically corrugated coupling bands, the connection angles may be oriented parallel to the pipe axis, provided connecting holes are slotted lengthwise sufficiently to allow adjustment for the helix angle.
  - Tension strap may be connected to band with either spot welds or fillet welds that develop minimum required strength of strap.
  - Use 1 1/4" gage line dimension on attached angle leg for rivets and spot welds.
  - Band thickness shall not be less than:
    - 3 standard thicknesses lighter than the thickness of the pipe for Corrugated Steel Pipe.
    - 2 standard thicknesses lighter than the thickness of the pipe and in no case lighter than 0.060" for Corrugated Aluminum Pipe.
  - Dimensions, thicknesses and strengths shown are minimum.
  - For pipe arches use same width band as for round pipe of equal periphery.
  - Fillet welds of equivalent strength may be substituted for spot welds or rivets.
  - Spot welds shall develop minimum required strength of strap.
  - Pipe with rerolled ends having at least two 2 2/3" x 1/2" annular corrugations at each end with or without an upturned flange may be connected with any of the annular coupling bands shown for pipe of the same diameter and wall thickness and having 2 2/3" x 1/2" corrugations.
  - In the case of H-12 huggerbands, two piece bands are required for diameters through 96" and three piece bands are required for diameters 102" through 120".
  - Two piece bands are required for pipes greater than 42" diameter.
  - The 2 1/4" x 2" x 0.109" thick galvanized die-formed angle connector may be used in lieu of the 2" x 2" x 3/16" angle connector for standard joints only on pipes through 72" diameter.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**CORRUGATED METAL PIPE  
COUPLING DETAILS No. 5  
STANDARD JOINT**  
NO SCALE

RSP D97E DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN D97E  
DATED MAY 1, 2006 - PAGE 187 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP D97E**

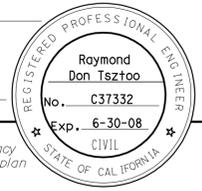
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| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
| 03   | ED     | 50    | R28.1                    | 13        | 52           |

Raymond Don Tsztou  
REGISTERED CIVIL ENGINEER

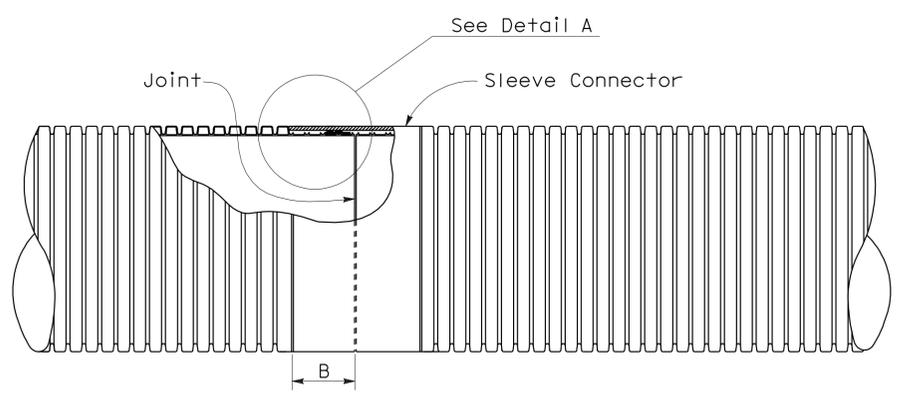
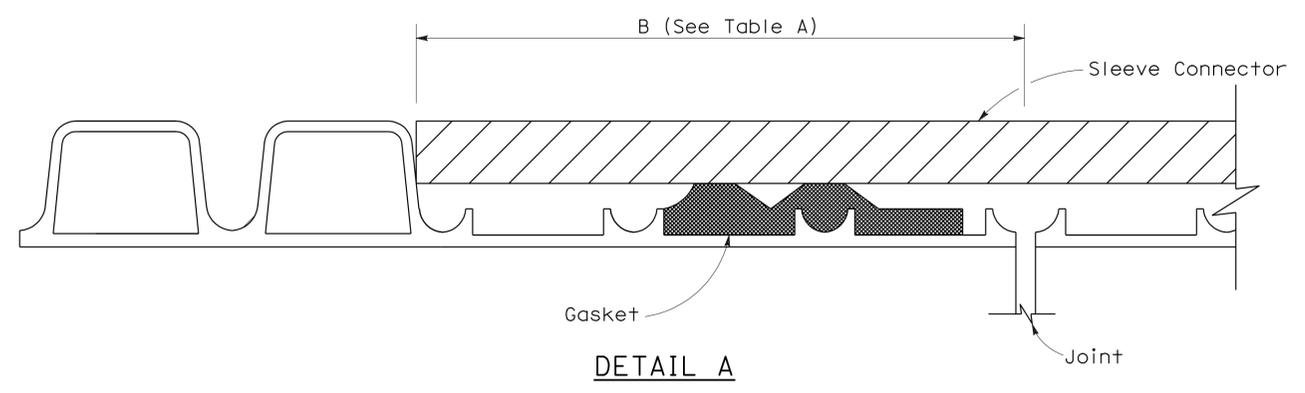
June 6, 2008  
PLANS APPROVAL DATE

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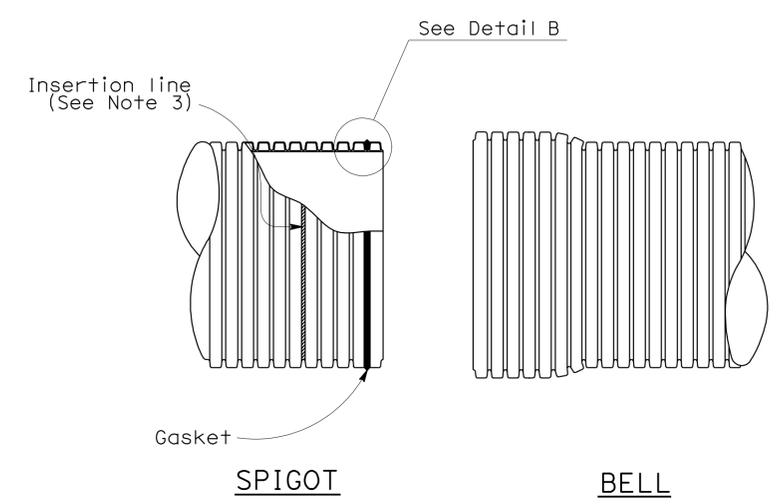
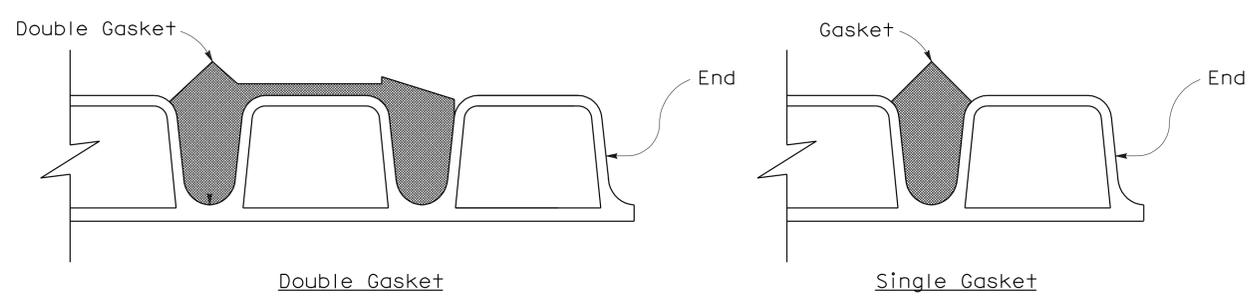
2006 REVISED STANDARD PLAN RSP D97E



To accompany plans dated 11-16-09

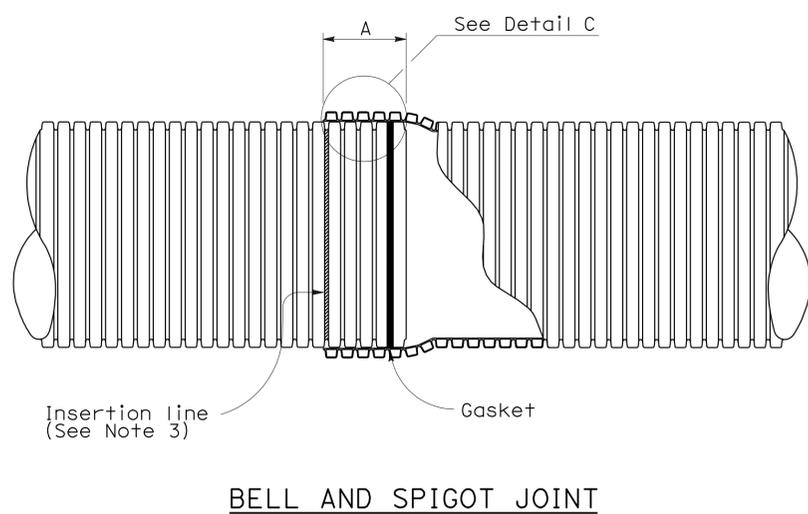
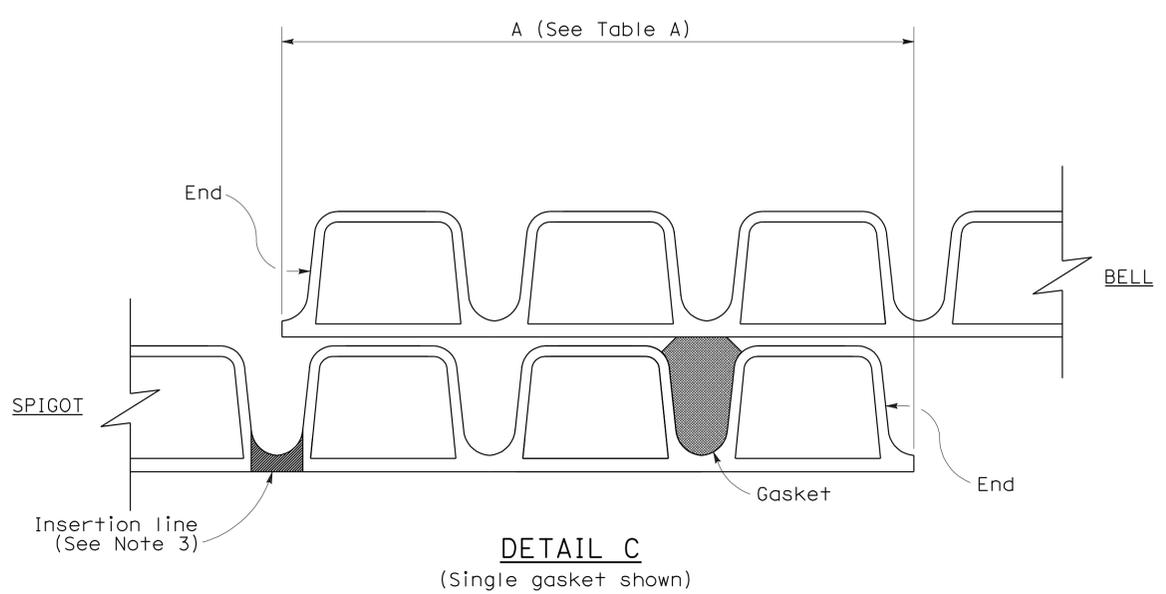


- NOTES:**
- For pipe sections installed on straight alignment, the pipe sections shall be joined to achieve maximum joint overlap at all points on the periphery as indicated in Table A where the plans call for positive or watertight joints. Maximum joint overlap is recommended where the plans call for standard joints, but in no case shall the joint overlap be less than 3/2".
  - For pipe sections installed on curved alignment, the maximum angle of deflection from straight alignment at any joint shall not exceed two degrees. Where the plans call for watertightness, field testing for compliance is required. Where plans call for positive joints, the pipe sections shall be joined to achieve Table A Dimensions on one side of the joint. Joints classified as standard shall have no less than 3/2" joint overlap at any point on the periphery.
  - Factory applied insertion line limit shall be placed on spigot.
  - Liner insert to be used inside of existing pipe.



**TABLE A**

| JOINT OVERLAP DIMENSIONS |        |        |
|--------------------------|--------|--------|
| PIPE Dia (NOMINAL)       | A      | B      |
| 12"                      | 5 3/4" | 4 1/4" |
| 15"                      | 6 3/4" | 5 5/8" |
| 18"                      | 6 3/4" | 5 5/8" |
| 21"                      | 8 1/2" | 5 5/8" |
| 24"                      | 8 1/2" | 6 1/8" |
| 30"                      | 8 1/2" | 7 1/8" |
| 36"                      | 8 1/2" | 8 1/8" |



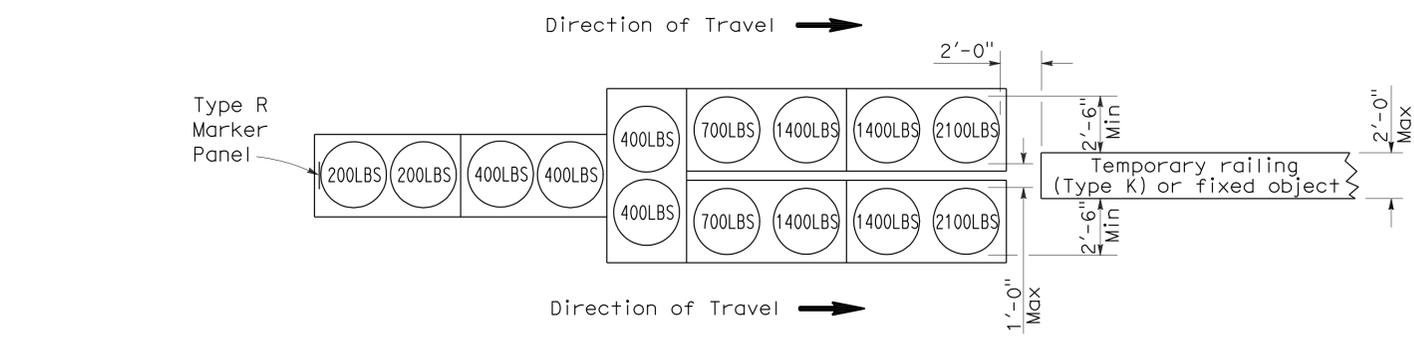
STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**CORRUGATED POLYVINYL CHLORIDE PIPE  
WITH SMOOTH INTERIOR  
STANDARD AND POSITIVE JOINTS**

NO SCALE  
NSP D97I DATED MARCH 7, 2008 SUPPLEMENTS THE STANDARD  
PLANS BOOK DATED MAY 2006.

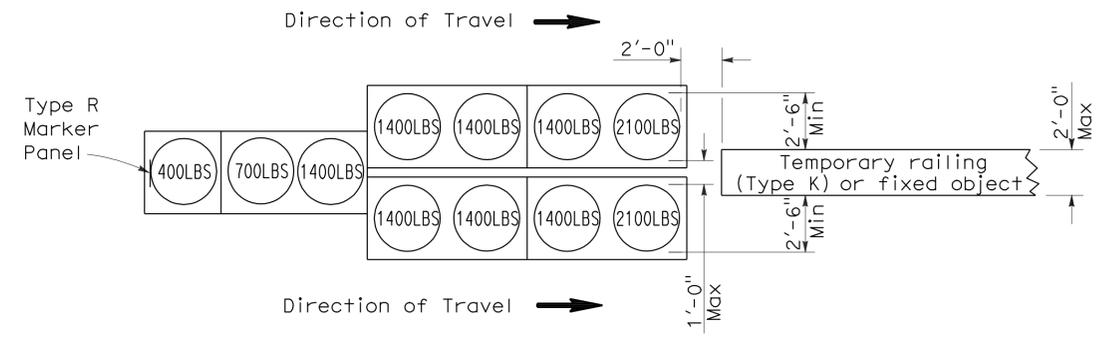
2006 NEW STANDARD PLAN NSP D97I

To accompany plans dated 11-16-09



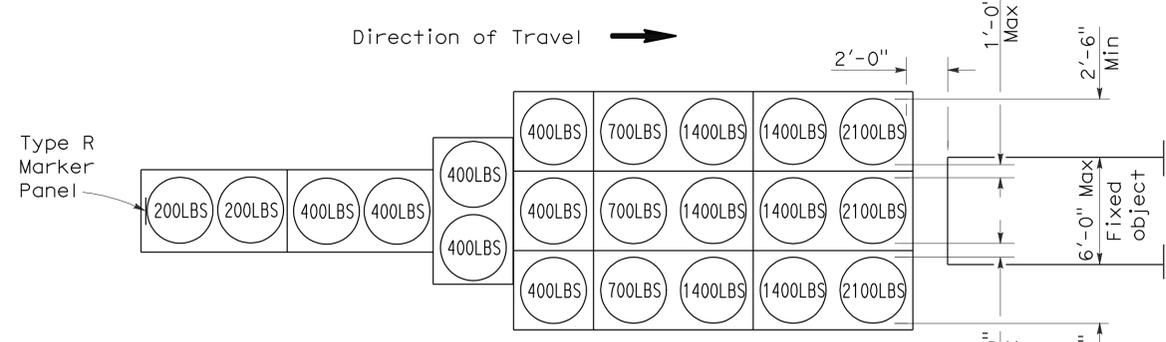
**ARRAY 'TU14'**

Approach speed 45 mph or more



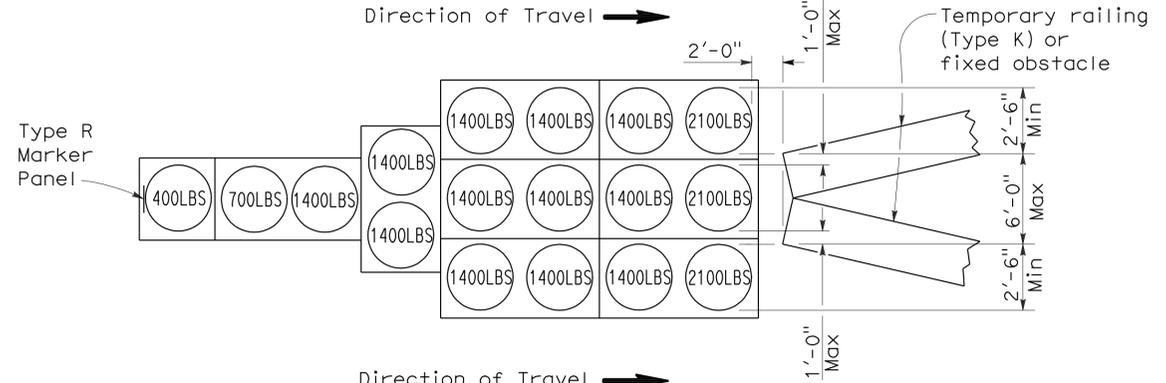
**ARRAY 'TU11'**

Approach speed less than 45 mph



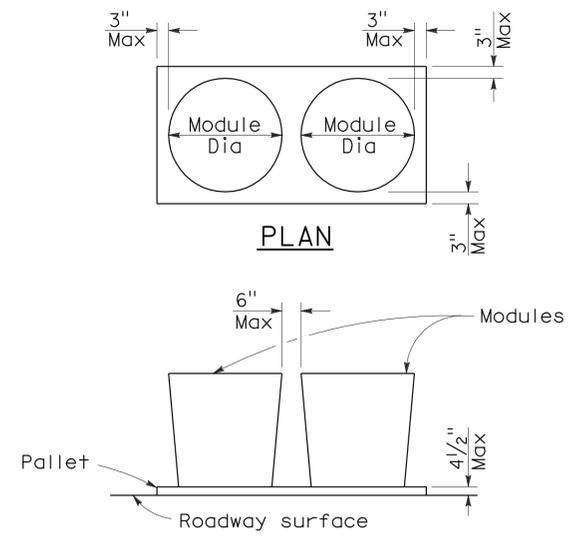
**ARRAY 'TU21'**

Approach speed 45 mph or more



**ARRAY 'TU17'**

Approach speed less than 45 mph



**CRASH CUSHION PALLET DETAIL**

See Note 7

**NOTES:**

1. (XXX) Indicates sand filled module location and weight of sand in pounds for each module. Module spacing is based on the greater diameter of the module.
2. All sand weights are nominal.
3. Temporary crash cushion arrays shall not encroach on the traveled way.
4. Place the top of Type R marker panel 1" below the module lid.
5. Refer to Standard Plan A73B for marker details.
6. Approach speeds indicated conform to NCHRP 350 Report criteria.
7. Use of pallets is optional.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**TEMPORARY CRASH CUSHION,  
SAND FILLED  
(UNIDIRECTIONAL)**

NO SCALE

RSP T1A DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN T1A  
DATED MAY 1, 2006 - PAGE 211 OF THE STANDARD PLANS BOOK DATED MAY 2006.

| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|------|--------|-------|--------------------------|-----------|--------------|
| 03   | ED     | 50    | R28.1                    | 16        | 52           |

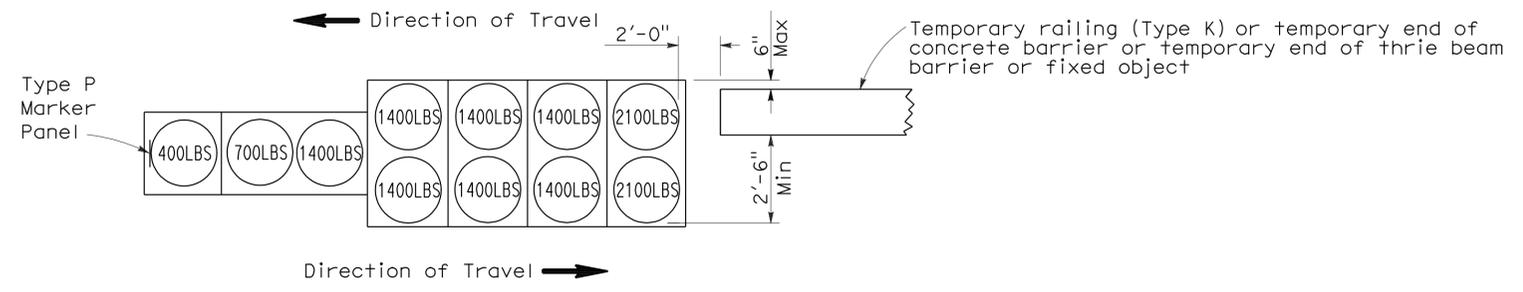
*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

June 6, 2008  
PLANS APPROVAL DATE

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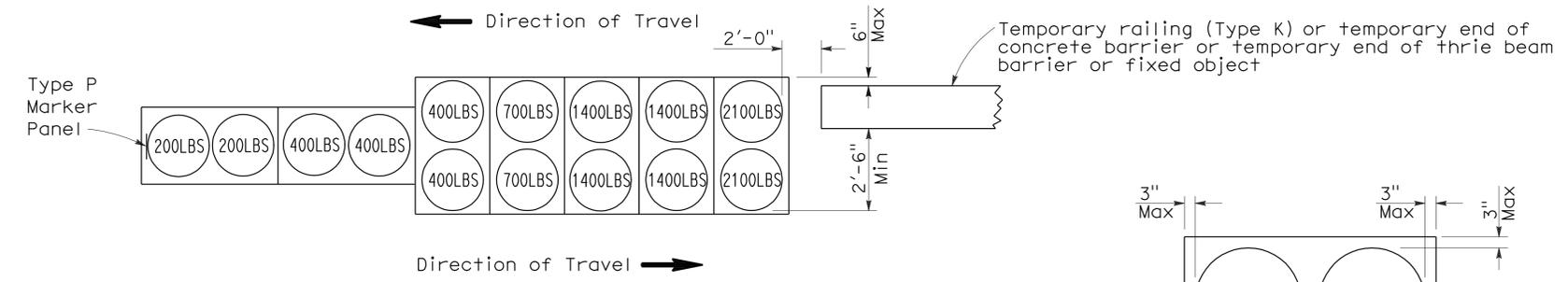
REGISTERED PROFESSIONAL ENGINEER  
No. C50200  
Exp. 6-30-09  
CIVIL  
STATE OF CALIFORNIA

To accompany plans dated 11-16-09



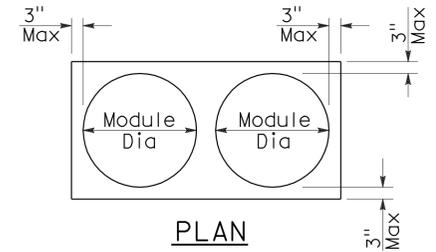
**ARRAY 'TB11'**

Approach speed less than 45 mph

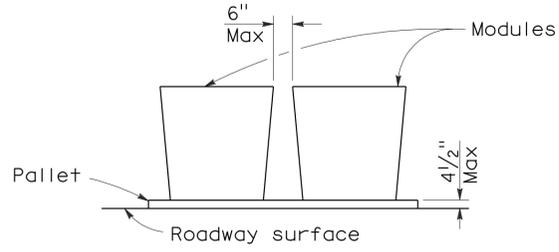


**ARRAY 'TB14'**

Approach speed 45 mph or more



PLAN



ELEVATION

**CRASH CUSHION PALLET DETAIL**

See Note 7

**NOTES:**

1. (XXX) Indicates sand filled module location and weight of sand in pounds for each module. Module spacing is based on the greater diameter of the module.
2. All sand weights are nominal.
3. Temporary crash cushion arrays shall not encroach on the traveled way.
4. Place the Type P marker panel so that the bottom of the panel rests upon the pallet.
5. Refer to Standard Plan A73B for marker details.
6. Approach speeds indicated conform to NCHRP 350 Report criteria.
7. Use of pallets is optional.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**TEMPORARY CRASH CUSHION,  
SAND FILLED  
(BIDIRECTIONAL)**

NO SCALE

RSP T1B DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN T1B  
DATED MAY 1, 2006 - PAGE 212 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP T1B**

2006 REVISED STANDARD PLAN RSP T1B

|      |        |       |                          |           |              |
|------|--------|-------|--------------------------|-----------|--------------|
| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
| 03   | ED     | 50    | R28.1                    | 17        | 52           |

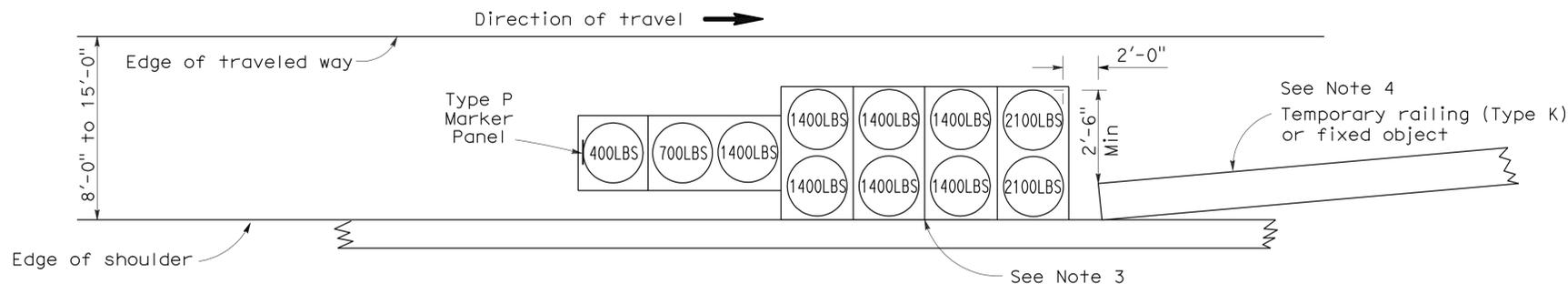
*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

June 6, 2008  
PLANS APPROVAL DATE

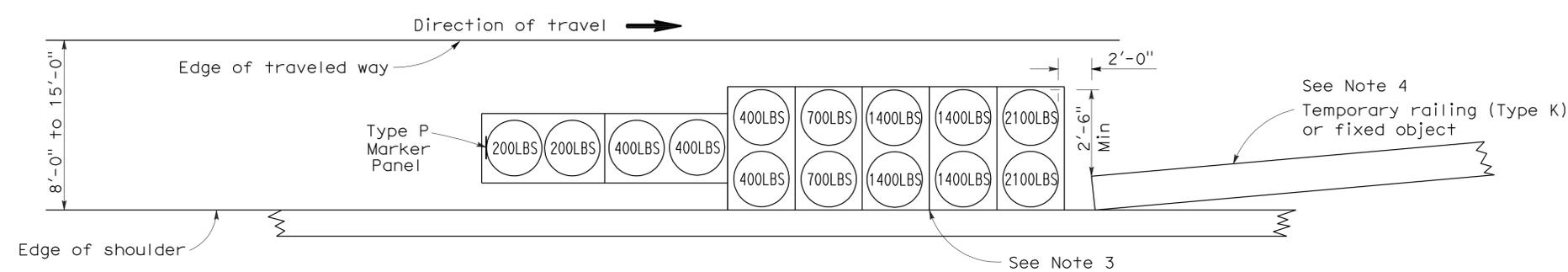
*Randell D. Hiatt*  
REGISTERED PROFESSIONAL ENGINEER  
No. C50200  
Exp. 6-30-09  
CIVIL  
STATE OF CALIFORNIA

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To accompany plans dated 11-16-09



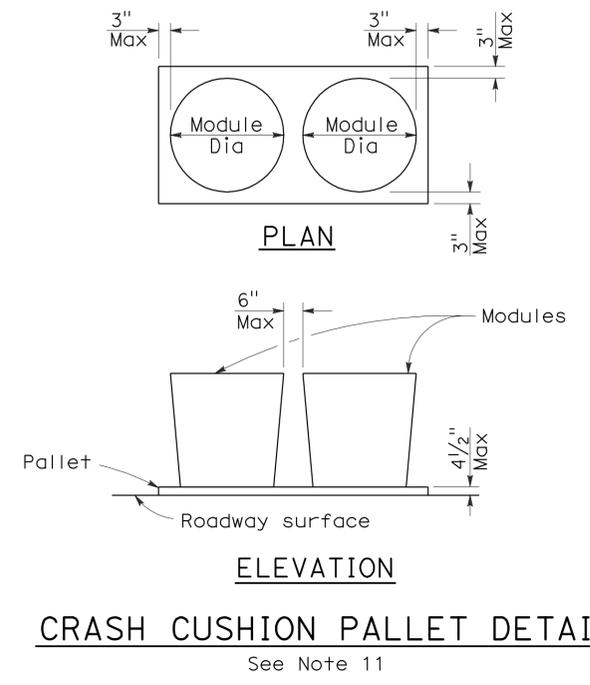
**ARRAY 'TS11'**  
Approach speed less than 45 mph  
See Note 9



**ARRAY 'TS14'**  
Approach speed 45 mph or more  
See Note 9

**NOTES:**

1. (XXX) Indicates sand filled module location and weight of sand in pounds for each module. Module spacing is based on the greater diameter of the module.
2. All sand weights are nominal.
3. The temporary crash cushion arrays shown on this plan shall be used only in locations where there will be traffic on one side of the temporary crash cushion array.
4. If the fixed object or approach end of the temporary railing is less than 15'-0" from the edge of traveled way, a temporary crash cushion is required in a construction or work zone.
5. Temporary crash cushion arrays shall not encroach on the traveled way.
6. Arrays for median shoulders shall conform to details shown on this plan for outside shoulders.
7. Place the Type P marker panel so that the bottom of the panel rests upon the pallet and faces traffic.
8. Refer to Standard Plan A73B for marker details.
9. For shoulder widths less than 8'-0", appropriate approved crash cushion protection, other than sand filled modules, shall be provided at fixed objects and at approach ends of temporary railing. The specific type of crash cushion shall be as shown on the project plans or as specified in the Special Provisions, or if not shown on the project plans or specified in the Special Provisions, shall be as approved by the Engineer.
10. Approach speeds indicated conform to NCHRP 350 Report criteria.
11. Use of pallets is optional.



STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**TEMPORARY CRASH CUSHION,  
SAND FILLED  
(SHOULDER INSTALLATIONS)**

NO SCALE

RSP T2 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN T2  
DATED MAY 1, 2006 - PAGE 213 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP T2**

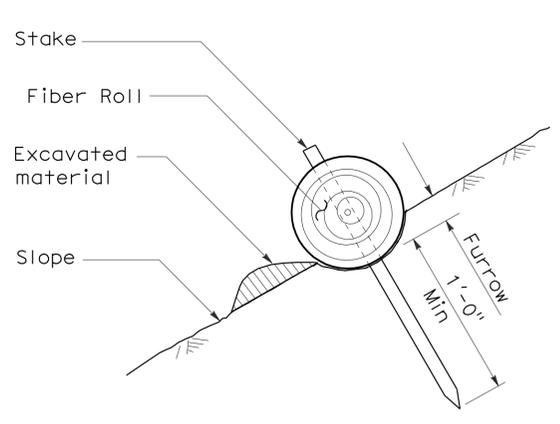
2006 REVISED STANDARD PLAN RSP T2

|      |        |       |                          |           |              |
|------|--------|-------|--------------------------|-----------|--------------|
| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
| 03   | ED     | 50    | R28.1                    | 18        | 52           |

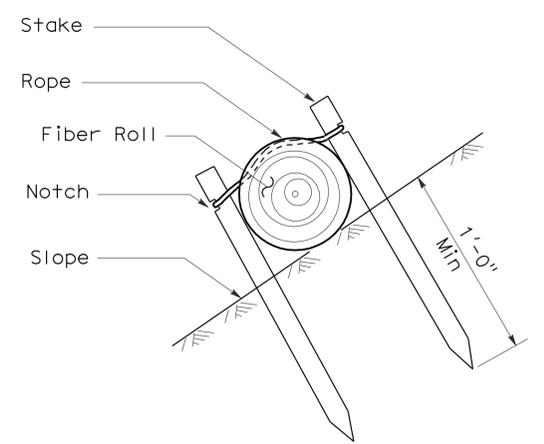
*Robert B. Schott*  
 LICENSED LANDSCAPE ARCHITECT  
 April 3, 2009  
 PLANS APPROVAL DATE  
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.



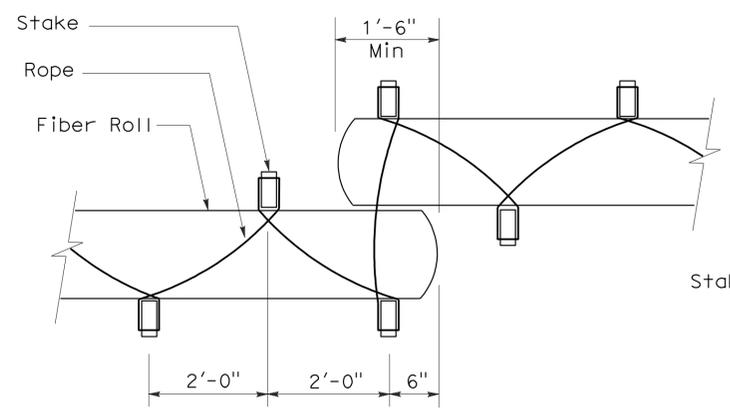
To accompany plans dated 11-16-09



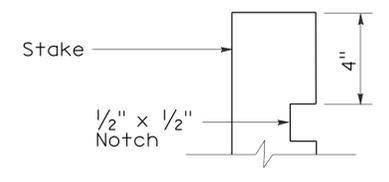
**SECTION**  
**TEMPORARY FIBER ROLL (TYPE 1)**



**SECTION**  
**TEMPORARY FIBER ROLL (TYPE 2)**

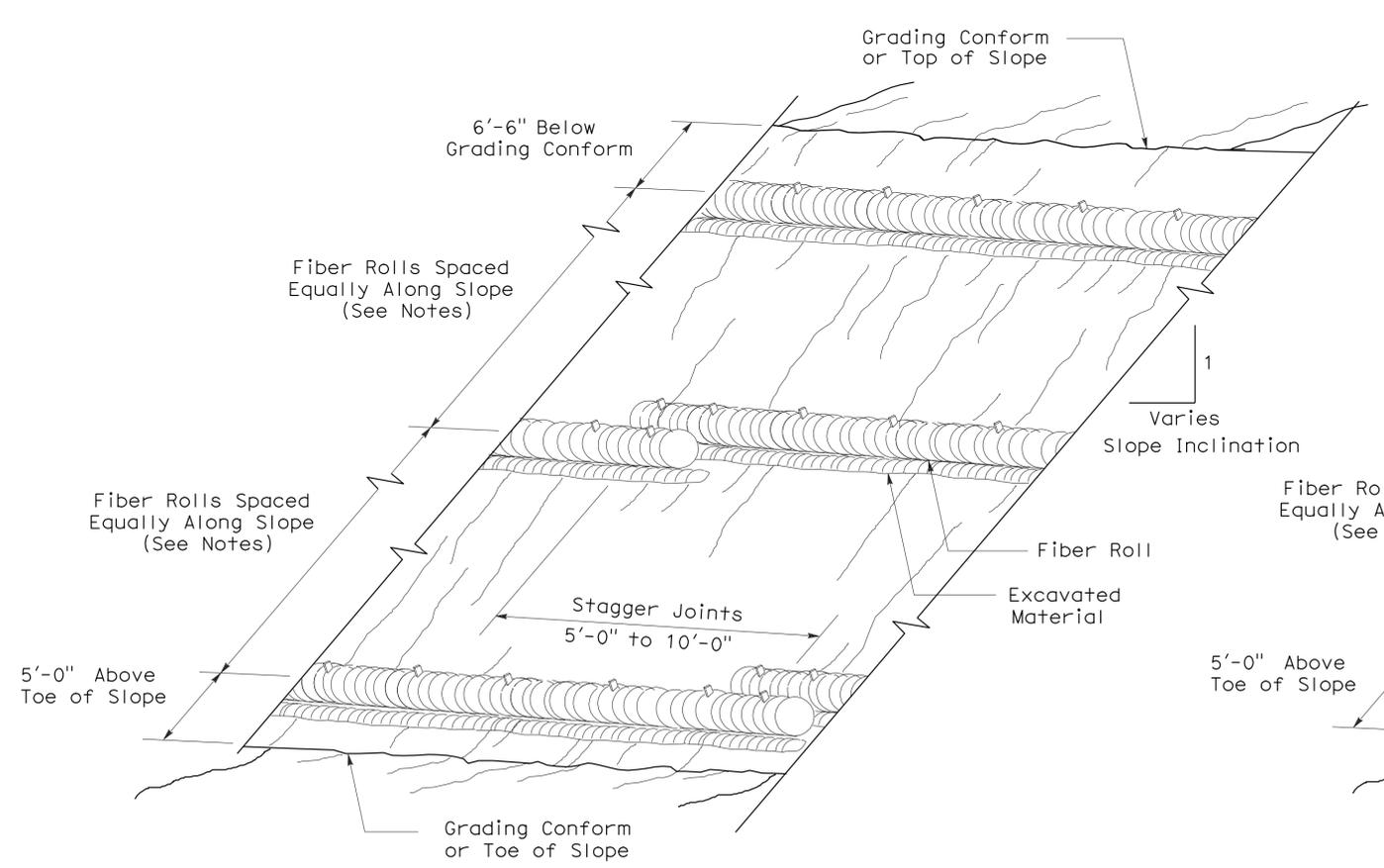


**PLAN**

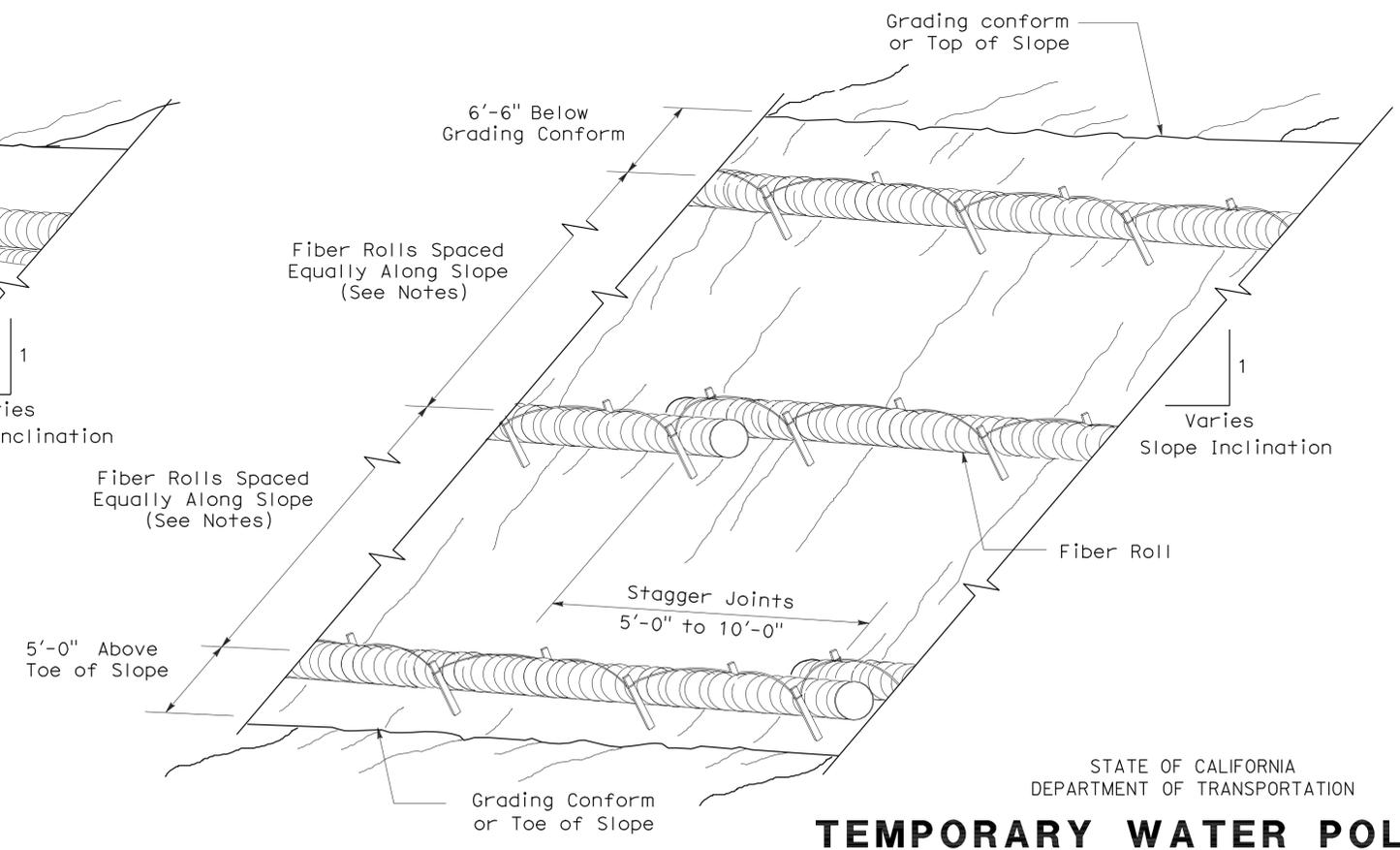


**ELEVATION**  
**STAKE NOTCH DETAIL**

- NOTES:**
1. Temporary fiber roll spacing varies depending upon slope inclination.
  2. Installations shown in the perspectives are for slope inclination of 10:1 and steeper.



**PERSPECTIVE**  
**TEMPORARY FIBER ROLL (TYPE 1)**



**PERSPECTIVE**  
**TEMPORARY FIBER ROLL (TYPE 2)**

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY FIBER ROLL)**

NO SCALE

RSP T56 DATED APRIL 3, 2009 SUPERSEDES STANDARD PLAN T56 DATED MAY 1, 2006 - PAGE 232 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP T56**

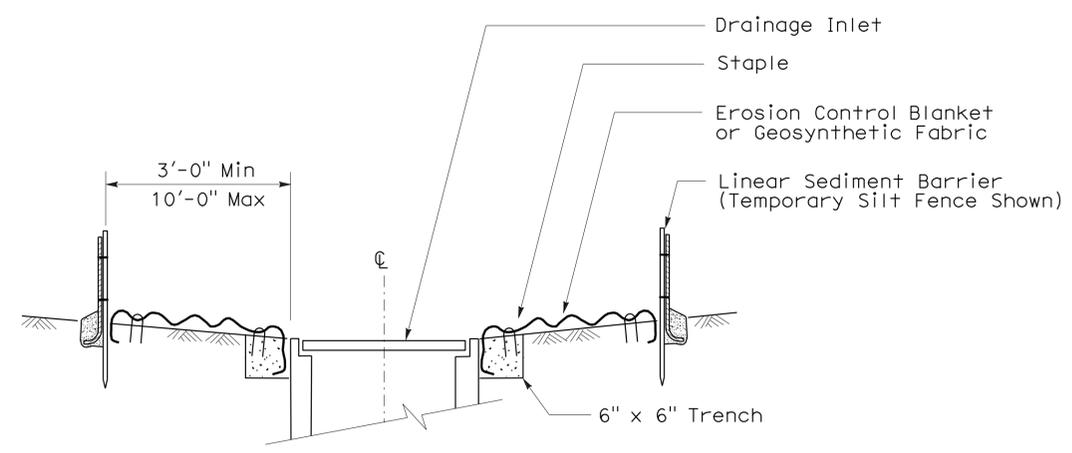
2006 REVISED STANDARD PLAN RSP T56

| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|------|--------|-------|--------------------------|-----------|--------------|
| 03   | ED     | 50    | R28.1                    | 19        | 52           |

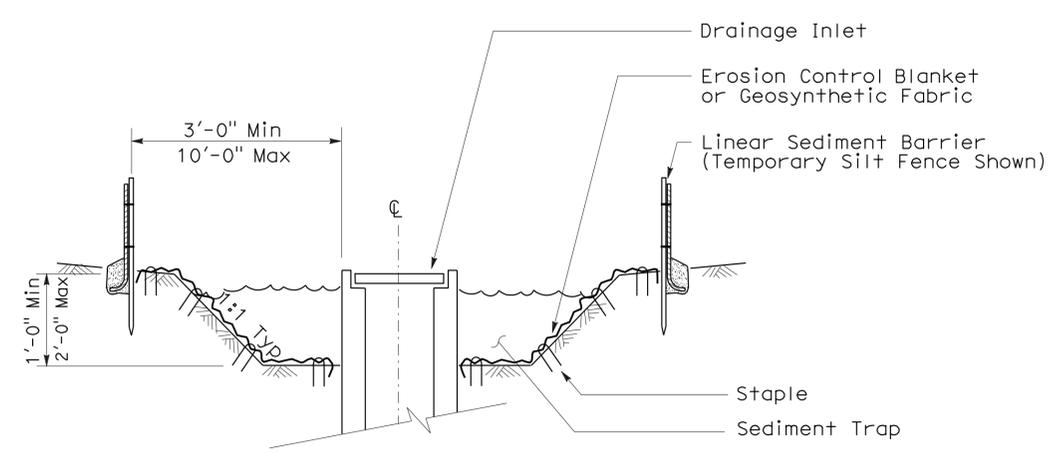
Robert B. Schott  
 LICENSED LANDSCAPE ARCHITECT  
 August 15, 2008  
 PLANS Approval DATE  
 The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

To accompany plans dated 11-16-09

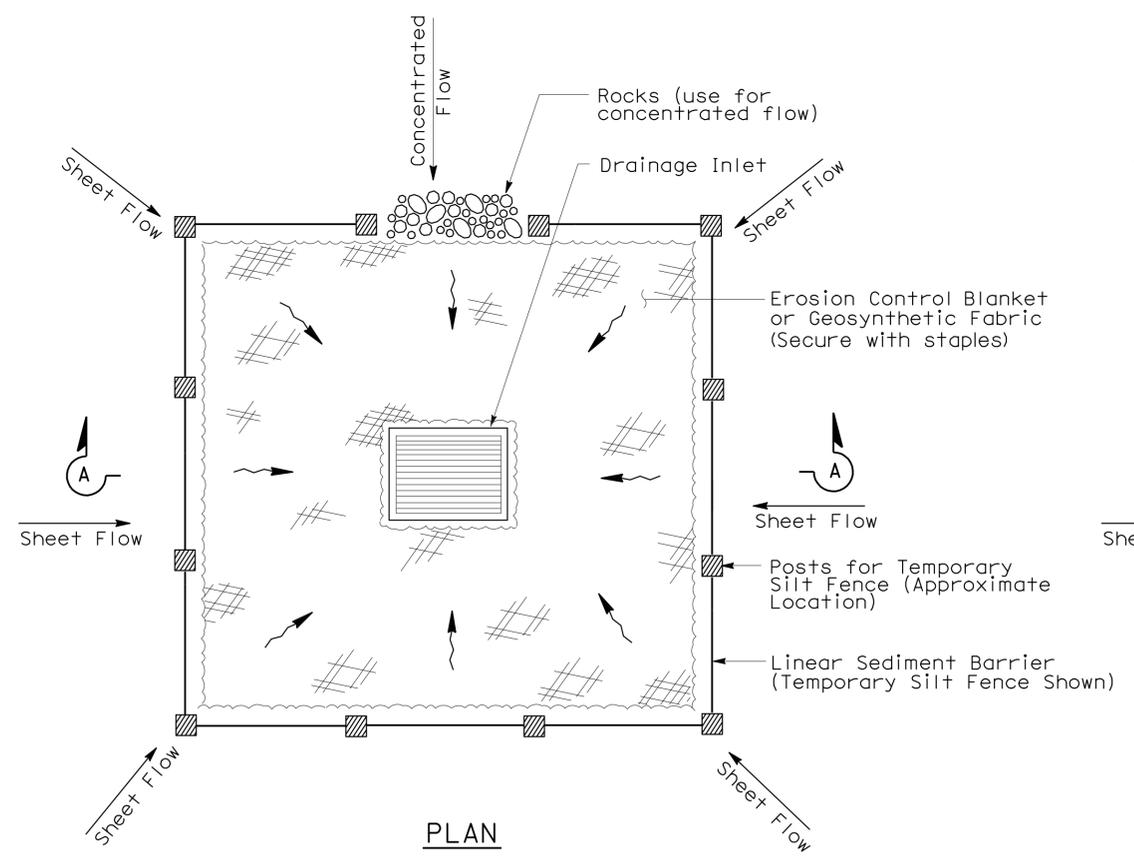
- NOTES:**
- See Standard Plan T51 for Temporary Silt Fence.
  - Dimensions may vary to fit field conditions.



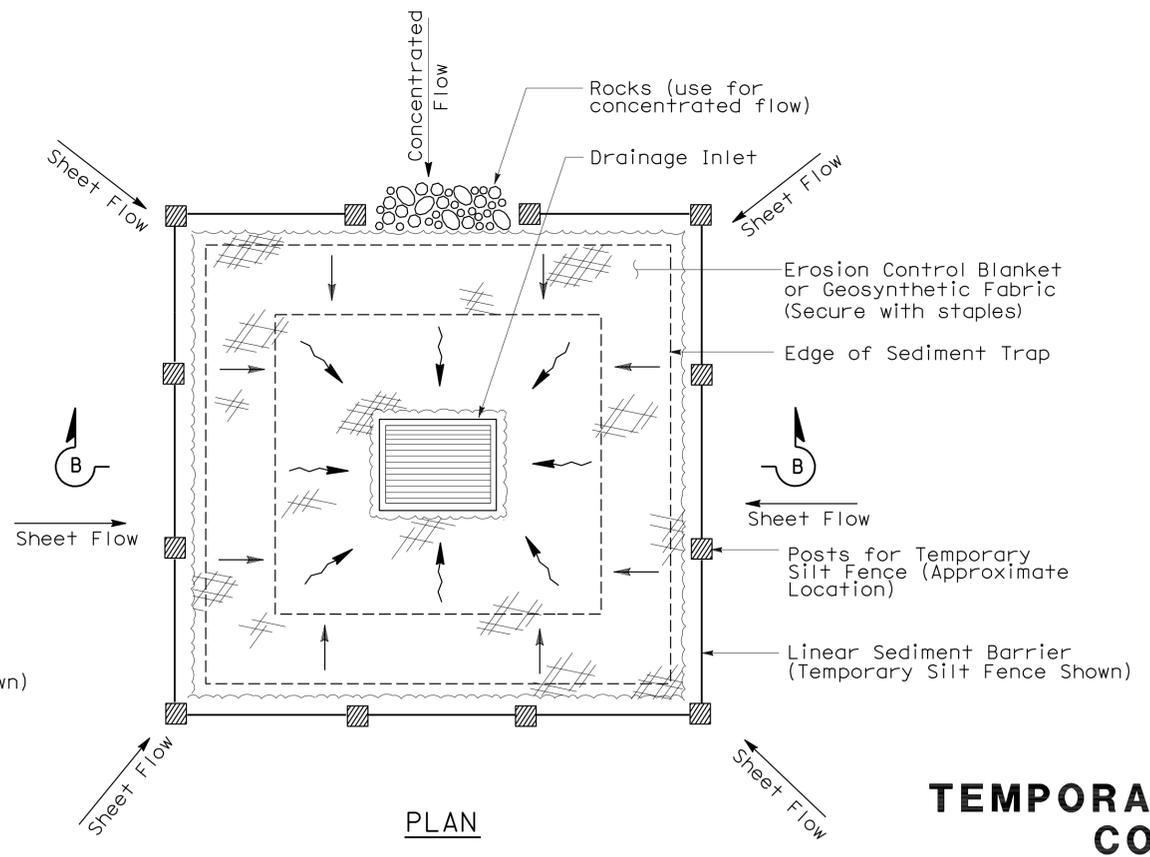
SECTION A-A



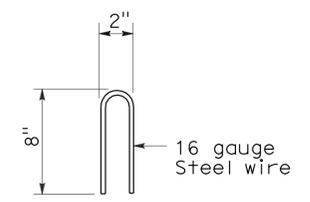
SECTION B-B



TEMPORARY DRAINAGE INLET PROTECTION (TYPE 1)



TEMPORARY DRAINAGE INLET PROTECTION (TYPE 2) (EXCAVATED SEDIMENT TRAP)



STAPLE DETAIL

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**TEMPORARY WATER POLLUTION CONTROL DETAILS**  
**(TEMPORARY DRAINAGE INLET PROTECTION)**  
 NO SCALE

NSP T61 DATED AUGUST 15, 2008 SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

2006 NEW STANDARD PLAN NSP T61

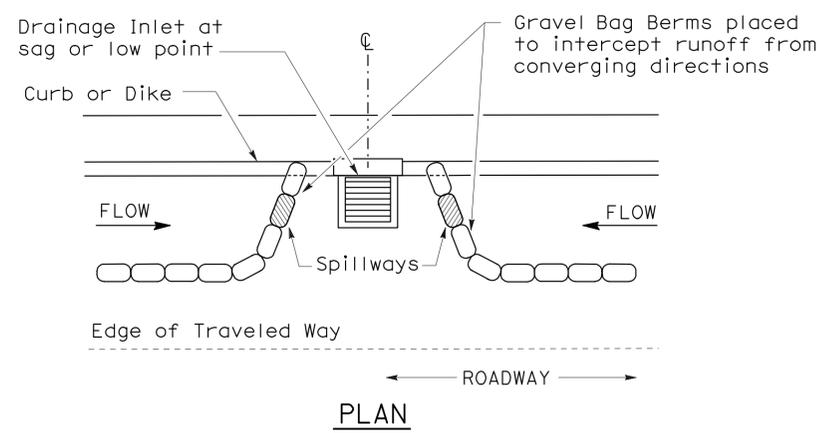


To accompany plans dated 11-16-09

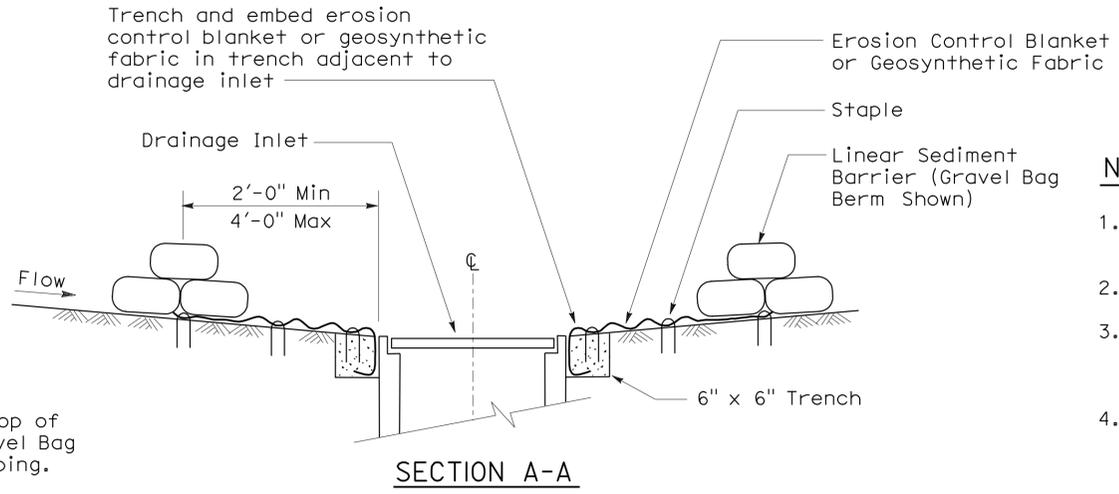
### GRAVEL BAG BERM (TYPE 3A) SPACING TABLE

| SLOPE OF ROADWAY (PERCENT) | 1 to 3.9 | 4 to 5.9 | 6 to 7.9 | 8 to 10 | 10+ |
|----------------------------|----------|----------|----------|---------|-----|
| INTERVAL BETWEEN BERM      | 100'     | 75'      | 50'      | 25'     | 12' |

For slope of less than 1%, install barriers only if erosion/sediment is prevalent



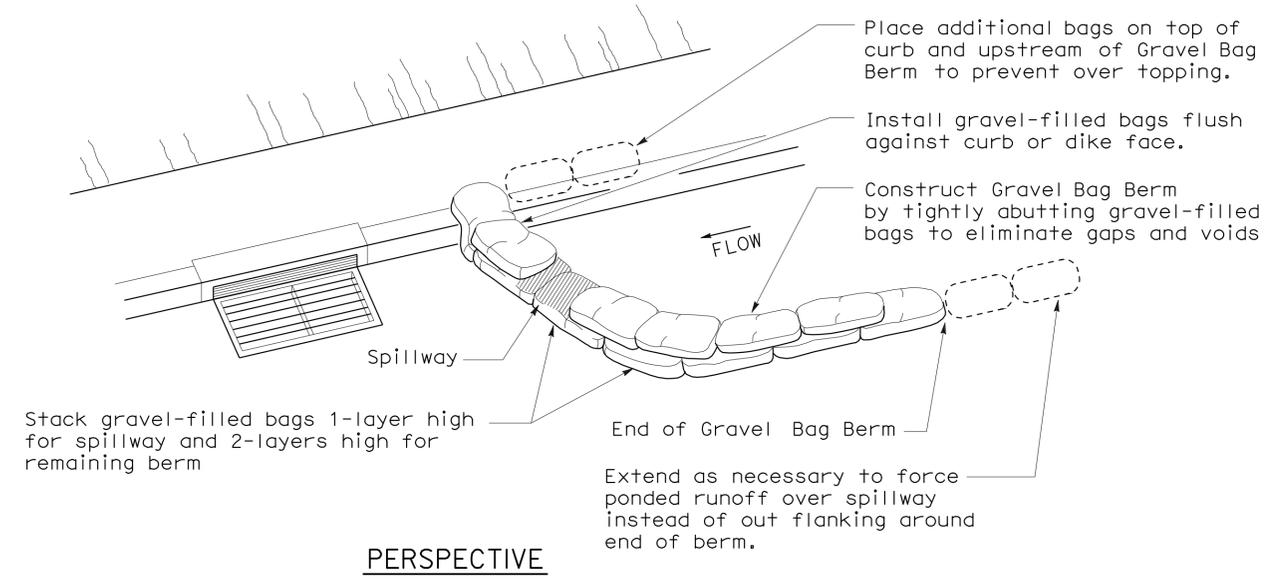
**PLAN**  
**CONFIGURATION FOR SAG POINT INLET (GRAVEL BAG BERM)**



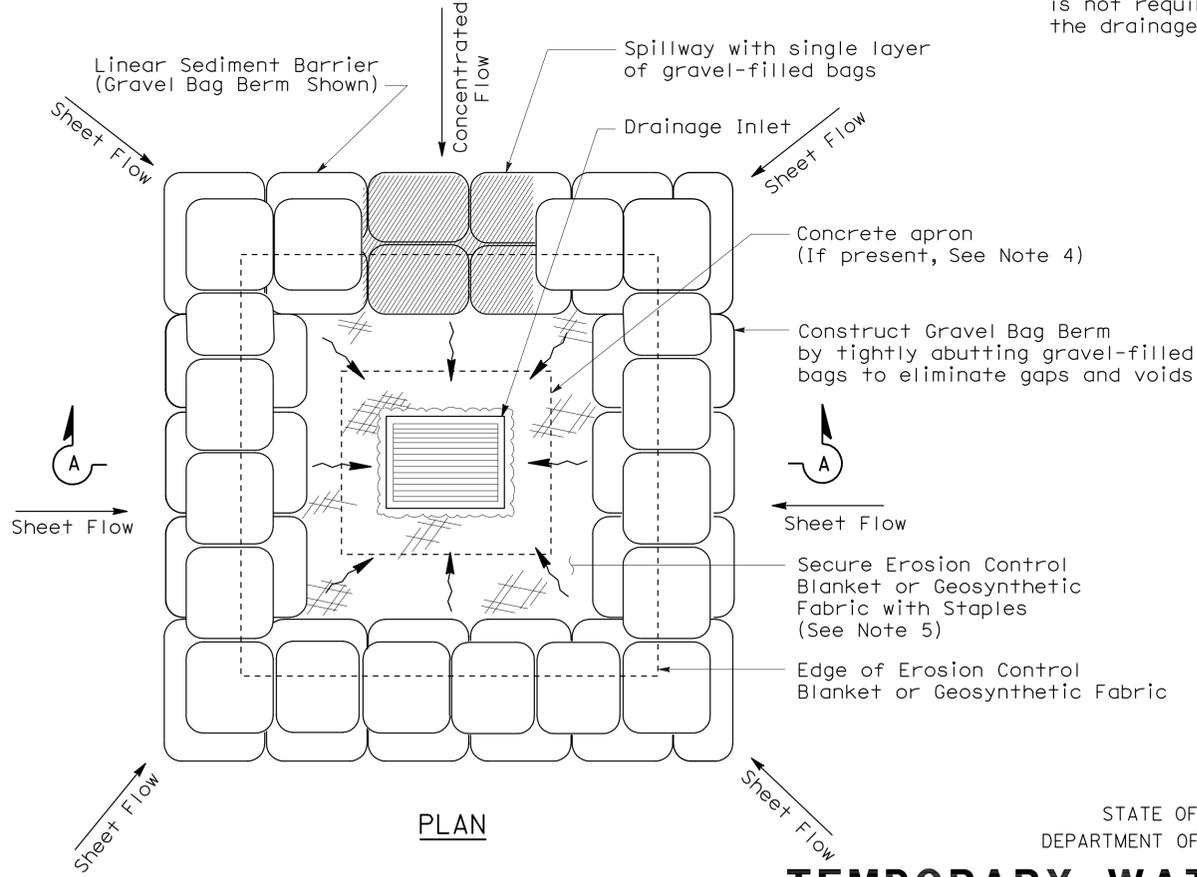
**SECTION A-A**

**NOTES:**

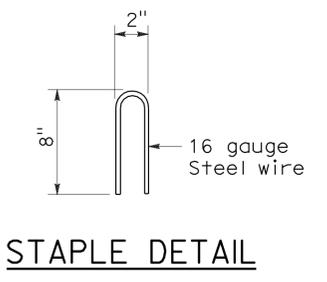
1. Place safety cones adjacent to drainage inlet protection.
2. Dimensions may vary to fit field conditions.
3. Install a minimum of 3 gravel bag berms upstream of each drainage inlet to be protected.
4. Position erosion control blanket or geosynthetic fabric at edge of concrete apron and secure in trench.
5. Erosion control blanket or geosynthetic fabric is not required if the area adjacent to the drainage inlet is vegetated or paved.



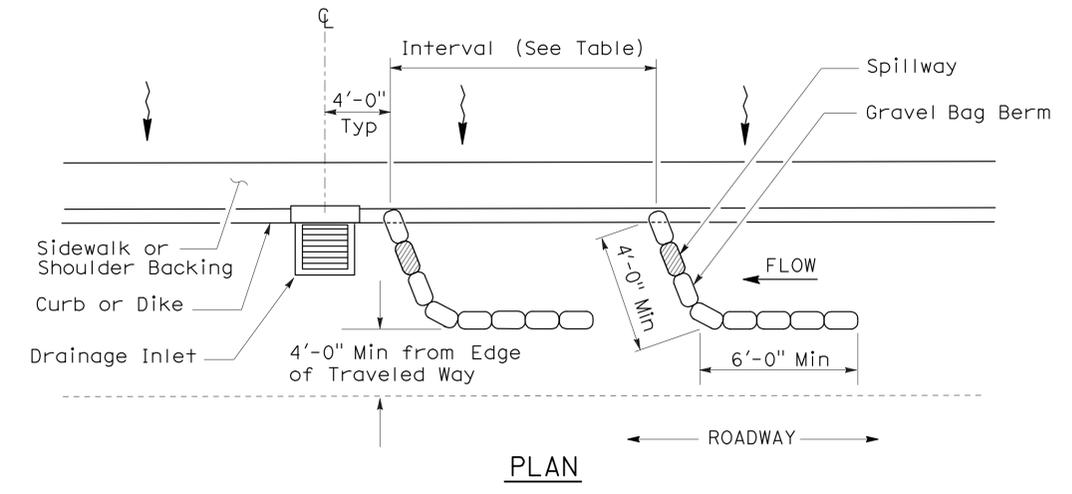
**PERSPECTIVE**



**PLAN**  
**TEMPORARY DRAINAGE INLET PROTECTION (TYPE 3B)**



**STAPLE DETAIL**



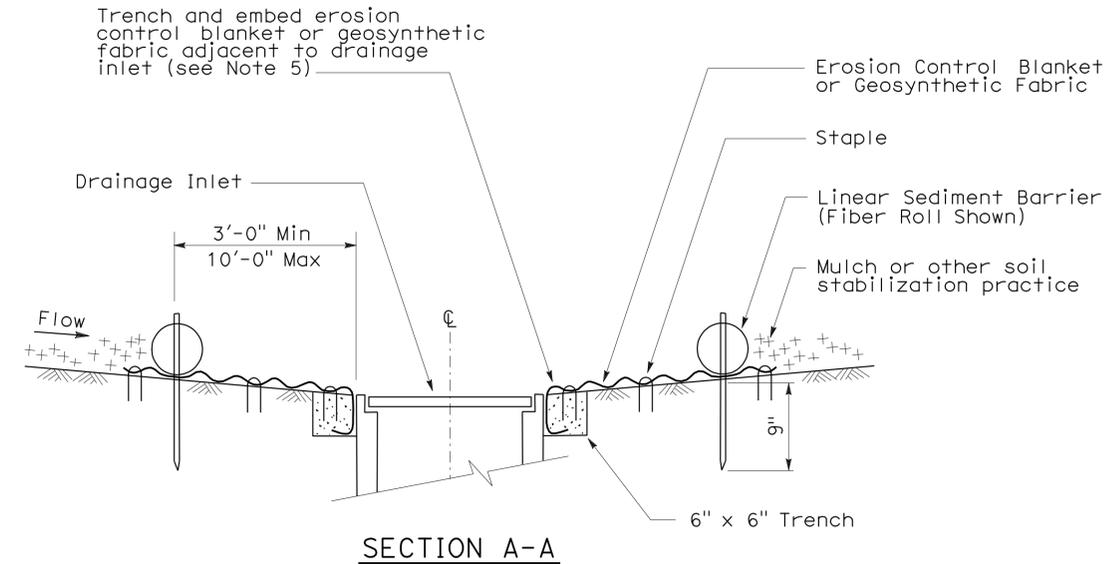
**PLAN**  
**TEMPORARY DRAINAGE INLET PROTECTION (TYPE 3A) (GRAVEL BAG BERM)**

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY DRAINAGE INLET PROTECTION)**

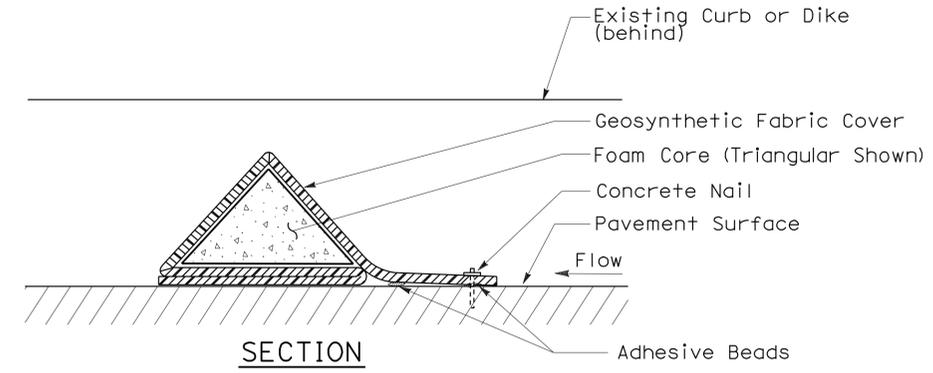
NO SCALE  
NSP T62 DATED AUGUST 15, 2008 SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

**FLEXIBLE SEDIMENT BARRIER SPACING TABLE**

| SLOPE OF ROADWAY (PERCENT) | 0 to 0.9 | 1 to 1.9 | 2 to 2.9 | 3 to 4 | 5+  |
|----------------------------|----------|----------|----------|--------|-----|
| INTERVAL BETWEEN BARRIERS  | 50'      | 35'      | 30'      | 25'    | 20' |
| ANGLE FROM FACE OF CURB    | 70°      | 70°      | 70°      | 45°    | 45° |
| SUGGESTED BARRIER LENGTH   | 6'       | 6'       | 6'       | 6'     | 6'  |



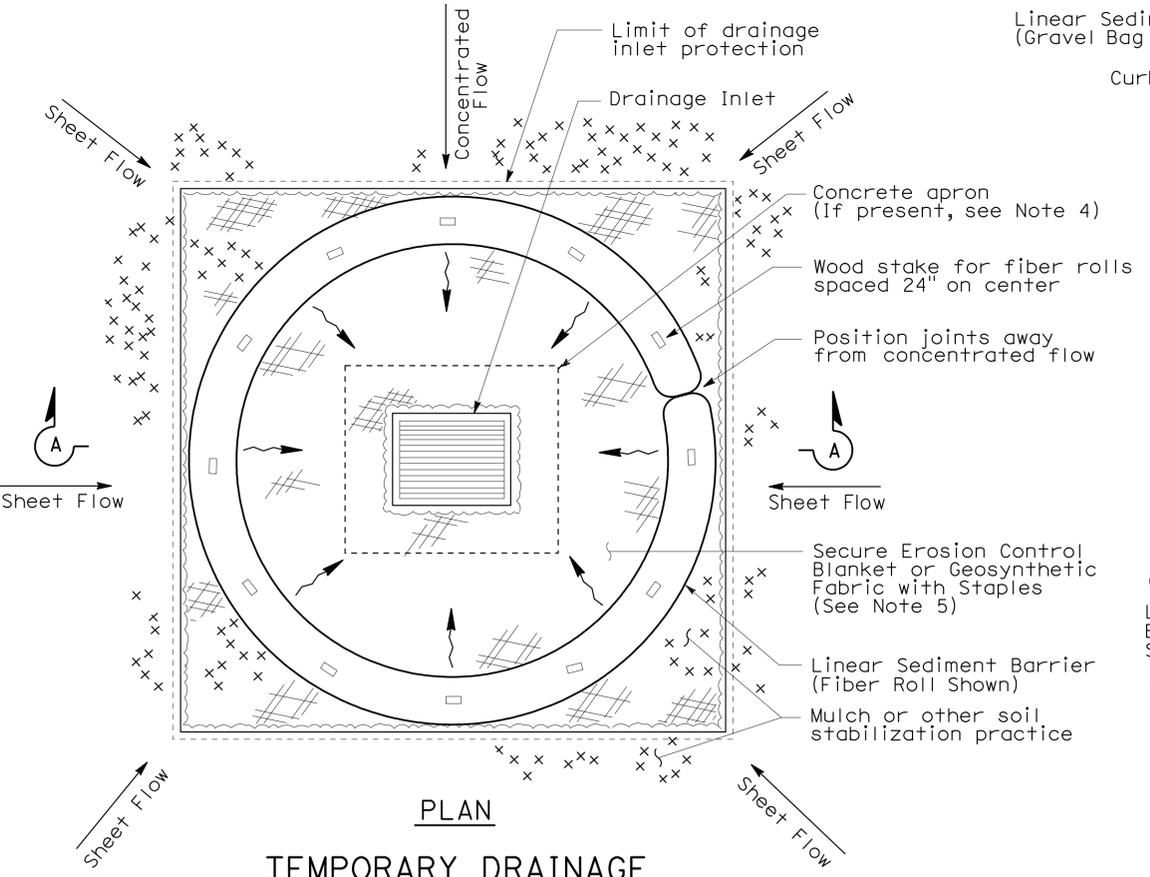
**SECTION A-A**



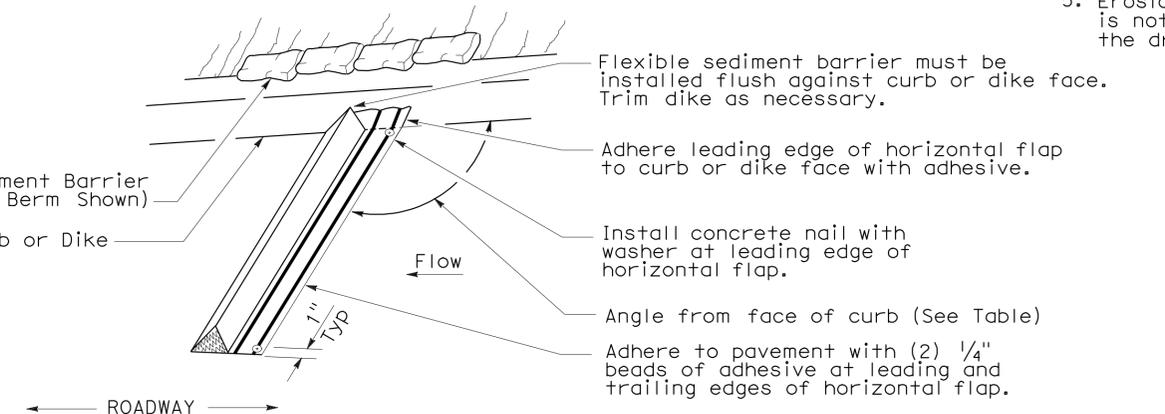
**FLEXIBLE SEDIMENT BARRIER DETAIL (FOAM BARRIER SHOWN)**

**NOTES:**

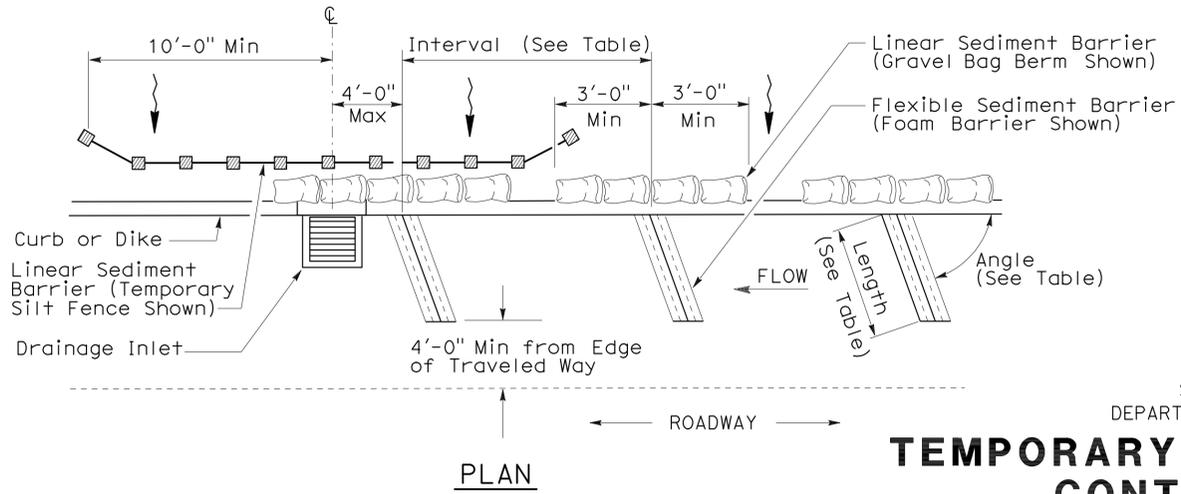
1. See Standard Plan T51 for Temporary Silt Fence.
2. Dimensions may vary to fit field conditions.
3. Install a minimum of 3 flexible sediment barriers upstream of each drainage inlet to be protected.
4. Position erosion control blanket or geosynthetic fabric at edge of concrete apron and secure in trench.
5. Erosion control blanket or geosynthetic fabric is not required if the area adjacent to the drainage inlet is vegetated.



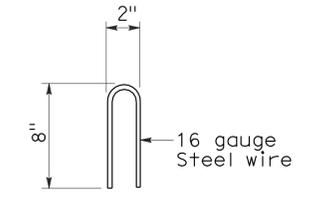
**TEMPORARY DRAINAGE INLET PROTECTION (TYPE 4A)**



**PERSPECTIVE**



**TEMPORARY DRAINAGE INLET PROTECTION (TYPE 4B) FLEXIBLE SEDIMENT BARRIER**



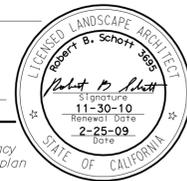
**STAPLE DETAIL**

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY DRAINAGE INLET PROTECTION)**  
 NO SCALE  
 NSP T63 DATED AUGUST 15, 2008 SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

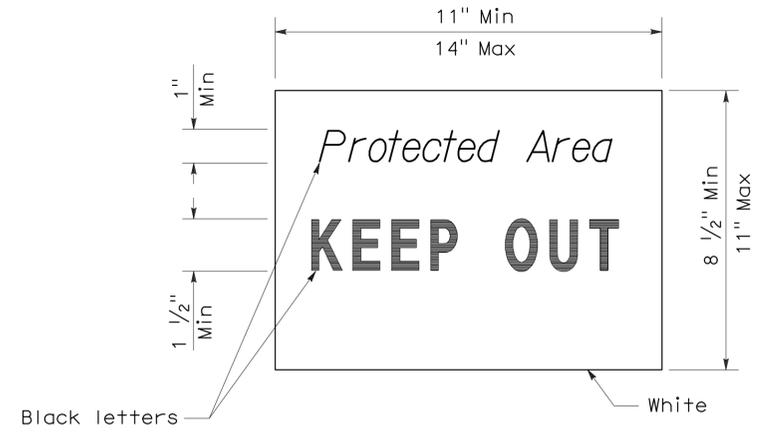
2006 NEW STANDARD PLAN NSP T63

| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|------|--------|-------|--------------------------|-----------|--------------|
| 03   | ED     | 50    | R28.1                    | 22        | 52           |

*Robert B. Schott*  
 LICENSED LANDSCAPE ARCHITECT  
 April 3, 2009  
 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.



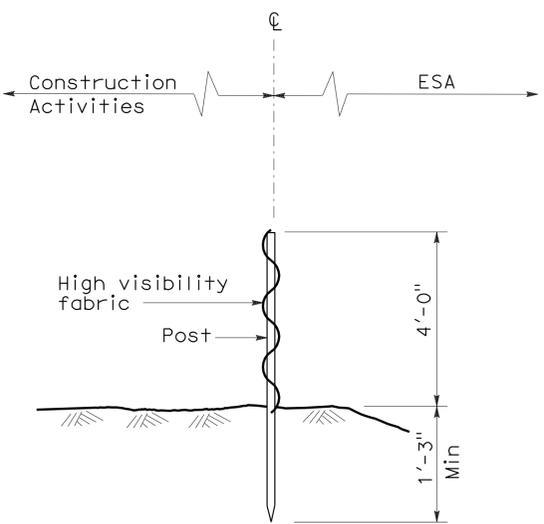
To accompany plans dated 11-16-09



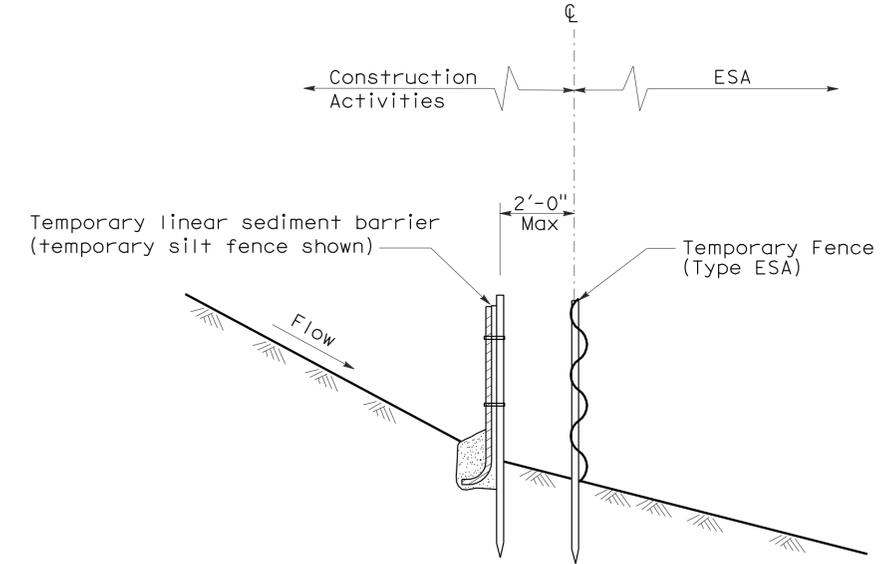
SIGN DETAIL

**NOTE:**

1. Temporary silt fence and temporary straw bale barrier shown for reference purposes only.

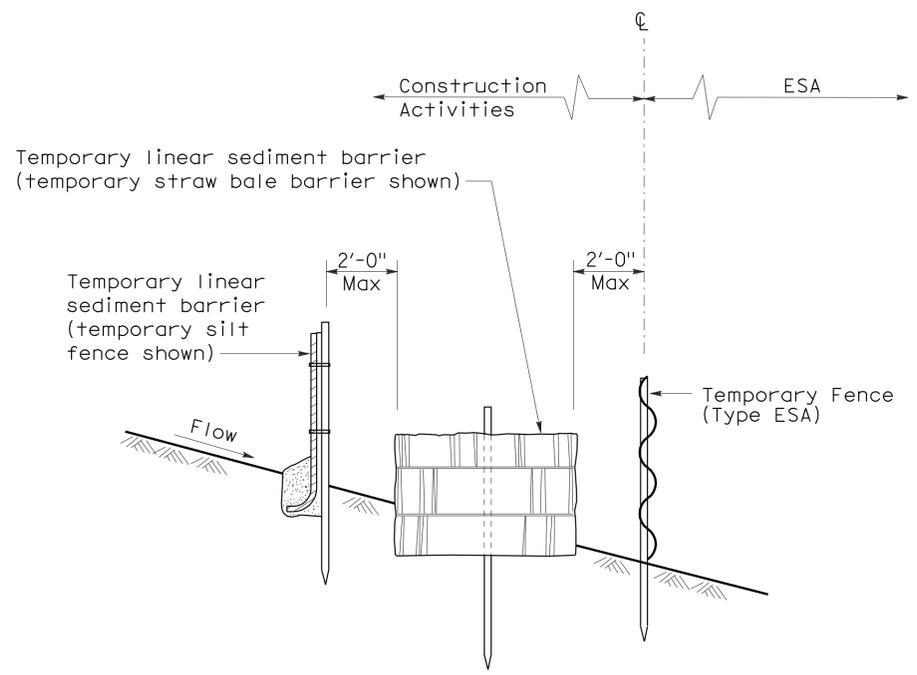


SECTION TEMPORARY FENCE (TYPE ESA)



SECTION PLACEMENT DETAIL FOR TEMPORARY LINEAR SEDIMENT BARRIER USED WITH TEMPORARY FENCE (TYPE ESA)

(See Note 1 )



SECTION PLACEMENT DETAIL FOR TEMPORARY LINEAR SEDIMENT BARRIER AND TEMPORARY STRAW BALE BARRIER USED WITH TEMPORARY FENCE (TYPE ESA)

(See Note 1 )

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**TEMPORARY WATER POLLUTION CONTROL DETAILS**  
**[TEMPORARY FENCE (TYPE ESA)]**  
 NO SCALE

NSP T65 DATED APRIL 3, 2009 SUPPLEMENTS  
 THE STANDARD PLANS BOOK DATED MAY 2006.

**NEW STANDARD PLAN NSP T65**

2006 NEW STANDARD PLAN NSP T65

INDEX OF SHEETS

SHEET NO. SHEET TITLE

GP GENERAL PLAN

ARCHITECTURAL

- AO-1 ARCHITECTURAL ABBREVIATIONS, SYMBOLS AND ACCESSIBILITY NOTES
- AO-3.1 OMIT
- AO-3.2 OMIT
- AO-3.3 ACCESSIBILITY STANDARD DETAILS
- AO-3.4 OMIT
- AO-3.5 OMIT
- A-1 FINISH NOTES, DOOR SCHEDULE, WINDOW, LOUVER SCHEDULES, ROOF AND REFLECTED CEILING PLAN
- A-2 FLOOR PLAN, BUILDING SECTION AND EXTERIOR ELEVATIONS
- A-3 MISCELLANEOUS DETAILS
- A-4 DOOR, WINDOW & LOUVER DETAILS
- A-5 EXISTING SALT STORAGE BLDG - EXTERIOR ELEVATIONS WITH FINISH-NOTES

STRUCTURAL

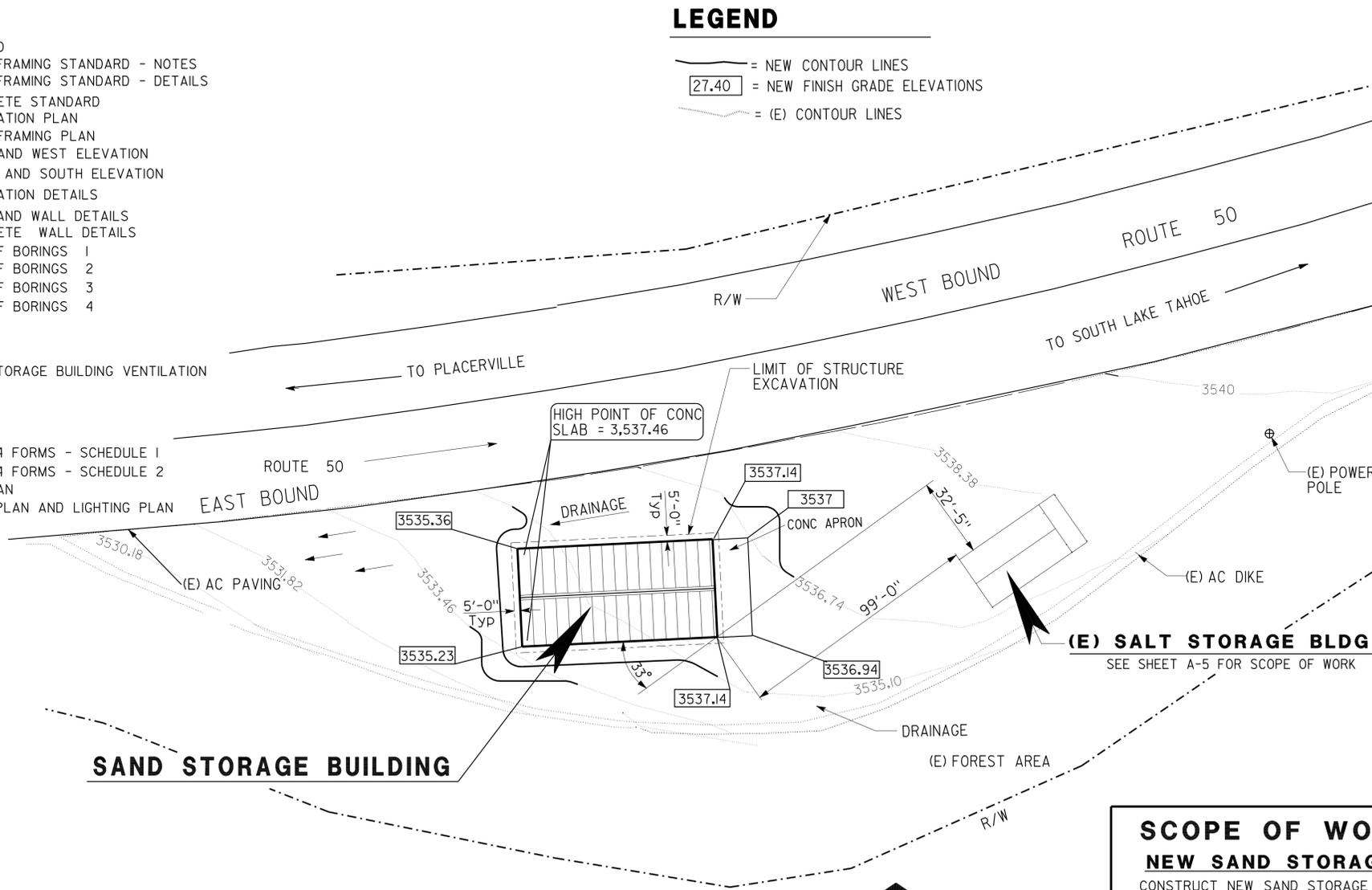
- ST-1 LEGEND
- ST-1A WOOD FRAMING STANDARD - NOTES
- ST-1B WOOD FRAMING STANDARD - DETAILS
- ST-2 CONCRETE STANDARD
- STI-1 FOUNDATION PLAN
- STI-2 ROOF FRAMING PLAN
- STI-3 EAST AND WEST ELEVATION
- STI-4 NORTH AND SOUTH ELEVATION
- STI-5 FOUNDATION DETAILS
- STI-6 ROOF AND WALL DETAILS
- STI-7 CONCRETE WALL DETAILS
- STI-8 LOG OF BORINGS 1
- STI-9 LOG OF BORINGS 2
- STI-10 LOG OF BORINGS 3
- STI-11 LOG OF BORINGS 4

MECHANICAL

- M-1 SAND STORAGE BUILDING VENTILATION

ELECTRICAL

- EE-0 LEGEND
- EE-1 TITLE 24 FORMS - SCHEDULE 1
- EE-2 TITLE 24 FORMS - SCHEDULE 2
- EE-3 SITE PLAN
- EE-4 POWER PLAN AND LIGHTING PLAN
- EE-5 DETAILS



SITE PLAN

SCALE 1" = 60'-0"



LEGEND

- = NEW CONTOUR LINES
- = NEW FINISH GRADE ELEVATIONS
- = (E) CONTOUR LINES

ACCESSIBILITY DESIGN APPROVAL STAMP  
DOT / DES / OTA  
**03-3E4601**  
DISTRICT - EA  
Reviewed by: *[Signature]*  
YA WANG  
Date: 9-2-09

CALIFORNIA STATE FIRE MARSHAL  
**APPROVED**  
Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approvals are subject to field inspection. One set of approved plans shall be available on the project site at all times.  
Reviewed by: *[Signature]*  
BILL ROBERTSON DSFM III  
Approval date: 09-1-09

|  |        |       |                          |           |              |
|--|--------|-------|--------------------------|-----------|--------------|
| DIST.  | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
| 03   | ED     | 50    | R28.1                    | 23        | 52           |
| <br>LICENSED ARCHITECT DATE  |        |       |                          |           |              |
| 11-16-09   |        |       |                          |           |              |
| 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. |        |       |                          |           |              |

DESIGN CRITERIA

THE BUILDING WORK ON THIS PROJECT HAS BEEN DESIGNED TO CONFORM TO THE 2007 TITLE 24 CALIFORNIA BUILDING CODE, THE CURRENT EDITION OF ADA, 2007 CALIFORNIA PLUMBING CODE, 2007 MECHANICAL CODE, 2007 ELECTRICAL CODE, 2007 CALIFORNIA ENERGY CODE AND THE 2007 CALIFORNIA FIRE CODE.

BUILDING CODE ANALYSIS (2007 CBC)

1. BUILDING AREA.....3,204 s.f.
  - a. OCCUPANCY GROUP: (CHAPTER 3, SECTN. 311).....S2
 BUILDING CONSTRUCTION TYPE ..... VB
  - c. ALLOWABLE BUILDING AREA: (TABLE 503).....13,500 s.f.  
13,500 s.f. > 3,204 s.f. (AREA COMPLIES)
2. FIRE RESISTANCE OF EXTERIOR WALLS: SECTION. 602.5 (TABLE 601 & 602)
  - a. NO REQUIREMENT FOR EXTERIOR WALL PROTECTION
  - b. NO REQUIREMENT FOR ROOF CONSTRUCTION PROTECTION
  - c. NO REQUIREMENT FOR EXTERIOR WALL OPENING PROTECTION (TABLE 704.8)
3. DRAFT STOPPING IN ATTICS REQUIRED (SECTION 717.4)  
DRAFT STOPPING SHALL BE INSTALLED IN ATTICS AND CONCEALED ROOF SPACES, SUCH THAT ANY HORIZONTAL AREA DOES NOT EXCEED 3,000 S.F.
4. BUILDING HEIGHT  
THE NEW SAND STORAGE BUILDING HEIGHT IS 30' - 8"  
THE ALLOWABLE HEIGHT IS 40' - 0" (2007 CBC SECTION 504, TABLE 503)
5. BUILDING USE STATEMENT  
THE NEW SAND STORAGE BUILDING SHALL BE USED FOR THE PURPOSE OF STORING SAND WHICH SHALL BE SPREAD OVER THE ADJACENT HIGHWAY DURING PERIODS OF INCLEMENT WEATHER.
6. FIRE SPRINKLER NO
7. FIRE ALARM NO

GENERAL NOTES

1. THE CONTRACTOR SHALL VERIFY ALL CONTROLLING DIMENSIONS AND FIELD CONDITIONS BEFORE ORDERING OR FABRICATING ANY MATERIALS OR ASSEMBLIES.
2. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES BETWEEN THESE PLANS AND ACTUAL MEASUREMENTS OR FIELD CONDITIONS.

SCOPE OF WORK

NEW SAND STORAGE BUILDING

CONSTRUCT NEW SAND STORAGE BUILDING WITH 11'-0" HIGH WOOD STUD WALLS CONSTRUCTED ON 9'-0" HIGH, REINFORCED CONCRETE WALLS WITH PREFINISHED METAL ROOFING ON PLYWOOD ROOF DECK OVER A PRE ENGINEERED WOOD TRUSS SYSTEM. INTERIOR FLOOR SURFACE SHALL BE A SLOPED REINFORCED CONCRETE SLAB. ALL REINFORCING STEEL SHALL BE EPOXY COATED.

EXISTING SALT STORAGE BUILDING

THE EXISTING METAL SIDING AND ROOFING SHALL BE REMOVED FROM THE EXISTING SALT STORAGE BUILDING. NEW PREFINISHED METAL SIDING AND ROOFING SHALL BE INSTALLED MATCHING THE STYLE AND COLOR OF ROOFING AND SIDING AT THE NEW SAND STORAGE BUILDING.

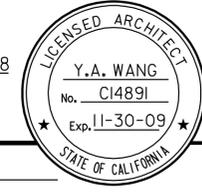
|  |                          |   |   |   |  |                       |   |                 |
|--|--------------------------|---|---|---|--|-----------------------|---|-----------------|
| <br>DESIGN SUPERVISOR<br>DESIGN ARCHITECT<br>C-17122 | DESIGNER<br>GARY HARRIS  | CHECKED BY:<br><i>[Signature]</i>       | SHEET LEGEND<br>A-1 ARCHITECTURAL ST-1 STRUCTURAL<br>M-1 MECHANICAL EE-1 ELECTRICAL<br>W-1 WATER SUPPLY SS-1 SANITARY | STATE OF CALIFORNIA<br>DEPARTMENT OF TRANSPORTATION | DIVISION OF ENGINEERING SERVICES<br>ARCHITECTURAL AND<br>STRUCTURAL DESIGN | BRIDGE NO.<br>19M5737 | CAMINO SAND STORAGE FACILITY<br>SAND STORAGE BUILDING<br>GENERAL PLAN | SHEET<br>GP     |
|  | DRAWN BY<br>ANTHONY CHUN | STRUCTURAL REVIEW<br><i>[Signature]</i> |   |   |  | POST MILE<br>R28.1    |   | SHEET OF<br>1 1 |
| 2gp-cam.dgn  |                          |   | ORIGINAL SCALE IN INCHES FOR REDUCED PLANS  | CU 03021<br>EA 3E4601                               | DISREGARD PRINTS BEARING EARLIER REVISION DATES                            |                       | REVISION DATES (PRELIMINARY STAGE ONLY)                               |                 |
| DS OSD Imperial Rev. 10/07 19-NOV-2009 08:59         |                          |   | 0 1 2 3   |   | 7/21/08 5/15/09 6/19/09 1/28/09 8/28/09 9/3/09                             |                       |   |                 |

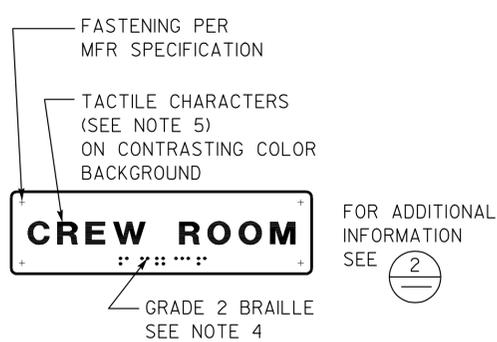
19-NOV-2009 08:59 2gp-cam.dgn



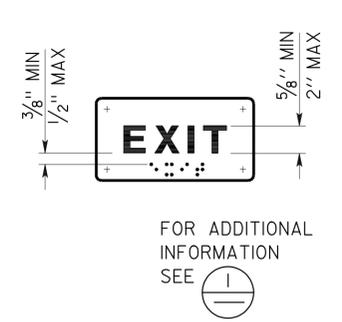
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|-------|--------|-------|--------------------------|-----------|--------------|
| DIST. | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
| 03    | ED     | 50    | R28.1                    | 25        | 52           |

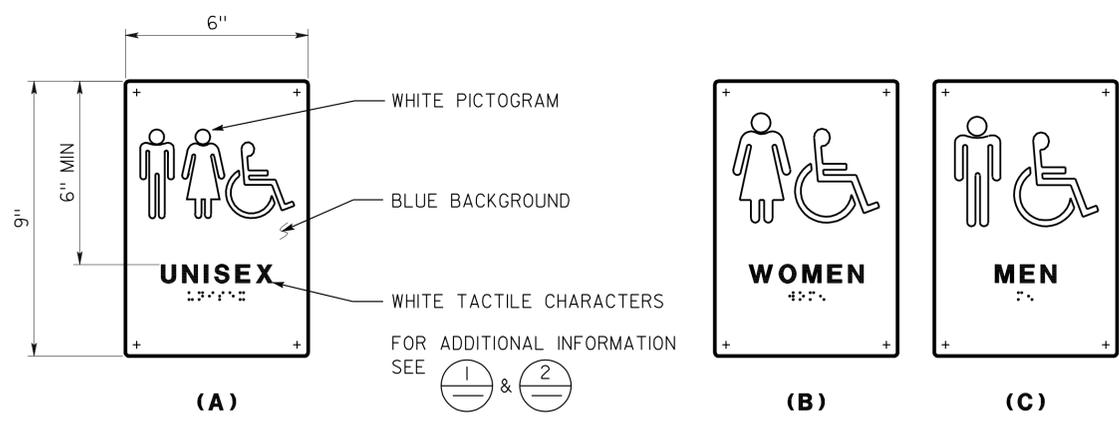
|   |  |  |   |
|---|--|--|---|
| <br>LICENSED ARCHITECT |  | 8-20-08<br>DATE  |  |
| 11-16-09<br>PLANS APPROVAL DATE   |  | The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet. |   |



**1 ROOM IDENTIFICATION SIGN**  
 INSTALL PER DETAIL 5  
 TEXT VARIES  
 SEE PLANS, EXT ELEVATIONS, OR DOOR SCHEDULE FOR LOCATIONS AND TEXT



**2 EXIT SIGN**  
 INSTALL PER DETAIL 5  
 TEXT MAY VARY  
 SEE PLANS, OR DOOR SCHEDULE FOR LOCATIONS AND TEXT



**3 RESTROOM SIGNS**  
 INSTALL PER DETAIL 5

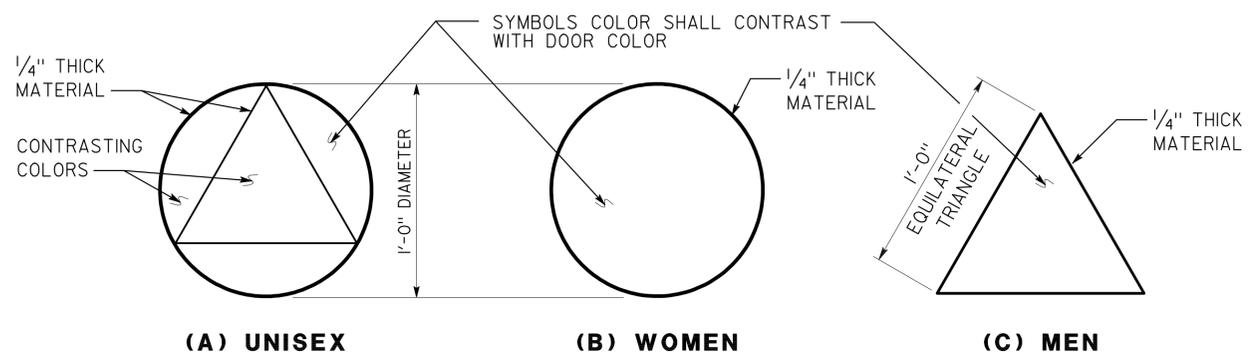
**ACCESSIBILITY DESIGN APPROVAL STAMP**  
 DOT / DES / OTA  
**03-3E4601**  
 DISTRICT - EA

Reviewed by:   
 YA WANG  
 Date: 9-2-09

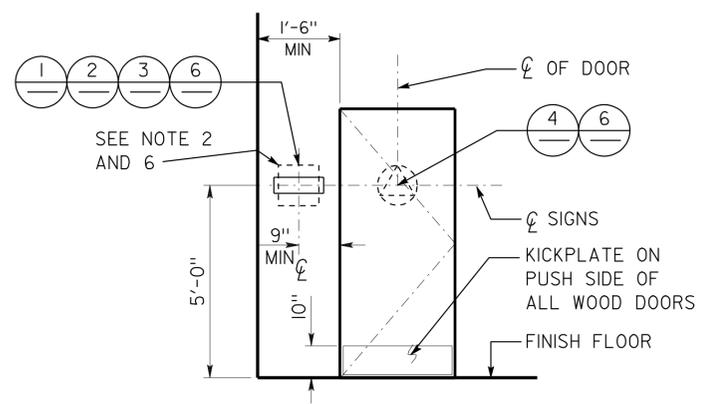
**CALIFORNIA STATE FIRE MARSHAL APPROVED**

Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.

Reviewed by:   
 BILL ROBERTSON DSFM III  
 Approval date: 09-1-09

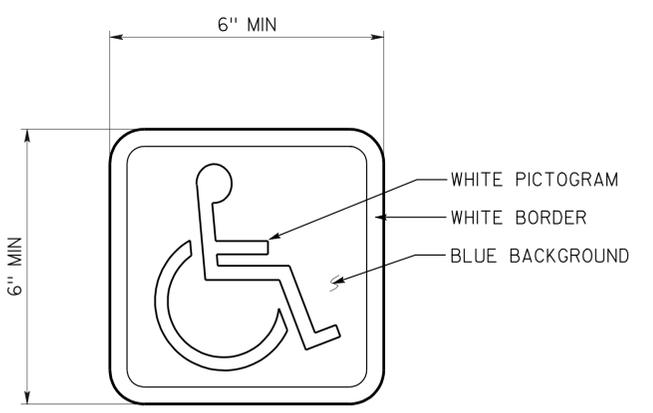


**4 RESTROOM IDENTIFICATION SYMBOLS**  
 INSTALL PER DETAIL 5  
 ANY PICTOGRAM AND TEXT ARE NOT REQUIRED

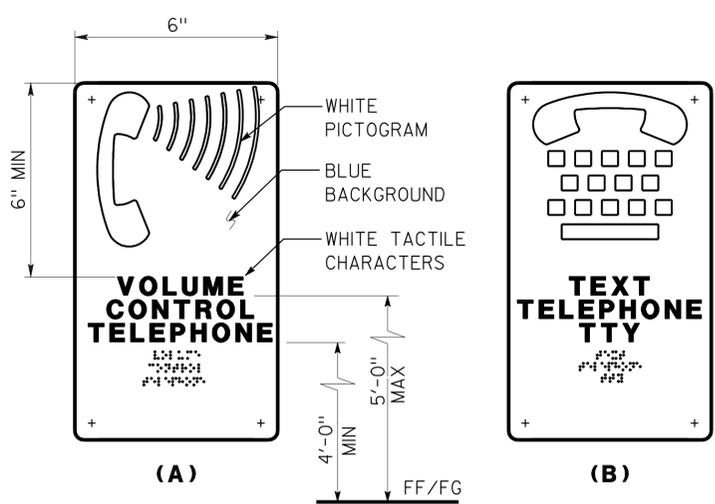


**5 SIGN LOCATIONS**  
 REFER TO SIGNAGE NOTES FOR ADDITIONAL INFORMATION

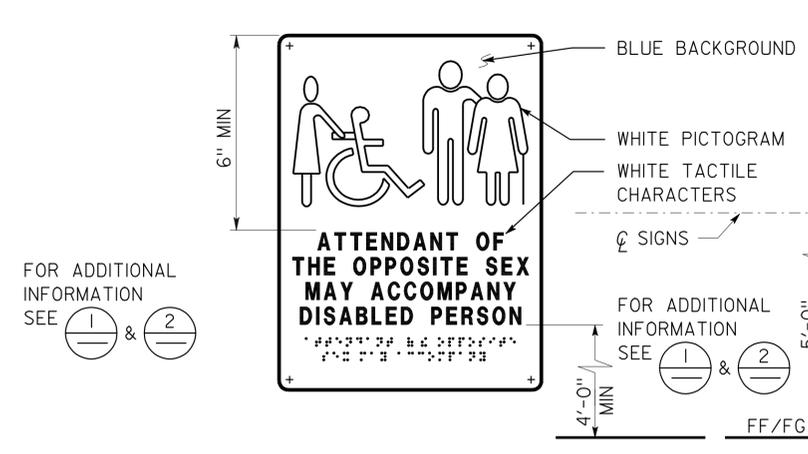
- SIGNAGE NOTES:**
- LOCATE ROOM IDENTIFICATION SIGNS, EXIT SIGNS, AND RESTROOM SIGNS ON WALL ADJACENT TO DOOR ON LATCH SIDE. IF WALL SPACE IS NOT AVAILABLE ON LATCH SIDE, LOCATE ON NEAREST ADJACENT WALL.
  - REFER TO SPECIFICATIONS FOR SIGN MATERIAL AND COLOR SELECTION. COLORS MAY VARY FROM DETAILS.
  - SEE DOOR SCHEDULE FOR TEXT AND SIGN LOCATIONS, UON.
  - GRADE 2 BRAILLE: DOTS SHALL BE 1/10" OC IN EACH CELL WITH 2/10" SPACE BETWEEN CELLS MEASURED FROM THE SECOND COLUMN OF DOTS IN THE FIRST CELL TO THE FIRST COLUMN OF DOTS IN THE SECOND CELL. DOTS SHALL BE RAISED A MINIMUM OF 1/40" ABOVE THE BACKGROUND.
  - TACTILE CHARACTERS SHALL BE UPPERCASE SANS SERIF RAISED 1/32" MIN WITH A WIDTH TO HEIGHT RATIO BETWEEN 3:5 AND 1:1 AND A STROKE WIDTH TO HEIGHT RATIO BETWEEN 1:5 AND 1:10.
  - PROVIDE 18"x18" MIN CLEAR FLOOR SPACE IN FRONT OF AND CENTERED ON THE SIGN.



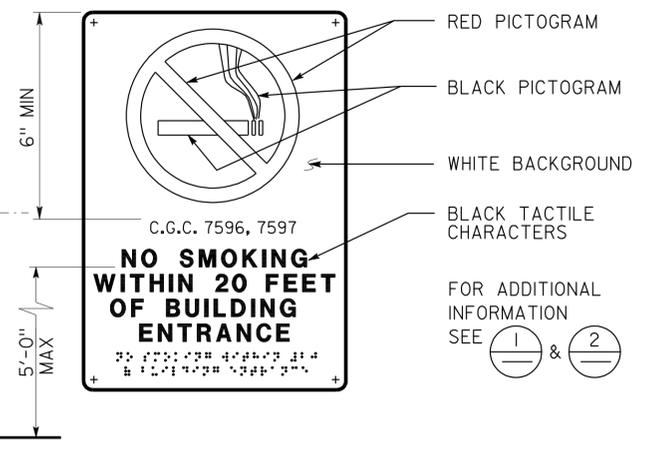
**6 INTERNATIONAL SYMBOL OF ACCESSIBILITY**  
 INSTALL PER DETAIL 5  
 SEE PLANS, EXT ELEVATIONS, OR SCHEDULE FOR SIGN LOCATIONS  
 SYMBOL MAY BE ON DOOR OR WALLS.  
 DECAL MAY BE USED ON DOORS OR SMOOTH WALLS



**7 TELEPHONE SIGNS**  
 TEXT MAY VARY  
 SEE PLANS OR EXT ELEVATIONS FOR SIGN LOCATIONS AND MOUNTING HEIGHTS



**8 RESTROOM ACCOMPANY SIGN**  
 SEE PLANS OR ELEVATIONS FOR LOCATIONS



**9 NO SMOKING SIGN**  
 SEE PLANS OR EXTERIOR ELEVATIONS FOR LOCATIONS

**DETAILS**  
 NO SCALE UNLESS OTHERWISE NOTED

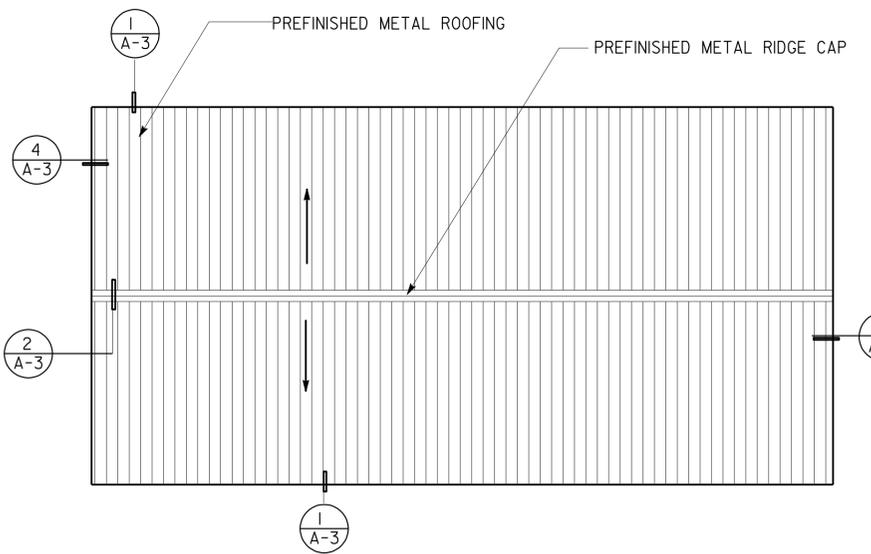
NOTE: SPECIFIC DETAILS OR NOTES ON OTHER SHEETS SHALL PREVAIL OVER STANDARD DETAILS AND NOTES ON THIS SHEET

|   |                    |                   |                      |  |  |  |  |  |  |              |  |
|---|--------------------|-------------------|----------------------|--|--|--|--|--|--|--------------|--|
| STANDARD DRAWING  |                    |                   |                      | STATE OF CALIFORNIA  |  | BRIDGE NO. 19M5737   |  | CAMINO SAND STORAGE FACILITY SAND STORAGE BUILDING |  | SHEET A0-3.3 |  |
| FILE NO. 08-08  | DESIGN BY D. ALSEY | CHECKED Y.A. WANG | APPROVED R.E. Travis | DIVISION OF ENGINEERING SERVICES ARCHITECTURAL AND STRUCTURAL DESIGN |  | POST MILE R28.1  |  | ACCESSIBILITY ACCESSIBILITY STANDARD DETAILS       |  | SHEET OF 6 6 |  |
| SUBMITTED BY Y.A. WANG                                    |                    |                   |                      | DEPARTMENT OF TRANSPORTATION   |  | CU 03021 EA 3E4601   |  | REVISION DATES (PRELIMINARY STAGE ONLY)            |  | SHEET OF 6 6 |  |
| 3a-03c_1.dgn DS OSD Imperial Rev. 10/07 16-NOV-2009 14:23 |                    |                   |                      | ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3                   |  | DISREGARD PRINTS BEARING EARLIER REVISION DATES 7/1/08 5/18/09 1/19/09 7/20/09 |  |  |  | 3a-03c_1.dgn |  |

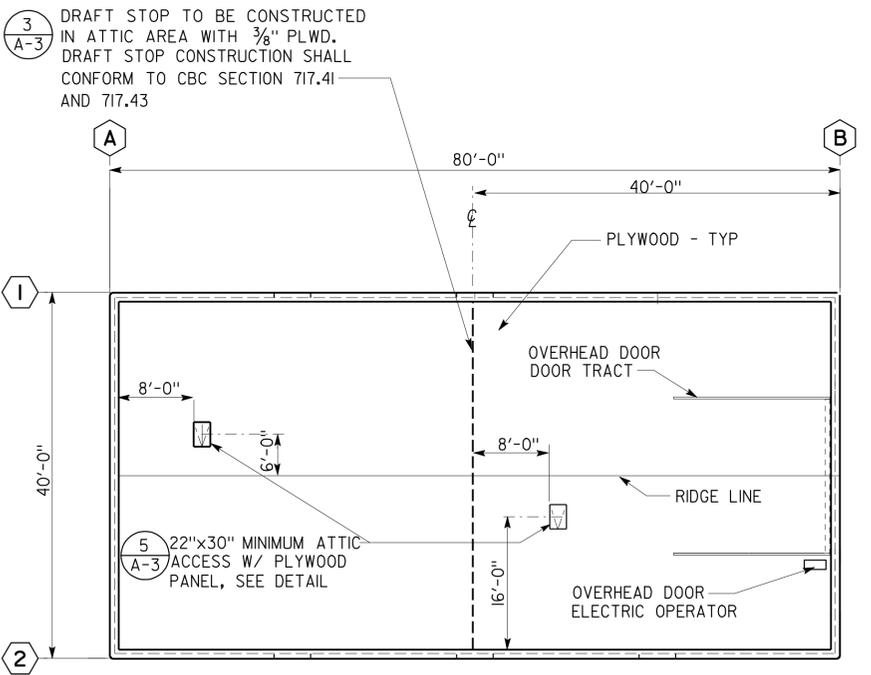
| DIST. | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|-------|--------|-------|--------------------------|-----------|--------------|
| 03    | ED     | 50    | R28.1                    | 26        | 52           |

LICENSED ARCHITECT: *Warren LAI*  
 No. 17122  
 Exp. 6/30/11  
 STATE OF CALIFORNIA

11-16-09  
 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.



**ROOF PLAN**  
NO SCALE



**REFLECTED CEILING PLAN**  
NO SCALE

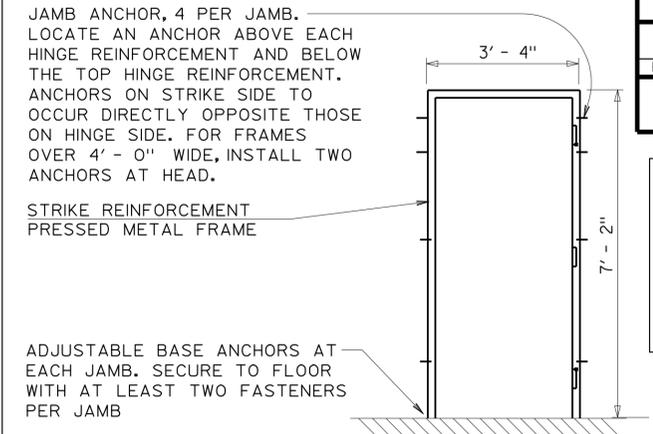
**FINISH NOTES**

- MANUFACTURERS DESIGNATIONS ARE USED TO INDICATE PATTERN AND COLOR AND ARE NOT INTENDED TO SHOW A PREFERENCE FOR A PARTICULAR BRAND. ALL PRODUCTS LISTED BELOW SHALL BE AS NOTED OR EQUAL IN COLOR AND QUALITY.
- PREFINISHED METAL ROOFING AND SIDING COLOR SHALL BE FACTORY FINISHED.  
METAL ROOFING & SIDING:  
 METAL SALES STANDARD WESTERN KYNAR 500 BOX RIB ROOF AND WALL PANELS  
 COLOR: FELT GREEN (W66)  
 OR  
 MORIN CORPORATION: BR7-35 ROOF AND WALL PANELS; COLOR: FOREST GREEN
- METAL TRIM AND FLASHINGS SHALL HAVE FACTORY FINISH MATCHING COLOR OF METAL ROOFING AND WALL PANELS.
- COLORS ARE SELECTED FROM ICI MASTER PALETTE & METAL SALES STANDARD
  - COLOR NO. 1 — CALTRANS SAFETY ORANGE
  - COLOR NO. 2 — ICI PAINT COLOR DEEP BROWN # 70YR07/093
  - COLOR NO. 3 — METAL SALES STANDARD WESTERN KYNAR 500 COLOR FELT GREEN (W66)
  - COLOR NO. 4 — ICI PAINT COLOR PEARL DROP # 30BB 83/018
  - COLOR NO. 5 — CONCRETE HARDENER AND WATER REPELLANT COATING

NOTE:  
COLOR NOTES APPLY TO SAND STORAGE BUILDING AND EXISTING SALT STORAGE BUILDING

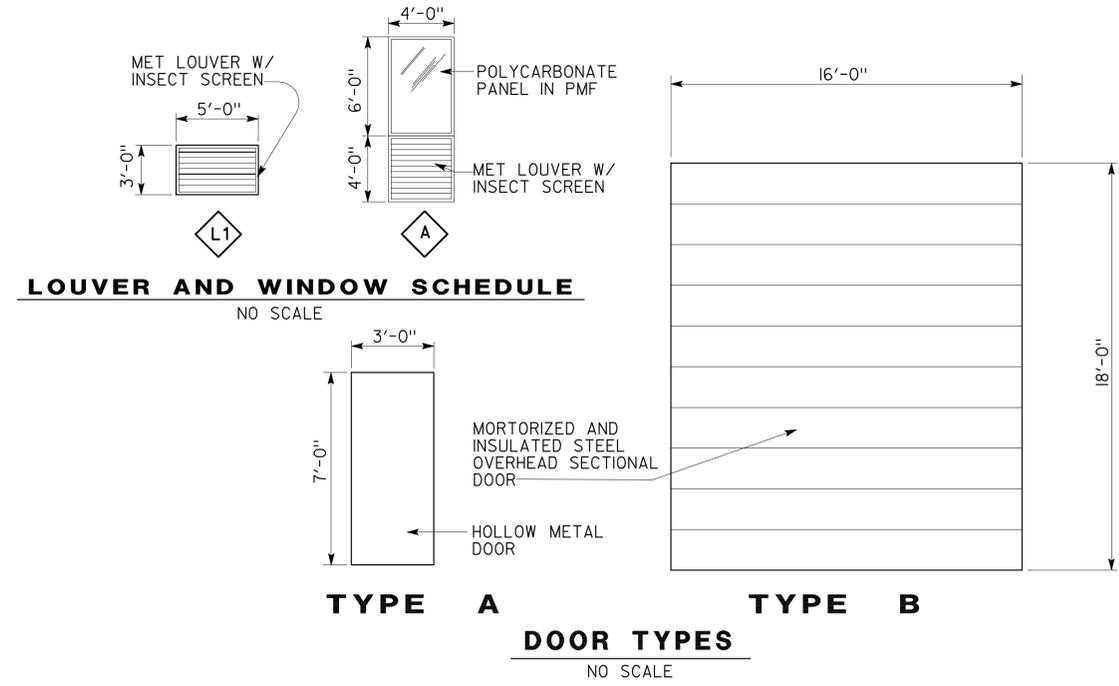
| MATERIAL  | COLOR NUMBER | COATING SYSTEM |
|---|--------------|----------------|
| STEEL GUARD POSTS (NEW & EXISTING)  | 1            | 2 (b)          |
| REINFORCED CONCRETE WALLS AT SAND BLDG AND (E) SALT BLDG (EXTERIOR ONLY)  | 2            | 1              |
| REINFORCED CONCRETE WALLS AT SAND BUILDINGS (EXTERIOR ONLY)   | 2            | 1, B           |
| OVERHEAD SECTIONAL DOOR & FRAME, HOLLOW METAL DOOR & PMF  | 2            | 2 (a)          |
| METAL ROOFING, METAL FLASHING   | 3            | A              |
| METAL SIDING, METAL LOUVERS, METAL TRIMS,   | 3            | A              |
| INTERIOR PLYWOOD CEILING AND WALLS.   | 4            | 3              |
| INTERIOR REINFORCED CONCRETE WALLS AND FLOOR.   | 5            | 1              |
| ELECTRICAL PANEL, EXPOSED METAL CONDUITS, EXHAUST FAN GRILL, HOUSING, AND SUPPORTS SHALL BE PAINTED TO MATCH ADJACENT COLOR |              | 2 (b)          |

- A. FACTORY FINISH BY MANUFACTURER
- B. CONCRETE TEXTURED SURFACE : FITZGERALD FORMLINERS PRODUCTS - 16939 WEATHERED PLANK ( 8" WIDE BOARDS) OR EQUAL
- C. (a) AND (b) REFER TO COATING SYSTEM IN SPECIFICATION



**1 FRAME AND FRAME ANCHORAGE**  
NOT TO SCALE

| DOOR SCHEDULE |           |                 |          |       |       |       |       |     |            |                 |           |         |            |
|---------------|-----------|-----------------|----------|-------|-------|-------|-------|-----|------------|-----------------|-----------|---------|------------|
| DOOR NO       | DOOR TYPE | OPENING SIZE    | DOOR THK | DOOR  |       | FRAME |       | LVR | HWDR GROUP | DETAILS SHT A-3 |           |         | SIGN       |
|               |           |                 |          | MTL   | FIN   | MTL   | FIN   |     |            | HEAD            | JAMB      | SILL    |            |
| 1             | A         | 3'-0" X 7'-0"   | 1 3/4"   | METAL | PAINT | PMF   | PAINT | --- | I          | 8 (A-4)         | 8 (A-4)   | 9 (A-4) | 6 (AO-3.3) |
| 2             | B         | 16'-0" X 18'-0" | ---      | METAL | PAINT | ---   | PAINT | --- | ---        | 4 (A-4)         | 5&6 (A-4) | 7 (A-4) |            |



**LOUVER AND WINDOW SCHEDULE**  
NO SCALE

**TYPE A TYPE B DOOR TYPES**  
NO SCALE

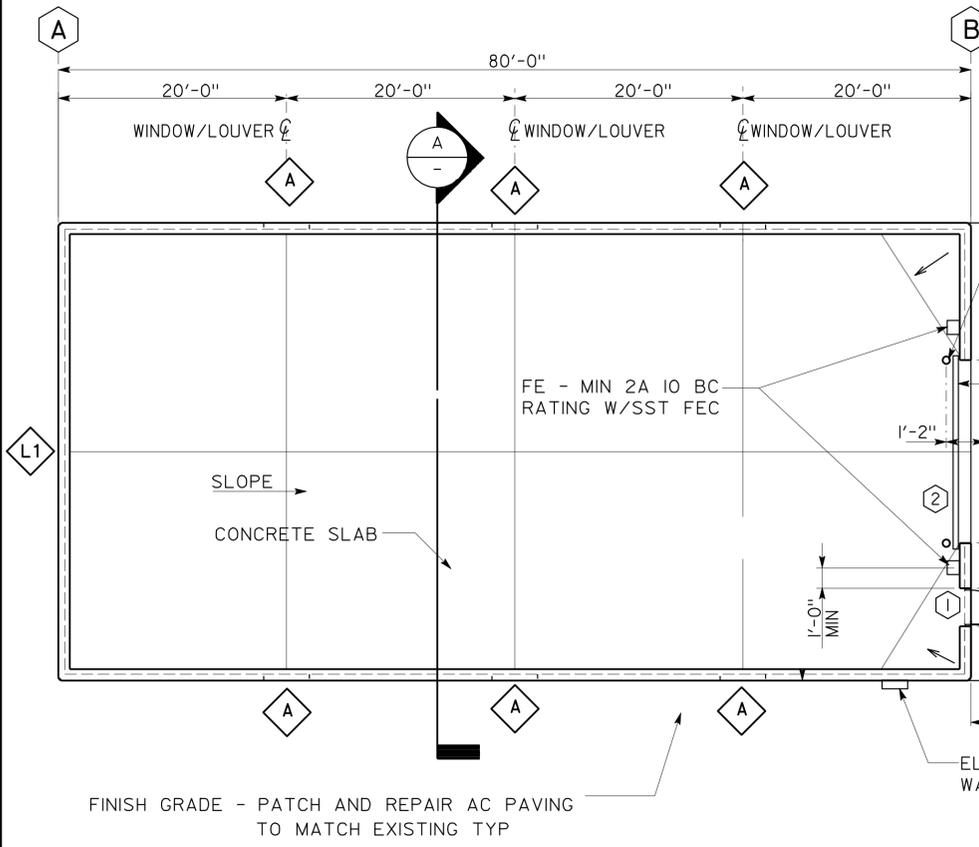
|                         |                           |   |   |                    |  |   |              |
|-------------------------|---------------------------|---|---|--------------------|--|---|--------------|
| DESIGN BY GARY HARRIS   | CHECKED <i>Warren LAI</i> | STATE OF CALIFORNIA<br>DEPARTMENT OF TRANSPORTATION | DIVISION OF ENGINEERING SERVICES<br>ARCHITECTURAL AND STRUCTURAL DESIGN | BRIDGE NO. 19M5737 | CAMINO SAND STORAGE FACILITY SAND STORAGE BUILDING<br>FINISH NOTES, DOOR SCHEDULE, WINDOW, LOUVER SCHEDULES, ROOF AND REFLECTED CEILING PLAN | SHEET OF A-1                                    |              |
| DETAILS BY ANTHONY CHUN | CHECKED <i>Warren LAI</i> |   |   | POST MILE R28.1    |  | REVISION DATES (PRELIMINARY STAGE ONLY)         | SHEET OF 6 6 |
| QUANTITIES BY           | CHECKED                   |   |   |                    |  | DISREGARD PRINTS BEARING EARLIER REVISION DATES | 4a-1-cam.dgn |

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS: 0 1 2 3  
 CU 03021 EA 3E4601  
 7/4/08 5/18/09 6/19/09 7/28/09 8/25/09 9/3/09

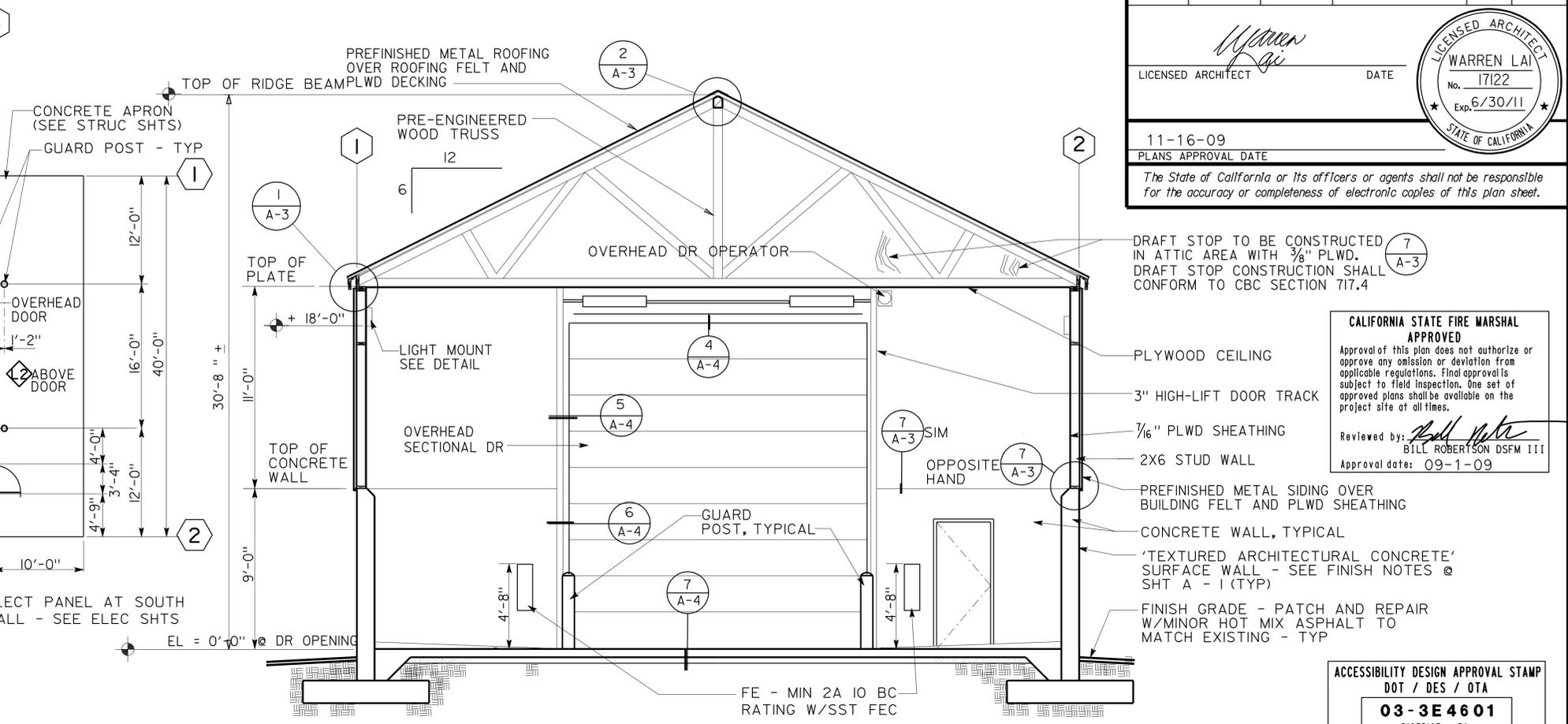
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|-------|--------|-------|--------------------------|-----------|--------------|
| DIST. | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
| 03    | ED     | 50    | R28.1                    | 27        | 52           |

|   |      |
|---|------|
|    |      |
| LICENSED ARCHITECT  | DATE |
| 11-16-09  |      |
| PLANS APPROVAL DATE   |      |
| <i>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.</i> |      |



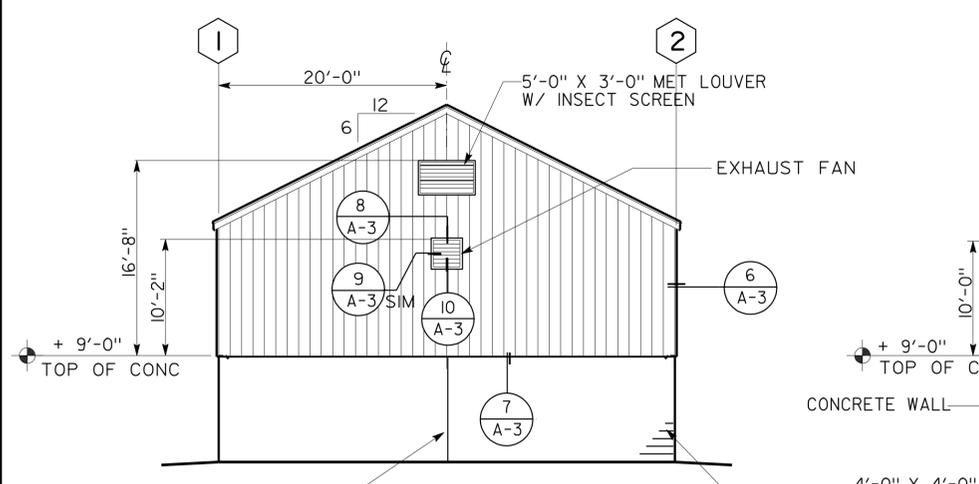
**FLOOR PLAN**  
1/8" = 1'-0"



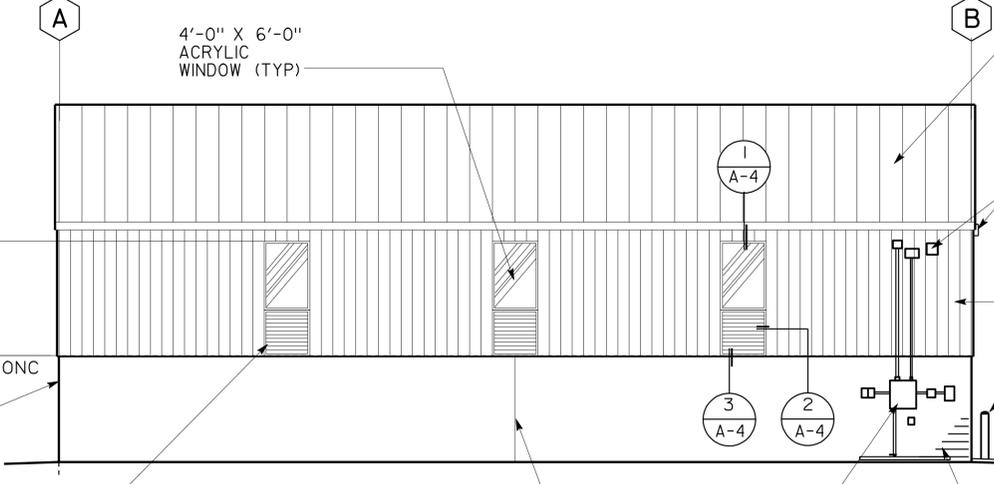
**A BUILDING SECTION**  
1/4" = 1'-0"

**CALIFORNIA STATE FIRE MARSHAL APPROVED**  
Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.  
Reviewed by: *Bill Robertson*  
BILL ROBERTSON DSFM III  
Approval date: 09-1-09

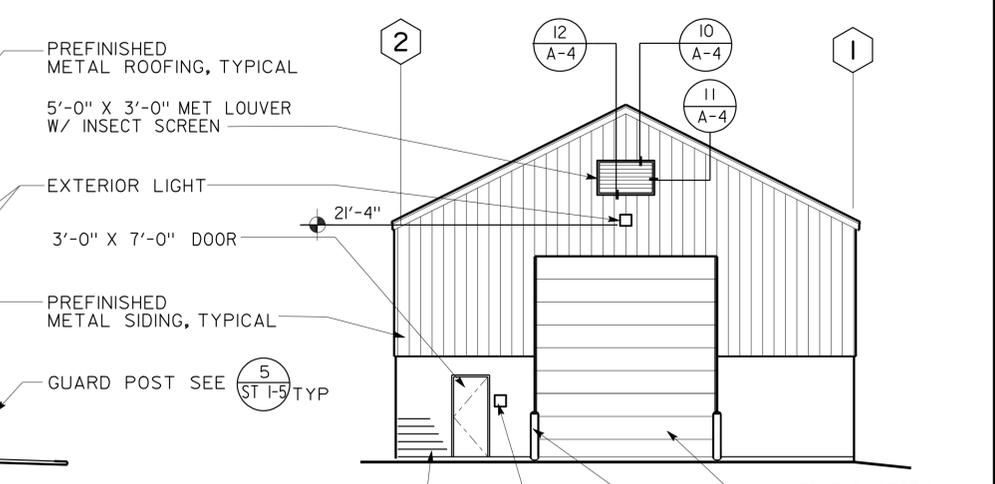
**ACCESSIBILITY DESIGN APPROVAL STAMP**  
DOT / DES / OTA  
**03-3E4601**  
DISTRICT - EA  
Reviewed by: *Ya Wang*  
YA WANG  
Date: 9-2-09



**WEST ELEVATION**  
1/8" = 1'-0"



**SOUTH ELEVATION (OPPOSITE HAND)**

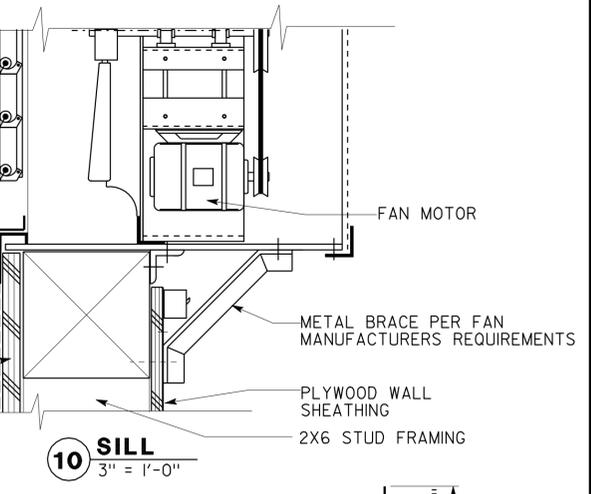
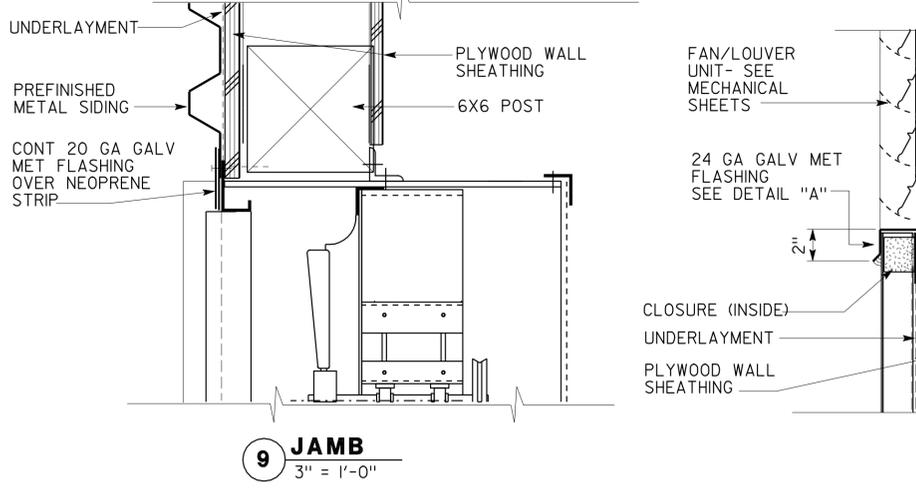
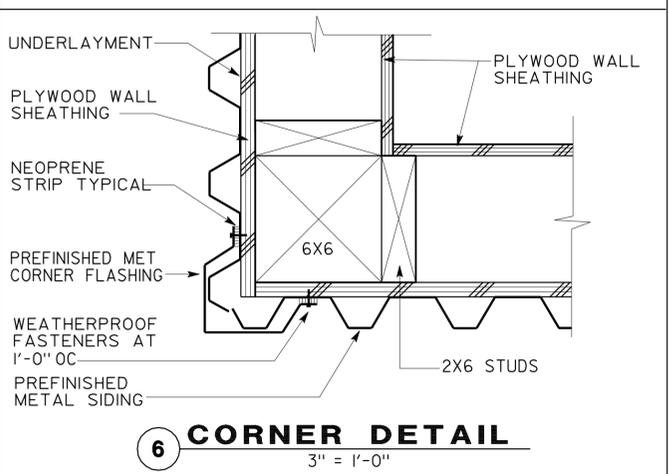
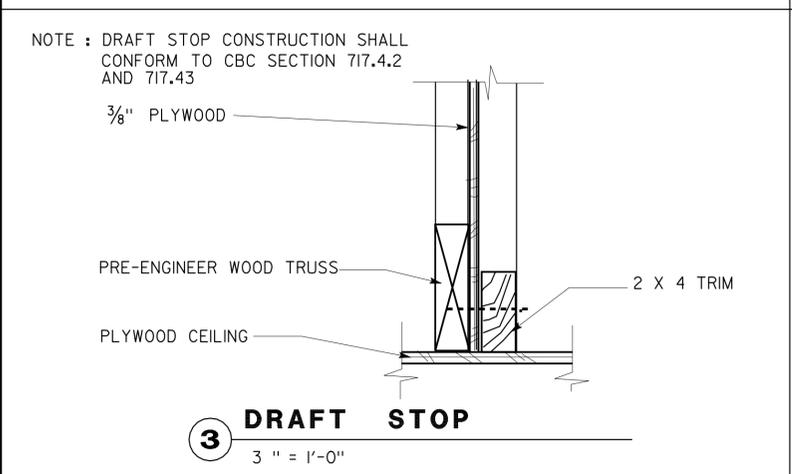
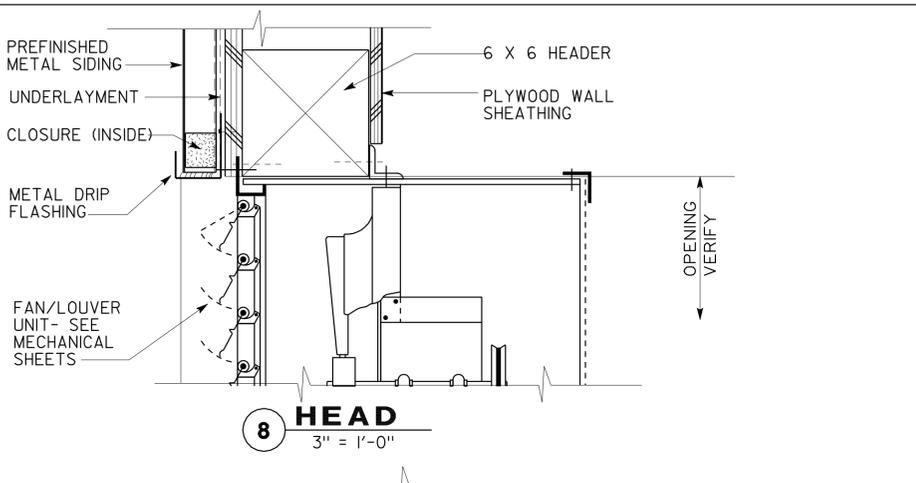
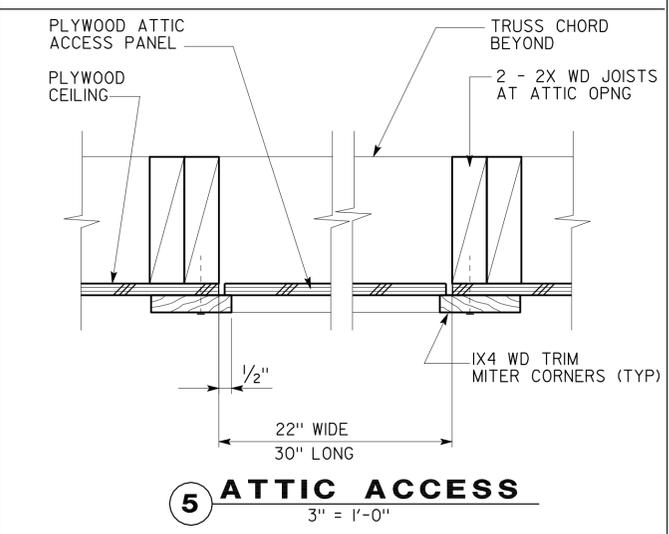
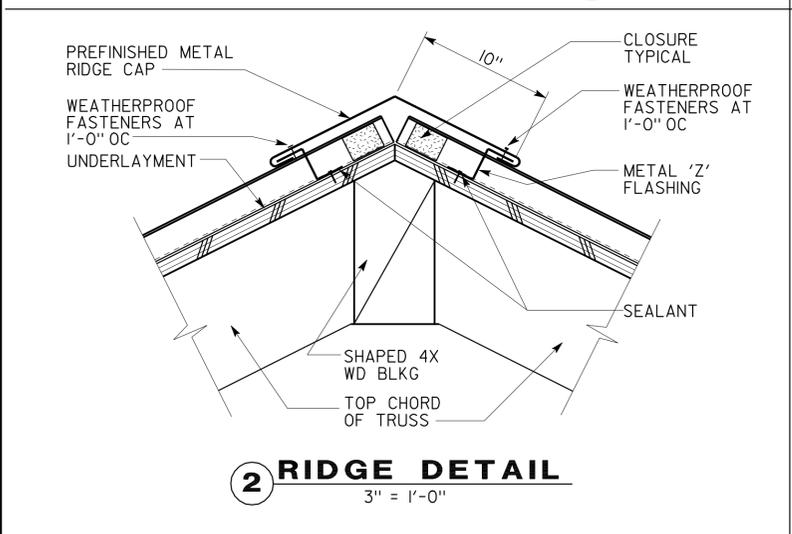
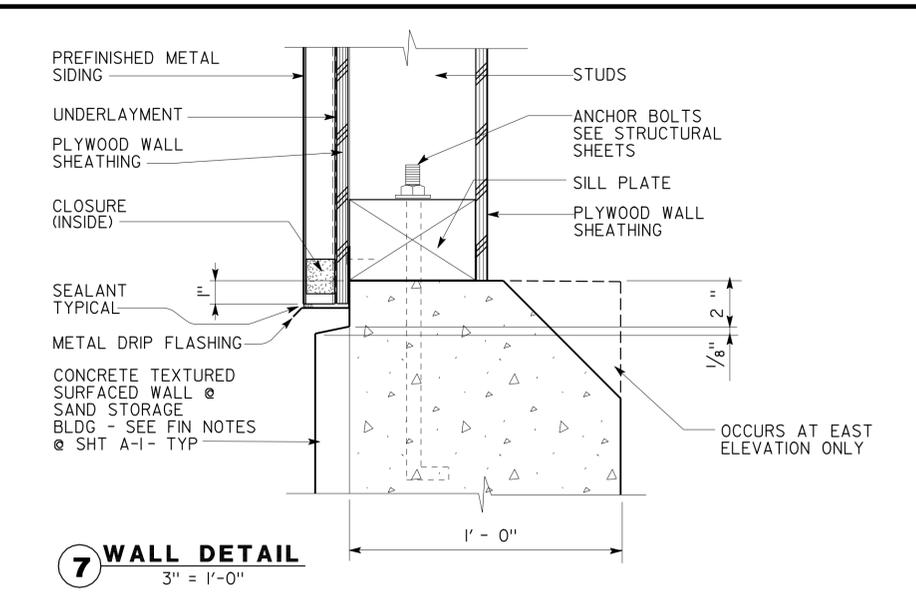
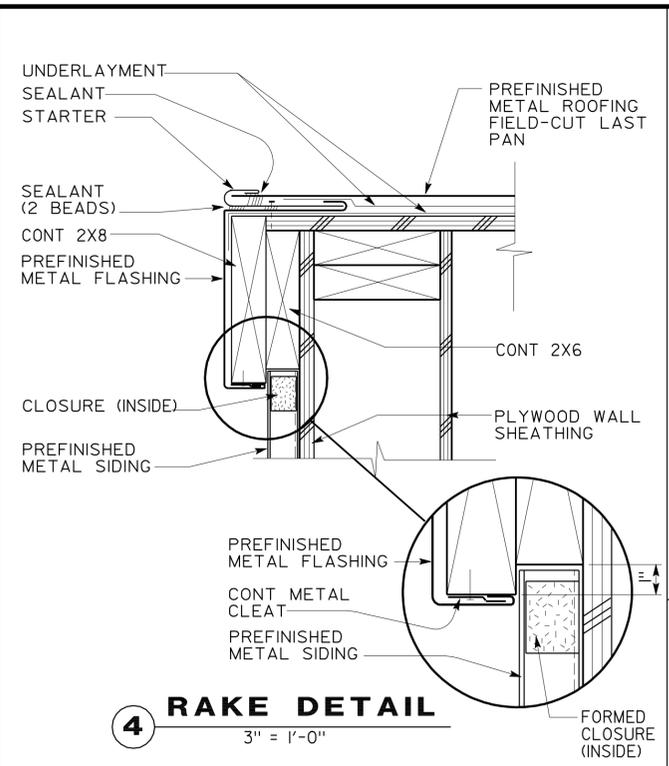
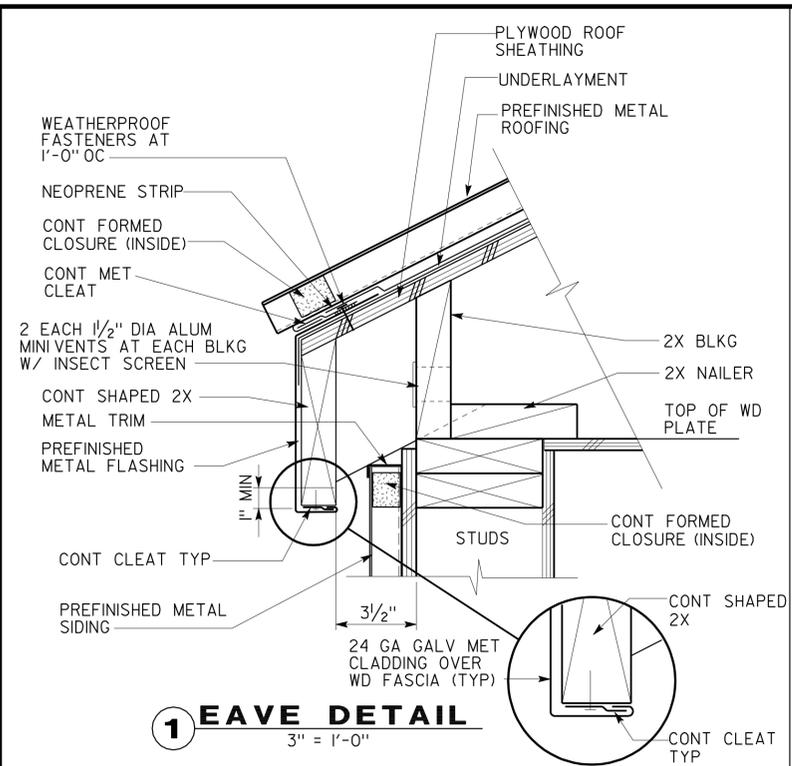


**EAST ELEVATION**  
1/8" = 1'-0"

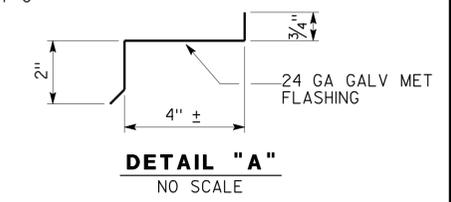
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| DESIGN BY GARY HARRIS   | CHECKED <i>Warren LAI</i> | STATE OF CALIFORNIA<br>DEPARTMENT OF TRANSPORTATION | DIVISION OF ENGINEERING SERVICES ARCHITECTURAL AND STRUCTURAL DESIGN | BRIDGE NO. 19M5737                              | <b>CAMINO SAND STORAGE FACILITY SAND STORAGE BUILDING</b><br>FLOOR PLAN, BUILDING SECTION AND EXTERIOR ELEVATIONS | SHEET 6  |      |
| DETAILS BY ANTHONY CHUN | CHECKED <i>Warren LAI</i> |   | POST MILE R28.1  | DISREGARD PRINTS BEARING EARLIER REVISION DATES |   | DATE   | OF 6 |
| QUANTITIES BY           | CHECKED                   |   | CU 03021<br>EA 3E4601  | REVISION DATES (PRELIMINARY STAGE ONLY)         |   | 7/14/08, 8/5/08, 9/10/08, 9/17/08, 9/25/08, 9/30/08, 9/30/09 | 6    |

5a-2-cam.dgn DS OSD Imperial Rev. 10/07 16-NOV-2009 14:23 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

|   |        |       |                          |           |              |
|---|--------|-------|--------------------------|-----------|--------------|
| DIST.   | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
| 03  | ED     | 50    | R28.1                    | 28        | 52           |
|    |        |       |                          |           |              |
| LICENSED ARCHITECT <i>Warren LAI</i> DATE _____   |        |       |                          |           |              |
| 11-16-09<br>PLANS APPROVAL DATE   |        |       |                          |           |              |
| <i>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.</i> |        |       |                          |           |              |



**FAN / LOUVER UNIT**  
SEE MECHANICAL AND ELECTRICAL SHEETS FOR INSTALLATION AND WIRING OF FAN UNIT



NOTE: THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

6a-3-cam.dgn  
DS OSD Imperial Rev. 10/07 16-NOV-2009 14:24

|            |                 |                           |
|------------|-----------------|---------------------------|
| DESIGN     | BY GARY HARRIS  | CHECKED <i>Warren LAI</i> |
| DETAILS    | BY ANTHONY CHUN | CHECKED <i>Warren LAI</i> |
| QUANTITIES | BY              | CHECKED                   |

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
ARCHITECTURAL AND STRUCTURAL DESIGN

BRIDGE NO. 19M5737  
POST MILE R 28.1

**CAMINO SAND STORAGE FACILITY SAND STORAGE BUILDING**  
SAND STORAGE BUILDING  
MISCELLANEOUS DETAILS

SHEET A-3

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

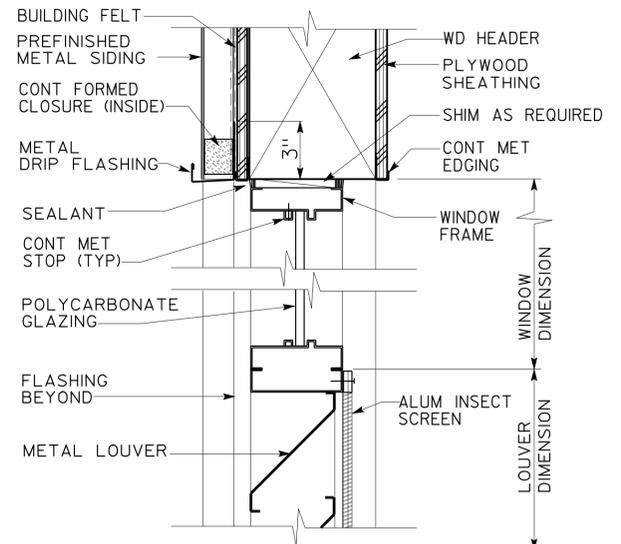
CU 03021  
EA 3E4601

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

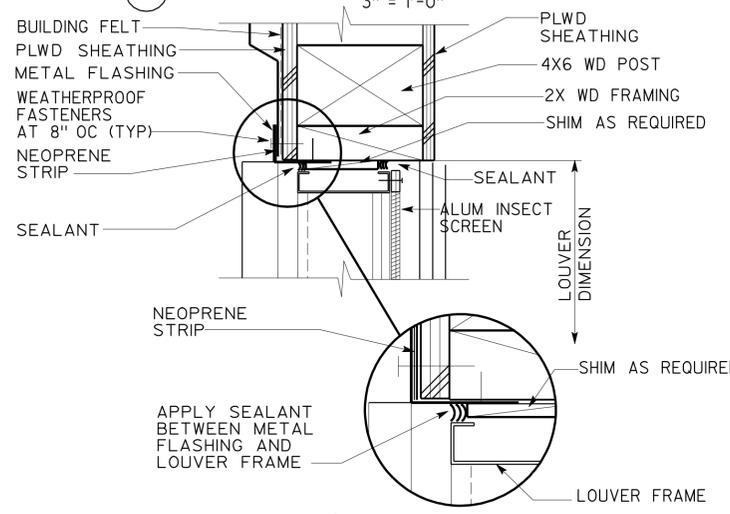
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|--------|---------|---------|---------|--------|
| 6/9/08 | 5/18/09 | 6/28/09 | 8/25/09 | 9/2/09 |
|--------|---------|---------|---------|--------|

SHEET OF 4 6

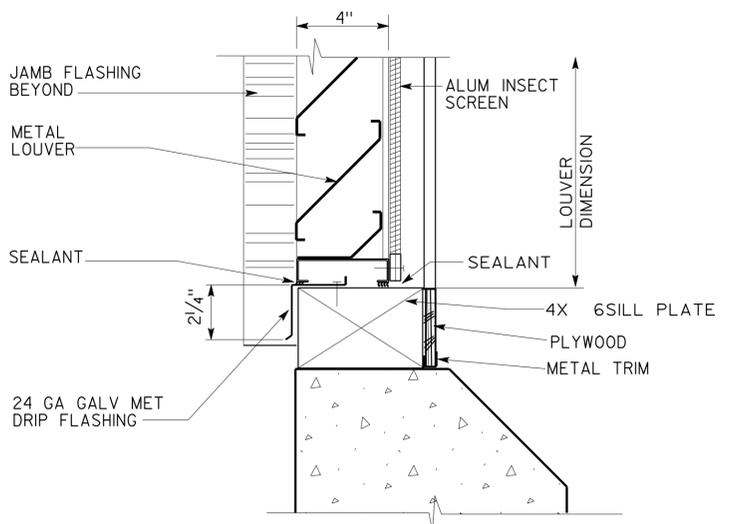
16-NOV-2009 14:24



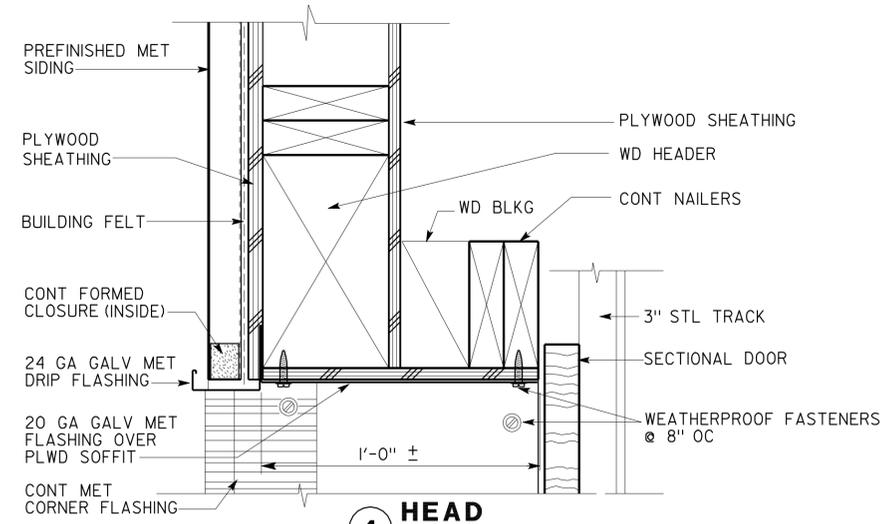
**1 HEAD AT WINDOW/LOUVER**  
3" = 1'-0"



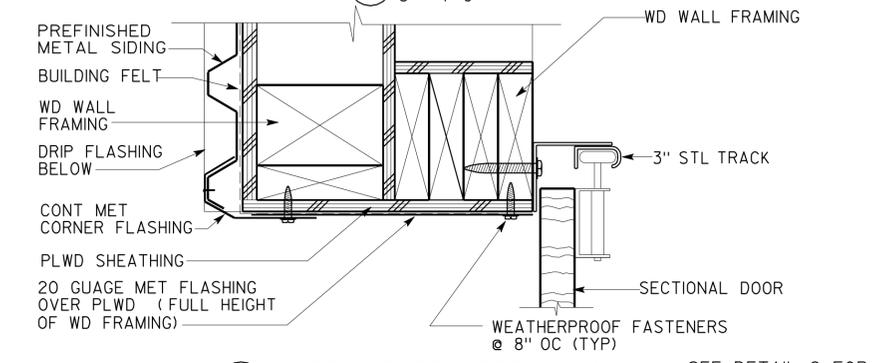
**2 JAMB AT LOUVER WINDOW SIMILAR**  
3" = 1'-0"



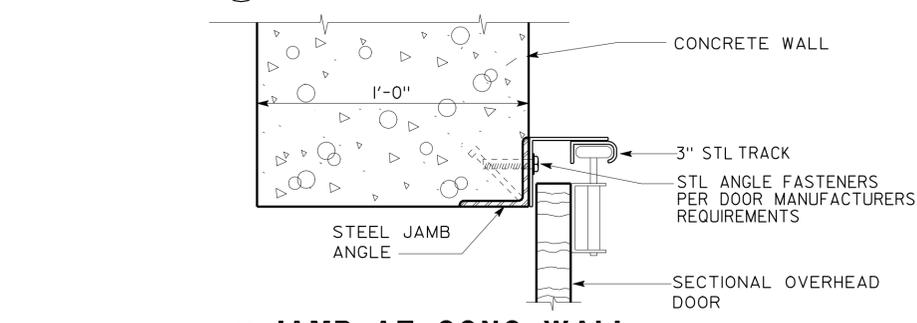
**3 SILL AT LOUVER**  
3" = 1'-0"  
**LOUVER DETAILS**



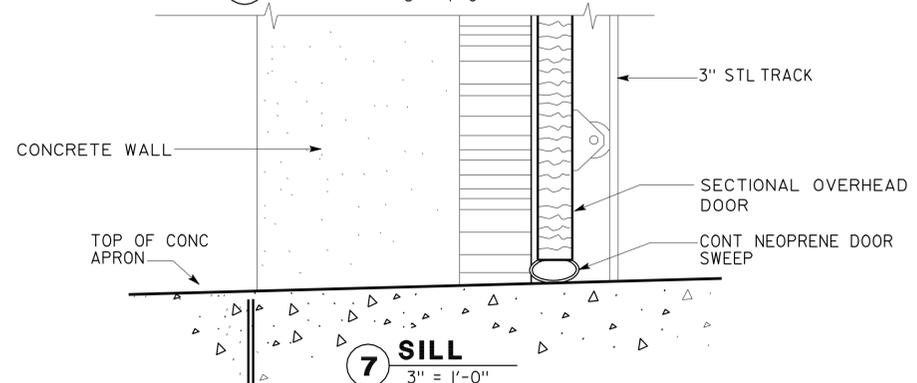
**4 HEAD**  
3" = 1'-0"



**5 JAMB AT FRAMED WALL**  
3" = 1'-0"  
SEE DETAIL 2 FOR ADDITIONAL NOTES

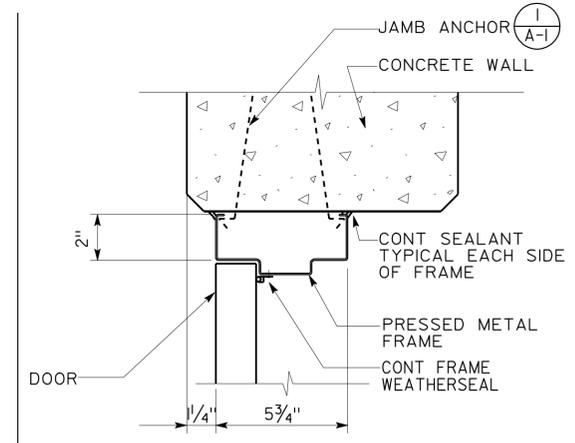


**6 JAMB AT CONC WALL**  
3" = 1'-0"

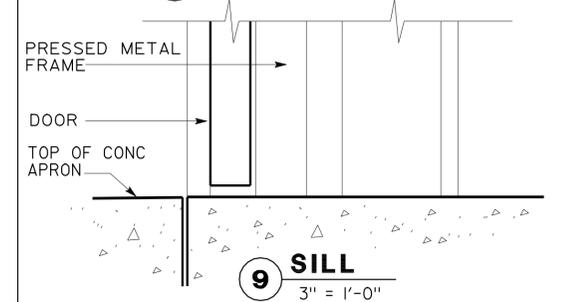


**7 SILL**  
3" = 1'-0"

**OVERHEAD SECTIONAL DOOR DETAILS**

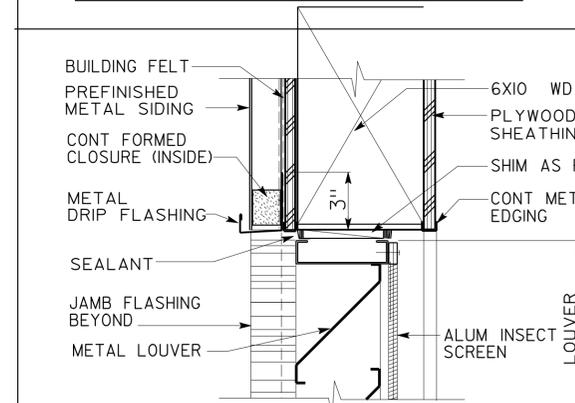


**8 HEAD JAMB SIMILAR**  
3" = 1'-0"

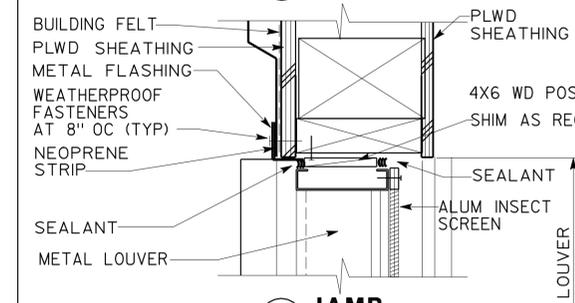


**9 SILL**  
3" = 1'-0"

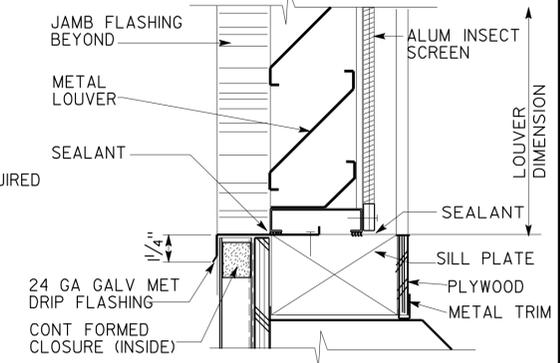
**EXTERIOR DOOR DETAILS**



**10 HEAD**  
3" = 1'-0"



**11 JAMB**  
3" = 1'-0"



**12 SILL**  
3" = 1'-0"

**FIXED LOUVER AT GABLE ENDS**

NOTE:  
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

|            |                 |         |
|------------|-----------------|---------|
| DESIGN     | BY GARY HARRIS  | CHECKED |
| DETAILS    | BY ANTHONY CHUN | CHECKED |
| QUANTITIES | BY              | CHECKED |

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

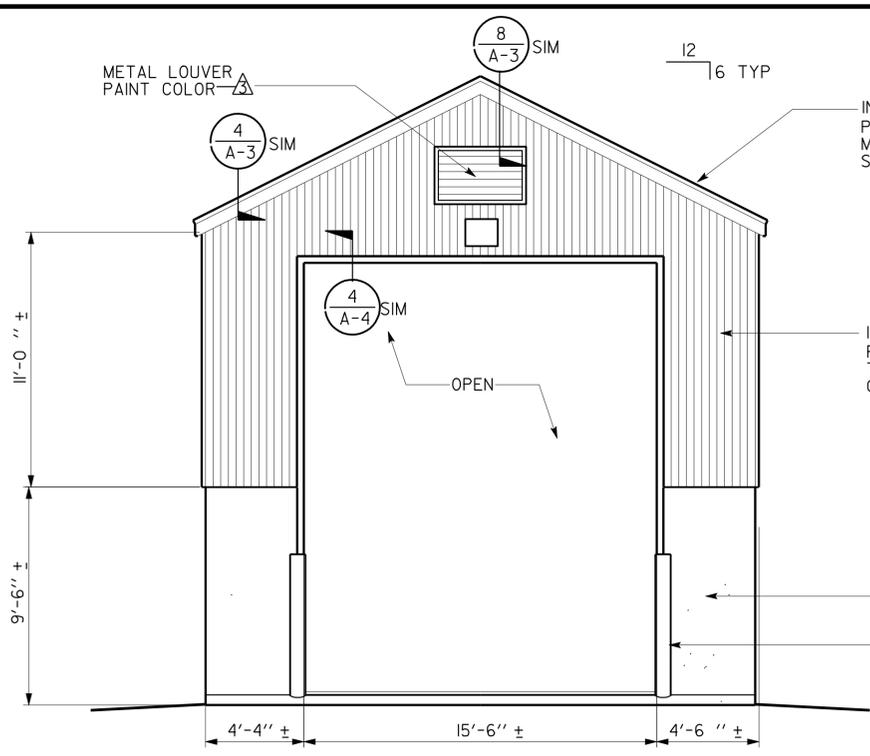
DIVISION OF ENGINEERING SERVICES  
ARCHITECTURAL AND STRUCTURAL DESIGN

BRIDGE NO. 19M5737  
POST MILE R 28.1

CAMINO SAND STORAGE FACILITY  
SAND STORAGE BUILDING  
DOOR, WINDOW & LOUVER DETAILS

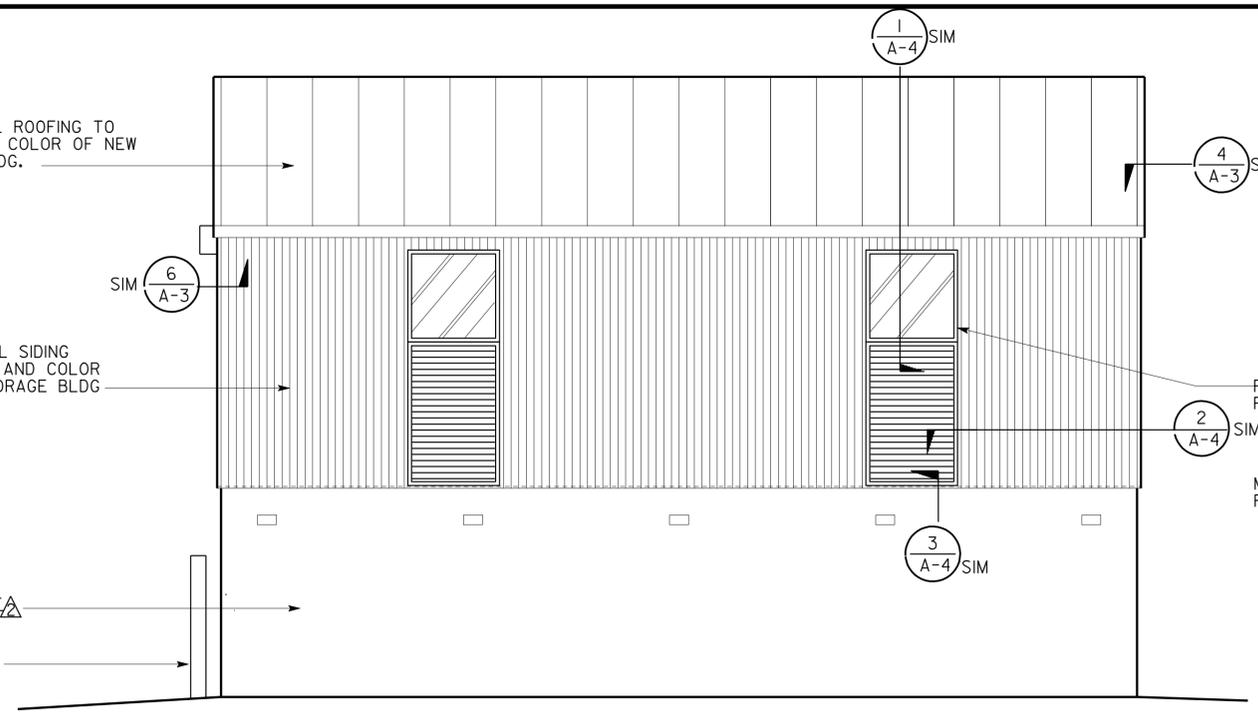
SHEET A-4

|  |        |       |                          |   |              |
|--|--------|-------|--------------------------|---|--------------|
| DIST.  | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO.   | TOTAL SHEETS |
| 03   | ED     | 50    | R28.1                    | 30  | 52           |
| <br>LICENSED ARCHITECT  |        |       |                          | DATE _____  |              |
| 11-16-09<br>PLANS APPROVAL DATE  |        |       |                          |  |              |
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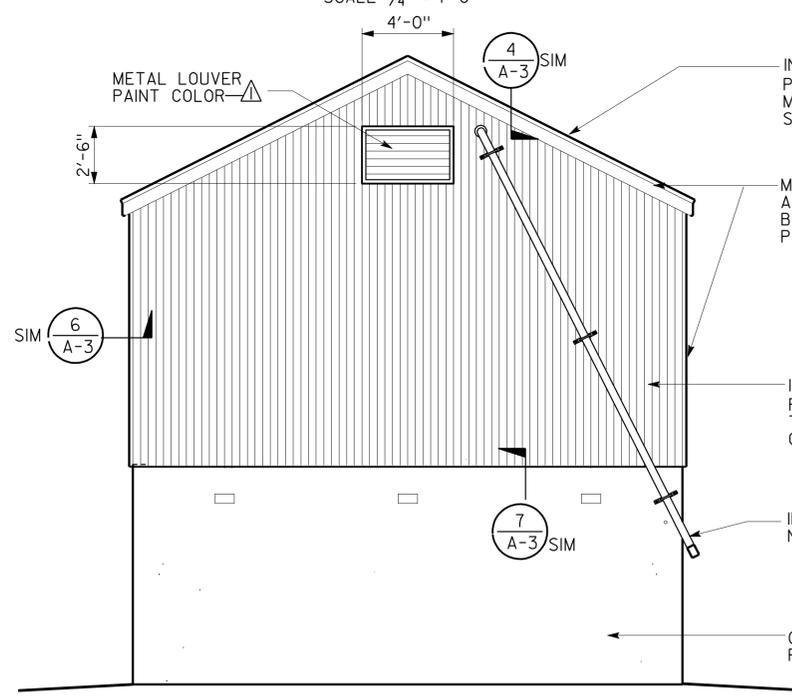
**EAST ELEVATION**

SCALE 1/4" = 1'-0"



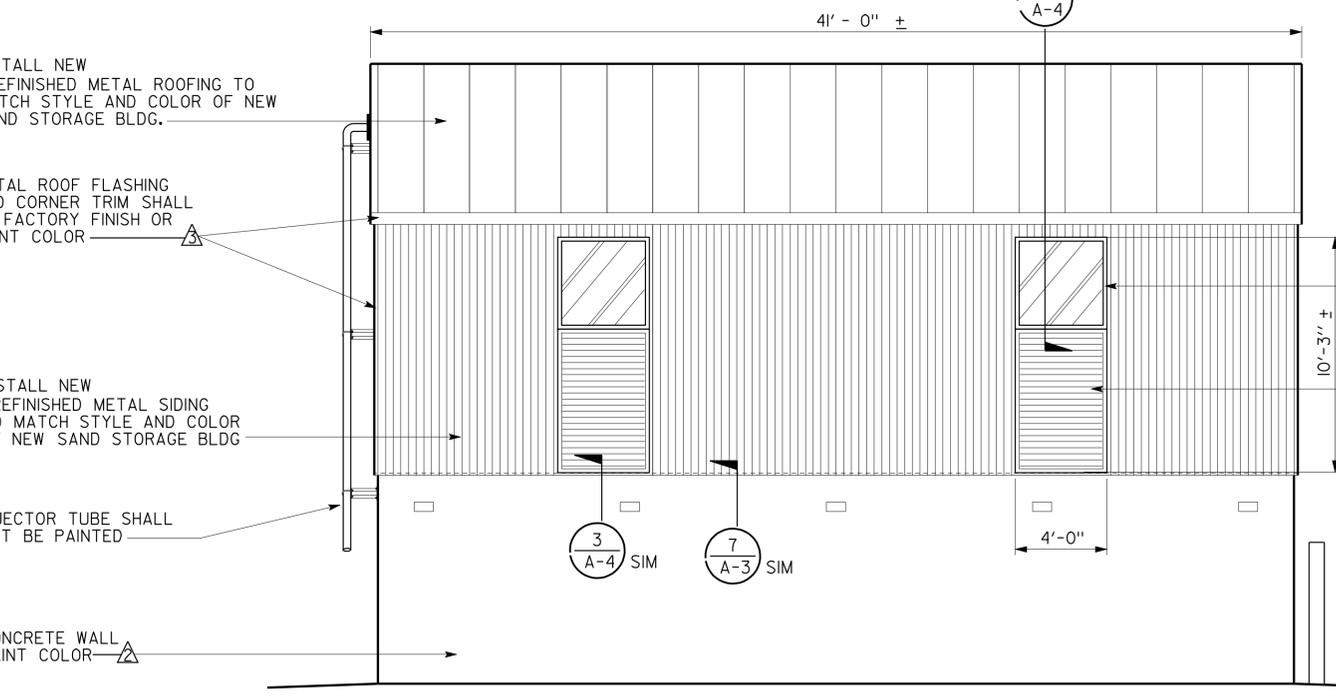
**NORTH ELEVATION**

SCALE 1/4" = 1'-0"



**WEST ELEVATION**

SCALE 1/4" = 1'-0"



**SOUTH ELEVATION**

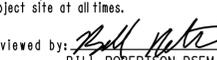
SCALE 1/4" = 1'-0"

- GENERAL NOTES**
- EXISTING METAL SIDING AND ROOFING SHALL BE REMOVED. INSTALL NEW METAL ROOFING AND WALL SIDING, TRIMS AND FLASHING. TO MATCH STYLE AND COLOR OF THE NEW SAND STORAGE BUILDING.
  - FOR ADDITIONAL COLOR NOTES SEE SHEET A-1
  - SEE SHT A-3 AND A-4 DETAILS FOR SIDING INSTALLATION

NOTE:  
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

**EXISTING SALT STORAGE BUILDING - FINISH NOTES**

ACCESSIBILITY DESIGN APPROVAL STAMP  
DOT / DES / OTA  
**03-3E4601**  
DISTRICT - EA  
Reviewed by:   
Date: 9-2-09

CALIFORNIA STATE FIRE MARSHAL  
APPROVED  
Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.  
Reviewed by:   
Approval date: 09-1-09

|  |                         |   |   |   |                    |  |  |
|--|-------------------------|---|---|---|--------------------|--|--|
| 8a-5-cam.dgn<br>DS OSD Imperial Rev. 10/07 16-NOV-2009 14:24 | DESIGN BY GARY HARRIS   | CHECKED  | STATE OF CALIFORNIA<br>DEPARTMENT OF TRANSPORTATION | DIVISION OF ENGINEERING SERVICES<br>ARCHITECTURAL AND STRUCTURAL DESIGN | BRIDGE NO. 19M5737 | CAMINO SAND STORAGE FACILITY<br>SAND STORAGE BUILDING<br>EXTERIOR ELEVATIONS WITH FINISH NOTES | SHEET OF 6 OF 6  |
|  | DETAILS BY ANTHONY CHUN | CHECKED  |   | CU 03021<br>EA 3E4601   | POST MILE R 28.1   |  | REVISION DATES (PRELIMINARY STAGE ONLY)<br>7/4/08 5/18/09 6/19/09 8/28/09 9/3/09 |
| ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3           |                         |   | DISREGARD PRINTS BEARING EARLIER REVISION DATES     |   | SHEET OF 6 OF 6    |  |  |

16-NOV-2009 14:24

| DIST. | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|-------|--------|-------|--------------------------|-----------|--------------|
| 03    | ED     | 50    | R28.1                    | 31        | 52           |

*Dai Lu*  
 REGISTERED CIVIL ENGINEER  
 No. 67416  
 Exp. 12-31-10  
 CIVIL  
 STATE OF CALIFORNIA

09-01-09  
 DATE

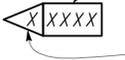
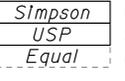
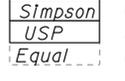
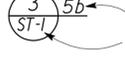
11-16-09  
 PLANS APPROVAL DATE

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**ABBREVIATIONS**

|  |  |
|--|--|
| <p>           AAD Adhesive Anchorage Device<br/>           AB Anchor Bolt<br/>           AC Asphalt Concrete<br/>           Alt Alternate<br/>           APA American Plywood Association<br/>           APC Alternative Pipe Culvert<br/>           Bldg Building<br/>           Blkg Blocking<br/>           BN Boundary Nailing<br/>           Btm Bottom<br/>           CB Carriage Bolt<br/>           CIDH Cast In Drilled Hole<br/>           CJ Control Joint<br/>           Clr Clear<br/>           CMU Concrete Masonry Unit<br/>           Conc Concrete<br/>           Const Construction<br/>           Cont Continuous<br/>           CP Complete Penetration Weld<br/>           Dbl Double<br/>           DF Douglas Fir<br/>           Dia Diameter<br/>           DIP Ductile Iron Pipe<br/>           DN Diameter Nominal<br/>           do Ditto<br/>           (E) Existing<br/>           Ea Each<br/>           EL Elevation<br/>           Elec Electrical<br/>           Embed Embedment<br/>           EN Edge Nail<br/>           Eq Equal<br/>           Exp Expansion<br/>           FDGM Free Draining Granular Material<br/>           FG Finish Grade<br/>           FL Flow Line<br/>           Fir Floor<br/>           FN Face (Field) Nail<br/>           FOC Face of Concrete<br/>           FOM Face of Masonry<br/>           FOS Face of Stud<br/>           Ftg Footing<br/>           Ga Gage<br/>           Galv Galvanized<br/>           GLM Glue Laminated Member<br/>           Gyp Bd Gypsum Board         </p> | <p>           HD Holdown<br/>           Hex Hexagon<br/>           Horiz Horizontal<br/>           HSB High Strength Bolt<br/>           HSS Hollow Structural Section<br/>           Jt Joint<br/>           LOL Layout Line<br/>           LVL Laminated Veneer Lumber<br/>           m Meter<br/>           Max Maximum<br/>           MEA Mechanical Expansion Anchor<br/>           Mech Mechanical<br/>           Mfr Manufacturer<br/>           mm Millimeter<br/>           Min Minimum<br/>           MIW Malleable Iron Washer<br/>           OC On Center<br/>           OG Original Grade<br/>           OH Opposite Hand<br/>           Opt Optional<br/>           P Pitch<br/>           PDF Powder Driven Fastener<br/>           Plwd Plywood<br/>           PT Pressure Treated<br/>           PW Puddle Weld<br/>           PWB Prefabricated Wood I Beam<br/>           RCP Reinforced Concrete Pipe<br/>           Relnf Reinforced, Reinforcing<br/>           Req'd Required<br/>           SDSTS Self Drill, Self Tap Screw<br/>           Sim Similar<br/>           SPS Structural Plywood Sheathing<br/>           Sq Square<br/>           Stagg Staggered<br/>           Std Standard<br/>           SW Stud Weld<br/>           Sym Symmetrical<br/>           T&amp;G Tongue-and-Groove<br/>           TN Toe Nail<br/>           TS Tube Steel<br/>           Typ Typical<br/>           UON Unless Otherwise Noted<br/>           Vert Vertical         </p> |
|--|--|

**SYMBOLS**

|  |   |
|--|---|
| <p>  Blocking in Section or Elevation<br/>  Continuous Member in Section<br/>  End of Member<br/>  Bearing Wall<br/>  Shear Wall<br/>  Length Shearwall Schedule Symbol Reference<br/>  Glue Laminated Member Section<br/>  North Arrow<br/>  Partial Section Cut<br/>  Full Section Cut<br/>  Revision Callout<br/>  Grid Line Indicator<br/>  Center Line<br/>  Station Line<br/>  Steel Plate<br/>  Diameter<br/>  Square         </p> | <p>  CMU Wall on Plan Views<br/>  Dropped Slab on Plan Views<br/>  Reinforced Concrete<br/>  Sand<br/>  Structural Backfill<br/>  Structural Excavation<br/>  Original Ground<br/>  Limits of Structural Backfill (shown on plan view)<br/>  Free Draining Granular Material<br/>  Bottom of Footing<br/>  Elevation or Working Point<br/>  Existing Features<br/>  Holdown, Typ (Manufacturers are those noted in the order shown.)<br/>  Frame Connector (Manufacturers are those noted in the order shown.)<br/>  Detail Number or Note Number Additional Reference (if required) Sheet Number         </p> |
|--|---|

NOTE: SPECIFIC DETAILS OR NOTES ON OTHER SHEETS SHALL PREVAIL OVER STANDARD DETAILS AND NOTES ON THIS SHEET

|                                       |   |   |   |   |   |   |  |               |
|---------------------------------------|---|---|---|---|---|---|--|---------------|
| FILE NO. XS-25-0<br>DRAWING DATE 1-04 | DESIGN BY <i>Sean Samal</i><br>CHECKED BY <i>George E. Rowe</i><br>SUBMITTED BY <i>Sean Samal</i> | STANDARD DRAWING<br>CHECKED BY <i>George E. Rowe</i><br>DESIGN ENGINEER | APPROVED BY <i>R.E. Travis</i><br>DESIGN SUPERVISOR | STATE OF CALIFORNIA<br>DEPARTMENT OF TRANSPORTATION | DIVISION OF ENGINEERING SERVICES<br>ARCHITECTURAL AND STRUCTURAL DESIGN | BRIDGE NO. 19M5737<br>POST MILE R28.1                     | CAMINO SAND STORGE FACILITY<br>SAND STORAGE BUILDING<br>LEGEND | SHEET ST-1 OF |
| DOES SD Imperial Rev. 9/02            |   |   |   | ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3  | CU 03021<br>EA 3E4601   | DISREGARD PRINTS BEARING EARLIER REVISION DATES → 1-16-04 | REVISION DATES (PRELIMINARY STAGE ONLY)                        | SHEET OF      |

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A

FRAMING NOTES

- Dimensions are typically shown to face of stud for exterior walls, to centerline of stud at interior walls, and to centerline of openings. Vertical dimensions are typically shown from rough floor or slab to top of plate or to underside of lintels. Dimensions shown as "clear" are from surface to surface.
- Bearing, shear and exterior walls shall be sheathed with 3/8" structural plywood sheathing.
- All roofs shall be sheathed with 5/8" structural plywood sheathing.
- Plywood for floors and roofs shall be placed face grain perpendicular to supports. Where possible, plywood shall be placed in full sheets and staggered one-half sheet length. Any partial plywood sheet shall not be less than 2'-0" in length or width unless fully blocked. Plywood for walnscoats, siding and wall sheathing may be placed parallel to framing and with the C-C plugged face exposed. See Detail 2, sheet ST-1B.
- All wood members shall be Douglas Fir-Larch (DF) quality grade stamped. Grade stamps shall indicate compliance with the grading requirements of WWSA, WCLIB or other approved lumber inspection agency.
- Structural plywood sheathing shall be APA grade stamped plywood conforming to Voluntary Product Standard PSI, Grade C-D, Exposure 1. Thickness and span rating shall be as shown on the plans.
- Wood grades (unless otherwise noted):
  - For horizontal members:
 

|                   |          |
|-------------------|----------|
| Jolsts & Rafters  | Grade *2 |
| Beams & Stringers | Grade *1 |
| Ledgers           | Grade *1 |
  - For vertical members:
 

|                      |                    |
|----------------------|--------------------|
| 2"x4" Studs          | Construction Grade |
| 2"x6" & larger studs | Grade *2           |
| Posts & Timbers      | Grade *1           |
  - Glue laminated beams:
 

|                          |              |
|--------------------------|--------------|
| Simple spans             | 24F-V4 DF/DF |
| Cantilevers & Continuous | 24F-V8 DF/DF |
- Glue laminated members shall be engineered, stress rated and factory laminated with adhesive for wet use.
- Exposed members shall be "architectural appearance" grade and non-exposed members shall be "industrial appearance" grade.
- All wood in direct contact with concrete or masonry shall be pressure treated Douglas Fir-Larch.
- Jolsts framed into the side of wood girders shall be supported by jolst hangers.
- Jolsts shall be supported laterally at the ends and at each support by solid blocking or other approved means except where the ends of jolsts are nailed to a header, band or rim jolst or to an adjoining stud. Solid blocking shall not be less than 2"x in thickness and the full depth of the jolst.
- Jolsts and roof rafters 1'-0" or deeper shall have full depth 2"x thick solid blocking at 8'-0" maximum spacing.
- Provide 2"x blocking to secure fixtures shown on the project plans.
- Jolsts under and parallel to bearing walls shall be doubled.
- When there are multiple holes and notches in one structural element or when there are holes and notches occurring in more than two consecutive structural elements, the Engineers approval is required, unless the details are shown on plans.
- Notches or cuts in bearing or shear wall studs may be to a depth not exceeding 25% of its width. Wood studs in non-bearing and non-shear walls supporting only their weight may be notched or cut to a depth not greater than 40% (See note 16 above).
- Bored hole diameters shall not exceed 40% of the stud width in bearing walls and 60% in non-bearing walls. The top plates may not be bored or cut, without the Engineer's approval. Neither bearing nor shear wall top plates may be bored greater than 40%, unless detailed on the plans. Holes shall not be closer than 5/8" to the edge of the stud. (See note 16 above)
- When it is necessary to cut the sole plate, sill plate or wood stud for plumbing, heating or other pipes, a 1/16" thick x 1/2" wide galvanized metal stud shoe plate shall be fastened w/6-16d to the plate across the opening.
- Equivalent metal bridging or ties may be submitted to the Engineer for approval.

B

MINIMUM NAILING SCHEDULE

- All structural nailing shall be common wire. Alternate fasteners may be substituted as approved by the Engineer.
- For wood to wood joints, the spacing of nails shall not be less than the required nail penetration. Edge or end distances shall not be less than 1/2 the required nail penetration. Where pre-drilling is required to avoid splitting of the wood, the hole diameter shall not exceed three-fourths of the nail diameter.
- Nailing not noted below or on the project plans shall be a minimum of 2 nails at each contact, 8d for 1"x members and 16d for 2"x members.
- Jolsts or Rafters:
  - Bearing (sill, girder, top plate) Toe Nail 3-8d
  - Laps (parallel members over walls or beams) Face Nail 4-16d  
For each additional 3" member depth beyond 6" member add 2-16d
  - Rim jolst to floor jolst, End Nail 2-16d  
For each additional 4" member depth beyond 8" member add 1-16d
  - Rim jolst to top plate, Toe Nail 8d @ 6" OC
  - Double jolsts under bearing walls, staggered Face Nail. 16d @ 1'-0" OC
- Studs:
  - Double studs, Face Nail 16d @ 2'-0" OC
  - Top plate to stud, End Nail 2-16d
  - Stud to sole plate, Toe Nail 3-16d or 4-8d
  - Sole plate to stud, End Nail 2-16d
  - Stud to continuous header, Toe Nail 3-16d or 4-8d
  - Built-up corner studs, Face Nail 16d @ 2'-0" OC
- Plates:
  - Top plate doubled, Face Nail 16d @ 1'-4" OC
  - Top plate intersection, Face Nail 2-16d
  - Sole plate to rim jolst or blocking, Face Nail 16d @ 1'-4" OC
  - Sole plate to floor framing, Face Nail 16d @ 1'-4" OC
- Blocking:
  - To studs, jolsts or rafters, Toe Nail 3-16d or 4-8d  
or End Nail 2-16d  
For each additional 4" member depth beyond 8" member add, Toe Nail 2-8d  
or End Nail 1-16d
  - To plates, Toe Nail 16d @ 1'-0" OC
- 2" Subfloor to each jolst or girder one blind and one Face Nail. 2-16d
- Structural Plywood Nailing:
  - Spacing at subflooring, decking, roof and wall structural plywood sheathing to framing:
 

| LOCATION   | 3/8" Plwd  | 1/16" - 1" Plwd |
|--|------------|-----------------|
| At supported edges (edge nailing) & over bearing (beams, girders, walls, etc.) | 8d @ 6" OC | 10d @ 6" OC     |
| At intermediate supports (field nailing)                                       | 8d @ 6" OC | 10d @ 1'-0" OC  |
| Where bearing is 4'-0" or greater (field nailing)                              | —          | 10d @ 6" OC     |
  - Structural plywood edge nailing shall be staggered at supports, Detail 2, Sheet ST-1B; at double plates, Detail 3, Sheet ST-1B; and at double studs located at wall intersections and corners, Details 9A and 9B, Sheet ST-1B.
  - Decking and Underlayment: Use deformed shank nail
  - Panel siding to framing: Use zinc coated nail (see Sheet ST-1B for nail size and spacing)
- Finish Plywood Nailing (non-structural):
  - Finish plywood to framing where the thickness is 1/2" or less:
    - Finish nail at supported edges (edge nailing) 6d @ 6" OC
    - Finish nail at intermediate supports (field nailing) 6d @ 1'-0" OC
- Gypsum Sheathing (Structural):
  - Wall structural gypsum board sheathing to framing where the thickness 5/8" or less:
    - Cooler nail, parker nail or wallboard nail with a flat or concave head and diamond point at all edges and intermediate supports (field nailing) 6d @ 4" OC

|       |        |       |                          |           |              |
|-------|--------|-------|--------------------------|-----------|--------------|
| DIST. | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
| 03    | ED     | 50    | R28.1                    | 32        | 52           |



11-16-09  
 PLANS APPROVAL DATE

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C

MECHANICAL FASTENER NOTES

- The clearance holes for lag screw shanks shall be the same diameter and depth as the unthreaded shank. The lead hole for the threaded portion shall be of a diameter equal to 60% of the shank diameter for screws up to 1/2" diameter, and 75% of the shank diameter for larger lag screws. The lead hole shall be at least the length of the threaded portion.
- Lag screws shall be turned into pre-drilled holes and not be driven.
- All bolts and lag screws shall be tightened and retightened before closing in, or at completion of job.
- All bolts and lag screws shall be provided with metal washers under heads and nuts which bear on wood.

| MINIMUM WASHER FOR BOLTS & LAG SCREWS |                       |                    |
|---------------------------------------|-----------------------|--------------------|
| Size                                  | Malleable Iron Washer | Steel Plate Washer |
| 1/2" Ø                                | 2 1/2" Ø x 5/16"      | 2" x 2" x 1/4"     |
| 5/8" Ø                                | 2 3/4" Ø x 5/16"      | 2" x 2" x 1/4"     |
| 3/4" Ø                                | 3" Ø x 7/16"          | 2" x 2" x 1/4"     |
| 7/8" Ø                                | 3 5/16" Ø x 3/8"      | 3" x 3" x 1/4"     |
| 1" Ø                                  | 4" Ø x 1/2"           | 3" x 3" x 1/4"     |

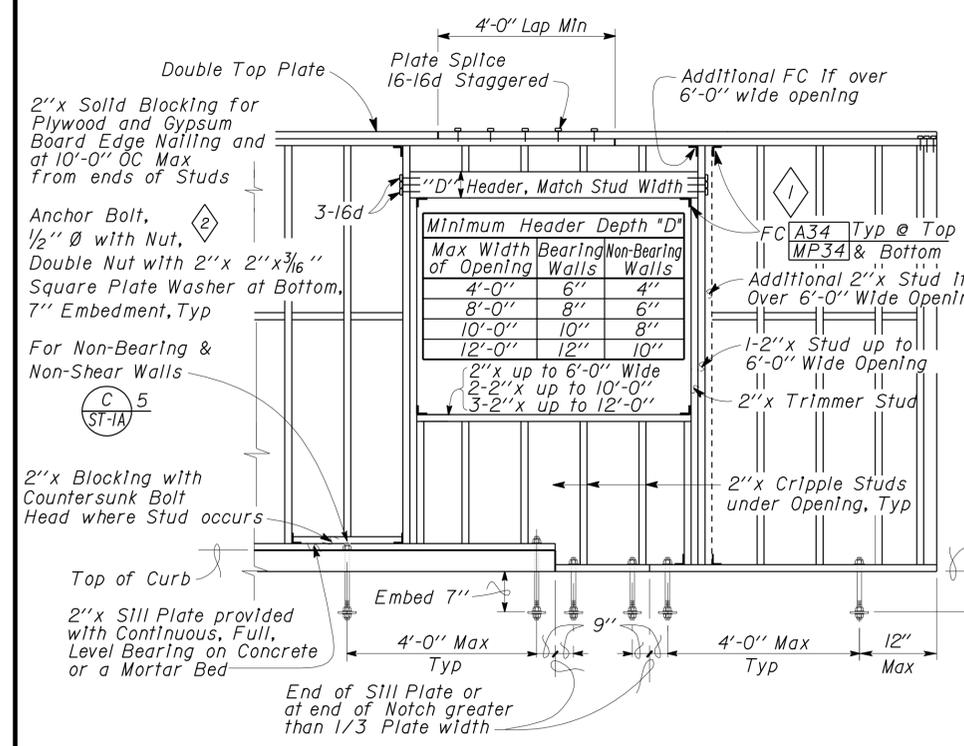
Place under Bolt Heads & Nuts bearing on Wood

- Fastener alternatives for non-bearing and non-shear walls: Two minimum per member and at 9" from ends.
  - 1/8" Ø Powder driven anchor with 1" penetration @ 2'-0" OC.
  - 1/4" Ø expansion anchorage device embedded 1 1/2" minimum at 2'-0" OC.
  - 1/2" Ø anchor bolt with 2 1/2" embedment @ 4'-0" OC.
- Equivalent mechanical fasteners may be submitted to the Engineer for approval.

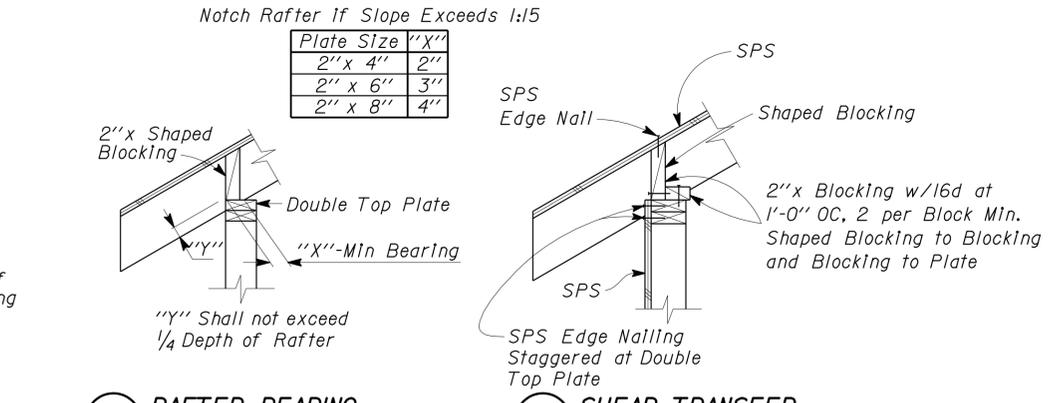
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|                            |                                |                            |                             |  |  |   |  |   |             |
|----------------------------|--------------------------------|----------------------------|-----------------------------|--|--|---|--|---|-------------|
| FILE NO. XS-25-5           | DESIGN BY <i>Sean Samuel</i>   | CHECKED <i>John G. ...</i> | APPROVED <i>R.E. Travis</i> | STATE OF CALIFORNIA                                | DIVISION OF ENGINEERING SERVICES ARCHITECTURAL AND STRUCTURAL DESIGN | BRIDGE NO. 19M5737                              | CAMINO SAND STORAGE FACILITY SAND STORAGE BUILDING |   | SHEET ST-1A |
| DRAWING DATE 1-04          | DETAILS BY <i>Peter F. ...</i> | CHECKED <i>John G. ...</i> | DESIGN SUPERVISOR           | DEPARTMENT OF TRANSPORTATION                       |  | POST MILE R28.1                                 | WOOD FRAMING STANDARD - NOTES                      |   |             |
| DOES SD Imperial Rev. 9/02 |                                |                            |                             | ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3 | CU 03021 EA 3E4601   | DISREGARD PRINTS BEARING EARLIER REVISION DATES |  | REVISION DATES (PRELIMINARY STAGE ONLY) | SHEET OF    |

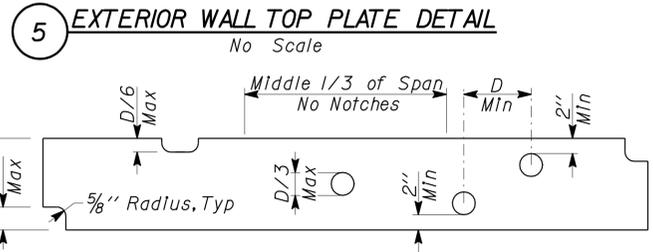
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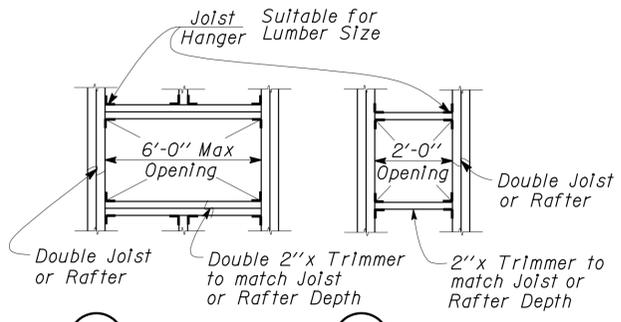
**1 TYPICAL WALL AND OPENING FRAMING**  
No Scale



**5A RAFTER BEARING**      **5B SHEAR TRANSFER**

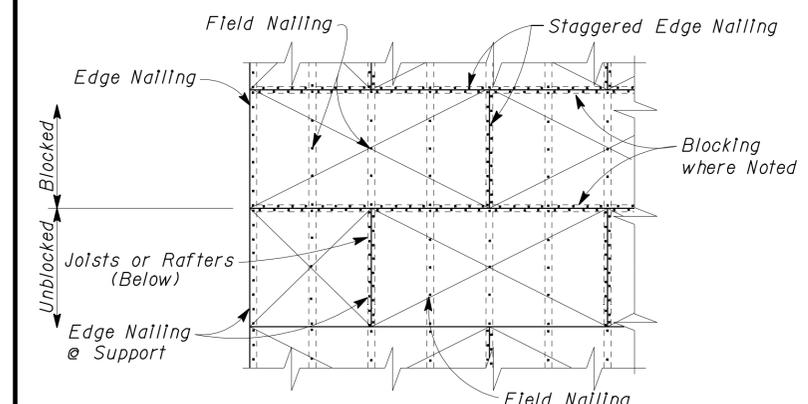


**5 EXTERIOR WALL TOP PLATE DETAIL**  
No Scale

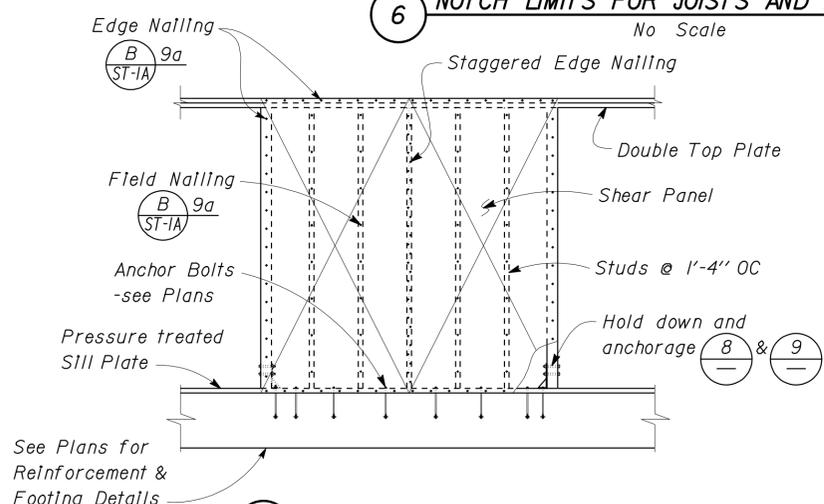


**7A**      **7B**

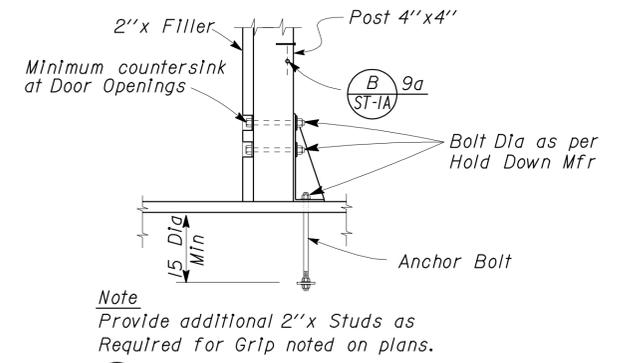
**7 FRAMING AT OPENINGS**  
No Scale



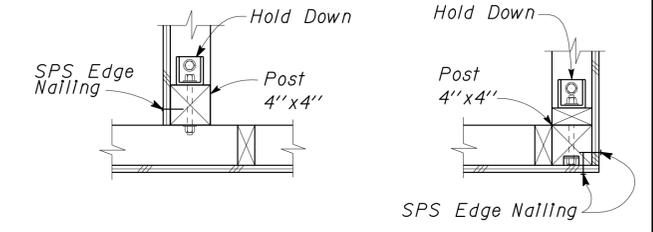
**2 STRUCTURAL PLYWOOD LAYOUT**  
No Scale



**3 SHEAR WALL ELEVATION**  
No Scale

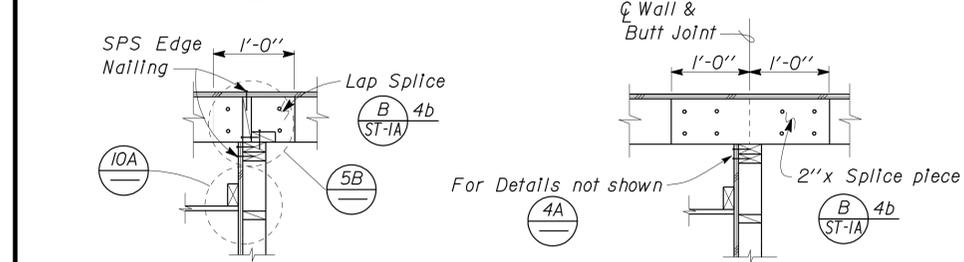


**8 INTERIOR HOLD DOWN**  
No Scale

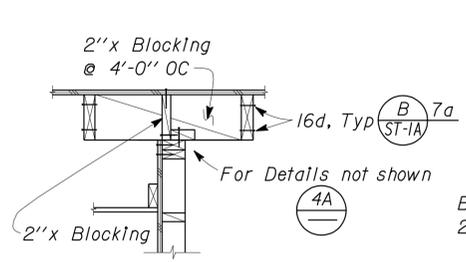


**9A INTERSECTION**      **9B CORNER**

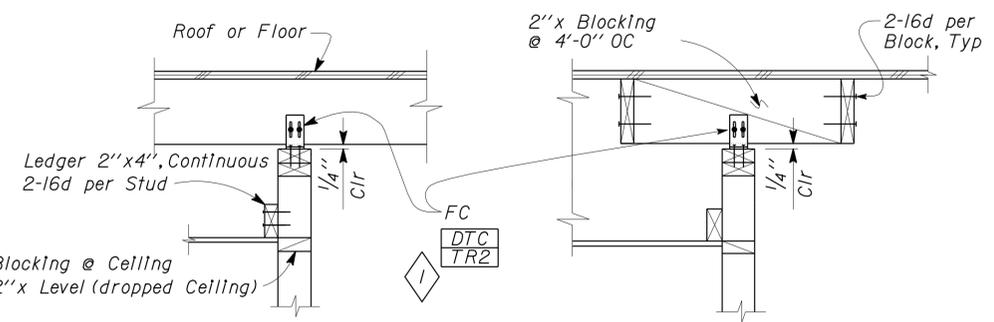
**9 INTERIOR AND CORNER WALL FRAMING DETAILS**  
No Scale



**4A LAP SPLICE ACROSS JOISTS**      **4B BUTT SPLICE ACROSS JOISTS**

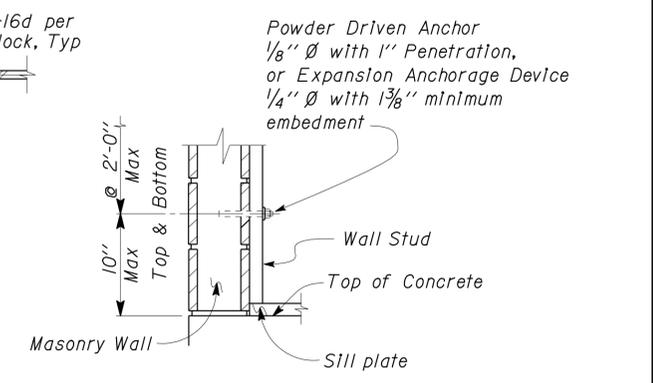


**4C JOISTS PARALLEL TO WALL**



**10A ACROSS JOISTS**      **10B PARALLEL TO JOISTS**

**10 NON-BEARING WALL TOP PLATE CONNECTION**  
No Scale



**11 STUD ANCHORAGE TO MASONRY**  
No Scale

NOTE: SPECIFIC DETAILS OR NOTES ON OTHER SHEETS SHALL PREVAIL OVER STANDARD DETAILS AND NOTES ON THIS SHEET

|                                 |                                      |                               |                                |
|---------------------------------|--------------------------------------|-------------------------------|--------------------------------|
| FILE NO. XS-25-5.1              | DESIGN BY <i>Sean Seidel</i>         | CHECKED BY <i>John Travis</i> | APPROVED BY <i>John Travis</i> |
| DRAWING DATE <b>1-04</b>        | DETAILS BY <i>Peter F. von Savoy</i> | CHECKED BY <i>John Travis</i> | DESIGN SUPERVISOR              |
| SUBMITTED BY <i>Sean Seidel</i> |                                      | DESIGN ENGINEER               |                                |

1 Revision - 11-02-2006  
 Updated USP connector ID.  
 2 Anchor Bolt size & definition.

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
 DIVISION OF ENGINEERING SERVICES  
 ARCHITECTURAL AND STRUCTURAL DESIGN

|                                 |  |             |
|---------------------------------|--|-------------|
| BRIDGE NO. 19M5737              | CAMINO SAND STORAGE FACILITY SAND STORAGE BUILDING | SHEET ST-1B |
| POST MILE R28.1                 |  |             |
| WOOD FRAMING STANDARD - DETAILS |  | SHEET OF    |

DOES SD Imperial Rev. 9/02

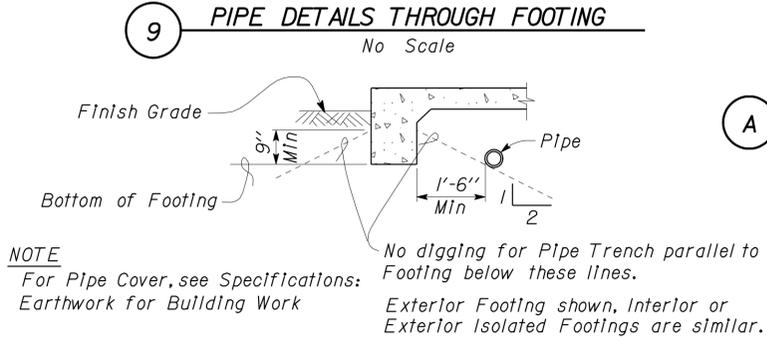
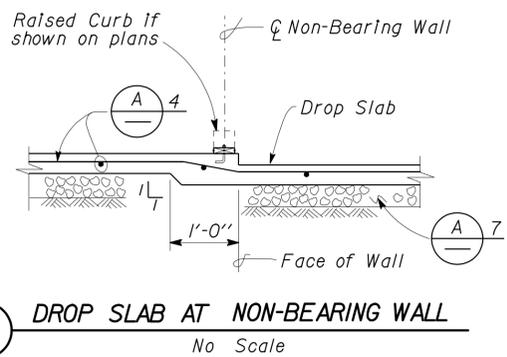
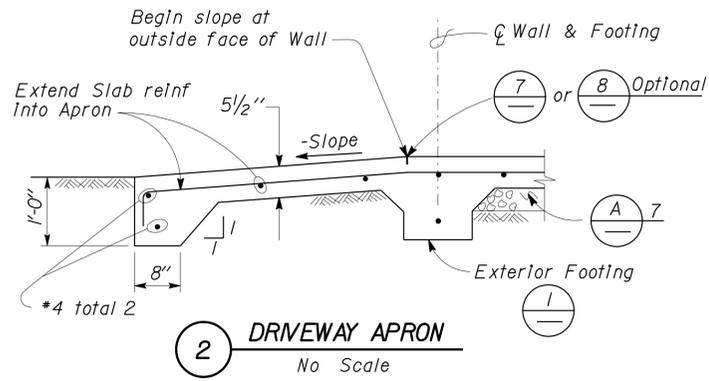
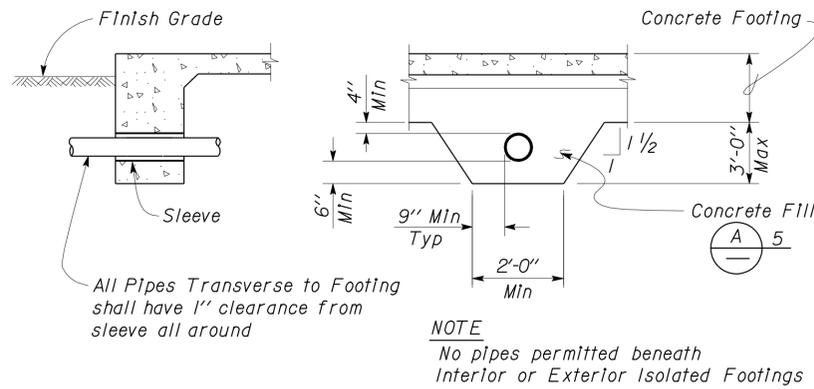
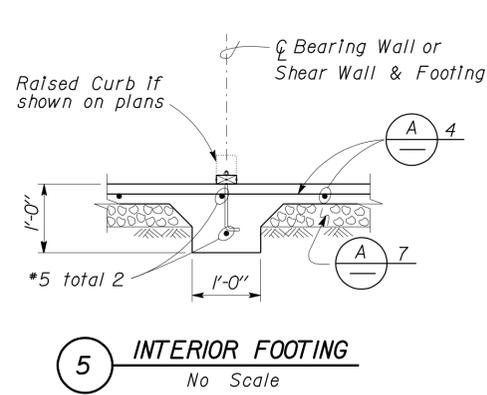
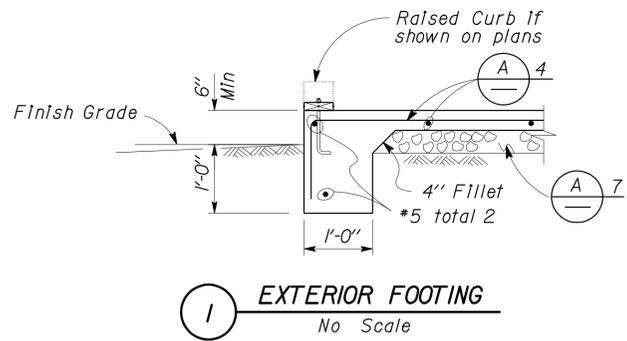
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

CU 03021 EA 3E4601

DISREGARD PRINTS BEARING EARLIER REVISION DATES

| REVISION DATES (PRELIMINARY STAGE ONLY) | SHEET | OF |
|---|-------|----|
| 10-16-03 11-14-05 11-02-06 01-15-08     |       |    |

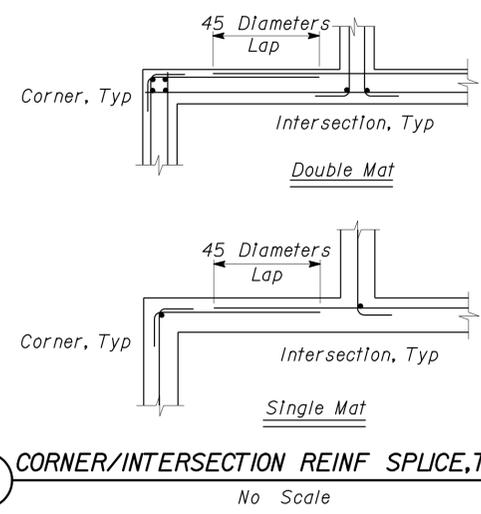
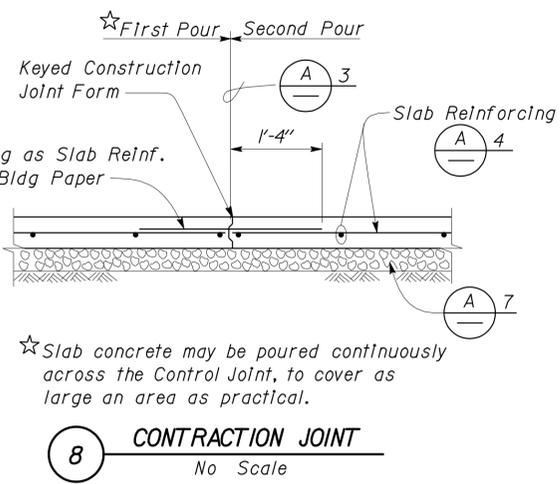
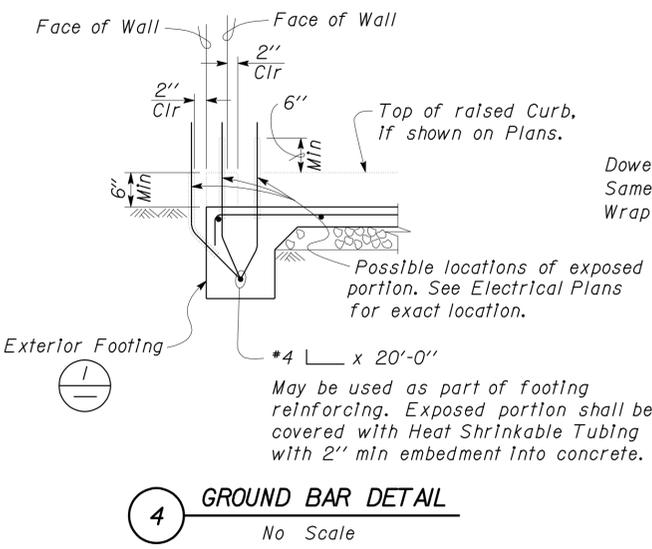
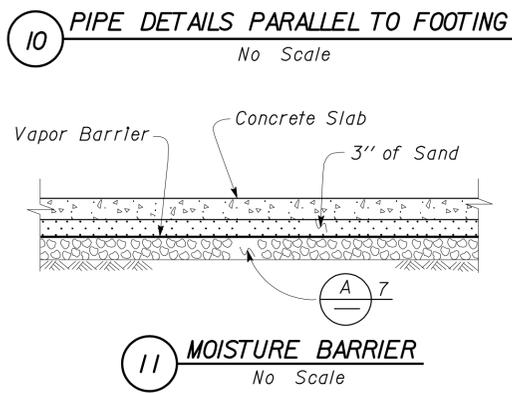
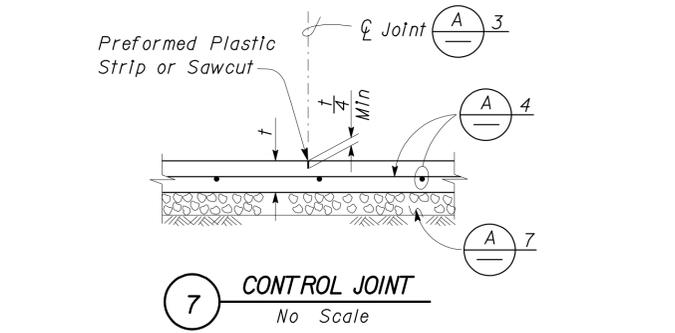
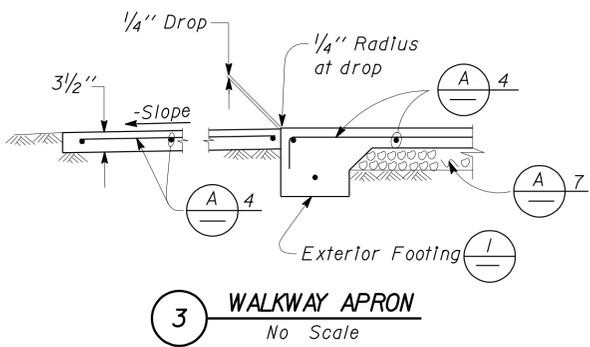
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**A CONCRETE NOTES**

1. The following minimum concrete cover shall be provided for reinforcement.

|   | Minimum Cover |
|---|---------------|
| a. Concrete cast against and permanently exposed to earth     | 3"            |
| b. Concrete exposed to earth or weather but cast in forms:    |               |
| *6 thru *18 bars  | 2"            |
| *5 bar and smaller, W31 or D31 Wire, and smaller              | 1 1/2"        |
| c. Concrete not exposed to weather or in contact with ground: |               |
| Slabs, Walls and Joists:                                      |               |
| *14 and *18 Bar   | 1 1/2"        |
| *11 Bar and smaller   | 3/4"          |
| Beams and Columns:  |               |
| Primary Reinforcement, Ties, Stirrups and Spirals             | 1 1/2"        |



NOTE: SPECIFIC DETAILS OR NOTES ON OTHER SHEETS SHALL PREVAIL OVER STANDARD DETAILS AND NOTES ON THIS SHEET

|                   |                                      |                                |                                |
|-------------------|--------------------------------------|--------------------------------|--------------------------------|
| FILE NO. XS-25-1  | DESIGN BY <i>Sean Samel</i>          | CHECKED BY <i>Steve Foster</i> | APPROVED BY <i>R.E. Travis</i> |
| DRAWING DATE 1-04 | DETAILS BY <i>Peter F. von Savoy</i> | CHECKED BY <i>Steve Foster</i> | DESIGN SUPERVISOR              |
|                   | SUBMITTED BY <i>Sean Samel</i>       | DESIGN ENGINEER                |                                |

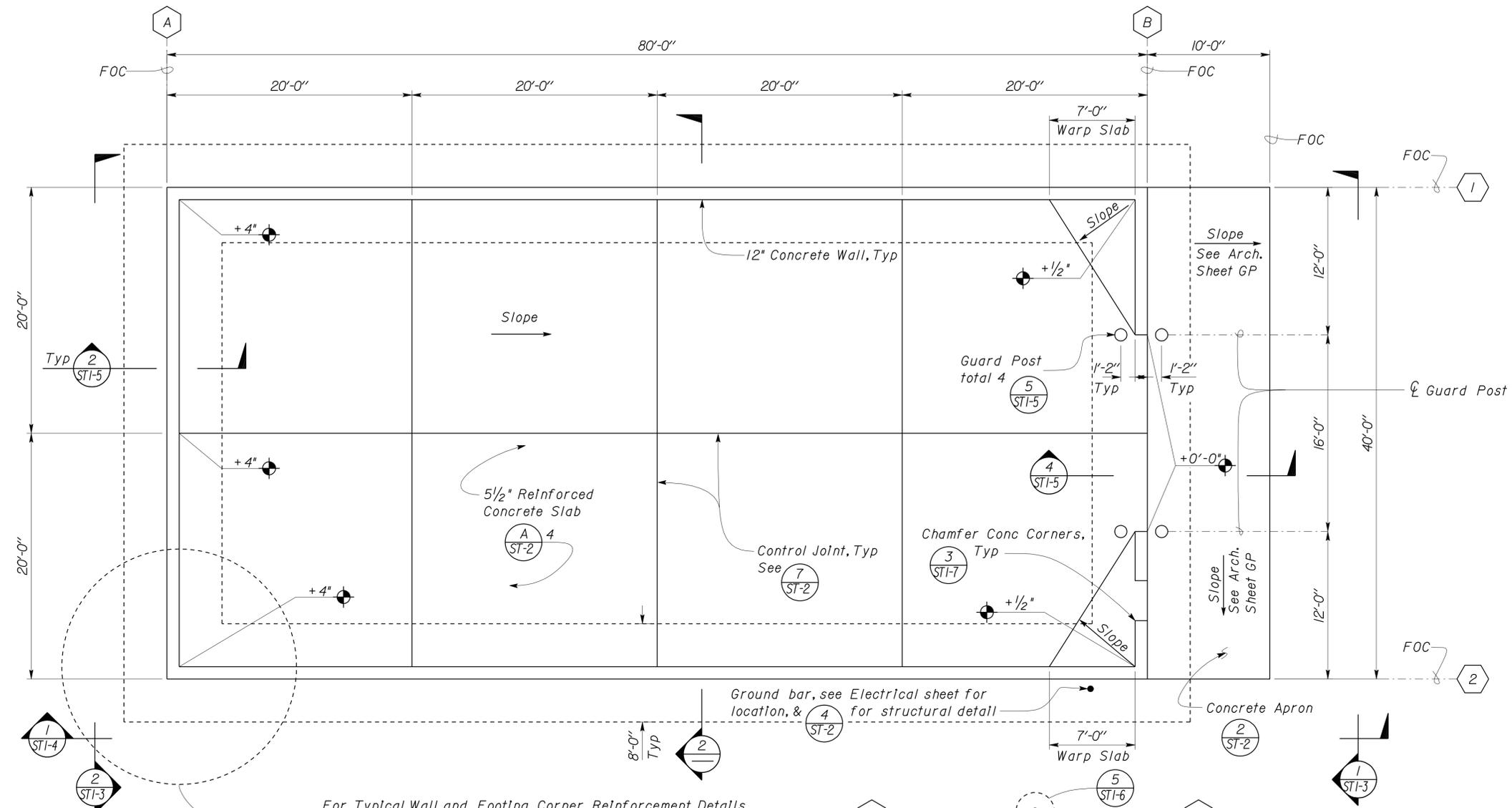
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| STATE OF CALIFORNIA          | DIVISION OF ENGINEERING SERVICES    | BRIDGE NO. 19M5737 | CAMINO SAND STORAGE FACILITY SAND STORAGE BUILDING | SHEET ST-2        |
| DEPARTMENT OF TRANSPORTATION | ARCHITECTURAL AND STRUCTURAL DESIGN | POST MILE R28.1    |  | CONCRETE STANDARD |
|                              |                                     |                    |  |                   |

| DIST. | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|-------|--------|-------|--------------------------|-----------|--------------|
| 03    | ED     | 50    | R28.1                    | 35        | 52           |

REGISTERED PROFESSIONAL ENGINEER  
**Dailu**  
 REGISTERED CIVIL ENGINEER  
 No. 67416  
 Exp. 12-31-10  
 CIVIL  
 STATE OF CALIFORNIA

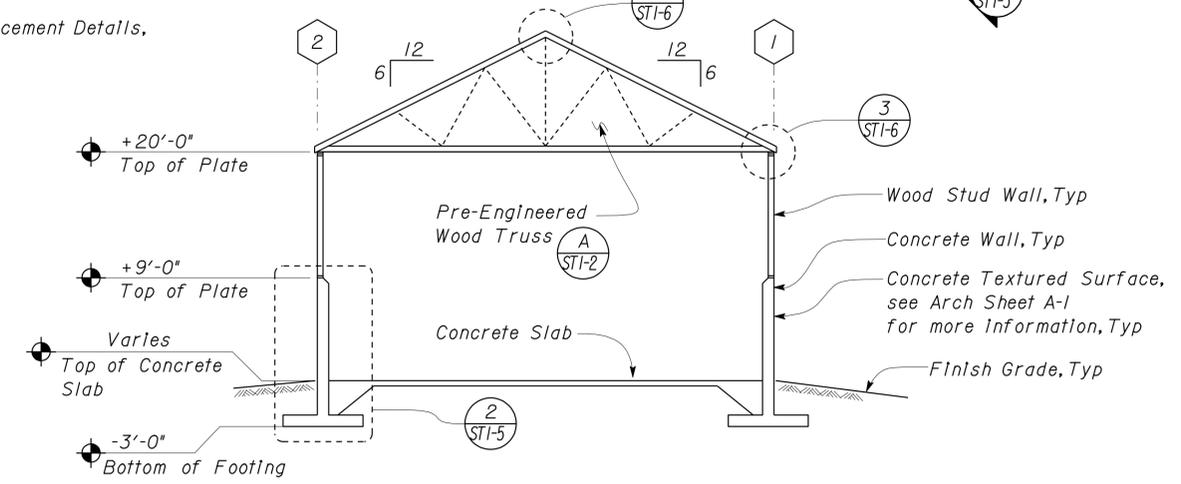
09-01-09 DATE  
 11-16-09 PLANS APPROVAL DATE

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**1 FOUNDATION PLAN**  
Scale 3/16" = 1' - 0"

Elevation 3537.13 = Datum 0'-0"



**2 TYPICAL SECTION**  
Scale 1/8" = 1' - 0"

- A DESIGN NOTES**
1. Design: The building work on this project has been designed to conform to the 2007 California Building Code.
  - a. Loads :
    - Live Loads : Roof = 20 PSF
    - Ground Snow  $P_g = 63$  PSF
    - $P_f = 38$  PSF
    - $C_e = 0.9$
    - $C_t = 1.2$
    - $I = 0.8$
  - Seismic :  $S_S = 0.56I_g$ ,  $S_1 = 0.208g$   
 $S_{DS} = 0.374$ ,  $S_{DI} = 0.139$   
 $SDC = C$   
 $C_S = 0.0575$   
 $R = 6.5$ ,  $I = 1.0$ ,  
 Occupancy Category : I  
 Building Frame System : Light Framed Wall Sheathed with wood structural panels Rated for Shear Resistance.  
 Equivalent Lateral Force Analysis:  
 $V_{SEISMIC} = 5.20$  Kips  
 Wind Speed : 100 MPH , Exposure C  
 Importance Factor = 0.87  
 Internal Pressure Coefficient  $GC_{pi} = \pm 0.18$
  - b. Reinforced Concrete ( Ultimate Strength Design ) :  
 $f'_c = 3,000$  PSI  
 $f_y = 60,000$  PSI  
 The maximum water/cementitious material ratio shall not exceed 0.40
  - c. Structural Steel ( Allowable Strength Design ) :  
 $f_y = 36,000$  PSI
  - d. Timber: Sawn Lumber Sheet ST-1A & ST-1B  
 Pre-Engineered Truss Sheets ST-1-2
  - e. Foundation :  
 Soils report dated: DEC 31 , 2008  
 Allowable Soil Pressure ( DL + LL ) : 4000 PSF

|  |                         |                       |   |   |   |   |                 |
|--|-------------------------|-----------------------|---|---|---|---|-----------------|
| DESIGN                                     | BY EDWARD ZHANG         | CHECKED JOE CAMILLERI | STATE OF CALIFORNIA<br>DEPARTMENT OF TRANSPORTATION | DIVISION OF ENGINEERING SERVICES<br>ARCHITECTURAL AND STRUCTURAL DESIGN | BRIDGE NO.                                      | CAMINO SAND STORAGE FACILITY<br>SAND STORAGE BUILDING | SHEET           |
|  | DETAILS BY EDWARD ZHANG | CHECKED JOE CAMILLERI |   |   | 19M5737   |   | ST1-1           |
|  | QUANTITIES BY           | CHECKED               |   |   | POST MILE R28.1                                 |   | FOUNDATION PLAN |
| ORIGINAL SCALE IN INCHES FOR REDUCED PLANS |                         |                       | 0 1 2 3   | CU 03021<br>EA 3E4601   | DISREGARD PRINTS BEARING EARLIER REVISION DATES | REVISION DATES (PRELIMINARY STAGE ONLY)               | SHEET OF        |

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|       |        |       |                          |           |              |
|-------|--------|-------|--------------------------|-----------|--------------|
| DIST. | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
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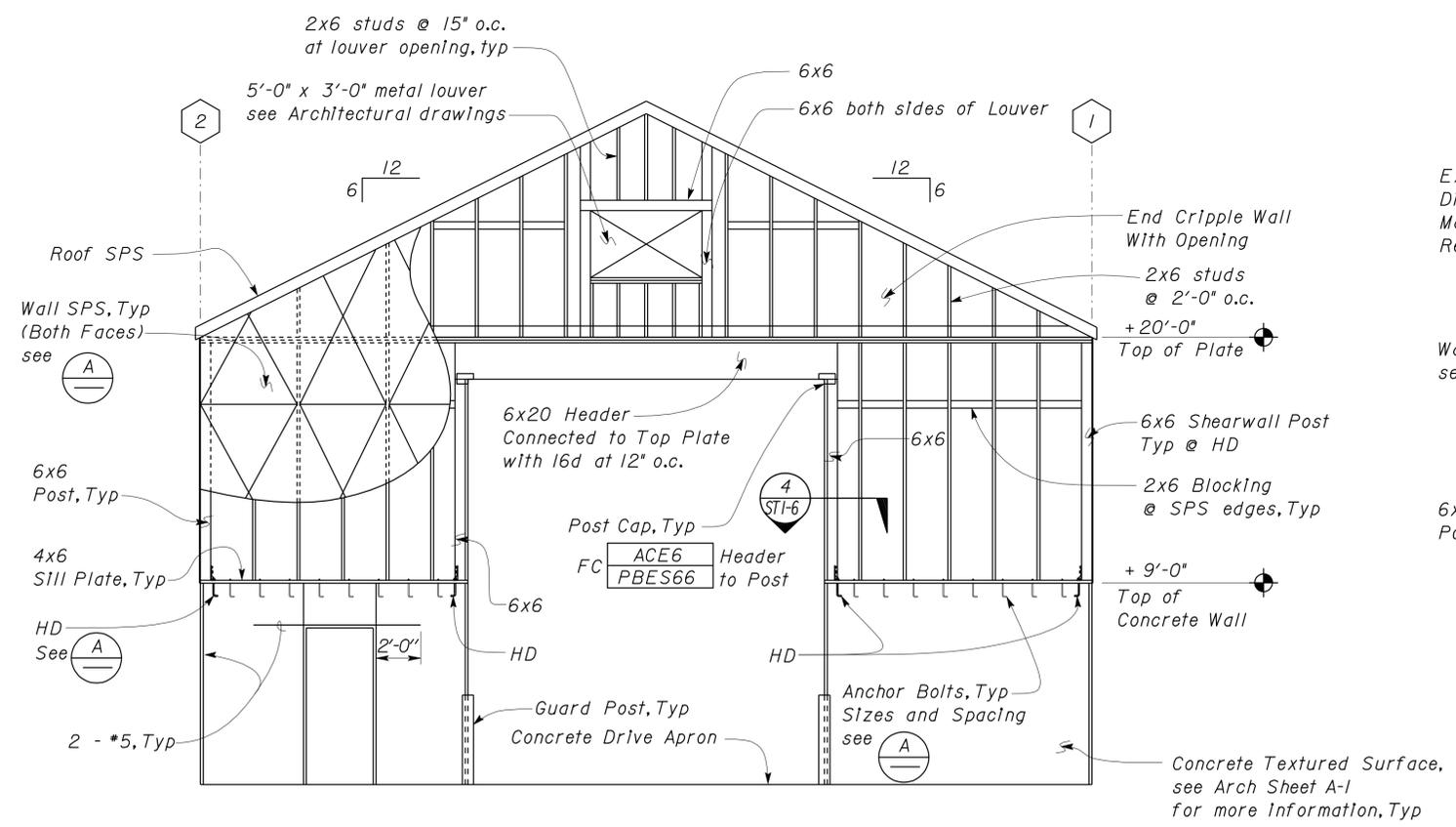
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|---------------------------------|------------------|
|                                 |                  |
| 11-16-09<br>PLANS APPROVAL DATE | 09-01-09<br>DATE |

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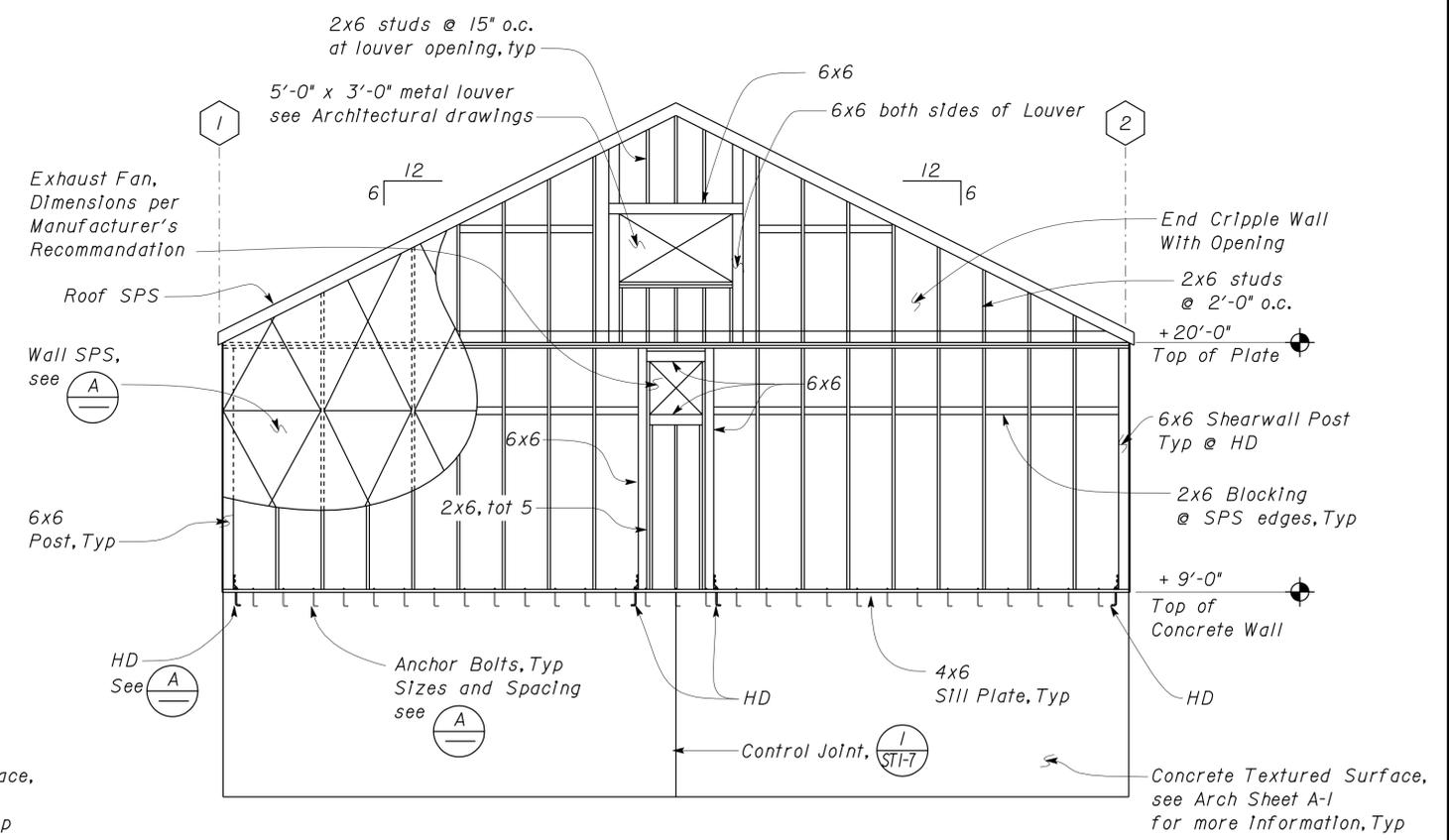
| SHEARWALL                                     | SHEARWALL NAILING                |                                  | ANCHOR BOLTS<br>5/8" Diameter<br>w/ 7" Embedment | HOLDDOWNS            | HOLDDOWN ANCHORS |
|---|----------------------------------|----------------------------------|--|----------------------|------------------|
|   | EDGE                             | FIELD                            |  |                      |                  |
| EAST<br>(LINE <u>B</u> )                      | 10d @ 4" o.c.<br>(Both Faces)    | 10d @ 6" o.c.<br>(Both Faces)    | 2'-0" o.c.                                       | HDU8-SDS2.5 or Equiv | SSTB28 or Equiv  |
| WEST<br>(LINE <u>A</u> )                      | 10d @ 4" o.c.<br>(Exterior Face) | 10d @ 6" o.c.<br>(Exterior Face) | 2'-0" o.c.                                       | HDU5-SDS2.5 or Equiv | SSTB24 or Equiv  |
| NORTH<br>SOUTH<br>(LINE <u>1</u> & <u>2</u> ) | 10d @ 6" o.c.<br>(Exterior Face) | 10d @ 6" o.c.<br>(Exterior Face) | 4'-0" o.c.                                       | HDU2-SDS2.5 or Equiv | SSTB16 or Equiv  |

- Note:
1. Wall SPS shall be 15/32" thick, CDX, Exposure 1 grade with 32/16 span rating.
  2. Where wall SPS is applied on both faces of a wall and nail spacing is less than 6" o.c. on either side, panel joints shall be offset to fall on different framing members.
  3. For Holddown detail, see 8 Sim & 9 Sim

**A SHEARWALL SCHEDULE**



**1 EAST WALL ELEVATION**  
Scale 1/4" = 1'-0"



**2 WEST WALL ELEVATION**  
Scale 1/4" = 1'-0"

|        |                         |                       |   |   |                       |   |       |
|--------|-------------------------|-----------------------|---|---|-----------------------|---|-------|
| DESIGN | BY EDWARD ZHANG         | CHECKED JOE CAMILLERI | STATE OF CALIFORNIA<br>DEPARTMENT OF TRANSPORTATION | DIVISION OF ENGINEERING SERVICES<br>ARCHITECTURAL AND STRUCTURAL DESIGN | BRIDGE NO.<br>19M5737 | CAMINO SAND STORAGE FACILITY<br>SAND STORAGE BUILDING | SHEET |
|        | DETAILS BY EDWARD ZHANG | CHECKED JOE CAMILLERI |   |   | POST MILE<br>R28.1    |   | ST1-3 |
|        | QUANTITIES BY           | CHECKED               |   |   |                       |   |       |

|                            |  |                       |   |   |          |
|----------------------------|--|-----------------------|---|---|----------|
| DOES SD Imper-Id Rev. 9/02 | ORIGINAL SCALE IN INCHES FOR REDUCED PLANS | CU 03021<br>EA 3E4601 | DISREGARD PRINTS BEARING EARLIER REVISION DATES | REVISION DATES (PRELIMINARY STAGE ONLY) | SHEET OF |
|                            | 0 1 2 3                                    |                       |   | 10-14-08 12-19-08 06-17-09 09-01-09     |          |

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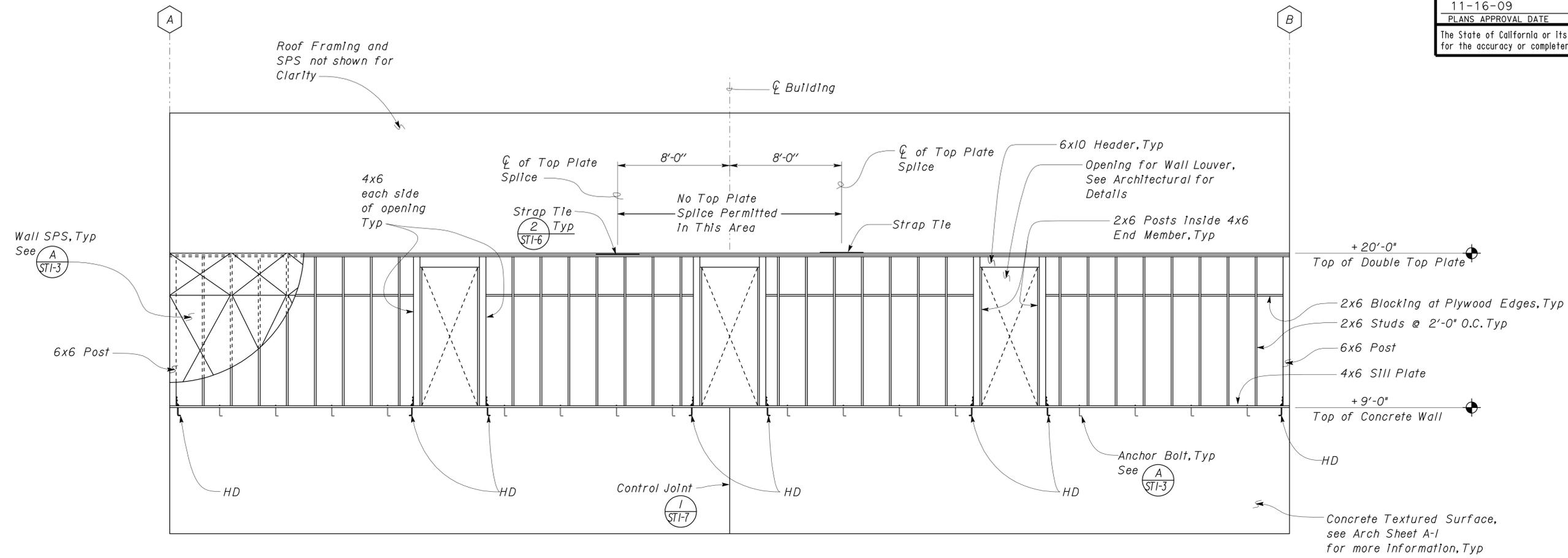
| DIST. | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|-------|--------|-------|--------------------------|-----------|--------------|
| 03    | ED     | 50    | R28.1                    | 38        | 52           |

*Dailu*  
REGISTERED CIVIL ENGINEER  
DATE 09-01-09

*Dai Lu*  
No. 67416  
Exp. 12-31-10  
CIVIL  
STATE OF CALIFORNIA

11-16-09  
PLANS APPROVAL DATE

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**1 SOUTH WALL ELEVATION (NORTH SIMILAR)**  
Scale 1/4" = 1' - 0"

|            |                 |                       |   |  |   |   |                |
|------------|-----------------|-----------------------|---|--|---|---|----------------|
| DESIGN     | BY EDWARD ZHANG | CHECKED JOE CAMILLERI | STATE OF CALIFORNIA<br>DEPARTMENT OF TRANSPORTATION | DIVISION OF ENGINEERING SERVICES<br>ARCHITECTURAL AND<br>STRUCTURAL DESIGN | BRIDGE NO.<br>19M5737                   | CAMINO SAND STORAGE FACILITY<br>SAND STORAGE BUILDING | SHEET<br>ST1-4 |
|            | DETAILS         | BY EDWARD ZHANG       |   |  | CHECKED JOE CAMILLERI                   |   |                |
| QUANTITIES | BY              | CHECKED               | CU 03021<br>EA 3E4601                               | DISREGARD PRINTS BEARING EARLIER REVISION DATES                            | REVISION DATES (PRELIMINARY STAGE ONLY) | SHEET   | OF             |

DOES SD Imperial Rev. 9/02 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

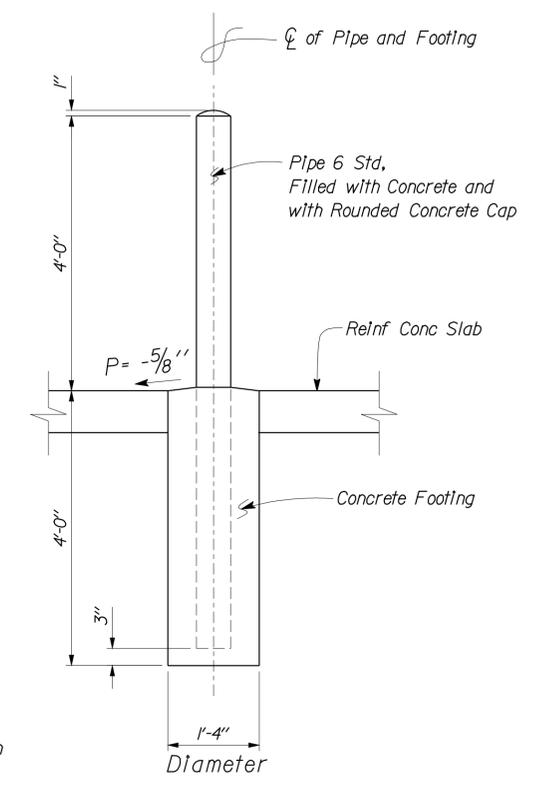
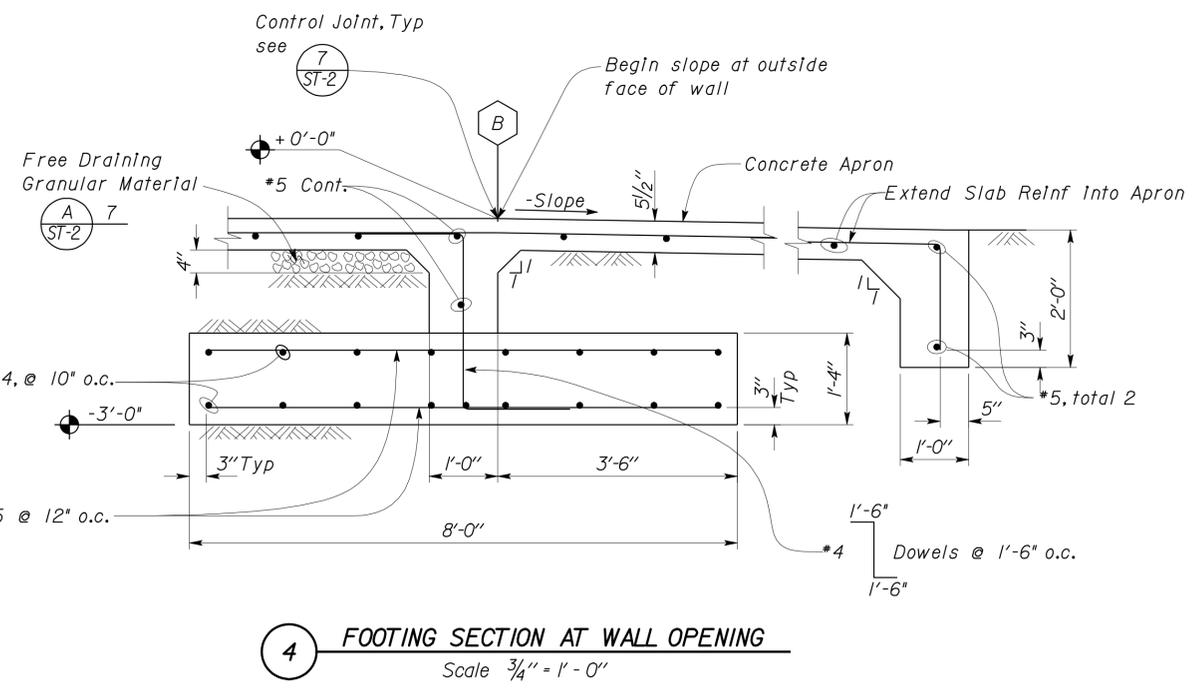
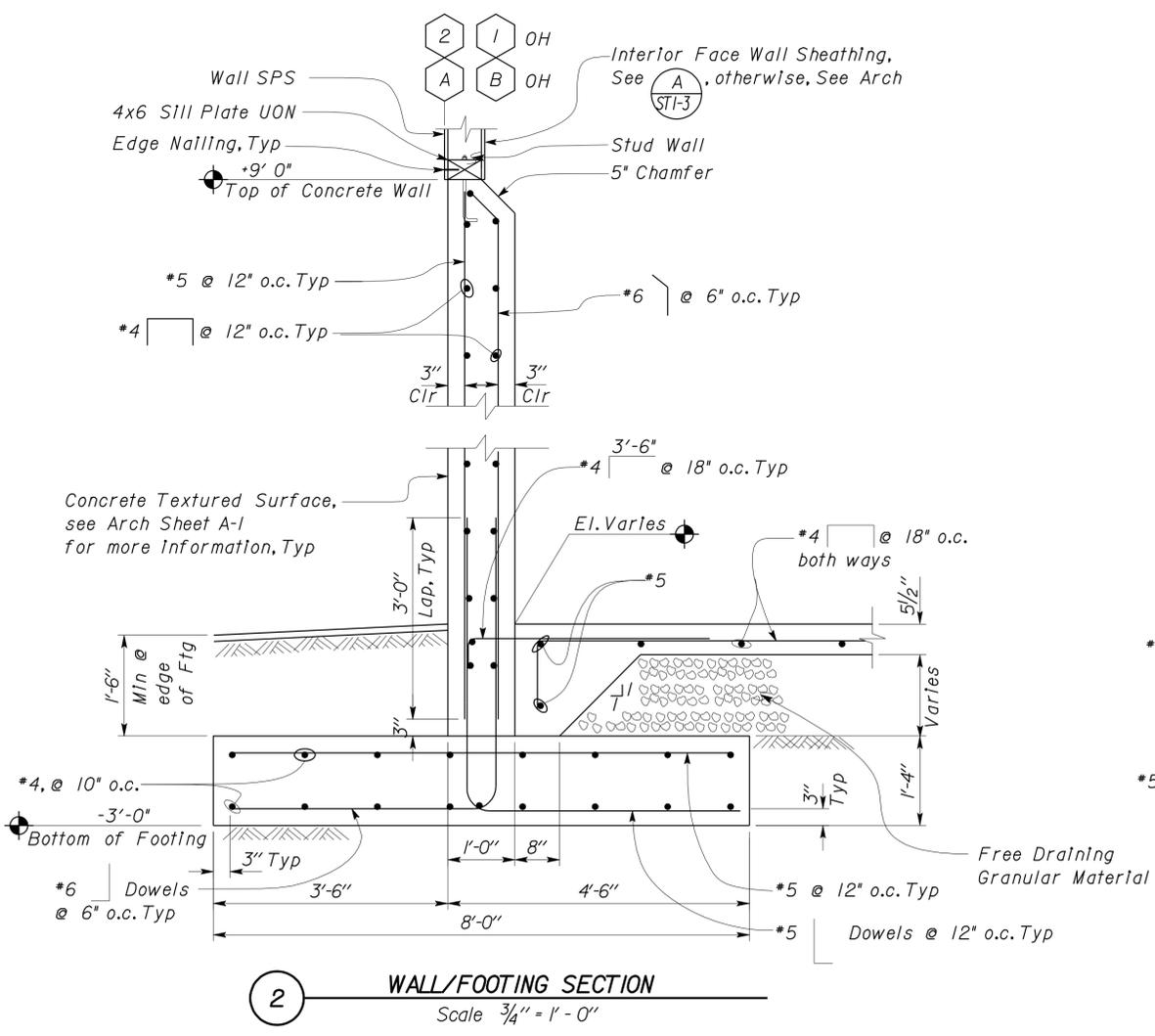
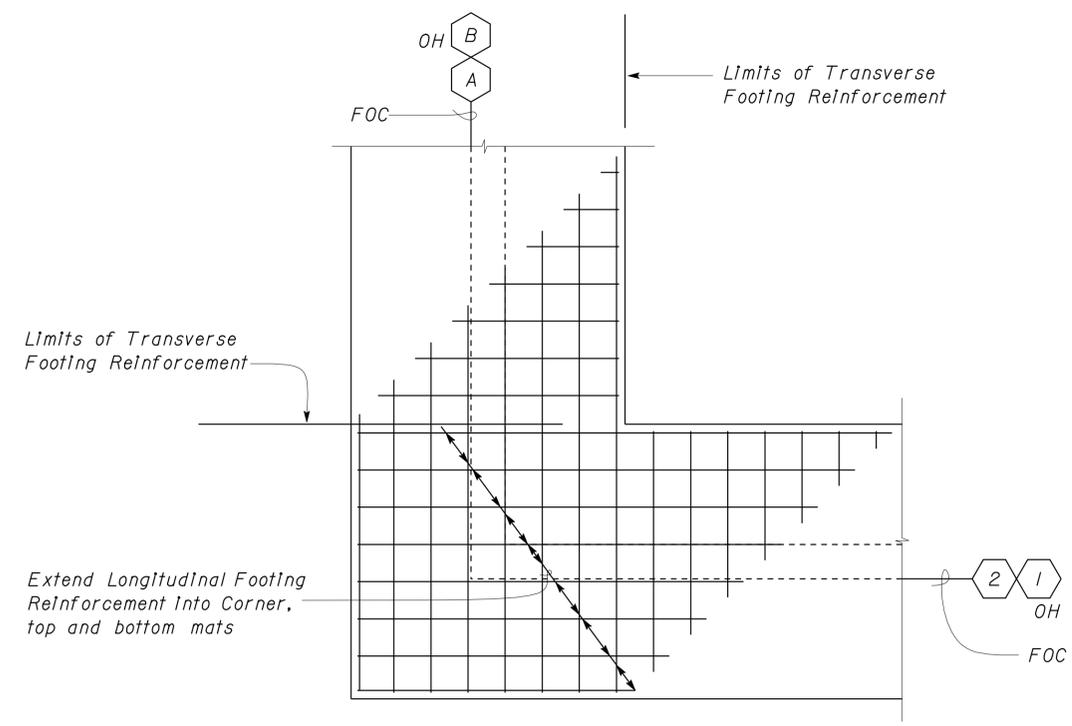
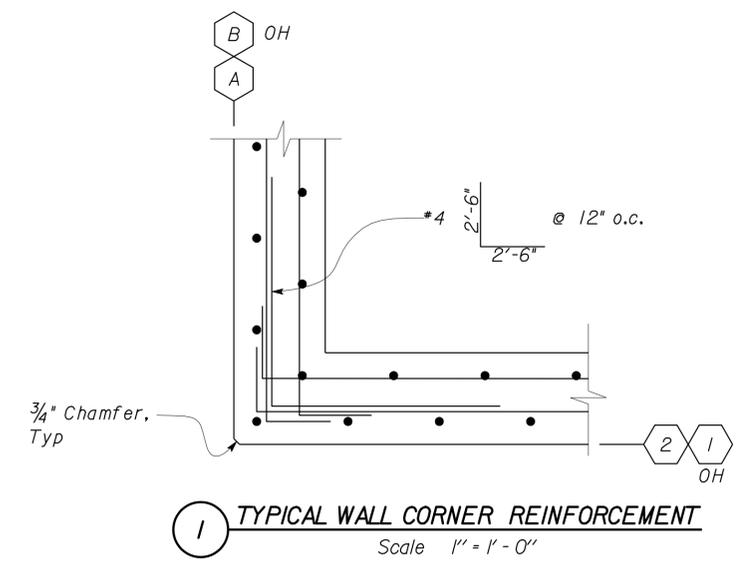
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| DIST. | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
| 03    | ED     | 50    | R28.1                    | 39        | 52           |

|  |  |                  |
|--|--|------------------|
| <i>Dailu</i><br>REGISTERED CIVIL ENGINEER  |  | 09-01-09<br>DATE |
| 11-16-09<br>PLANS APPROVAL DATE  |  |                  |
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 No. 67416  
 Exp. 12-31-10  
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 STATE OF CALIFORNIA



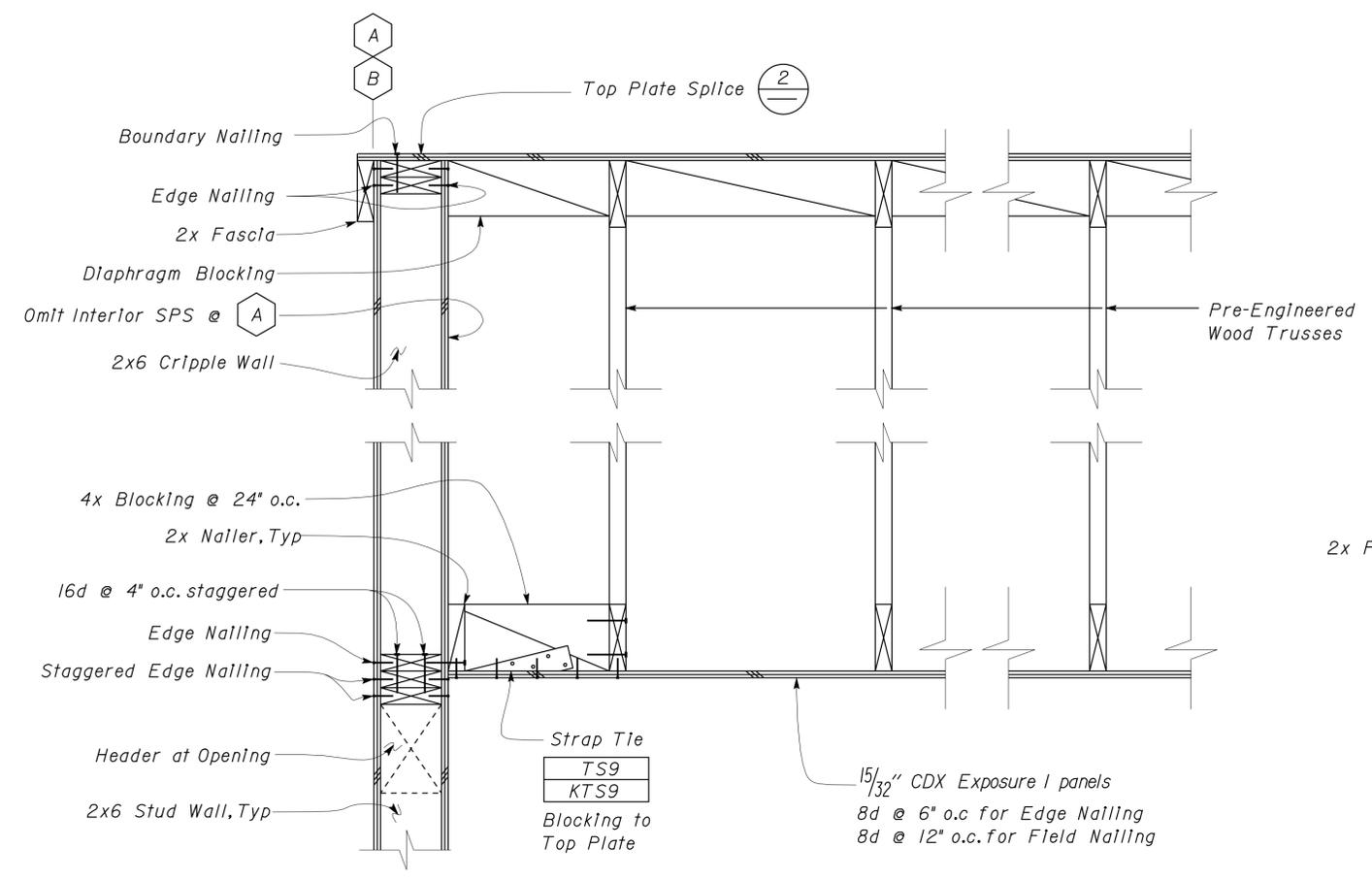
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|            | DETAILS         | BY EDWARD ZHANG       |   |   | CHECKED JOE CAMILLERI                           |   | POST MILE<br>R28.1 |
| QUANTITIES | BY              | CHECKED               | ORIGINAL SCALE IN INCHES FOR REDUCED PLANS          | CU 03021<br>EA 3E4601   | DISREGARD PRINTS BEARING EARLIER REVISION DATES | REVISION DATES (PRELIMINARY STAGE ONLY)               | SHEET OF           |

DOES SD Imperial Rev. 9/02

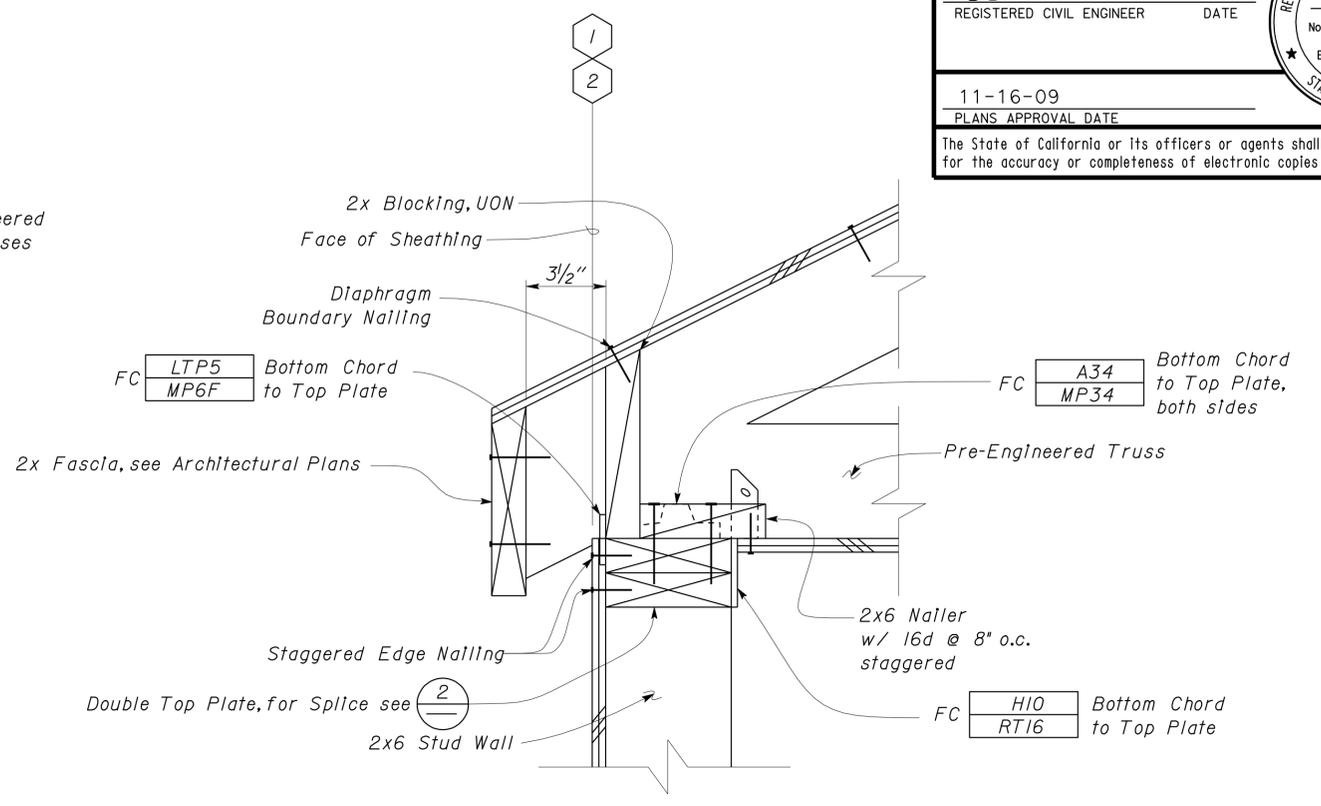
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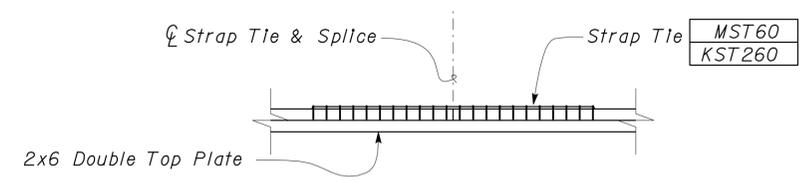
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| DIST.  | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO.   | TOTAL SHEETS |
| 03   | ED     | 50    | R28.1                    | 40  | 52           |
| <i>Dailu</i><br>REGISTERED CIVIL ENGINEER  |        |       | 09-01-09<br>DATE         |  |              |
| 11-16-09<br>PLANS APPROVAL DATE  |        |       |                          |   |              |
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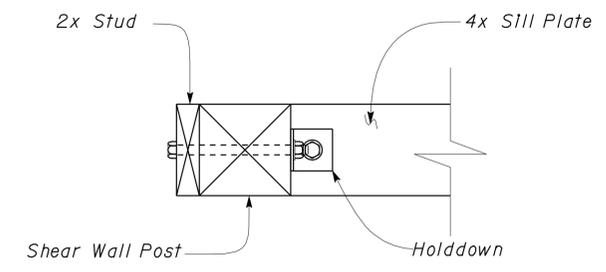
**1** CRIPPLE WALL SECTION ALONG A & B  
Scale 1 1/2" = 1' - 0"



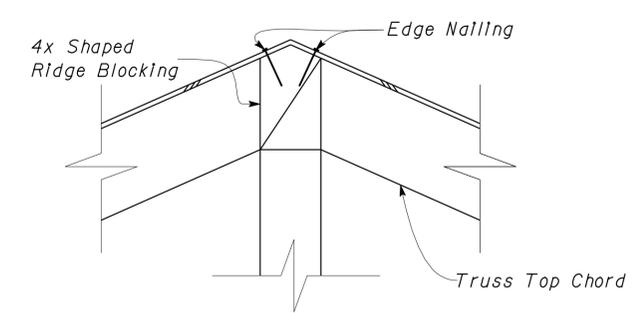
**3** TRUSS TO TOP PLATE CONNECTION  
Scale 3" = 1' - 0"



**2** TYPICAL TOP PLATE SPLICE  
Scale 1" = 1' - 0"



**4** INTERIOR HOLDDOWN DETAIL  
Scale 2" = 1' - 0"



**5** RIDGE BLOCKING DETAIL  
Scale 2" = 1' - 0"

|  |                 |                       |   |   |   |   |                |
|--|-----------------|-----------------------|---|---|---|---|----------------|
| DESIGN                                     | BY EDWARD ZHANG | CHECKED JOE CAMILLERI | STATE OF CALIFORNIA<br>DEPARTMENT OF TRANSPORTATION | DIVISION OF ENGINEERING SERVICES<br>ARCHITECTURAL AND STRUCTURAL DESIGN | BRIDGE NO.<br>19M5737                   | CAMINO SAND STORAGE FACILITY<br>SAND STORAGE BUILDING | SHEET<br>ST1-6 |
|  | DETAILS         | BY EDWARD ZHANG       |   |   | CHECKED JOE CAMILLERI                   |   |                |
| QUANTITIES                                 | BY              | CHECKED               | CU 03021<br>EA 3E4601                               | DISREGARD PRINTS BEARING EARLIER REVISION DATES                         | REVISION DATES (PRELIMINARY STAGE ONLY) | SHEET   | OF             |
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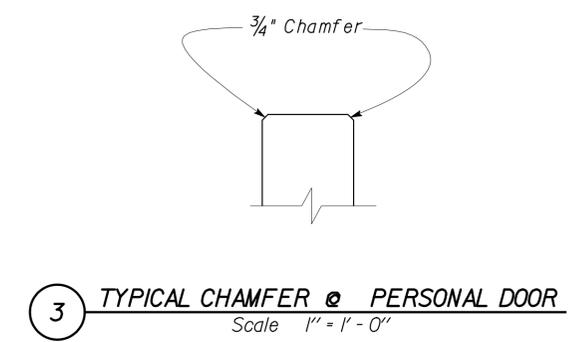
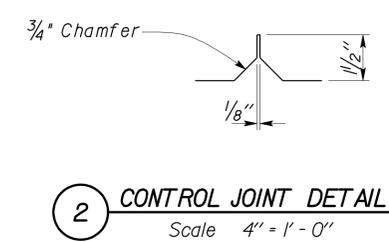
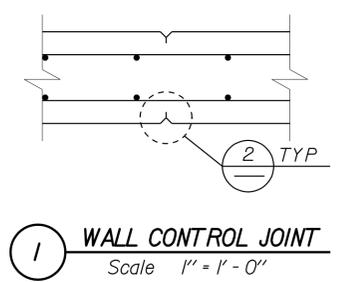
| DIST. | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|-------|--------|-------|--------------------------|-----------|--------------|
| 03    | ED     | 50    | R28.1                    | 41        | 52           |

*Dailu*  
REGISTERED CIVIL ENGINEER  
DATE 09-01-09

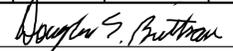
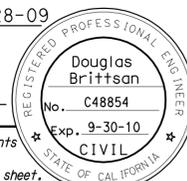
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PLANS APPROVAL DATE



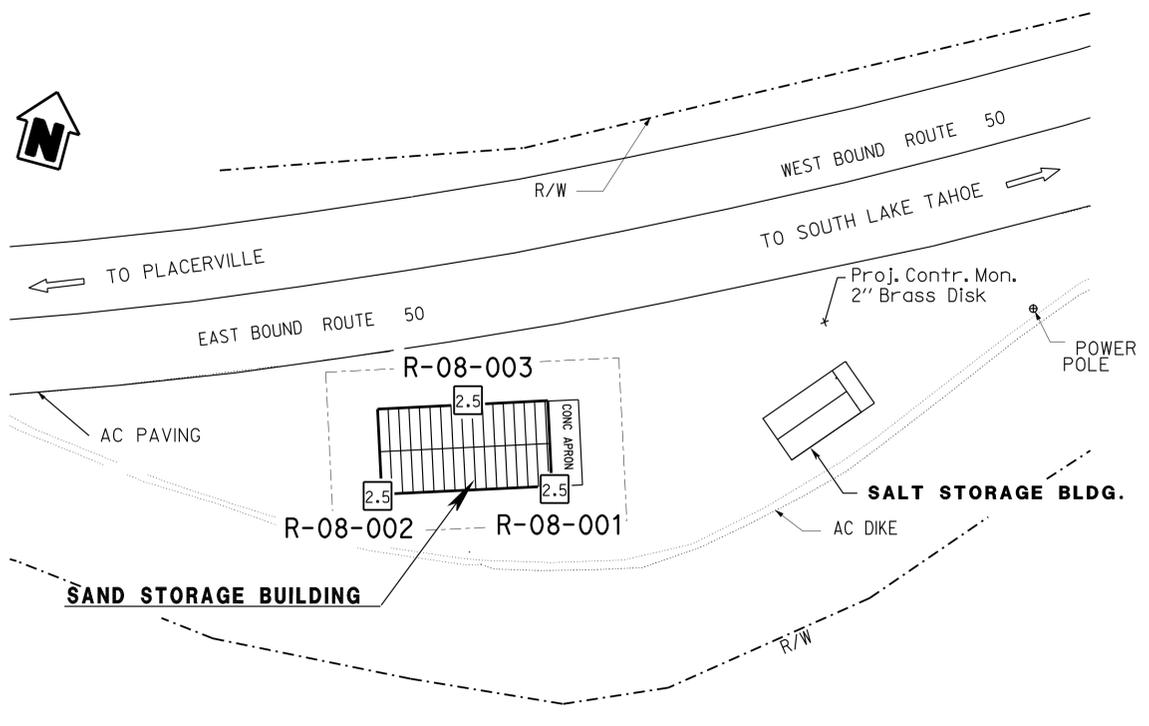
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| DOES SD Imperial Rev. 9/02                 | DESIGN     | BY EDWARD ZHANG | CHECKED JOE CAMILLERI | STATE OF CALIFORNIA<br>DEPARTMENT OF TRANSPORTATION | DIVISION OF ENGINEERING SERVICES<br>ARCHITECTURAL AND STRUCTURAL DESIGN | BRIDGE NO.                                      | CAMINO SAND STORAGE FACILITY<br>SAND STORAGE BUILDING<br>CONCRETE WALL DETAILS | SHEET                      |
|  | DETAILS    | BY EDWARD ZHANG | CHECKED JOE CAMILLERI |   |   | 19M5737   |  | OF                         |
|  | QUANTITIES | BY              | CHECKED               |   |   | POST MILE R28.1                                 |  | ST1-7                      |
| ORIGINAL SCALE IN INCHES FOR REDUCED PLANS |            |                 |                       | 0 1 2 3   | CU 03021<br>EA 3E4601   | DISREGARD PRINTS BEARING EARLIER REVISION DATES | REVISION DATES (PRELIMINARY STAGE ONLY)  | 02-13-09 06-17-09 09-01-09 |

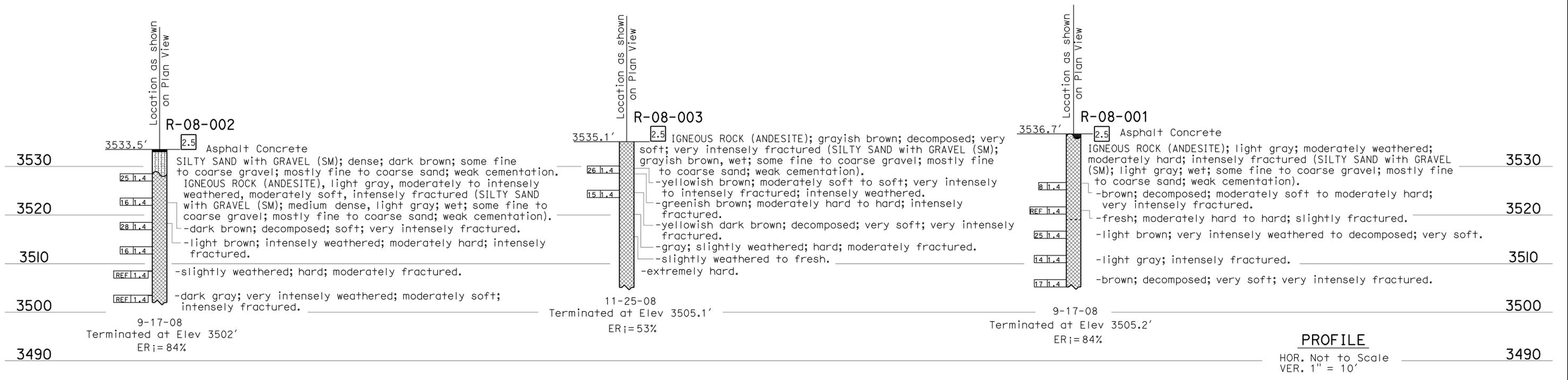
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|    |        |       | 7-28-09                  |          |              |
| REGISTERED CIVIL ENGINEER   |        |       |                          |          |              |
| 11-16-09  |        |       | PLANS APPROVAL DATE      |          |              |
|    |        |       |                          |          |              |
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This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, & Presentation Manual (June 2007).



**BENCH MARK**  
 PRH309 Elev 3538.674'  
 "25-309" - "BRASS DISK"  
 N 2035526.9197517  
 E 6951450.6738425  
 DATUM:  
 Horizontal NAD83  
 Vertical NGVD29

**PLAN**  
Not to Scale



**PROFILE**  
 HOR. Not to Scale  
 VER. 1" = 10'

|                                     |  |  |  |   |  |   |  |                   |  |                                     |  |              |  |
|-------------------------------------|--|--|--|---|--|---|--|-------------------|--|-------------------------------------|--|--------------|--|
| <b>ENGINEERING SERVICES</b>         |  | <b>GEOTECHNICAL SERVICES</b>               |  | <b>STATE OF CALIFORNIA</b>              |  | <b>DIVISION OF ENGINEERING SERVICES</b> |  | <b>BRIDGE NO.</b> |  | <b>CAMINO SAND STORAGE FACILITY</b> |  | <b>SHEET</b> |  |
| FUNCTIONAL SUPERVISOR               |  | DRAWN BY: I.G-Remmen                       |  | DEPARTMENT OF TRANSPORTATION            |  | STRUCTURE DESIGN                        |  | 19M5737           |  | <b>SAND STORAGE BUILDING</b>        |  | <b>ST1-8</b> |  |
| NAME: R. Bibbens                    |  | CHECKED BY: L. Paredes-Mejia               |  | FIELD INVESTIGATION BY: H. Akbarzadegan |  | <b>DESIGN BRANCH</b>                    |  | POST MILES        |  | <b>LOG OF TEST BORINGS 1</b>        |  | OF           |  |
| 065 CIVIL LOG OF TEST BORINGS SHEET |  | ORIGINAL SCALE IN INCHES FOR REDUCED PLANS |  | 0 1 2 3                                 |  | CU 03<br>EA 3E4601                      |  | R28.1             |  | REVISION DATES                      |  | SHEET        |  |
|                                     |  |  |  |   |  |   |  |                   |  | 07-15-09 07-20-09 07-22-09          |  |              |  |

USERNAME => hrmkgs DATE PLOTTED => 16-NOV-2009 TIME PLOTTED => 14:27

|      |        |       |                          |          |              |
|------|--------|-------|--------------------------|----------|--------------|
| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No | TOTAL SHEETS |
| 03   | ED     | 50    | R28.1                    | 43       | 52           |

*Douglas S. Brittsan* 7-28-09  
 REGISTERED CIVIL ENGINEER  
 11-16-09  
 PLANS APPROVAL DATE  
 No. C48854  
 Exp. 9-30-10  
 CIVIL  
 STATE OF CALIFORNIA  
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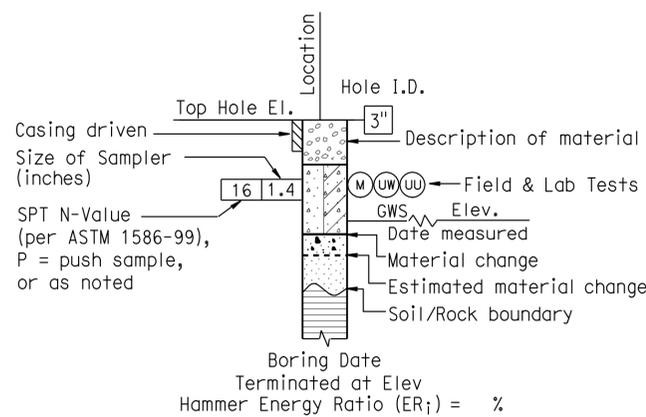
| CEMENTATION |   |
|-------------|---|
| Description | Criteria  |
| Weak        | Crumbles or breaks with handling or little finger pressure. |
| Moderate    | Crumbles or breaks with considerable finger pressure.       |
| Strong      | Will not crumble or break with finger pressure.             |

| CONSISTENCY OF COHESIVE SOILS |                                       |                                       |                           |   |
|-------------------------------|---------------------------------------|---------------------------------------|---------------------------|---|
| Description                   | Unconfined Compressive Strength (tsf) | Pocket Penetrometer Measurement (tsf) | Torvane Measurement (tsf) | Field Approximation   |
| Very Soft                     | < 0.25                                | < 0.25                                | < 0.12                    | Easily penetrated several inches by fist                        |
| Soft                          | 0.25 to 0.50                          | 0.25 to 0.50                          | 0.12 to 0.25              | Easily penetrated several inches by thumb                       |
| Medium Stiff                  | 0.50 to 1.0                           | 0.50 to 1.0                           | 0.25 to 0.50              | Penetrated several inches by thumb with moderate effort         |
| Stiff                         | 1 to 2                                | 1 to 2                                | 0.50 to 1.0               | Readily indented by thumb but penetrated only with great effort |
| Very Stiff                    | 2 to 4                                | 2 to 4                                | 1.0 to 2.0                | Readily indented by thumbnail                                   |
| Hard                          | > 4.0                                 | > 4.0                                 | > 2.0                     | Indented by thumbnail with difficulty                           |

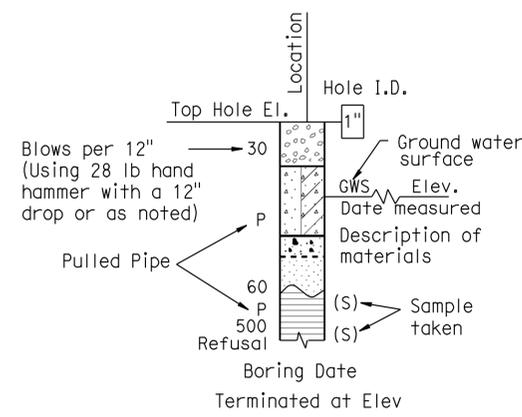
| BOREHOLE IDENTIFICATION |           |  |
|-------------------------|-----------|--|
| Symbol                  | Hole Type | Description                            |
|                         | A         | Auger Boring                           |
|                         | R         | Rotary drilled boring                  |
|                         | P         | Rotary percussion boring (air)         |
|                         | R         | Rotary drilled diamond core            |
|                         | HD        | Hand driven (1-inch soil tube)         |
|                         | HA        | Hand Auger                             |
|                         | D         | Dynamic Cone Penetration Boring        |
|                         | CPT       | Cone Penetration Test (ASTM D 5778-95) |
|                         | O         | Other                                  |

Note: Size in inches.

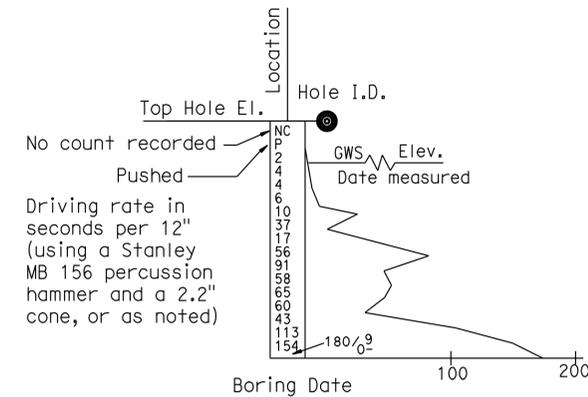
| PLASTICITY OF FINE-GRAINED SOILS |  |
|----------------------------------|--|
| Description                      | Criteria   |
| Nonplastic                       | A 1/8-inch thread cannot be rolled at any water content.   |
| Low                              | The thread can barely be rolled and the lump cannot be formed when drier than the plastic limit.   |
| Medium                           | The thread is easy to roll and not much time is required to reach the plastic limit. The thread cannot be rerolled after reaching the plastic limit. The lump crumbles when drier than the plastic limit.                          |
| High                             | It takes considerable time rolling and kneading to reach the plastic limit. The thread can be rerolled several times after reaching the plastic limit. The lump can be formed without crumbling when drier than the plastic limit. |



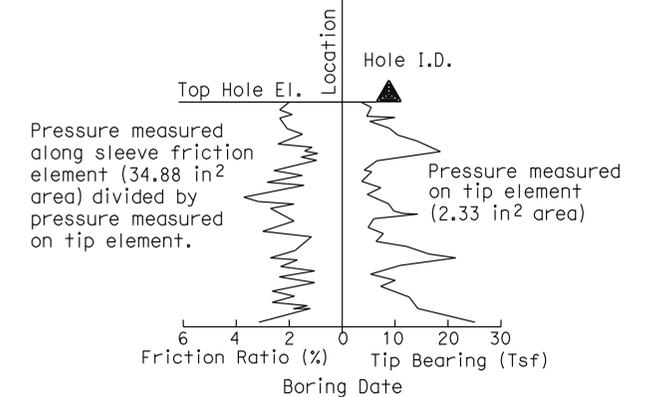
ROTARY BORING



HAND BORING



DYNAMIC CONE PENETRATION BORING



CONE PENETRATION TEST (CPT) SOUNDING

|                      |                                  |   |   |                       |  |                |
|----------------------|----------------------------------|---|---|-----------------------|--|----------------|
| ENGINEERING SERVICES | GEOTECHNICAL SERVICES            | STATE OF CALIFORNIA<br>DEPARTMENT OF TRANSPORTATION | DIVISION OF ENGINEERING SERVICES<br>STRUCTURE DESIGN<br>DESIGN BRANCH | BRIDGE NO.<br>19M5737 | CAMINO SAND STORAGE FACILITY<br>SAND STORAGE BUILDING<br>LOG OF TEST BORINGS 2 | SHEET<br>ST1-9 |
|                      | PREPARED BY:<br>I.G-Remmen, 7/09 |   |   | POST MILE<br>R28.1    |  |                |

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS  
 0 1 2 3  
 FILE => sf\_Log\_02\_of\_04.dgn

USERNAME => fhmikes DATE PLOTTED => 16-NOV-2009 TIME PLOTTED => 14:27

|      |        |       |                          |          |              |
|------|--------|-------|--------------------------|----------|--------------|
| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No | TOTAL SHEETS |
| 03   | ED     | 50    | R28.1                    | 44       | 52           |

*Douglas S. Brittsan* 7-28-09  
 REGISTERED CIVIL ENGINEER  
 11-16-09  
 PLANS APPROVAL DATE  
 No. C48854  
 Exp. 9-30-10  
 CIVIL  
 STATE OF CALIFORNIA  
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| GROUP SYMBOLS AND NAMES |             |  |             |                |   |
|-------------------------|-------------|--|-------------|----------------|---|
| Graphic/Symbol          | Group Names | Graphic/Symbol   | Group Names | Graphic/Symbol | Group Names                             |
|                         | GW          | Well-graded GRAVEL   |             | CL             | Lean CLAY                               |
|                         |             | Well-graded GRAVEL with SAND                                       |             |                | Lean CLAY with SAND                     |
|                         | GP          | Poorly graded GRAVEL   |             | CL-ML          | Lean CLAY with GRAVEL                   |
|                         |             | Poorly graded GRAVEL with SAND                                     |             |                | SANDY lean CLAY                         |
|                         | GW-GM       | Well-graded GRAVEL with SILT                                       |             | ML             | SANDY lean CLAY with GRAVEL             |
|                         |             | Well-graded GRAVEL with SILT and SAND                              |             |                | GRAVELLY lean CLAY                      |
|                         | GW-GC       | Well-graded GRAVEL with CLAY (or SILTY CLAY)                       |             | OL             | GRAVELLY lean CLAY with SAND            |
|                         |             | Well-graded GRAVEL with CLAY and SAND (or SILTY CLAY and SAND)     |             |                | SILTY CLAY                              |
|                         | GP-GM       | Poorly graded GRAVEL with SILT                                     |             | OH             | SANDY SILTY CLAY with GRAVEL            |
|                         |             | Poorly graded GRAVEL with SILT and SAND                            |             |                | GRAVELLY SILTY CLAY                     |
|                         | GP-GC       | Poorly graded GRAVEL with CLAY (or SILTY CLAY)                     |             | OL/OH          | GRAVELLY SILTY CLAY with SAND           |
|                         |             | Poorly graded GRAVEL with CLAY and SAND (or SILTY CLAY and SAND)   |             |                | ORGANIC lean CLAY                       |
|                         | GM          | SILTY GRAVEL   |             | OH             | ORGANIC lean CLAY with SAND             |
|                         |             | SILTY GRAVEL with SAND   |             |                | ORGANIC lean CLAY with GRAVEL           |
|                         | GC          | CLAYEY GRAVEL  |             | OH             | SANDY ORGANIC lean CLAY                 |
|                         |             | CLAYEY GRAVEL with SAND  |             |                | SANDY ORGANIC lean CLAY with GRAVEL     |
|                         | GC-GM       | SILTY, CLAYEY GRAVEL   |             | OH             | GRAVELLY ORGANIC lean CLAY              |
|                         |             | SILTY, CLAYEY GRAVEL with SAND                                     |             |                | GRAVELLY ORGANIC lean CLAY with SAND    |
|                         | SW          | Well-graded SAND   |             | CH             | Fat CLAY                                |
|                         |             | Well-graded SAND with GRAVEL                                       |             |                | Fat CLAY with SAND                      |
|                         | SP          | Poorly graded SAND   |             | MH             | Fat CLAY with GRAVEL                    |
|                         |             | Poorly graded SAND with GRAVEL                                     |             |                | SANDY fat CLAY                          |
|                         | SW-SM       | Well-graded SAND with SILT   |             | MH             | SANDY fat CLAY with GRAVEL              |
|                         |             | Well-graded SAND with SILT and GRAVEL                              |             |                | GRAVELLY fat CLAY                       |
|                         | SW-SC       | Well-graded SAND with CLAY (or SILTY CLAY)                         |             | OH             | GRAVELLY fat CLAY with SAND             |
|                         |             | Well-graded SAND with CLAY and GRAVEL (or SILTY CLAY and GRAVEL)   |             |                | Elastic SILT                            |
|                         | SP-SM       | Poorly graded SAND with SILT                                       |             | OH             | Elastic SILT with SAND                  |
|                         |             | Poorly graded SAND with SILT and GRAVEL                            |             |                | Elastic SILT with GRAVEL                |
|                         | SP-SC       | Poorly graded SAND with CLAY (or SILTY CLAY)                       |             | OH             | SANDY elastic SILT                      |
|                         |             | Poorly graded SAND with CLAY and GRAVEL (or SILTY CLAY and GRAVEL) |             |                | SANDY elastic SILT with GRAVEL          |
|                         | SM          | SILTY SAND   |             | OH             | GRAVELLY elastic SILT                   |
|                         |             | SILTY SAND with GRAVEL   |             |                | GRAVELLY elastic SILT with SAND         |
|                         | SC          | CLAYEY SAND  |             | OH             | ORGANIC fat CLAY                        |
|                         |             | CLAYEY SAND with GRAVEL  |             |                | ORGANIC fat CLAY with SAND              |
|                         | SC-SM       | SILTY, CLAYEY SAND   |             | OH             | ORGANIC fat CLAY with GRAVEL            |
|                         |             | SILTY, CLAYEY SAND with GRAVEL                                     |             |                | SANDY ORGANIC fat CLAY                  |
|                         | PT          | PEAT   |             | OH             | GRAVELLY ORGANIC fat CLAY               |
|                         |             |  |             |                | GRAVELLY ORGANIC fat CLAY with SAND     |
|                         |             | COBBLES  |             | OH             | ORGANIC elastic SILT                    |
|                         |             | COBBLES and BOULDERS   |             |                | ORGANIC elastic SILT with SAND          |
|                         |             | BOULDERS   |             | OH             | ORGANIC elastic SILT with GRAVEL        |
|                         |             |  |             |                | SANDY ORGANIC elastic SILT              |
|                         |             |  |             | OH             | GRAVELLY ORGANIC elastic SILT           |
|                         |             |  |             |                | GRAVELLY ORGANIC elastic SILT with SAND |
|                         |             |  |             | OH             | ORGANIC SOIL                            |
|                         |             |  |             |                | ORGANIC SOIL with SAND                  |
|                         |             |  |             | OH             | ORGANIC SOIL with GRAVEL                |
|                         |             |  |             |                | SANDY ORGANIC SOIL                      |
|                         |             |  |             | OH             | SANDY ORGANIC SOIL with GRAVEL          |
|                         |             |  |             |                | GRAVELLY ORGANIC SOIL                   |
|                         |             |  |             | OH             | GRAVELLY ORGANIC SOIL with SAND         |
|                         |             |  |             |                |   |

| FIELD AND LABORATORY TESTING |   |
|------------------------------|---|
| (C)                          | Consolidation (ASTM D 2435)                               |
| (CL)                         | Collapse Potential (ASTM D 5333)                          |
| (CP)                         | Compaction Curve (CTM 216)                                |
| (CR)                         | Corrosivity Testing (CTM 643, CTM 422, CTM 417)           |
| (CU)                         | Consolidated Undrained Triaxial (ASTM D 4767)             |
| (DS)                         | Direct Shear (ASTM D 3080)                                |
| (EI)                         | Expansion Index (ASTM D 4829)                             |
| (M)                          | Moisture Content (ASTM D 2216)                            |
| (OC)                         | Organic Content-% (ASTM D 2974)                           |
| (P)                          | Permeability (CTM 220)                                    |
| (PA)                         | Particle Size Analysis (ASTM D 422)                       |
| (PI)                         | Plasticity Index (AASHTO T 90) Liquid Limit (AASHTO T 89) |
| (PL)                         | Point Load Index (ASTM D 5731)                            |
| (PM)                         | Pressure Meter  |
| (PP)                         | Pocket Penetrometer                                       |
| (R)                          | R-Value (CTM 301)   |
| (SE)                         | Sand Equivalent (CTM 217)                                 |
| (SG)                         | Specific Gravity (AASHTO T 100)                           |
| (SL)                         | Shrinkage Limit (ASTM D 427)                              |
| (SW)                         | Swell Potential (ASTM D 4546)                             |
| (TV)                         | Pocket Torvane  |
| (UC)                         | Unconfined Compression-Soil (ASTM D 2166)                 |
|                              | Unconfined Compression-Rock (ASTM D 2938)                 |
| (UU)                         | Unconsolidated Undrained Triaxial (ASTM D 2850)           |
| (UW)                         | Unit Weight (ASTM D 4767)                                 |
| (VS)                         | Vane Shear (AASHTO T 223)                                 |

| APPARENT DENSITY OF COHESIONLESS SOILS |   |
|--|---|
| Description                            | SPT N <sub>60</sub> (Blows / 12 inches) |
| Very loose                             | 0 - 4                                   |
| Loose                                  | 5 - 10                                  |
| Medium Dense                           | 11 - 30                                 |
| Dense                                  | 31 - 50                                 |
| Very Dense                             | > 50                                    |

| MOISTURE    |   |
|-------------|---|
| Description | Criteria  |
| Dry         | Absence of moisture, dusty, dry to the touch          |
| Moist       | Damp but no visible water                             |
| Wet         | Visible free water, usually soil is below water table |

| PERCENT OR PROPORTION OF SOILS |  |
|--------------------------------|--|
| Description                    | Criteria   |
| Trace                          | Particles are present but estimated to be less than 5% |
| Few                            | 5 to 10%   |
| Little                         | 15 to 25%  |
| Some                           | 30 to 45%  |
| Mostly                         | 50 to 100%   |

| PARTICLE SIZE |           |                   |
|---------------|-----------|-------------------|
| Description   | Size      |                   |
| Boulder       | > 12"     |                   |
| Cobble        | 3" to 12" |                   |
| Gravel        | Coarse    | 3/4" to 3"        |
|               | Fine      | No. 4 to 3/4"     |
| Sand          | Coarse    | No. 10 to No. 4   |
|               | Medium    | No. 40 to No. 10  |
|               | Fine      | No. 200 to No. 40 |

|                                  |                       |   |   |                       |  |                 |
|----------------------------------|-----------------------|---|---|-----------------------|--|-----------------|
| ENGINEERING SERVICES             | GEOTECHNICAL SERVICES | STATE OF CALIFORNIA<br>DEPARTMENT OF TRANSPORTATION | DIVISION OF ENGINEERING SERVICES<br>STRUCTURE DESIGN<br>DESIGN BRANCH | BRIDGE NO.<br>19M5737 | CAMINO SAND STORAGE FACILITY<br>SAND STORAGE BUILDING<br>LOG OF TEST BORINGS 3 | SHEET<br>ST1-10 |
|                                  |                       |   |   | POST MILE<br>R28.1    |  |                 |
| PREPARED BY:<br>I.G-Remmen, 7/09 |                       | ORIGINAL SCALE IN INCHES FOR REDUCED PLANS          |   | CU 03<br>EA 3E4601    | DISREGARD PRINTS BEARING EARLIER REVISION DATES                                | REVISION DATES  |

FILE => sf\_Log\_03\_of\_04.dgn

*Douglas S. Brittsan* 7-28-09  
 REGISTERED CIVIL ENGINEER  
 11-16-09  
 PLANS APPROVAL DATE  
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**PERCENT CORE RECOVERY (REC) & ROCK QUALITY DESIGNATION (RQD)**

$$REC = \frac{\sum \text{Length of the recovered core pieces (inches)}}{\text{Total length of core run (inches)}} \times 100\%$$

$$RQD = \frac{\sum \text{Length of intact core pieces} \geq 4''}{\text{Total length of core run (inches)}} \times 100\%$$

**RELATIVE STRENGTH OF INTACT ROCK**

| Term             | Uniaxial Compressive Strength (PSI) |
|------------------|-------------------------------------|
| Extremely Strong | > 30,000                            |
| Very Strong      | 14,500 - 30,000                     |
| Strong           | 7,000 - 14,500                      |
| Medium Strong    | 3,500 - 7,000                       |
| Weak             | 700 - 3,500                         |
| Very Weak        | 150 - 700                           |
| Extremely Weak   | < 150                               |

**BEDDING SPACING**

| Description         | Thickness / Spacing |
|---------------------|---------------------|
| Massive             | Greater than 10 ft  |
| Very thickly bedded | 3 to 10 ft          |
| Thickly bedded      | 1 to 3 ft           |
| Moderately bedded   | 3-5/8" to 1 ft      |
| Thinly bedded       | 1-1/4" to 3-5/8"    |
| Very thinly bedded  | 3/8" to 1-1/4"      |
| Laminated           | Less than 3/8"      |

**LEGEND OF ROCK MATERIALS**

- IGNEOUS ROCK
- SEDIMENTARY ROCK
- METAMORPHIC ROCK

**ROCK HARDNESS**

| Description     | Criteria   |
|-----------------|--|
| Extremely Hard  | Specimen cannot be scratched with a pocket knife or sharp pick; can only be chipped with repeated heavy hammer blows.  |
| Very Hard       | Specimen cannot be scratched with a pocket knife or sharp pick. Breaks with repeated heavy hammer blows.   |
| Hard            | Specimen can be scratched with a pocket knife or sharp pick with difficulty (heavy pressure). Heavy hammer blows required to break specimen.                                   |
| Moderately Hard | Specimen can be scratched with pocket knife or sharp pick with light or moderate pressure. Core breaks with moderate hammer blows.   |
| Moderately Soft | Specimen can be grooved 1/6" deep with a pocket knife or sharp pick with moderate or heavy pressure. Breaks with light hammer blow or heavy manual pressure.                   |
| Soft            | Specimen can be grooved or gouged easily by a pocket knife or sharp pick with light pressure, can be scratched with fingernail. Breaks with light to moderate manual pressure. |
| Very Soft       | Specimen can be readily indented, grooved or gouged with fingernail, or carved with a pocket knife. Breaks with light manual pressure.   |

**WEATHERING DESCRIPTORS FOR INTACT ROCK**

| Description          | Diagnostic features  |   |  |   |   | General Characteristics  |
|----------------------|--|---|--|---|---|--|
|                      | Chemical Weathering-Discoloration and/or oxidation   |   | Mechanical Weathering-Grain boundary conditions (disaggregation) primarily for granitics and some coarse-grained sediments | Texture and Solutioning   |   |  |
|                      | Body of Rock   | Fracture Surfaces   |  | Texture   | Solutioning   |  |
| Fresh                | No discoloration, not oxidized.  | No discoloration or oxidation.                                      | No separation, intact (tight).   | No change.  | No solutioning.                                       | Hammer rings when crystalline rocks are struck.  |
| Slightly Weathered   | Discoloration or oxidation is limited to surface of, or short distance from, fractures; some feldspar crystals are dull.   | Minor to complete discoloration or oxidation of most surfaces.      | No visible separation, intact (tight).   | Preserved.  | Minor leaching of some soluble minerals may be noted. | Hammer rings when crystalline rocks are struck. Body of rock not weakened.   |
| Moderately Weathered | Discoloration or oxidation extends from fractures usually throughout; Fe-Mg minerals are "rusty," feldspar crystals are "cloudy."  | All fracture surfaces are discolored or oxidized.                   | Partial separation of boundaries visible.  | Generally preserved.  | Soluble minerals may be mostly leached.               | Hammer does not ring when rock is struck. Body of rock is slightly weakened.   |
| Intensely Weathered  | Discoloration or oxidation throughout; all feldspars and Fe-Mg minerals are altered to clay to some extent; or chemical alteration produces in-situ disaggregation, see grain boundary conditions. | All fracture surfaces are discolored or oxidized, surfaces friable. | Partial separation, rock is friable; in semiarid conditions granitics are disaggregated.                                   | Texture altered by chemical disintegration (hydration, argillation).  | Leaching of soluble minerals may be complete.         | Dull sound when struck with hammer, usually can be broken with moderate to heavy manual pressure or by light hammer blow without reference to planes of weakness such as incipient or hairline fractures, or veinlets. Rock is significantly weakened. |
| Decomposed           | Discolored or oxidized throughout, but resistant minerals such as quartz may be unaltered; all feldspars and Fe-Mg minerals are completely altered to clay.  |   | Complete separation of grain boundaries (disaggregated).   | Resembles a soil, partial or complete remnant rock structure may be preserved; leaching of soluble minerals usually complete. |   | Can be granulated by hand. Resistant minerals such as quartz may be present as "stringers" or "dikes."   |

Combination descriptors (such as "slightly weathered to fresh") are permissible where equal distribution of both weathering characteristics is present over significant intervals or where characteristics present are "in between" the diagnostic feature. However, combination descriptors should not be used where significant, identifiable zones can be delineated. Only two adjacent descriptors may be combined. "Very intensely weathered" is the combination descriptor for "intensely weathered to decomposed."

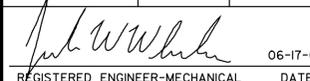
**FRACTURE DENSITY**

| Description              | Observed Fracture Density  |
|--------------------------|--|
| Unfractured              | No fractures.  |
| Very slightly fractured  | Lengths greater than 3 feet.   |
| Slightly fractured       | Lengths from 1 to 3 feet with few lengths less than 1 foot or greater than 3 feet.         |
| Moderately fractured     | Lengths mostly in 4" to 1 foot range with most lengths about 8"                            |
| Intensely fractured      | Lengths average from 1 to 4" with scattered fragmented intervals with lengths less than 4" |
| Very intensely fractured | Mostly chips and fragments with a few scattered short core lengths.                        |

Combination descriptors (such as "Very intensely to intensely fractured") are used where equal distribution of both fracture density characteristics is present over a significant interval or exposure, or where characteristics are "in between" the descriptor definitions. Only two adjacent descriptors may be combined.

| DIST. | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|-------|--------|-------|--------------------------|-----------|--------------|
| 03    | ED     | 50    | R28.1                    | 46        | 52           |

|   |  |   |
|---|--|---|
| <br>REGISTERED ENGINEER-MECHANICAL DATE 06-17-09 |  |  |
| 11-16-09<br>PLANS APPROVAL DATE   |  |   |

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**EQUIPMENT SCHEDULE**

EF Exhaust Fan (wall) - 13,200 cfm @ 0.375 In w.c. SP, 2 hp, 240-V, 1-Phase, 32 sones maximum

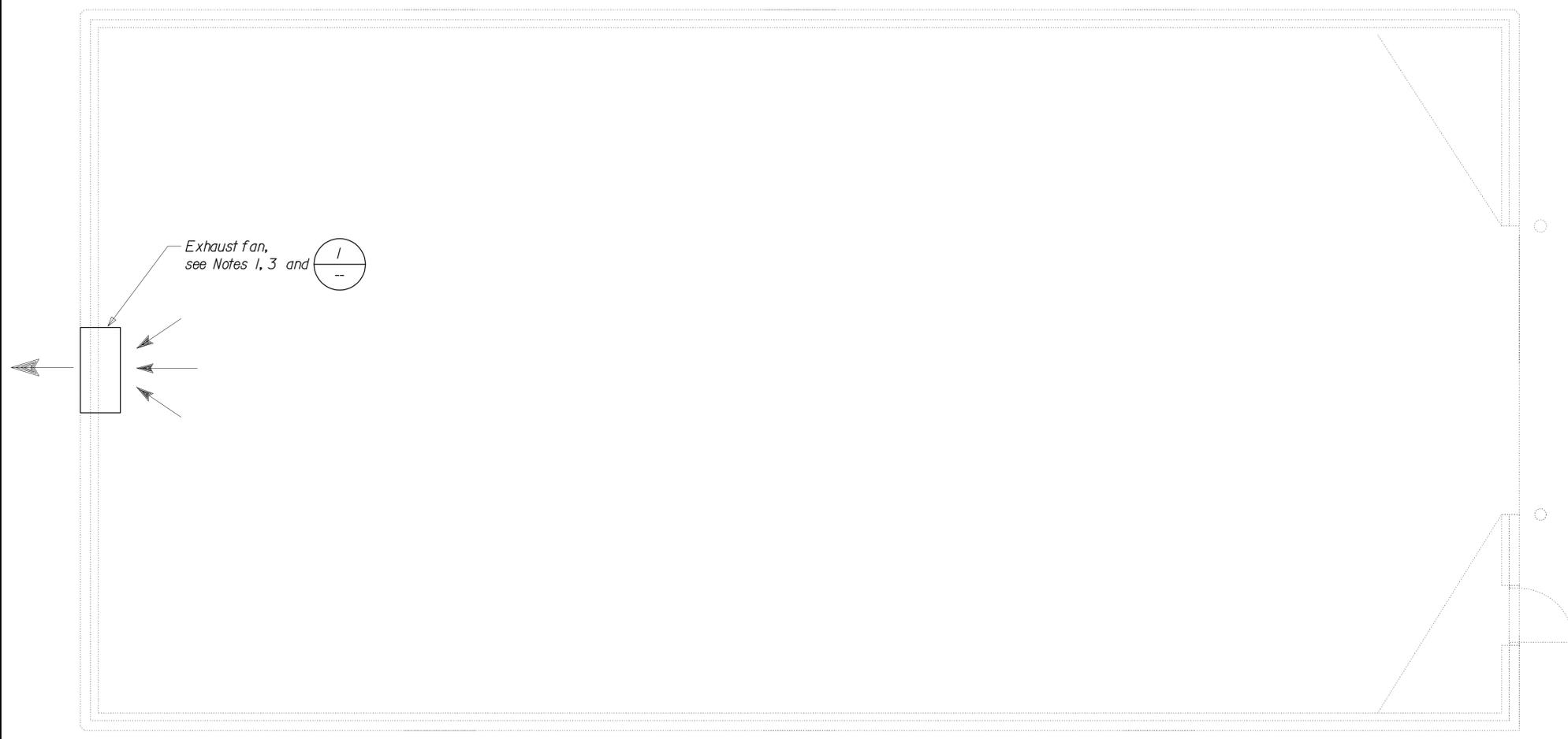
**NOTES:**

1. Exhaust fan, motor, and mounting plates shall be a manufacturer assembled unit.
2. See Electrical sheets for exhaust fan controls.
3. See Architectural sheets for location and elevation of exhaust fan.

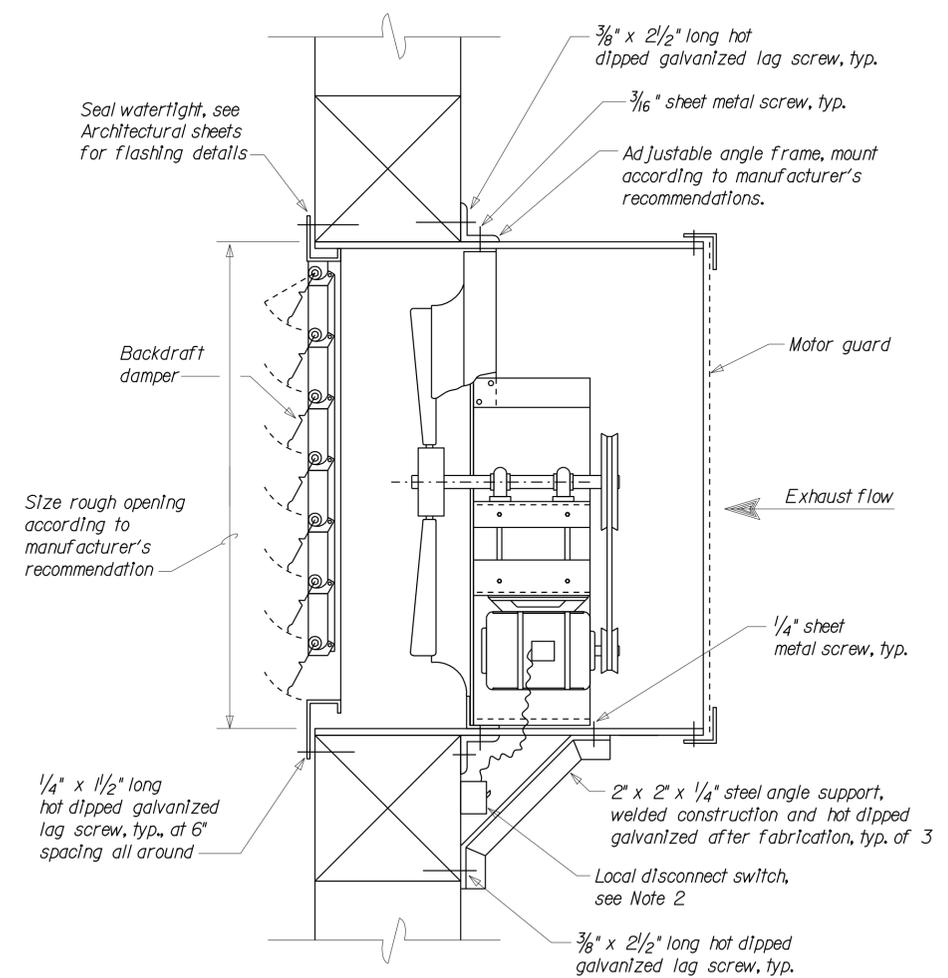
**ABBREVIATIONS:**

cfm Cubic Feet per Minute  
 dia. Diameter  
 hp Horsepower  
 SP Static Pressure  
 typ. Typical  
 V Volts  
 w.c. Water Column

**CALIFORNIA STATE FIRE MARSHAL APPROVED**  
 Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.  
 Reviewed by:   
 BILL ROBERTSON DSFM III  
 Approval date: 09-1-09

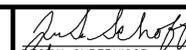


 **FLOOR PLAN**  
 1/4" = 1'-0"



**1 WALL EXHAUST FAN**  
 NO SCALE

THIS DRAWING ACCURATE FOR MECHANICAL WORK ONLY

|  |                   |                      |                       |   |  |   |   |  |       |            |
|--|-------------------|----------------------|-----------------------|---|--|---|---|--|-------|------------|
| DESIGN SUPERVISOR<br><br>DESIGN ENGINEER<br> | DESIGN            | BY Thomas Dietsch    | CHECKED Jack Wheeler  | STATE OF CALIFORNIA<br>DEPARTMENT OF TRANSPORTATION | DIVISION OF STRUCTURES<br>ELECTRICAL-MECHANICAL-WATER<br>AND WASTEWATER DESIGN | BRIDGE NO.                                      | 19M5737   | <b>CAMINO SAND STORAGE FACILITY</b><br><b>SAND STORAGE BUILDING</b><br>SAND STORAGE BUILDING VENTILATION | SHEET | <b>M-1</b> |
|  | DETAILS           | BY Thomas Dietsch    | CHECKED Jack Wheeler  |   |  | POST MILE                                       | R28.1   |  |       |            |
| QUANTITIES   | BY Thomas Dietsch | CHECKED Jack Wheeler | CU 03021<br>EA 3E4601 |   |  | DISREGARD PRINTS BEARING EARLIER REVISION DATES | REVISION DATES (PRELIMINARY STAGE ONLY)<br>12/16/08 05/07/09 06/17/09 |  | SHEET |            |

BKW DOS ELEC(1/93)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



GRAPHIC SYMBOLS FOR ELECTRICAL WIRING AND LAYOUT DIAGRAMS

| SYMBOL              | DESCRIPTION  |
|---------------------|--|
|                     | POLE-TOP ELECTROLIER   |
|                     | POLE-ARM ELECTROLIER   |
| <b>CEILING WALL</b> |  |
|                     | SURFACE FLUORESCENT, METAL HALIDE OR SODIUM VAPOR FIXTURE  |
|                     | RECESSED FLUORESCENT, METAL HALIDE, OR SODIUM VAPOR FIXTURE  |
|                     | EXIT LIGHT   |
|                     | SURFACE OR PENDANT INDIVIDUAL FLUORESCENT FIXTURE  |
|                     | RECESSED INDIVIDUAL FLUORESCENT FIXTURE  |
|                     | SURFACE OR PENDANT CONTINUOUS ROW FLUORESCENT FIXTURES   |
| NOTE:               | A LOWER CASE LETTER NEAR GRAPHIC LIGHTING FIXTURE SYMBOL DENOTES THAT FIXTURE IS CONTROLLED BY A SIMILARLY MARKED SWITCH, AN ALPHANUMERIC SYMBOL NEAR GRAPHIC LIGHTING FIXTURE SYMBOL DENOTES FIXTURE TYPE, (I=INCANDESCENT, F=FLUORESCENT, MH=METAL HALIDE, H=HIGH PRESSURE SODIUM VAPOR), DESIGN TYPE, NUMBER OF LAMPS AND WATTAGE.<br>EXAMPLE: (4) F 2 - 2 x 32<br> |
|                     | BLANK OUTLET   |
|                     | JUNCTION BOX   |
|                     | DROP CORD  |
|                     | SINGLE RECEPTACLE OUTLET   |
|                     | DUPLEX RECEPTACLE OUTLET   |
|                     | DUPLEX RECEPTACLE OUTLET (WITH GFCI)   |
|                     | DUPLEX RECEPTACLE OUTLET, WEATHERPROOF (WITH GFCI)   |
|                     | SINGLE, SPECIAL PURPOSE RECEPTACLE OUTLET  |
|                     | DUPLEX, SPECIAL PURPOSE RECEPTACLE OUTLET  |
|                     | RANGE OUTLET   |
|                     | CLOCK HANGER RECEPTACLE  |
|                     | FAN HANGER RECEPTACLE  |
|                     | FLOOR SINGLE RECEPTACLE OUTLET   |
|                     | FLOOR DUPLEX RECEPTACLE OUTLET   |
|                     | FLOOR SPECIAL PURPOSE OUTLET   |
|                     | FLOOR RADIO OUTLET   |
|                     | FLOOR TELEPHONE OUTLET   |
|                     | MULTI-FLOOR OUTLET, 2 OR MORE GANG   |
|                     | MULTI-OUTLET ASSEMBLY  |
| S                   | SINGLE POLE SWITCH   |
| S <sub>2</sub>      | DOUBLE POLE SWITCH   |
| S <sub>3</sub>      | THREE WAY SWITCH   |
| S <sub>4</sub>      | FOUR WAY SWITCH  |
| S <sub>D</sub>      | AUTOMATIC DOOR   |
| S <sub>K</sub>      | KEY OPERATED SWITCH  |
| S <sub>P</sub>      | SWITCH AND PILOT LIGHT   |
| S <sub>MC</sub>     | MOMENTARY CONTACT SWITCH   |
| S <sub>RC</sub>     | REMOTE CONTROL SWITCH  |
| S <sub>WP</sub>     | WEATHERPROOF SWITCH  |
| S <sub>F</sub>      | FAN SWITCH   |
| S <sub>L</sub>      | LIGHT SWITCH   |
| S <sub>H</sub>      | HEATER SWITCH  |
| S <sub>VS</sub>     | VARIABLE SPEED MOTOR CONTROL SWITCH  |
| S <sub>CHLF</sub>   | TWO SWITCHES, ONE SWITCH FOR LIGHT AND FAN AND TIMER SWITCH FOR HEAT LAMP  |

| SYMBOL                | DESCRIPTION   |
|-----------------------|---|
| S <sub>1</sub>        | OCCUPANCY SENSOR WALL SWITCH, SINGLE LEVEL  |
| S <sub>2</sub>        | OCCUPANCY SENSOR WALL SWITCH, BILEVEL   |
| S <sub>M</sub>        | MOTION SENSOR SWITCH  |
| S <sub>T</sub>        | MANUAL MOTOR STARTING SWITCH, THERMAL OVERLOAD TYPE   |
| S <sub>HP</sub>       | MANUAL MOTOR STARTING SWITCH, WITHOUT OVERLOAD ELEMENT  |
| T <sub>s</sub>        | TIMER SWITCH  |
| S <sub>S</sub>        | SWITCH AND SINGLE RECEPTACLE  |
| S <sub>S</sub>        | SWITCH AND DUPLEX RECEPTACLE  |
| C                     | HAND DRYER NOZZLE   |
| H                     | HAND DRYER  |
| ▲                     | RADIO OUTLET  |
| ☎                     | TELEPHONE OUTLET  |
| ☎                     | SOUND SYSTEM LOUD SPEAKER OUTLET  |
| ■                     | PUSHBUTTON  |
| ■                     | PUSHBUTTON STATION, NC, WITH LOCKING DEVICE FOR OPEN  |
| ■                     | PUSHBUTTON STATION MOTOR CONTROL  |
| ■                     | BUZZER  |
| ■                     | BELL  |
| ■                     | COMBINATION BELL-BUZZER   |
| ⊖                     | THERMOSTAT  |
| PS                    | PRESSURE SWITCH   |
| R                     | CONTROL RELAY   |
| FS                    | FLOW SWITCH   |
| PEC                   | PHOTOELECTRIC CELL  |
| R                     | RADIO OUTLET  |
| TV                    | TELEVISION OUTLET   |
| M                     | MICROPHONE OUTLET   |
| ■                     | FLUSH-MOUNTED PANELBOARD AND CABINET  |
| ■                     | SURFACE-MOUNTED PANELBOARD AND CABINET  |
| ■                     | LIGHTING PANEL  |
| ■                     | POWER PANEL   |
| ■                     | COMBINATION LIGHTING AND POWER  |
| MC                    | MOTOR CONTROLLER  |
| ■                     | DISCONNECT SWITCH   |
| ---                   | CONDUIT CONCEALED IN CEILING OR WALL  |
| ----                  | CONDUIT CONCEALED IN FLOOR  |
| ---                   | CONDUIT EXPOSED   |
| ---/---               | CROSS-LINES INDICATE NUMBER OF #12 AWG CONDUCTORS. LONGER CROSS-LINE INDICATES #12 AWG (G) FOR EQUIPMENT GROUNDING CONDUCTOR. NO CROSS-LINE INDICATES 2#12 WITH #12 (G) UNLESS OTHERWISE NOTED. ALL CONDUIT SHALL BE 1/2" UNLESS OTHERWISE NOTED. |
| A1, A2                | HOMERUN TO PANELBOARD, ARROWS INDICATE NUMBER OF CIRCUITS, LETTER DENOTES PANELBOARD, NUMERAL DENOTES CIRCUIT.  |
| SM                    | SURFACE METAL RACEWAY   |
| (2) 1/2" C, PVC, 2#12 | CONDUIT INFO (PER CONDUIT) CONDUIT TYPE CONDUIT SIZE NUMBER OF CONDUITS (NO NUMBER INDICATES ONE CONDUIT)   |
| MC                    | CONDUIT, RIGID STEEL, UNDERGROUND   |
| PVC                   | CONDUIT, POLYVINYL CHLORIDE, UNDERGROUND  |
| ~                     | CONDUIT, FLEXIBLE   |
| ○                     | CONDUIT, TURN UP  |
| ○                     | CONDUIT, TURN DOWN  |
| ■                     | CONDUIT SEAL, EXPLOSION-PROOF   |
| ■                     | CONDUIT, EXPANSION JOINT  |
| →                     | ADAPTER, ONE TYPE CONDUIT TO ANOTHER  |
| ○                     | POLE  |

| SYMBOL | DESCRIPTION   |
|--------|---|
| OC     | OCCUPANCY SENSOR  |
| H      | HEAT DETECTOR   |
| S      | SMOKE DETECTOR  |
| P      | MANUAL PULL STATION   |
| AV     | AUDIO/VISUAL ALARM DEVICE   |
| G      | GLASS BREAK DISCRIMINATOR   |
| C      | MAGNETIC CONTACT SWITCH-PEDESTRIAN DOOR   |
| C      | MAGNETIC CONTACT SWITCH-VEHICLE DOOR  |
| K      | KEYPAD FOR ALARM SYSTEM   |
| W      | COMBINATION DETECTOR (MICROWAVE/PASSIVE INFRARED)   |
| □      | PULL BOX-LETTER INDICATES INSCRIPTION ON COVER (E-ELECTRICAL, T-TELEPHONE, R-RADIO)                 |
| □(T)   | PULL BOX (TRAFFIC RATED)-LETTER INDICATES INSCRIPTION ON COVER (E-ELECTRICAL, T-TELEPHONE, R-RADIO) |
| CHLF   | COMBINATION HEAT, LIGHT AND FAN UNIT  |
| A      | SECTION/ELEVATION LETTER  |
| EE-2   | SHEET NUMBER  |
| I      | DETAIL NUMBER   |
| EE-2   | SHEET NUMBER  |

REMODEL WORK

| SYMBOL | DESCRIPTION  |
|--------|--|
| ⊖      | EXISTING FLUORESCENT FIXTURE-TO REMAIN                           |
| ⊖      | EXISTING FLUORESCENT FIXTURE-REMOVE                              |
| ⊖      | EXISTING INCANDESCENT FIXTURE-TO REMAIN                          |
| ⊖      | EXISTING INCANDESCENT FIXTURE-REMOVE                             |
| ○      | EXISTING OUTLET-TO REMAIN  |
| ○      | EXISTING RECEPTACLE OUTLET-TO REMAIN                             |
| ○      | EXISTING RECEPTACLE OUTLET-REMOVE                                |
| -E-E-  | EXISTING CONDUIT AND CONDUCTORS-TO REMAIN UNLESS OTHERWISE NOTED |
| -*-*   | EXISTING CONDUIT AND CONDUCTORS-REMOVE                           |
| S      | EXISTING SWITCH-TO REMAIN  |
| X      | EXISTING SWITCH-REMOVE   |
| J      | EXISTING JUNCTION BOX-TO REMAIN                                  |
| X      | EXISTING JUNCTION BOX-REMOVE                                     |

STANDARD NOTES

|     |   |
|-----|---|
| AB  | ABANDON, IF APPLIED TO CONDUIT, REMOVE CONDUCTORS.  |
| BC  | INSTALL PULL BOX IN EXISTING CONDUIT RUN.   |
| CB  | INSTALL CONDUIT INTO EXISTING PULL BOX.   |
| CC  | CONNECT NEW AND EXISTING CONDUIT. REMOVE EXISTING CONDUCTORS AND INSTALL CONDUCTORS AS INDICATED. |
| CF  | CONDUIT TO REMAIN FOR FUTURE USE. REMOVE CONDUCTORS, INSTALL PULL ROPE AND PLUG.                  |
| FA  | REMOVE FOUNDATION ABOVE GRADE AND ABANDON FOUNDATION BELOW GRADE.                                 |
| RL  | RELOCATE EQUIPMENT.   |
| RLD | RELOCATED EQUIPMENT.  |
| SC  | SPLICE NEW TO EXISTING CONDUCTORS.  |

STANDARD PLANS

DATED MAY, 2006

- ES-8
- ES-13A

GRAPHIC SYMBOLS FOR ELECTRICAL DIAGRAMS

| SYMBOL | DESCRIPTION   |
|--------|---|
|        | CIRCUIT BREAKER, SINGLE POLE                                  |
|        | CIRCUIT BREAKER, DOUBLE POLE                                  |
|        | CIRCUIT BREAKER, THREE POLE                                   |
| GFCI   | CIRCUIT BREAKER, WITH GROUND FAULT CIRCUIT INTERRUPTER        |
|        | CONTACT, NORMALLY OPEN  |
|        | CONTACT, NORMALLY CLOSED                                      |
|        | CONTACT, NORMALLY CLOSED, TIME DELAY CLOSING ON DE-ENERGIZING |
|        | CONTACT, NORMALLY OPEN, TIME DELAY CLOSING ON ENERGIZING      |
|        | CONTACT, NORMALLY CLOSED, TIME DELAY OPENING ON ENERGIZING    |
|        | CONTACT, SINGLE POLE DOUBLE-THROW                             |
|        | OPERATING COIL  |
|        | LIQUID LEVEL ACTUATED SWITCH, NORMALLY CLOSED                 |
|        | LIQUID LEVEL ACTUATED SWITCH, NORMALLY OPEN                   |
|        | PRESSURE ACTUATED SWITCH, NORMALLY CLOSED                     |
|        | PRESSURE ACTUATED SWITCH, NORMALLY OPEN                       |
|        | FLOW ACTUATED SWITCH, NORMALLY CLOSED                         |
|        | FLOW ACTUATED SWITCH, NORMALLY OPEN                           |
|        | TEMPERATURE ACTUATED SWITCH, NORMALLY CLOSED                  |
|        | TEMPERATURE ACTUATED SWITCH, NORMALLY OPEN                    |
|        | LIMIT SWITCH, NORMALLY CLOSED                                 |
|        | LIMIT SWITCH, NORMALLY OPEN                                   |
|        | PUSHBUTTON SWITCH, NORMALLY CLOSED                            |
|        | PUSHBUTTON SWITCH, NORMALLY OPEN                              |
|        | SWITCH, SINGLE-POLE   |
|        | SWITCH, SINGLE-POLE, DOUBLE-THROW                             |
|        | SWITCH, DOUBLE-POLE   |
|        | SWITCH, DOUBLE-POLE, DOUBLE-THROW                             |
|        | SWITCH, SINGLE-POLE, 3-POSITION                               |
|        | THERMAL OVERLOAD  |
|        | FUSE  |
|        | RESISTOR  |
|        | VARIABLE RESISTOR   |
|        | TRANSFORMER WINDING   |
|        | GROUNDING ELECTRODE   |
|        | ENCLOSURE BOND  |
| A      | PILOT LIGHT (A=AMBER, G=GREEN, R=RED)                         |
| G      | GENERATOR   |
| M      | MOTOR   |
| F      | FAN MOTOR   |

PROJECT NOTES

- SEPARATE GROUNDED (NEUTRAL) CONDUCTOR SHALL BE USED FOR EACH 120-VOLT CIRCUIT.
- HOMERUNS TO PANELBOARDS SHALL BE INSTALLED AS SHOWN ON THE PLANS. HOMERUNS SHALL NOT BE COMBINED.
- A SINGLE INSULATED EQUIPMENT GROUNDING CONDUCTOR (SIZED AS REQUIRED) SHALL BE INSTALLED IN EACH CONDUIT RUN.

| DIST. | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|-------|--------|-------|--------------------------|-----------|--------------|
| 03    | ED     | 50    | R28.1                    | 47        | 52           |

Catalino A. Enrriquez  
REGISTERED ELECTRICAL ENGINEER  
9-2-09 DATE

11-16-09  
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.



ABBREVIATIONS

CALIFORNIA STATE FIRE MARSHAL APPROVED

Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.

Reviewed by: *[Signature]*  
BILL ROBERTSON DSFM III

Approval date: 09-1-09

|      |                                  |
|------|----------------------------------|
| A    | AMPERES                          |
| A/C  | AIR CONDITIONING UNIT            |
| ACS  | AIR COMPRESSOR STARTER           |
| AI   | ANALOG INPUT                     |
| AL   | ALARM LIGHT                      |
| AO   | ANALOG OUTPUT                    |
| AVC  | AIR VOLUME CONTROLLER            |
| BD   | BUILDING DISCONNECT              |
| BRK  | BREAKER                          |
| C    | CONDUIT                          |
| CB   | CIRCUIT BREAKER                  |
| CKT  | CIRCUIT                          |
| CR   | CONTROL RELAY                    |
| CSW  | CURRENT SWITCH                   |
| DI   | DIGITAL INPUT                    |
| DO   | DIGITAL OUTPUT                   |
| DP   | DUPLEX PLUG RECEPTACLE           |
| DS   | DOOR SWITCH                      |
| (E)  | EXISTING                         |
| EF   | EXHAUST FAN                      |
| F    | FUSE                             |
| FL   | FAILURE LIGHT                    |
| FLA  | FLASHER                          |
| FLEX | FLEXIBLE CONDUIT                 |
| FLS  | FLOW SWITCH                      |
| FR   | FAILURE RESET                    |
| FS   | FLOAT SWITCH                     |
| G    | GROUND                           |
| GFCI | GROUND FAULT CIRCUIT INTERRUPTER |
| GRS  | GALVANIZED RIGID STEEL           |
| IR   | INDUCTION RELAY                  |
| JB   | JUNCTION BOX                     |
| L    | LIGHT                            |
| LC   | LIGHTING CONTACTOR               |
| LCP  | LIGHTING CONTROL PANEL           |
| LD   | LIGHT DISCONNECT                 |
| LL   | LIQUID LEVEL RELAY               |
| LLC  | LIQUID LEVEL CONTROLLER          |
| LP   | LIGHT PANEL                      |
| LS   | LIGHT SWITCH                     |
| LT   | LIGHT TRANSFORMER                |
| LTO  | LIGHT TRANSFORMER OVERLOAD       |
| MB   | MAIN BREAKER                     |
| MC   | METALLIC CONDUIT                 |
| MCP  | MOTOR CIRCUIT PROTECTOR          |
| MCC  | MOTOR CONTROL CENTER             |
| MSB  | MAIN SWITCHBOARD                 |
| MT   | EMPTY CONDUIT                    |
| (N)  | NEW                              |
| NC   | NORMALLY CLOSED                  |
| NO   | NORMALLY OPEN                    |
| NSW  | NEUTRAL SWITCHING BREAKER        |
| OL   | OVERLOAD                         |
| P    | POLE                             |
| PB   | PULL BOX                         |
| PB   | PUSHBUTTON                       |
| PFR  | PHASE FAILURE RELAY              |
| PFRD | PHASE FAILURE RELAY DISCONNECT   |
| PEC  | PHOTOELECTRIC CELL               |
| PL   | PILOT LIGHT                      |
| PS   | PRESSURE SWITCH                  |
| PTS  | POWER TRANSFER SWITCH            |
| PVC  | POLYVINYL CHLORIDE               |
| RSC  | RIGID STEEL CONDUIT              |
| RTB  | RADIO TERMINAL BOARD             |
| S    | STARTER COIL                     |
| SD   | SERVICE DISCONNECT               |
| SFR  | SEAL FAILURE RELAY               |
| SL   | SUMP LIGHT                       |
| SPR  | STANDBY POWER RECEPTACLE         |
| SS   | SELECTOR SWITCH                  |
| ST   | STARTER                          |
| SV   | SOLENOID VALVE                   |
| T    | TRANSFORMER                      |
| TB   | TERMINAL BLOCK                   |
| TDR  | TIME DELAY RELAY                 |
| TGLS | TOGGLE SWITCH                    |
| TM   | TIME METER                       |
| TOT  | TOTAL                            |
| TS   | TIMER SWITCH                     |
| TSW  | TEST SWITCH                      |
| TTB  | TELEPHONE TERMINAL BOARD         |
| TYP  | TYPICAL                          |
| UPS  | UNINTERRUPTIBLE POWER SUPPLY     |
| WLS  | WATER LEVEL SWITCH               |
| WP   | WEATHERPROOF                     |

| DESIGN     | BY                 | CHECKED         |
|------------|--------------------|-----------------|
| BY         | C. A. Enrriquez    | Jaswinder Gill  |
| DETAILS    | Ed D. Tapalla 9/04 | C. A. Enrriquez |
| QUANTITIES | C. A. Enrriquez    | Jaswinder Gill  |

| STATE OF CALIFORNIA          | DIVISION OF ENGINEERING SERVICES                  | BRIDGE NO.      |
|------------------------------|---|-----------------|
| DEPARTMENT OF TRANSPORTATION | ELECTRICAL-MECHANICAL-WATER AND WASTEWATER DESIGN | 19M5737         |
|                              |   | POST MILE R28.1 |

| CAMINO SAND STORAGE FACILITY SAND STORAGE BUILDING | LEGEND | SHEET |
|--|--------|-------|
|  |        | EE-0  |
|  |        | OF    |

### CERTIFICATE OF COMPLIANCE (Part 1 of 4) LTG-1-C

|  |   |
|--|---|
| PROJECT NAME<br><b>CAMINO SAND STORAGE FACILITY-SAND STORAGE BUILDING</b>  | DATE<br><b>09/02/2009</b>                 |
| PROJECT ADDRESS<br><b>28. 1 MILES EAST OF EL DORADO COUNTY ON ROUTE 50</b> | Building Permit #                         |
| PRINCIPAL DESIGNER-LIGHTING<br><b>CATALINO A. ENRIQUEZ</b>                 |   |
| TELEPHONE<br><b>(916)227-8833</b>  | Checked by/Date<br>Enforcement Agency Use |
| DOCUMENTATION AUTHOR<br><b>CATALINO A. ENRIQUEZ</b>                        |   |
| TELEPHONE<br><b>(916)227-8833</b>  |   |

| GENERAL INFORMATION                         |  |   |  |
|---|--|---|--|
| DATE OF PLANS                               | <b>09/02/09</b>  | BUILDING CONDITIONED FLOOR AREA                 | <b>0</b>                                   |
| CLIMATE ZONE                                | <b>12</b>  |   |  |
| BUILDING TYPE                               | <input checked="" type="checkbox"/> NONRESIDENTIAL       | <input type="checkbox"/> HIGH RISE RESIDENTIAL  | <input type="checkbox"/> HOTEL/MOTEL GUEST |
| <input type="checkbox"/> CONDITIONED SPACES | <input checked="" type="checkbox"/> UNCONDITIONED SPACES | <input type="checkbox"/> INDOOR / OUTDOOR SIGNS |  |
| PHASE OF CONSTRUCTION                       | <input checked="" type="checkbox"/> NEW                  | <input type="checkbox"/> ADDITION               | <input type="checkbox"/> ALTERATION        |

METHOD OF COMPLIANCE

PERFORMANCE  COMPLETE BUILDING  AREA CATEGORY  TAILORED  COMMON LIGHTING

STATEMENT OF COMPLIANCE

This Certificate of Compliance lists the building features and performance specifications needed to comply with Title 24, Parts 1 and 6 of the California Code of Regulations. This certificate applies only to building lighting requirements.

The documentation preparer hereby certifies that the documentation is accurate and complete.

|   |  |                           |
|---|--|---------------------------|
| DOCUMENTATION AUTHOR<br><b>CATALINO A. ENRIQUEZ</b> | SIGNATURE<br><i>Catalino A. Enriquez</i> | DATE<br><b>09/02/2009</b> |
|---|--|---------------------------|

The Principal Lighting Designer hereby certifies that the proposed building design represented in this set of construction documents is consistent with the other compliance forms and worksheets, with the specifications, and with any other calculations submitted with this permit application. The proposed building has been designed to meet lighting requirements contained in the applicable parts of Sections 110, 119, 130-132, 146, 148, & 149 of Title 24, Part 6.

- The plans & specifications meet the requirements of Part 6 (Sections 10-103a).  The installation certificates meet the requirements of Part 6 (10-103a 3).
- The operation & maintenance information meets the requirements of Part 6 (10-103c). Please check one: (These sections of the Business and Professions Code are printed in full in the Nonresidential Manual.)
- I hereby affirm that I am eligible under the provisions of Division 3 of the Business and Professions Code to sign this document as the person responsible for its preparation; and that I am licensed in the State of California as a civil engineer or electrical engineer, or I am a licensed architect.
- I affirm that I am eligible under the provisions of Division 3 of the Business and Professions Code by section 5537.2 or 6737.3 to sign this document as the person responsible for its preparation; and that I am a licensed contractor performing this work.
- I affirm that I am eligible under Division 3 of the Business and Professions Code to sign this document because it pertains to a structure or type of work described as exempt pursuant to Business Code Sections 5537, 5538 and 6737.1.

|   |  |                           |                        |
|---|--|---------------------------|------------------------|
| PRINCIPAL LIGHTING DESIGNER-NAME<br><b>CATALINO A. ENRIQUEZ</b> | SIGNATURE<br><i>Catalino A. Enriquez</i> | DATE<br><b>09/02/2009</b> | LIC.#<br><b>E16944</b> |
|---|--|---------------------------|------------------------|

LIGHTING MANDATORY MEASURES

Indicate location on plans of Note Block for Mandatory Measures

| LIGHTING COMPLIANCE FORMS & WORKSHEETS (Check box if worksheet is included) |  |
|---|--|
| <input checked="" type="checkbox"/> LTG-1-C, Parts 1 of 4 and 2 of 4        | Certificate of Compliance. Part 1 of 4 and 2 of 4 are required for all submittals.                 |
| <input type="checkbox"/> LTG-1-C, Part 3 of 4                               | Certificate of Compliance. Part 3 of 4 is required only if Control Credits are claimed.            |
| <input type="checkbox"/> LTG-1-C, Part 4 of 4                               | Certificate of Compliance. Part 4 of 4 submittal is required when lighting controls are installed. |
| <input type="checkbox"/> LTG-2-C  | Indoor Lighting Schedule   |
| <input type="checkbox"/> LTG-3-C  | Portable Lighting Worksheet  |
| <input type="checkbox"/> LTG-4-C  | Lighting Controls Credit Worksheet   |
| <input type="checkbox"/> LTG-5-C  | Indoor Lighting Power Allowance  |
| <input type="checkbox"/> LTG-6-C  | Tailored Method Worksheet  |
| <input type="checkbox"/> LTG-7-C  | Room Cavity Ratio Worksheet  |
| <input type="checkbox"/> LTG-8-C  | Common Lighting Systems Method Worksheet   |
| <input type="checkbox"/> LTG-9-C  | Line Voltage Track Lighting Worksheet  |
| <input type="checkbox"/> OLTG-4-C   | Signs (See OLTG-4-C Sign Worksheet in Chapter 6, Outdoor Lighting and Signs Chapter)               |

2005 Nonresidential Compliance Forms January 2006

### CERTIFICATE OF COMPLIANCE (Part 2 of 4) LTG-1-C

|   |                           |
|---|---------------------------|
| PROJECT NAME<br><b>CAMINO SAND STORAGE FACILITY-SAND STORAGE BUILDING</b>       | DATE<br><b>09/02/2009</b> |
| <b>INSTALLED INDOOR LIGHTING POWER FOR CONDITIONED AND UNCONDITIONED SPACES</b> |                           |

|  | INSTALLED WATTS |
|--|-----------------|
| INSTALLED LIGHTING, CONDITIONED SPACES (From LTG-2-C)        |                 |
| PORTABLE LIGHTING (From LTG-3-C)                             | +               |
| LIGHTING CONTROL CREDIT, CONDITIONED SPACES (From LTG-4-C)   | -               |
| CONDITIONED SPACE ADJUSTED INSTALLED LIGHTING POWER          | =               |
| INSTALLED LIGHTING, UNCONDITIONED SPACES (From LTG-2-C)      | <b>2025</b>     |
| LIGHTING CONTROL CREDIT, UNCONDITIONED SPACES (From LTG-4-C) | - 0             |
| UNCONDITIONED SPACE ADJUSTED INSTALLED LIGHTING POWER        | = <b>2025</b>   |

ALLOWED INDOOR LIGHTING POWER FOR CONDITIONED SPACES

COMPLETE BUILDING METHOD (From LTG-5-C)

AREA CATEGORY METHOD (From LTG-5-C)

TAILORED METHOD (From LTG-5-C)

|   | ALLOWED WATTS |
|---|---------------|
| ALLOWED INDOOR LIGHTING POWER FOR UNCONDITIONED SPACES (From LTG-5-C) | <b>2240</b>   |

ALTERNATE COMPLIANCE

- PERFORMANCE METHOD
  - COMMON LIGHTING SYSTEM (From LTG-8-C)
- ALLOWED INDOOR LIGHTING POWER FOR UNCONDITIONED SPACES (From LTG-5-C)  Watts

MANDATORY LIGHTING MEASURES FOR INDOOR LIGHTING AND DAYLIT AREAS

MANDATORY INDOOR AND DAYLIGHTING AUTOMATIC CONTROLS

| CONTROL LOCATION (Room #, Area #, or Description) | CONTROL IDENTIFICATION | CONTROL TYPE (Auto Time Switch, Dimming, Photosensor, etc.) | SPACE CONTROLLED Lists the location of controlled lights | If Control is for Daylighting | NOTE TO FIELD |
|---|------------------------|---|--|-------------------------------|---------------|
| Sand Storage Building                             | T <sub>S</sub>         | Time switch   | Sand Storage Area  |                               |               |
|   |                        |   |  |                               |               |
|   |                        |   |  |                               |               |
|   |                        |   |  |                               |               |
|   |                        |   |  |                               |               |
|   |                        |   |  |                               |               |
|   |                        |   |  |                               |               |
|   |                        |   |  |                               |               |
|   |                        |   |  |                               |               |

2005 Nonresidential Compliance Forms January 2006

| DIST. | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|-------|--------|-------|--------------------------|-----------|--------------|
| 03    | ED     | 50    | R28.1                    | 48        | 52           |

*Catalino A. Enriquez*  
REGISTERED ELECTRICAL ENGINEER  
DATE 9-2-09

11-16-09  
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.

**CALIFORNIA STATE FIRE MARSHAL APPROVED**

Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.

Reviewed by: *Bill Robertson*  
BILL ROBERTSON DSFM III  
Approval date: 09-1-09

# CERTIFICATE OF COMPLIANCE (Part 1 of 2) OLTG-1-C

|   |                                    |   |
|---|------------------------------------|---|
| PROJECT NAME<br><b>CAMINO SAND STORAGE FACILITY-SAND STORAGE BUILDING</b> |                                    | DATE<br><b>09/02/2009</b>                 |
| PROJECT ADDRESS<br><b>28.1 MILES EAST OF EL DORADO COUNTY ON ROUTE 50</b> |                                    |   |
| PRINCIPAL DESIGNER-LIGHTING<br><b>CATALINO A. ENRIQUEZ</b>                | TELEPHONE<br><b>(916) 227-8833</b> | Building Permit #                         |
| DOCUMENTATION AUTHOR<br><b>CATALINO A. ENRIQUEZ</b>                       | TELEPHONE<br><b>(916) 227-8833</b> | Checked by/Date<br>Enforcement Agency Use |

|  |  |
|--|--|
| <b>GENERAL INFORMATION</b>   |  |
| DATE OF PLANS<br><b>09/02/09</b>   | OUTDOOR LIGHTING ZONE (✓ One) <input type="checkbox"/> LZ1 <input checked="" type="checkbox"/> LZ2 <input type="checkbox"/> LZ3 <input type="checkbox"/> LZ4 |
| FUNCTION TYPE <input checked="" type="checkbox"/> OUTDOOR LIGHTING <input type="checkbox"/> OUTDOOR SIGNS <input type="checkbox"/> INDOOR SIGNS    |  |
| PHASE OF CONSTRUCTION <input checked="" type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> ADDITIONS <input type="checkbox"/> ALTERATIONS |  |

### STATEMENT OF COMPLIANCE

This Certificate of Compliance lists outdoor lighting system specifications needed to comply with Title 24, Parts 1 and 6 of the California Code of Regulations. This certificate applies only to building lighting requirements.

The documentation preparer hereby certifies that the documentation is accurate and complete.

|   |  |                           |
|---|--|---------------------------|
| DOCUMENTATION AUTHOR<br><b>CATALINO A. ENRIQUEZ</b> | SIGNATURE<br><i>Catalino A. Enriquez</i> | DATE<br><b>09/02/2009</b> |
|---|--|---------------------------|

The Principal Lighting Designer hereby certifies that the proposed outdoor lighting and signs design represented in this set of construction documents is consistent with the other compliance forms and worksheets, with the specifications, and with any other calculations submitted with this permit application. The proposed building has been designed to meet the lighting requirements contained in the applicable parts of Sections 110, 119, 130 through 132, 146, and 149 of Title 24, Part 6.

- I hereby affirm that I am eligible under the provisions of Division 3 of the Business and Professions Code to sign this document as the person responsible for its preparation; and that I am licensed in the State of California as a civil engineer or electrical engineer, or I am a licensed architect.
- I affirm that I am eligible under the provisions of Division 3 of the Business and Professions Code by section 5537.2 or 6737.3 to sign this document as the person responsible for its preparation; and that I am a licensed contractor performing this work.
- I affirm that I am eligible under Division 3 of the Business and Professions Code to sign this document because it pertains to a structure or type of work described as exempt pursuant to Business and Professions Code Sections 5537, 5538 and 6737.1.

(These sections of the Business and Professions Code are printed in full in the Nonresidential Manual.)

|   |  |                           |                        |
|---|--|---------------------------|------------------------|
| PRINCIPAL LIGHTING DESIGNER-NAME<br><b>CATALINO A. ENRIQUEZ</b> | SIGNATURE<br><i>Catalino A. Enriquez</i> | DATE<br><b>09/02/2009</b> | LIC.#<br><b>E16944</b> |
|---|--|---------------------------|------------------------|

### INSTRUCTIONS TO APPLICANT OUTDOOR LIGHTING COMPLIANCE & WORKSHEETS (Check box if worksheet is included)

For detailed instructions on the use of this and all Energy Efficiency Standards compliance forms, please refer to the Nonresidential Manual published by the California Energy Commission.

|                                     |          |   |
|-------------------------------------|----------|---|
| <input checked="" type="checkbox"/> | OLTG-1-C | Certificate of Compliance. Required on plans for all submittals for outdoor lighting. Part 2 of 2 may be incorporated in schedules on the plans.  |
|                                     |          | Either LTG-1-C or OLTG-1-C may be used for signs as follows:<br>1. Use LTG-1-C if the project consists solely of indoor signs.<br>2. Use LTG-1-C if the project consists of indoor lighting, and outdoor or indoor signs, but no other outdoor lighting.<br>3. Use OLTG-1-C if the project consists solely of outdoor signs.<br>4. Use OLTG-1-C if the project consists of outdoor lighting, and indoor or outdoor signs, but no other indoor lighting. |
| <input checked="" type="checkbox"/> | OLTG-2-C | LIGHTING COMPLIANCE SUMMARY. Applicable Parts required for ALL outdoor lighting allowances (Except for Signs).  |
| <input checked="" type="checkbox"/> | OLTG-3-C | AREA CALCULATIONS WORKSHEETS. Applicable parts required for all outdoor area calculations.  |
| <input type="checkbox"/>            | OLTG-4-C | SIGN LIGHTING COMPLIANCE. Required for all internally and externally illuminated signs, for both indoor and outdoor signs.  |

**2005 Nonresidential Compliance Forms**

**January 2006**

#### GENERAL NOTE:

Only forms OLTG-1-C, Parts 1 of 2 and 2 of 2 are shown on this sheet.  
Other checked forms are available upon request.

# CERTIFICATE OF COMPLIANCE (Part 2 of 2) OLTG-1-C

|   |
|---|
| PROJECT NAME<br><b>CAMINO SAND STORAGE FACILITY-SAND STORAGE BUILDING</b> |
|---|

### Lighting Schedules on Plans Show that Outdoor Lighting Meets Allowed Lighting Power

- Lighting power allowances for general site illumination on OLTG-2-C Part 1 of 4
- Not applicable
- Lighting power allowances for local ordinances or for security multipliers on OLTG-2-C Part 2 of 4
- Not applicable
- Lighting power allowances for specific applications, other than vehicle service stations with canopies on OLTG-2-C Part 3 of 4
- Not applicable
- Lighting power allowances for vehicle service station canopies on OLTG-2-C Part 4 of 4
- Not applicable
- Sign lighting compliance on OLTG-4-C
- Not applicable

### Mandatory Measures on Plans Show that Outdoor Lighting Meets Outdoor Lighting Controls and Equipment

Indicate location on plans of Note Block for Mandatory Measure

- Installed lighting power has been determined in accordance with § 130(c)1
- Not applicable
- All permanently installed luminaires with lamps rated over 100 watts either have a lamp efficacy of at least 60 lumens per watt or are controlled by a motion sensor § 132(a)
- Not applicable
- All Luminaires with lamps rated greater than 175 watts in hardscape areas, including parking lots, building entrances, canopies, and all outdoor sales areas meet the Cutoff Requirements of § 132(b)
- Not applicable
- All permanently installed outdoor lighting meets the Control Requirements of § 132(c)1
- Not applicable
- Building facades, parking lots, garages, canopies, and outdoor sales areas meet the Multi-Level Lighting Requirements of § 132(c)2
- Not applicable

### MANDATORY AUTOMATIC CONTROLS

| CONTROL LOCATION      | CONTROL IDENTIFICATION    | CONTROL TYPE<br>Auto Time Switch/<br>Photosensor, etc | AREA CONTROLLED   | NOTE TO FIELD |
|-----------------------|---------------------------|---|-------------------|---------------|
| Sand Storage building | Built-in to light fixture | Photosensor   | Building entrance |               |
|                       |                           |   |                   |               |
|                       |                           |   |                   |               |
|                       |                           |   |                   |               |
|                       |                           |   |                   |               |
|                       |                           |   |                   |               |
|                       |                           |   |                   |               |
|                       |                           |   |                   |               |

**2005 Nonresidential Compliance Forms**

**January 2006**

|       |        |       |                          |           |              |
|-------|--------|-------|--------------------------|-----------|--------------|
| DIST. | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
| 03    | ED     | 50    | R28.1                    | 49        | 52           |

|   |   |
|---|---|
| <i>Catalino A. Enriquez</i><br>REGISTERED ELECTRICAL ENGINEER<br>DATE: 9-2-09 |  |
| 11-16-09<br>PLANS APPROVAL DATE   |   |

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#### CALIFORNIA STATE FIRE MARSHAL APPROVED

Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.

Reviewed by: *Bill Robertson*  
 BILL ROBERTSON DSFM III  
 Approval date: 09-1-09

|               |                           |         |                       |
|---------------|---------------------------|---------|-----------------------|
| DESIGN BY     | <i>C. A. Enriquez</i>     | CHECKED | <i>Jaswinder Gill</i> |
| DETAILS BY    | <i>Ed D. Tapalla 9/09</i> | CHECKED | <i>C. A. Enriquez</i> |
| QUANTITIES BY | <i>C. A. Enriquez</i>     | CHECKED | <i>Jaswinder Gill</i> |

STATE OF  
**CALIFORNIA**  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
ELECTRICAL-MECHANICAL-WATER AND WASTEWATER DESIGN

|            |         |
|------------|---------|
| BRIDGE NO. | 19M5737 |
| POST MILE  | R28.1   |

**CAMINO SAND STORAGE FACILITY SAND STORAGE BUILDING**  
TITLE 24 FORMS-SCHEDULE 2

|       |             |
|-------|-------------|
| SHEET | <b>EE-2</b> |
|-------|-------------|

| DIST. | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|-------|--------|-------|--------------------------|-----------|--------------|
| 03    | ED     | 50    | R28.1                    | 50        | 52           |

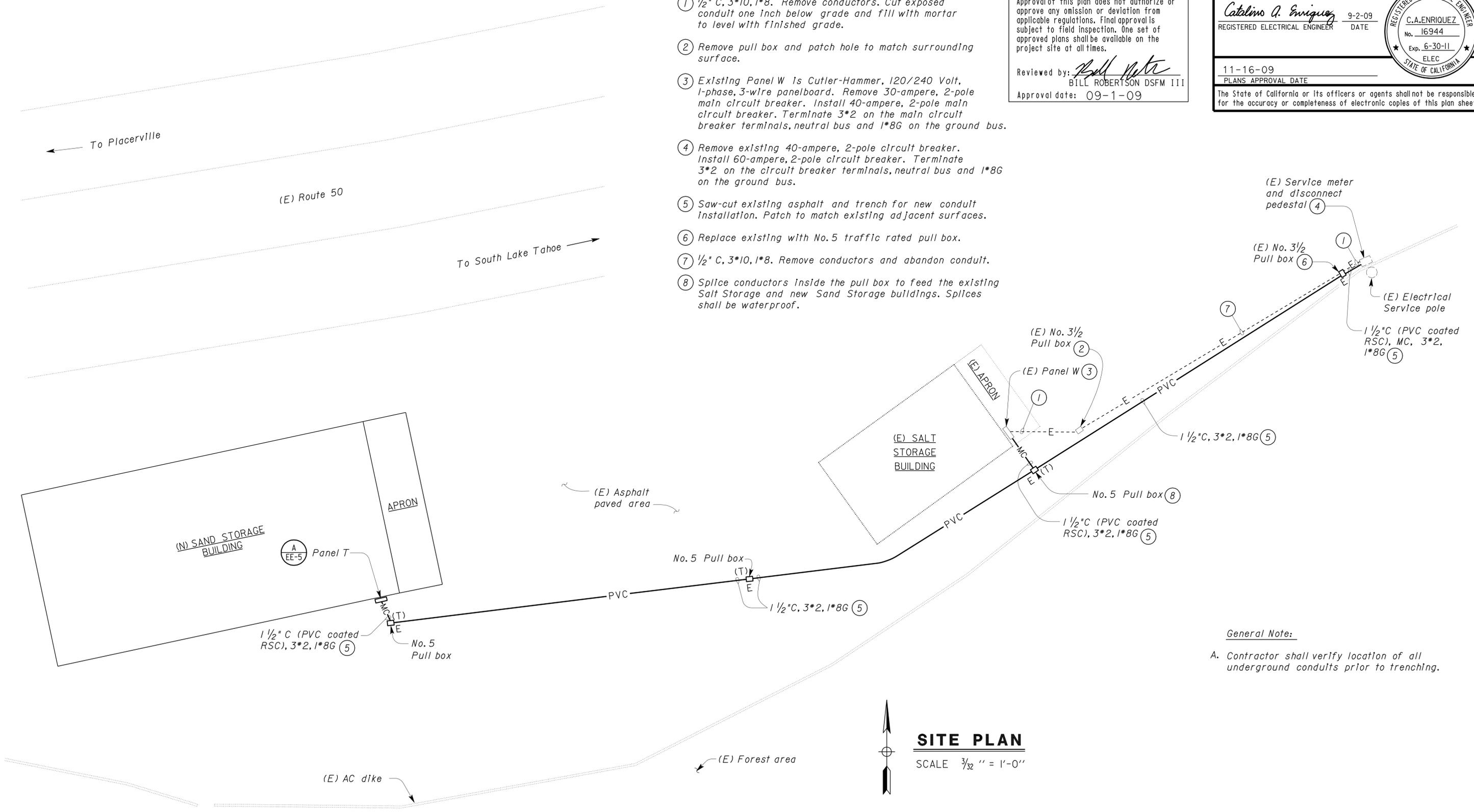
|  |  |                |
|--|--|----------------|
| <i>Catalino A. Enriquez</i><br>REGISTERED ELECTRICAL ENGINEER  |  | 9-2-09<br>DATE |
| 11-16-09<br>PLANS APPROVAL DATE  |  |                |
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Reviewed by: *Bill Robertson*  
 BILL ROBERTSON DSFM III  
 Approval date: 09-1-09

- Notes:
- 1/2" C, 3\*10, 1\*8. Remove conductors. Cut exposed conduit one inch below grade and fill with mortar to level with finished grade.
  - Remove pull box and patch hole to match surrounding surface.
  - Existing Panel W is Cutler-Hammer, 120/240 Volt, 1-phase, 3-wire panelboard. Remove 30-ampere, 2-pole main circuit breaker. Install 40-ampere, 2-pole main circuit breaker. Terminate 3\*2 on the main circuit breaker terminals, neutral bus and 1\*8G on the ground bus.
  - Remove existing 40-ampere, 2-pole circuit breaker. Install 60-ampere, 2-pole circuit breaker. Terminate 3\*2 on the circuit breaker terminals, neutral bus and 1\*8G on the ground bus.
  - Saw-cut existing asphalt and trench for new conduit installation. Patch to match existing adjacent surfaces.
  - Replace existing with No.5 traffic rated pull box.
  - 1/2" C, 3\*10, 1\*8. Remove conductors and abandon conduit.
  - Splice conductors inside the pull box to feed the existing Salt Storage and new Sand Storage buildings. Splices shall be waterproof.



**SITE PLAN**  
 SCALE 3/32" = 1'-0"

General Note:  
 A. Contractor shall verify location of all underground conduits prior to trenching.

|  |  |                             |   |   |   |   |  |                      |
|--|--|-----------------------------|---|---|---|---|--|----------------------|
| DESIGN SUPERVISOR<br><i>Josh Schreff</i> |  | DESIGN BY<br>C. A. Enriquez | CHECKED<br>Jaswinder Gill                             | STATE OF CALIFORNIA<br>DEPARTMENT OF TRANSPORTATION | DIVISION OF ENGINEERING SERVICES<br>ELECTRICAL-MECHANICAL-WATER AND WASTEWATER DESIGN | BRIDGE NO.<br>19M5737   | <b>CAMINO SAND STORAGE FACILITY SAND STORAGE BUILDING</b><br>SITE PLAN | SHEET<br><b>EE-3</b> |
| DESIGN ENGINEER<br><i>Jaswinder Gill</i> |  | DETAILS BY<br>Dalil Zhou    | CHECKED<br>C. A. Enriquez                             |   | POST MILE<br>R28.1  | SHEET OF  |  |                      |
| QUANTITIES BY<br>C. A. Enriquez          |  | CHECKED<br>Jaswinder Gill   | ORIGINAL SCALE IN INCHES FOR REDUCED PLANS<br>0 1 2 3 |   | CU 03021<br>EA 3E4601   | DISREGARD PRINTS BEARING EARLIER REVISION DATES<br>REVISION DATES (PRELIMINARY STAGE ONLY)<br>4/26/02 12/12/02 9/28/04 2/17/09 6/10/09 8/6/09 9/12/09 |  |                      |

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| DIST. | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|-------|--------|-------|--------------------------|-----------|--------------|
| 03    | ED     | 50    | R28.1                    | 51        | 52           |

*Catalino A. Enrriquez*  
REGISTERED ELECTRICAL ENGINEER  
No. 16944  
Exp. 6-30-11  
ELEC  
STATE OF CALIFORNIA

9-2-09  
DATE

11-16-09  
PLANS APPROVAL DATE

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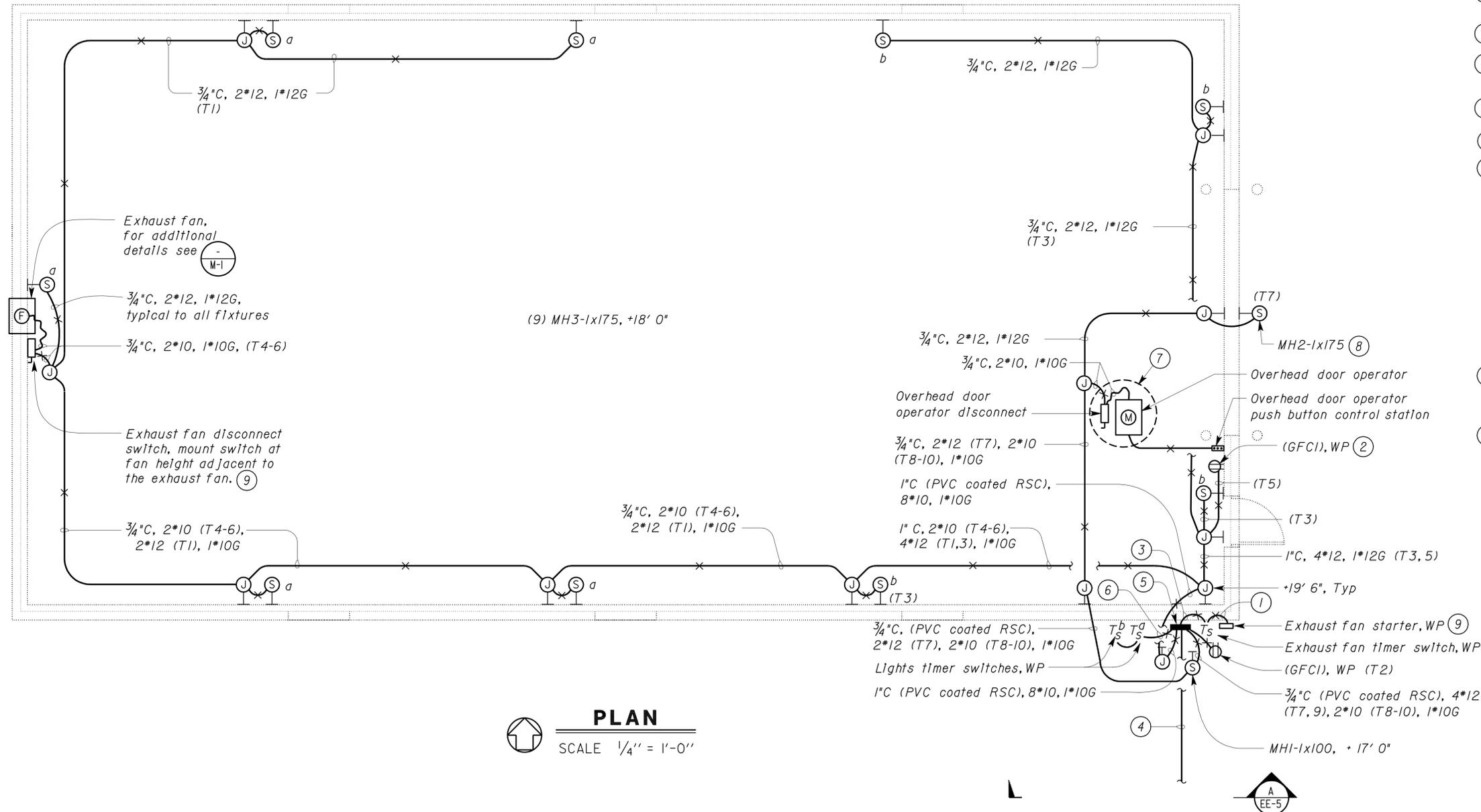
Reviewed by: *Bill Robertson*  
BILL ROBERTSON DSFM III  
Approval date: 09-1-09

General Notes:

- A. All conduits inside Sand Storage Building shall be non-metallic, schedule 80, rigid PVC conduit with equipment grounding conductors unless otherwise noted.
- B. All junction boxes inside Sand Storage Building shall be weatherproof type non-metallic (PVC) boxes.
- C. For exact location of exterior lighting fixtures, see Architectural plans.
- D. Homeruns to panelboards shall be installed as shown on the plans. Homeruns shall not be combined unless approved by the Engineer.
- E. Separate grounded (neutral) conductor shall be used for each 120 V circuit.

Notes:

- ① 3/4" C (PVC coated RSC), 6\*12, 1\*12G.
- ② Mount duplex receptacle 4 feet above finished floor.
- ③ 3/4" C (PVC coated RSC), 5\*12, 1\*12G.
- ④ 1/2" C (PVC coated RSC), 3\*2, 1\*8G to pull box. For continuation, see sheet EE-3.
- ⑤ Panel T, 120/240 Volt, 1-phase, 3-wire.
- ⑥ 1/2" C (PVC coated RSC), 4\*12, 1\*12G.
- ⑦ Location for overhead door operator shown is arbitrary only. Exact location depends upon unit furnished. Install the overhead door operator disconnect adjacent to the overhead operator. Install the following conduits for the overhead door operator system:  
- 1/2" C, Control conductors as required in between the overhead door operator push button control station and the overhead door operator.  
- 1/2" C, Control conductors as required in between the overhead door operator and reversing edge limit switch. Reversing edge limit switch is not shown.
- ⑧ Mount fixture at a height clearing the top of pre-engineered truss bottom chord. See Architectural plan sheets.
- ⑨ For Exhaust Fan Wiring Diagram, see sheet EE-5.



**PLAN**  
SCALE 1/4" = 1'-0"

THIS DRAWING ACCURATE FOR ELECTRICAL WORK ONLY

|  |            |                 |                 |                |   |   |                 |  |   |               |       |
|--|------------|-----------------|-----------------|----------------|---|---|-----------------|--|---|---------------|-------|
| DESIGN                                     | BY         | C. A. Enrriquez | CHECKED         | Jaswinder Gill | STATE OF CALIFORNIA<br>DEPARTMENT OF TRANSPORTATION | DIVISION OF ENGINEERING SERVICES<br>ELECTRICAL-MECHANICAL-WATER AND WASTEWATER DESIGN | BRIDGE NO.      | 19M5737  | CAMINO SAND STORAGE FACILITY<br>SAND STORAGE BUILDING | SHEET<br>EE-4 |       |
|  | DETAILS    | BY              | Dall Zhou       | CHECKED        |   |   | C. A. Enrriquez | POST MILE  |   |               | R28.1 |
|  | QUANTITIES | BY              | C. A. Enrriquez | CHECKED        |   |   | Jaswinder Gill  | POST MILE  |   |               | R28.1 |
| ORIGINAL SCALE IN INCHES FOR REDUCED PLANS |            |                 |                 |                | 0   | 1   | 2               | 3  | DISREGARD PRINTS BEARING EARLIER REVISION DATES       |               |       |
|  |            |                 |                 |                | CU 03021<br>EA 3E4601                               |   |                 | REVISION DATES (PRELIMINARY STAGE ONLY)                  |   |               |       |
| DOES SD Imperial Rev. 1/07                 |            |                 |                 |                |   |   |                 | 3/12/02 12/12/02 9/28/04 9/25/08 5/13/09 8/10/09 9/21/09 |   |               |       |

|       |        |       |                          |           |              |
|-------|--------|-------|--------------------------|-----------|--------------|
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|   |  |                |
|---|--|----------------|
| <b>Catalino A. Enriquez</b><br>REGISTERED ELECTRICAL ENGINEER |  | 9-2-09<br>DATE |
| 11-16-09<br>PLANS APPROVAL DATE                               |  |                |

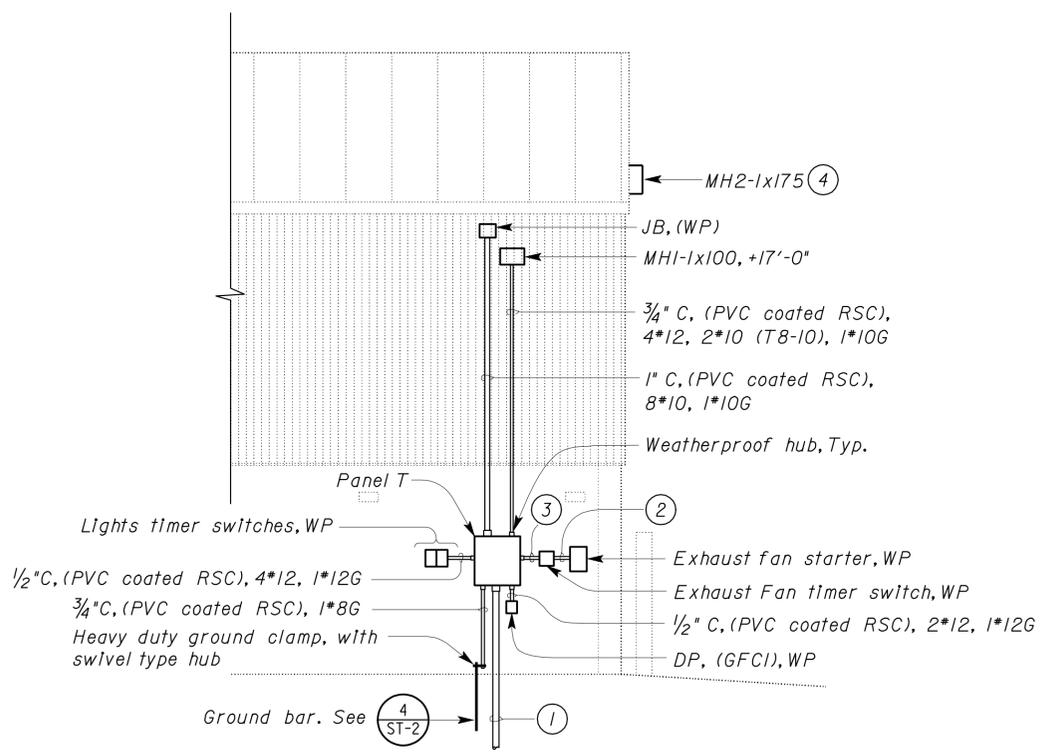
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**CALIFORNIA STATE FIRE MARSHAL APPROVED**

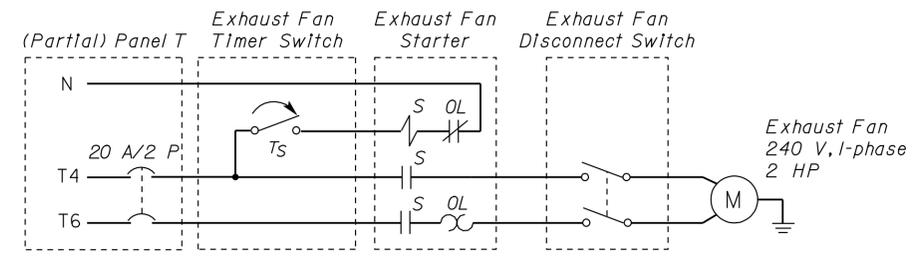
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Reviewed by: *Bill Robertson*  
 BILL ROBERTSON DSFM III  
 Approval date: 09-1-09

- Notes:
- 1 1/2" C. (PVC coated RSC), 3\*2, 1\*8G to pull box. For continuation, see sheet EE-3.
  - 2 3/4" C. (PVC coated RSC), 6\*12, 1\*12G.
  - 3 3/4" C. (PVC coated RSC), 5\*12, 1\*12G.
  - 4 Mount fixture at a height clearing the top of pre-engineer truss bottom chord. See Architectural plan sheets.



**A ELEVATION**  
NO SCALE



**EXHAUST FAN WIRING DIAGRAM**

MAIN: 50 A CB  
 VOLTS: 120/240 V, 1-PHASE, 3-WIRE  
 PANEL T (BOTTOM FEED)  
 FEEDER SIZE: 3\*2, 1\*8G  
 LOCATION: SAND STORAGE BUILDING

| DESCRIPTION                       | AMPERES |   | BRK  | CKT | A |   | B |   | CKT | BRK  | AMPERES |    | DESCRIPTION            |
|-----------------------------------|---------|---|------|-----|---|---|---|---|-----|------|---------|----|------------------------|
|                                   | A       | B |      |     | A | B | A | B |     |      |         |    |                        |
| LIGHTS, INTERIOR (TIMER SWITCH a) | 11      |   | 20/1 | 1   | • |   |   |   | 2   | 20/1 | 2       |    | RECEPTACLE, EXTERIOR   |
| LIGHTS, INTERIOR (TIMER SWITCH b) |         | 8 | 20/1 | 3   |   | • |   |   | 4   | 20/2 |         | 12 | EXHAUST FAN            |
| RECEPTACLE, INTERIOR              | 2       |   | 20/1 | 5   | • |   |   |   | 6   |      | 12      |    |                        |
| LIGHT EXTERIOR (FRONT)            |         | 2 | 20/1 | 7   |   | • |   |   | 8   |      |         | 7  | OVERHEAD DOOR OPERATOR |
| LIGHT EXTERIOR (SIDE)             | 1       |   | 20/1 | 9   | • |   |   |   | 10  | 20/2 | 7       |    |                        |
| SPARE                             |         |   | 20/1 | 11  | • |   |   |   | 12  | 20/1 |         |    | SPARE                  |

|    |    |                         |
|----|----|-------------------------|
| A  | B  | TOTAL AMPERES PER PHASE |
| 35 | 29 |                         |

**PANEL SCHEDULE**

THIS DRAWING ACCURATE FOR ELECTRICAL WORK ONLY

|        |            |                |                    |                |   |   |                |           |   |               |       |
|--------|------------|----------------|--------------------|----------------|---|---|----------------|-----------|---|---------------|-------|
| DESIGN | BY         | C. A. Enriquez | CHECKED            | Jaswinder Gill | STATE OF CALIFORNIA<br>DEPARTMENT OF TRANSPORTATION | DIVISION OF ENGINEERING SERVICES<br>ELECTRICAL-MECHANICAL-WATER AND WASTEWATER DESIGN | BRIDGE NO.     | 19M5737   | CAMINO SAND STORAGE FACILITY<br>SAND STORAGE BUILDING | SHEET<br>EE-5 |       |
|        | DETAILS    | BY             | Ed D. Tapalla 5/09 | CHECKED        |   |   | C. A. Enriquez | POST MILE |   |               | R28.1 |
|        | QUANTITIES | BY             | C. A. Enriquez     | CHECKED        |   |   | Jaswinder Gill | DETAILS   |   |               |       |

|  |   |   |   |   |                       |   |   |          |
|--|---|---|---|---|-----------------------|---|---|----------|
| ORIGINAL SCALE IN INCHES FOR REDUCED PLANS | 0 | 1 | 2 | 3 | CU 03021<br>EA 3E4601 | DISREGARD PRINTS BEARING EARLIER REVISION DATES | REVISION DATES (PRELIMINARY STAGE ONLY)               | SHEET OF |
|  |   |   |   |   |                       |   | 2/8/02 9/28/04 9/25/08 2/17/09 4/21/09 8/10/09 9/2/09 |          |