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STRUCTURE PLANS

19-23 SNEATH TANGENT WALL (Br No. 35-E0036)

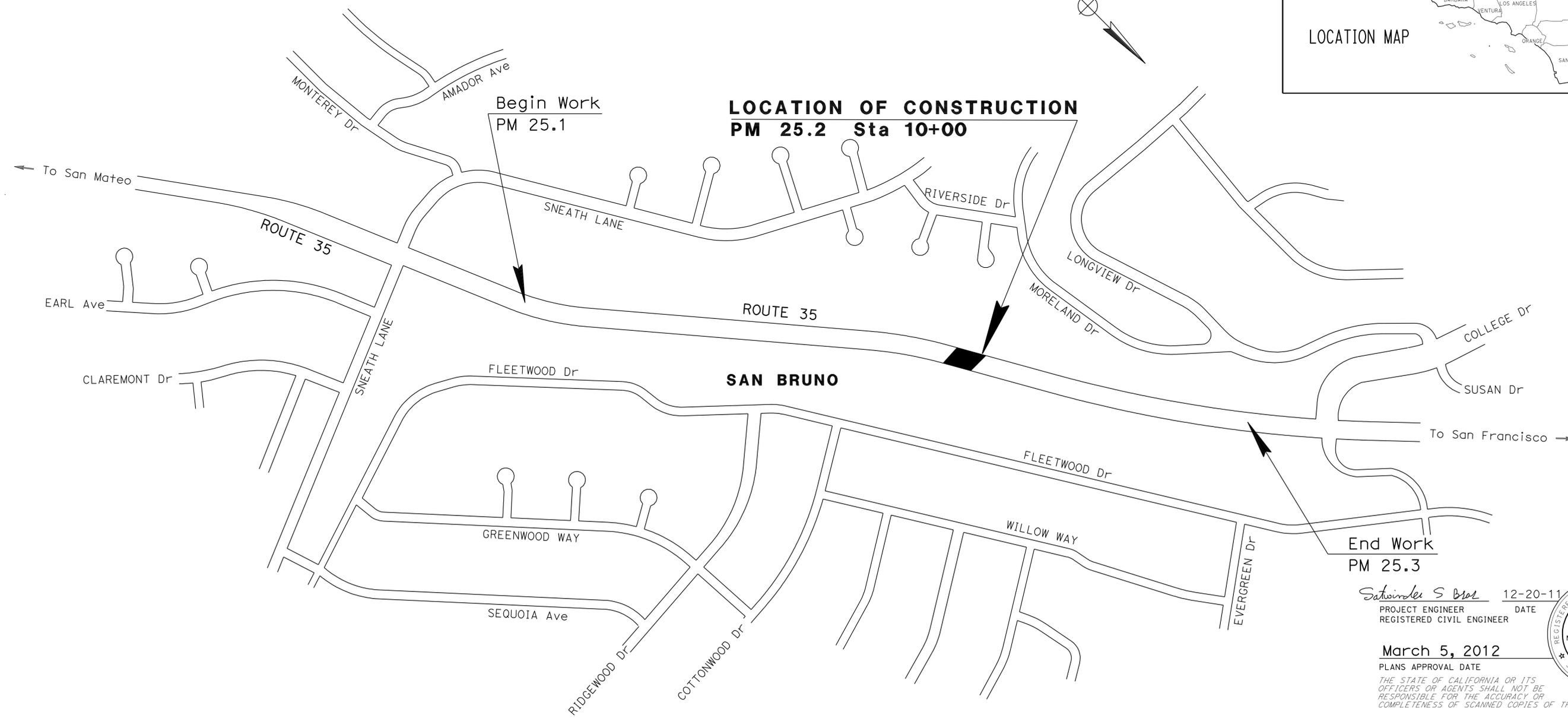
THE STANDARD PLANS LIST APPLICABLE TO THIS CONTRACT IS INCLUDED IN THE NOTICE TO BIDDERS AND SPECIAL PROVISIONS BOOK.

STATE OF CALIFORNIA  
**DEPARTMENT OF TRANSPORTATION**  
**PROJECT PLANS FOR CONSTRUCTION ON**  
**STATE HIGHWAY**  
**IN SAN MATEO COUNTY**  
**IN SAN BRUNO**  
**AT 0.4 MILE NORTH OF SNEATH LANE**

TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	35	25.2	1	23

LOCATION MAP



PROJECT MANAGER  
**AL B LEE**  
 DESIGN ENGINEER  
**GETACHEW ESHETE**

**End Work**  
 PM 25.3

*Satwinder S Brar* 12-20-11  
 PROJECT ENGINEER DATE  
 REGISTERED CIVIL ENGINEER

REGISTERED PROFESSIONAL ENGINEER

SATWINDER S BRAR

No. 78016  
Exp. 9-30-13  
CIVIL

STATE OF CALIFORNIA

March 5, 2012  
 PLANS APPROVAL DATE

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

NO SCALE

DATE PLOTTED => 09-MAR-2012 TIME PLOTTED => 14:07

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
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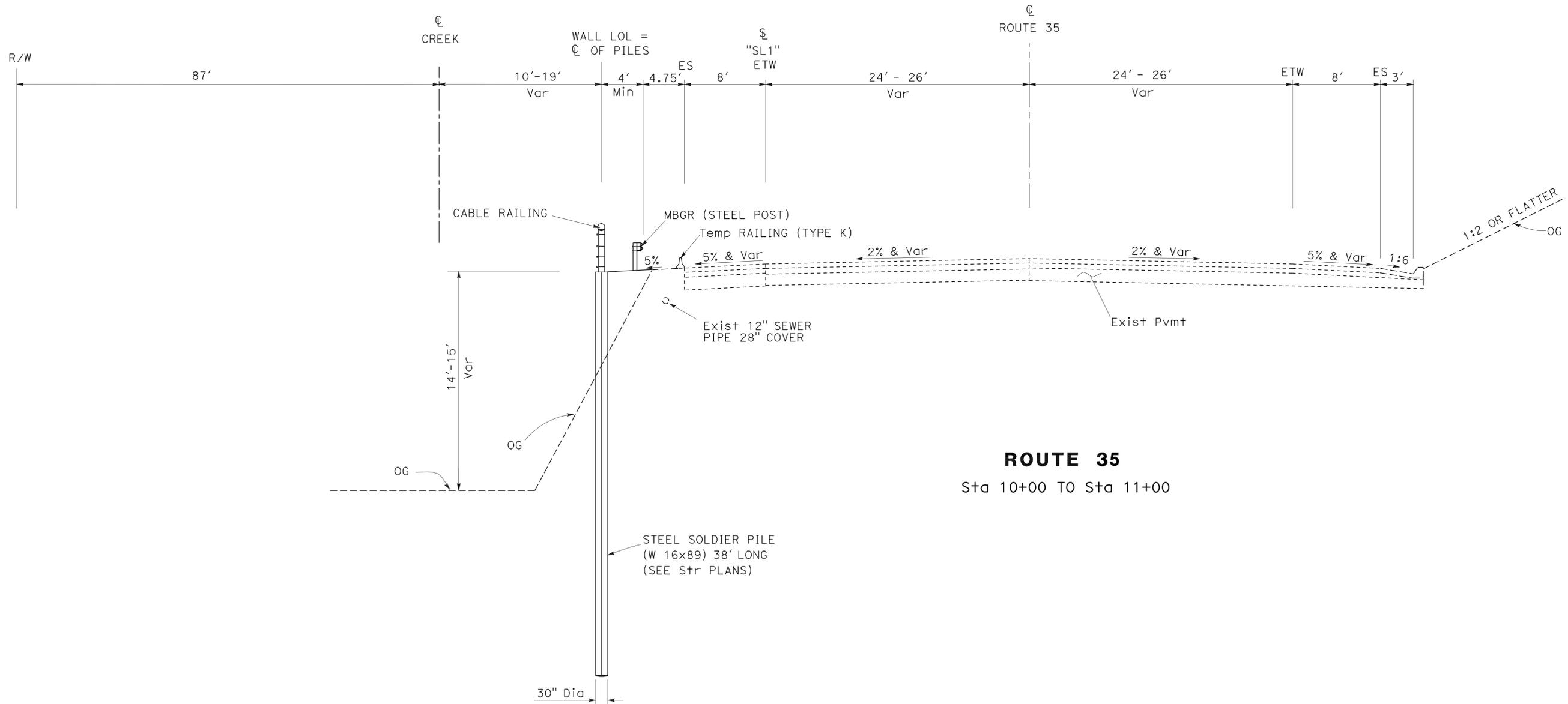
Satwinder S Brar	12-20-11
REGISTERED CIVIL ENGINEER	DATE
3-5-12	
PLANS APPROVAL DATE	

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**NOTE:**  
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGNED BY	REVISOR
<b>Caltrans</b>	SATWINDER BRAR	MAHESH MONGA
06 - DESIGN	CHECKED BY	DATE REVISED
	GETACHEW ESHETE	



**ROUTE 35**  
Sta 10+00 TO Sta 11+00

**TYPICAL CROSS SECTIONS**

NO SCALE

**X-1**

FOR ACCURATE RIGHT OF WAY DATA, CONTACT  
RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

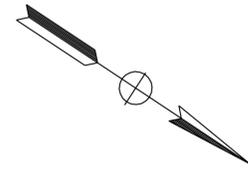
R/W

**ABBREVIATION:**

ESA ENVIRONMENTALLY SENSITIVE AREA

**LEGEND:**

-  TFESA TEMPORARY FENCE (TYPE ESA)
-  DIRECTION OF WATER FLOW
-  DIRECTION OF TRAFFIC
-  CR TANGENT WALL AND CABLE RAILING



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	35	25.2	3	23

Satwinder S Brar 12-20-11  
REGISTERED CIVIL ENGINEER DATE

3-5-12  
PLANS APPROVAL DATE

SATWINDER S BRAR  
No. 78016  
Exp. 9-30-13  
CIVIL  
STATE OF CALIFORNIA

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
Caltrans®  
06-DESIGN

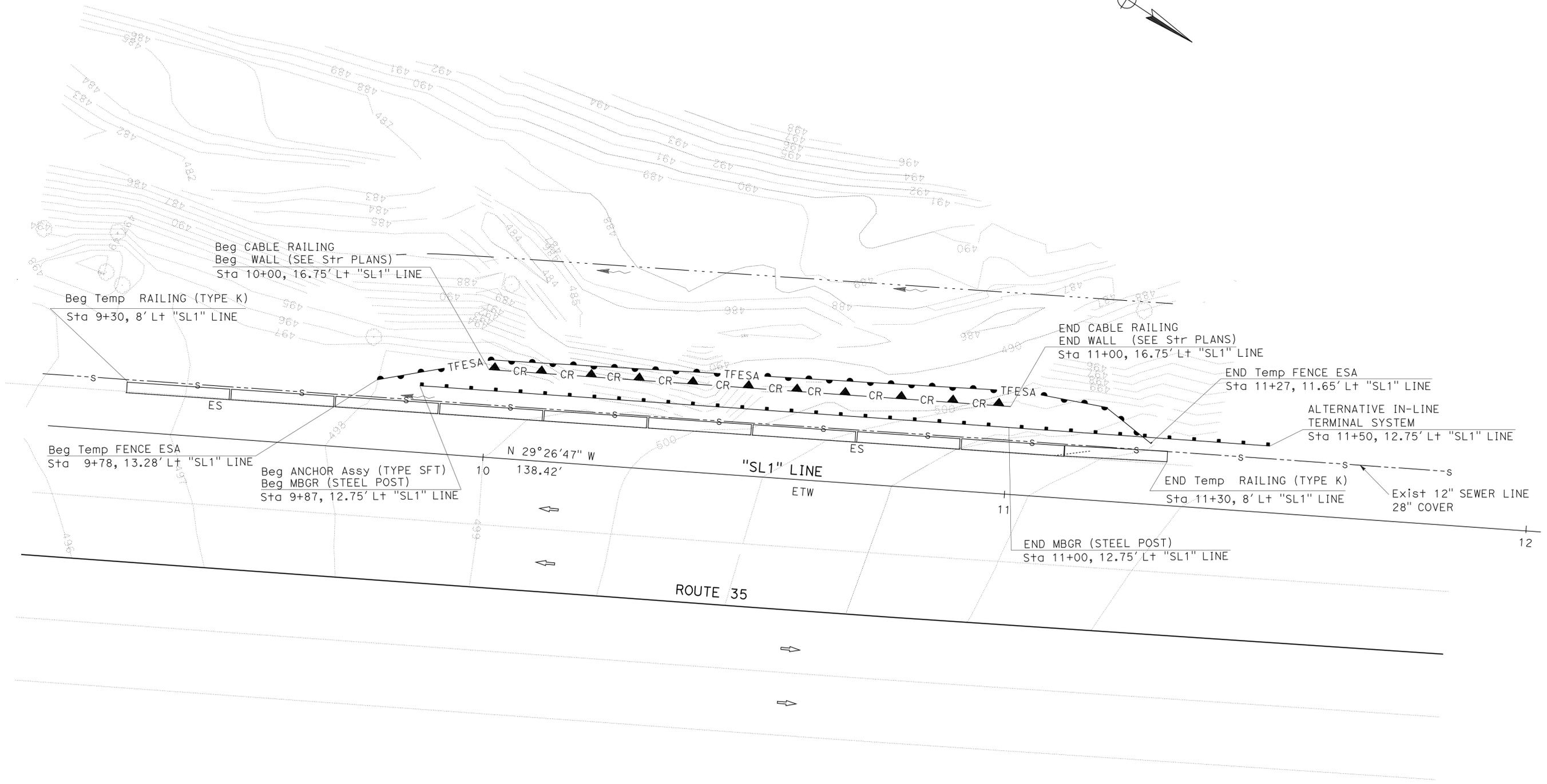
FUNCTIONAL SUPERVISOR  
GETACHEW ESHETE

DESIGNED BY  
SATWINDER BRAR

CHECKED BY  
MAHESH MONGA

REVISOR BY  
DATE

REVISOR BY  
DATE



**LAYOUT**  
**L-1**

SCALE: 1" = 10'



FOR ACCURATE RIGHT OF WAY DATA,  
CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE

R/W

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	35	25.2	5	23

  
 LICENSED LANDSCAPE ARCHITECT  
 3-5-12  
 PLANS APPROVAL DATE

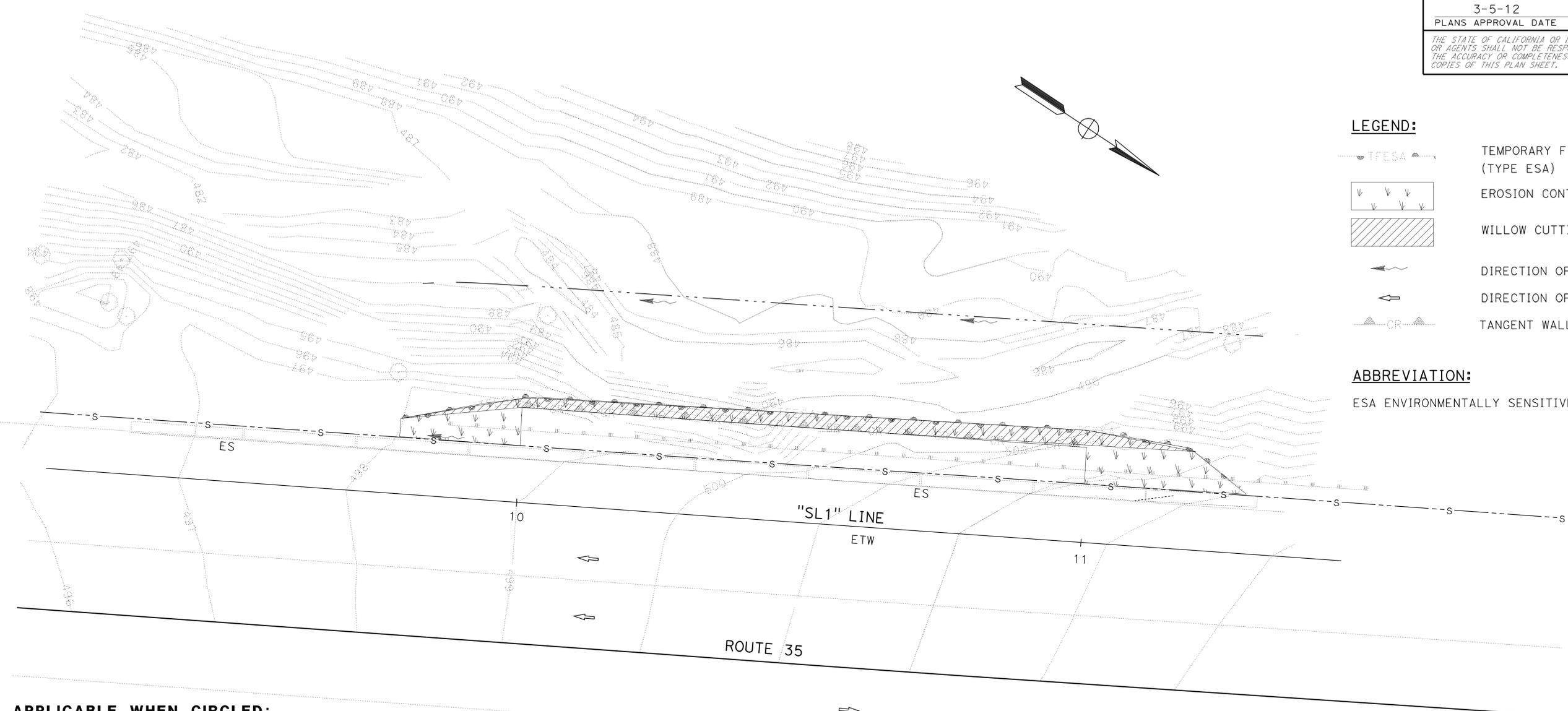
  
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**LEGEND:**

-  TEMPORARY FENCE (TYPE ESA)
-  EROSION CONTROL (HYDROSEED)
-  WILLOW CUTTINGS (PLANT GROUP W)
-  DIRECTION OF WATER FLOW
-  DIRECTION OF TRAFFIC
-  TANGENT WALL AND CABLE RAILING

**ABBREVIATION:**

ESA ENVIRONMENTALLY SENSITIVE AREA



**APPLICABLE WHEN CIRCLED:**

- ① - QUANTITIES SHOWN ARE "PER PLANT" UNLESS SHOWN AS SQFT OR SQYD APPLICATION RATES
- 2 - BASIN MULCH IS INCLUDED WITH MULCH QUANTITIES SHOWN ON PLANTING PLAN
- 3 - SUFFICIENT TO RECEIVE ROOT BALL AND AMENDMENTS IF REQUIRED
- 4 - SEE DETAIL
- ⑤ - SEE SPECIAL PROVISIONS
- 6 - SEE STANDARD SPECIFICATIONS
- 7 - AS SHOWN ON PLANS
- 8 - UNLESS OTHERWISE SHOWN ON PLANS
- 9 - FOLIAGE PROTECTOR REQUIRED
- 10 - ROOT PROTECTOR REQUIRED
- 11 - ROOT BARRIER REQUIRED
- 12 - STATE-FURNISHED

**PLANT LIST AND PLANTING SPECIFICATIONS**

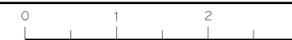
PLANT GROUP	PLANT No.	SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	QUANTITY EACH	HOLE SIZE (INCH)		BASIN TYPE	IRON SULFATE	SOIL AMEND	COMMERCIAL FERTILIZER ①		BASIN MULCH (CY)	STAKING	PLANTING LIMITS						REMARKS
							Dia	DEPTH				PLANTING	PLT ESTB			MINIMUM DISTANCE (ft) FROM				ON CENTER (ft)		
																ETW	Pvm†	FENCE	WALL		PAVED DITCH	
W	1		WILLOW CUTTINGS	WILLOW CUTTINGS	--	35	⑤	⑤	--	--	--	⑤	⑤	--	--	--	--	--	--	3		

**EROSION CONTROL PLAN**

SCALE: 1" = 10'

**EC-1**

APPROVED FOR EROSION CONTROL WORK ONLY



DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	35	25.2	6	23

Satwinder S Brar 12-20-11  
 REGISTERED CIVIL ENGINEER DATE

3-5-12  
 PLANS APPROVAL DATE

SATWINDER S BRAR  
 No. 78016  
 Exp. 9-30-13  
 CIVIL

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.

### ROADWAY QUANTITIES

STATION/LOCATION			METAL BEAM GUARD RAILING STANDARD PLAN LAYOUT	TEMPORARY FENCE (TYPE ESA)	MBGR (STEEL POST)	CABLE RAILING	ALTERNATIVE IN-LINE TERMINAL SYSTEM	TEMPORARY RAILING (TYPE K)	IMPORTED BORROW	END ANCHOR ASSEMBLY (TYPE SFT)
FROM	TO	SIDE	TYPE	LF	LF	LF	EA	LF	CY	EA
9+78	11+27	L+		150						
9+87	11+00	L+	11A		113					
10+00	11+00	L+				100			17	1
11+00	11+50	L+					1			
9+30	11+30	L+						200		
<b>TOTAL</b>				150	113	100	1	200	17	1

### EROSION CONTROL QUANTITY

STATION/LOCATION			EROSION CONTROL (HYDROSEED)
FROM	TO	SIDE	SQFT
9+78	11+27	L+	600

### TEMPORARY WATER POLLUTION CONTROL QUANTITY

STATION	TEMPORARY CONSTRUCTION ENTRANCE	TEMPORARY COVER
	EA	SQYD
9+00	1	200

## SUMMARY OF QUANTITIES Q-1

LAST REVISION | DATE PLOTTED => 15-MAR-2012  
 07-12-10 TIME PLOTTED => 10:19

**STATIONARY MOUNTED CONSTRUCTION  
AREA SIGNS**

ROUTE	SIGN No.	SIGN CODE	PANEL SIZE	SIGN MESSAGE	No. OF POST AND SIZE	No. OF SIGNS
35	(A)	W20-1	36" x 36"	ROAD WORK AHEAD	1 - 4" x 6"	2
	(B)	G20-2	36" x 18"	END ROAD WORK	1 - 4" x 4"	2

NOTE: EXACT SIGN LOCATIONS TO BE DETERMINED BY THE ENGINEER.

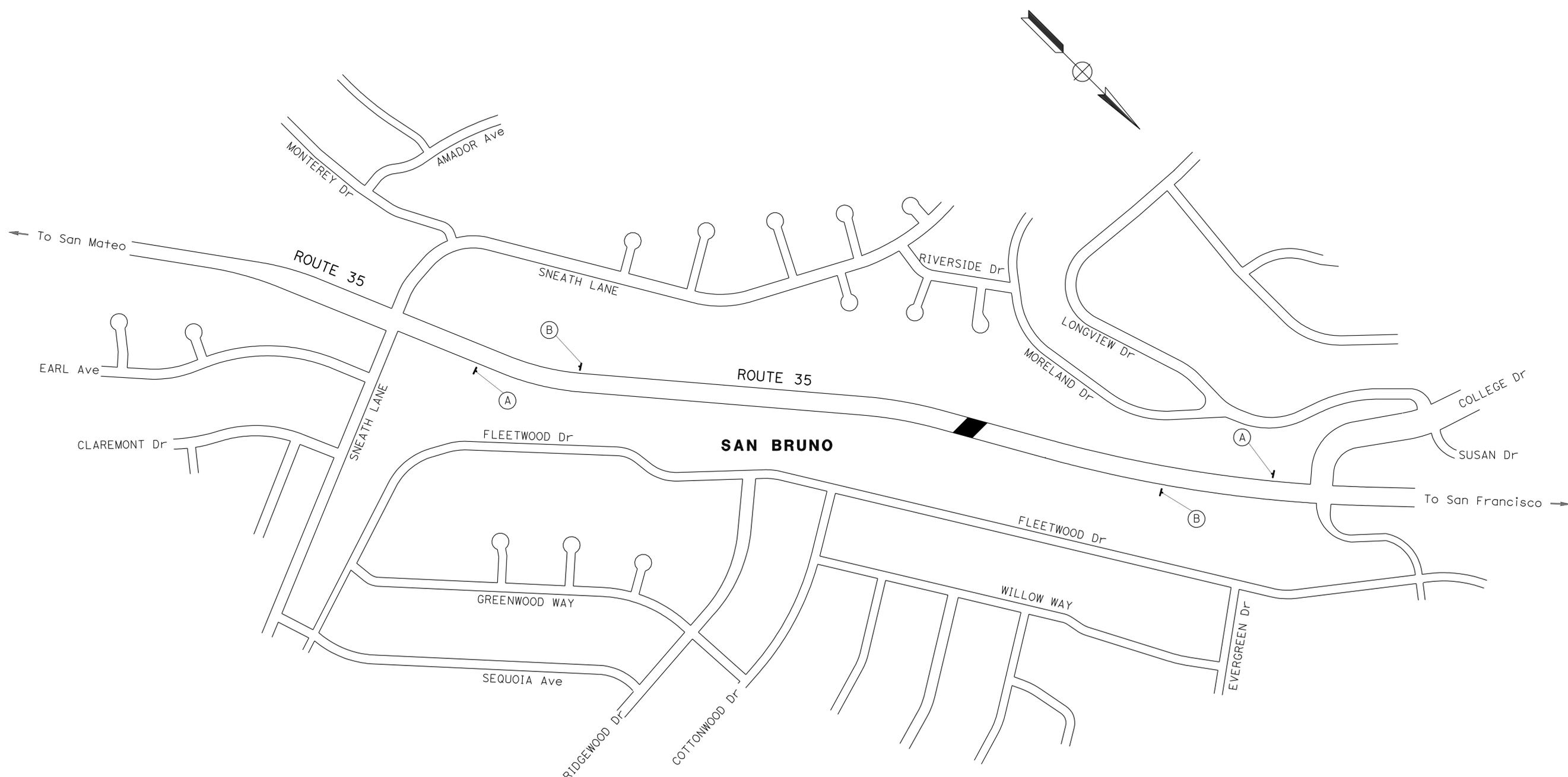
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	35	25.2	7	23

*Sandy L. Le* 12-14-11  
REGISTERED CIVIL ENGINEER DATE

3-5-12  
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
SANDY L. LE  
No. 67065  
Exp. 9/30/12  
CIVIL  
STATE OF CALIFORNIA

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** TRAFFIC DESIGN  
FUNCTIONAL SUPERVISOR: MOHAMMED QATAMI  
CALCULATED/DESIGNED BY: SANDY LE  
CHECKED BY: HASSAN TAHA  
REVISED BY: SANDY LE  
DATE REVISED: HASSAN TAHA

**CONSTRUCTION AREA SIGNS**  
NO SCALE  
**CS-1**

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	35	25.2	8	23

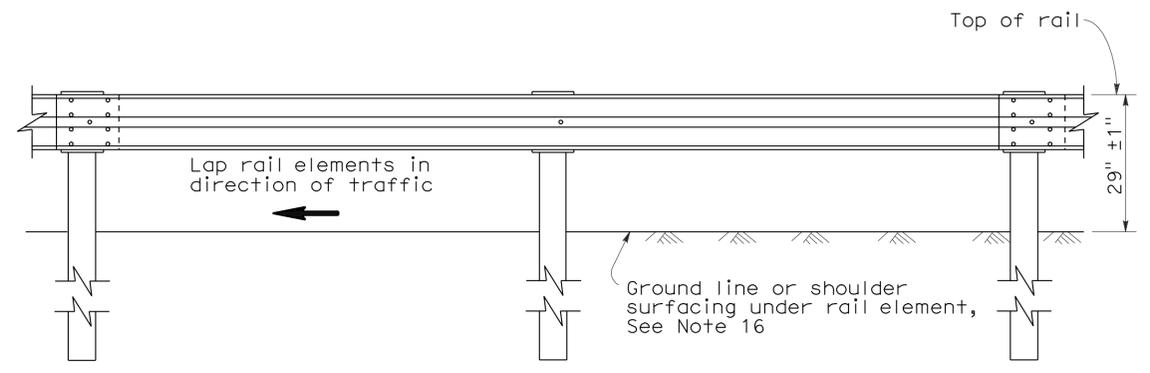
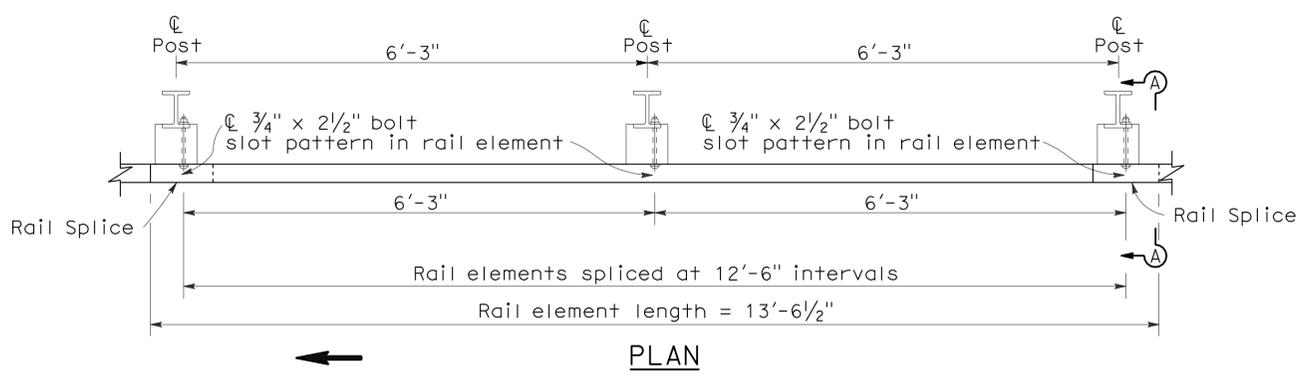
*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

May 20, 2011  
PLANS APPROVAL DATE

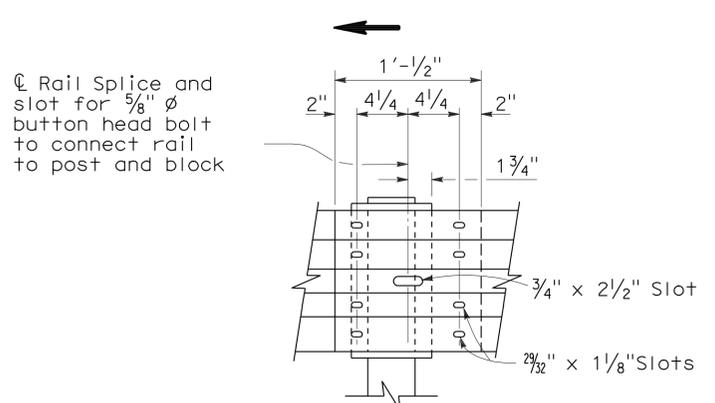
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To accompany plans dated 3-5-12

2006 REVISED STANDARD PLAN RSP A77A2

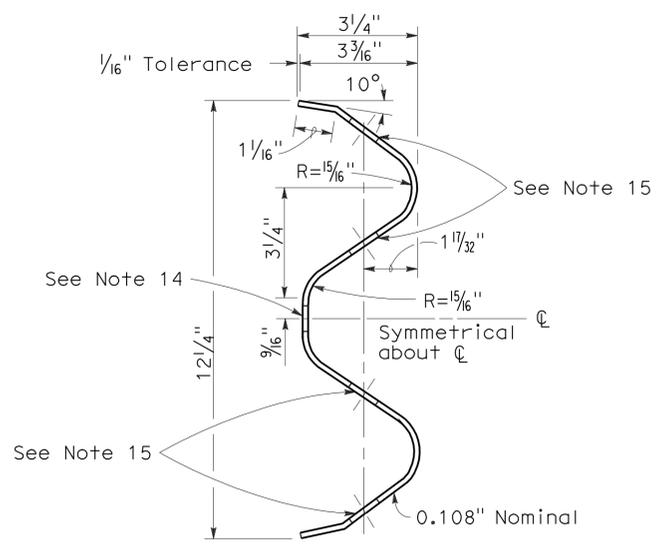


**METAL BEAM GUARD RAILING WITH STEEL POSTS AND NOTCHED WOOD OR NOTCHED RECYCLED PLASTIC BLOCKS**

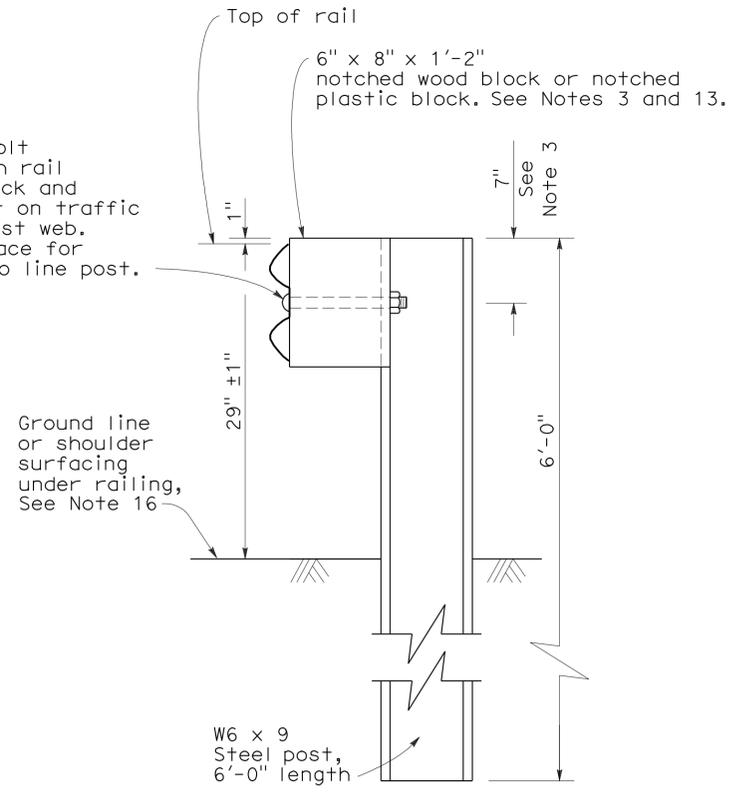


**ELEVATION  
RAIL ELEMENT SPLICE DETAIL**

- Connect the overlapped end of the rail elements with 5/8"  $\phi$  x 1 3/8" button head oval shoulder splice bolts inserted into the 2 3/32" x 1 1/8" slots and bolted together with 5/8"  $\phi$  recessed hex nuts. Recess of hex nut points toward rail element. A total of 8 bolts and nuts are to be used at each rail splice connection.
- The ends of the rail elements are to be overlapped in the direction of traffic (see details).
- Where end cap is to be attached to the end of a rail element, a total of 4 of the above described splice bolts and nuts are to be used.



**SECTION THRU RAIL ELEMENT**



**SECTION A-A  
TYPICAL STEEL LINE POST INSTALLATION**

See Note 4

**NOTES:**

- For details of wood post installations, see Standard Plan A77A1.
- For details of standard hardware used to construct guard railing, see Standard Plan A77B1.
- For details of steel posts and notched wood blocks used to construct guard railing, see Standard Plan A77C2.
- For additional installation details, see Standard Plan A77C3.
- Guard railing post spacing to be 6'-3" center to center, except as otherwise noted.
- For guard railing typical layouts, see the A77E, A77F and A77G Series of Standard Plans.
- For terminal system end treatment details, see the A77L Series of Standard Plans. To connect railing to terminal system end treatment, transition the top of railing height at a ratio of 120:1 to terminal system end treatment height plus one 12'-6" standard railing section at the transitioned height for a horizontal connection to the end treatment.
- For guard railing end anchor details, see Standard Plans A77H1 and A77I2.
- For details of guard railing transition to bridge railing, see Standard Plan A77J4.
- For additional details of guard railing connection to bridge railings, see Standard Plans A77J1, A77J2 and A77K1.
- For dike positioning and guard railing delineation details, see Standard Plan A77C4.
- Direction of adjacent traffic indicated by  $\rightarrow$ .
- Notched face of block faces steel post.
- Slotted hole for bolted connection of rail element to block and post. See "Section Thru Rail Element".
- Slotted holes for splice bolts to overlap ends of rail element. See "Section Thru Rail Element".
- Install posts in soil.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**METAL BEAM GUARD RAILING  
STANDARD RAILING SECTION  
(STEEL POST WITH NOTCHED  
WOOD OR NOTCHED  
RECYCLED PLASTIC BLOCK)**

NO SCALE

To accompany plans dated 3-5-12

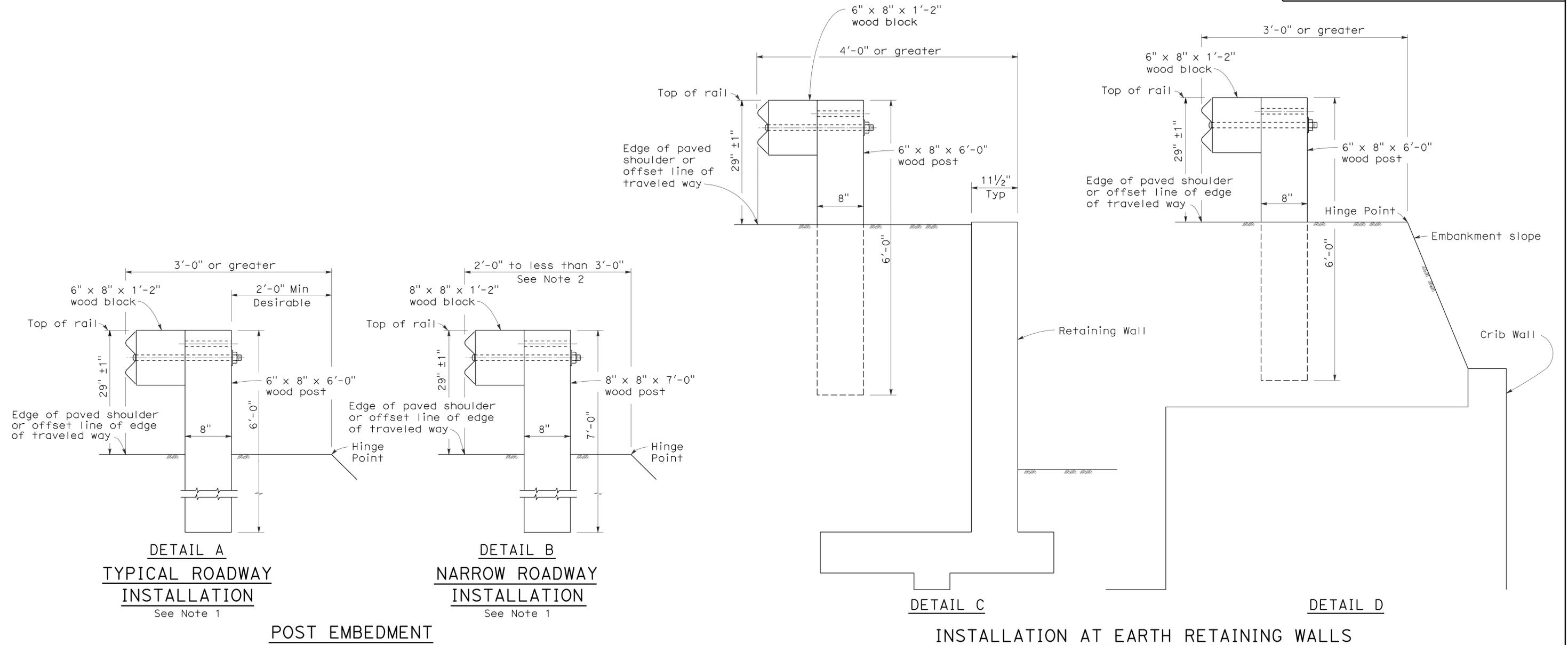
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	35	25.2	9	23

*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

May 20, 2011  
PLANS APPROVAL DATE

*Randell D. Hiatt*  
No. C50200  
Exp. 6-30-11  
CIVIL  
STATE OF CALIFORNIA

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**NOTES:**

1. These installation details also applicable to steel line post installations. For Detail A, C, and D, where steel line post installations are constructed, W6 x 9 steel post, 6'-0" in length, with 6" x 8" x 1'-2" notched wood blocks or notched recycled plastic blocks are to be used in place of the size of wood post and wood block shown. For Detail B, where steel line post installations are constructed, W6 x 9 steel post, 7'-0" in length, with 6" x 8" x 1'-2" notched wood blocks or notched recycled plastic blocks are to be used in place of the size of wood post and wood block shown. For additional installation details, see Standard Plans A77A1 and A77A2.
2. Where the distance between the face of the rail and the hinge point is less than 2'-0", see the Project Plans for special details.
3. For dike positioning with guard railing installations, see Standard Plan A77C4.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**METAL BEAM GUARD RAILING  
TYPICAL LINE POST  
EMBEDMENT AND  
HINGE POINT OFFSET DETAILS**

NO SCALE

RSP A77C3 DATED MAY 20, 2011 SUPERSEDES STANDARD PLAN A77C3  
DATED MAY 1, 2006 - PAGE 46 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP A77C3**

2006 REVISED STANDARD PLAN RSP A77C3

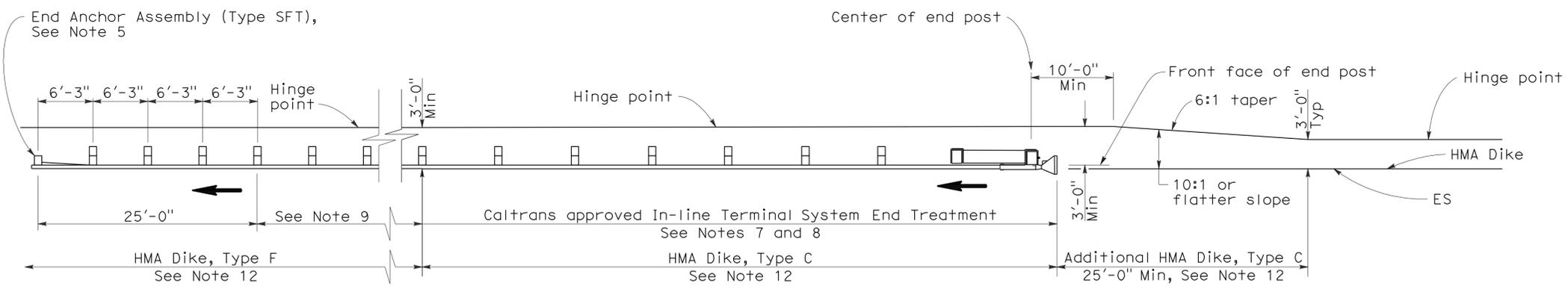
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SM	35	25.2	10	23

RANDALL D. HIATT  
 REGISTERED CIVIL ENGINEER  
 No. C50200  
 Exp. 6-30-09  
 CIVIL  
 STATE OF CALIFORNIA

June 6, 2008  
 PLANS APPROVAL DATE

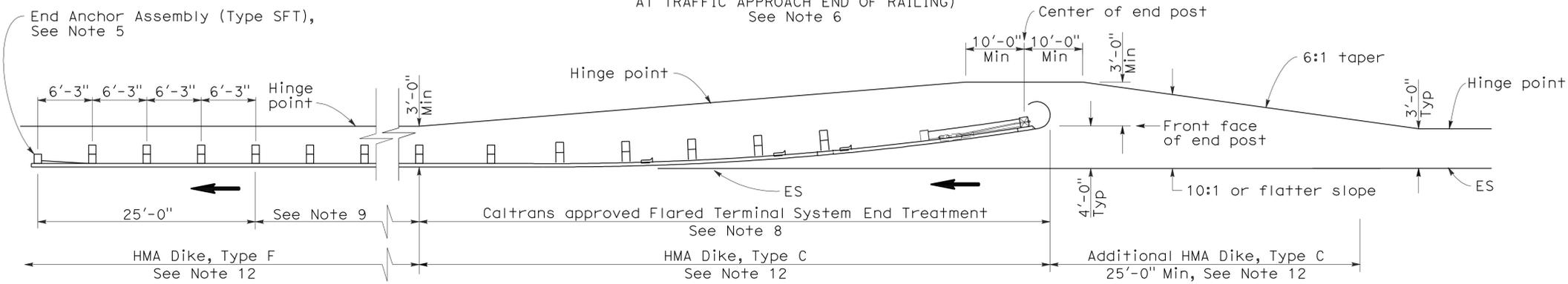
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To accompany plans dated 3-5-12



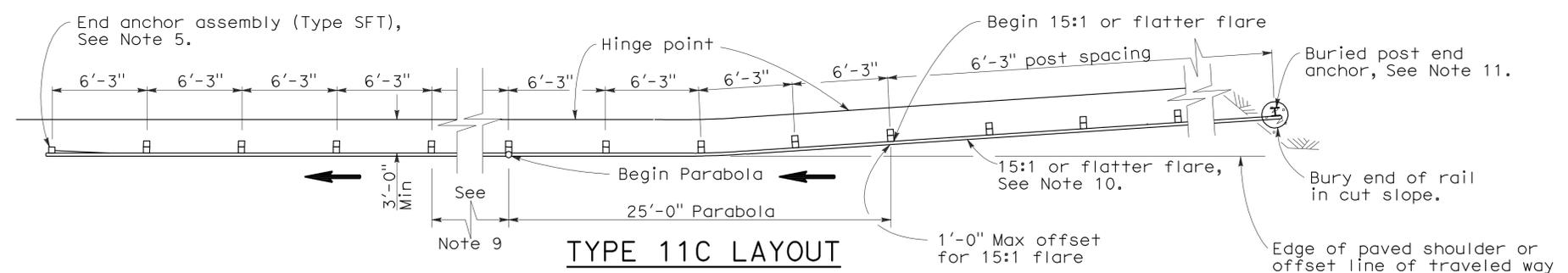
**TYPE 11A LAYOUT**

(EMBANKMENT GUARD INSTALLATION WITH IN-LINE END TREATMENT AT TRAFFIC APPROACH END OF RAILING)  
See Note 6



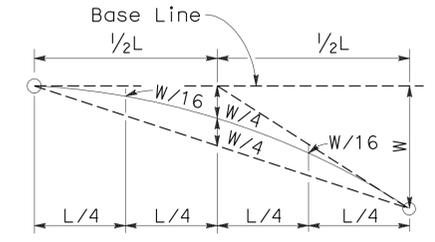
**TYPE 11B LAYOUT**

(EMBANKMENT GUARD RAILING INSTALLATION WITH FLARED END TREATMENT AT TRAFFIC APPROACH END OF RAILING)  
See Note 6

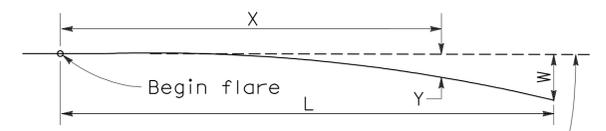


**TYPE 11C LAYOUT**

(EMBANKMENT GUARD RAILING INSTALLATION WITH BURIED END ANCHOR TREATMENT AT TRAFFIC APPROACH END OF RAILING)  
See Notes 6 and 12



**TYPICAL PARABOLIC LAYOUT**

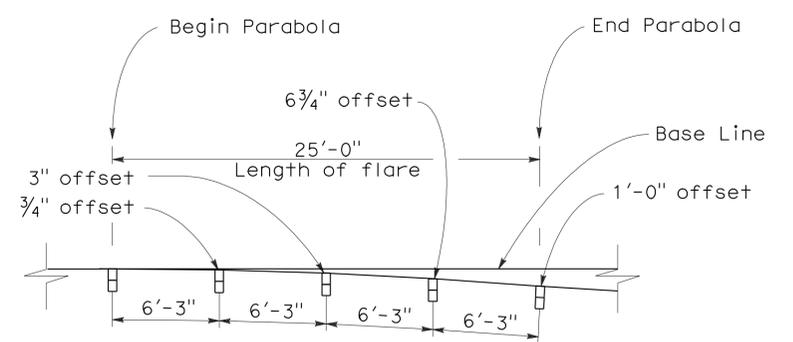


Base Line (Edge of paved shoulder or offset line of edge of traveled way)

$$Y = \frac{WX^2}{L^2}$$

Y = Offset from base line  
 W = Maximum offset  
 X = Distance along base line  
 L = Length of flare

**PARABOLIC FLARE OFFSETS**



**TYPICAL FLARE OFFSETS FOR 1 FOOT MAX END OFFSET**

**NOTES:**

- Line post, blocks and hardware to be used are shown on Standard Plans A77A1, A77A2, A77B1, A77C1, and A77C2.
- Guard rail post spacing to be 6'-3" center to center, except as otherwise noted.
- Except as noted, line posts are 6" x 8" x 6'-0" wood with 6" x 8" x 1'-2" wood blocks. W6 x 9 steel posts, 6'-0" in length, with 6" x 8" x 1'-2" notched wood blocks or recycled plastic blocks may be used for 6" x 8" x 6'-0" wood post with 6" x 8" x 1'-2" wood blocks where applicable and when specified.
- Direction of adjacent traffic indicated by →.
- For End Anchor Assembly (Type SFT) details, see Standard Plan A77H1.
- Layout Types 11A, 11B or 11C are typically used where guard railing is recommended to shield embankment slopes and a crashworthy end treatment is required for only one direction of traffic.
- In-line Terminal System End Treatments are used where site conditions will not accommodate a flared end treatment.
- The type of terminal system end treatment to be used will be shown on the Project Plans.
- Dependent on site conditions (embankment height and side slope), construction of additional guard railing (length equal to multiples of 12'-6" with 6'-3" post spacing) may be advisable.
- The 15:1 or flatter flare used with buried end anchors is based on the edge of the paved shoulder or offset line of edge of the traveled way. The length of guard railing within the 15:1 or flatter flare is based on site conditions and should be a length equal to multiples of 12'-6".
- For details of the buried post end anchor used with Type 11C Layout, see Standard Plan A77I2.
- Where placement of dike is required with guard railing installations, see Revised Standard Plan RSP A77C4 for dike positioning details.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**METAL BEAM GUARD RAILING**  
**TYPICAL LAYOUTS FOR EMBANKMENTS**  
NO SCALE

RSP A77E1 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A77E1  
DATED MAY 1, 2006 - PAGE 48 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP A77E1**

2006 REVISED STANDARD PLAN RSP A77E1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	35	25.2	11	23

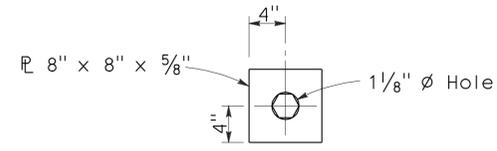
*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

May 20, 2011  
PLANS APPROVAL DATE

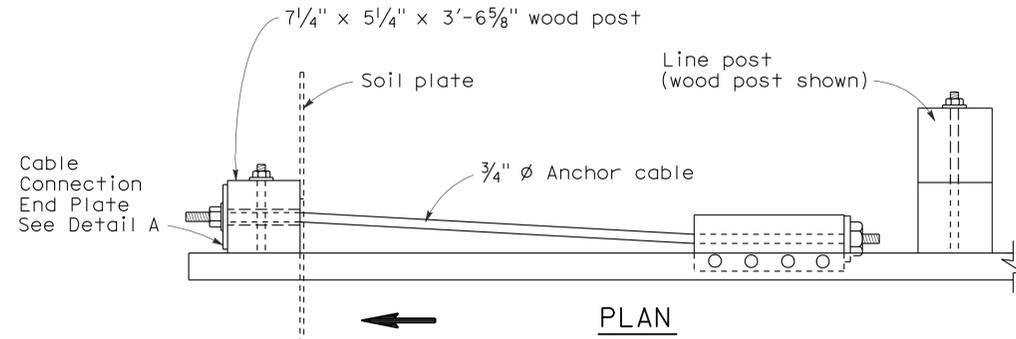
*Randell D. Hiatt*  
No. C50200  
Exp. 6-30-11  
CIVIL  
STATE OF CALIFORNIA

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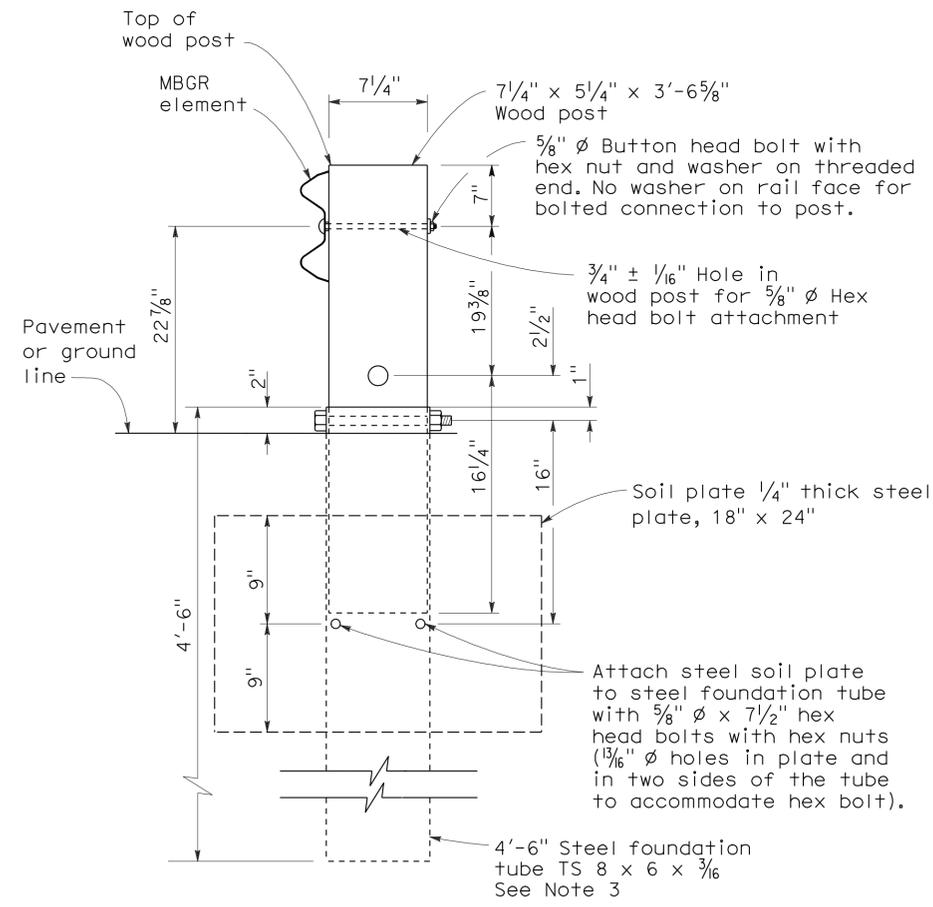
To accompany plans dated 3-5-12



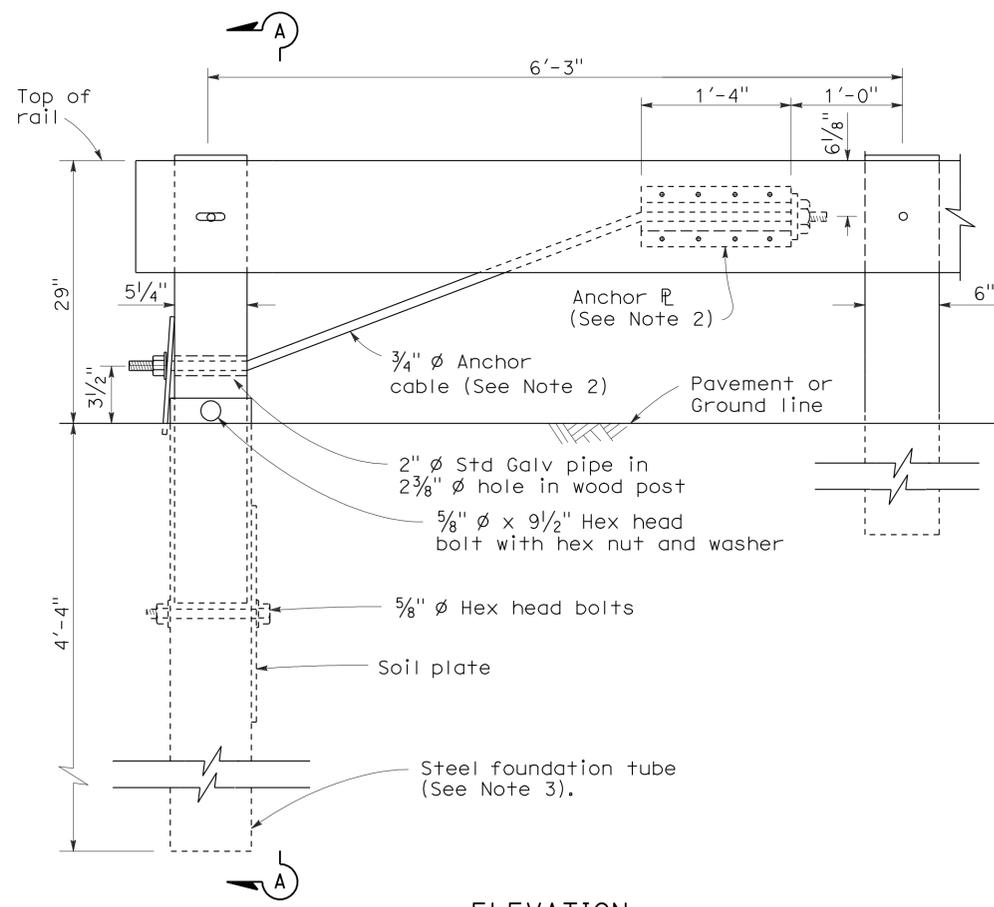
**DETAIL A**  
**CABLE CONNECTION**  
**END PLATE**



**PLAN**



**SECTION A-A**



**ELEVATION**  
**END ANCHOR**  
**ASSEMBLY (TYPE SFT)**  
See Note 1

**NOTES:**

1. See the A77E, A77F and A77G series of Standard Plans for typical use of End Anchor Assembly (Type SFT).
2. For details of the anchor plate and 3/4" cable, see Standard Plan A77H3.
3. A 6'-0" length steel foundation tube, TS 8 x 6 x 3/16, without a soil plate, may be furnished and installed in place of the 4'-6" length steel foundation tube and soil plate shown. Minimum embedment of the 6'-0" length tube shall be 5'-9". A 5/8" diameter hex head bolt and nut shall be installed in the hole in the 6'-0" length tube to keep the wood post from dropping into the tube.
4. Direction of traffic indicated by  $\Rightarrow$ .
5. Install line post, steel foundation tube and soil plate in soil.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**METAL RAILING**  
**END ANCHOR ASSEMBLY**  
**(TYPE SFT)**

NO SCALE

RSP A77H1 DATED MAY 20, 2011 SUPERSEDES STANDARD PLAN A77H1  
DATED MAY 1, 2006 - PAGE 67 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP A77H1**

2006 REVISED STANDARD PLAN RSP A77H1

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SM	35	25.2	12	23

*Gregory A. Balzer*  
 LICENSED LANDSCAPE ARCHITECT  
 June 5, 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 3-5-12

2006 REVISED STANDARD PLAN RSP H1

**A**

AB aggregate base  
 ABS acrylonitrile-butadiene-styrene  
 AC asphalt concrete  
 Adj adjacent/adjustable  
 AIC auxiliary irrigation controller  
 Alt alternative  
 AMEND amendment  
 ARV air release valve  
 AUTO automatic  
 AUX auxiliary  
 AVB atmospheric vacuum breaker

**B**

B&B balled and burlapped  
 B/B brass/bronze  
 B/B/PL brass/bronze/plastic  
 B/PL brass/plastic  
 BFM bonded fiber matrix  
 Bit C+D bituminous coated  
 BP booster pump  
 BPA backflow preventer assembly  
 BPAE backflow preventer assembly in enclosure  
 BPE backflow preventer enclosure  
 BV ball valve

**C**

CAP corrugated aluminum pipe  
 CARV combination air release valve  
 CCA cam coupler assembly  
 CEC controller enclosure cabinet  
 CHDPE corrugated high density polyethylene  
 CL chain link  
 CNC control and neutral conductors  
 Conc concrete  
 Cond conduit  
 CSP corrugated steel pipe  
 CST center strip  
 CV check valve

**D**

Dia diameter  
 DIP ductile iron pipe  
 DN diameter nominal

**E**

EA each  
 Elect electric/electrical  
 Elev elevation  
 ENCL enclosure  
 EP edge of pavement  
 ES edge of shoulder  
 EST end strip  
 ESTB establishment  
 ETW edge of traveled way

**F**

F full circle  
 F/P full/part circle  
 FAU filter assembly unit  
 FCV flow control valve  
 FERT fertilizer  
 FG finished grade  
 FIPT female iron pipe thread  
 FIS fertilizer injector system  
 FL flow line  
 FM flow monitor  
 FS flow sensor  
 Ft foot/feet  
 FV flush valve

**G**

GAL Gallon(s)  
 Galv galvanized  
 GARV garden valve  
 GPH gallons per hour  
 GPM gallons per minute  
 GSP galvanized steel pipe  
 GV gate valve

**H**

H half circle  
 HB hose bib  
 HDPE high density polyethylene  
 HP horsepower/hinge point  
 HPL high pressure line  
 Hwy highway

**I**

IC irrigation controller  
 ICC irrigation controller(s) in controller enclosure cabinet  
 ID inside diameter  
 In inches  
 IFS irrigation filtration system  
 IPS iron pipe size  
 IPT iron pipe thread  
 Irr irrigation

**L**

L length  
 LF linear foot

**M**

Max maximum  
 MBGR metal beam guard railing  
 MCV manual control valve  
 MIC master irrigation controller  
 Min minimum  
 MIPT male iron pipe thread  
 Misc miscellaneous  
 M+I material  
 MVP maintenance vehicle pullout

**N**

NCN no common name  
 NL nozzle line  
 No. number  
 NPT national pipe thread

**O**

O/C on center  
 OD outside diameter  
 Oz ounce

**P**

P part circle  
 PB pull box  
 PCC portland cement concrete  
 PE polyethylene  
 PK+ packet  
 PL plastic  
 PLT plant/planting  
 PLT ESTB plant establishment  
 PM post mile  
 PR pressure rated  
 PRLV pressure relief valve  
 PSFM polymer stabilized fiber matrix  
 PSI pounds per square inch  
 PRV pressure reducing valve  
 PVC polyvinyl chloride  
 Pvm+ pavement

**Q**

Q quarter circle  
 QCV quick coupling valve

**R**

R radius  
 RCP reinforced concrete pipe  
 RCV remote control valve  
 RCVM remote control valve (master)  
 RCVMF remote control valve (master) w/ flow meter  
 RCW recycled/reclaimed water  
 RECP rolled erosion control product  
 REQ required  
 R/W right of way

**S**

S slip  
 SCC sprinkler control conduit  
 SCH schedule  
 SF state-furnished  
 Shld shoulder  
 SQFT square foot/feet  
 SQYD square yard(s)  
 SST side strip  
 Sta station  
 Std standard  
 SW sidewalk/sound wall

**T**

T third circle/thread  
 TLS truck loading standpipe  
 TQ three quarter circle  
 TRM turf reinforcement mat  
 TRVD traveled  
 TT two third circle  
 Typ typical

**U**

UG underground

**V**

VAU valve assembly unit

**W**

W width  
 W/ with  
 WM water meter  
 WS wye strainer  
 WSP welded steel pipe  
 WWM welded wire mesh

**NOTE:**  
 FOR ADDITIONAL ABBREVIATIONS,  
 SEE STANDARD PLANS A10A AND A10B.

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**PLANTING AND IRRIGATION  
 ABBREVIATIONS**

NO SCALE  
 RSP H1 DATED JUNE 5, 2009 SUPERSEDES STANDARD PLAN H1  
 DATED MAY 1, 2006 - PAGE 201 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP H1**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SM	35	25.2	13	23

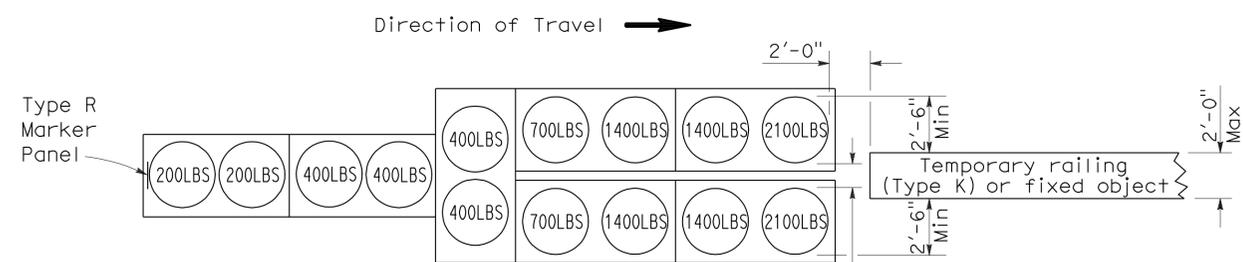
*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

June 6, 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.*

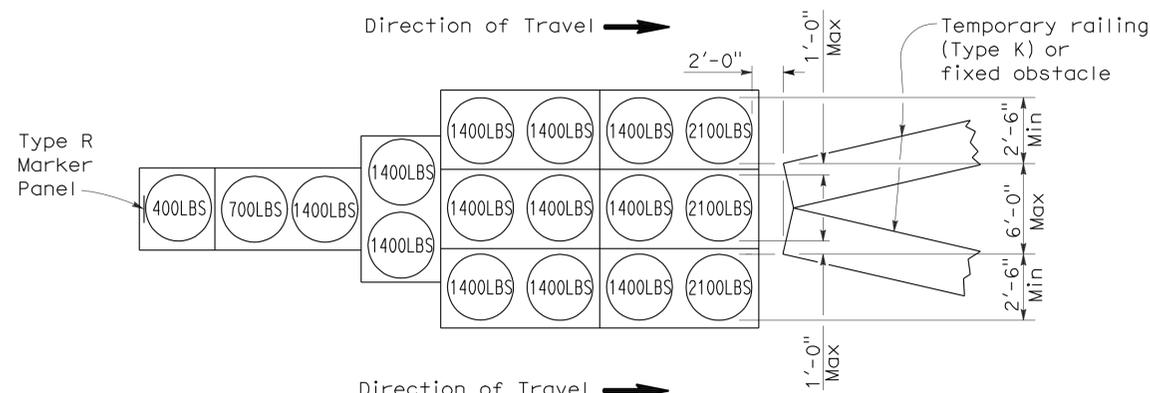
REGISTERED PROFESSIONAL ENGINEER  
Randell D. Hiatt  
No. C50200  
Exp. 6-30-09  
CIVIL  
STATE OF CALIFORNIA

To accompany plans dated 3-5-12



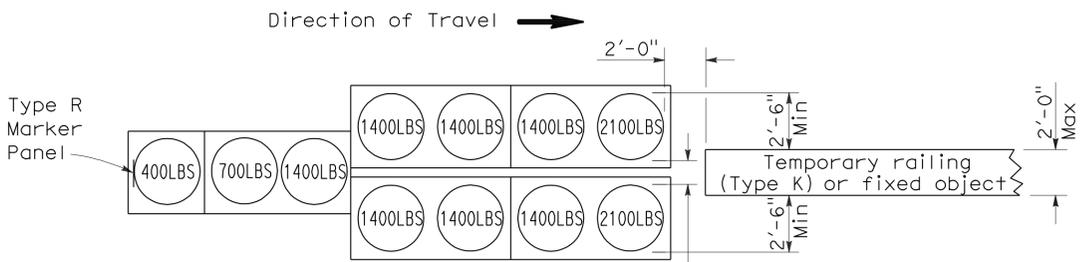
**ARRAY 'TU14'**

Approach speed 45 mph or more



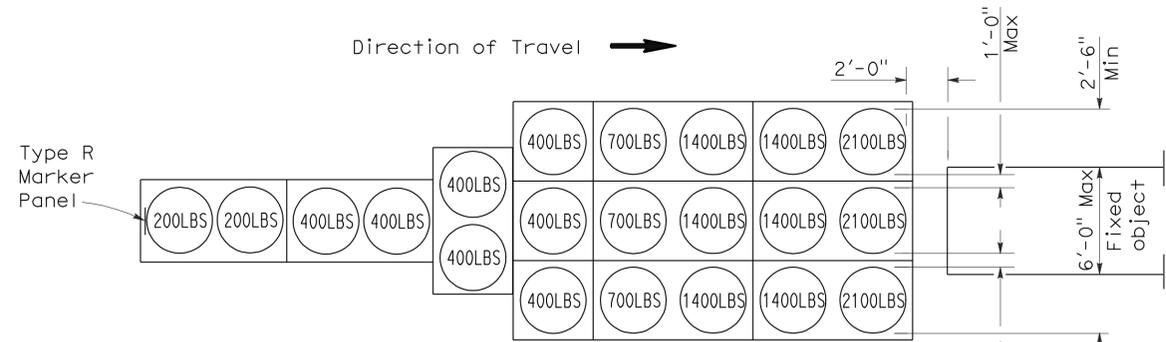
**ARRAY 'TU17'**

Approach speed less than 45 mph



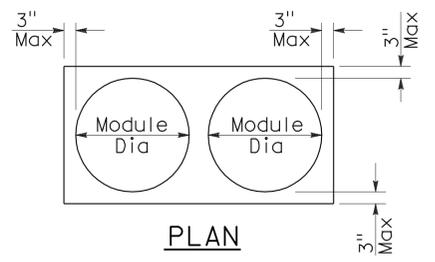
**ARRAY 'TU11'**

Approach speed less than 45 mph

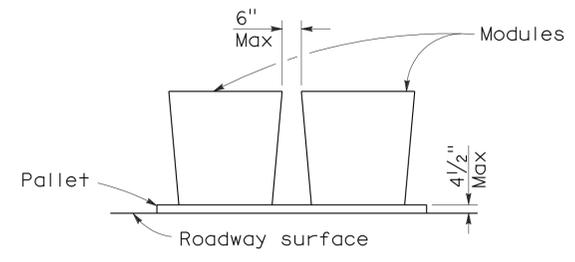


**ARRAY 'TU21'**

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 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.

**REVISED STANDARD PLAN RSP T1A**

2006 REVISED STANDARD PLAN RSP T1A

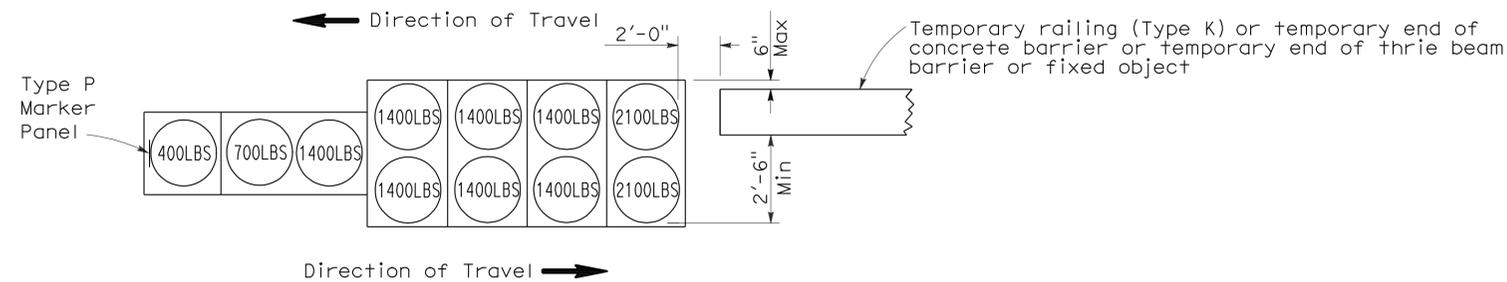
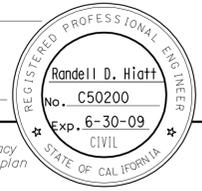
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SM	35	25.2	14	23

*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

June 6, 2008  
PLANS APPROVAL DATE

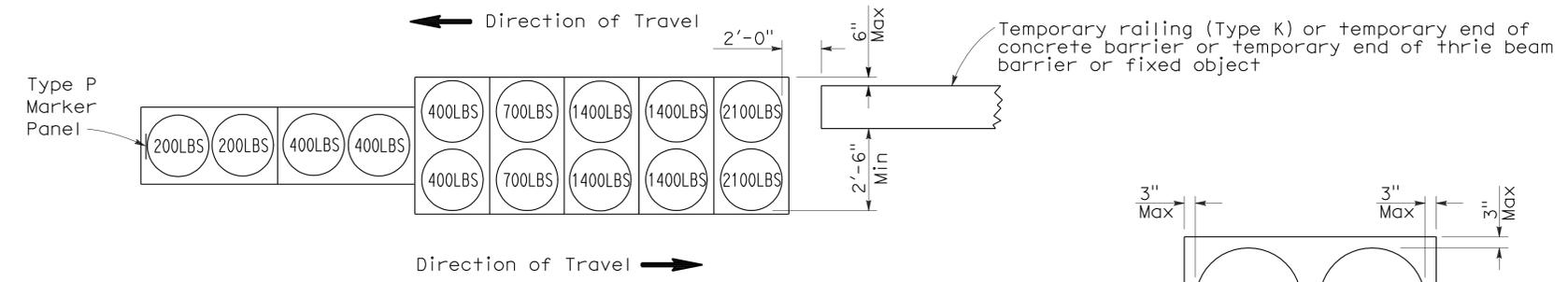
*The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.*

To accompany plans dated 3-5-12



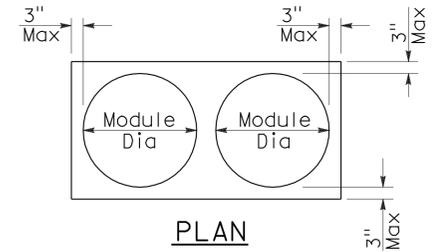
**ARRAY 'TB11'**

Approach speed less than 45 mph

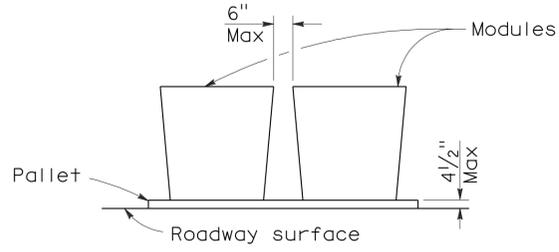


**ARRAY 'TB14'**

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

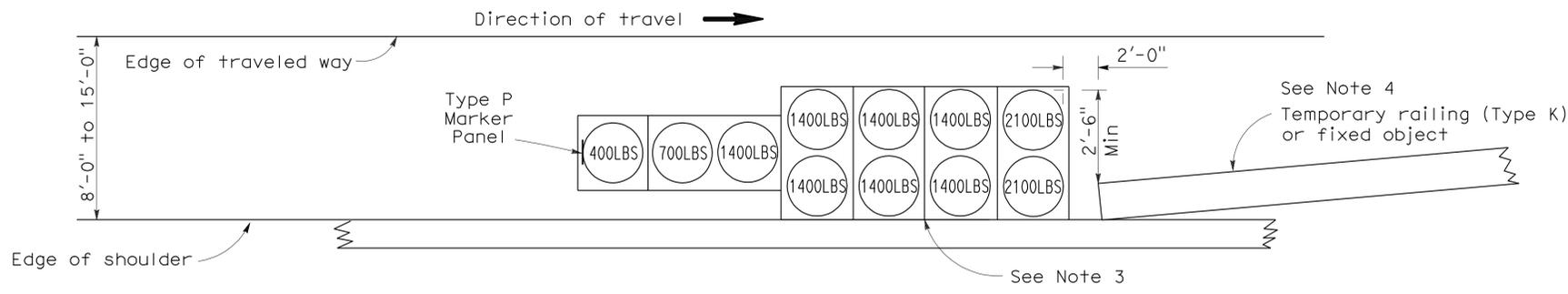
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SM	35	25.2	15	23

*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

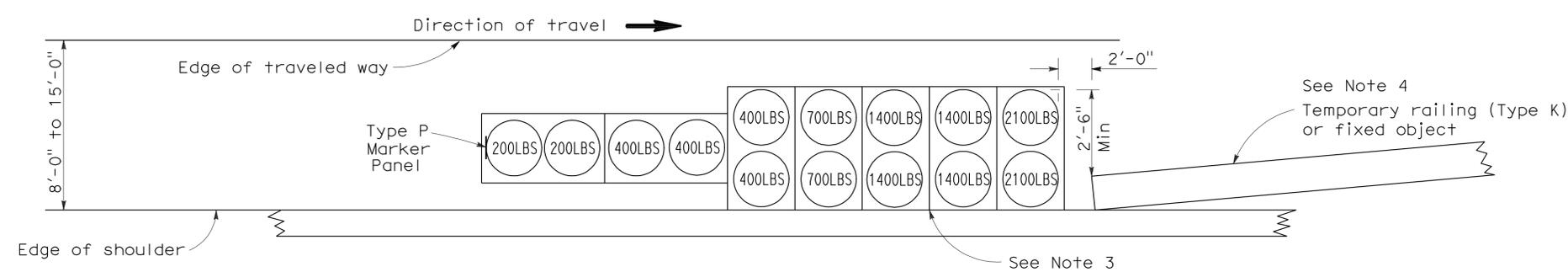
June 6, 2008  
PLANS APPROVAL DATE

*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 3-5-12



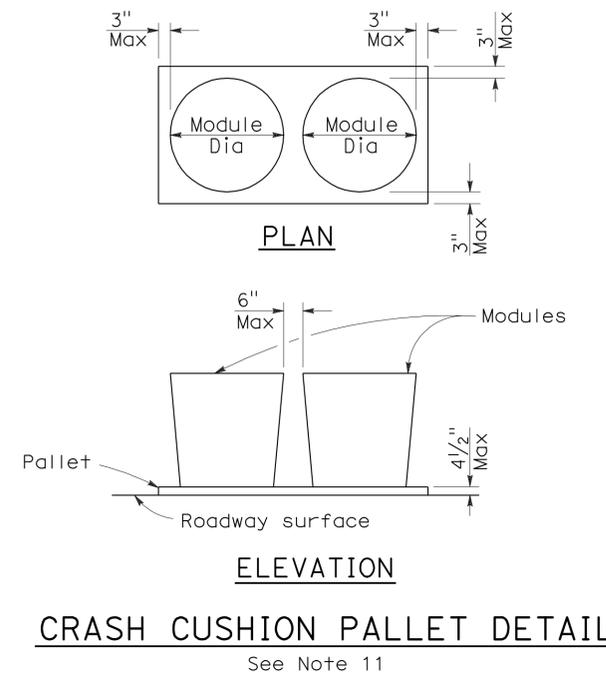
**ARRAY 'TS11'**  
Approach speed less than 45 mph  
See Note 9



**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.



**CRASH CUSHION PALLET DETAIL**  
See Note 11

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

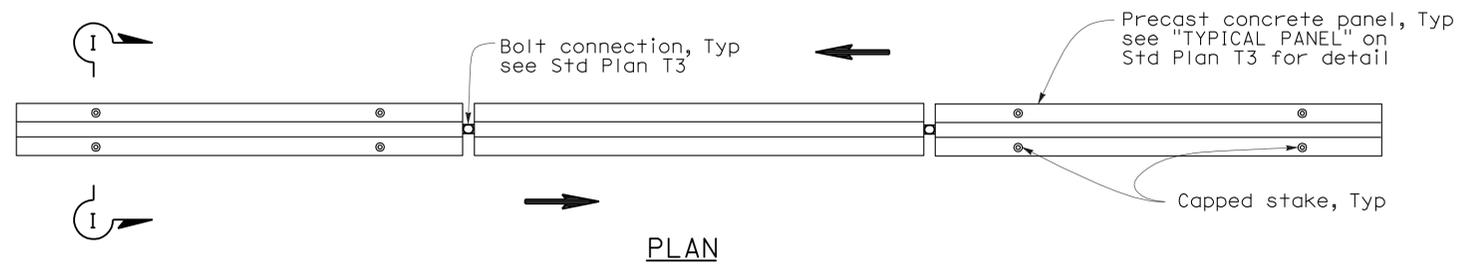
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	35	25.2	16	23

*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

May 20, 2011  
PLANS APPROVAL DATE

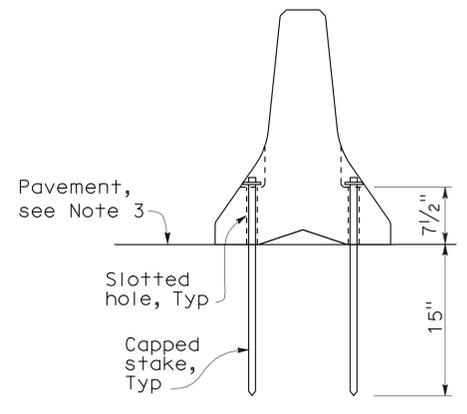
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To accompany plans dated 3-5-12



**RAILING STAKING CONFIGURATION FOR TWO-WAY TRAFFIC**

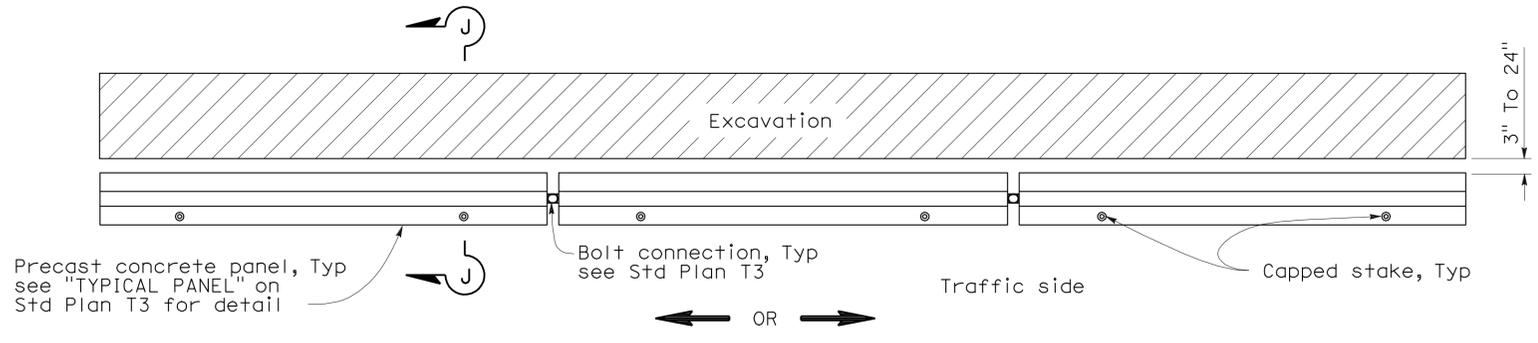
See Note 1



**SECTION I-I**

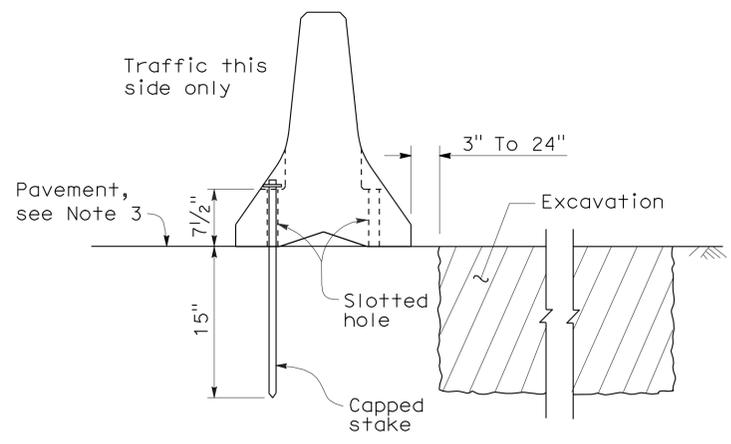
**NOTES:**

1. Where Type K Temporary Railing is placed as a temporary or long term barrier in two-way traffic on highways with less than 24" from the edge of traveled way, use four capped stakes per every other panel with end panels staked.
2. Where Type K Temporary Railing is placed 3" to 24" from the edge of an excavation on highways, use two capped stakes per panel along the traffic side.
3. Staked Type K Temporary Railing must be supported by at least 4" thick concrete, hot mix asphalt or existing asphalt concrete pavement.
4. The minimum yield strength for the washer must be 60,000 psi.
5. Direction of adjacent traffic indicated by  $\Rightarrow$ .

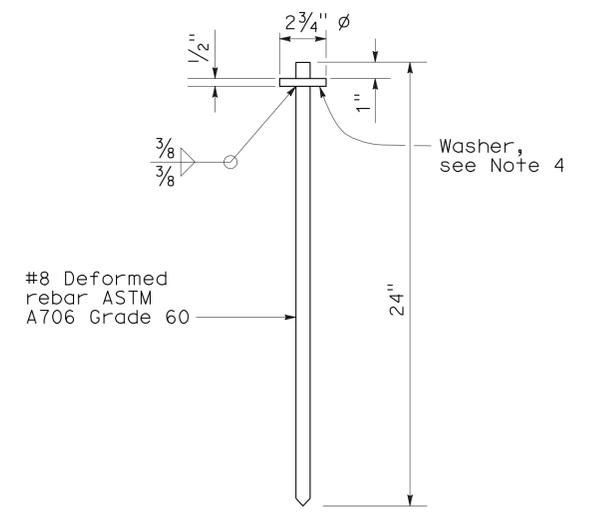


**RAILING STAKING CONFIGURATION ADJACENT TO AN EXCAVATION**

See Note 2



**SECTION J-J**



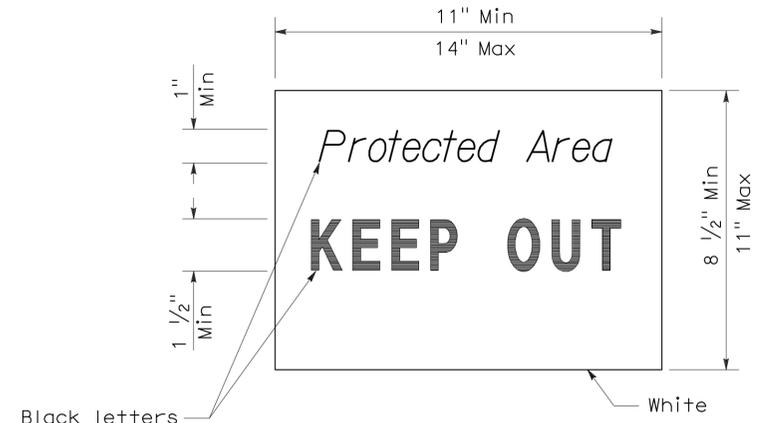
**CAPPED STAKE DETAIL**

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**TEMPORARY RAILING  
(TYPE K)**  
NO SCALE

NSP T3A DATED MAY 20, 2011 SUPPLEMENTS  
THE STANDARD PLANS BOOK DATED MAY 2006.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SM	35	25.2	17	23

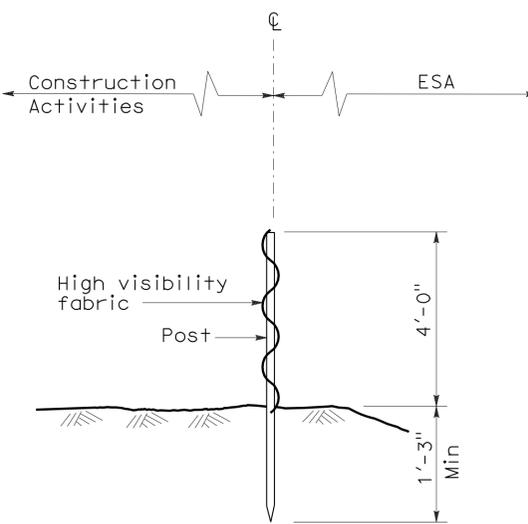
*Robert B. Schott*  
 LICENSED LANDSCAPE ARCHITECT  
 April 3, 2009  
 PLANS APPROVAL DATE  
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.



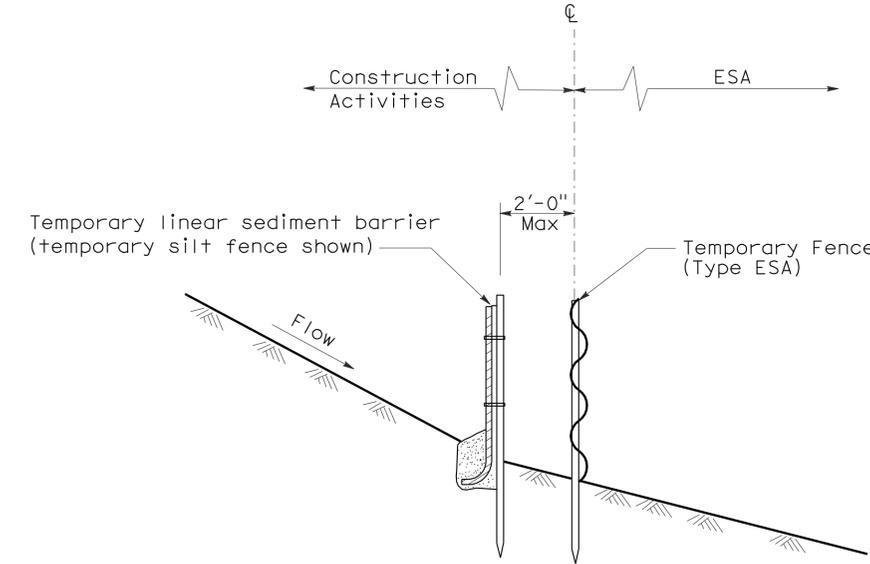
**SIGN DETAIL**

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

To accompany plans dated 3-5-12

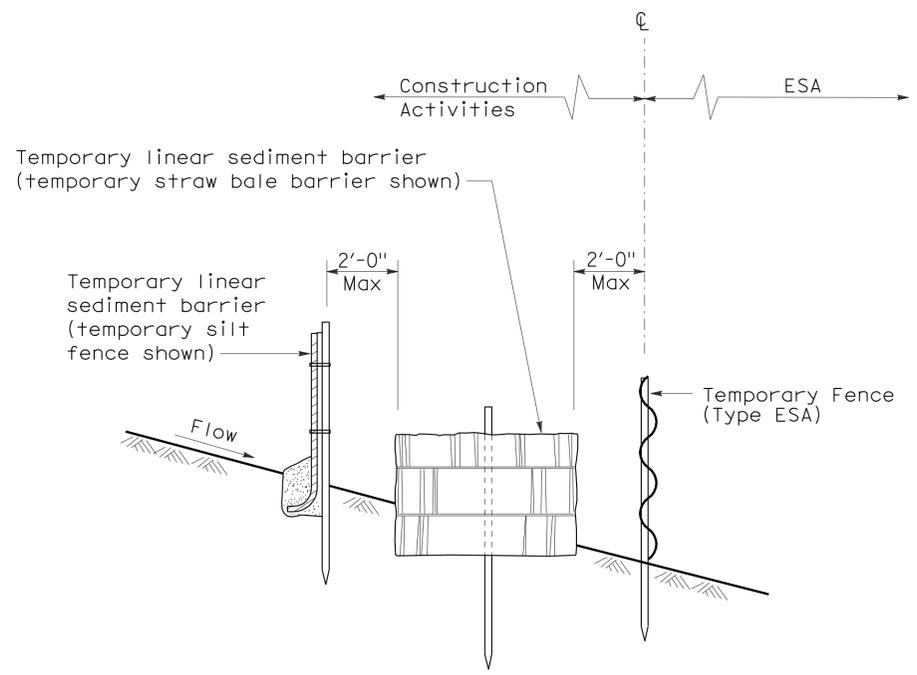


**SECTION TEMPORARY FENCE (TYPE ESA)**



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

(See Note 1)



**SECTION PLACEMENT DETAIL FOR TEMPORARY SILT FENCE 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.

2006 NEW STANDARD PLAN NSP T65

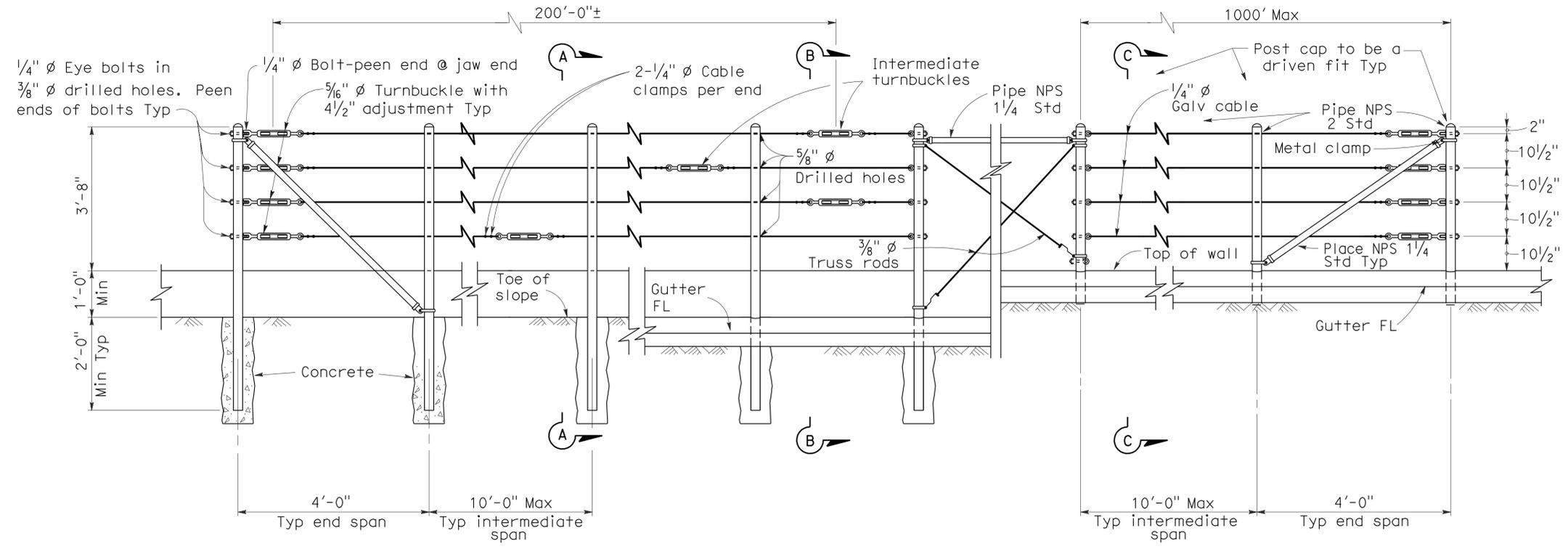
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SM	35	25.2	18	23

REGISTERED CIVIL ENGINEER		
October 21, 2011		
PLANS APPROVAL DATE		

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To accompany plans dated 3-5-12

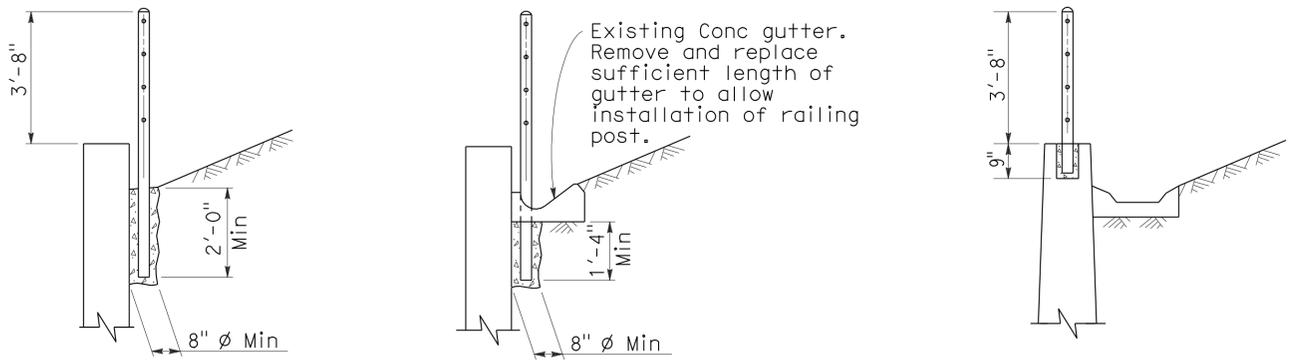


**EXISTING WALL (WITHOUT GUTTER)** Existing      **RETAINING WALL (WITH GUTTER)** Existing      **RETAINING WALL (WITH GUTTER)** New construction

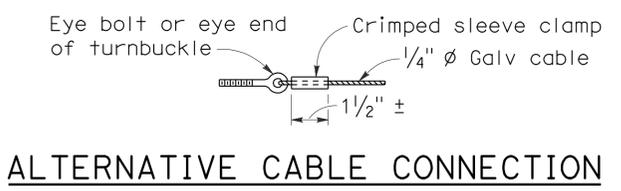
**ELEVATION**

**NOTES:**

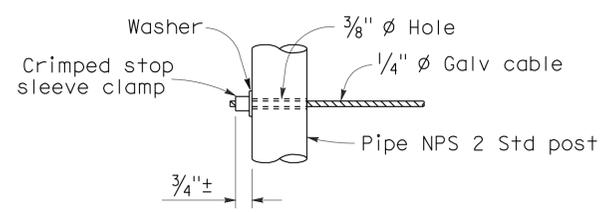
1. Maximum distance between turnbuckles shall be 200'-0"±.
2. Intermediate turnbuckles to be placed in adjacent spans.
3. Cable shall not be spliced between intermediate turnbuckles and end posts.
4. All posts, cable, and hardware to be galvanized.
5. Posts to be vertical.
6. Alignment of holes in posts may vary to conform to slope of top of retaining wall.
7. The Contractor shall verify all dependent dimensions in the field before ordering or fabricating any material.
8. Alternative details may be submitted by the Contractor for approval by the Engineer.
9. Line posts shall be braced horizontally and trussed diagonally in both directions at intervals not to exceed 1000'.
10. Post pockets to be centered in top of wall.
11. Typical end spans, braced in both directions, shall be constructed at changes in line where the angle of deflection is 15° or more.
12. Provide thimbles at all cable loops.



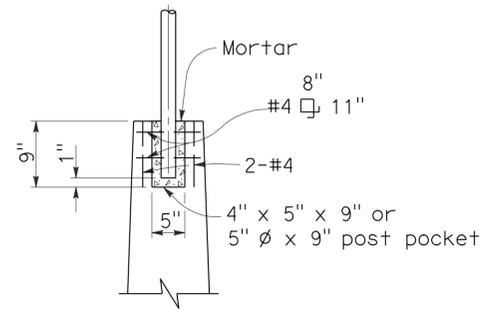
**SECTION A-A** Existing      **SECTION B-B** Existing      **SECTION C-C** New construction



**ALTERNATIVE CABLE CONNECTION**



**ALTERNATIVE DEAD END ANCHORAGE**



**POST POCKET**

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**CABLE RAILING**

NO SCALE

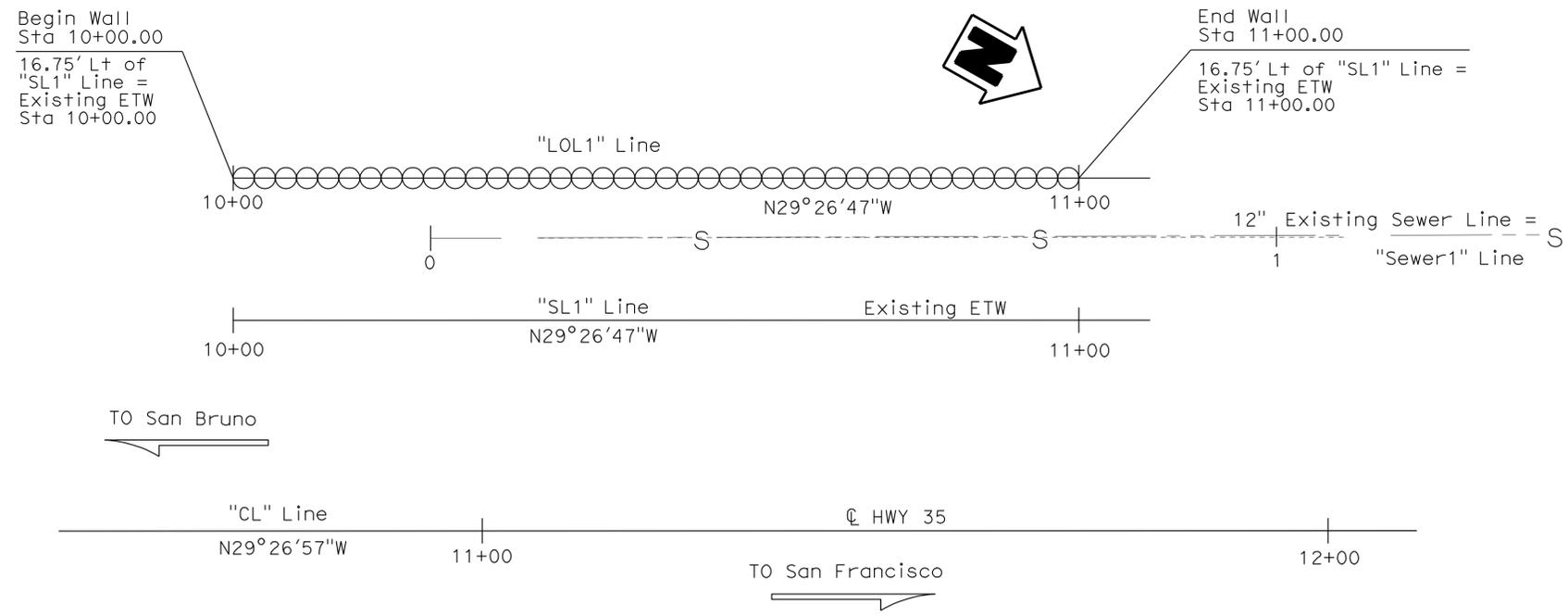
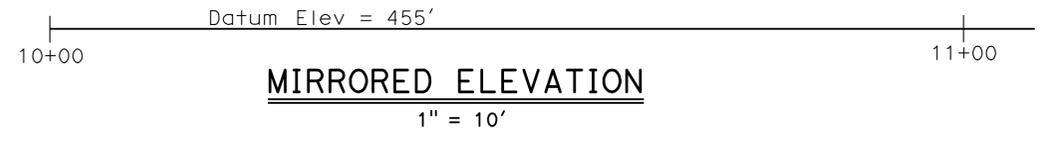
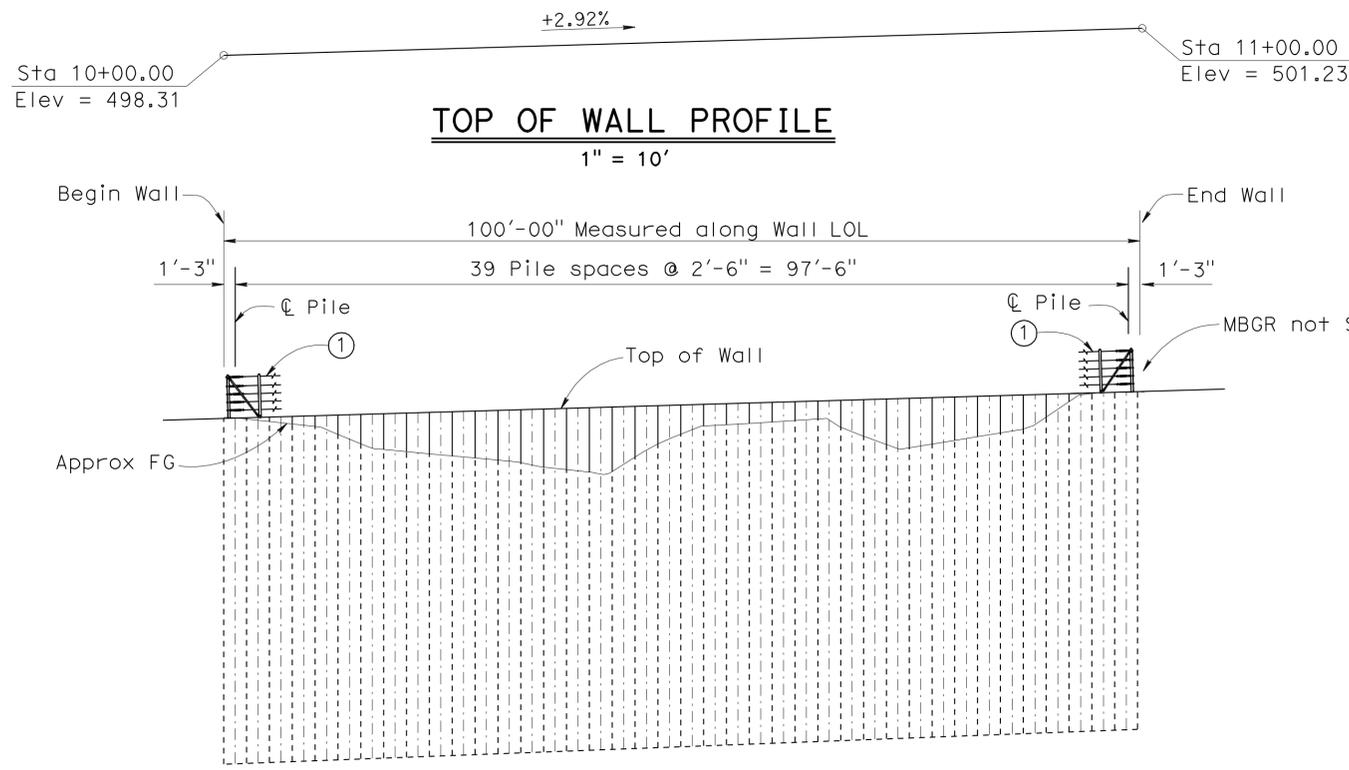
RSP B11-47 DATED OCTOBER 21, 2011 SUPERSEDES STANDARD PLAN B11-47 DATED MAY 1, 2006 - PAGE 268 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP B11-47**

2006 REVISED STANDARD PLAN RSP B11-47

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	35	25.2	19	23

REGISTERED CIVIL ENGINEER DATE 12-27-11  
 ISAIAS D. YALAN  
 No. C68269  
 Exp. 9-30-13  
 CIVIL  
 STATE OF CALIFORNIA  
 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.



**PLAN**  
1" = 10'

**QUANTITIES**

STRUCTURE BACKFILL (SOLDIER PILE WALL)	23	CY
CONCRETE BACKFILL (SOLDIER PILE WALL)	210	CY
STEEL SOLDIER PILE (W16X89)	1,520	LF
30" DRILLED HOLE	1,403	LF
STRUCTURAL CONCRETE (SOLDIER PILE WALL)	60	CY
BAR REINFORCING STEEL (SOLDIER PILE WALL)	6,345	LB
CLEAN AND PAINT STEEL SOLDIER PILING	LUMP	SUM

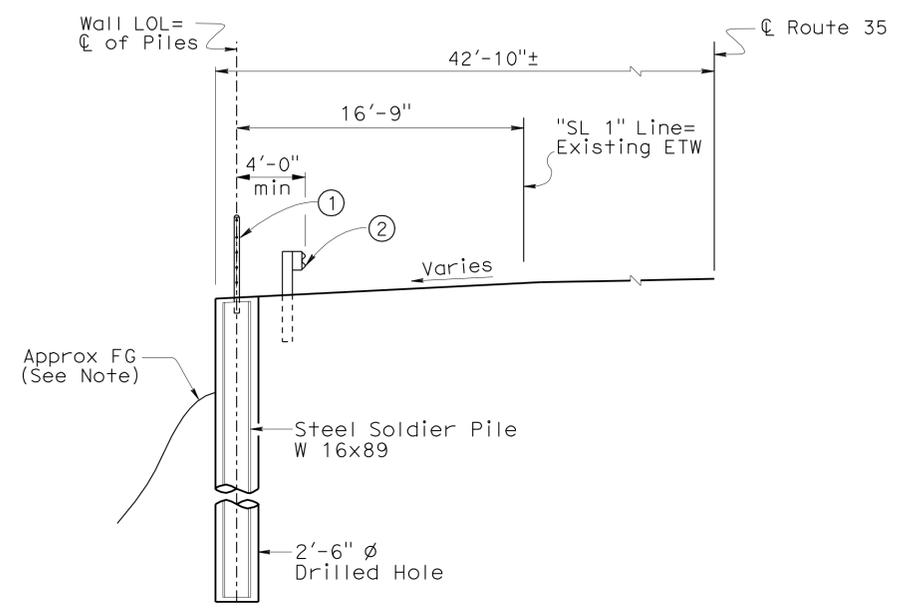
**INDEX TO PLANS**

- 1 GENERAL PLAN
- 2 STRUCTURE PLAN
- 3 FOUNDATION PLAN
- 4 TYPICAL SECTION
- 5 LOG OF TEST BORINGS

**LEGEND**

- ① Cable Railing, see "Road Plans"
- ② MBGR, see "Road Plans"

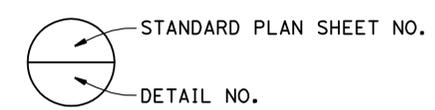
NOTE:  
FG shall be placed as close as possible to OG condition, and as directed by the Engineer.



**PILE WALL TYPICAL SECTION**  
3/16" = 1'

**STANDARD PLANS DATED MAY 2006**

- A10A ACRONYMS AND ABBREVIATIONS (SHEET 1 OF 2)
- A10B ACRONYMS AND ABBREVIATIONS (SHEET 2 OF 2)
- A10C SYMBOLS (SHEET 1 OF 2)
- A10D SYMBOLS (SHEET 2 OF 2)
- A62B LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL BRIDGE SURCHARGE AND WALL



Note:  
For "GENERAL NOTES" see "TYPICAL SECTION" sheet

Gordon Danke DESIGN ENGINEER	DESIGN	BY Isaias Yalan	CHECKED J. Hernandez III	LOAD & RESISTANCE FACTOR DESIGN	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 9	BRIDGE NO.	35-E0036	SNEATH TANGENT WALL GENERAL PLAN
	DETAILS	BY I. Yalan / R. Heider	CHECKED Rosa Candiotti	LAYOUT			BY Isaias Yalan		
	QUANTITIES	BY Isaias Yalan	CHECKED Rosa Candiotti	SPECIFICATIONS	BY Todd Geerts	CHECKED Todd Geerts			

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS  
 UNIT: 3594  
 PROJECT NUMBER & PHASE: 0400001209-1  
 CONTRACT NO.: 04-4S1201  
 DISREGARD PRINTS BEARING EARLIER REVISION DATES  
 REVISION DATES: 7-28-11, 7-24-12, 12-28-11  
 SHEET 1 OF 5

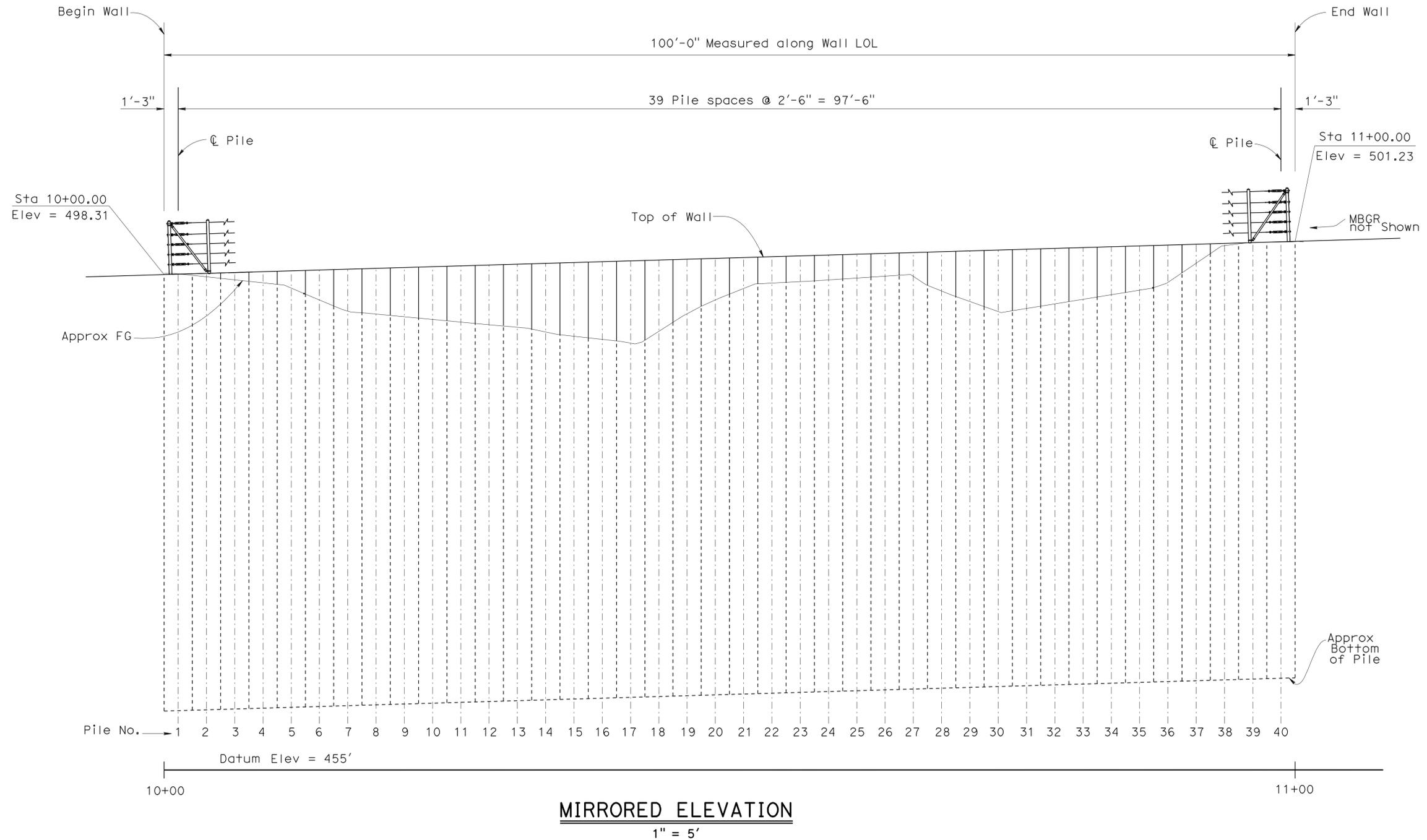
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	35	25.2	20	23

12-27-11  
 REGISTERED CIVIL ENGINEER DATE  
 3-5-12  
 PLANS APPROVAL DATE  
 ISAIAS D. YALAN  
 No. C68269  
 Exp. 9-30-13  
 CIVIL  
 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.

- Notes:
- For details not shown, see "TYPICAL SECTION" sheet.
  - Drilling for a Soldier Pile shall not be performed until the concrete in the adjacent pile or piles has cured for a period of not less than 36 hours.

PILE TABLE

Station	Pile No.	Top of Wall Elev	Approx FG Elev
10+01.25	1	498.35	498.35
10+03.75	2	498.42	498.12
10+06.25	3	498.49	497.85
10+08.75	4	498.57	497.58
10+11.25	5	498.64	497.11
10+13.75	6	498.71	496.06
10+16.25	7	498.78	495.08
10+18.75	8	498.86	494.82
10+21.25	9	498.93	494.58
10+23.75	10	499.00	494.35
10+26.25	11	499.08	494.11
10+28.75	12	499.15	493.88
10+31.25	13	499.22	493.66
10+33.75	14	499.30	493.24
10+36.25	15	499.37	492.87
10+38.75	16	499.44	492.59
10+41.25	17	499.51	492.26
10+43.75	18	499.59	493.31
10+46.25	19	499.66	494.86
10+48.75	20	499.73	496.09
10+51.25	21	499.81	497.09
10+53.75	22	499.88	497.56
10+56.25	23	499.95	497.69
10+58.75	24	500.03	497.84
10+62.25	25	500.10	498.01
10+63.75	26	500.17	498.17
10+66.25	27	500.24	498.15
10+68.75	28	500.32	496.86
10+71.25	29	500.39	495.94
10+73.75	30	500.46	495.05
10+76.25	31	500.54	495.32
10+78.75	32	500.61	495.73
10+81.25	33	500.68	496.13
10+83.75	34	500.76	496.54
10+86.25	35	500.83	496.94
10+88.75	36	500.90	497.62
10+91.25	37	500.97	499.31
10+93.75	38	501.05	500.66
10+96.25	39	501.12	501.12
10+98.75	40	501.19	501.19



**MIRRORED ELEVATION**  
1" = 5'

DESIGN	BY Isaias Yalan	CHECKED Rosa Candiotti
DETAILS	BY Rania Heider	CHECKED Rosa Candiotti
QUANTITIES	BY Isaias Yalan	CHECKED Rosa Candiotti

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
DESIGN BRANCH 9

BRIDGE NO.	35-E0036
POST MILE	25.2

**SNEATH TANGENT WALL  
STRUCTURE PLAN**

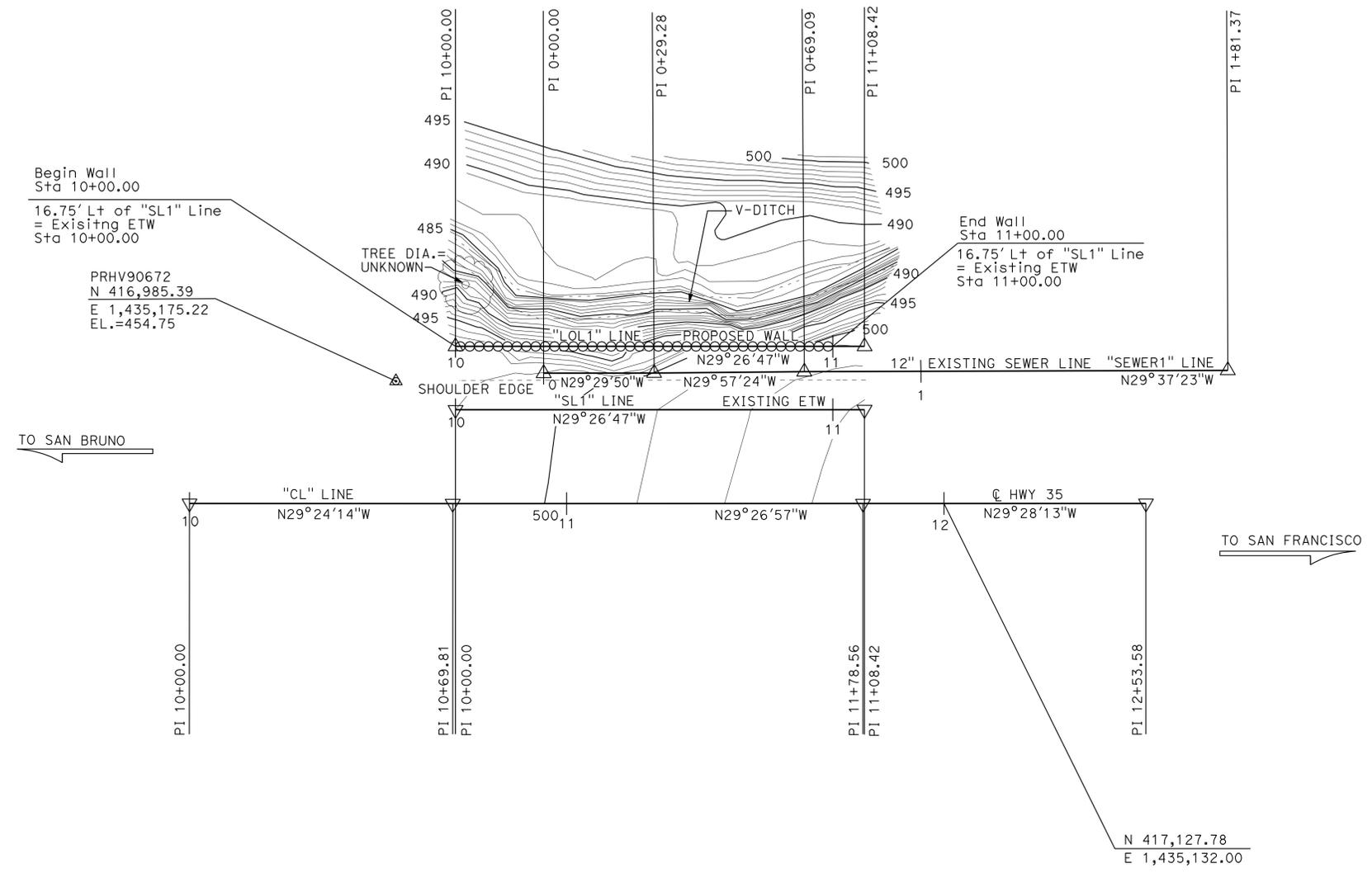
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	35	25.2	21	23

*Isaias D. Yalan* 12-27-11  
REGISTERED CIVIL ENGINEER DATE

3-5-12  
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 ISAIAS D. YALAN  
 No. C68269  
 Exp. 9-30-13  
 CIVIL  
 STATE OF CALIFORNIA

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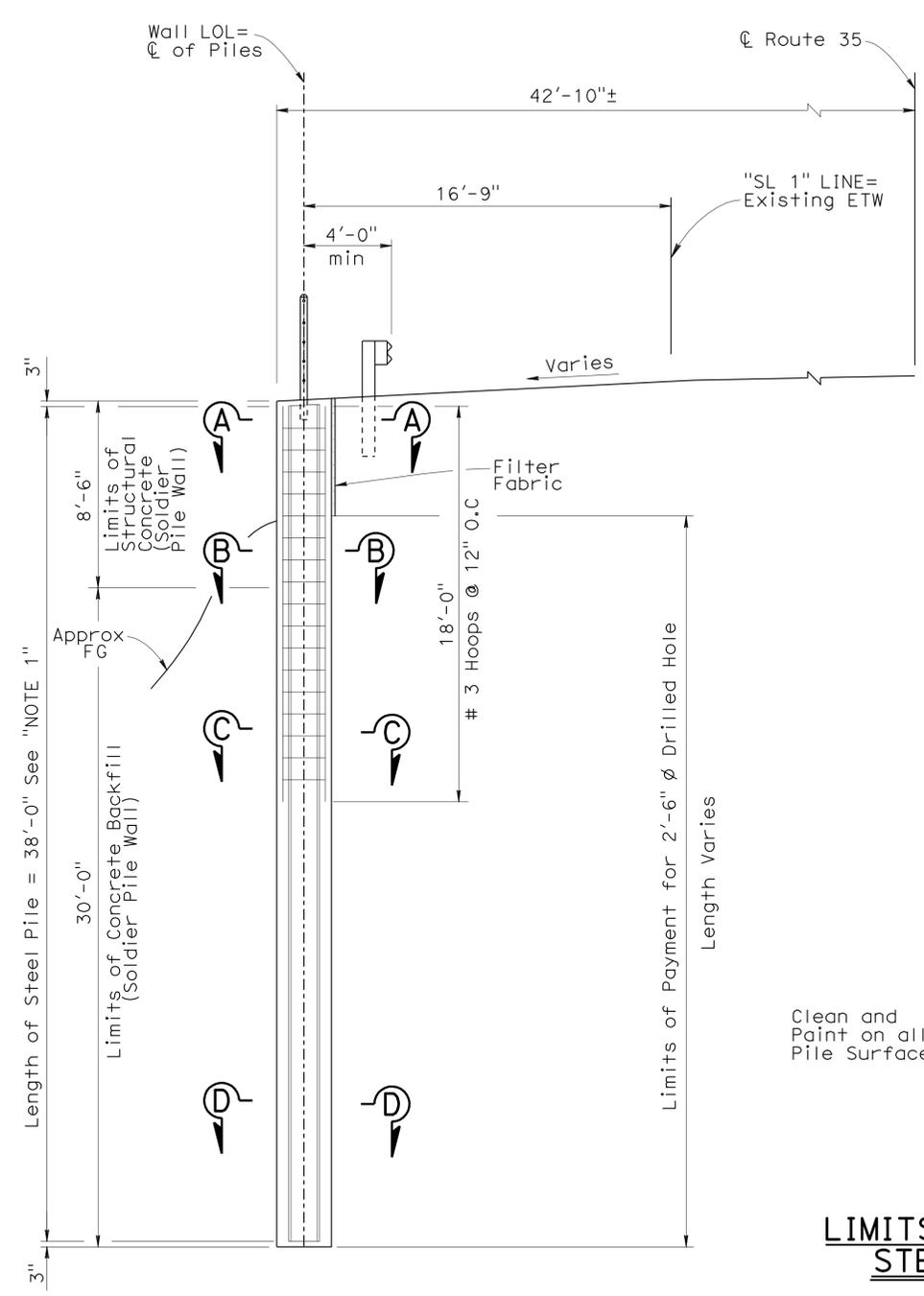


**SURVEY CONTROL**  
 PRHV90671 (NOT SHOWN ON PLAN)  
 Fnd PK Nail  
 1002.58 FT S40°43'33"E From  
 Sta. 10+00.00  
 N 416,193.81  
 E 1,435,884.41  
 Elev. = 454.75

PRHV90672  
 Fnd PK Nail  
 32.37 FT Lt. Rte 35  
 Sta. 10+54.73  
 N 416,985.39  
 E 1,435,175.22  
 Elev. = 498.31

<b>PRELIMINARY INVESTIGATION SECTION</b>				DESIGN BY Isaias Yalan	CHECKED Rosa Candiotti	<b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN <b>DESIGN BRANCH 9</b>	BRIDGE NO. 35-E0036	<b>SNEATH TANGENT WALL</b> <b>FOUNDATION PLAN</b>			
SCALE 1"=20'	VERT. DATUM NGVD29	PHOTOGRAMMETRY AS OF: X	DETAILS BY Rania Heider	CHECKED Rosa Candiotti	POST MILE 25.2							
ALIGNMENT TIES Dist. Traverse Sheet	DRAFTED BY L. Vasquez	CHECKED BY T. Zolnikov	QUANTITIES BY Isaias Yalan	CHECKED Rosa Candiotti								
STRUCTURES FOUNDATION PLAN SHEET (ENGLISH) (REV. 09-01-10)						ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	UNIT: 3646	PROJECT NUMBER & PHASE: 0400001209 1	CONTRACT NO.: 04-4S1201	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET 3 OF 5

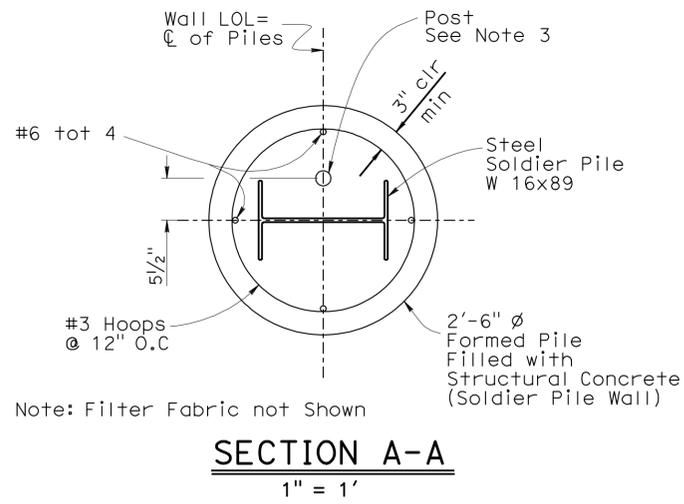
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	35	25.2	22	23
			12-27-11	REGISTERED CIVIL ENGINEER DATE	
			3-5-12	PLANS APPROVAL DATE	
			REGISTERED PROFESSIONAL ENGINEER ISAIAS D. YALAN No. C68269 Exp. 9-30-13 CIVIL STATE OF CALIFORNIA		
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.					



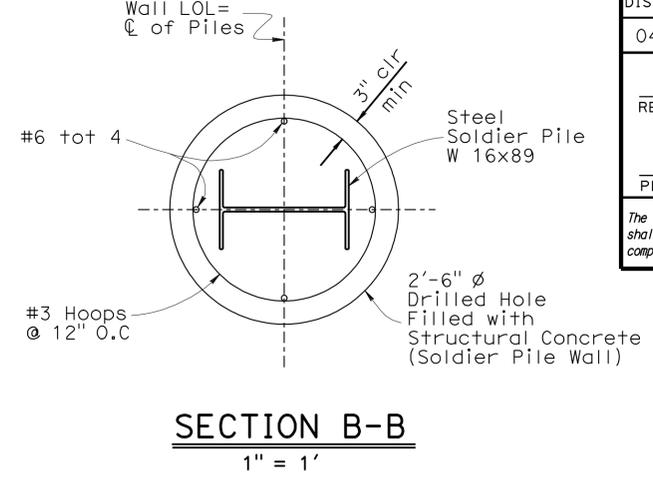
**TYPICAL SECTION**  
1/4" = 1'

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

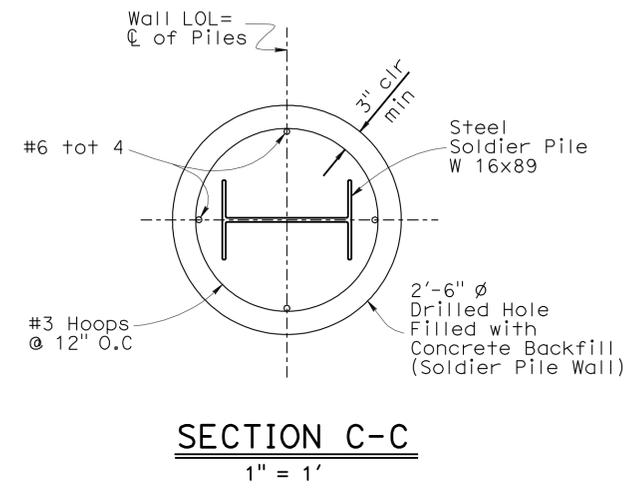
- NOTES:**
- Limits of clean and paint steel soldier pile.
  - No splices allowed on steel soldier pile.
  - For posts spacing and details, see "ROAD PLANS".



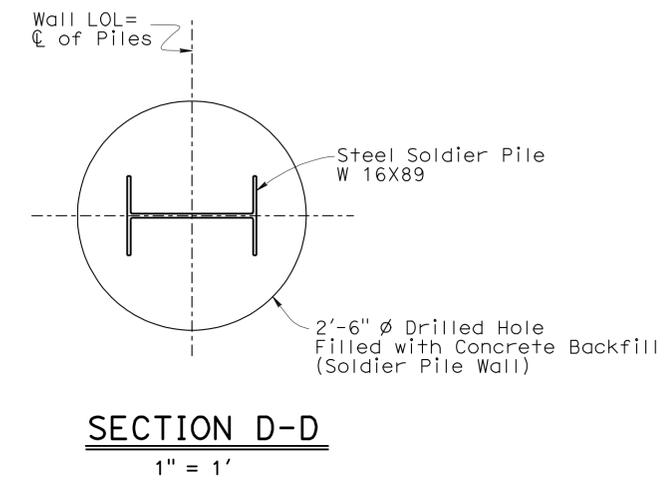
**SECTION A-A**  
1" = 1'



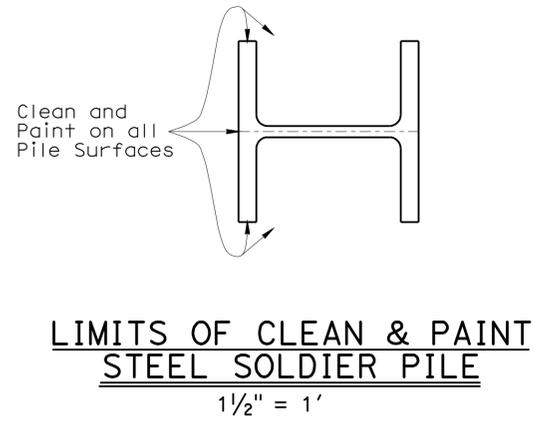
**SECTION B-B**  
1" = 1'



**SECTION C-C**  
1" = 1'



**SECTION D-D**  
1" = 1'



**LIMITS OF CLEAN & PAINT STEEL SOLDIER PILE**  
1 1/2" = 1'

**GENERAL NOTES**

**DESIGN:**  
AASHTO LRFD Bridge Design Specifications  
4th Edition with California Amendments

**SOIL PARAMETERS:** (For determination of lateral earth pressure)

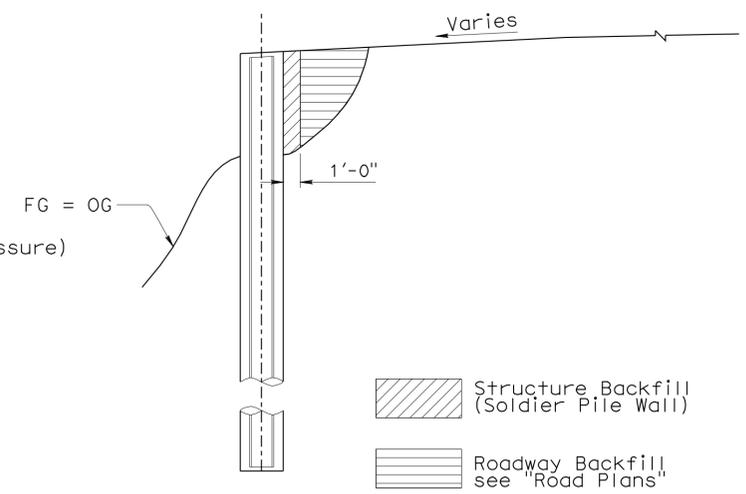
Active Pressure:  
 $\phi$  (Internal Friction Angle) = 32°  
 C (Cohesion) = 0 psf  
 $\gamma$  (Unit Weight) = 120 lb/ft<sup>3</sup>  
 $K_a$  (Active Earth Pressure Coefficient) = 0.30  
 $q$  (Traffic Surcharge) = 240 psf

Passive Pressure:  
 $\gamma$  (Unit Weight) = 120 lb/ft<sup>3</sup>  
 $S_u$  (Undrained Shear Strength) = 2000 psf

**CONCRETE:**  
 $f_y$  = 60 ksi  
 $f'_c$  = 3.6 ksi

**STRUCTURAL STEEL:**  
 $f_y$  = ASTM A709 Grade 50

**SEISMIC LOADING:**  
 EQ = 18 pcf



**LIMITS OF BACKFILL**  
3/16" = 1'

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)	DESIGN	BY Isaias Yalan	CHECKED Rosa Candiotti	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 9	BRIDGE NO.	SNEATH TANGENT WALL					
	DETAILS	BY Rania Heider	CHECKED Rosa Candiotti			35-E0036	TYPICAL SECTION					
	QUANTITIES	BY Isaias Yalan	CHECKED Rosa Candiotti			POST MILE	25.2					
				ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	UNIT: 3594 PROJECT NUMBER & PHASE: 0400001209-1	CONTRACT NO.: 04-4S1201	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES				
								<table border="1"> <tr> <td>7-28-11</td> <td>2-27-12</td> <td>3-01-12</td> <td>1-04-12</td> </tr> </table>	7-28-11	2-27-12	3-01-12	1-04-12
7-28-11	2-27-12	3-01-12	1-04-12									
								<table border="1"> <tr> <td>SHEET</td> <td>OF</td> </tr> <tr> <td>4</td> <td>5</td> </tr> </table>	SHEET	OF	4	5
SHEET	OF											
4	5											

DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SM	35	25.2	23	23

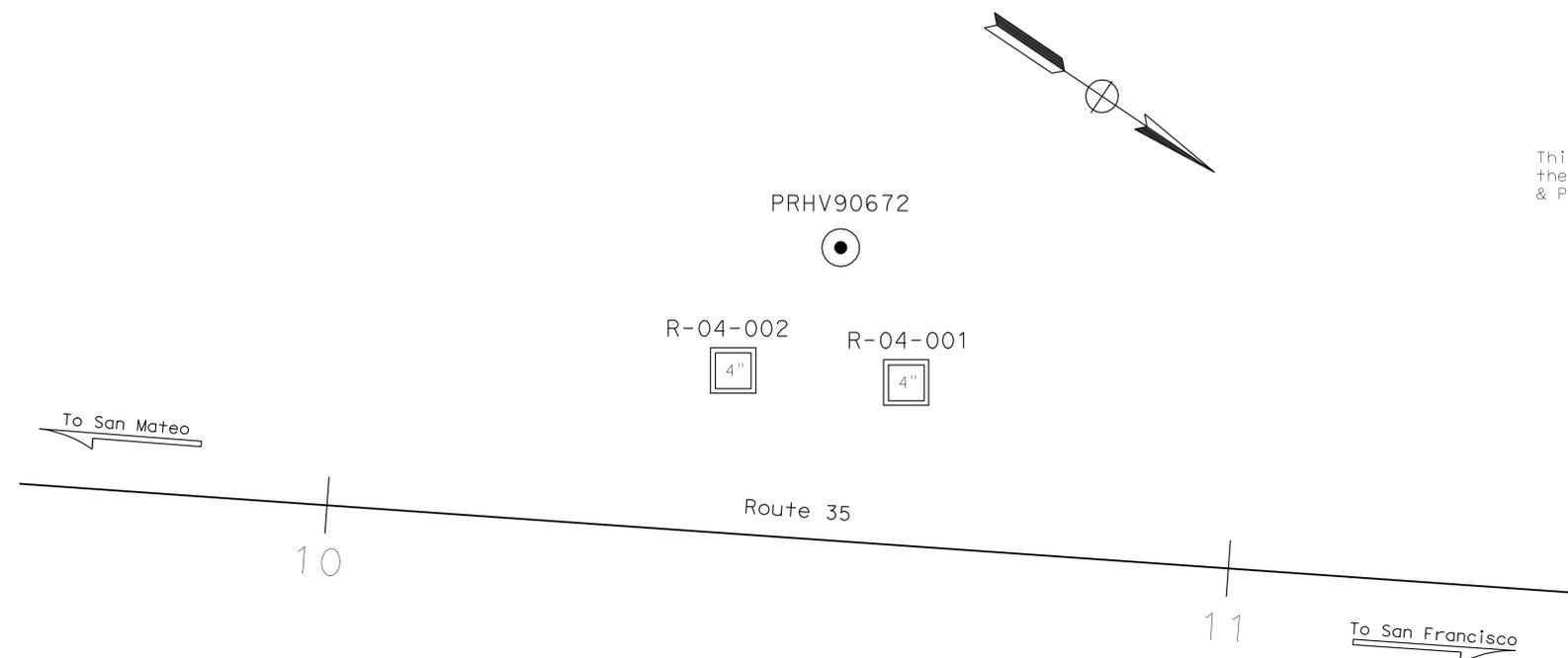
05-19-11  
*E. Ortega*  
 REGISTERED ENGINEER - CIVIL  
 No. 41012  
 Exp. 03-31-13  
 CIVIL  
 STATE OF CALIFORNIA

3-5-12  
 PLANS APPROVAL DATE  
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**BENCH MARK**

PRHV90671 (NOT SHOWN ON PLAN)  
 Fnd PK Nail  
 1002.58 FT S40°43'33"E From  
 Sta. 10+00.00  
 N 416,193.81  
 E 1,435,884.41  
 Elev.=454.75

PRHV90672  
 Fnd PK Nail  
 32.37 FT Lt. Rte 35  
 Sta. 10+54.73  
 N 416,985.39  
 E 1,435,175.22  
 Elev.=498.31



This LOTB sheet does not entirely comply with the Cantrans Soil & Rock Logging, Classification, & Presentation Manual (2010).

**LEGEND OF BORING OPERATIONS**

**LEGEND OF EARTH MATERIALS**

**CONSISTENCY CLASSIFICATION FOR SOILS**

**LEGEND OF BORING OPERATIONS**

**LEGEND OF EARTH MATERIALS**

**CONSISTENCY CLASSIFICATION FOR SOILS**

**LEGEND OF BORING OPERATIONS**

**LEGEND OF EARTH MATERIALS**

**CONSISTENCY CLASSIFICATION FOR SOILS**



**PROFILE**  
 HORIZ. NO SCALE  
 VERT. 1"=10'

<b>ENGINEERING SERVICE CENTER</b>		<b>STRUCTURE FOUNDATIONS</b>		FIELD INVESTIGATION BY:	<b>STATE OF CALIFORNIA</b>	<b>DIVISION OF ENGINEERING SERVICES</b>	BRIDGE NO.	<b>SNEATH TANGENT WALL</b>	
DRAWN BY	M. REYNOLDS 12/04			E. Ortega	DEPARTMENT OF TRANSPORTATION	OFFICE OF GEOTECHNICAL	35-E0036	<b>LOG OF TEST BORINGS</b>	
CHECKED BY	R. Nashed					DESIGN BRANCH	POST MILE		
							25.2		