

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	5	25.1/28.6	401	485

<i>Paul Matos</i>	01-30-12
REGISTERED ELECTRICAL ENGINEER	DATE
6-4-12	
PLANS APPROVAL DATE	

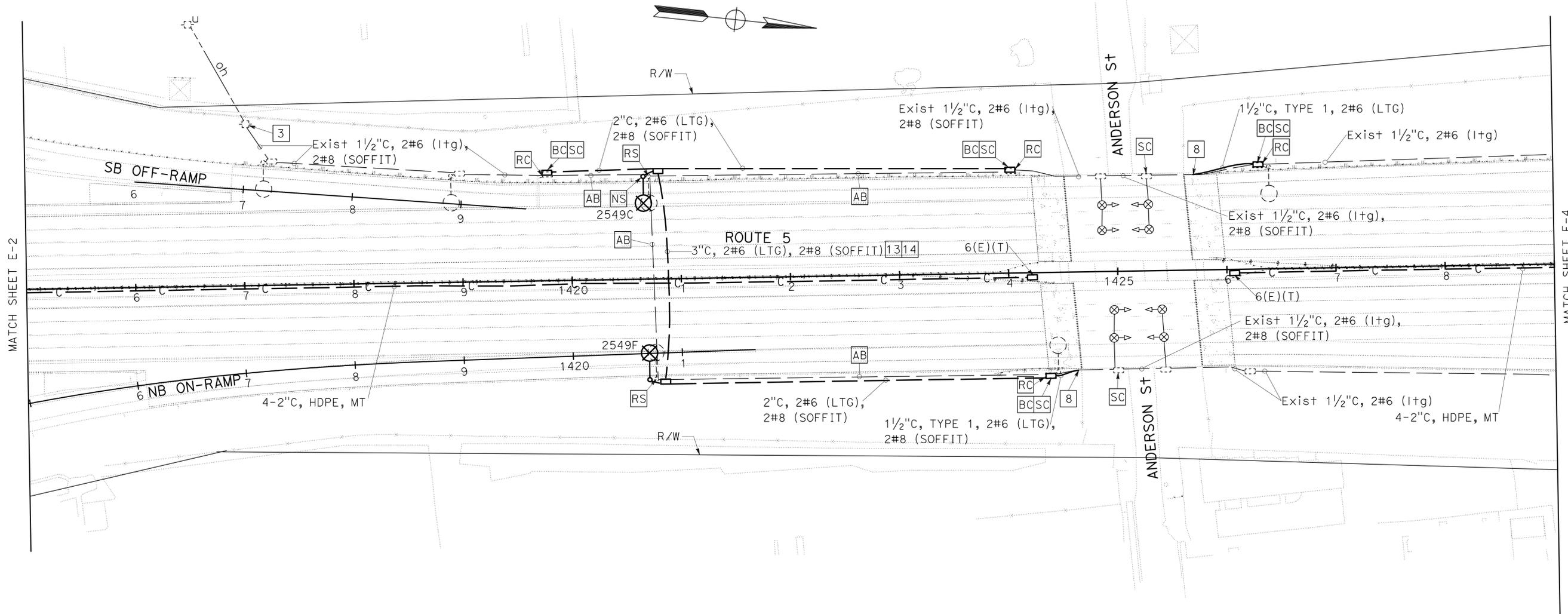
PAUL MATOS
No. 18757
Exp. 6/30/13
ELECTRICAL

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans 06-ELECTRICAL DESIGN
FUNCTIONAL SUPERVISOR
ALI BAKHDOUD
CALCULATED/DESIGNED BY
CHECKED BY
PAUL MATOS
OMAR MENDOZA
REVISOR BY
DATE
REVISED
DATE
REVISED



MODIFY LIGHTING COMMUNICATION CONDUIT SYSTEM

SCALE: 1"=50' **E-3**

APPROVED FOR ELECTRICAL WORK ONLY

LAST REVISION DATE PLOTTED => 05-JUN-2012 01-30-12 TIME PLOTTED => 09:16

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	5	25.1/28.6	402	485

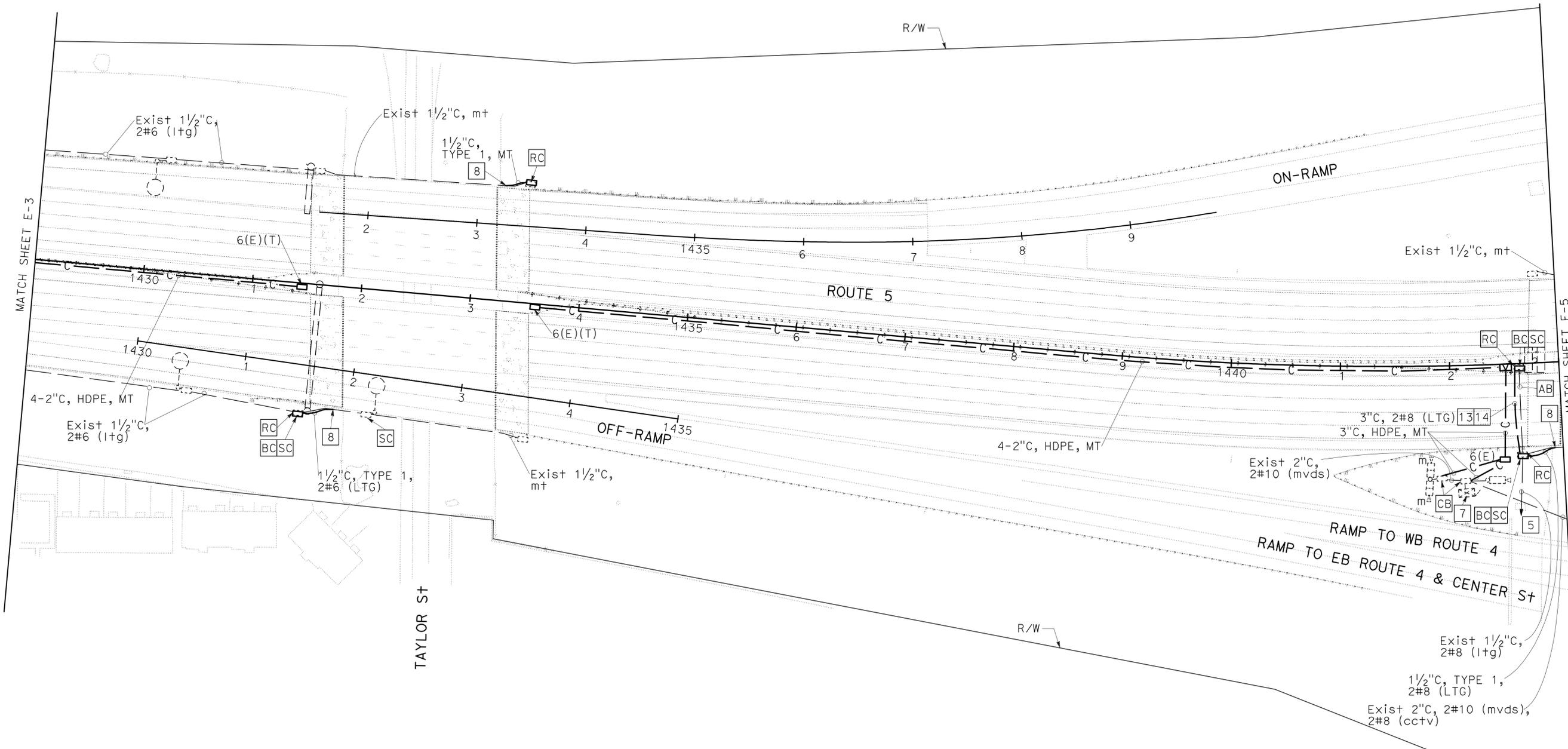
<i>Paul Matos</i>	01-30-12
REGISTERED ELECTRICAL ENGINEER	DATE
6-4-12	
PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER
PAUL MATOS
No. 18757
Exp. 6/30/13
ELECTRICAL
STATE OF CALIFORNIA

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MODIFY LIGHTING COMMUNICATION CONDUIT SYSTEM

SCALE: 1"=50' **E-4**

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	PAUL MATOS	REVISOR
Caltrans 06-ELECTRICAL DESIGN	ALI BAKHDOUD	OMAR MENDOZA	DATE
	CHECKED BY		REVISION
	DESIGNED BY		

LAST REVISION DATE PLOTTED => 08-JUN-2012 01-30-12 TIME PLOTTED => 08:02

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
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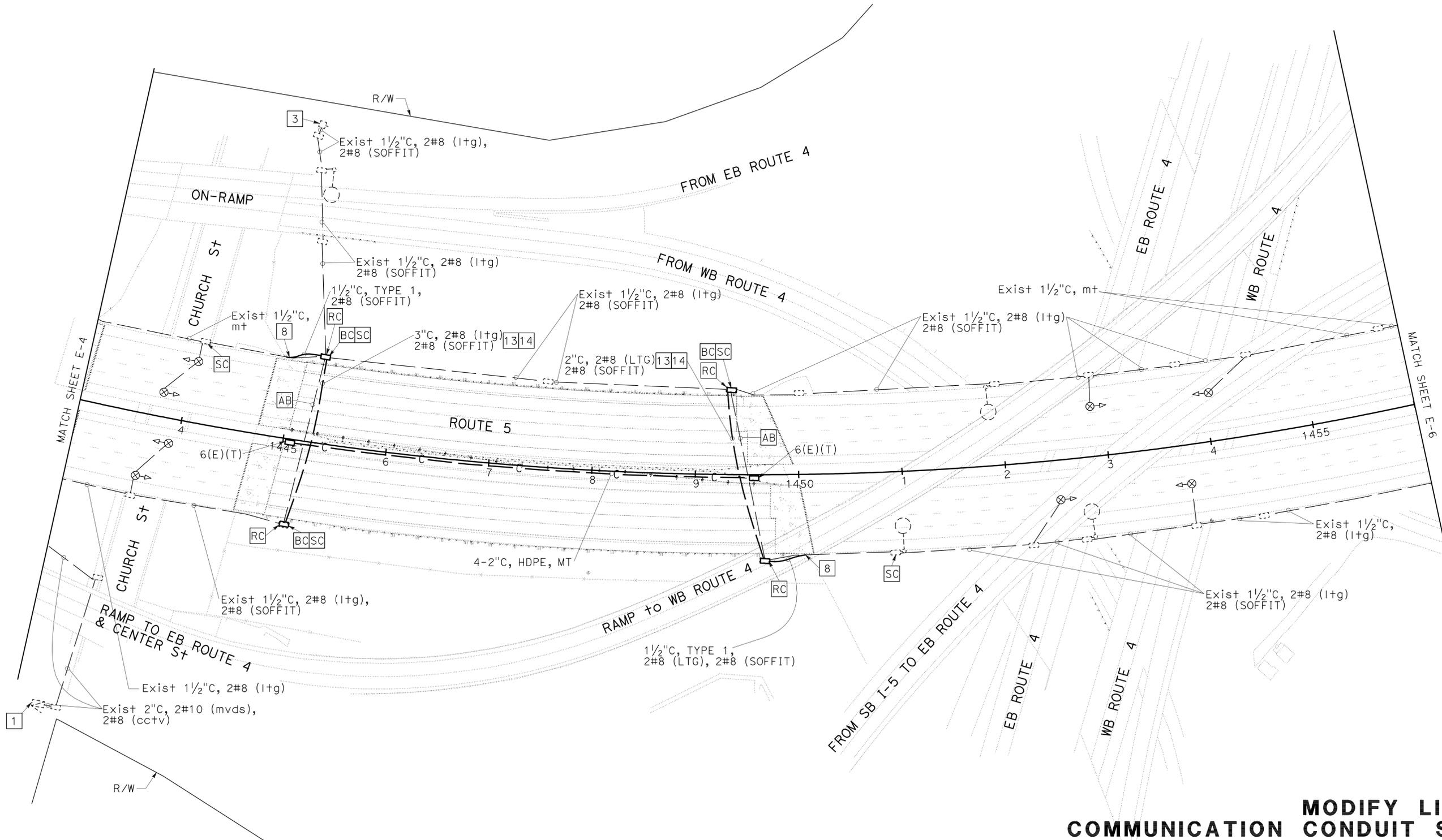
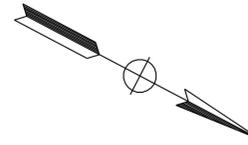
<i>Paul Matos</i>	01-30-12
REGISTERED ELECTRICAL ENGINEER	DATE
6-4-12	
PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER
PAUL MATOS
No. 18757
Exp. 6/30/13
ELECTRICAL
STATE OF CALIFORNIA

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MODIFY LIGHTING COMMUNICATION CONDUIT SYSTEM

SCALE: 1"=50' **E-5**

APPROVED FOR ELECTRICAL WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	REVISOR	DATE
Caltrans 06-ELECTRICAL DESIGN	ALI BAKHDOUD	PAUL MATOS	
	CHECKED BY	OMAR MENDOZA	
	DESIGNED BY		

LAST REVISION DATE PLOTTED => 05-JUN-2012 01-30-12 TIME PLOTTED => 09:17

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
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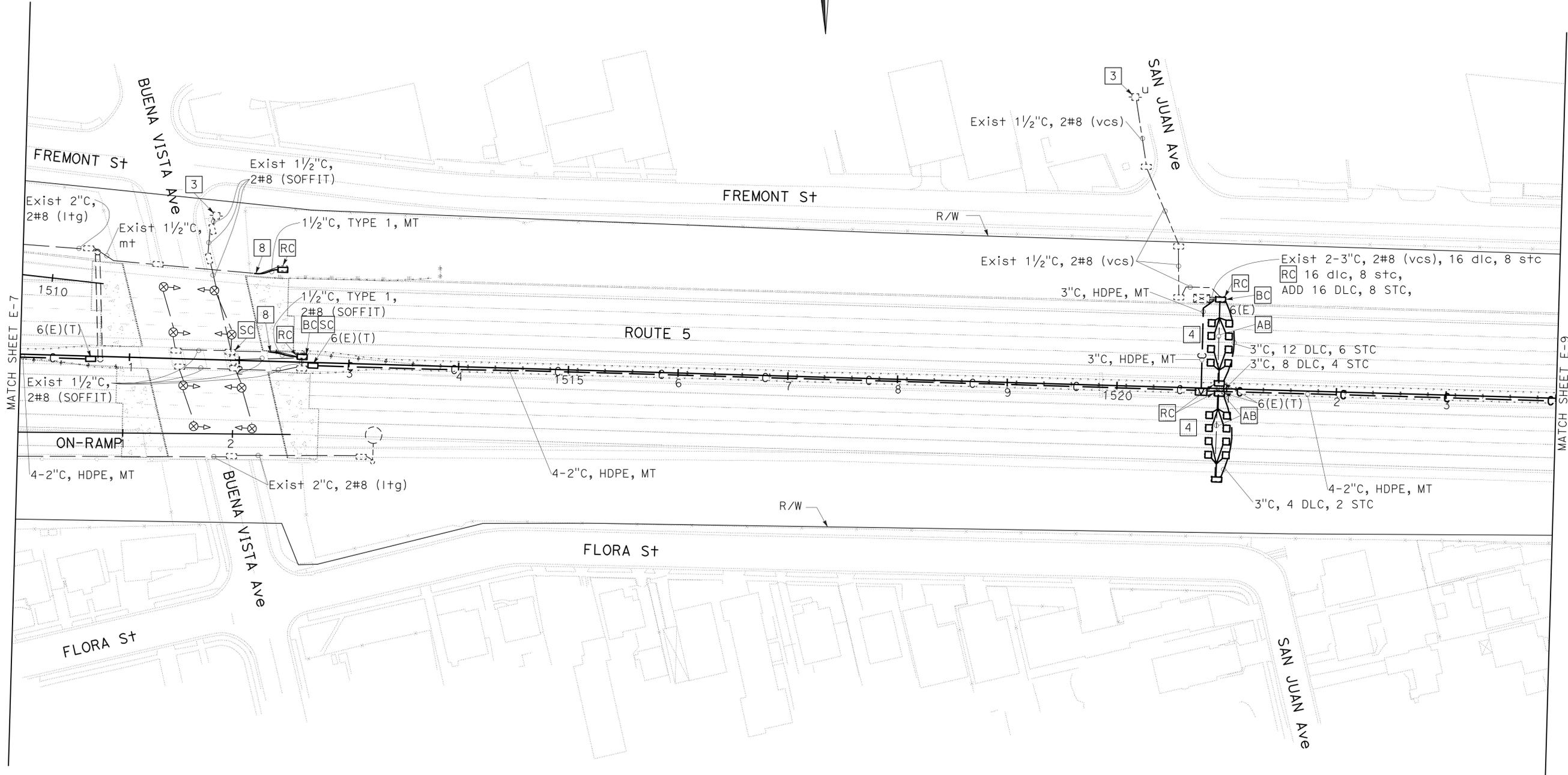
<i>Paul Matos</i>	01-30-12
REGISTERED ELECTRICAL ENGINEER	DATE
6-4-12	
PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER
PAUL MATOS
No. 18757
Exp. 6/30/13
ELECTRICAL
STATE OF CALIFORNIA

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NOTES:

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**MODIFY LIGHTING
MODIFY VEHICLE CLASSIFICATION STATION
COMMUNICATION CONDUIT SYSTEM**

SCALE: 1"=50' **E-8**

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	REVISOR	DATE
Caltrans 06-ELECTRICAL DESIGN	PAUL MATOS	
FUNCTIONAL SUPERVISOR	OMAR MENDOZA	
ALI BAKHDOUD		
CALCULATED/DESIGNED BY		
CHECKED BY		

LAST REVISION DATE PLOTTED => 08-JUN-2012
01-30-12 TIME PLOTTED => 08:02

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
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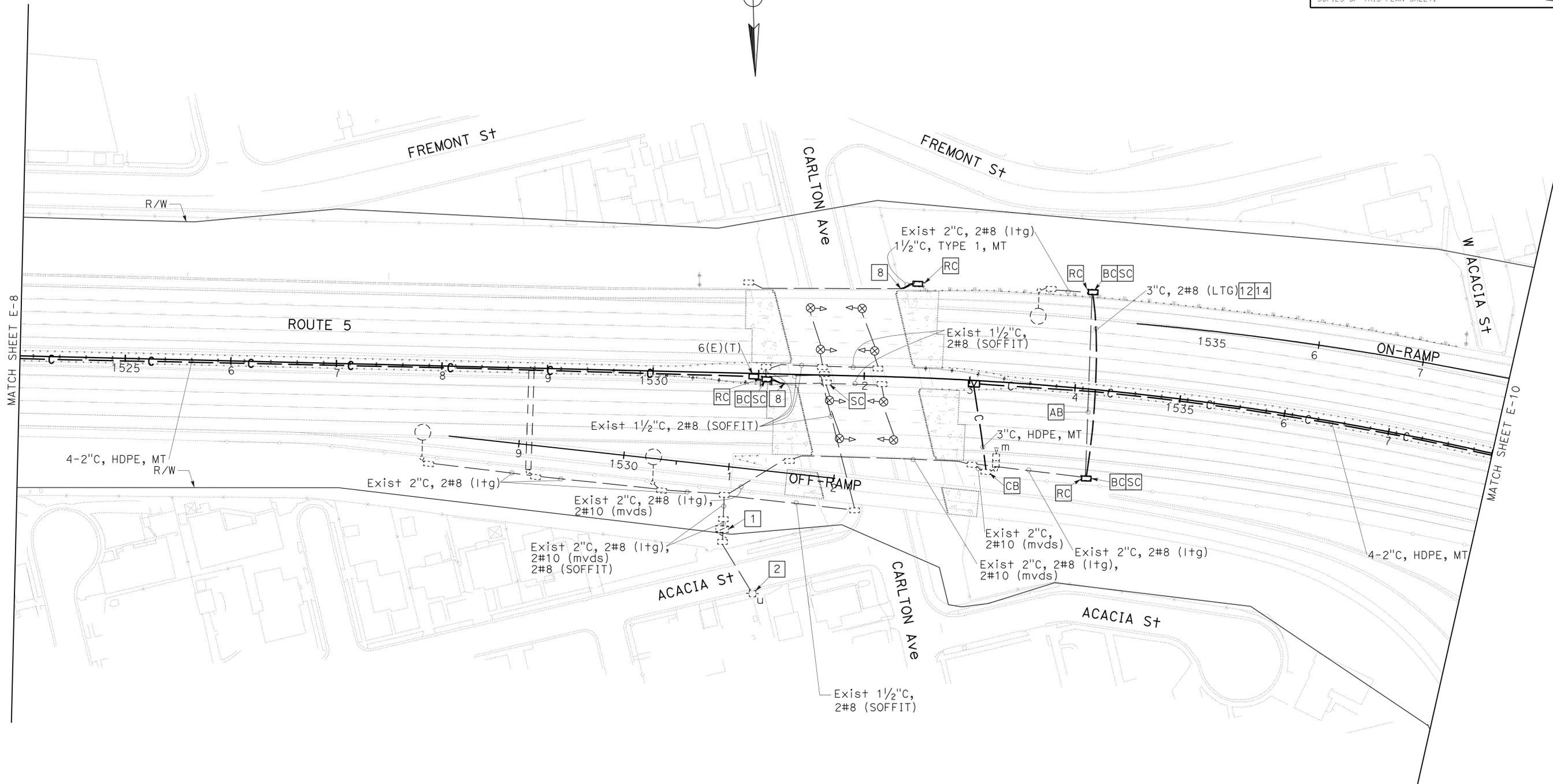
Paul Matos 01-30-12
 REGISTERED ELECTRICAL ENGINEER DATE

6-4-12
 PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER
PAUL MATOS
 No. 18757
 Exp. 6/30/13
 ELECTRICAL
 STATE OF CALIFORNIA

- NOTES:**
- FOR NOTES SEE SHEET E-1.
 - FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

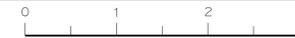


MODIFY LIGHTING COMMUNICATION CONDUIT SYSTEM

SCALE: 1"=50' **E-9**

APPROVED FOR ELECTRICAL WORK ONLY

REVISOR	DATE	REVISION	DATE	REVISION
PAUL MATOS	OMAR MENDOZA	PAUL MATOS	OMAR MENDOZA	PAUL MATOS
CALCULATED/DESIGNED BY	CHECKED BY	FUNCTIONAL SUPERVISOR	DEPARTMENT OF TRANSPORTATION	
ALI BAKHDOUD	ALI BAKHDOUD	06-ELECTRICAL DESIGN		
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION				
Caltrans				



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
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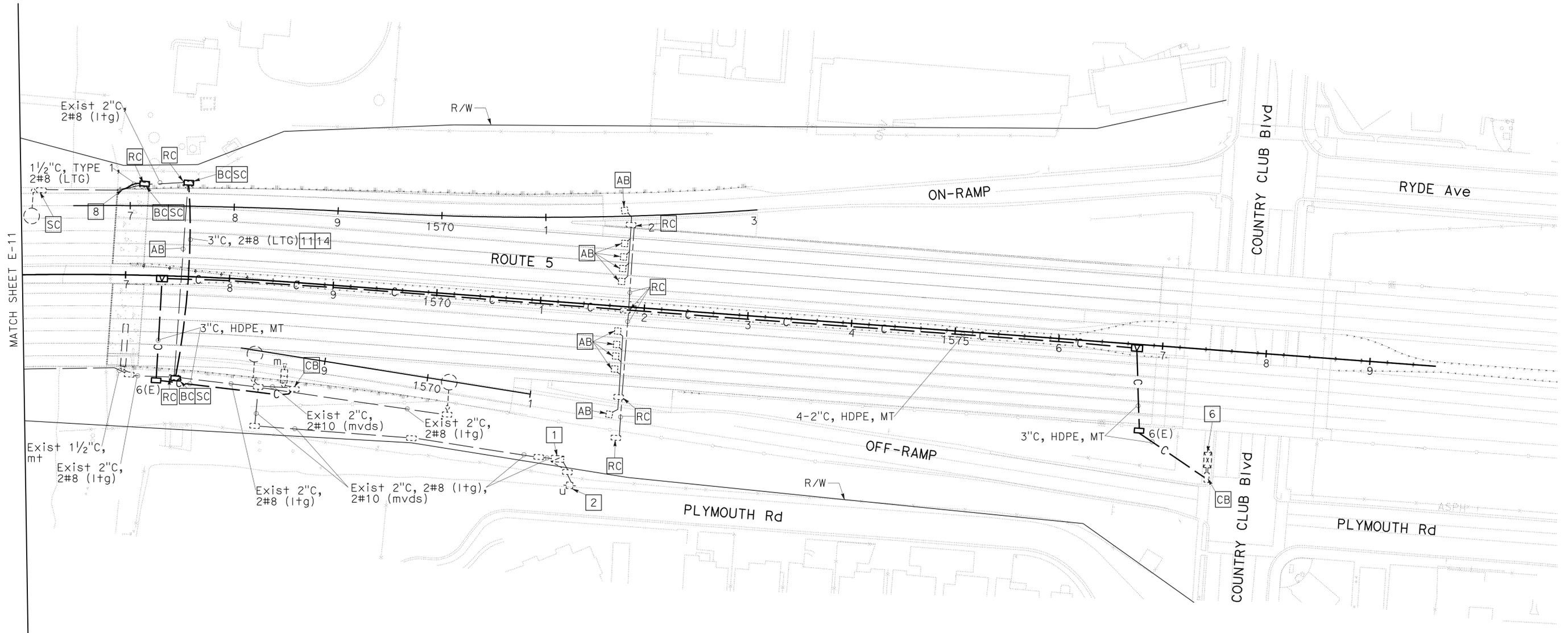
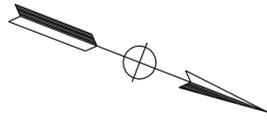
<i>Paul Matos</i>	01-30-12
REGISTERED ELECTRICAL ENGINEER	DATE
6-4-12	
PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER
PAUL MATOS
No. 18757
Exp. 6/30/13
ELECTRICAL
STATE OF CALIFORNIA

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NOTES:

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

FUNCTIONAL SUPERVISOR
 ALI BAKHDOUD

CALCULATED/DESIGNED BY
 CHECKED BY

PAUL MATOS
 OMAR MENDOZA

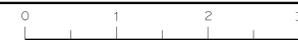
REVISED BY
 DATE

REVISED BY
 DATE

**MODIFY LIGHTING
 COMMUNICATION CONDUIT SYSTEM**

SCALE: 1"=50' **E-12**

APPROVED FOR ELECTRICAL WORK ONLY



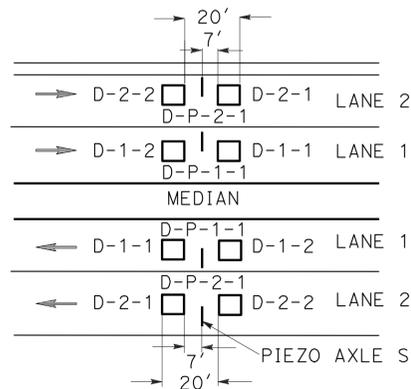
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10	SJ	5	25.1/28.6	411	485

Paul Matos 01-30-12
 REGISTERED ELECTRICAL ENGINEER DATE

6-4-12
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
PAUL MATOS
 No. 18757
 Exp. 6/30/13
 ELECTRICAL
 STATE OF CALIFORNIA

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INDUCTIVE LOOP DETECTOR SENSOR DESIGNATION

DIRECTION OF TRAFFIC
 N - NORTHBOUND
 S - SOUTHBOUND
 E - EASTBOUND
 W - WESTBOUND

1 - LEADING
 2 - TRAILING
 LANE NUMBER

D-L-N

PIEZO AXLE SENSOR DESIGNATION

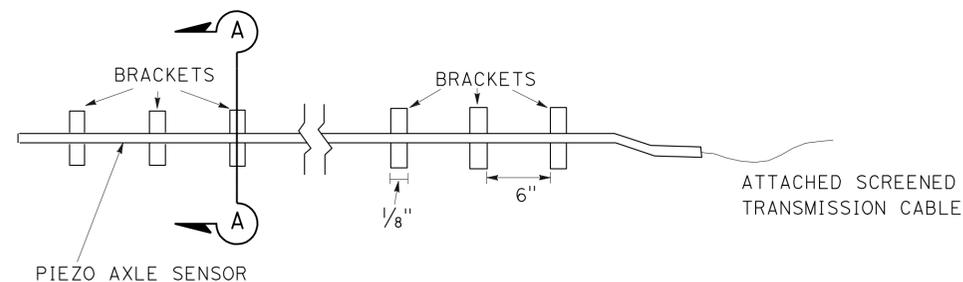
DIRECTION OF TRAFFIC
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 S - SOUTHBOUND
 E - EASTBOUND
 W - WESTBOUND

1 - LEADING
 2 - TRAILING
 LANE NUMBER

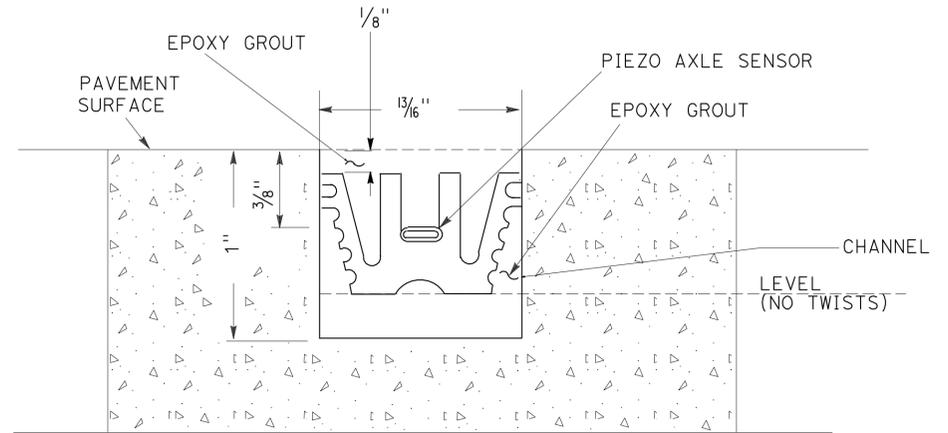
P - PIEZO

D-P-L-N

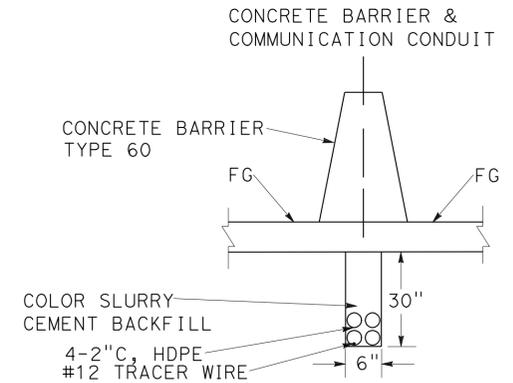
**TYPICAL INDUCTIVE LOOP DETECTOR SENSOR AND PIEZO SENSOR DESIGNATION
DETAIL A**



**PIEZO AXLE SENSOR INSTALLATION
DETAIL C**



**SECTION A-A
PIEZO AXLE SENSOR INSTALLATION
DETAIL B**



**COMMUNICATION CONDUIT
PLACEMENT DETAIL UNDER BARRIER
DETAIL D**

**COMMUNICATION CONDUIT SYSTEM
MODIFY VEHICLE CLASSIFICATION STATION**

NO SCALE **E-13**

APPROVED FOR ELECTRICAL WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans 06-ELECTRICAL DESIGN
 FUNCTIONAL SUPERVISOR: ALI BAKHDOUD
 CALCULATED/DESIGNED BY: PAUL MATOS
 CHECKED BY: OMAR MENDOZA
 REVISED BY: PAUL MATOS
 DATE REVISED:

USERNAME => s124496
 DGN FILE => a0m780ua013.dgn



UNIT 1515

PROJECT NUMBER & PHASE

1000001281

LAST REVISION: DATE PLOTTED => 05-JUN-2012
 01-30-12 TIME PLOTTED => 09:17

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	5	25.1/28.6	412	485

<i>Paul Matos</i>	01-30-12
REGISTERED ELECTRICAL ENGINEER	DATE
6-4-12	
PLANS APPROVAL DATE	

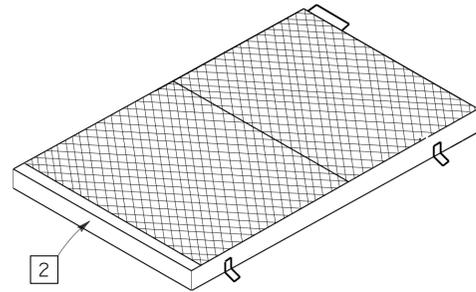
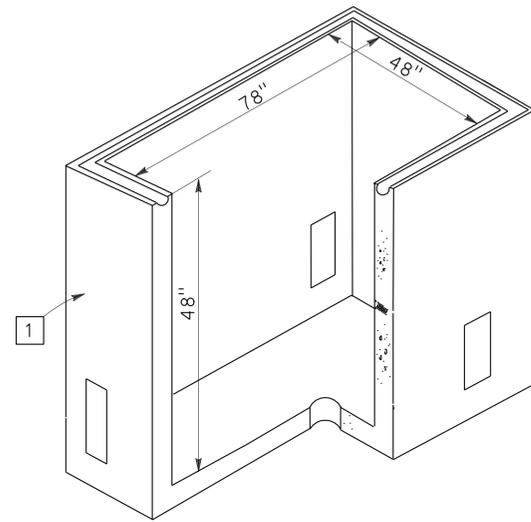
REGISTERED PROFESSIONAL ENGINEER
PAUL MATOS
No. 18757
Exp. 6/30/13
ELECTRICAL
STATE OF CALIFORNIA

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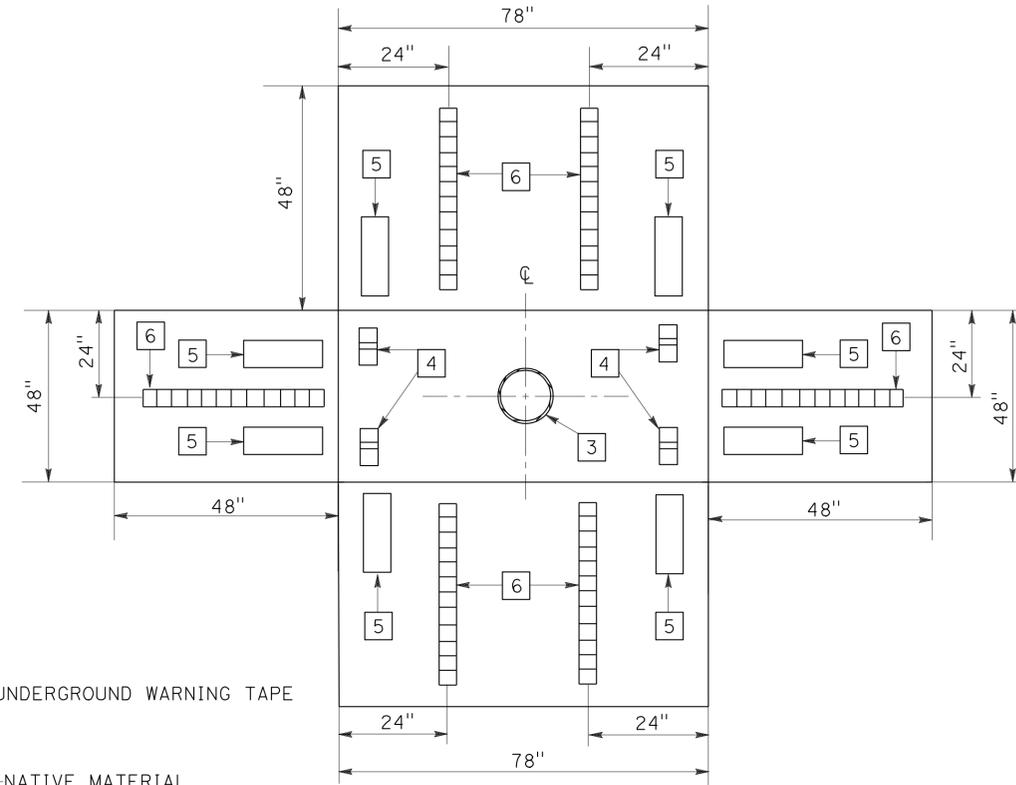
NOTES: (THIS SHEET ONLY)

- 1 GALVANIZED CAST-IN ANGLE FRAME.
- 2 TWO PIECE TRAFFIC RATED TORSION ASSISTED COVER, WITH PICK SLOTS AND BOLT DOWN HOLES. GALVANIZED AFTER FABRICATION.
- 3 12" DIAMETER DRAIN HOLE. LOCATE AT CENTER.
- 4 7/8" DIAMETER PULL IRONS.
- 5 8" x 4" KNOCK-OUTS.
- 6 CAST-IN CABLE RACK.

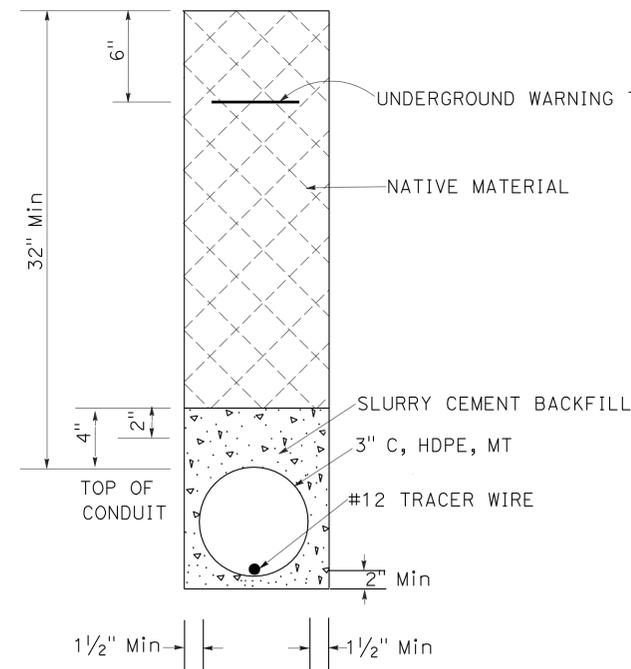
7. ALL MOUNTING HARDWARE SHALL BE GALVANIZED OR STAINLESS STEEL.
8. VAULT/PB DESIGNED IN ACCORDANCE WITH AASHTO 04-08-08 TRAFFIC Br LOADING USING 3,756 KPSI COMPRESSIVE STRENGTH CONCRETE AND 60 KPSI YIELD STRENGTH ASTM A-706 STEEL REINFORCEMENT PER CALCULATIONS.
9. EACH VAULT/PB TO BE PLACED ON A 12" BASE OF CRUSHED ROCK.
10. EACH VAULT/PB SHALL COME PROVIDED WITH TWO SETS BOLT/LID REMOVERS.



**SPLICE VAULT
DETAIL E**



**SPLICE VAULT
DETAIL F**



DETAIL G

COMMUNICATION CONDUIT SYSTEM

NO SCALE

E-14

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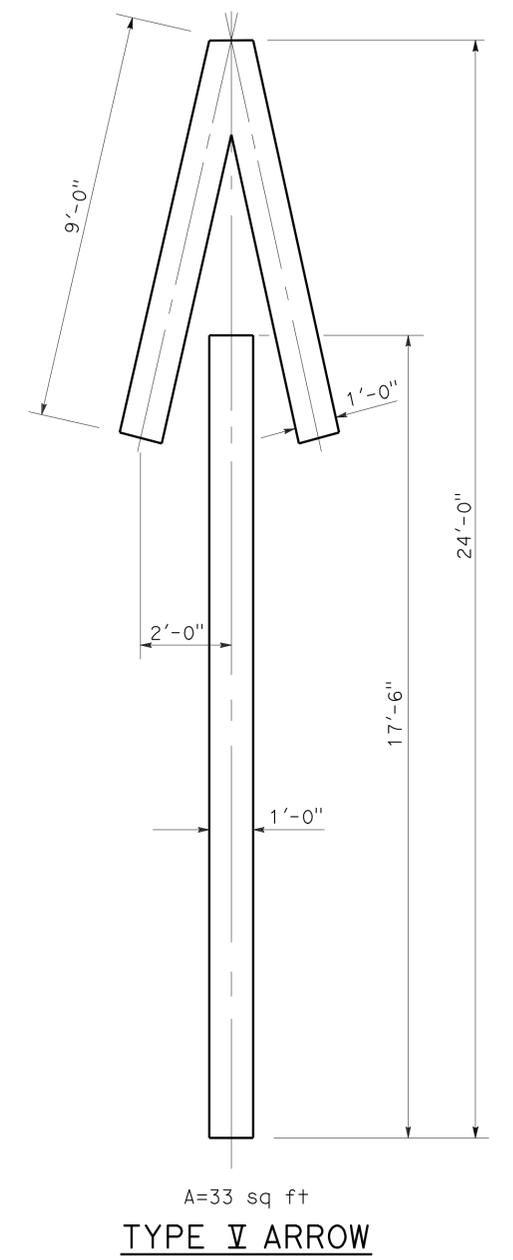
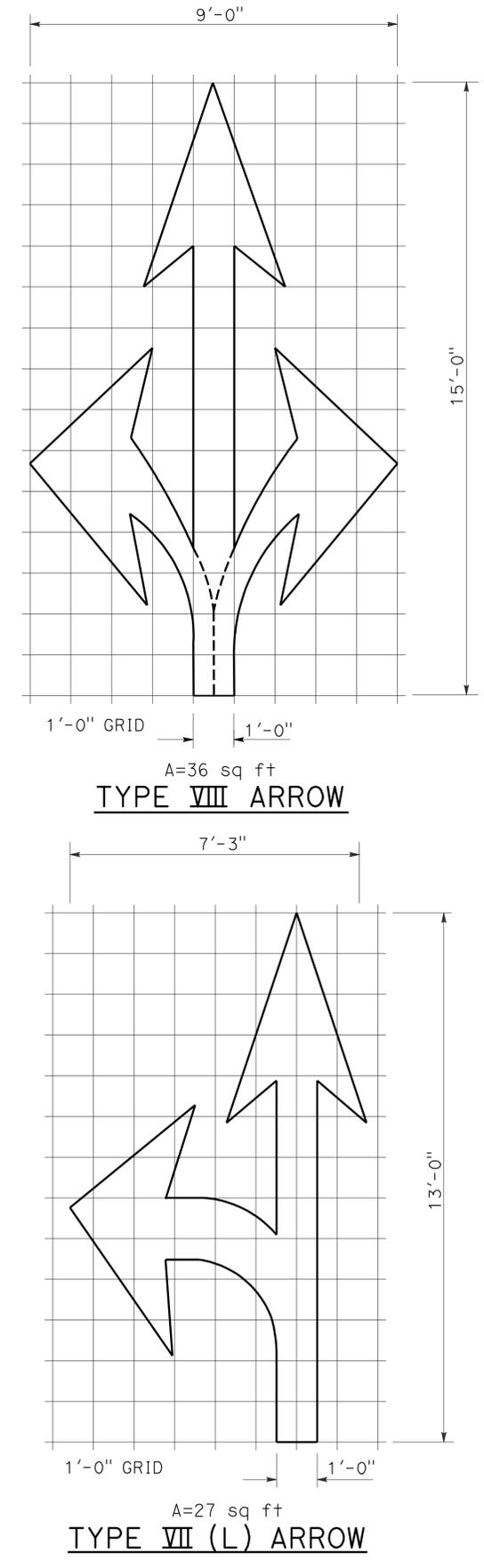
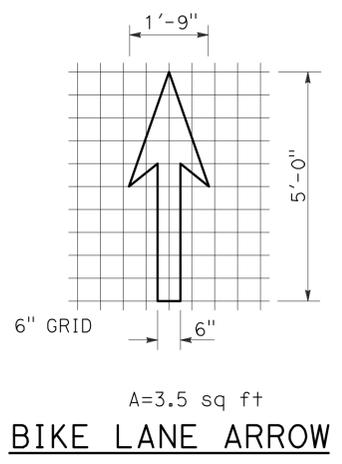
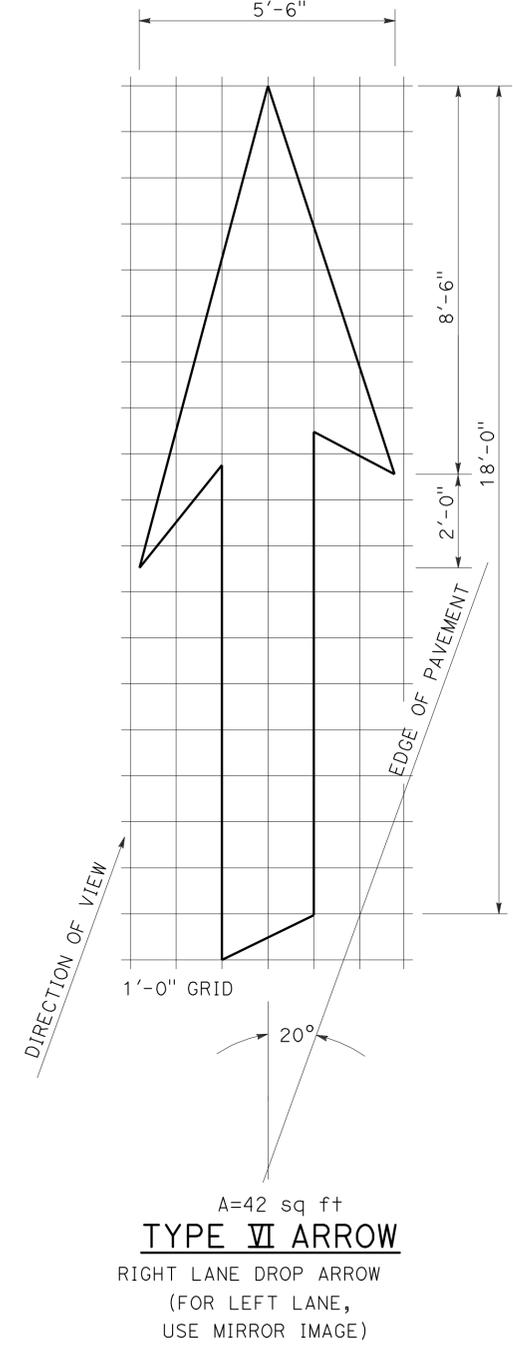
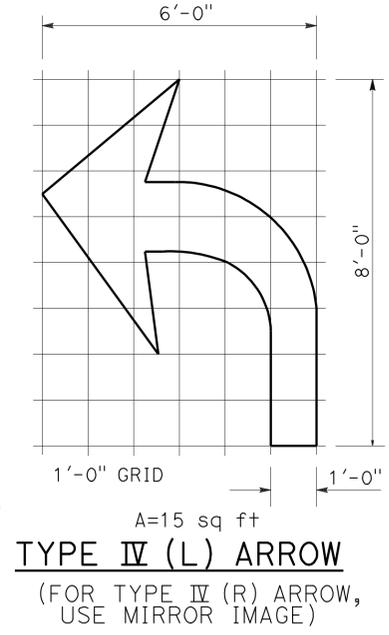
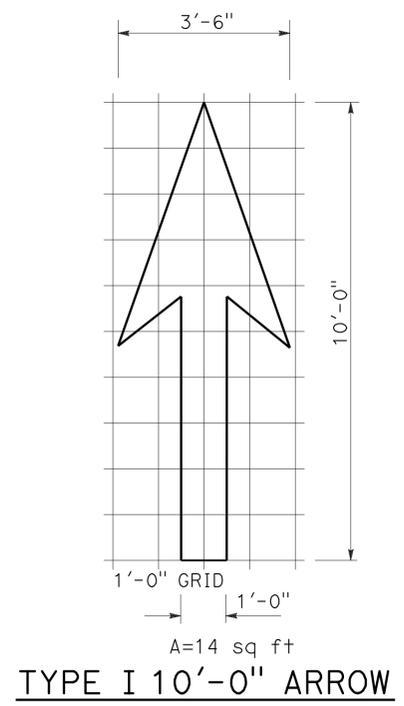
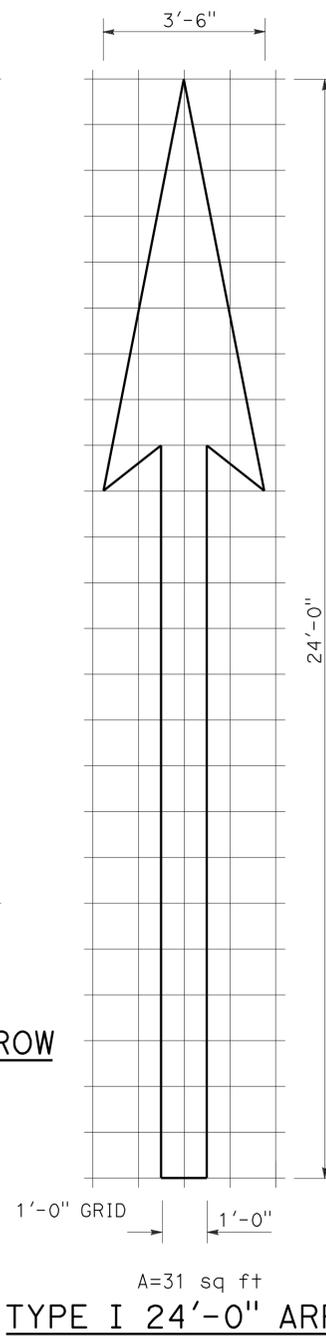
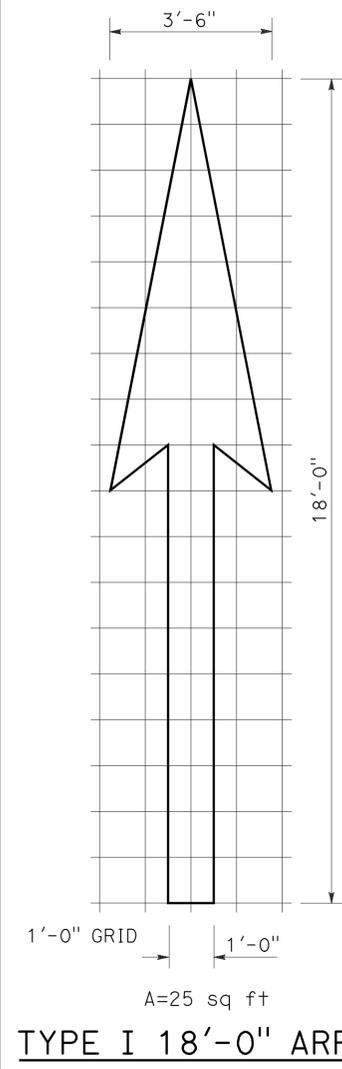


DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ	5	25.1/28.6	413	485

Roberto L. McLaughlin
 REGISTERED CIVIL ENGINEER
 April 20, 2012
 PLANS APPROVAL DATE
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REGISTERED PROFESSIONAL ENGINEER
 Roberto L. McLaughlin
 No. C40375
 Exp. 3-31-13
 CIVIL
 STATE OF CALIFORNIA

To accompany plans dated 6-4-12



NOTE:
MINOR VARIATIONS IN DIMENSIONS
MAY BE ACCEPTED BY THE ENGINEER.

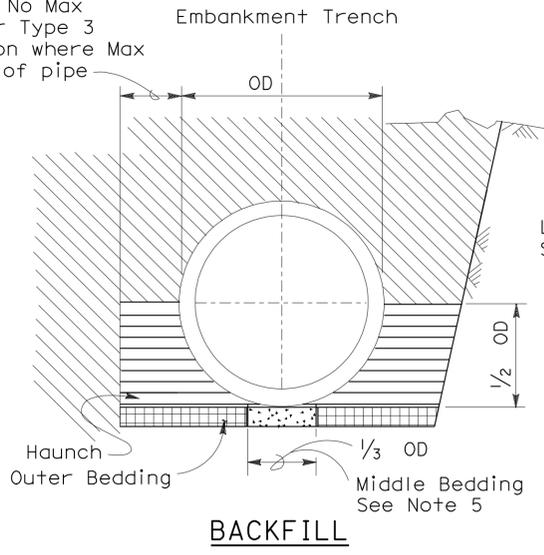
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**PAVEMENT MARKINGS
ARROWS**
NO SCALE

RSP A24A DATED APRIL 20, 2012 SUPERSEDES STANDARD PLAN A24A
DATED MAY 1, 2006 - PAGE 9 OF THE STANDARD PLANS BOOK DATED MAY 2006.

2006 REVISED STANDARD PLAN RSP A24A

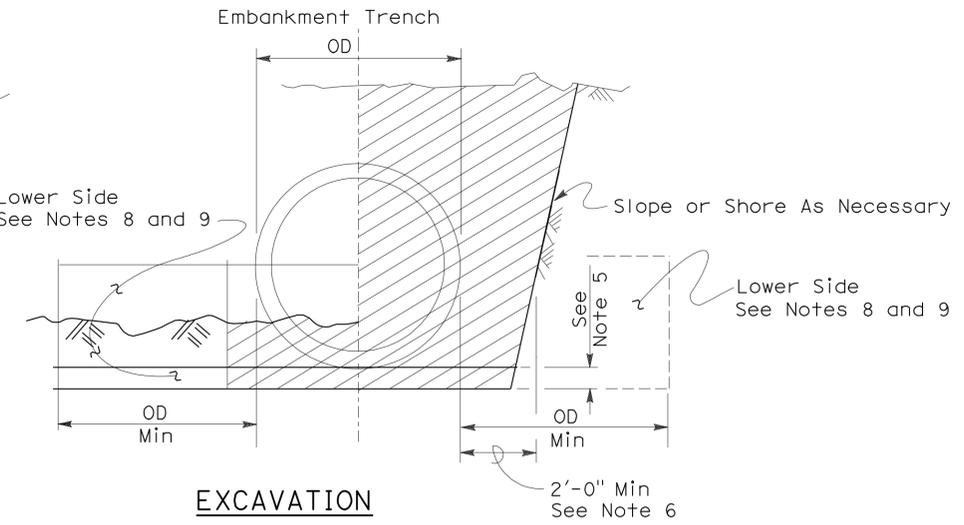
To accompany plans dated 6-4-12

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:
 a) Class III or stronger with Installation Type 1.
 b) Class III Special or stronger with Installation Type 2.
 c) 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:
 a) Successive drainage structure (inlets, junction boxes, headwalls, etc.).
 b) A drainage structure and the inlet or outlet end of the culvert.
 c) 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

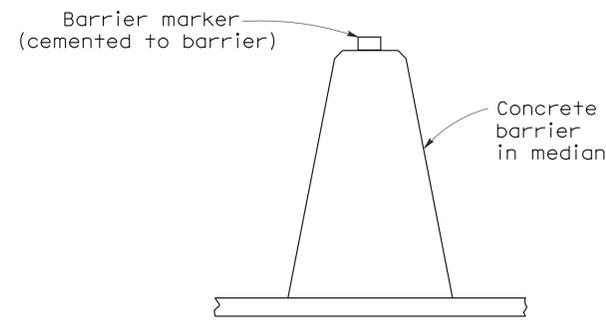
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ	5	25.1/28.6	415	485

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

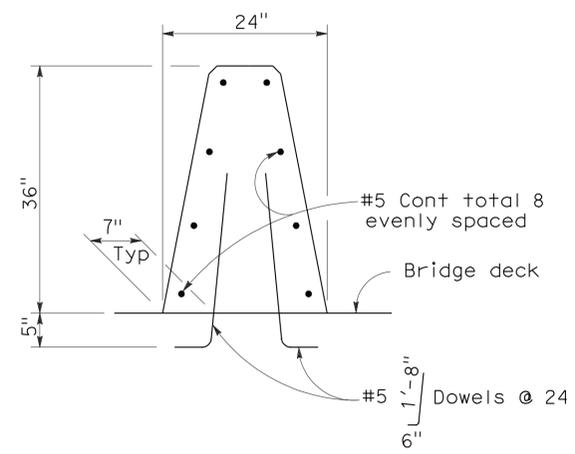
June 6, 2008
PLANS APPROVAL DATE

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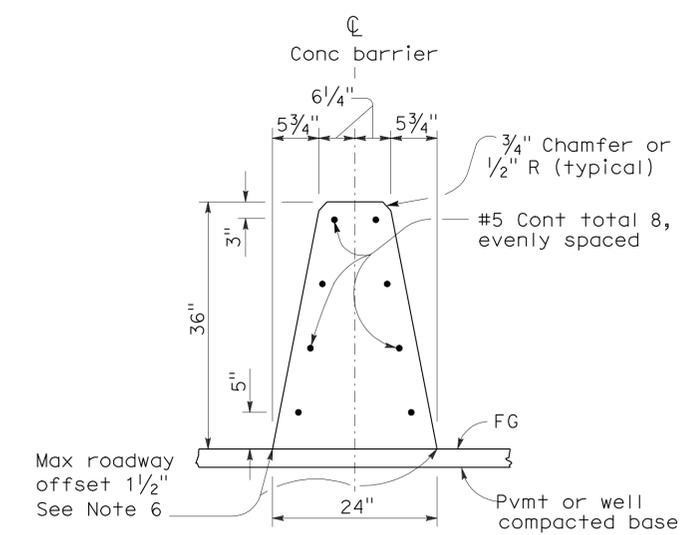
To accompany plans dated 6-4-12



CONCRETE BARRIER TYPE 60 DELINEATION
See Notes 7 and 8



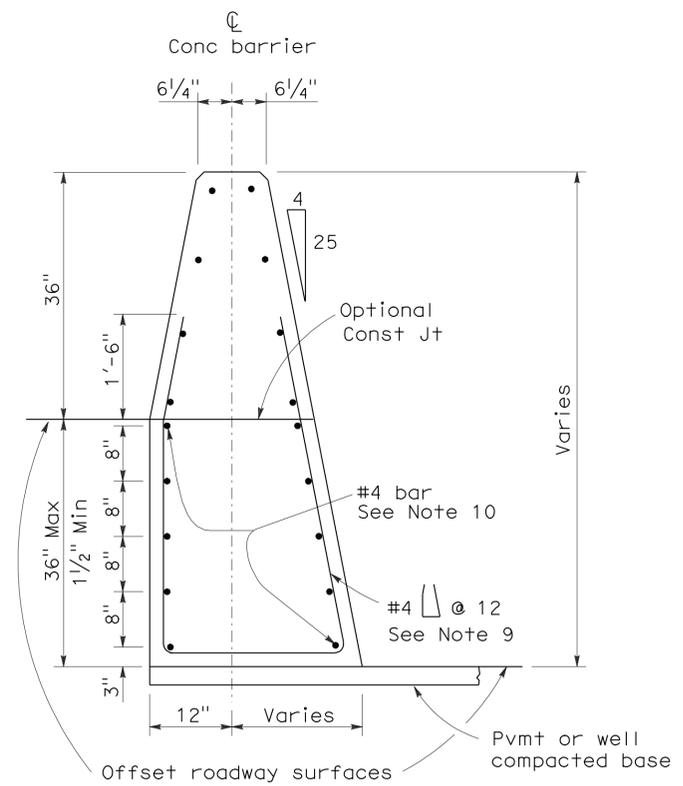
CONCRETE BARRIER TYPE 60A
Details similar to Type 60 except as noted.



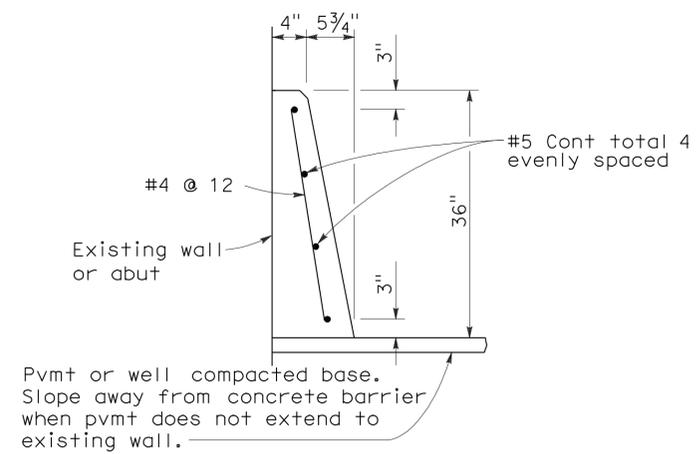
CONCRETE BARRIER TYPE 60

NOTES:

- See Standard Plan A76B for details of Concrete Barrier Type 60 end anchors, connection to structures and transitions to Concrete Barrier Type 50 and Concrete Barrier Type 60S.
- See Standard Plan A76C for Concrete Barrier Type 60 transitions at bridge column and sign pedestals.
- Where glare screen is required on Concrete Barrier Type 60, use Concrete Barrier Type 60G.
- Where the concrete barrier is added to the face of existing concrete structure, match existing weep holes.
- Expansion joints in concrete barrier shall be located at all deck, pavement and principal wall joints. Expansion joint filler material shall be the same size as joint or 1/2" minimum.
- Where roadway offset is greater than 1 1/2", see Concrete Barrier Type 60C.
- Barrier delineation to be used when required by the Special Provisions.
- Spacing of barrier markers to match spacing of raised pavement markers on the adjacent median edgeline pavement delineation.
- Reinforcing stirrup not required for roadway offsets less than 1'-0".
- For roadway surfaces offset greater than 1 1/2" to 3", no rebars required. For roadway surfaces offset greater than 3" to 8" use two #4 rebars at 3" above the lower roadway surface. For roadway surfaces offset greater than 8" to 12", use two #4 rebars at 3" above the lower roadway surface and two #4 rebars at 8" above the lower roadway surface. For roadway surfaces offset greater than 12" to 36", use two #4 rebars at 3" above the lower roadway surface and two #4 rebars at every 8" increment vertical spacing above the first two #4 rebars.



CONCRETE BARRIER TYPE 60C
Details similar to Type 60 except as noted. Concrete barrier end anchor when necessary. 36" roadway surfaces offset shown.



CONCRETE BARRIER TYPE 60D

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
CONCRETE BARRIER TYPE 60
NO SCALE

RSP A76A DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A76A
DATED MAY 1, 2006 - PAGE 29 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A76A

2006 REVISED STANDARD PLAN RSP A76A

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	5	25.1/28.6	416	485

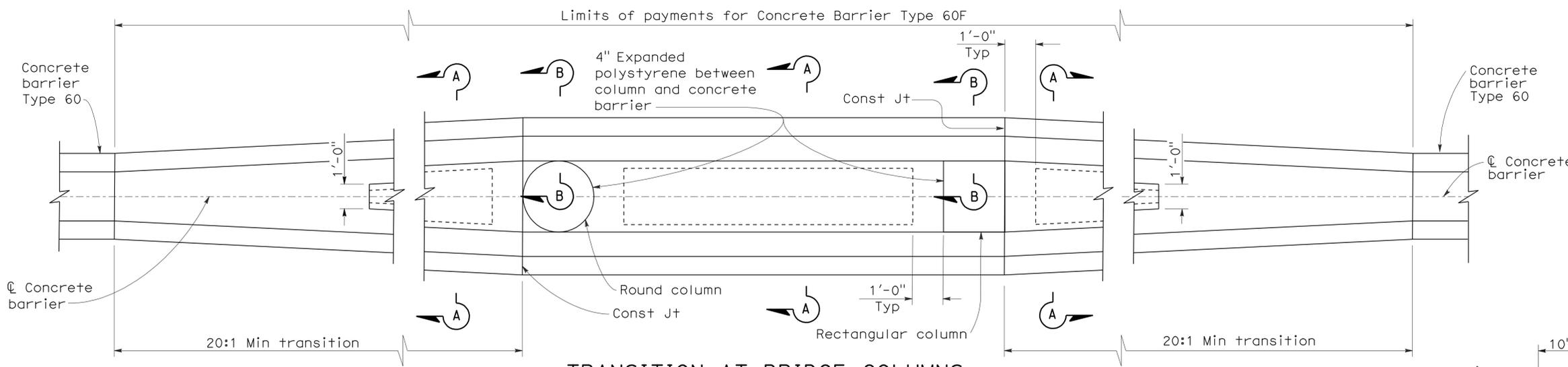
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REGISTERED CIVIL ENGINEER

May 20, 2011
PLANS APPROVAL DATE

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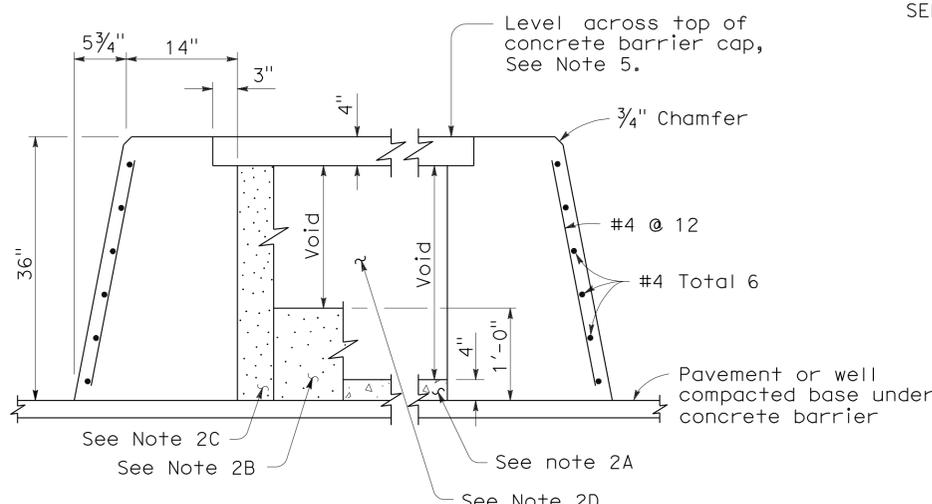
REGISTERED PROFESSIONAL ENGINEER
No. C50200
Exp. 6-30-11
CIVIL
STATE OF CALIFORNIA

To accompany plans dated 6-4-12

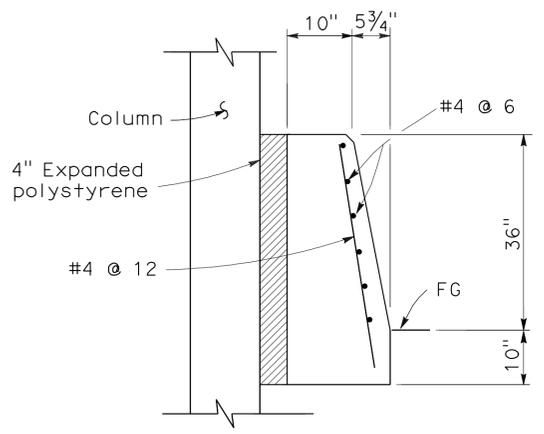


TRANSITION AT BRIDGE COLUMNS

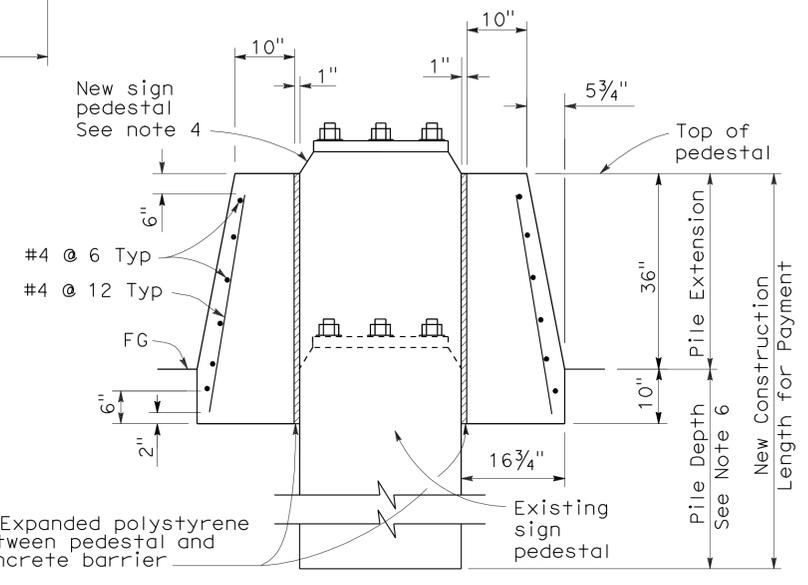
CONCRETE BARRIER TYPE 60F
SEE NOTE 7



SECTION A-A



SECTION B-B



SECTION C-C

NOTES:

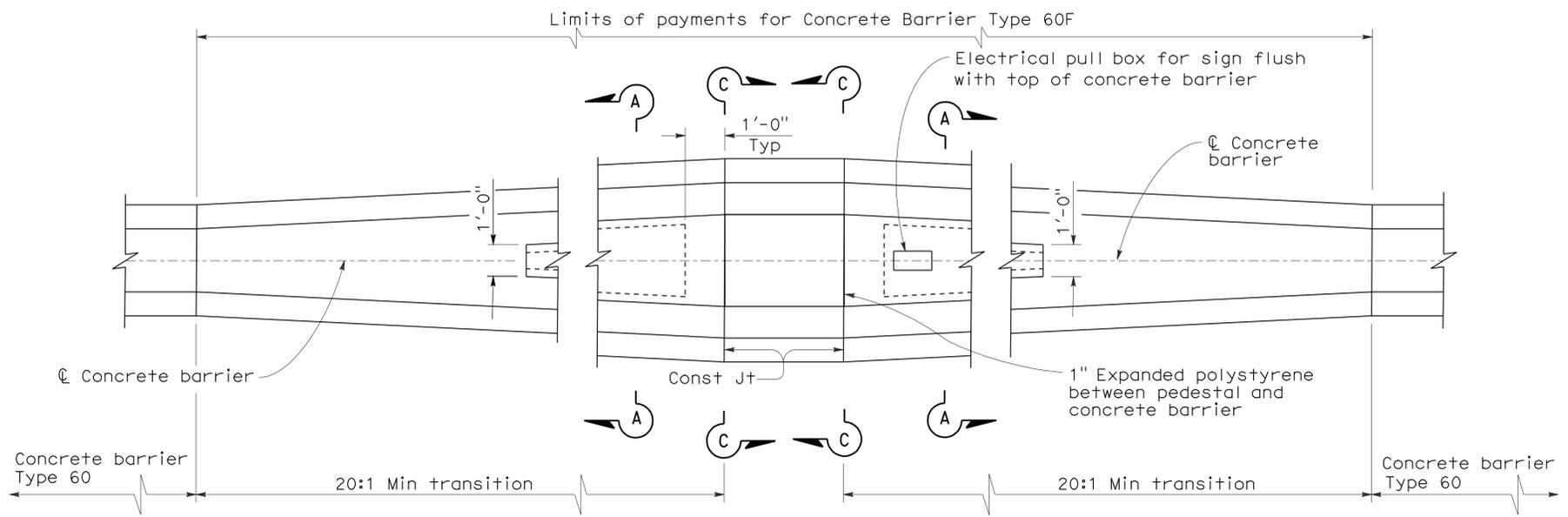
- See Revised Standard Plan RSP A76A for Concrete Barrier Type 60.
- Contractor options for fill between concrete barrier walls:
 - Place 4" PCC at base between concrete barrier walls.
 - Place 1'-0" of granular material at base between walls.
 - Place granular material from base to bottom of 4" cap.
 - Monolithic concrete with foam blockouts is not permitted.
- Reinforcing steel shall extend continuous through construction joints.
- See "Overhead Sign" plans for sign pedestal elevations on new construction.
- Adjust height of concrete barrier wall on low side of offset or superelevated roadways to provide level grade across top of concrete barrier cap.
- See Overhead Signs Standard Plan Pile Foundation Tables.
- All locations with limited shoulder width available for barrier, see Revised Standard Plan RSP A76F for use of Concrete Barrier Type 60GE.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

CONCRETE BARRIER TYPE 60F
NO SCALE

RSP A76C DATED MAY 20, 2011 SUPERSEDES STANDARD PLAN A76C
DATED MAY 1, 2006 - PAGE 31 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A76C



TRANSITION AT SIGN PEDESTAL

CONCRETE BARRIER TYPE 60F
SEE NOTE 7

2006 REVISED STANDARD PLAN RSP A76C

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	5	25.1/28.6	417	485

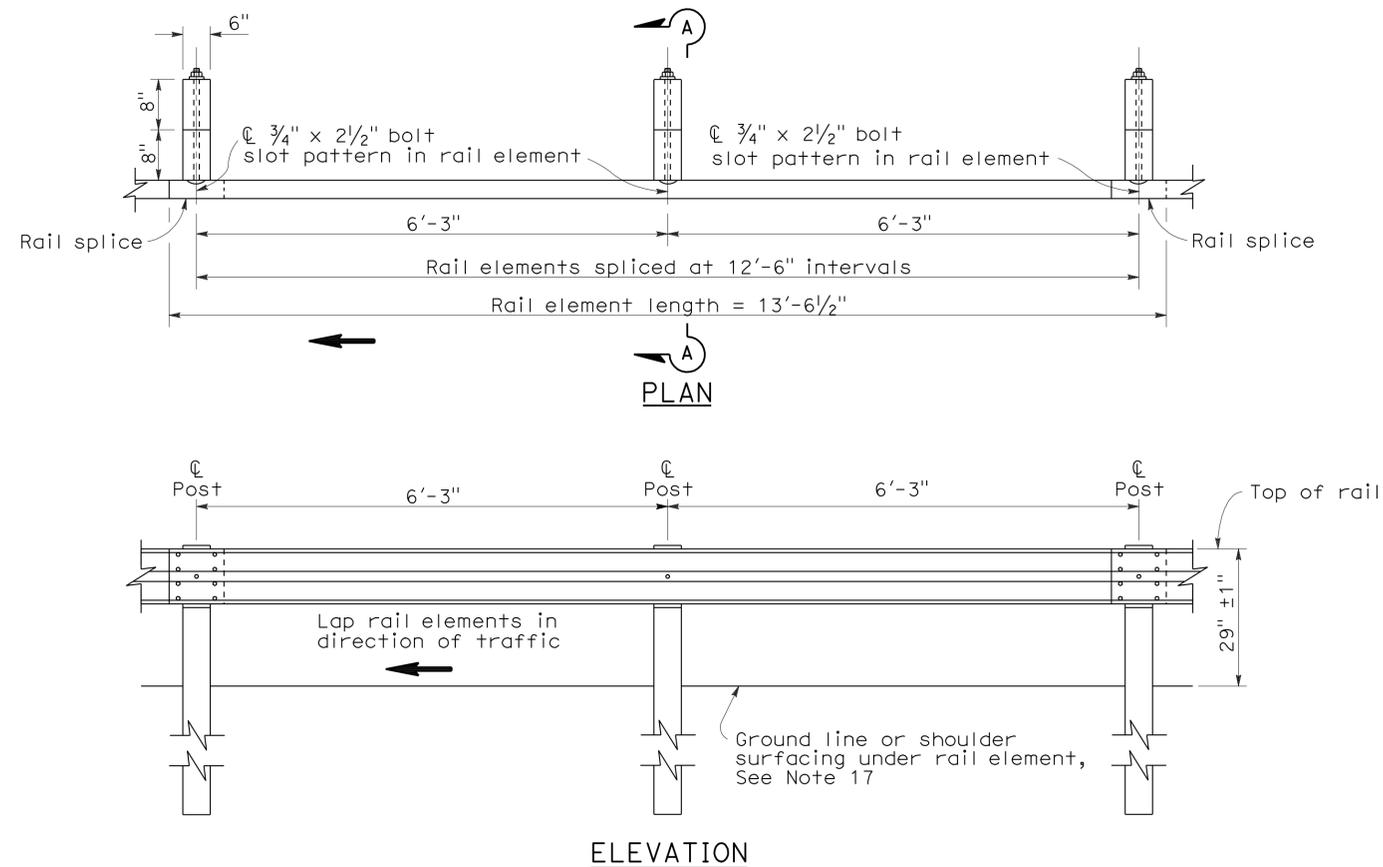
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

May 20, 2011
PLANS APPROVAL DATE

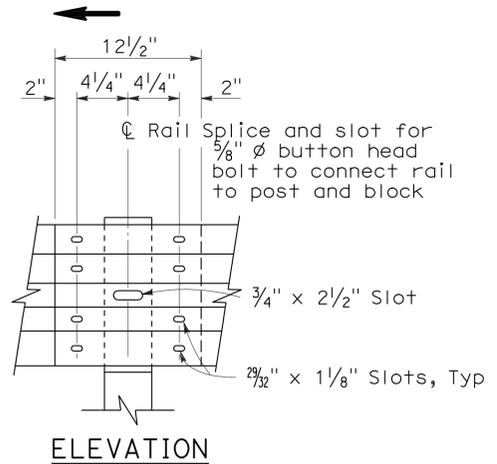
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To accompany plans dated 6-4-12

REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
Exp. 6-30-11
CIVIL
STATE OF CALIFORNIA

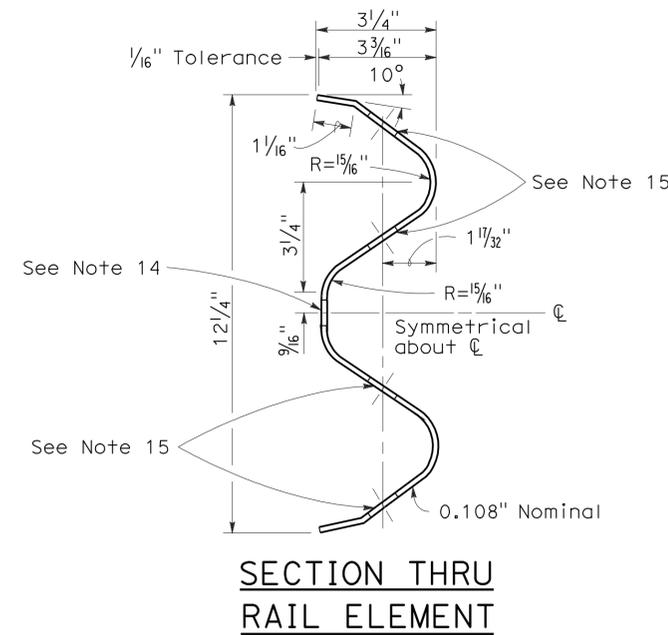


METAL BEAM GUARD RAILING WITH WOOD POST AND BLOCKS

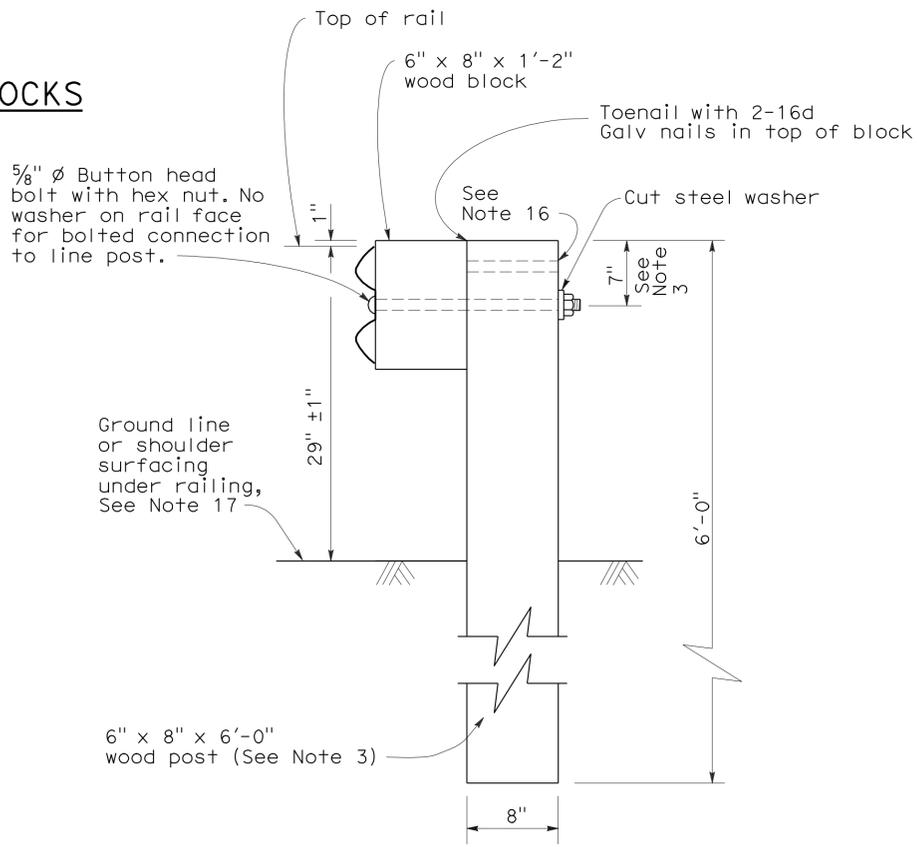


RAIL ELEMENT SPLICE DETAIL

- Connect the over lapped end of the rail elements with 5/8" ϕ x 1 3/8" button head oval shoulder splice bolts inserted into the 29/32" x 1 1/8" slots and bolted together with 5/8" ϕ 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 WOOD LINE POST INSTALLATION

See Note 4

NOTES:

- For details of steel post installations, see Standard Plan A77A2.
- For details of standard hardware used to construct guard railing, see Standard Plan A77B1.
- For details of wood posts and wood blocks used to construct guard railing, see Standard Plan A77C1.
- 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 guard railing connection details to abutments and walls, see Standard Plan A77J3.
- Direction of adjacent traffic indicated by \rightarrow .
- For typical guard railing delineation and dike positioning details, see Standard Plan A77C4.
- 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".
- Additional hole in uppermost portion of line post is for potential future adjustments of railing height. See Standard Plan A77C1.
- Install posts in soil.

METAL BEAM GUARD RAILING STANDARD RAILING SECTION (WOOD POST WITH WOOD BLOCK)

NO SCALE

RSP A77A1 DATED MAY 20, 2011 SUPERSEDES STANDARD PLAN A77A1 DATED MAY 1, 2006 - PAGE 41 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A77A1

2006 REVISED STANDARD PLAN RSP A77A1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	5	25.1/28.6	418	485

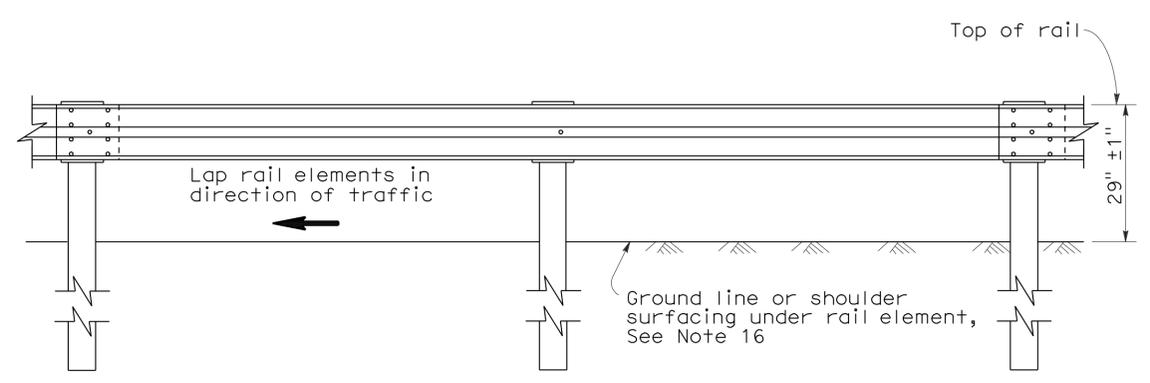
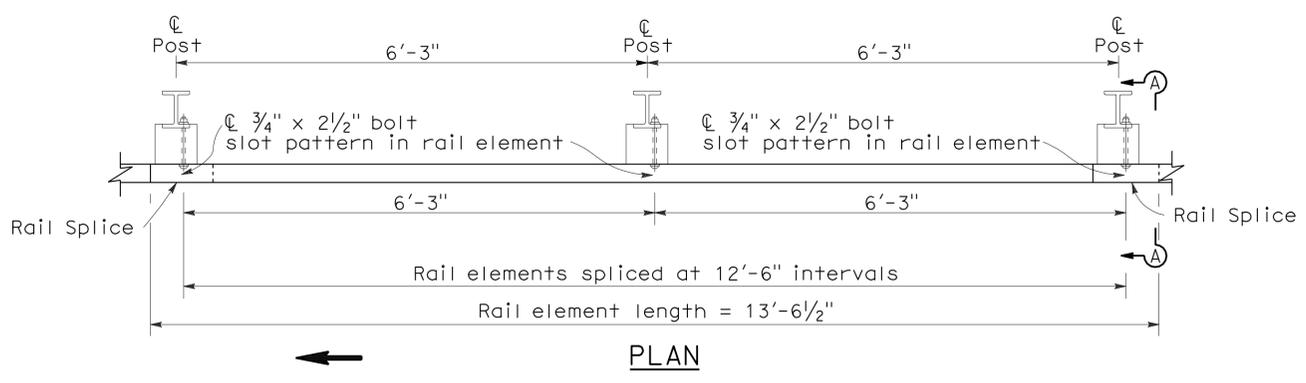
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

May 20, 2011
PLANS APPROVAL DATE

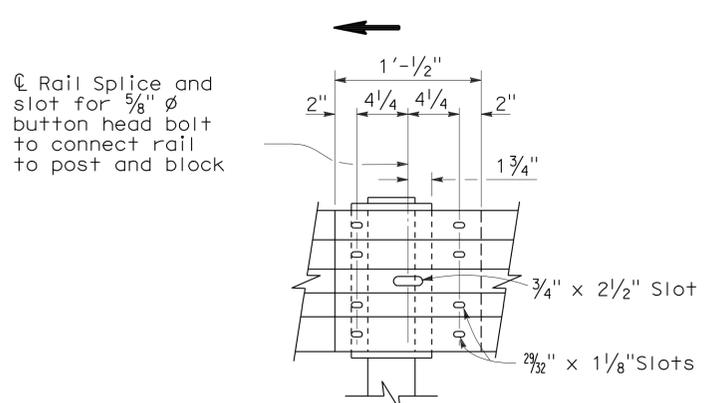
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To accompany plans dated 6-4-12

2006 REVISED STANDARD PLAN RSP A77A2

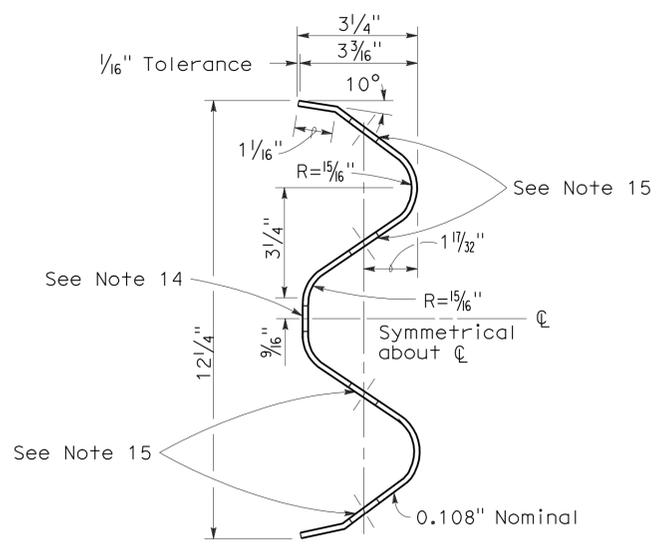


METAL BEAM GUARD RAILING WITH STEEL POSTS AND NOTCHED WOOD OR NOTCHED RECYCLED PLASTIC BLOCKS

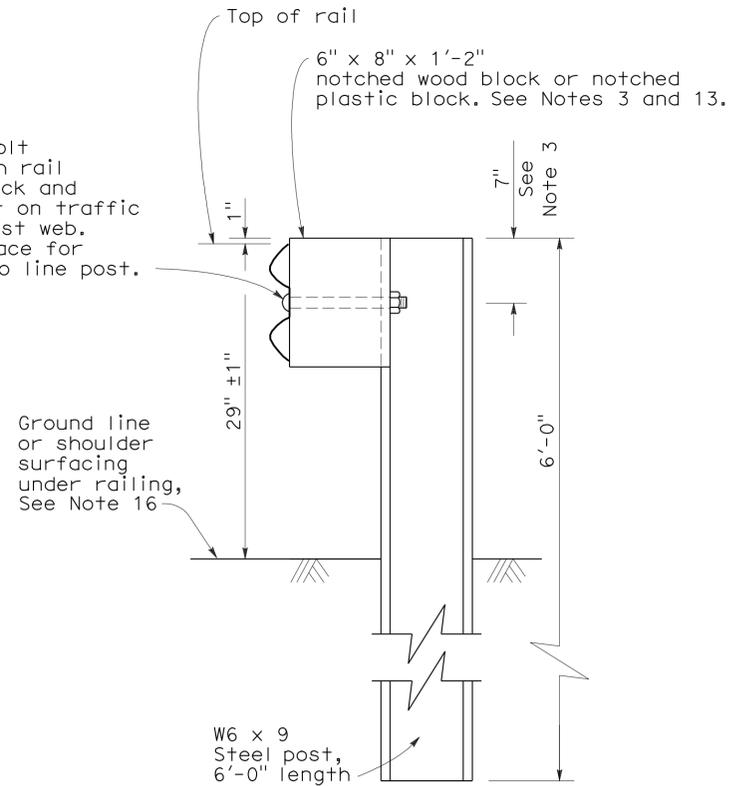


**ELEVATION
RAIL ELEMENT SPLICE DETAIL**

- Connect the overlapped end of the rail elements with $\frac{5}{8}$ " ϕ x $1\frac{3}{8}$ " button head oval shoulder splice bolts inserted into the $\frac{29}{32}$ " x $1\frac{1}{8}$ " slots and bolted together with $\frac{5}{8}$ " ϕ 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

RSP A77A2 DATED MAY 20, 2011 SUPERSEDES STANDARD PLAN A77A2
DATED MAY 1, 2006 - PAGE 42 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A77A2

To accompany plans dated 6-4-12

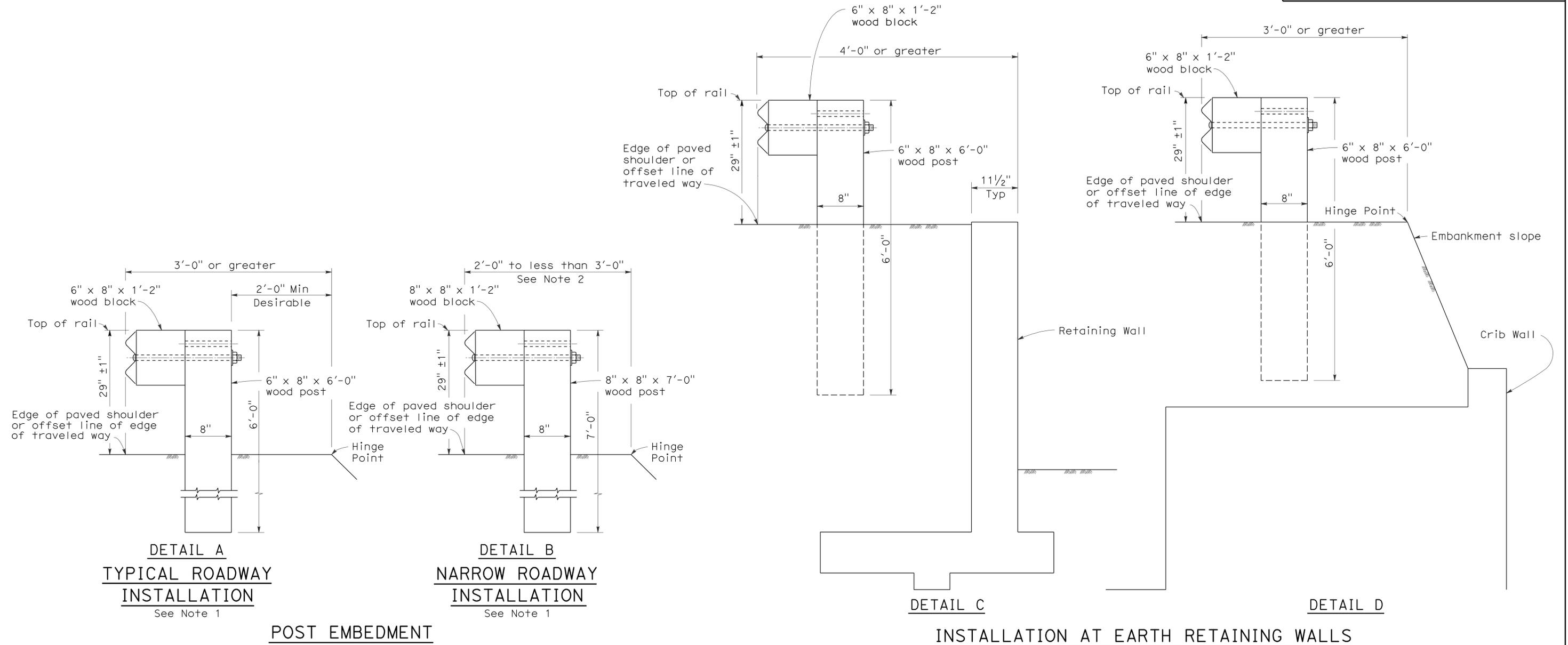
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	5	25.1/28.6	419	485

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
10	SJ	5	25.1/28.6	420	485

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

May 20, 2011
PLANS APPROVAL DATE

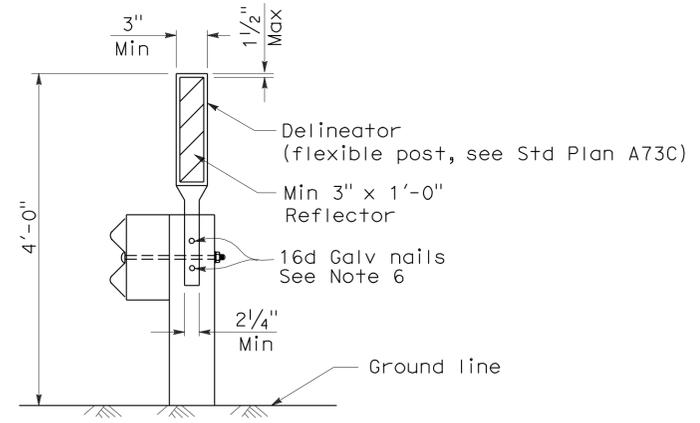
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Exp. 6-30-11
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STATE OF CALIFORNIA

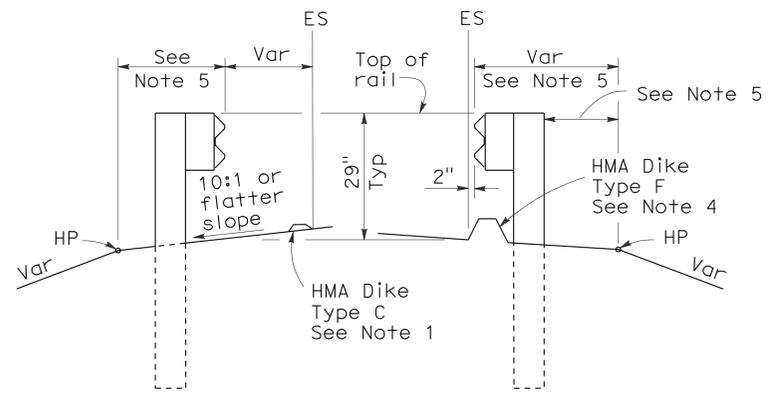
To accompany plans dated 6-4-12

NOTES:

1. When necessary to place dike in front of face of guard railing, only Type C dike may be used. For dike details, see Standard Plan A87B.
2. For standard railing post embedment, see Standard Plans A77C3.
3. Guard railing delineation to be used where shown on the Project Plans.
4. When dike or curb is placed under guard railing, the maximum height of the dike or curb shall be 4". Mountable dike should not be used. For dike and curb details, see Standard Plans A87A and A87B.
5. For details of typical distance between the face of rail and hinge point, see Standard Plan A77C3.
6. For steel line posts, use 1/4" - 20 self-tapping screws in 0.22" diameter holes or 1/4" bolts in 3/32" diameter holes.



GUARD RAILING DELINEATION
See Note 3



DIKE POSITIONING
See Note 1

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**METAL BEAM GUARD RAILING
TYPICAL RAILING DELINEATION
AND DIKE POSITIONING DETAILS**

NO SCALE

RSP A77C4 DATED MAY 20, 2011 SUPERSEDES RSP A77C4 DATED JUNE 6, 2008 AND STANDARD PLAN A77C4 DATED MAY 1, 2006 - PAGE 47 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A77C4

2006 REVISED STANDARD PLAN RSP A77C4

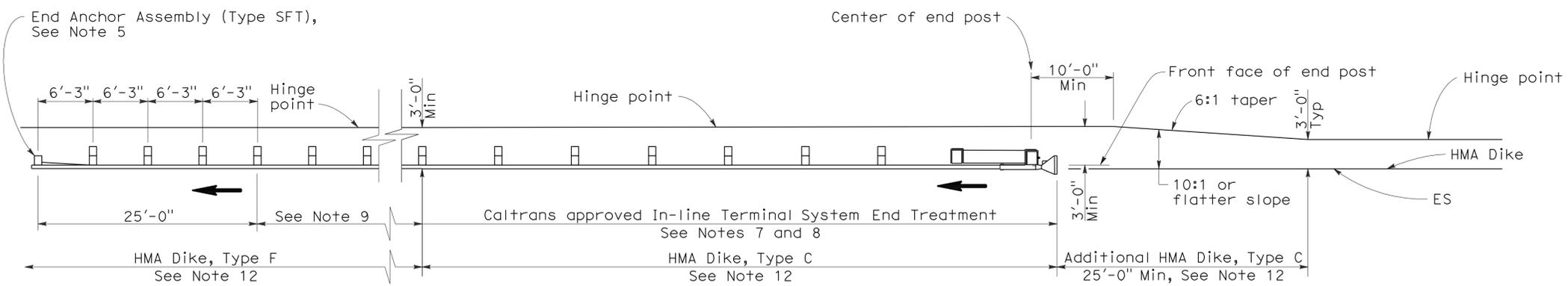
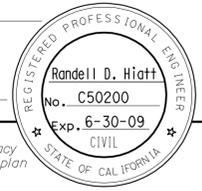
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ	5	25.1/28.6	421	485

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

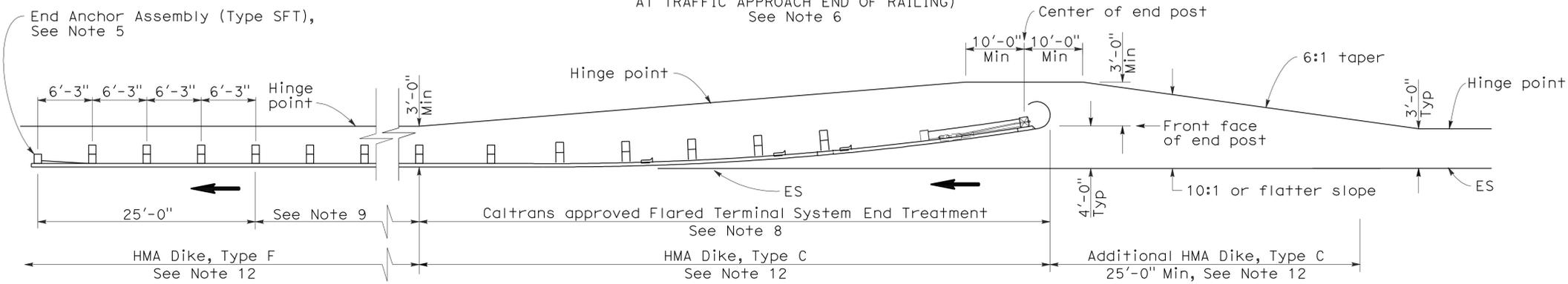
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To accompany plans dated 6-4-12



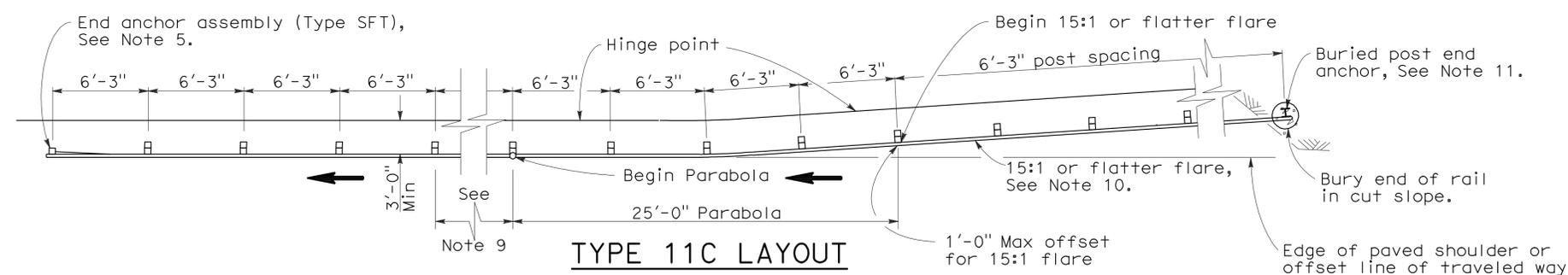
TYPE 11A LAYOUT

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



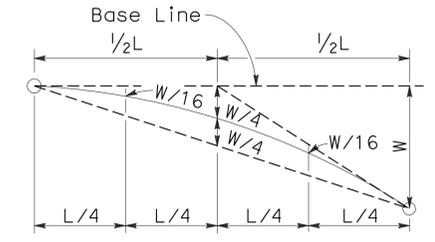
TYPE 11B LAYOUT

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

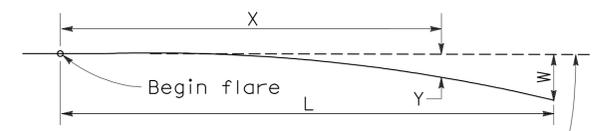


TYPE 11C LAYOUT

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



TYPICAL PARABOLIC LAYOUT

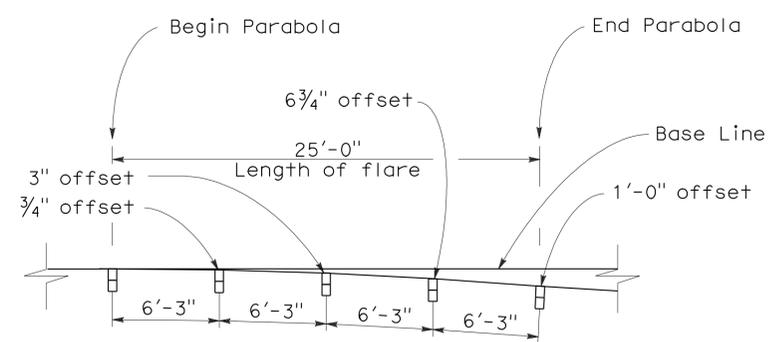


Base Line (Edge of paved shoulder or offset line of edge of traveled way)

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

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 \rightarrow .
- 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
10	SJ	5	25.1/28.6	422	485

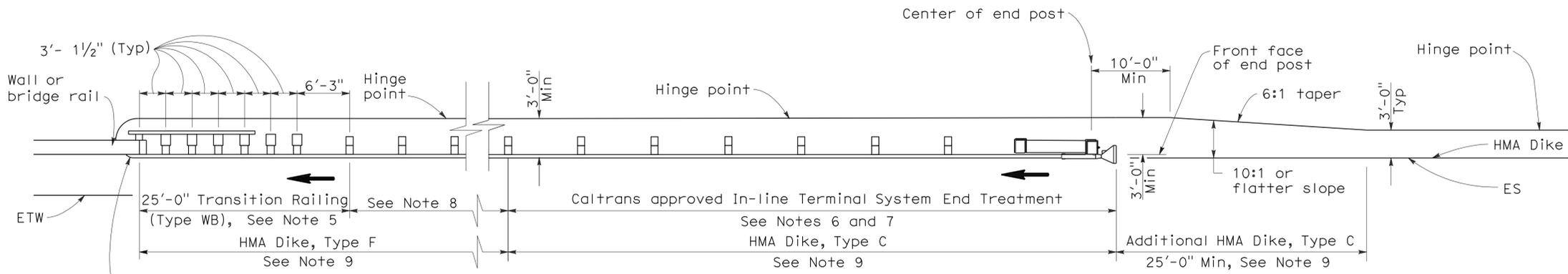
Randell D. Hiatt
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June 6, 2008
PLANS APPROVAL DATE

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

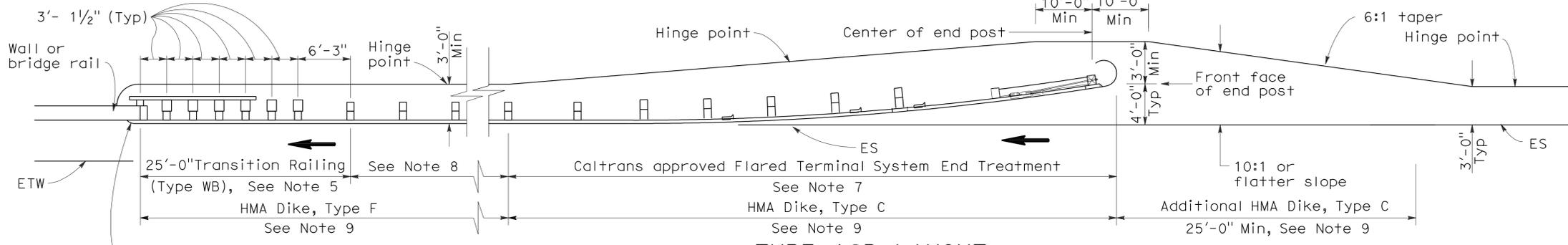
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To accompany plans dated 6-4-12



TYPE 12A LAYOUT

(GUARD RAILING INSTALLATION AT STRUCTURE APPROACH WITH AN IN-LINE END TREATMENT AT TRAFFIC APPROACH END OF RAILING)
See Notes 10



TYPE 12B LAYOUT

(GUARD RAILING INSTALLATION AT STRUCTURE APPROACH WITH A FLARED END TREATMENT AT TRAFFIC APPROACH END OF RAILING)
See Notes 10

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 plastic blocks may be used for 6" x 8" x 6'-0" wood posts with 6" x 8" x 1'-2" wood blocks where applicable and when specified.
- Direction of adjacent traffic indicated by \rightarrow .
- For Transition Railing (Type WB) details for Types 12A and 12B Layouts, see Standard Plan A77J4.
- 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, side slopes, or other fixed objects), it may be advisable to construct additional guard railing (a length equal to multiples of 12'-6" with 6'-3" post spacing) between the transition railing and end treatment.

- Where placement of dike is required with guard railing installations, see Revised Standard Plan RSP A77C4 for dike positioning details.
- Type 12A or Type 12B Layouts are typically used:
 - To the right of approaching traffic, at the end of a structure, on two-lane conventional highway where the roadbed width across the structure is less than 40 feet.
 - To the left of approaching traffic, at the end of a structure, on two-lane conventional highway where the roadbed width across the structure is less than 40 feet.
 - To the right of approaching traffic at the end of each structure on multilane freeways or expressways with separate adjacent or parallel bridges.
 - To the right of approaching traffic at the end of the structure on multilane freeways or expressways with decked median on the bridge.
- See Revised Standard Plan RSP A77F3 for typical layout used left of approaching traffic at the ends of each structure on multilane freeways or expressways with separate adjacent or parallel bridges.

- For additional details of typical connections to bridge rail, see Connection Detail AA on Revised Standard Plans RSP A77J1 and RSP A77J2 and Connection Detail FF on Standard Plans A77K1 and A77K2.
- For additional details of a typical connection to walls or abutments, see Standard Plan A77J3.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**METAL BEAM GUARD RAILING
TYPICAL LAYOUTS FOR
STRUCTURE APPROACH**

NO SCALE

RSP A77F1 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A77F1
DATED MAY 1, 2006 - PAGE 54 OF THE STANDARD PLANS BOOK DATED MAY 2006.

2006 REVISED STANDARD PLAN RSP A77F1

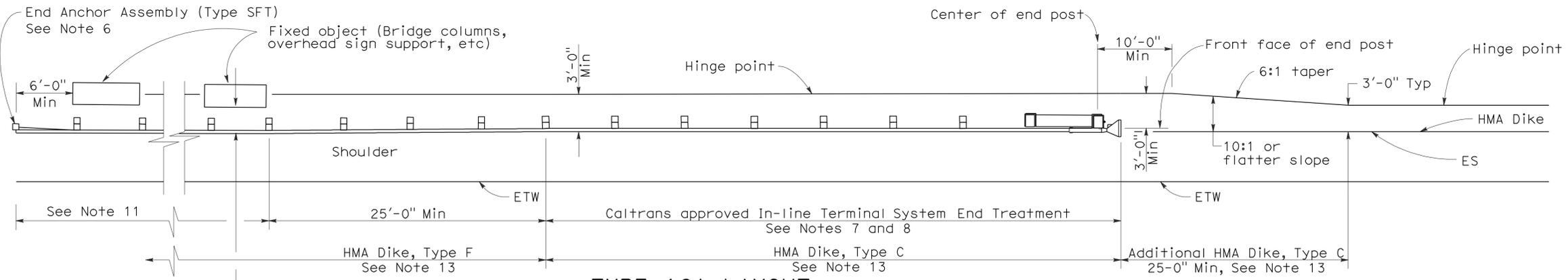
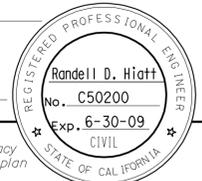
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ	5	25.1/28.6	423	485

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

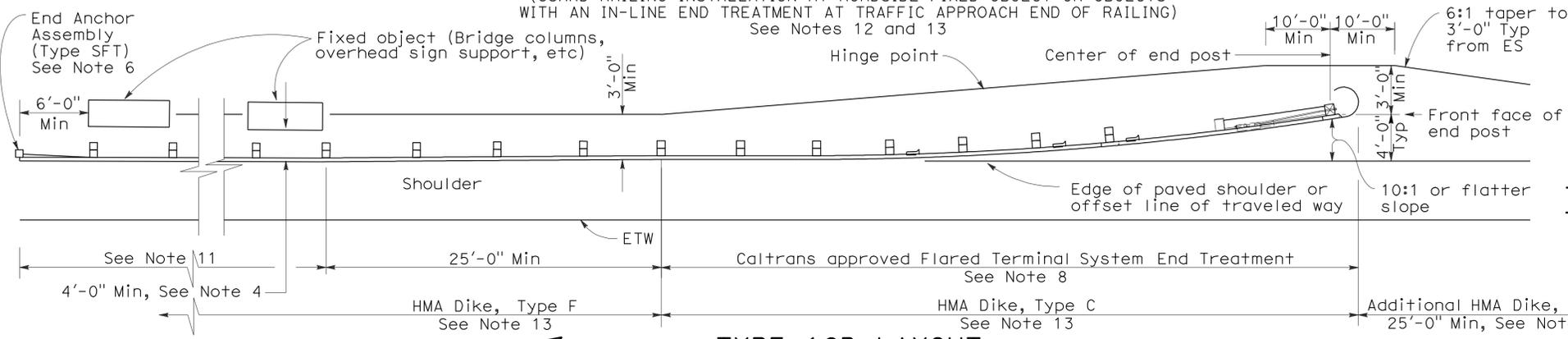
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To accompany plans dated 6-4-12



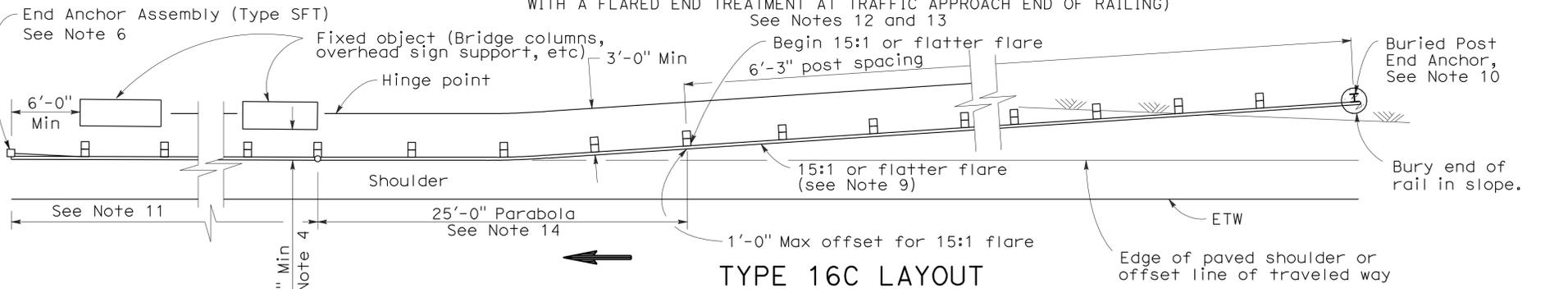
TYPE 16A LAYOUT

(GUARD RAILING INSTALLATION AT ROADSIDE FIXED OBJECT OR OBJECTS WITH AN IN-LINE END TREATMENT AT TRAFFIC APPROACH END OF RAILING)
See Notes 12 and 13



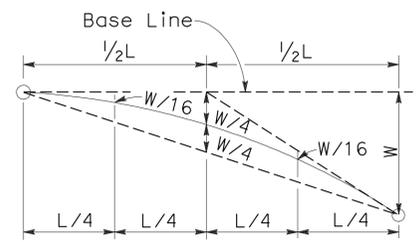
TYPE 16B LAYOUT

(GUARD RAILING INSTALLATION AT ROADSIDE FIXED OBJECT OR OBJECTS WITH A FLARED END TREATMENT AT TRAFFIC APPROACH END OF RAILING)
See Notes 12 and 13

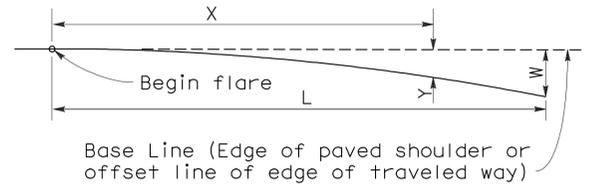


TYPE 16C LAYOUT

(GUARD RAILING INSTALLATION AT ROADSIDE FIXED OBJECT OR OBJECTS WITH A BURIED END ANCHOR TREATMENT AT TRAFFIC APPROACH END OF RAILING)
See Notes 12 and 13



TYPICAL PARABOLIC LAYOUT

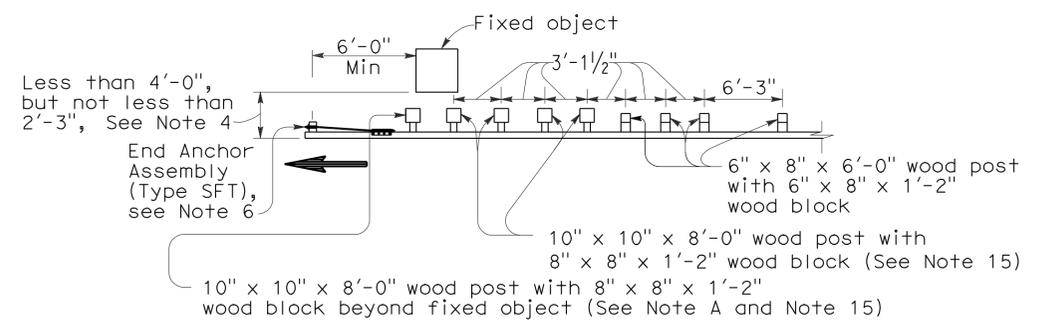


Base Line (Edge of paved shoulder or offset line of edge of traveled way)
Y = Offset from base line
W = Maximum offset
X = Distance along base line
L = Length of flare

PARABOLIC FLARE OFFSETS

NOTES:

- Line post, blocks and hardware to be used are shown on Revised Standard Plans A77A1, A77A2, A77B1, A77C1 and A77C2.
- Guard railing 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 notched recycled plastic blocks may be used for 6" x 8" x 6'-0" wood line posts with 6" x 8" x 1'-2" wood blocks where applicable and when specified.
- A 4'-0" minimum clearance is required between the face of the railing and the face of a fixed object located directly behind standard guard railing sections with post spacing of 6'-3". Construct guard railing as shown in the detail "Strengthened Railing Sections for Fixed Objects" on this plan, where the clearance between the face of the railing and the face of a fixed object is less than 4'-0", but not less than 2'-3". Where the clearance is less than 2'-3", a concrete wall or barrier should be constructed to shield the fixed object(s).
- Direction of adjacent traffic indicated by \rightarrow .
- For End Anchor Assembly (Type SFT) details, see Standard Plan A77H1.
- In-line Terminal System End Treatments are used where site conditions will not accommodate a flared end treatment.
- The type of terminal system to be used will be shown on the Project Plans.
- The 15:1 or flatter flare used with Type 16C Layout 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 16C Layout, see Standard Plan A77I2.
- As site conditions dictate, construct additional guard railing to shield fixed object(s). Additional guard railing length equal to multiples of 12'-6". Post spacing at 6'-3" except as specified in Note 4.
- Layout Types 16A, 16B or 16C are typically used where guard railing is recommended to shield roadside fixed object(s) and a crashworthy end treatment is required for only one direction of traffic.
- Where placement of dike is required with guard railing, see Revised Standard Plan RSP A77C4 for dike positioning details.
- For typical flare offsets for 25'-0" length parabola with maximum offset of 1'-0", see Revised Standard Plan RSP A77E1.
- W6 x 15 steel post, 8'-0" in length, with 8" x 8" x 1'-2" notched wood block or notched recycled plastic blocks may be used in place of the 10" x 10" x 8'-0" wood post with 8" x 8" x 1'-2" wood block shown in the "Strengthened Railing Sections Detail".



NOTE A:

For a series of fixed objects (bridge columns, overhead sign supports, etc.) additional 10" x 10" x 8'-0" wood post with 8" x 8" x 1'-2" wood blocks at 3'-1/2" center to center spacing are to be used between fixed objects.

STRENGTHENED RAILING SECTIONS FOR FIXED OBJECT

Use strengthened railing sections with Types 16A, 16B or 16C Layouts where minimum clearance between the face of the guard railing and fixed object(s) is less than 4'-0", but not less than 2'-3". See Note 4

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
METAL BEAM GUARD RAILING TYPICAL LAYOUTS FOR ROADSIDE FIXED OBJECTS

NO SCALE

RSP A77G3 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A77G3 DATED MAY 1, 2006 - PAGE 61 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A77G3

2006 REVISED STANDARD PLAN RSP A77G3

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
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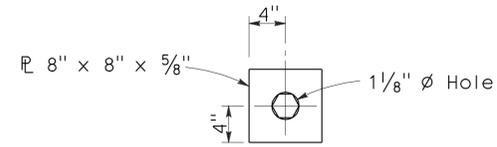
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

May 20, 2011
PLANS APPROVAL DATE

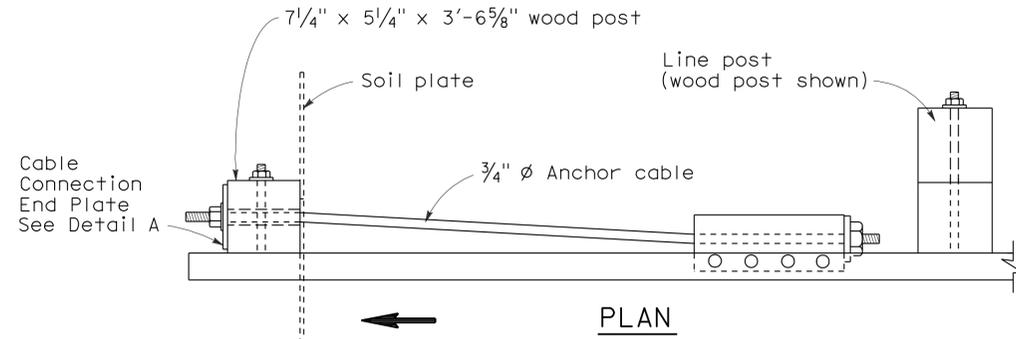
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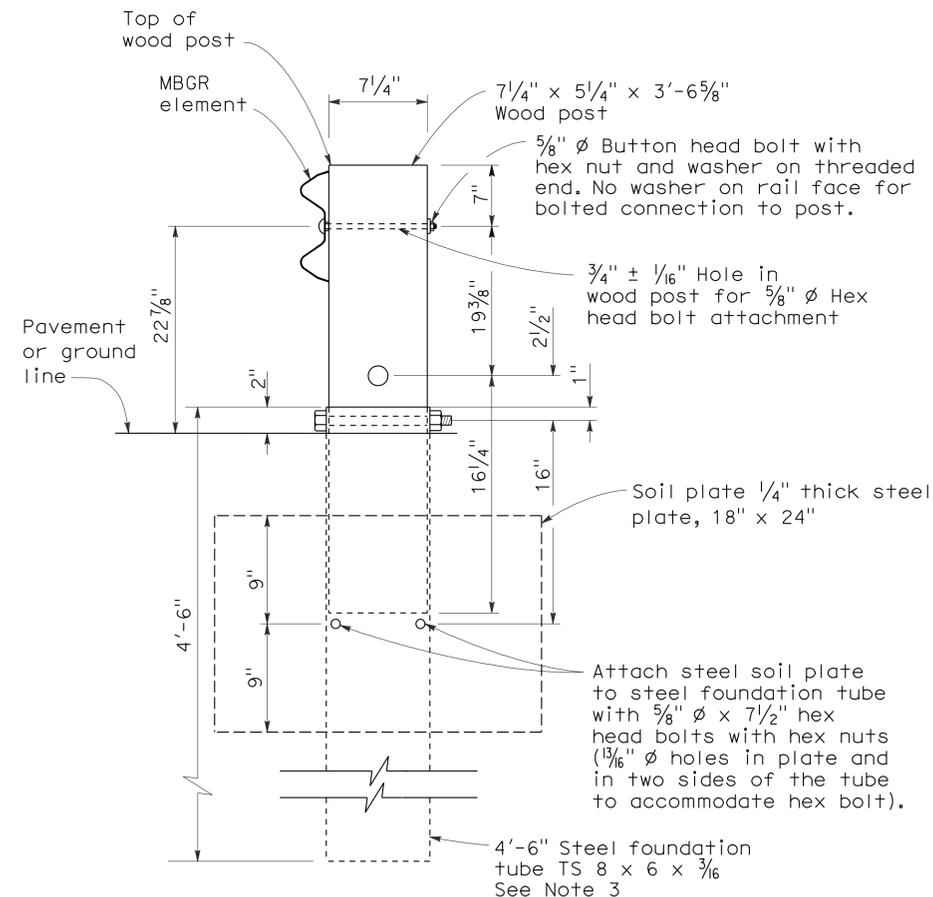
To accompany plans dated 6-4-12



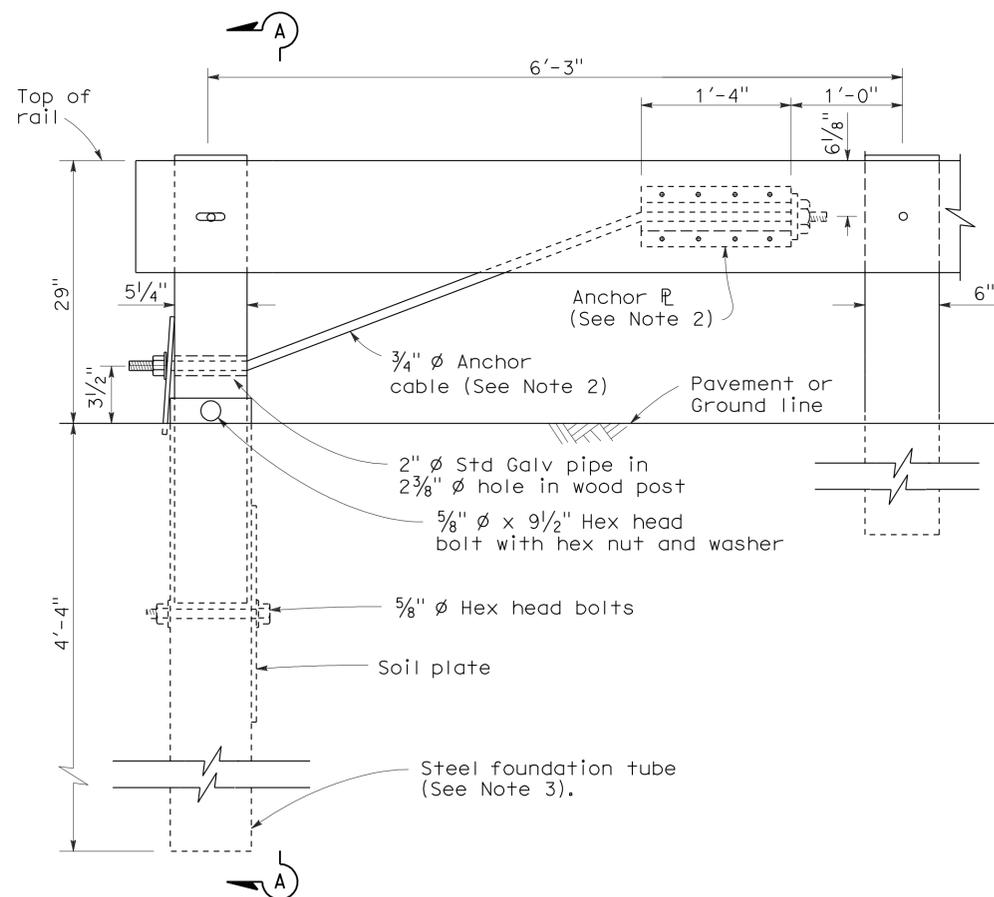
DETAIL A
CABLE CONNECTION
END PLATE



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 →.
5. Install line post, steel foundation tube and soil plate in soil.

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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
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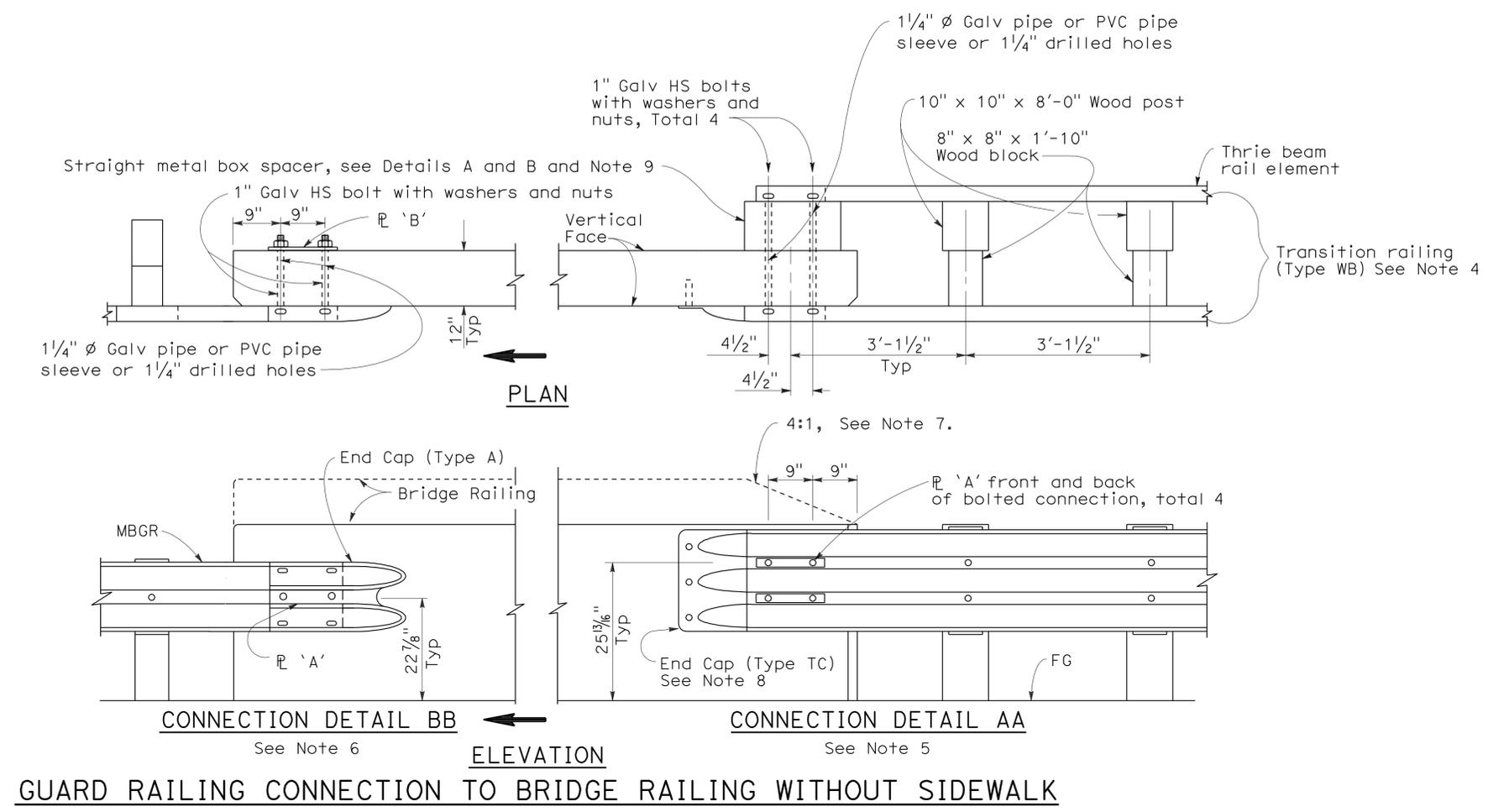
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May 20, 2011
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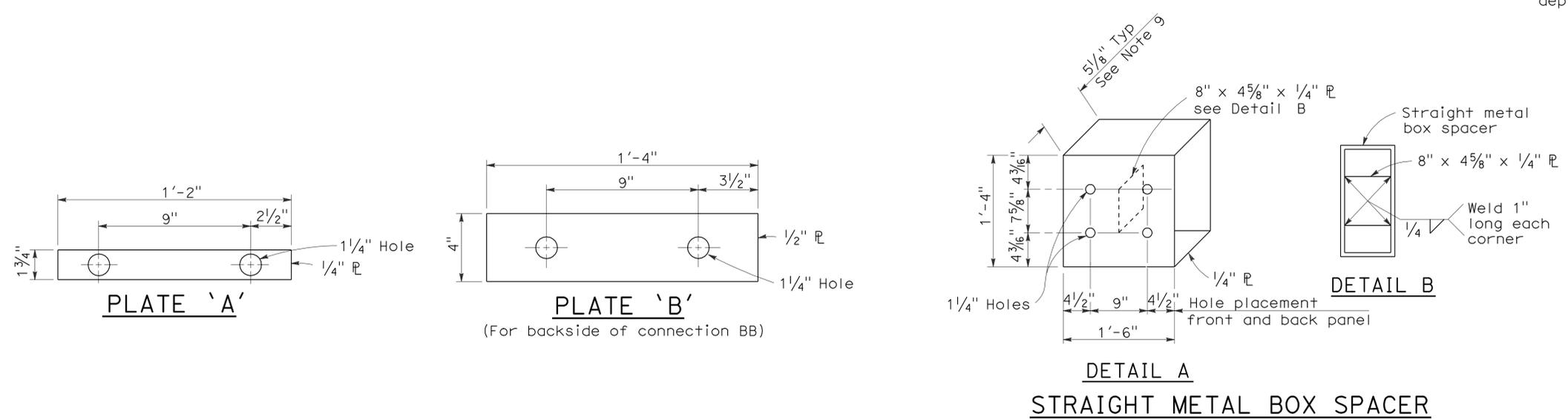
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To accompany plans dated 6-4-12



- NOTES:**
- See Revised Standard Plan RSP A77J2 for additional connection details to bridges without sidewalks.
 - Additional details of posts, blocks and hardware are shown on Standard Plan A77B1, A77C1 and A77C2.
 - Direction of adjacent traffic indicated by \rightarrow .
 - For additional details of Transition Railing (Type WB), see Standard Plan A77J4. Transition Railing (Type WB) transitions the 12 gage w-beam standard railing section of guard railing to a heavier gage nested thrie beam railing section which is connected to the concrete bridge railing.
 - For typical use of Connection Detail AA, see Layout Types 12A and 12B on Revised Standard Plan RSP A77F1, Layout Types 12C and 12D on Standard Plan A77F2, and Layout Type 12E on Revised Standard Plan RSP A77F3.
 - For typical use of Connection Detail BB, see Layout Type 12D (structure departure railing connection) on Standard Plan A77F2 and Layout Type 12DD on Standard Plan A77F5.
 - Where the height of the bridge railing exceeds the height of the thrie beam railing by more than 1" at Connection Detail AA, taper the top of the end of the bridge railing at 4:1 to match the top elevation of the thrie beam rail.
 - For details of End Cap (Type TC), see Standard Plan A77J4.
 - See Standard Plan A77J4 for additional details regarding depth dimension for straight metal box spacer.



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

METAL BEAM GUARD RAILING CONNECTIONS TO BRIDGE RAILINGS WITHOUT SIDEWALKS DETAILS No.1

NO SCALE
RSP A77J1 DATED MAY 20, 2011 SUPERSEDES RSP A77J1 DATED JUNE 6, 2008 AND STANDARD PLAN A77J1 DATED MAY 1, 2006 - PAGE 72 OF THE STANDARD PLANS BOOK DATED MAY 2006.

2006 REVISED STANDARD PLAN RSP A77J1

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ	5	25.1/28.6	426	485

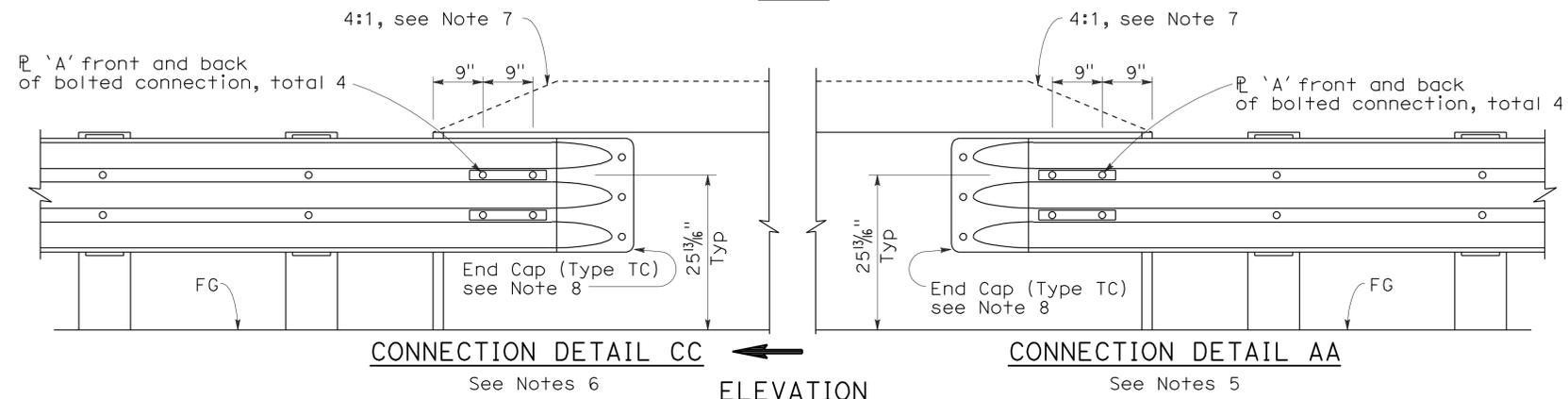
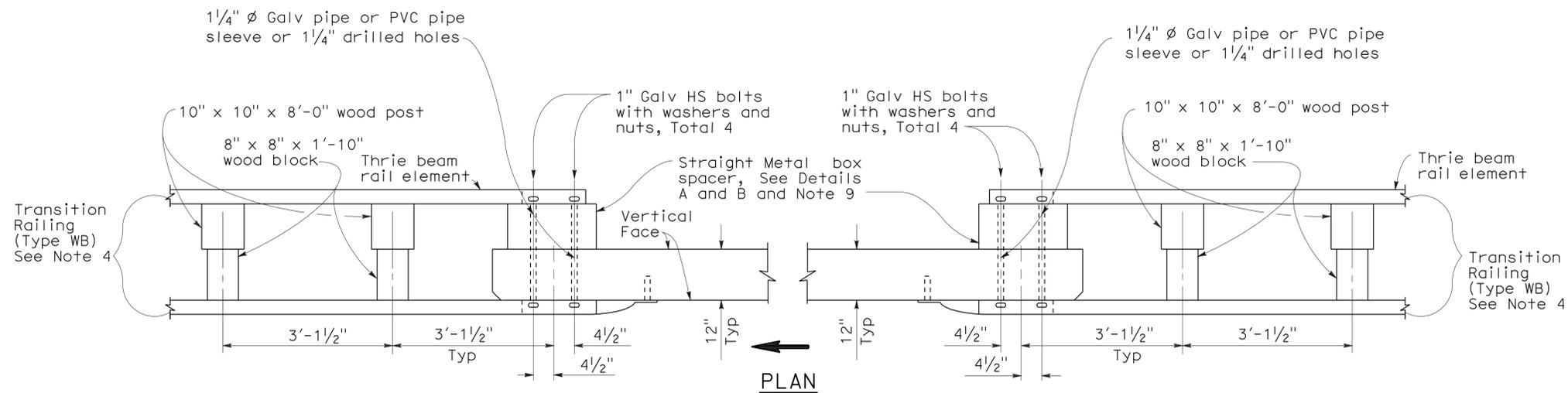
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

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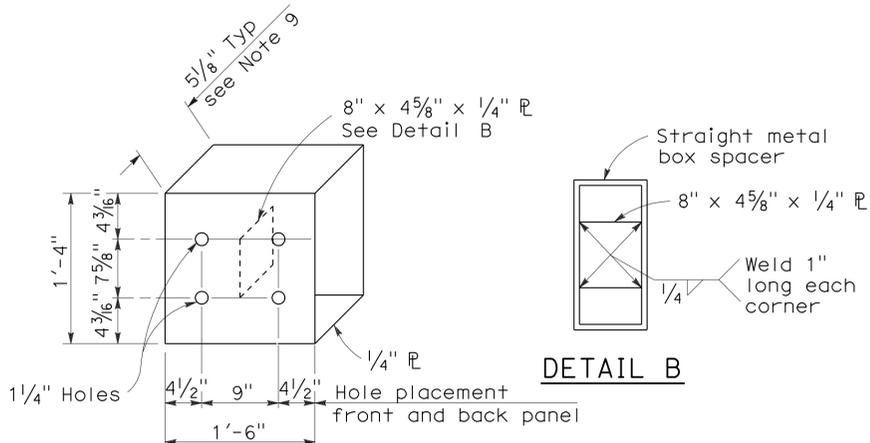
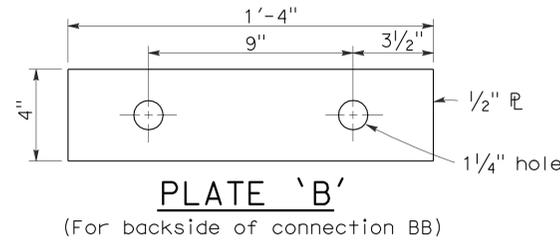
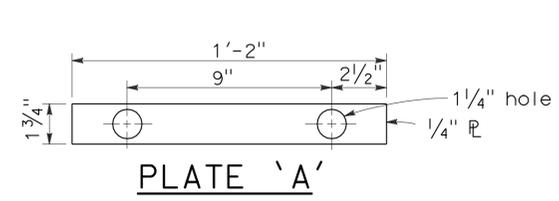
To accompany plans dated 6-4-12



GUARD RAILING CONNECTION TO BRIDGE RAILING WITHOUT SIDEWALK

NOTES:

1. See Revised Standard Plan RSP A77J1 for additional connection details to bridges without sidewalks.
2. Additional details of posts, blocks and hardware are shown on Standard Plan A77B1, A77C1 and A77C2.
3. Direction of adjacent traffic indicated by →.
4. For additional details of Transition Railing (Type WB), see Standard Plan A77J4. Transition Railing (Type WB) transitions the 12 gage w-beam standard railing section of guard railing to a heavier gage nested thrie beam railing section which is connected to the concrete bridge railing.
5. For typical use of Connection Detail AA, see Layout Types 12A and 12B on Revised Standard Plan RSP A77F1, Layout Types 12C and 12D on Standard Plan A77F2, and Layout Type 12E on Revised Standard Plan RSP A77F3.
6. For typical use of Connection Detail CC, see Layout Types 12AA and 12BB on Standard Plan A77F4 and Layout Type 12CC on Standard Plan A77F5.
7. Where the height of the bridge railing exceeds the height of the thrie beam railing by more than 1" at Connection Detail AA and connection Detail CC, taper the top of the end of the bridge railing at 4:1 to match the top elevation of the thrie beam railing.
8. For details of End Cap (Type TC), see Standard Plans A77J4.
9. See Standard Plans A77J4 for additional details regarding depth dimension for straight metal box spacer.



**DETAIL A
STRAIGHT METAL BOX SPACER**

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**METAL BEAM GUARD RAILING
CONNECTIONS TO BRIDGE RAILINGS
WITHOUT SIDEWALKS DETAILS No.2**

NO SCALE
RSP A77J2 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A77J2
DATED MAY 1, 2006 - PAGE 73 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A77J2

2006 REVISED STANDARD PLAN RSP A77J2

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
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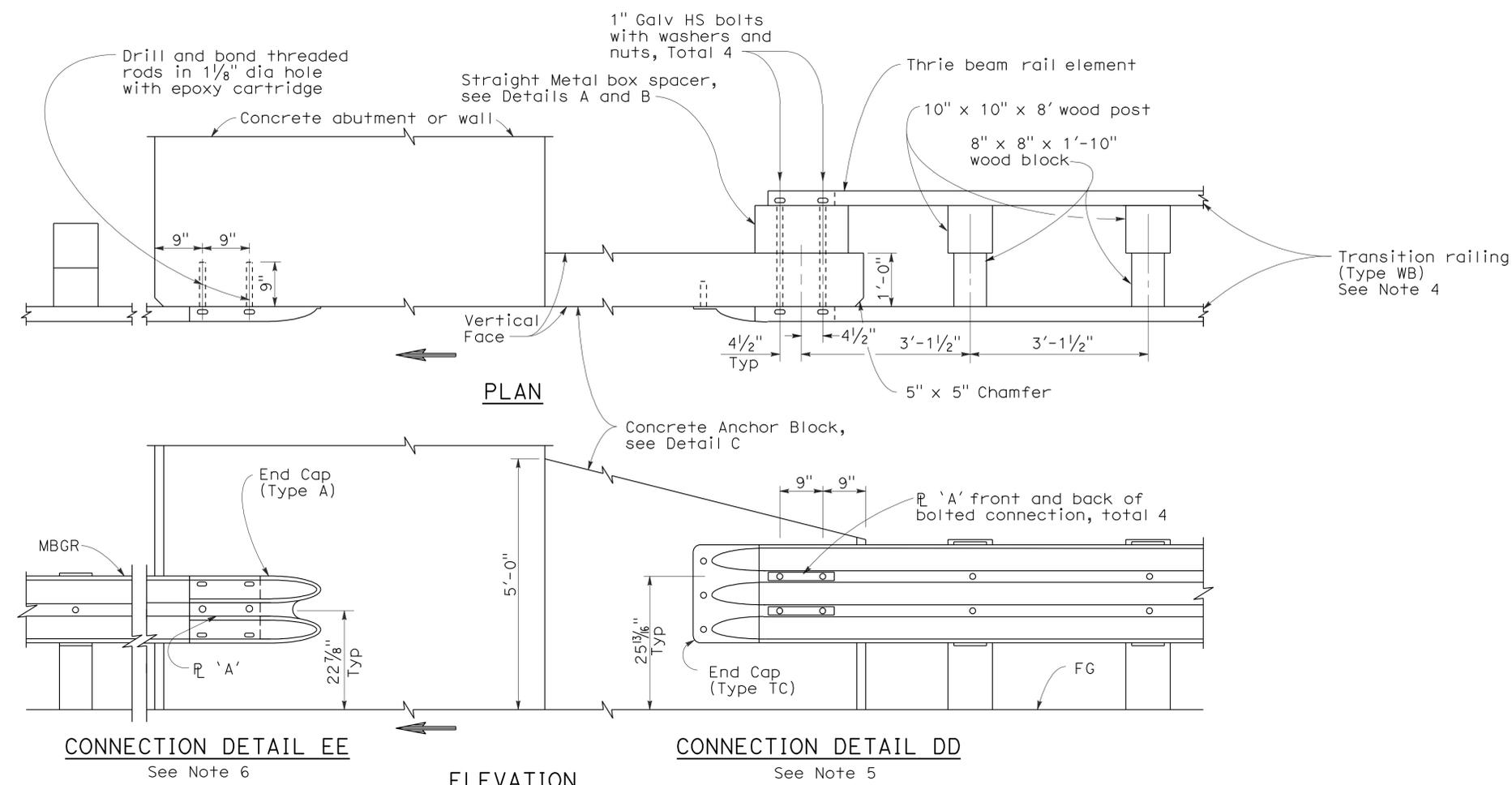
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

May 20, 2011
PLANS APPROVAL DATE

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No. C50200
Exp. 6-30-11
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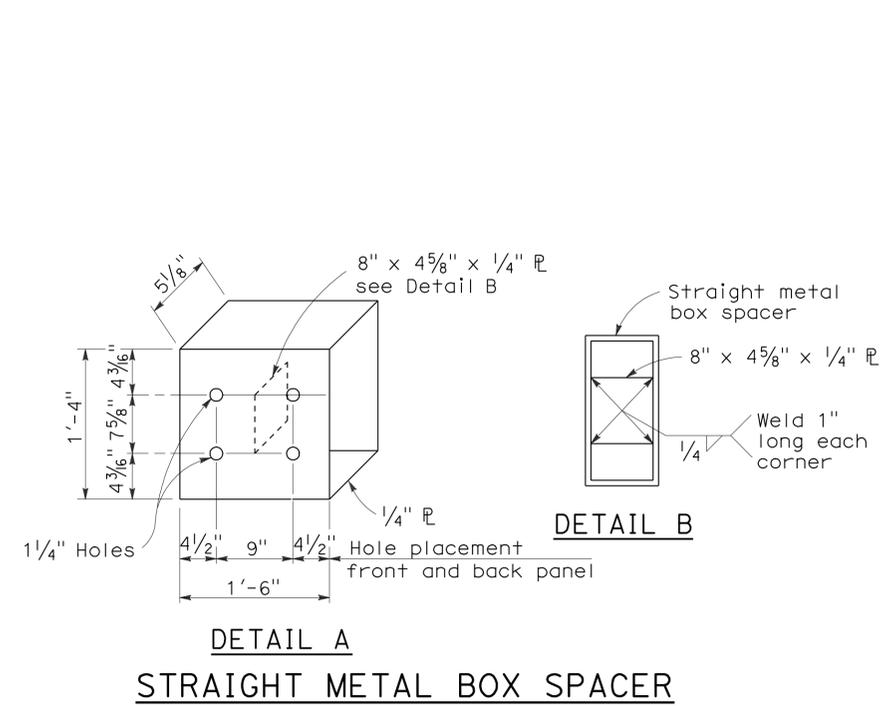
To accompany plans dated 6-4-12



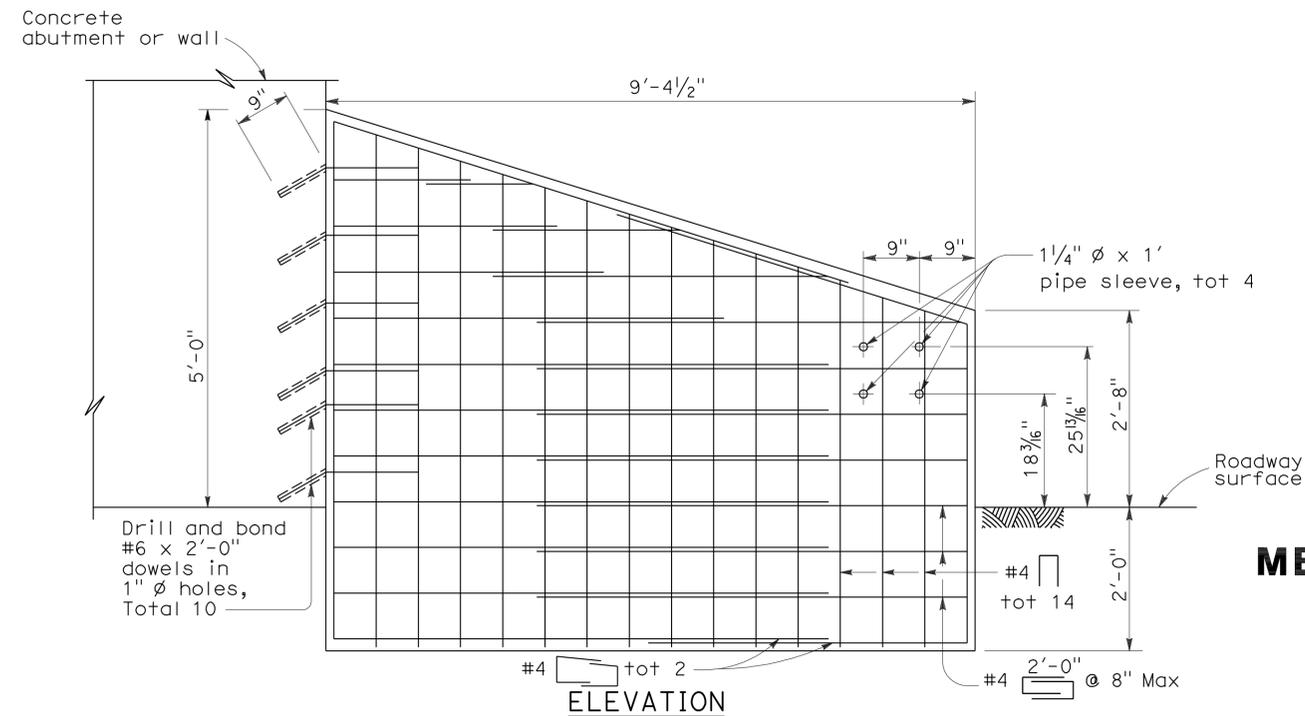
NOTES:

1. These connection details apply to abutments and walls.
2. Additional details of posts, blocks and hardware are shown on Standard Plans A77B1, A77C1 and A77C2.
3. Direction of adjacent traffic indicated by →.
4. For additional details of Transition Railing (Type WB), see Standard Plan A77J4 Transition Railing (Type WB) transitions the 12 gage w-beam standard railing section of guard railing to a heavier gage nested thrie beam railing section which is connected to the concrete anchor block.
5. For typical use of Connection Details DD, See Layout Types 12A and 12B on Standard Plan A77F1 and Layout Types 12C and 12D on Standard Plan A77F2.
6. For typical use of Connection Detail EE, see Layout Type 12D on Standard Plan A77F2 and Layout Type 12DD on Standard Plan A77F5.

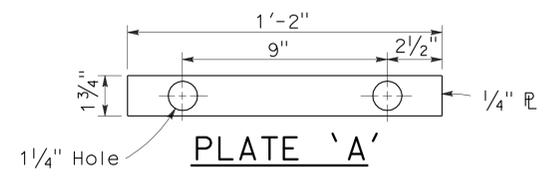
GUARD RAILING CONNECTION TO ABUTMENT OR WALL



STRAIGHT METAL BOX SPACER



ANCHOR BLOCK FOR TRANSITION RAILING CONNECTION



METAL BEAM GUARD RAILING CONNECTIONS TO ABUTMENTS AND WALLS

NO SCALE

2006 REVISED STANDARD PLAN RSP A77J3

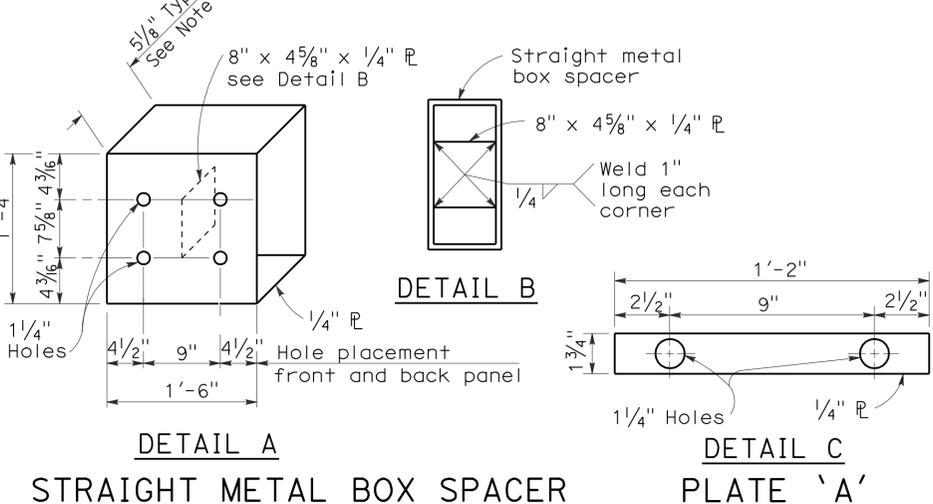
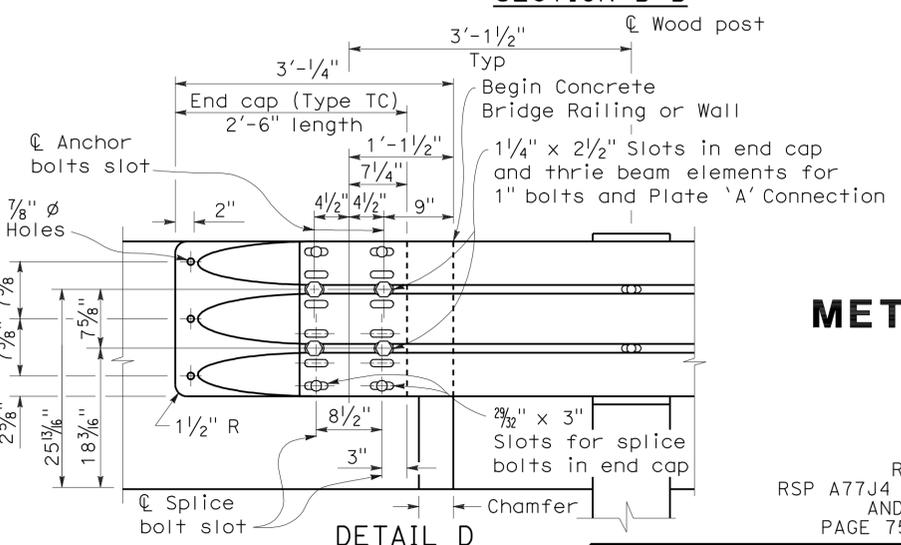
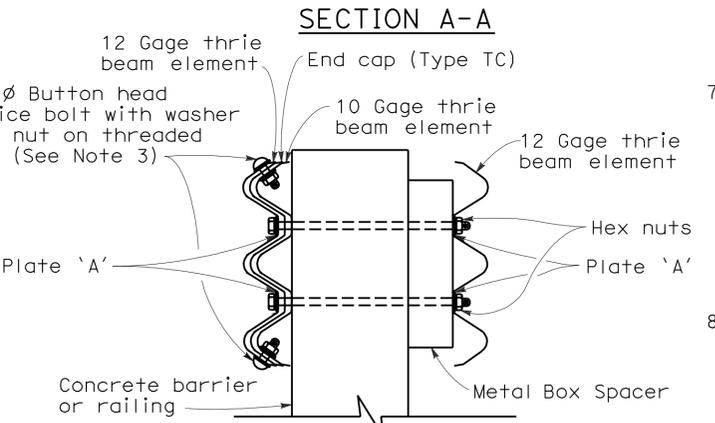
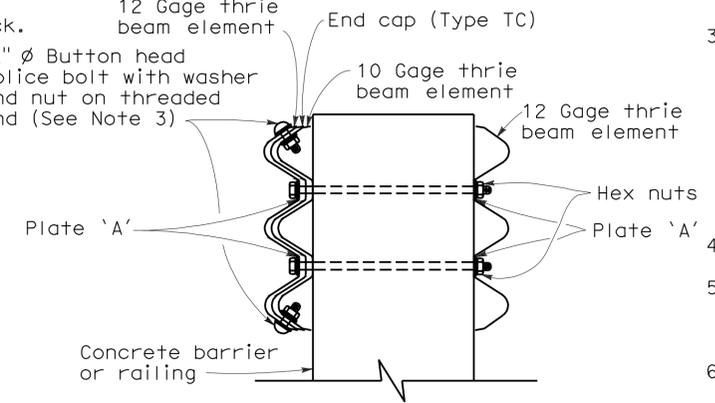
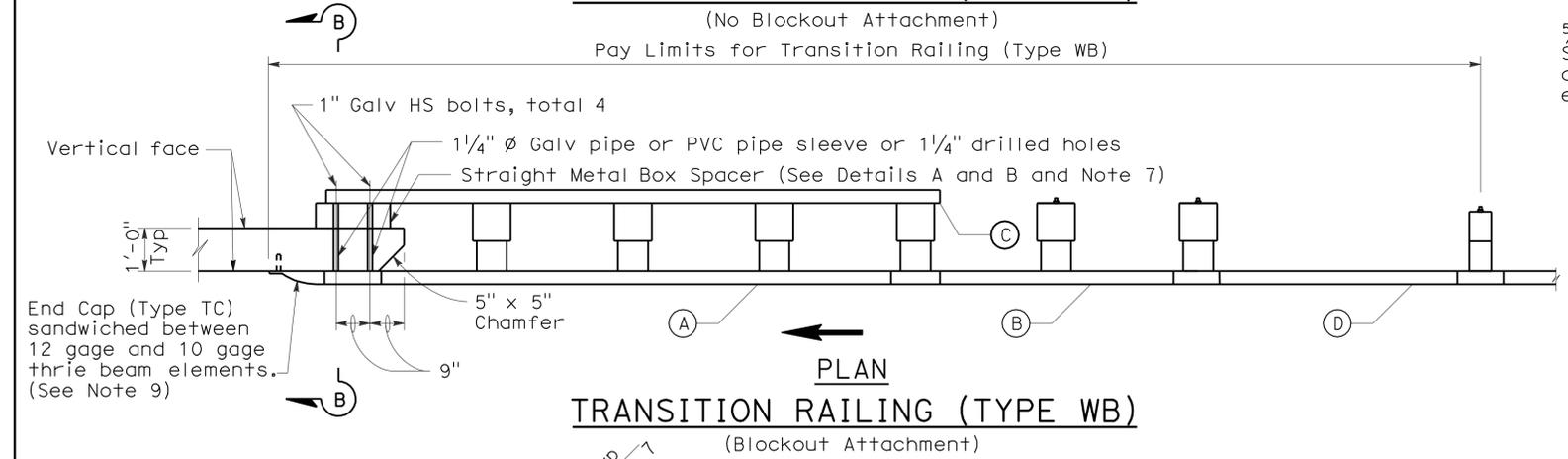
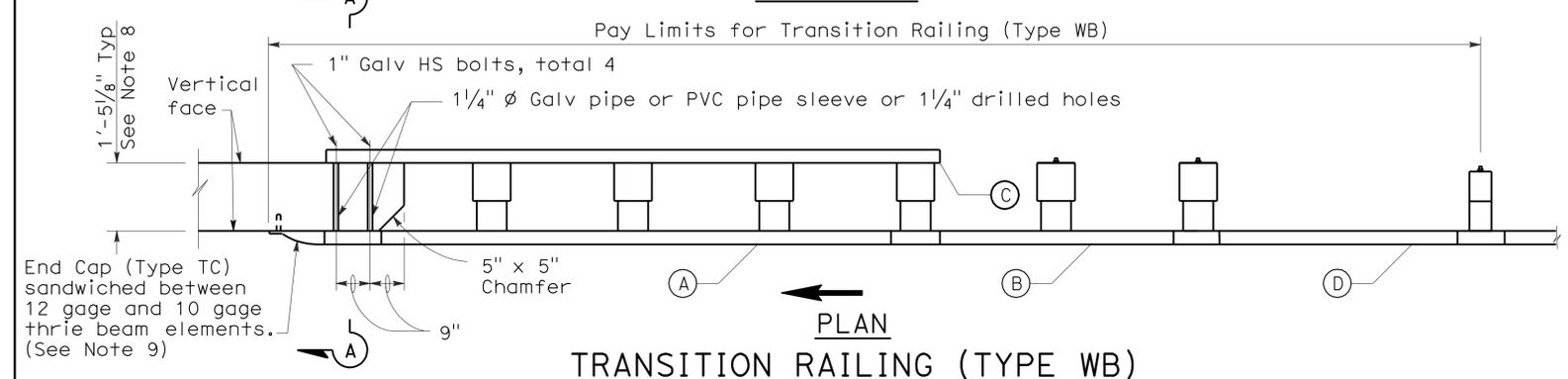
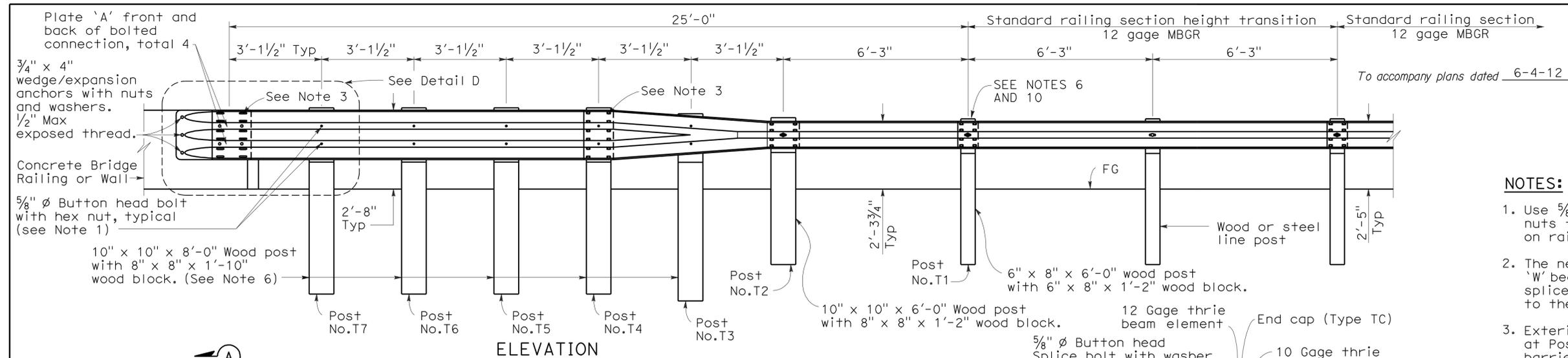
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	5	25.1/28.6	428	485

Randell D. Hiatt
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May 20, 2011
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- LEGEND**
- (A) Nested thrie beam elements (one 12 gage element nested over one 10 gage element).
 - (B) One 10 gage "W" beam to thrie beam element.
 - (C) One 12 gage thrie beam element.
 - (D) One 10 gage "W" beam rail element (7'-3 1/2" length)
- 10 gage = 0.135" thick
 12 gage = 0.108" thick

- NOTES:**
1. Use 5/8" ø Button head bolts and hex nuts for connections to posts. No washer on rail face for bolted connections to post.
 2. The nested rail elements, end cap, and "W" beam to thrie beam element may be spliced together prior to bolting the elements to the wood post and concrete barrier or railing.
 3. Exterior splice bolt holes for rail element splices at Post No. T4 and the connection to the concrete barrier or railing shall be the standard 7/32" x 1/8" slot size. Interior splice bolt holes at these locations may be increased up to 1/4" ø. Only the top 2 and the bottom 2 splice bolts with washers and nuts are required for rail splices at Post No. T4 and the connection to the concrete barrier or railing.
 4. Direction of adjacent traffic indicated by →.
 5. The top elevation of Posts No. T2 through No. T7 shall not project more than 1" above the top elevation of the rail element.
 6. Typically, the railing connected to Transition Railing (Type WB) will be either standard railing section of metal beam guard railing with height transition ratio of 120:1 or an approved Caltrans end treatment attached to Post No. T1.
 7. The depth of the metal box spacer varies from the 5/8" to 1 1/2" and is dependent on the width of the concrete railing or wall. The combined dimension for the depth of the metal box spacer plus the width of railing or wall is typically 17 1/8". Where the space between the backside of the concrete railing or wall and the rear thrie beam element is less than 1 1/2", metal plates similar to Plate 'A' are to be used as spacers.
 8. Where the width of the concrete railing or wall is greater than 17 1/8", wood blocks are to be used to fill the space created between the backside of Posts No. T4 through No. T7 and the rear thrie beam element. These wood blocks shall be 8" in width and 1'-2" in length. The dimension between the front thrie beam element and the rear thrie beam element is to match the width of the concrete railing or wall.
 9. End cap may be installed over 12 gage and 10 gage thrie beam elements where transition railing is installed on the departure end of bridge railing.
 10. Conform standard railing section height to 2'-3 3/4" at Post No. T1 using height transition ratio of 120:1.

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**METAL BEAM GUARD RAILING
 TRANSITION RAILING
 (TYPE WB)**
 NO SCALE
 RSP A77J4 DATED MAY 20, 2011 SUPERSEDES
 RSP A77J4 DATED JUNE 5, 2009, RSP A77J4 DATED JUNE 6, 2008
 AND STANDARD PLAN A77J4 DATED MAY 1, 2006 -
 PAGE 75 OF THE STANDARD PLANS BOOK DATED MAY 2006.

2006 REVISED STANDARD PLAN RSP A77J4

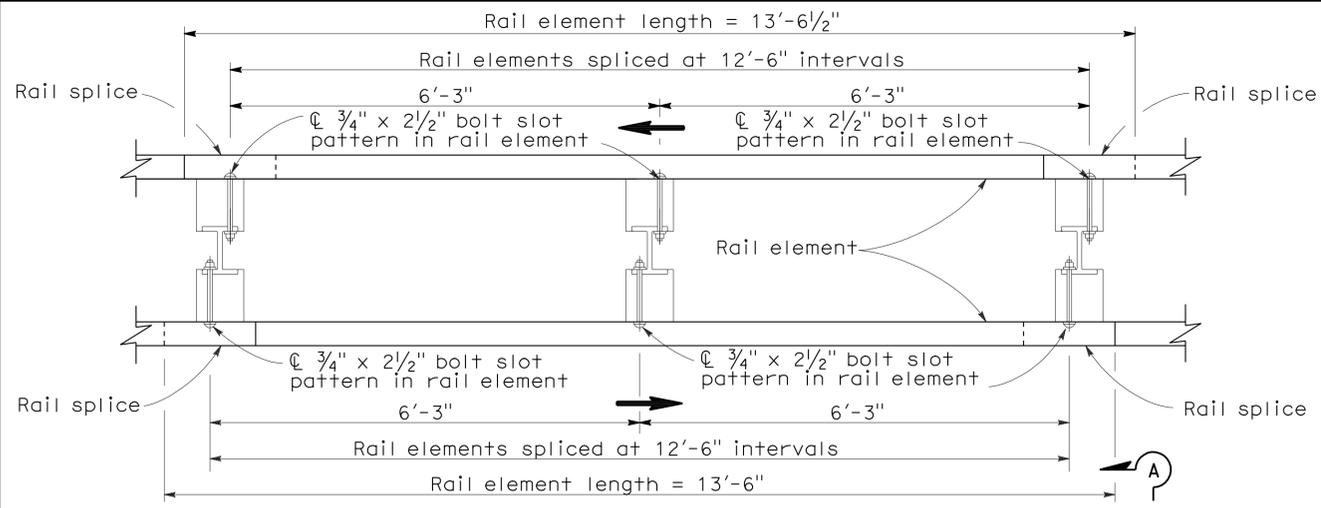
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ	5	25.1/28.6	429	485

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

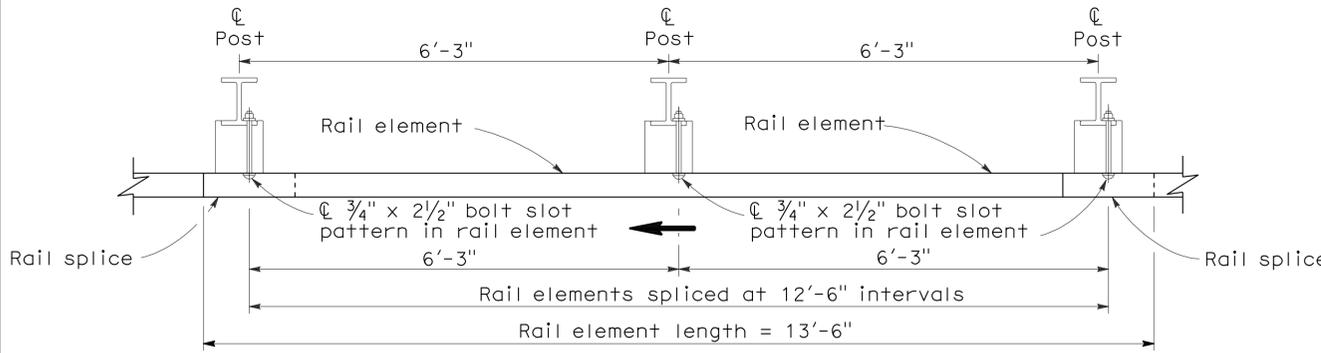
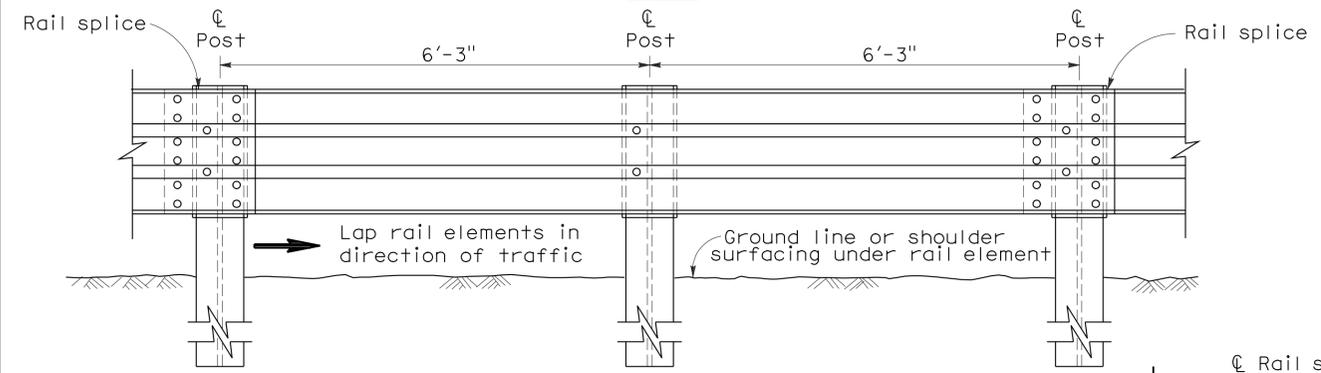
June 6, 2008
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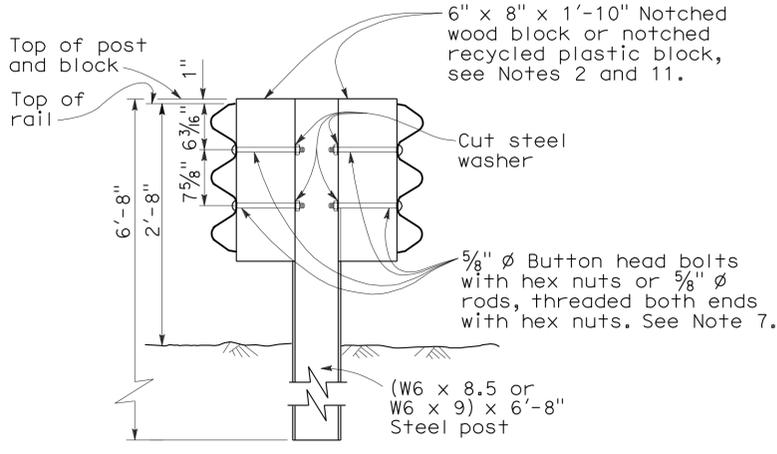
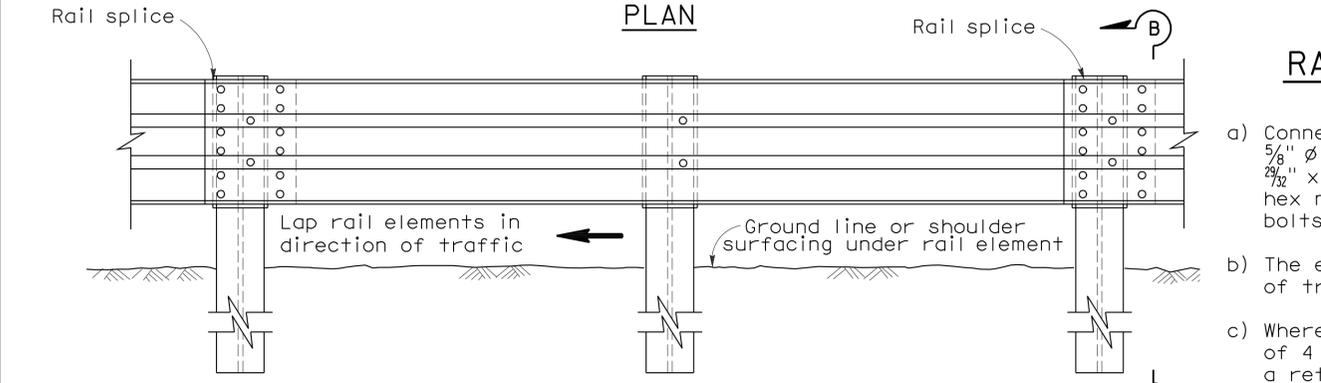
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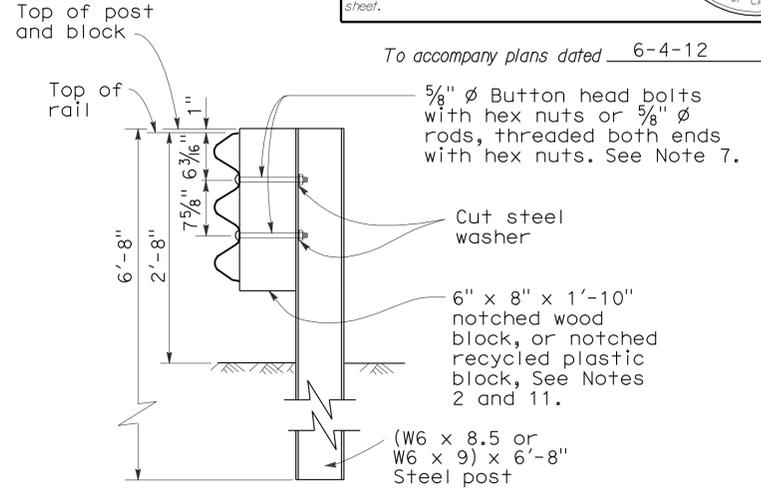
DOUBLE THRIE BEAM BARRIER
(Steel post with notched wood or notched plastic blocks)
See Note 1



SINGLE THRIE BEAM BARRIER
(Steel post with notched wood or notched plastic blocks)
See Note 1

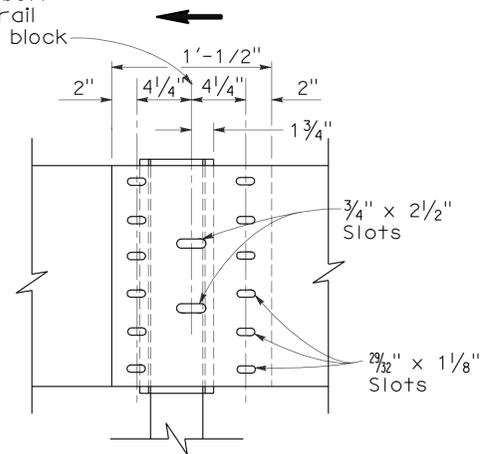


SECTION A-A
TYPICAL STEEL LINE POST INSTALLATION



SECTION B-B
TYPICAL STEEL LINE POST INSTALLATION

⊗ Rail splice and slots for 5/8" ⌀ button head bolt to connect rail to post and block



RAIL ELEMENT SPLICE DETAIL

- Connect the overlapped ends of the thrie beam rail elements with 5/8" ⌀ x 1 1/8" button head oval shoulder bolts inserted into the 2 3/32" x 1 1/8" slots and bolted together with 5/8" ⌀ x 1 1/8" recessed hex nuts. Recess of hex nut points toward rail element. A total of 12 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. Where a return cap is to be attached to the ends of rail elements, a total of 8 of the above described splice bolts and nuts are to be used.

NOTES:

- For details of the cross section of the thrie beam rail element and details for wood post with wood block installations, see Standard Plan A78A.
- For details of standard hardware, posts and blocks used to construct thrie beam barrier, see Revised Standard Plan RSP A78C1 and Standard Plan A78C2.
- Thrie beam barrier post spacing to be 6'-3" center to center, except as otherwise noted.
- Top of barrier rail to be 2'-8" above ground line or shoulder surfacing under the rail element.
- For barrier end treatments and barrier connections, see Standard Plans A78E1, A78E2 and A78E3, Revised Standard Plans RSPs A78F1 and A78F2, Standard Plan A78G and Revised Standard Plan RSP A78H.
- For connection to Concrete Barrier, see Revised Standard Plan RSP A78I.
- Attach rail element to block and steel post with 2 bolts or rods on approaching traffic side of block and post web. No washer on rail face for rod or bolted connections to line post.
- For details of thrie beam barrier on bridges, see Standard Plan A78D2. For details of thrie beam barrier at fixed objects, see Standard Plan A78D1.
- Direction of traffic indicated by →.
- Notched face of block faces steel post.

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

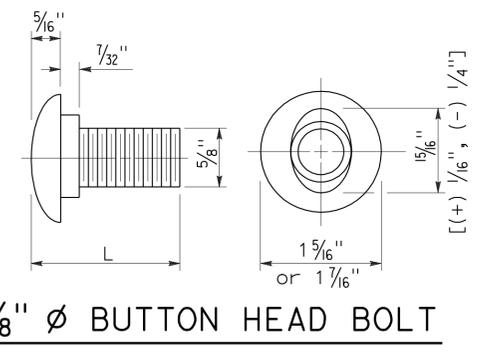
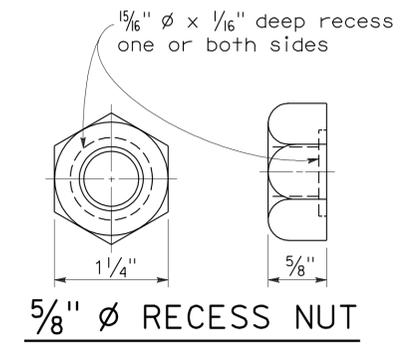
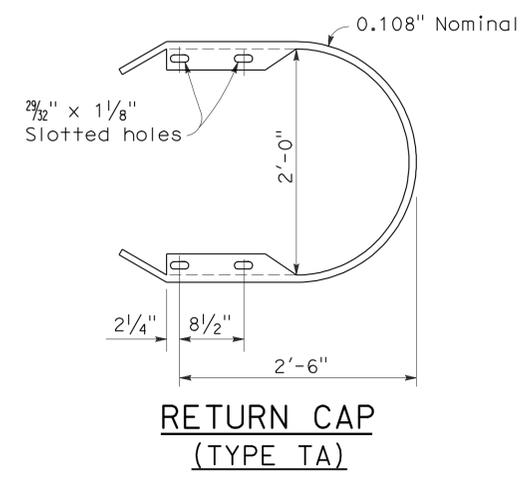
NO SCALE

RSP A78B DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A78B
DATED MAY 1, 2006 - PAGE 84 OF THE STANDARD PLANS BOOK DATED MAY 2006.

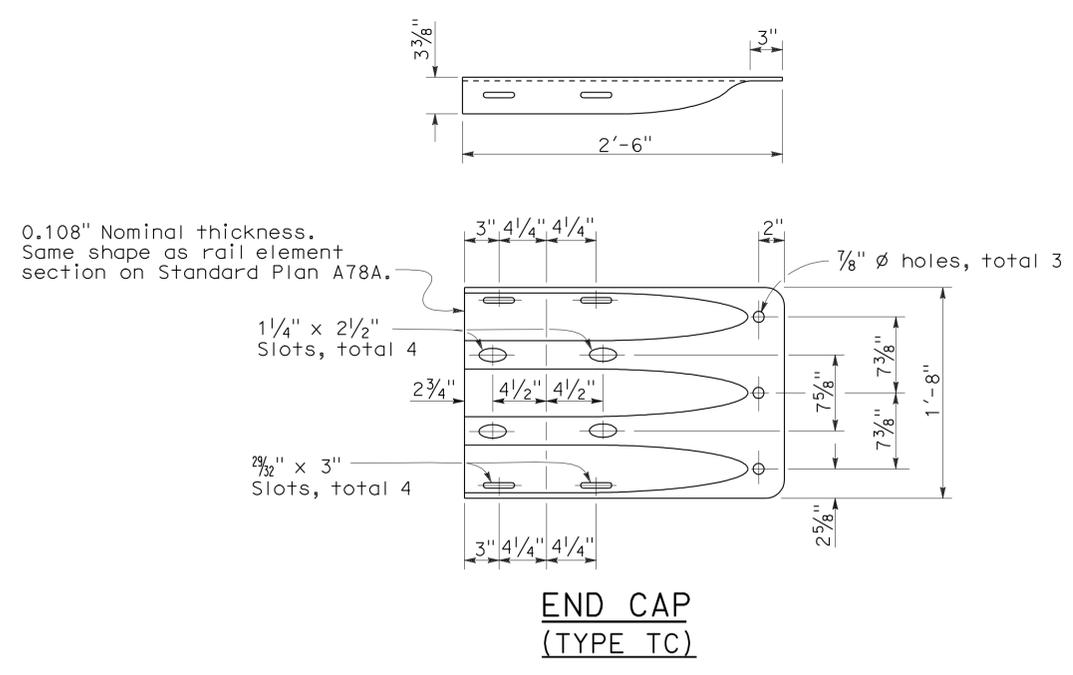
REVISED STANDARD PLAN RSP A78B

2006 REVISED STANDARD PLAN RSP A78B

To accompany plans dated 6-4-12



L	THREAD LENGTH
1 1/4"	full thread length
2"	full thread length
9/2"	4" Min thread length
18"	4" Min thread length



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DEPARTMENT OF TRANSPORTATION

**THRIE BEAM BARRIER
STANDARD HARDWARE DETAILS**

NO SCALE

RSP A78C1 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A78C1
DATED MAY 1, 2006 - PAGE 85 OF THE STANDARD PLANS BOOK DATED MAY 2006.

2006 REVISED STANDARD PLAN RSP A78C1

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ	5	25.1/28.6	431	485

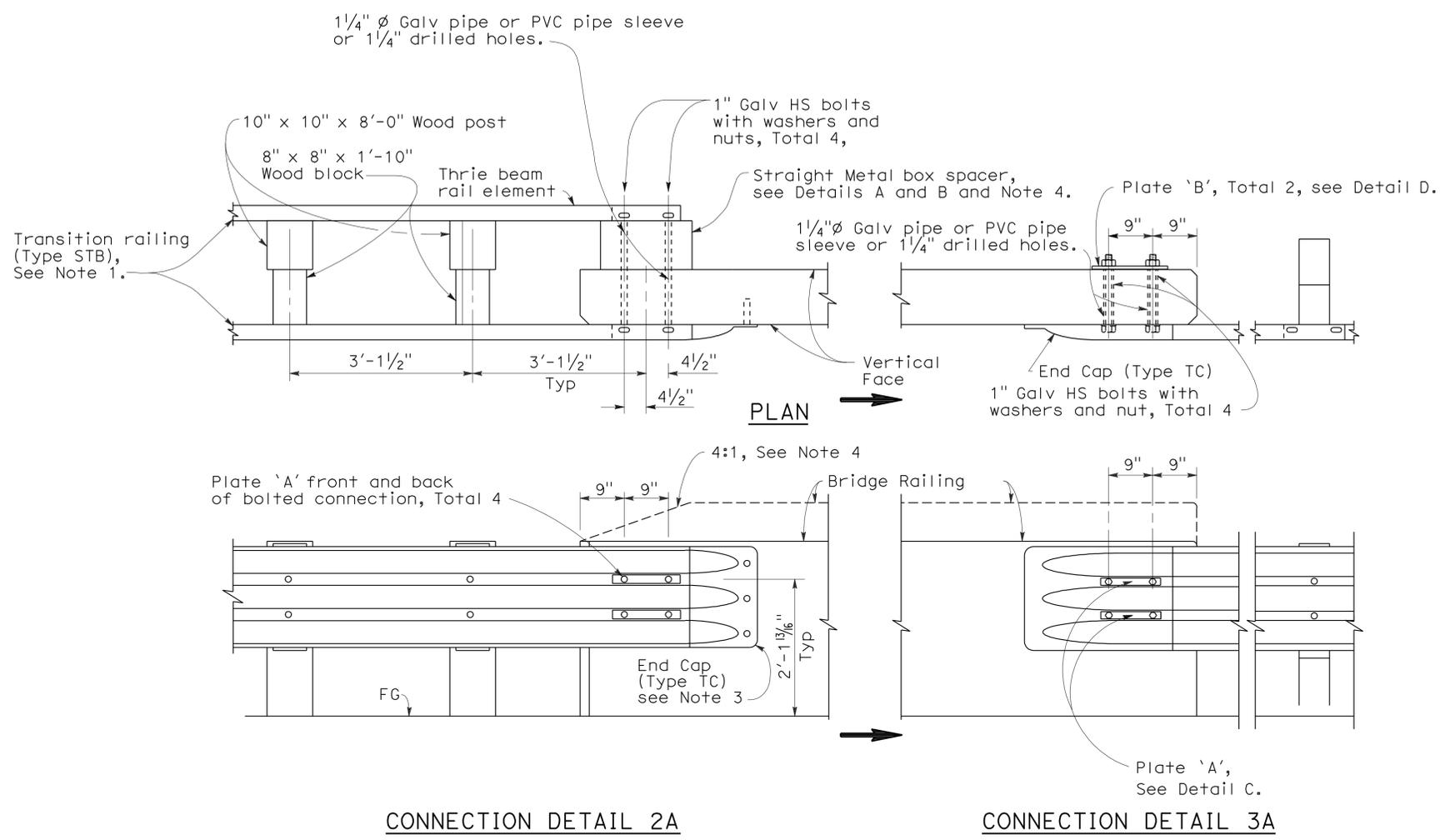
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

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

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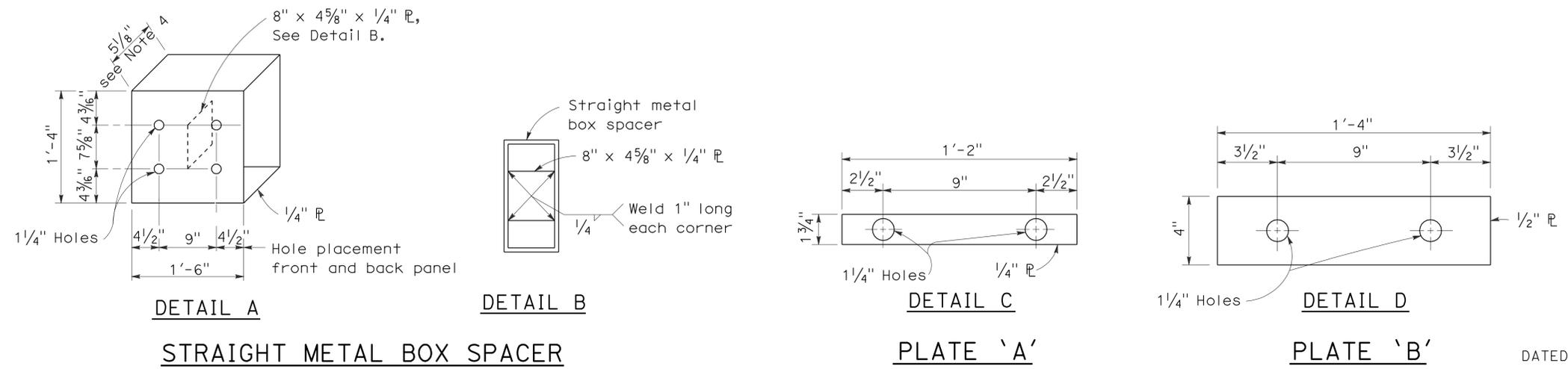
To accompany plans dated 6-4-12



NOTES:

1. For additional details of Transition Railing (Type STB), see Standard Plans A78J. Transition Railing (Type STB) transitions the standard 12 gage single thrie beam barrier to a heavier gage single thrie beam railing section then to a heavier gage nested double thrie beam barrier section which then is connected to the concrete bridge railing.
2. Where the height of the bridge railing exceeds the height of the thrie beam railing by more than 1" at Connection Detail 2A, taper the top of the end of the bridge railing at 4:1 to match the top elevation of the thrie beam railing.
3. For details of End Cap (Type TC), see Standard Plan A78C1.
4. See Standard Plan A78J for additional details regarding depth dimension for straight metal box spacer.
5. Direction of adjacent traffic indicated by ➡.

CONNECTION DETAIL 2A **CONNECTION DETAIL 3A**
ELEVATION
SINGLE THRIE BEAM BARRIER CONNECTION TO BRIDGE RAILING WITHOUT SIDEWALK



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
SINGLE THRIE BEAM BARRIER CONNECTIONS TO BRIDGE RAILINGS WITHOUT SIDEWALKS
NO SCALE

RSP A78F2 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A78F2 DATED MAY 1, 2006 - PAGE 93 OF THE STANDARD PLANS BOOK DATED MAY 2006.
REVISED STANDARD PLAN RSP A78F2

2006 REVISED STANDARD PLAN RSP A78F2

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ	5	25.1/28.6	432	485

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

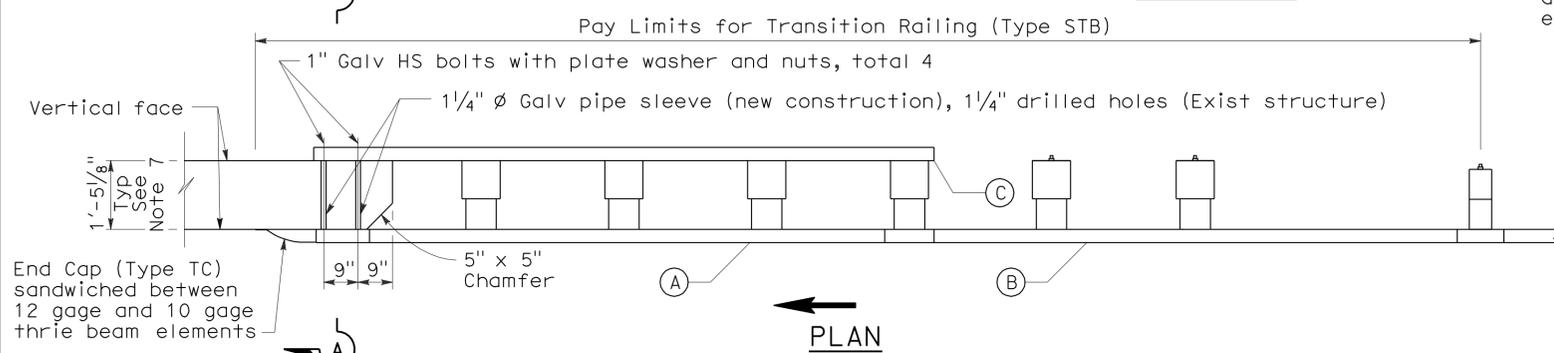
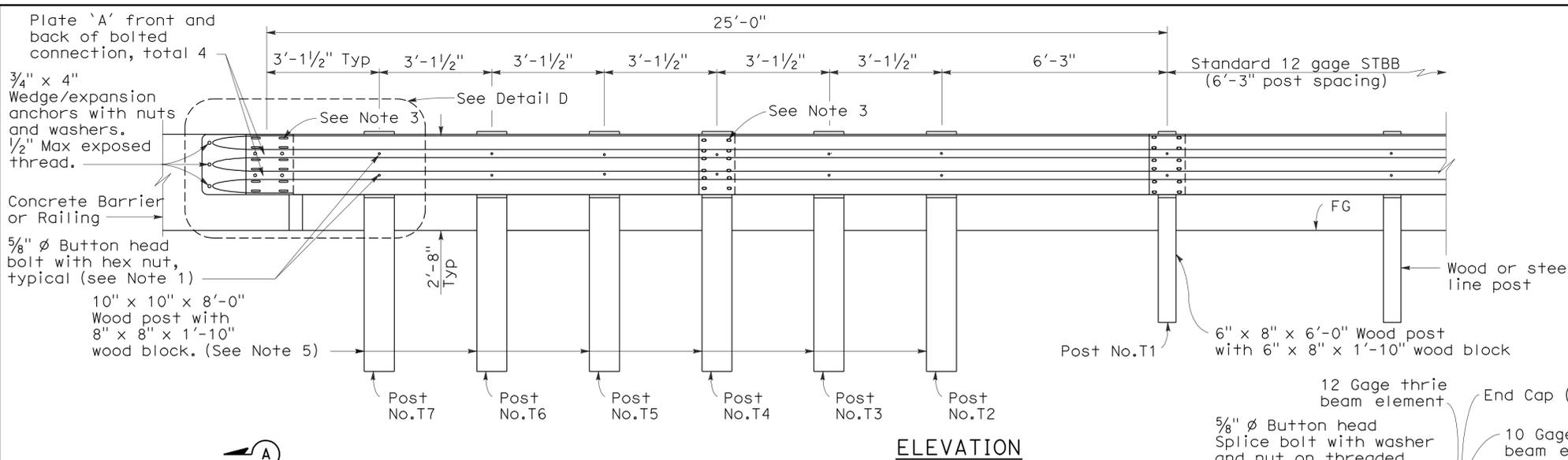
To accompany plans dated 6-4-12

LEGEND

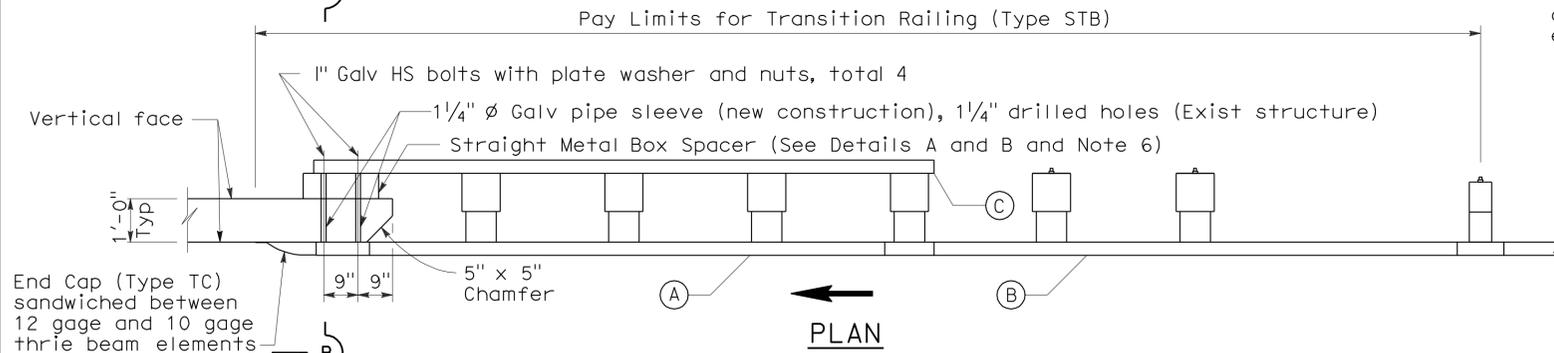
- (A) Nested thrie beam elements (one 12 gage element nested over one 10 gage element).
 - (B) One 10 gage thrie beam element.
 - (C) One 12 gage thrie beam element.
- 10 gage = 0.135" thick
12 gage = 0.108" thick

NOTES:

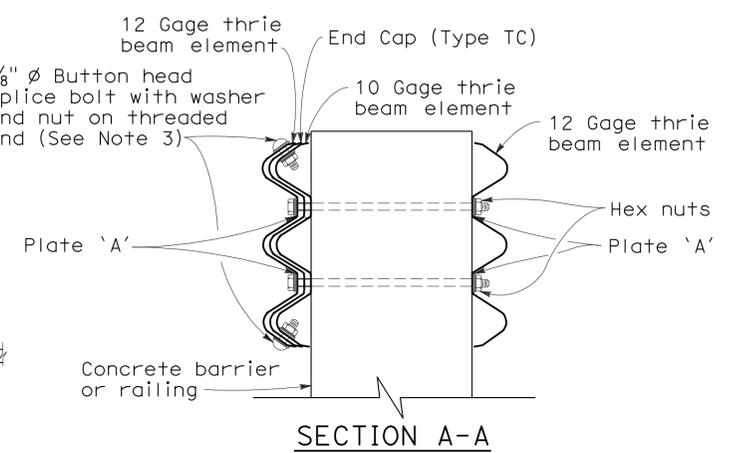
1. Use 5/8" ø Button head bolts and hex nuts for connection to posts. No washer on rail face for bolted connections to post.
2. The nested rail elements, end cap and single 10 gage thrie beam element, may be spliced together prior to bolting the elements to the wood post and concrete barrier or railing.
3. Exterior splice bolt holes for rail element splices at Post No.T4 and the connection to the concrete barrier or railing shall be the standard 3/2" x 1/8" slot size. Interior splice bolt holes at these locations may be increased up to 1/4" ø. Only the top 2 and the bottom 2 splice bolts with washers and nuts are required for rail splices at Post No.T4 and the connection to the concrete barrier or railing.
4. Direction of adjacent traffic indicated by ➡.
5. The top elevation of Post Nos.T2 through T7 shall not project more than 1" above the top elevation of the rail element.
6. The depth of the metal box spacer varies from the 5/8" to 1/2" and is dependent on the width of the concrete railing or wall. The combined dimension for the depth of the metal box spacer plus the width of railing or wall is typically 17/8". Where the space between the backside of the concrete railing or wall and the rear thrie beam element is less than 1/2" metal plates similar to Plate 'A' are to be used as spacers.
7. Where the width of the concrete railing or wall is greater than 17/8", wood blocks are to be used to fill the space created between the backside of Post No.4 through No.7 and the rear thrie beam element. These wood blocks shall be 8" in width and 1'-2" in length. The dimension between the front thrie beam element and the rear thrie beam element is to match the width of the concrete railing or wall.
8. For details of End Cap (Type TC), see Revised Standard Plan RSP A78C1.



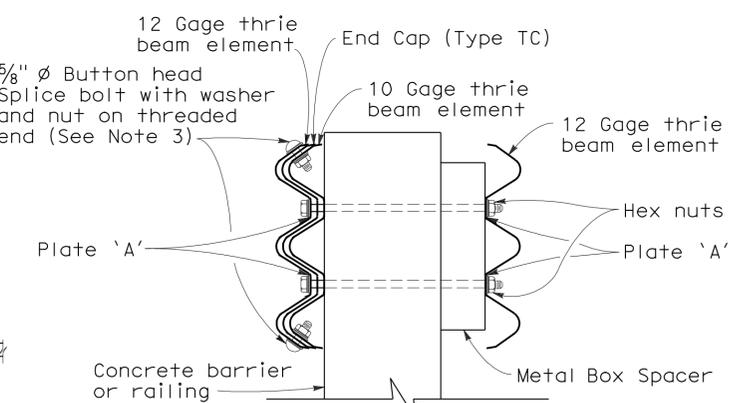
TRANSITION RAILING (TYPE STB)
(No Blockout Attachment)



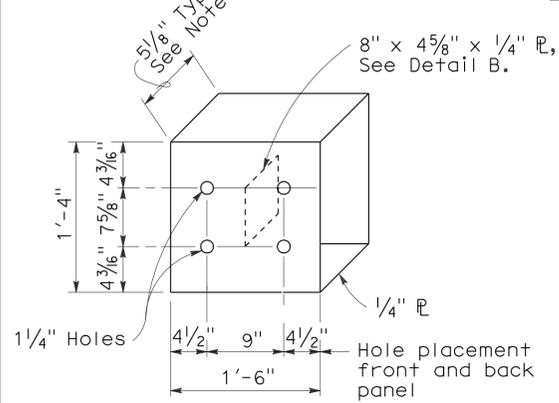
TRANSITION RAILING (TYPE STB)
(Blockout Attachment)



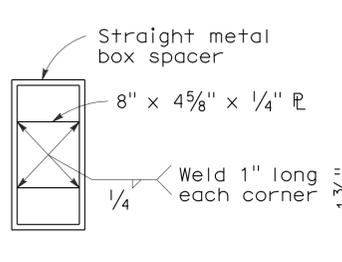
SECTION A-A



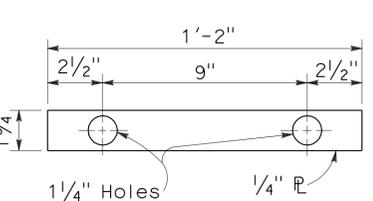
SECTION B-B



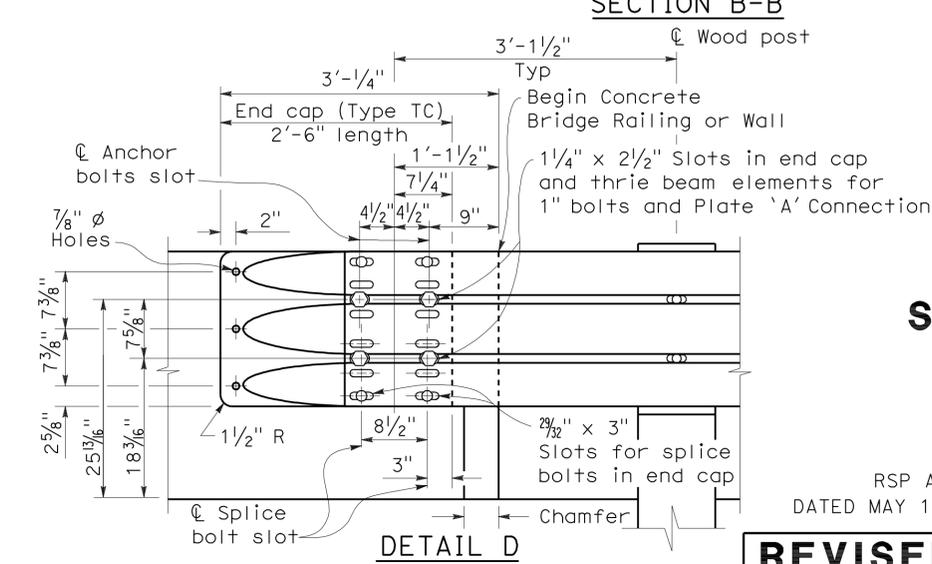
DETAIL A
STRAIGHT METAL BOX SPACER



DETAIL B



DETAIL C
PLATE 'A'



DETAIL D

SINGLE THRIE BEAM BARRIER TRANSITION RAILING (TYPE STB)

NO SCALE

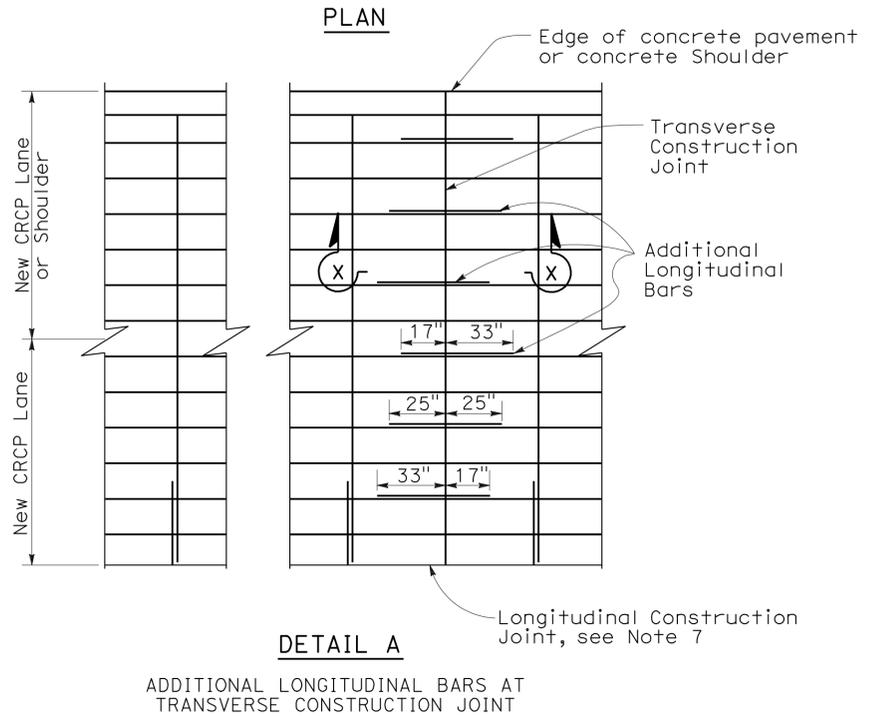
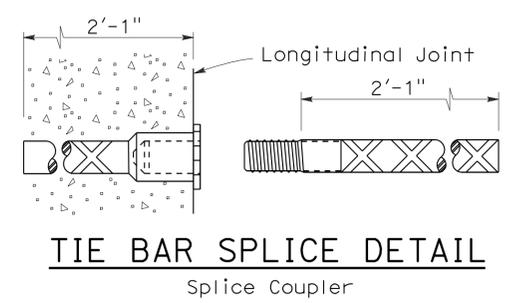
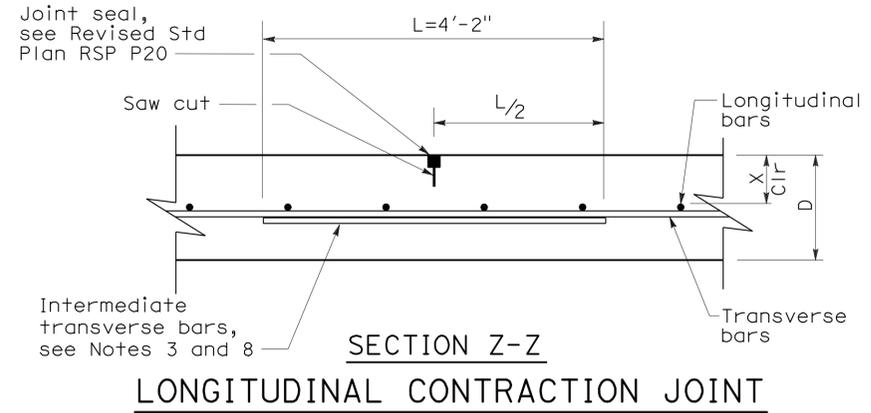
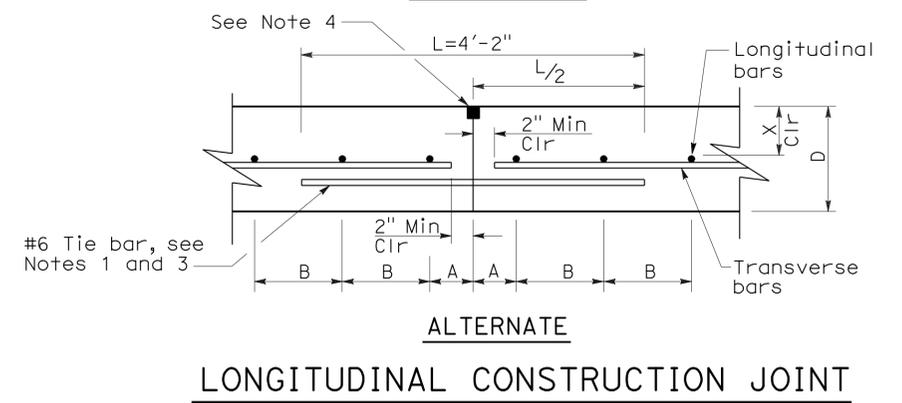
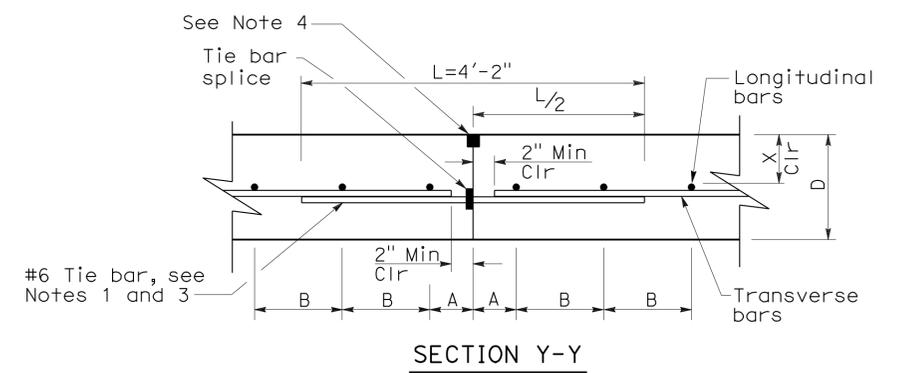
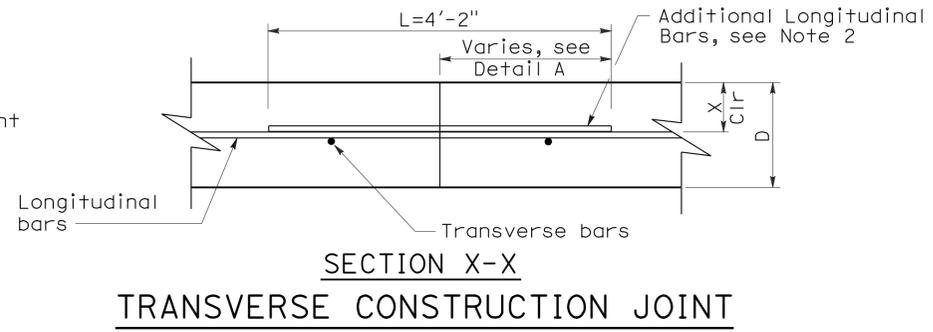
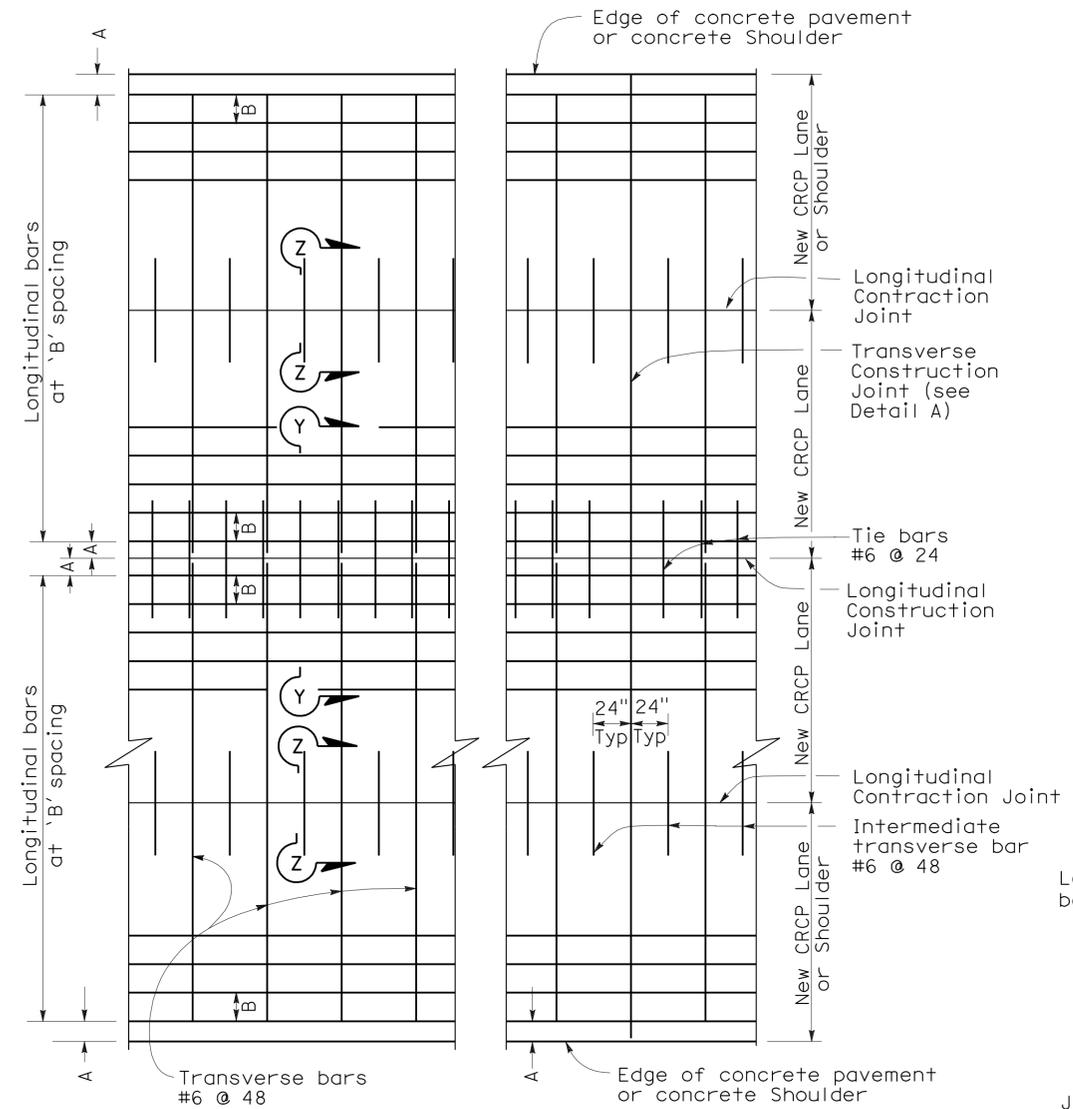
RSP A78J DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A78J DATED MAY 1, 2006 - PAGE 97 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A78J

2006 REVISED STANDARD PLAN RSP A78J

SLAB THICKNESS AND BAR SIZE		FIRST SPACING AT EDGE OR JOINT	REGULAR BARS	ADDITIONAL BARS AT TRANSVERSE CONSTRUCTION JOINT		Clr
D	BAR SIZE	SPACING A	SPACING B	SPACING 2 x B	LENGTH L	X
.80'	#6	3" TO 4"	7.5"	15"	50"	4"
.85'	#6	3" TO 4"	7.0"	14"	50"	4"
.90'	#6	3" TO 4"	6.5"	13"	50"	4"
.95'	#6	3" TO 4"	6.25"	12.5"	50"	4"
1.00'	#6	3" TO 4"	6.0"	12"	50"	6"
1.05'	#6	3" TO 4"	5.75"	11.5"	50"	6"
1.10'	#6	3" TO 4"	5.5"	11"	50"	6"

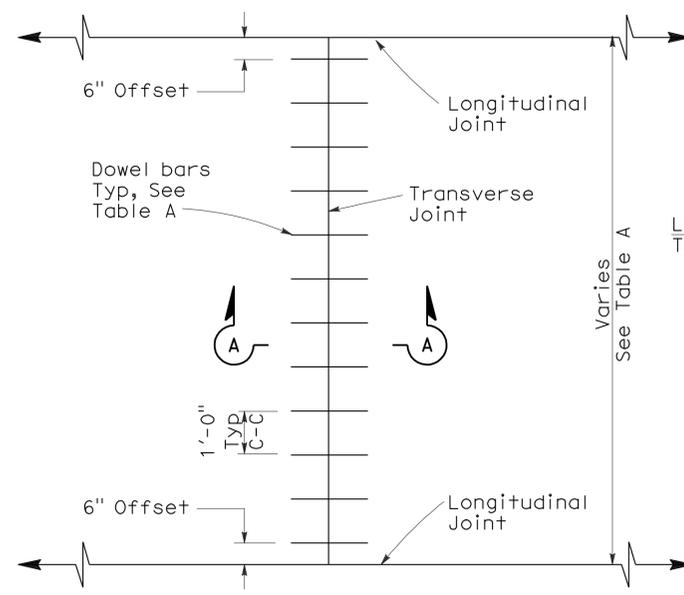
- NOTES:** To accompany plans dated 6-4-12
- Place tie bar in the same plane as transverse bars.
 - Place additional longitudinal bars in the same horizontal plane as the longitudinal bars.
 - Place tie bars and intermediate transverse bars parallel to transverse bars.
 - Joint seals at longitudinal construction joints shall conform to the details shown on Standard Plan P20 for Type C joint.
 - Intermediate transverse bar spacing shall be equal to transverse bar spacing.
 - Reinforcing bar splices shall be a minimum of 25".
 - Additional longitudinal bars symmetrical about longitudinal construction joint.
 - Place Intermediate transverse bar in the same plane as transverse bars.



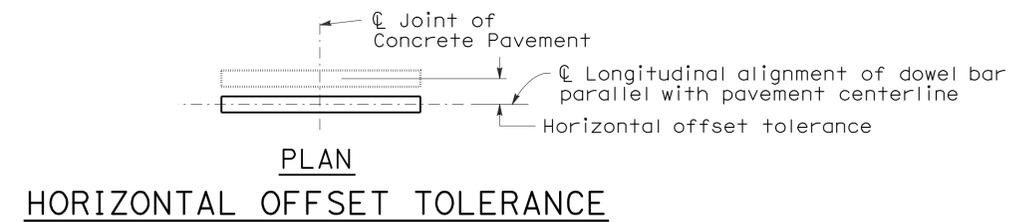
STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**CONTINUOUSLY REINFORCED
 CONCRETE PAVEMENT**
 NO SCALE

RNSP P4 DATED APRIL 20, 2012 SUPERSEDES RNSP P4 DATED JUNE 5, 2009 AND NSP P4 DATED MAY 15, 2009 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

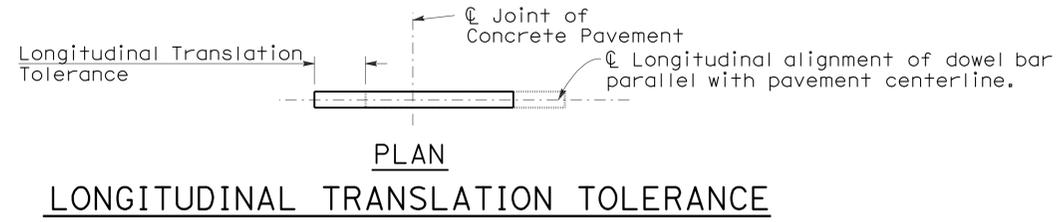
2006 REVISED NEW STANDARD PLAN RNSP P4



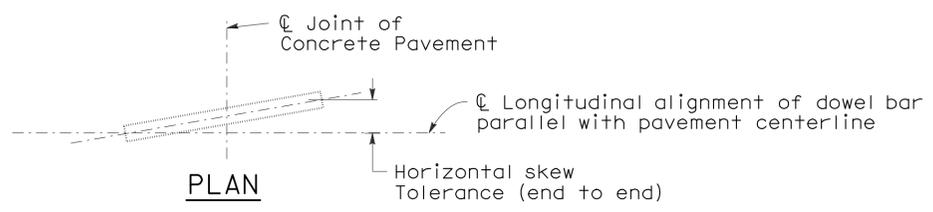
TRANSVERSE JOINT DOWEL BAR LAYOUT



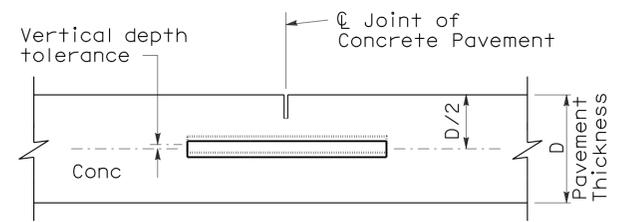
HORIZONTAL OFFSET TOLERANCE



LONGITUDINAL TRANSLATION TOLERANCE

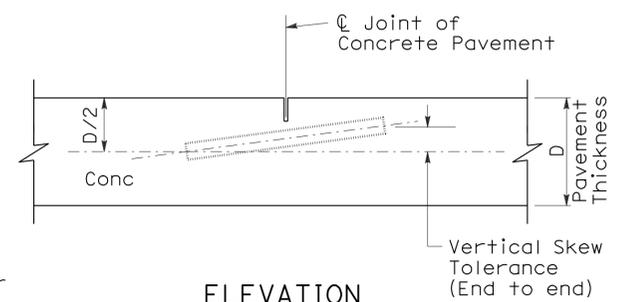


HORIZONTAL SKEW TOLERANCE



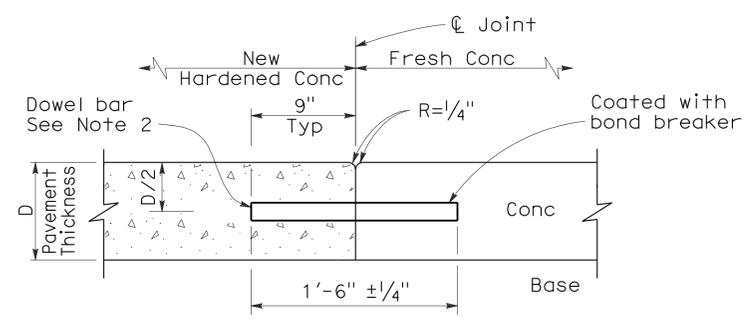
ELEVATION

VERTICAL DEPTH TOLERANCE

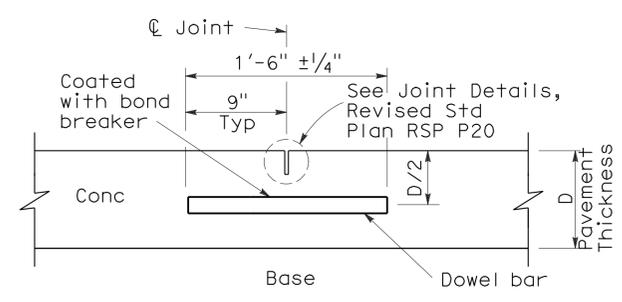


ELEVATION

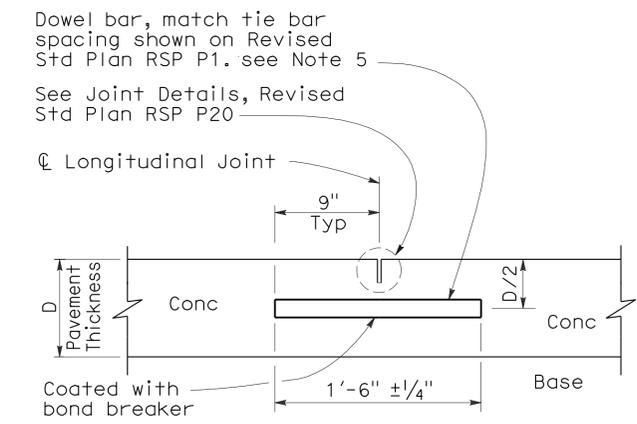
VERTICAL SKEW TOLERANCE



SECTION A-A TRANSVERSE CONSTRUCTION JOINT DETAIL

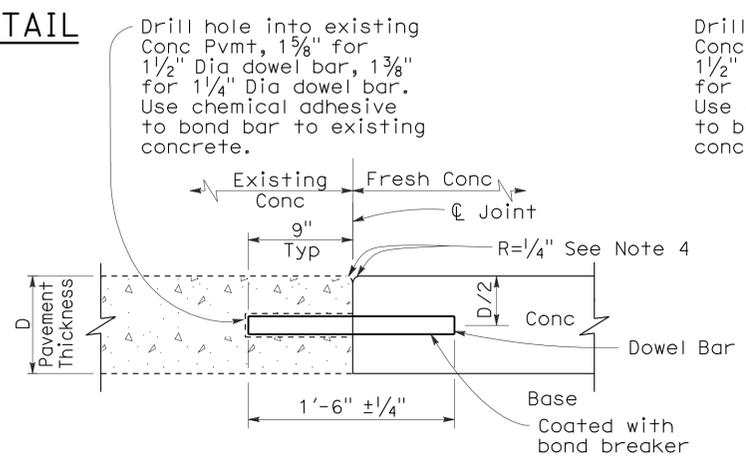


TRANSVERSE CONTRACTION JOINT



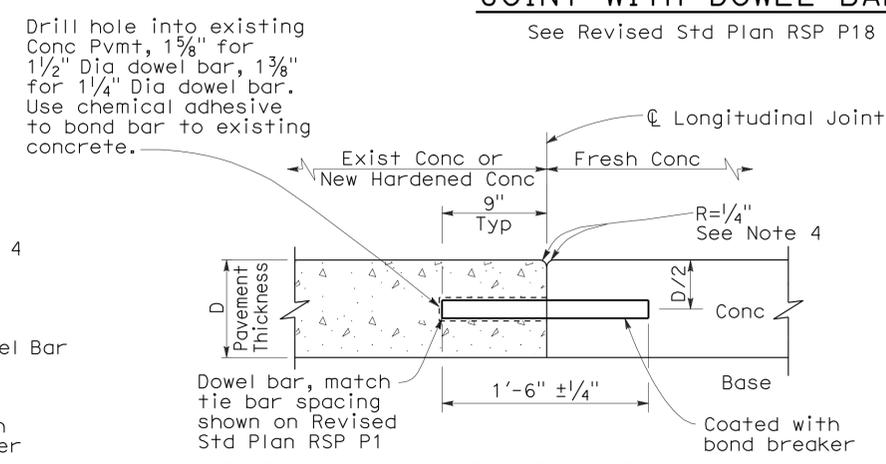
LONGITUDINAL CONTRACTION JOINT WITH DOWEL BARS

See Revised Std Plan RSP P18



TRANSVERSE CONSTRUCTION JOINT FOR EXISTING CONCRETE PAVEMENT

Drill and bond locations



LONGITUDINAL CONSTRUCTION JOINT WITH DOWEL BARS

See Revised Std Plan RSP P18

TABLE A (See Note 3)

Dowel Bar Transverse Spacing Table

Width between Longitudinal Joints	Number of Dowels between Longitudinal Joints
14'-0"	14
13'-0"	13
12'-0"	12
11'-0"	11
10'-0"	10
8'-0"	8
5'-0"	5
4'-0"	4

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DEPARTMENT OF TRANSPORTATION

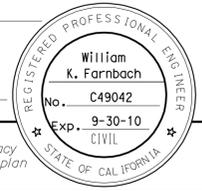
CONCRETE PAVEMENT-DOWEL BAR DETAILS

NO SCALE

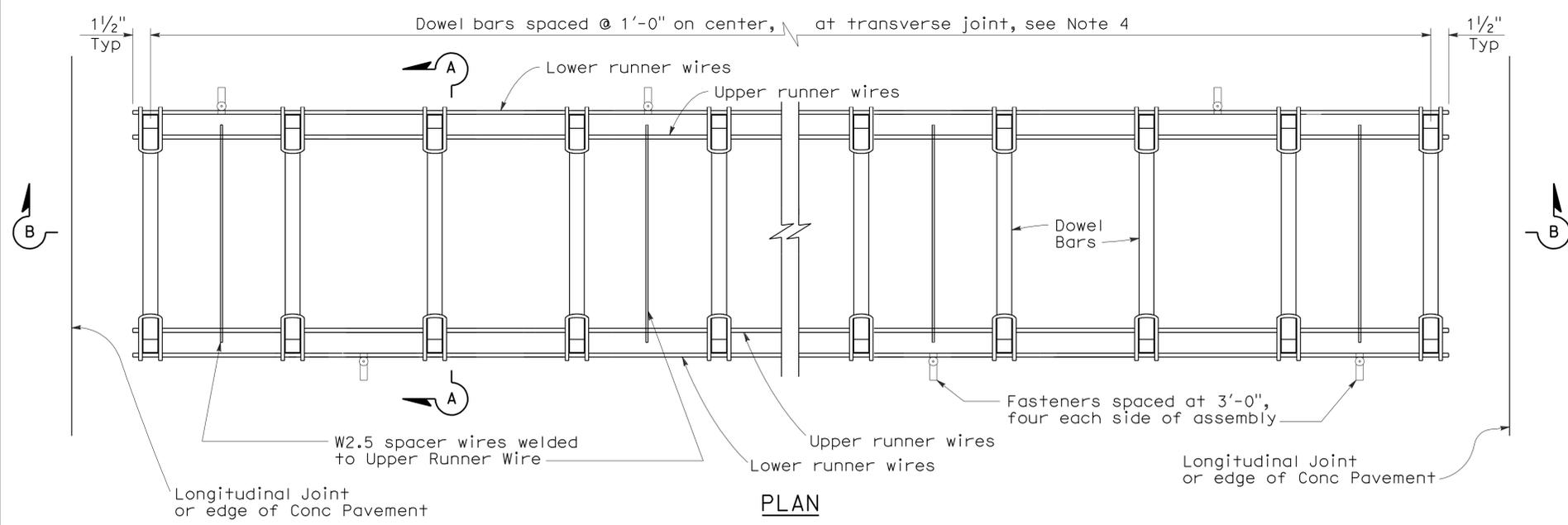
RSP P10 DATED APRIL 20, 2012 SUPERSEDES RSP P10 DATED MAY 15, 2009 AND STANDARD PLAN P10 DATED MAY 1, 2006 - PAGE 124 OF THE STANDARD PLANS BOOK DATED MAY 2006.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ	5	25.1/28.6	435	485

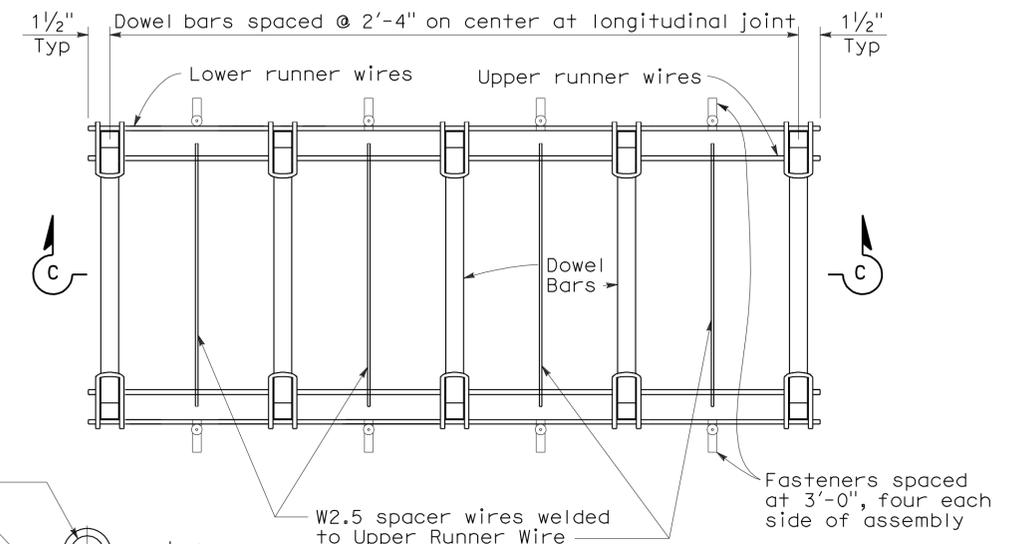
William K. Farnbach
 REGISTERED CIVIL ENGINEER
 May 15, 2009
 PLANS APPROVAL DATE
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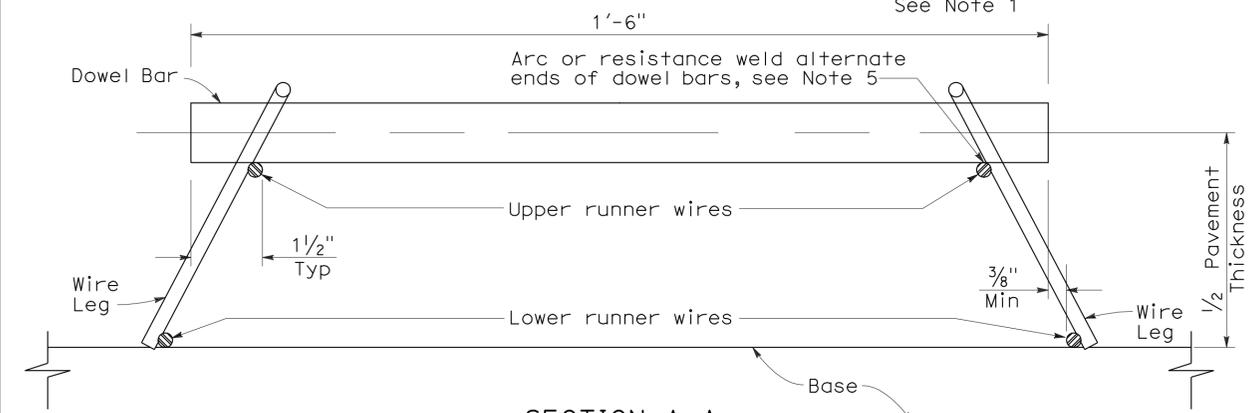
To accompany plans dated 6-4-12



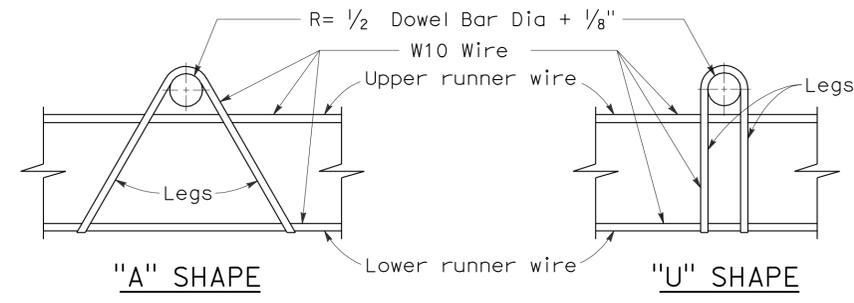
**PLAN
DOWEL BAR BASKET
(TRANSVERSE JOINT)**
See Note 1



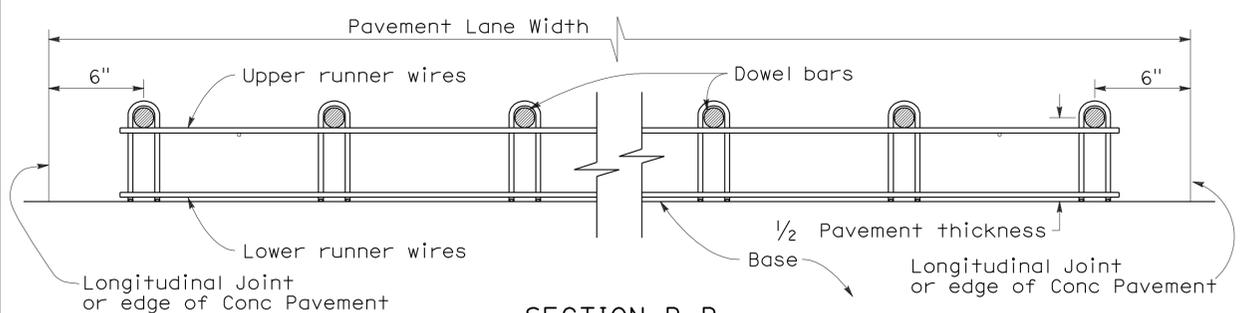
**PLAN
DOWEL BAR BASKET
(LONGITUDINAL JOINT)**
See Note 1



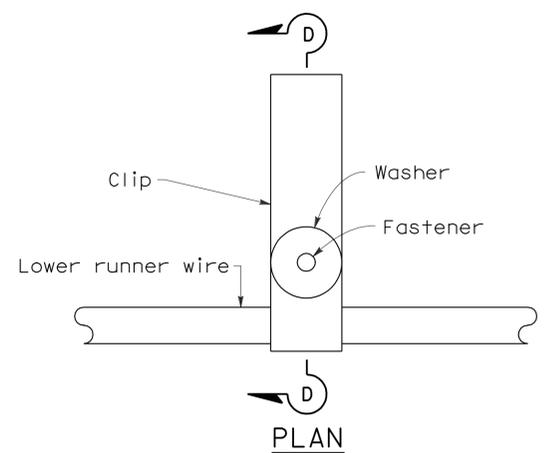
SECTION A-A



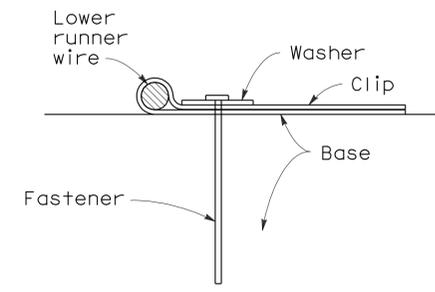
ASSEMBLY FRAME DETAILS



SECTION B-B
See Note 1



FASTENER DETAIL



SECTION D-D

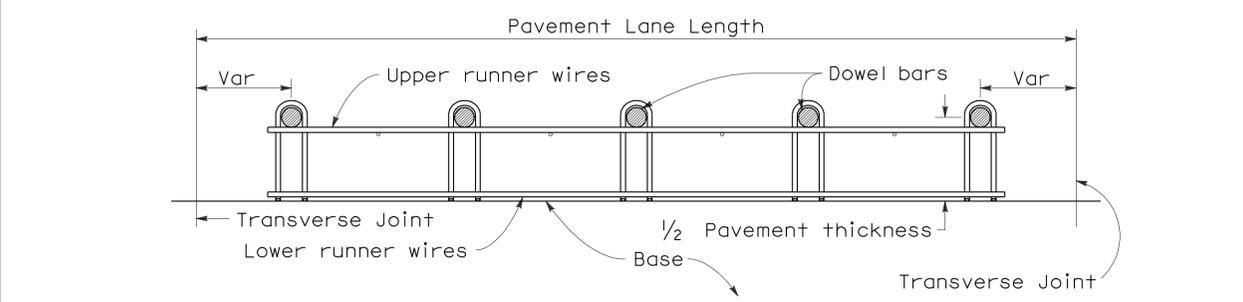
NOTES:

- "U" frame shape assembly shown. "U" frame shape or "A" frame shape are acceptable.
- Wire sizes shown are minimum required.
- All wire intersections are to be resistance welded.
- Use tie bar spacing for longitudinal dowel bar locations. See Revised Std Plans RSPs P1, P2, and P3 for tie bar requirements.
- Weld may be at top or bottom of dowel bar.

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**CONCRETE PAVEMENT-
DOWEL BAR BASKET
DETAILS**

NO SCALE



SECTION C-C
See Notes 1 and 4

RSP P12 DATED MAY 15, 2009 SUPERSEDES RSP P12 DATED NOVEMBER 17, 2006 AND STANDARD PLAN P12 DATED MAY 1, 2006 - PAGE 125 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP P12

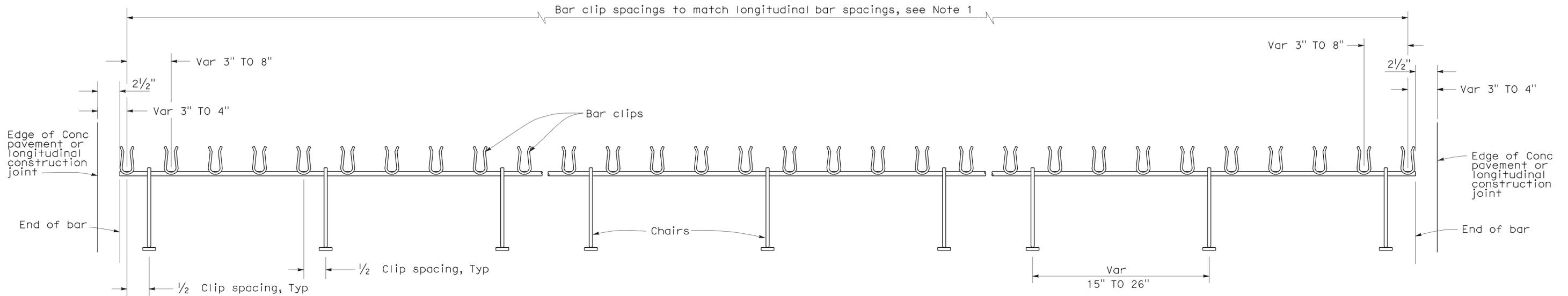
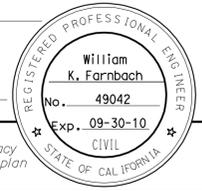
2006 REVISED STANDARD PLAN RSP P12

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ	5	25.1/28.6	436	485

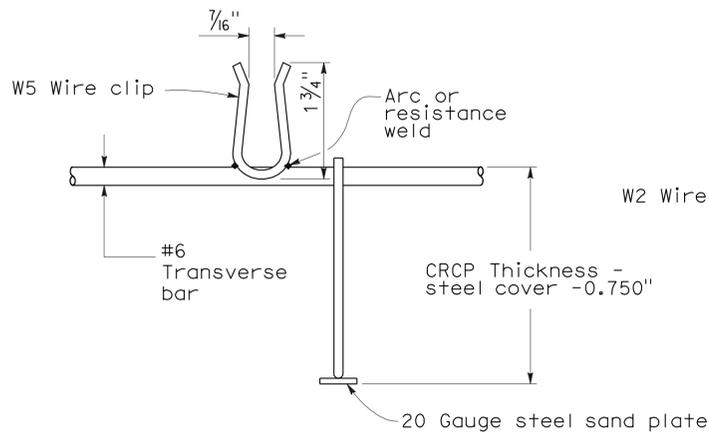
William K. Farnbach
 REGISTERED CIVIL ENGINEER
 June 5, 2009
 PLANS APPROVAL DATE

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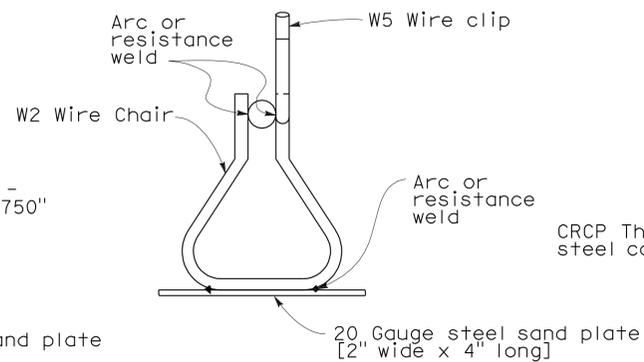
To accompany plans dated 6-4-12



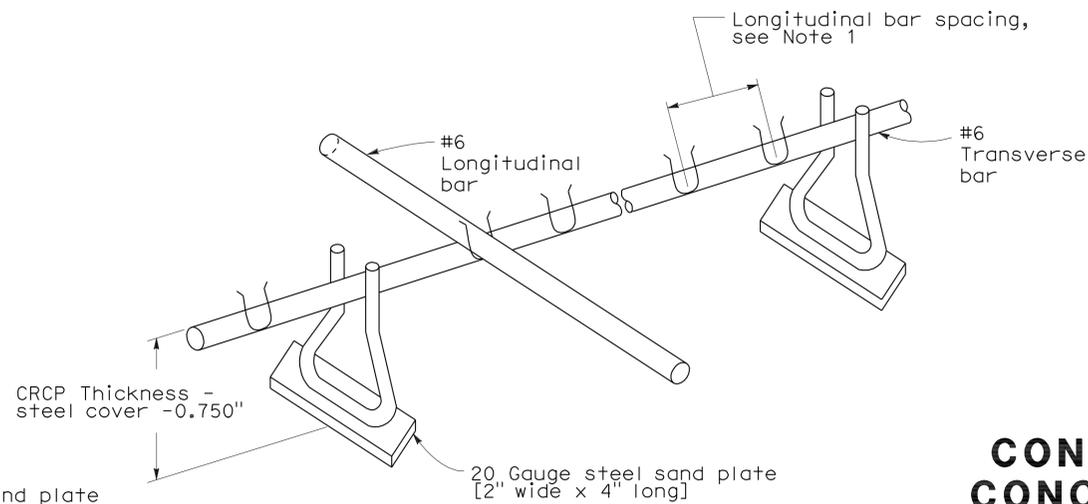
TRANSVERSE BAR ASSEMBLY



#6 BAR CLIP DETAIL



CHAIR DETAIL



ISOMETRIC VIEW OF CHAIR ASSEMBLY

NOTES:

1. See New Standard Plan NSP P4 for spacing of longitudinal bars.
2. Tensile strength of chair shall be at least 50,000 psi.
3. Wire sizes shown are minimum required.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**CONTINUOUSLY REINFORCED
CONCRETE PAVEMENT-SINGLE
PIECE TRANSVERSE BAR
ASSEMBLY**

NO SCALE
NSP P13 DATED JUNE 5, 2009 SUPPLEMENTS THE STANDARD
PLANS BOOK DATED MAY 2006.

2006 NEW STANDARD PLAN NSP P13

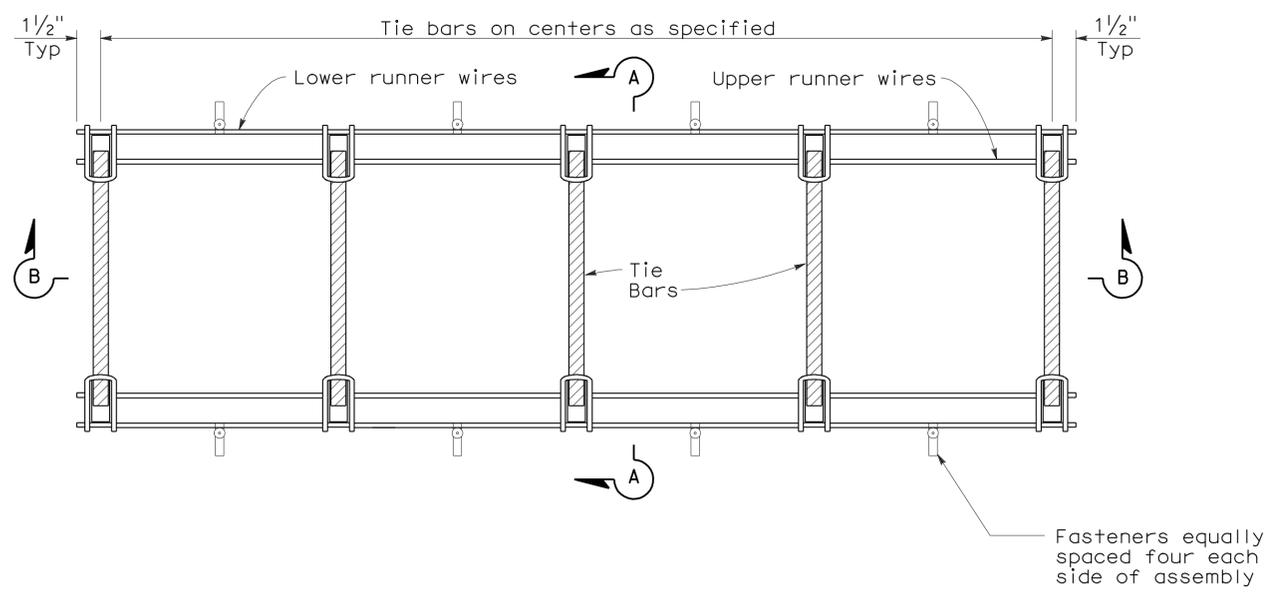
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ	5	25.1/28.6	437	485

William K. Farnbach
 REGISTERED CIVIL ENGINEER
 May 15, 2009
 PLANS APPROVAL DATE

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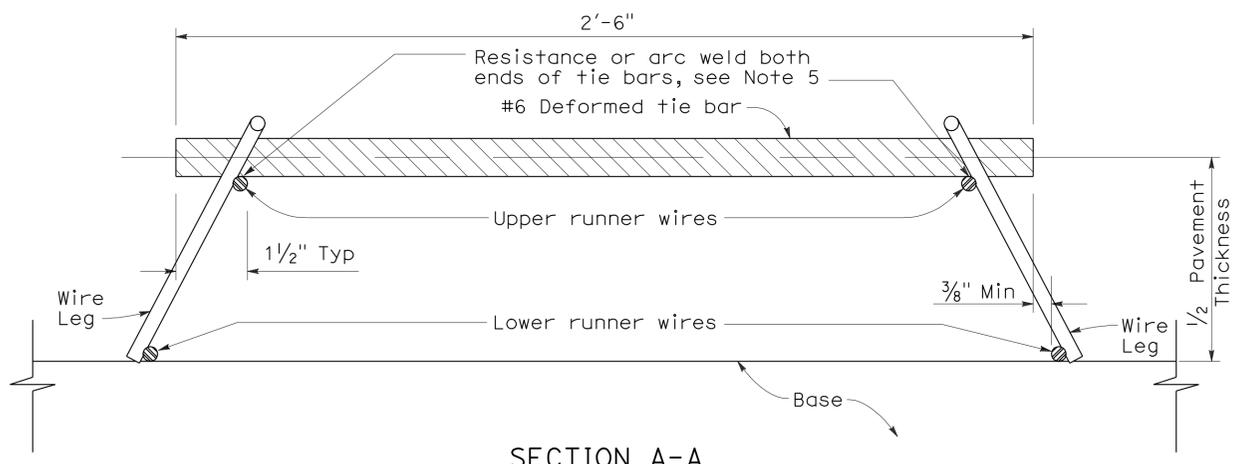
REGISTERED PROFESSIONAL ENGINEER
 William K. Farnbach
 No. C49042
 Exp. 9-30-10
 CIVIL
 STATE OF CALIFORNIA

To accompany plans dated 6-4-12

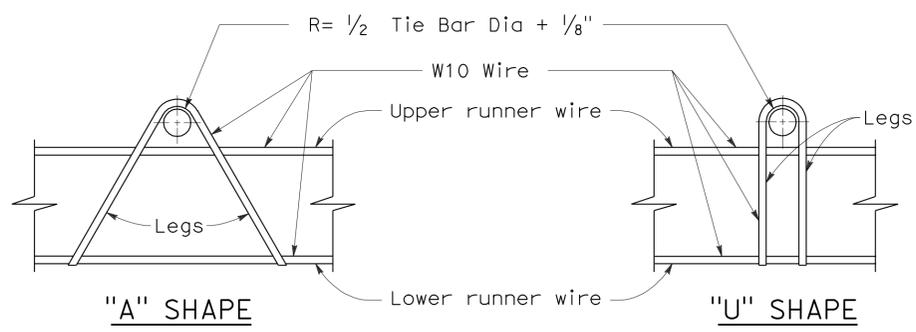


PLAN
TIE BAR BASKET
 (TIE BARS AT LONGITUDINAL JOINT)
 See Note 1

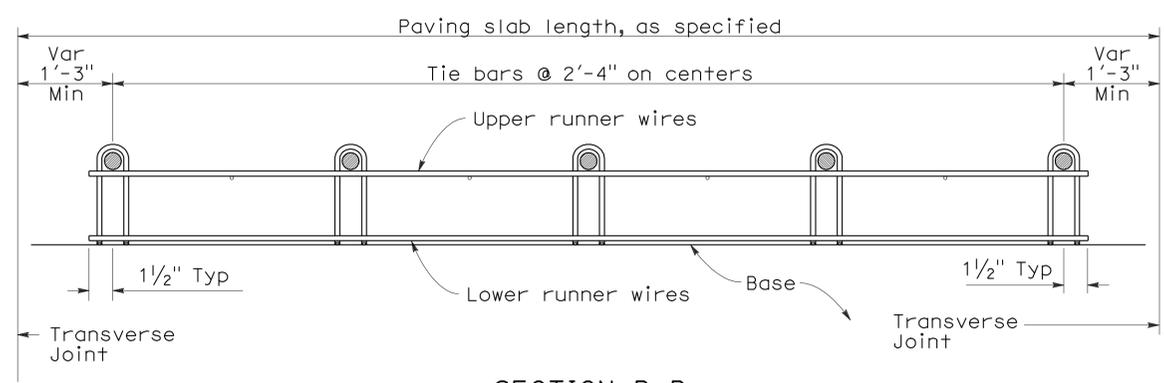
- NOTES:**
- "U" frame shape assembly shown. "U" frame shape or "A" frame shape are acceptable.
 - Wire sizes shown are minimum required.
 - All wire intersections are to be resistance welded.
 - Not for use on nondoweled skewed jointed plain concrete pavement.
 - Weld may be at top or bottom of tie bar.



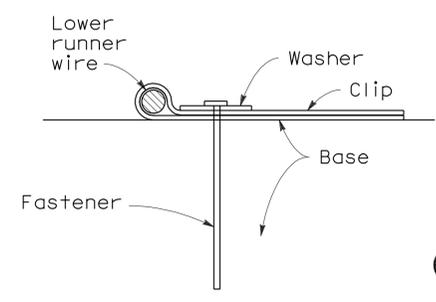
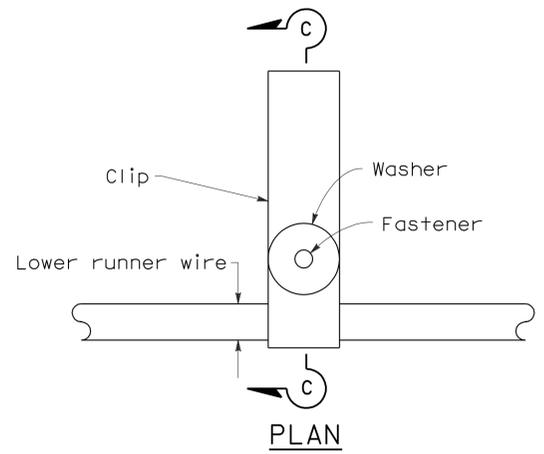
SECTION A-A



ASSEMBLY FRAME DETAILS



SECTION B-B
 See Note 1



FASTENER DETAIL

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**CONCRETE PAVEMENT -
 TIE BAR BASKET
 DETAILS**

NO SCALE

RSP P17 DATED MAY 15, 2009 SUPERSEDES RSP P17 DATED NOVEMBER 17, 2006 AND STANDARD PLAN P17 DATED MAY 1, 2006 - PAGE 126 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP P17

2006 REVISED STANDARD PLAN RSP P17

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ	5	25.1/28.6	438	485

William K. Farnbach
 REGISTERED CIVIL ENGINEER
 April 20, 2012
 PLANS APPROVAL DATE

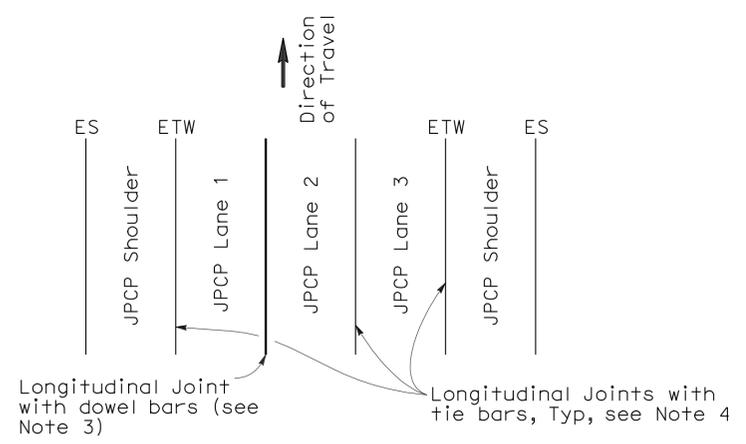
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

REGISTERED PROFESSIONAL ENGINEER
 William K. Farnbach
 No. C49042
 Exp. 9-30-12
 CIVIL
 STATE OF CALIFORNIA

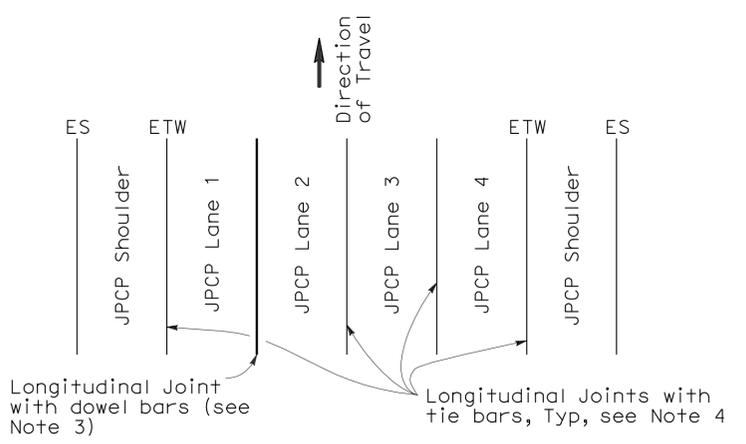
To accompany plans dated 6-4-12

NOTES:

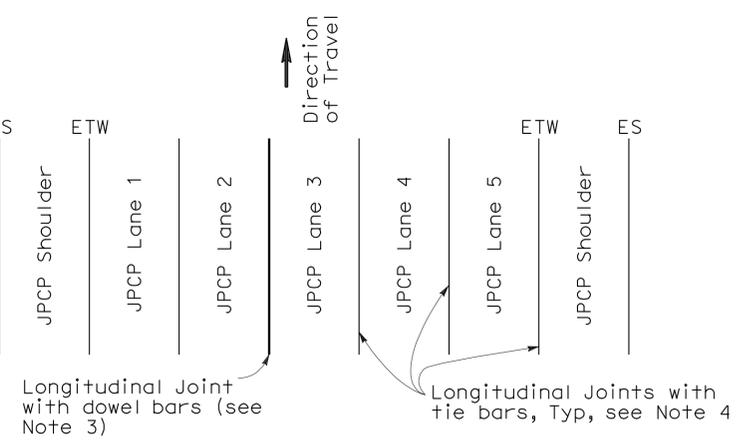
- Where Lean Concrete Base is not used as base material, the joint filler material used for the longitudinal isolation joint shall only extend to the bottom of the new concrete slab. See Detail A.
- Use $\frac{5}{8}'' \pm \frac{1}{16}''$ dimension for silicone sealant.
- See Revised Standard Plan RSP P10 for longitudinal joint with dowel bars.
- See Revised Standard Plan RSP P1.
- See Revised Standard Plan RSP P2.



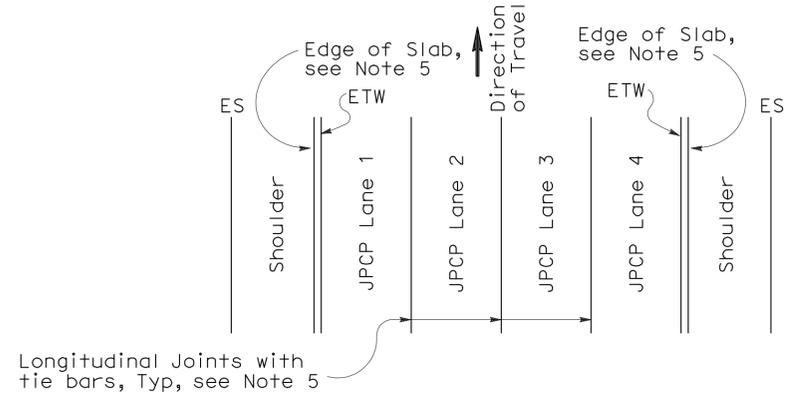
3 LANES WITH TIED CONCRETE SHOULDERS
PLAN



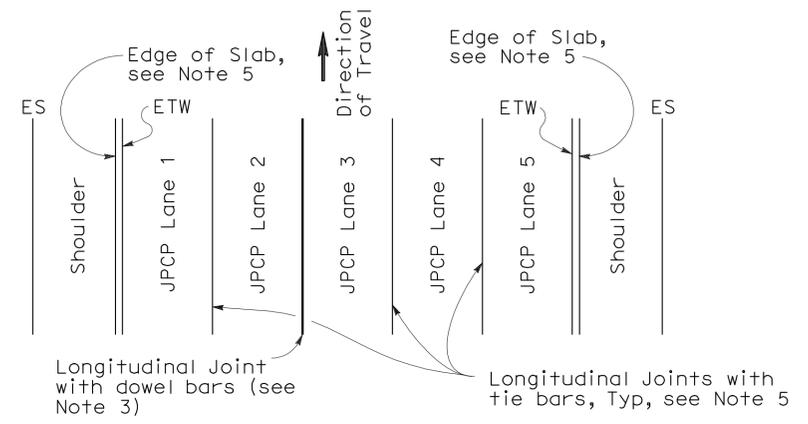
4 LANES WITH TIED CONCRETE SHOULDERS
PLAN



5 LANES WITH TIED CONCRETE SHOULDERS
PLAN



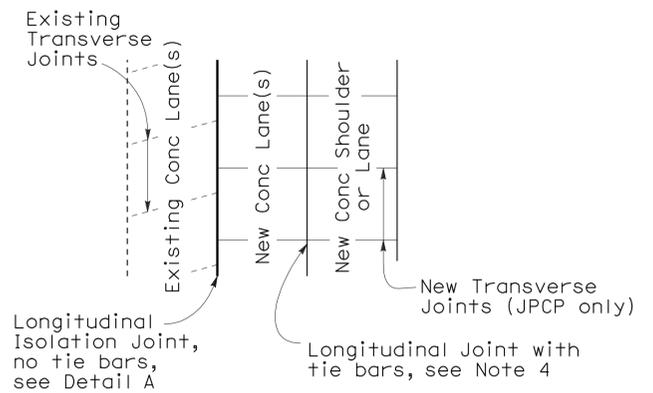
4 LANES OR LESS WITH WIDENED SLAB
PLAN



5 LANES WITH WIDENED SLAB
PLAN

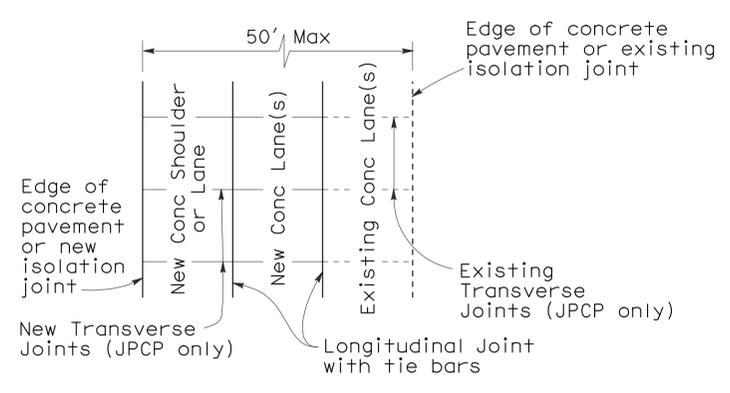
NEW CONSTRUCTION

Location of Longitudinal Joints For JPCP



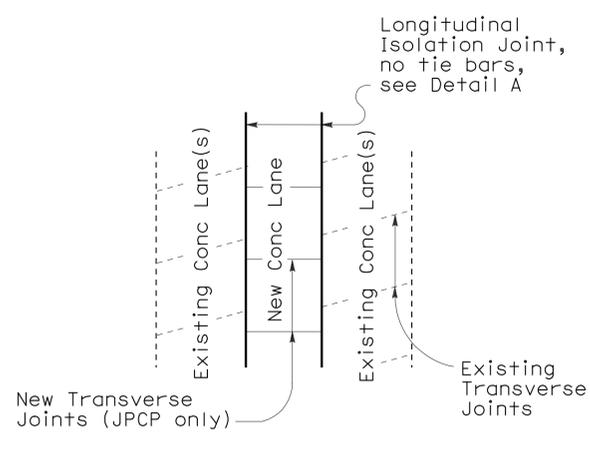
CASE 1
PLAN

Transverse Joints do not align between new and existing



CASE 2
PLAN

Transverse Joints align between new and existing

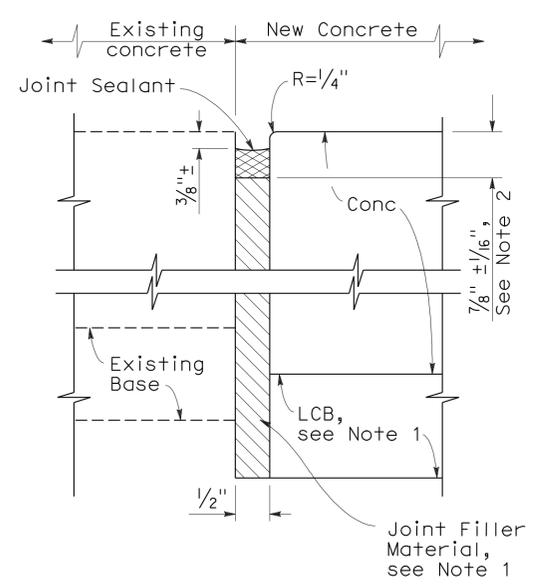


CASE 3 (INTERIOR LANE REPLACEMENT)
PLAN

Transverse Joints do not align between new and existing

LANE/SHOULDER ADDITION OR RECONSTRUCTION

For JPCP and CRCP



DETAIL A
ISOLATION JOINT

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
CONCRETE PAVEMENT-LANE SCHEMATICS AND ISOLATION JOINT DETAIL

NO SCALE

RSP P18 DATED APRIL 20, 2012 SUPERSEDES RSP P18 DATED JUNE 5, 2009, RSP P18 DATED MAY 15, 2009, RSP P18 DATED NOVEMBER 17, 2006 AND STANDARD PLAN P18 DATED MAY 1, 2006 - PAGE 127 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP P18

2006 REVISED STANDARD PLAN RSP P18

NOTE:

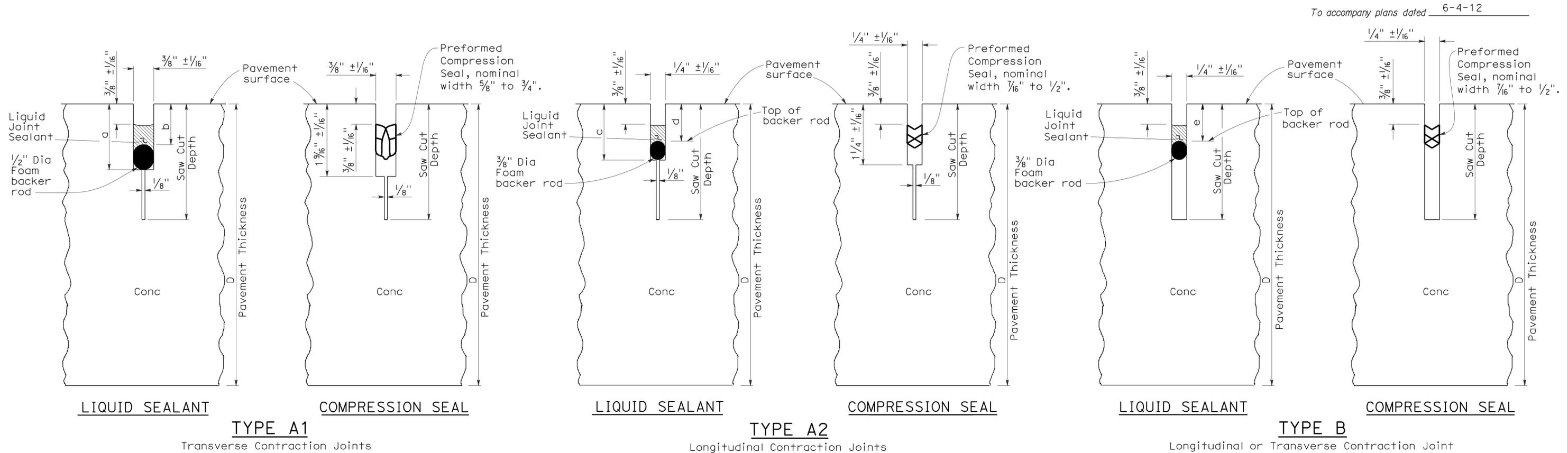
1. Tie bars, dowel bars, and reinforcement are not shown in joint seal details, see Revised Standard Plans RSP P1, RSP P3, RSP P10, RSP P35, RSP P45, or RSP P46 as applicable.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ	5	25.1/28.6	439	485

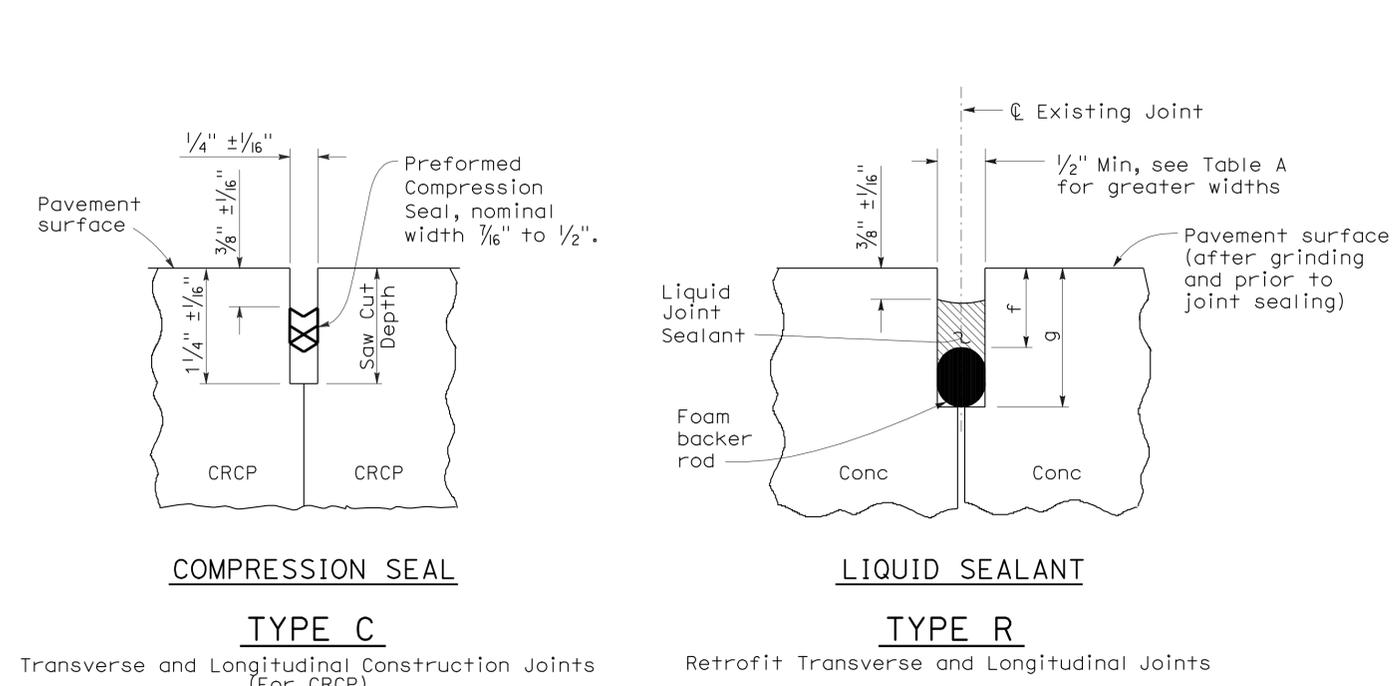
William K. Farnbach
 REGISTERED CIVIL ENGINEER
 No. C49042
 Exp. 9-30-10
 STATE OF CALIFORNIA

May 15, 2009
 PLANS APPROVAL DATE

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To accompany plans dated 6-4-12



LIQUID SEALANT RESERVOIR DEPTH

LIQUID SEALANT MATERIAL	3/8" Joint Width Type A1		1/4" Joint Width Type A2		1/4" Joint Width Type B
	DIMENSION		DIMENSION		DIMENSION
	a	b	c	d	e
SILICONE	1" ± 1/16"	5/8" ± 1/16"	15/16" ± 1/16"	9/16" ± 1/16"	9/16" ± 1/16"
ASPHALT RUBBER	1 3/16" ± 1/16"	3/4" ± 1/16"	1 1/16" ± 1/16"	11/16" ± 1/16"	11/16" ± 1/16"

TABLE A (TYPE R JOINT)

Sawn Joint Width	Backer Rod Diameter ± 1/16"	DIMENSION "f"	DIMENSION "g"
1"	1 5/16"	7/8"	2 1/4"
7/8"	1 3/16"	13/16"	2"
3/4"	1"	3/4"	1 3/4"
5/8"	7/8"	11/16"	1 1/2"
1/2"	11/16"	5/8"	1 1/4"

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**CONCRETE PAVEMENT-
 JOINT DETAILS**
 NO SCALE

RSP P20 DATED MAY 15, 2009 SUPERSEDES STANDARD PLAN P20
 DATED MAY 1, 2006 - PAGE 128 OF THE STANDARD PLANS BOOK DATED MAY 2006.

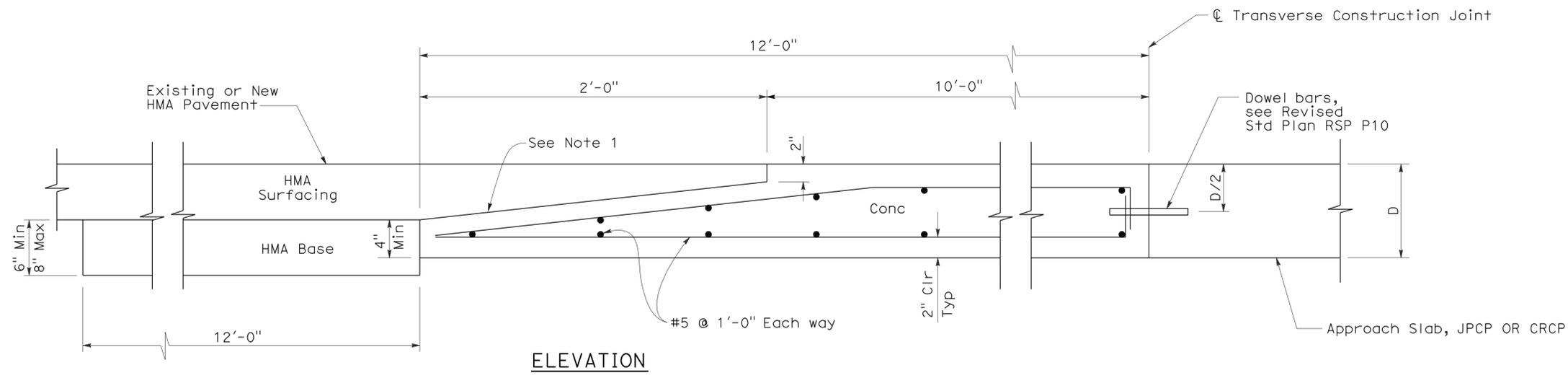
REVISED STANDARD PLAN RSP P20

2006 REVISED STANDARD PLAN RSP P20

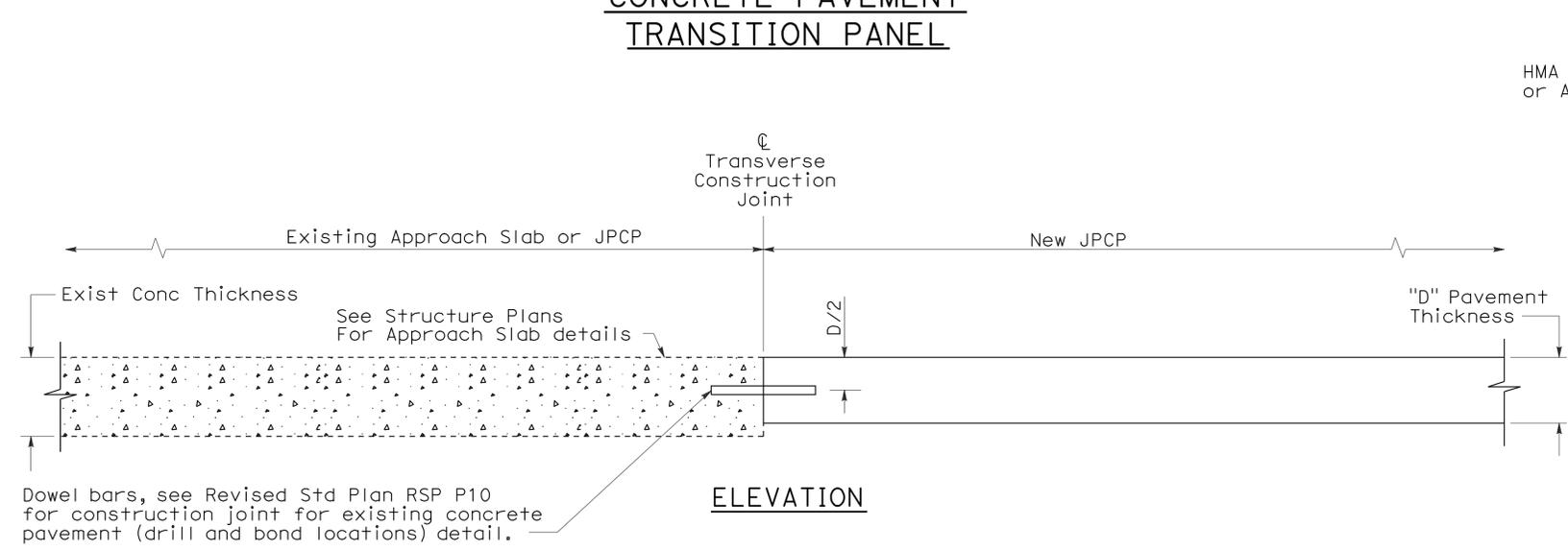
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ	5	25.1/28.6	440	485

William K. Farnbach
 REGISTERED CIVIL ENGINEER
 April 20, 2012
 PLANS APPROVAL DATE
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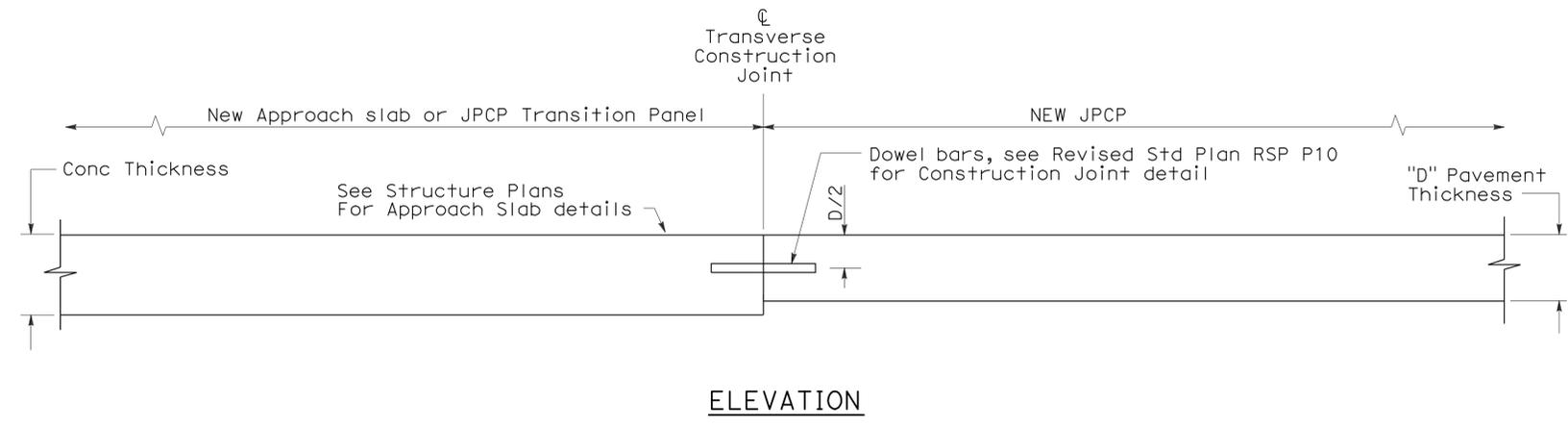
To accompany plans dated 6-4-12



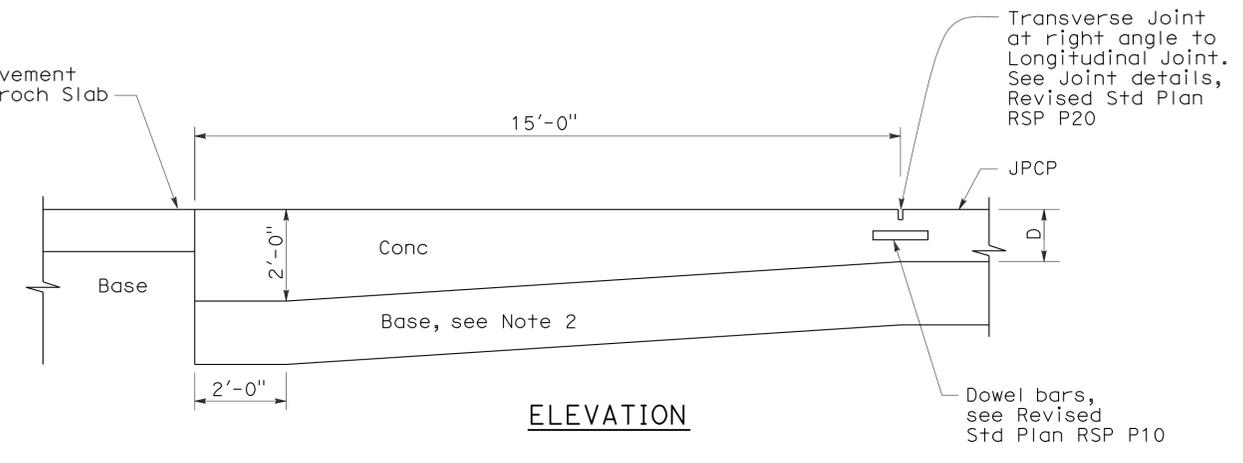
ELEVATION
CONCRETE PAVEMENT TRANSITION PANEL



ELEVATION
TERMINAL JOINT TYPE 1
For Exist JPCP or Structure Approach Slab



ELEVATION
TERMINAL JOINT TYPE 2
For JPCP Transition Panel or Structure Approach Slab



ELEVATION
PAVEMENT END ANCHOR
For HMA Pvmt or Structure Approach Slab

- NOTES:**
1. Heavy broom finish.
 2. Maintain same base thickness as JPCP.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**CONCRETE PAVEMENT-
END PANEL
PAVEMENT TRANSITIONS**

NO SCALE

RSP P30 DATED APRIL 20, 2012 SUPERSEDES RSP P30 DATED MAY 15, 2009 AND STANDARD PLAN P30 DATED MAY 1, 2006 - PAGE 129 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP P30

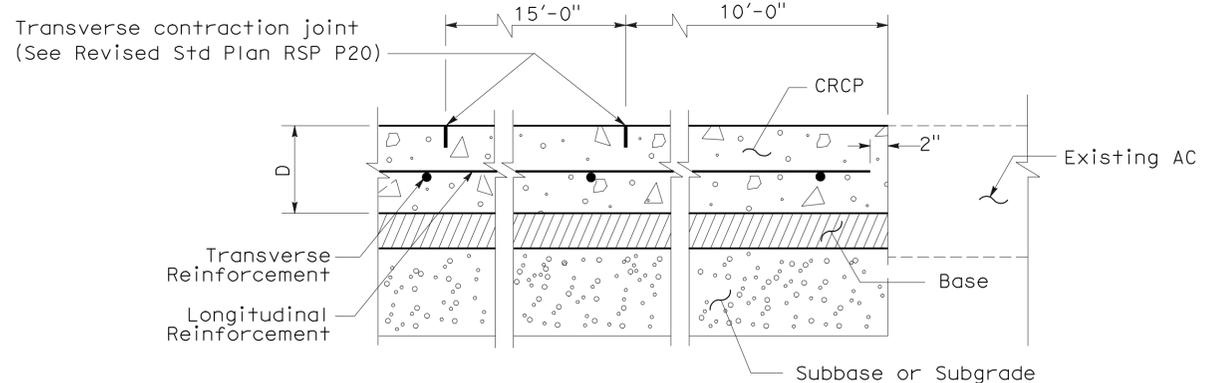
2006 REVISED STANDARD PLAN RSP P30

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ	5	25.1/28.6	441	485

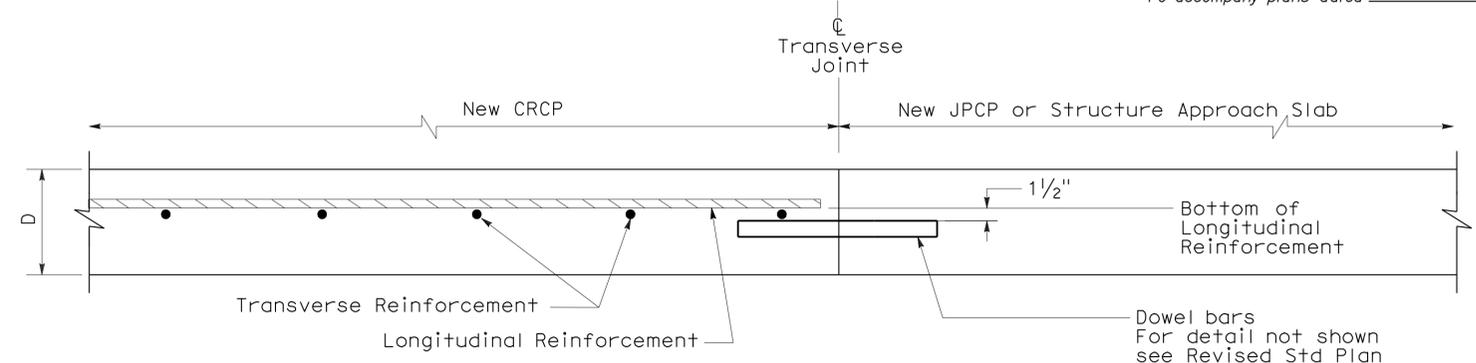
William K. Farnbach
 REGISTERED CIVIL ENGINEER
 June 5, 2009
 PLANS APPROVAL DATE
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REGISTERED PROFESSIONAL ENGINEER
 William K. Farnbach
 No. 49042
 Exp. 09-30-10
 STATE OF CALIFORNIA

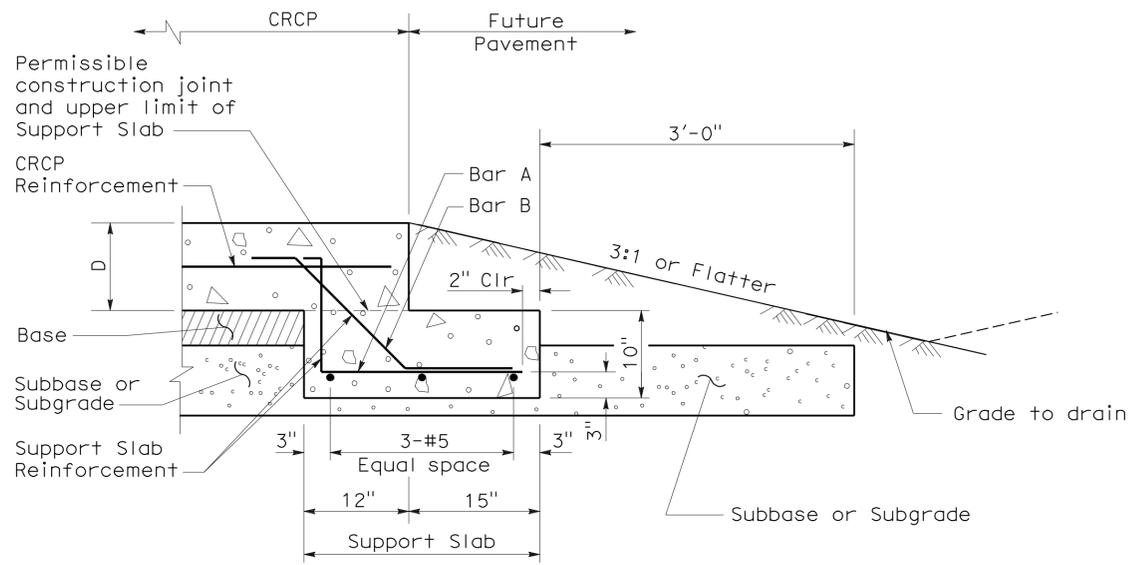
To accompany plans dated 6-4-12



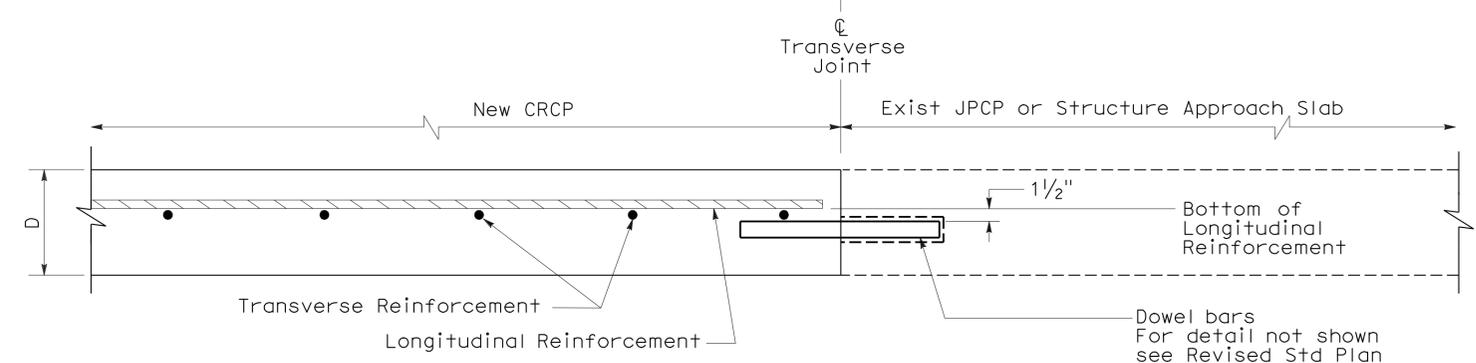
TERMINAL JOINT TYPE A
(For Existing AC)



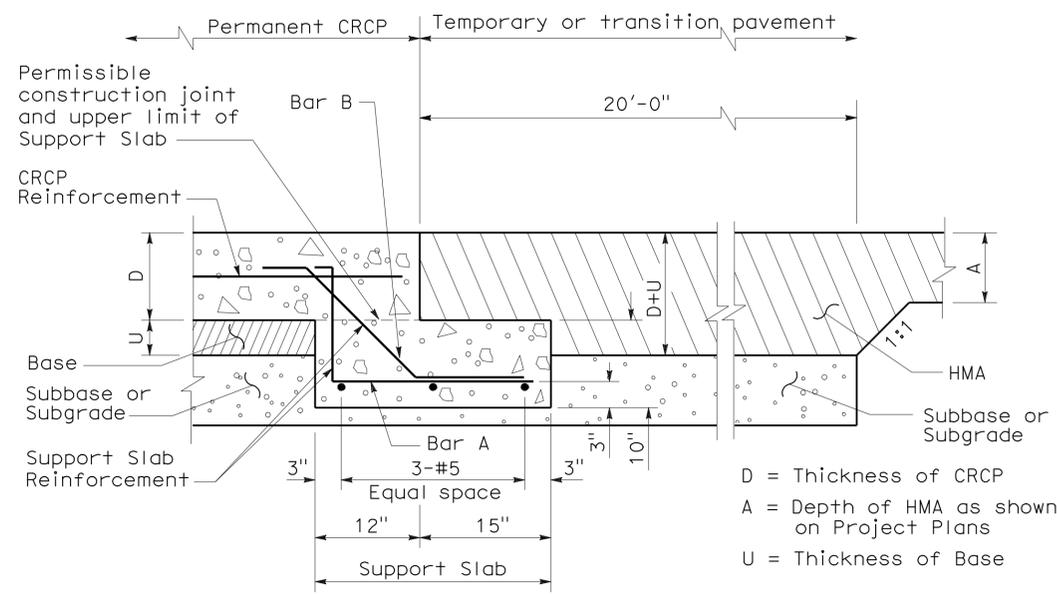
TERMINAL JOINT TYPE E
(For New JPCP or Structure Approach Slabs)



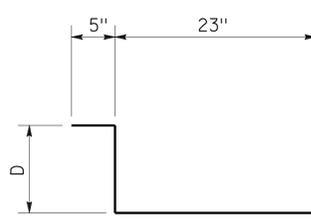
TERMINAL JOINT TYPE B
(For Future Pavement)



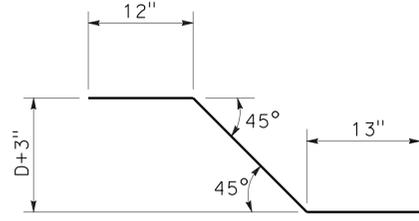
TERMINAL JOINT TYPE D
(For Existing JPCP or Structure Approach Slabs)



TERMINAL JOINT TYPE C
(For Temporary HMA Pavement)



BAR "A" (#5)
AT 12" C-C



BAR "B" (#5)
AT 12" C-C

D = Thickness of CRCP
 A = Depth of HMA as shown on Project Plans
 U = Thickness of Base

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**CONTINUOUSLY REINFORCED
 CONCRETE PAVEMENT -
 TERMINAL JOINT DETAILS**

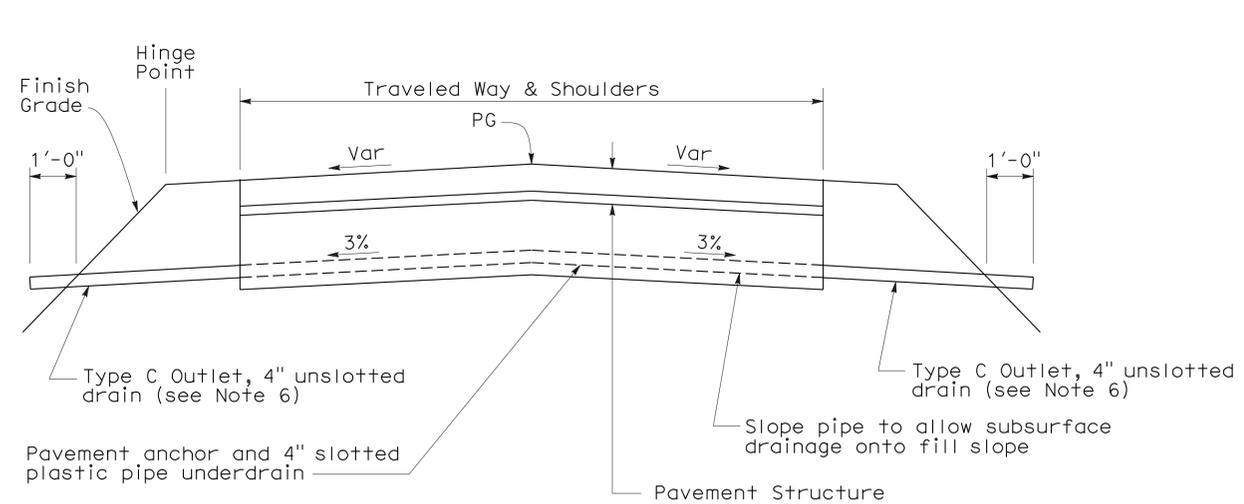
NO SCALE
 NSP P31A DATED JUNE 5, 2009 SUPPLEMENTS THE
 STANDARD PLANS BOOK DATED MAY 2006.

NEW STANDARD PLAN NSP P31A

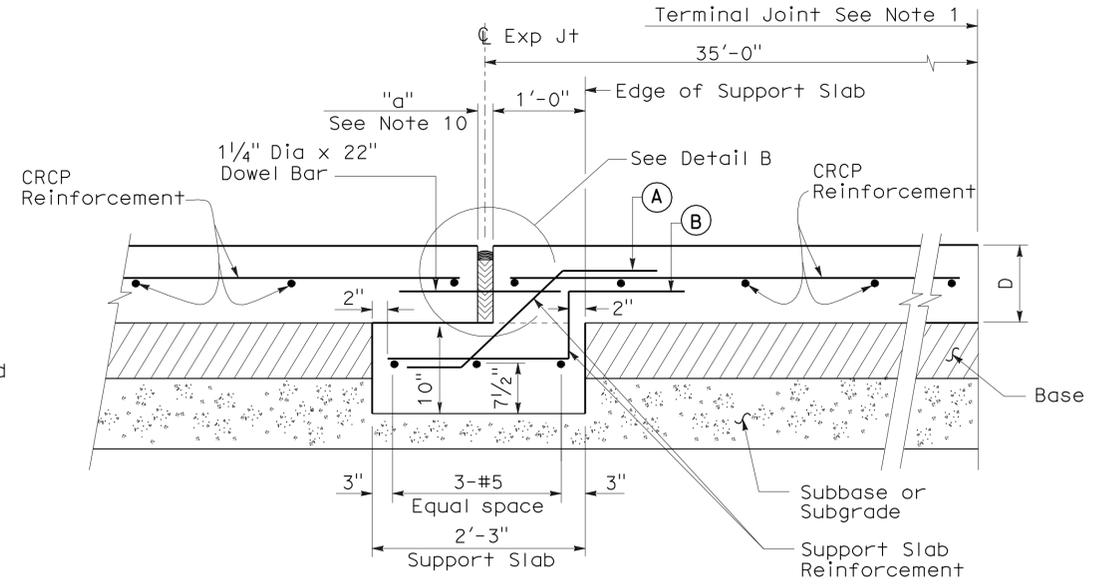
2006 NEW STANDARD PLAN NSP P31A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	5	25.1/28.6	442	485

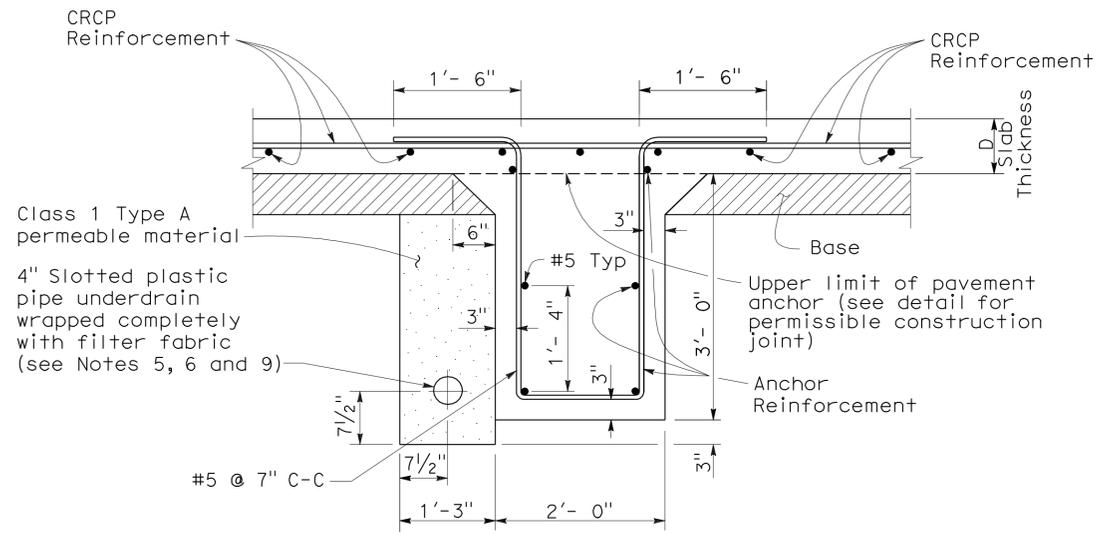
Florante E. Bautista
 REGISTERED CIVIL ENGINEER
 April 20, 2012
 PLANS APPROVAL DATE
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 To accompany plans dated 6-4-12



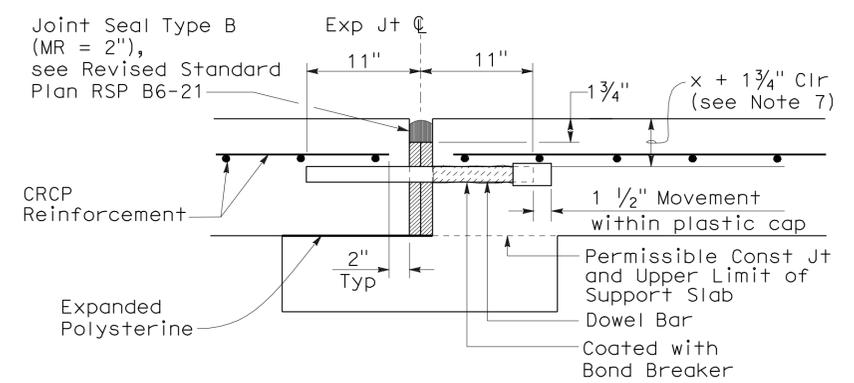
PAVEMENT ANCHOR PROFILE



EXPANSION JOINT TYPE AN



PAVEMENT ANCHOR

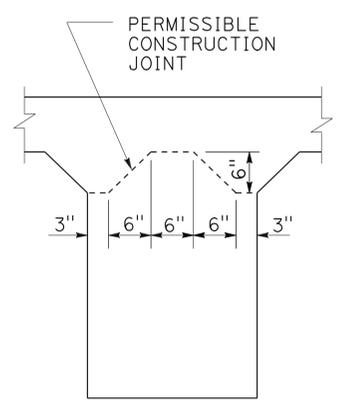


DETAIL B

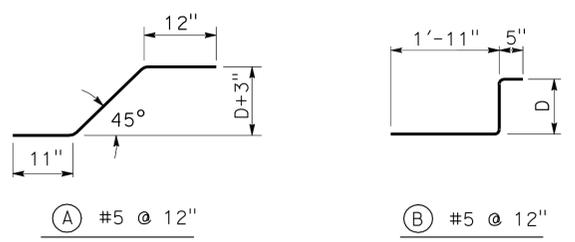
(For layout, tolerances, and other details not shown, see Revised Standard Plan RSP P10.)

NOTES:

- For the locations of the terminal joints, expansion joints and pavement anchors, see project plans.
- The CRCP shall continue across the pavement anchor and expansion joints as shown.
- Details of reinforcement, tie bars, and longitudinal joints (and if necessary, transverse construction joints) are shown on Revised New Standard Plan RNSP P4.
- Transverse construction joints are not allowed within 20'-0" of the pavement anchor.
- When placing pipe through concrete barrier, use 4" unslotted plastic pipe wrapped completely with 3/8" polystyrene.
- See Standard Plan D99B for details not shown.
- See Revised New Standard Plan RNSP P4 for "x".
- D = thickness of CRCP
- Place the 4" Slotted Plastic Pipe on the high side of the longitudinal grade.
- See Revised Standard Plan RSP B6-21 for "a".



PAVEMENT ANCHOR DETAIL SHOWING PERMISSIBLE CONSTRUCTION JOINT



REINFORCEMENT DETAIL

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
CONTINUOUSLY REINFORCED CONCRETE PAVEMENT- EXPANSION JOINT AND ANCHOR DETAILS
NO SCALE

RNSP P31B DATED APRIL 20, 2012 SUPERSEDES NSP P31B DATED JUNE 5, 2009 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006

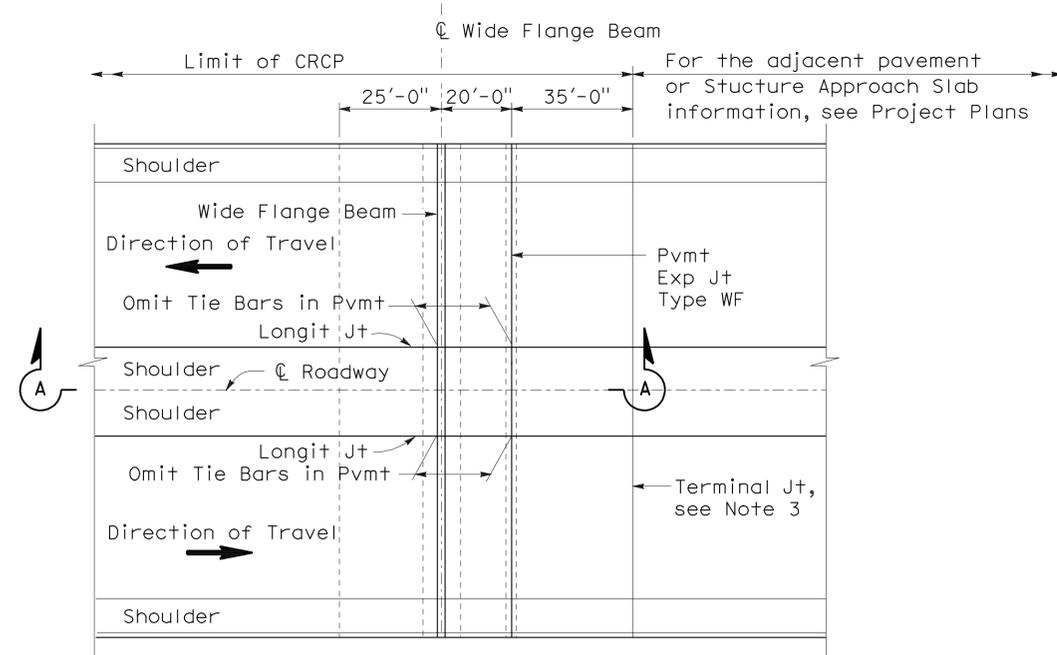
2006 REVISED NEW STANDARD PLAN RNSP P31B

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	5	25.1/28.6	443	485

Florante E. Bautista
 REGISTERED CIVIL ENGINEER
 April 20, 2012
 PLANS APPROVAL DATE
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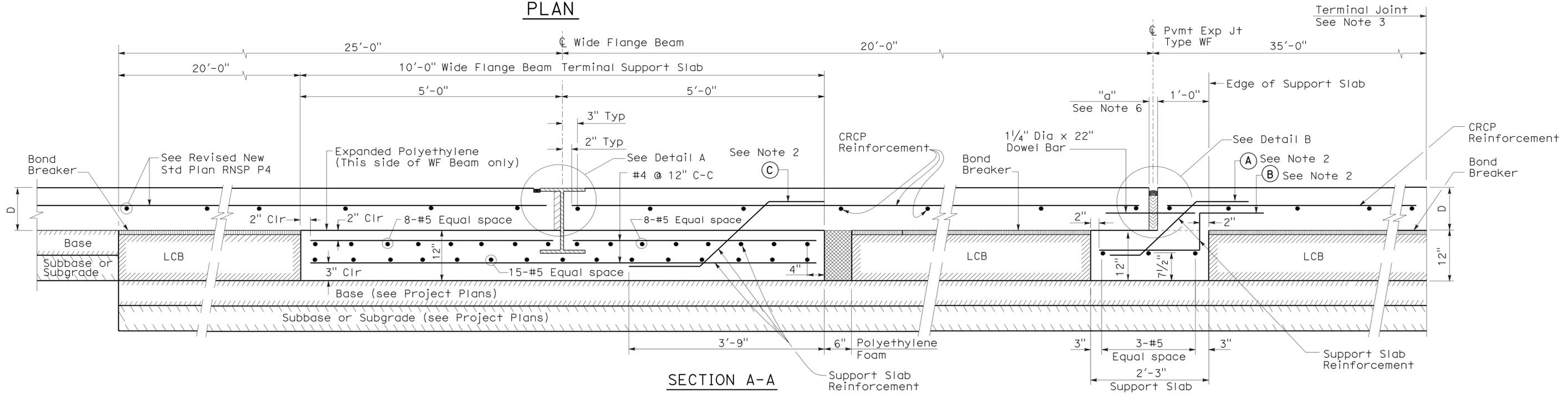
To accompany plans dated 6-4-12



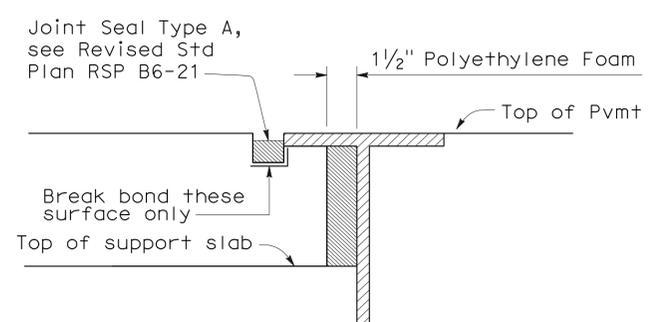
PLAN

NOTES:

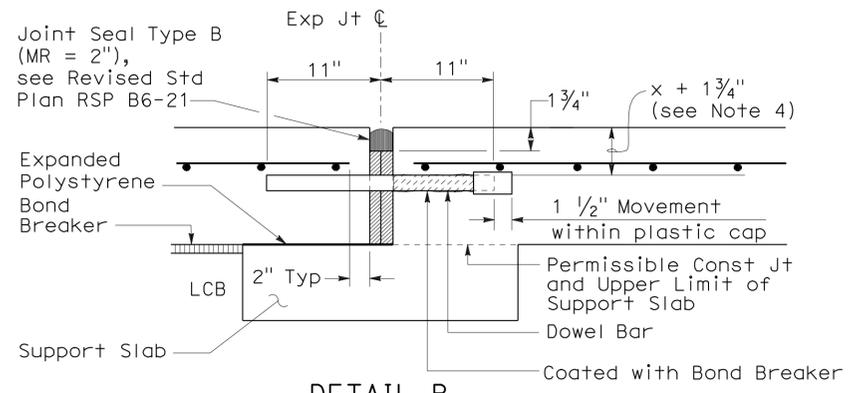
1. For additional details on reinforcement member quantities of the wide flange beam terminal and Pavement Expansion Joint Type WF, see Revised New Standard Plan RNSP P32B.
2. For reinforcement (A), (B), and (C) Details, see Revised New Standard Plan RNSP P32B.
3. For the Pavement Terminal Joint Details, see New Standard Plan NSP P31A. For Pavement Terminal Joint Type, see Project Plans.
4. See Revised New Standard Plan RNSP P4 for "x".
5. D = Thickness of CRCP
6. See Revised Standard Plan RSP B6-21 for "a".



SECTION A-A



DETAIL A



DETAIL B

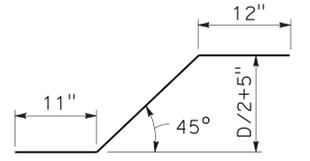
For layout, tolerances, and other details not shown see Revised Std Plan RSP P10.

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**CONTINUOUSLY REINFORCED
 CONCRETE PAVEMENT -
 WIDE FLANGE BEAM TERMINALS**
 NO SCALE
 RNSP P32A DATED APRIL 20, 2012 SUPERSEDES NSP P32A DATED JUNE 5, 2009
 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006

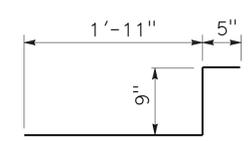
2006 REVISED NEW STANDARD PLAN RNSP P32A



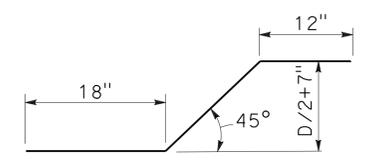
To accompany plans dated 6-4-12



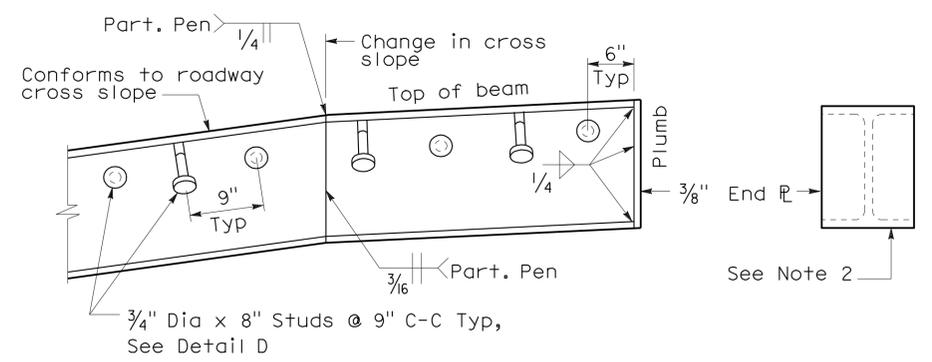
(A) #5 @ 12"



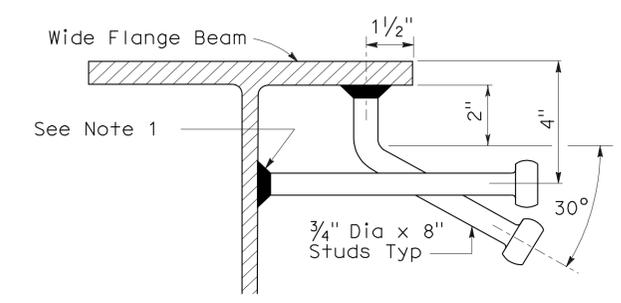
(B) #5 @ 12"



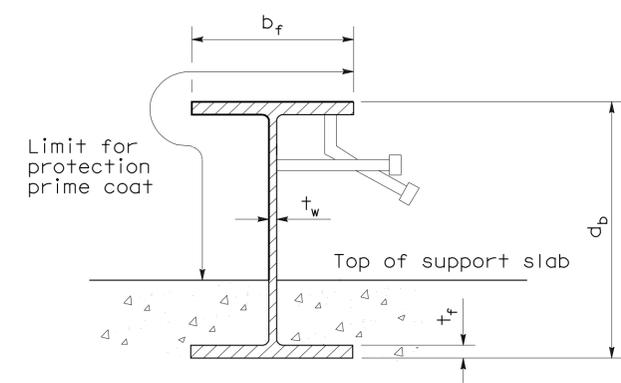
(C) #4 @ 12"



WIDE FLANGE DETAIL



DETAIL D



WIDE FLANGE PAINTING DETAIL

SEE "TABLE OF BEAM SIZES"

LEGEND:

- b_f - flange width
- t_f - flange thickness
- t_w - web thickness
- d_b - beam depth

NOTES:

1. Studs shall be electric arc end welded with complete fusion. Any stud which is dislodged in shipping or can be dislodged by hammer shall be replaced.
2. Weld 3/8" Plate to each end of wide flange beam at pavement edges only. End plate covers entire wide flange beam.

CONCRETE AND STEEL QUANTITIES

ITEM	PAVEMENT THICKNESS						
	.80'	.85'	.90'	.95'	1.00'	1.05'	1.10'
Wide Flange Beam	Concrete	4.81CY	4.81CY	4.81CY	4.81CY	4.81CY	4.81CY
Terminal Slab	Reinforcing Steel	552.2 LBS	552.4 LBS	552.6 LBS	552.8 LBS	553.0 LBS	553.3 LBS
Exp Joint Type	Concrete	1.1 CY					
WF Support Slab	Reinforcing Steel	99.9 LBS	100.2 LBS	100.5 LBS	100.8 LBS	101.1 LBS	101.6 LBS
Steel Beam (Weight of Wide Flange Beam and Studs)		69.51 LBS/LF +2 PLATES @ 14.87 LBS EA	90.51 LBS/LF +2 PLATES @ 18.46 LBS EA	90.51 LBS/LF +2 PLATES @ 18.46 LBS EA	98.51 LBS/LF +2 PLATES @ 22.01 LBS EA	98.51 LBS/LF +2 PLATES @ 22.01 LBS EA	98.51 LBS/LF +2 PLATES @ 22.01 LBS EA

TABLE OF BEAM SIZES

PAVEMENT THICKNESS	WIDE FLANGE BEAM DESIGNATION	d _b	b _f	t _f	t _w
.80'	W14 X 68	14.04"	10.04"	0.72"	0.42"
.85'	W16 X 89	16.75"	10.37"	0.88"	0.53"
.90'	W16 X 89	16.75"	10.37"	0.88"	0.53"
.95'	W18 X 97	18.59"	11.15"	0.87"	0.54"
1.00'	W18 X 97	18.59"	11.15"	0.87"	0.54"
1.05'	W18 X 97	18.59"	11.15"	0.87"	0.54"
1.10'	W18 X 97	18.59"	11.15"	0.87"	0.54"

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**CONTINUOUSLY REINFORCED
CONCRETE PAVEMENT -
WIDE FLANGE BEAM TERMINALS**

NO SCALE

RNSP P32B DATED APRIL 20, 2012 SUPERSEDES NSP P32B DATED JUNE 5, 2009 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006

2006 REVISED NEW STANDARD PLAN RNSP P32B

NOTES:

1. Details for gore area paving are applicable to both exit and entrance ramps.
2. Transverse Joint Layouts are not shown. Refer to Revised Standard Plan RSP P1 or Project Plans for details regarding joint layouts, tie bars, and dowel bars not shown.
3. WWF 4 x 4 - W4.0 x W4.0 can be used in place of steel reinforcement for gore area paving only.
4. Omit longitudinal joint when concrete on ramp shoulder is less than 3'-0".
5. Place joint perpendicular to ramp longitudinal joints. Match location of joint with ramp transverse joints.
6. Place joint perpendicular to ramp longitudinal joints. Match location of joint with mainline transverse joints.
7. Isolation joint detail shown on Revised Standard Plan RSP P18.
8. For jointed plain concrete pavement, transverse joints to be spaced from fixed transverse joint and shall follow spacing pattern on Revised Standard Plan RSP P1. Minimum spacing shall be 6 feet.

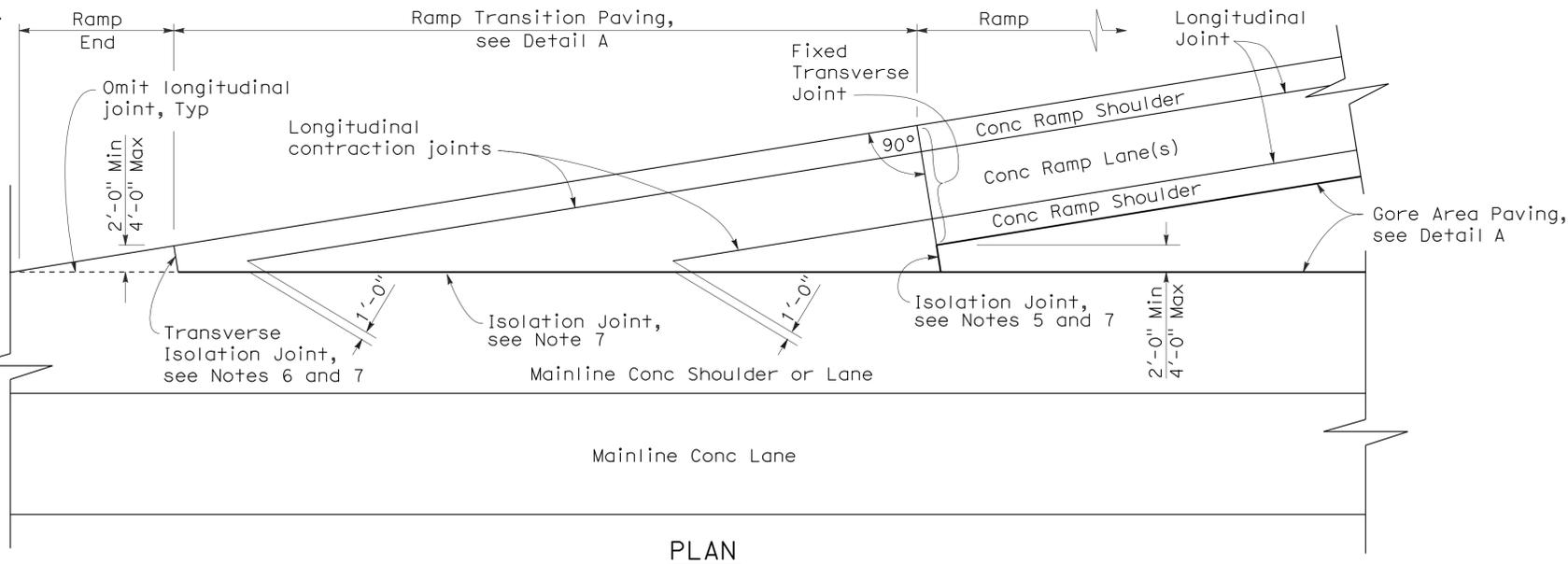
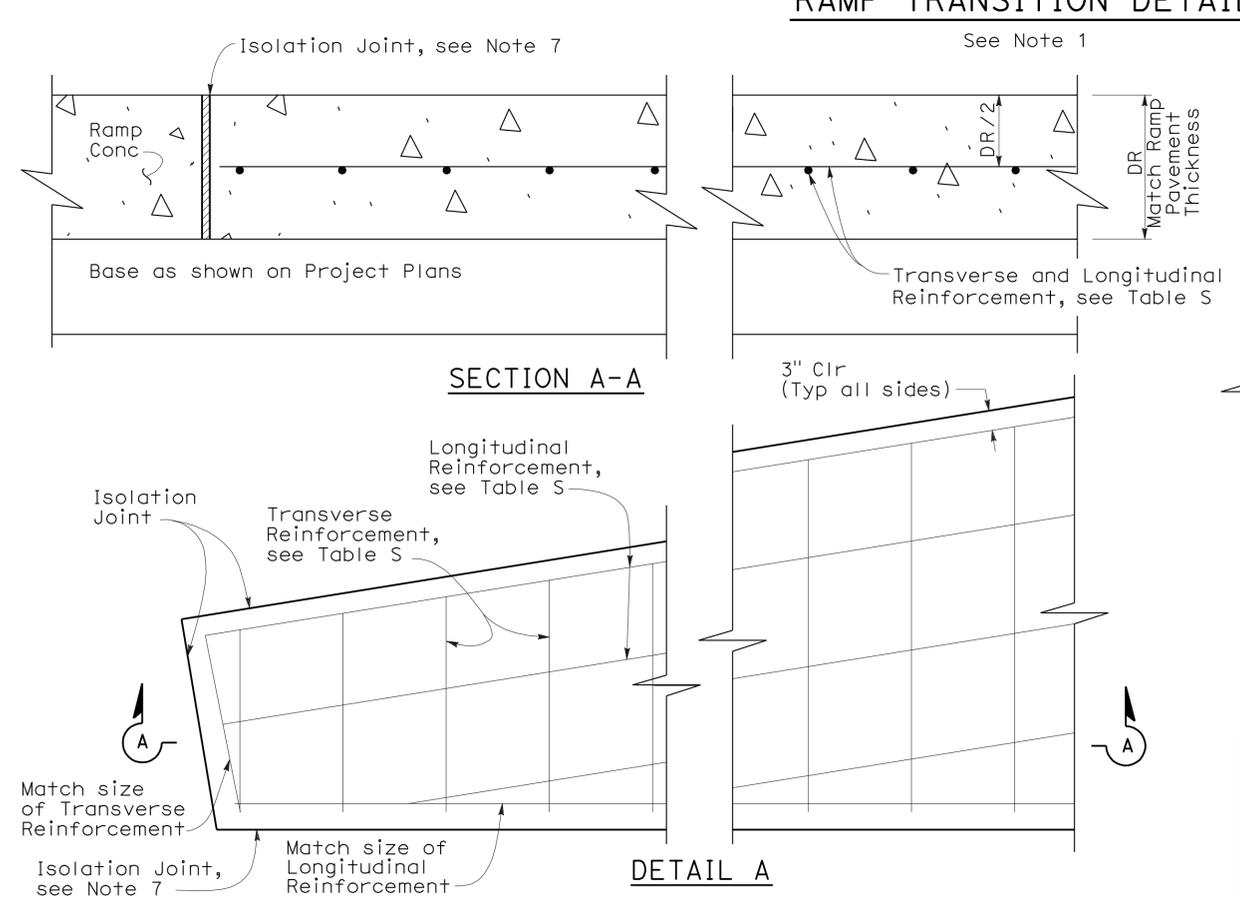
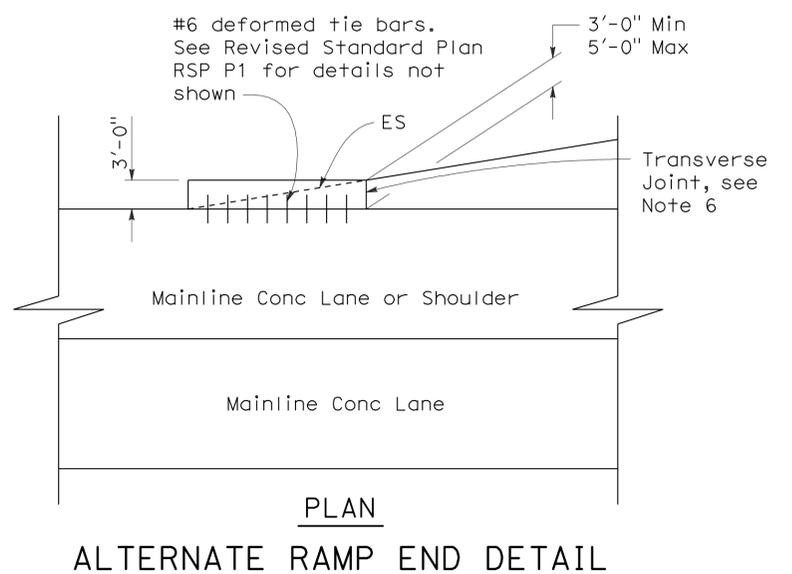
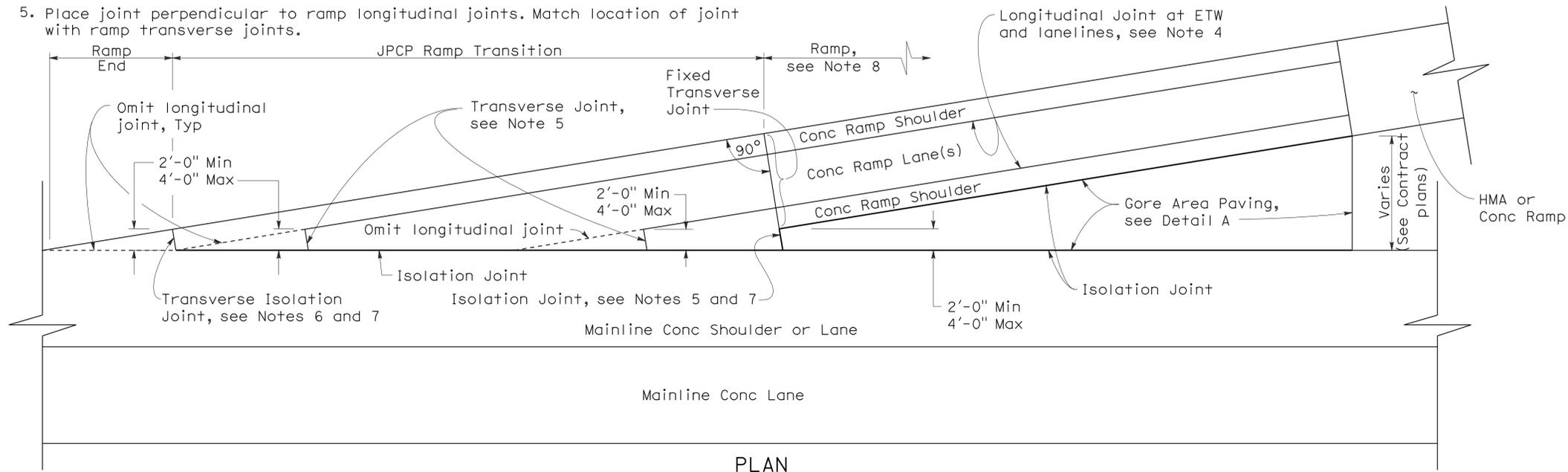
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ	5	25.1/28.6	445	485

William K. Farnbach
 REGISTERED CIVIL ENGINEER
 No. C49042
 Exp. 9-30-10
 CIVIL
 STATE OF CALIFORNIA

May 15, 2009
 PLANS APPROVAL DATE

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To accompany plans dated 6-4-12



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**CONCRETE PAVEMENT-
RAMP TRANSITION
PAVING DETAILS**

NO SCALE

RSP P35 DATED MAY 15, 2009 SUPERSEDES STANDARD PLAN P35
DATED MAY 1, 2006 - PAGE 131 OF THE STANDARD PLANS BOOK DATED MAY 2006.

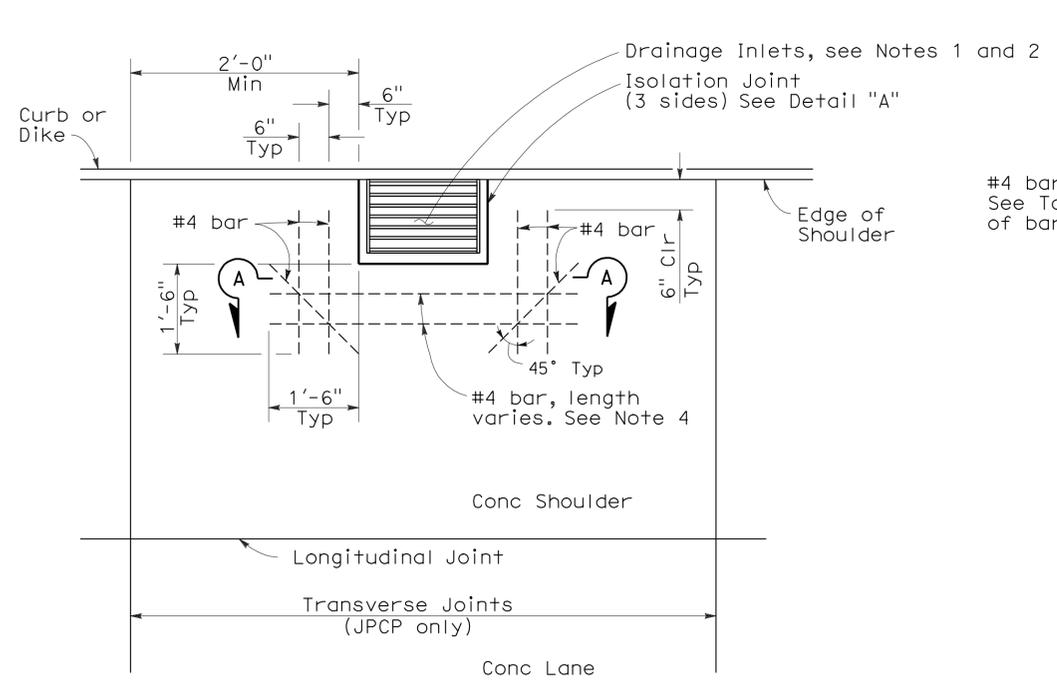
REVISED STANDARD PLAN RSP P35

TABLE S
(For JPCP and CRCP)

Location	Transverse Reinf	Longitudinal Reinf
Gore Area Paving	#4 @ 1'-0" *	#4 @ 1'-0" *
Ramp Transition (JPCP)	#6 @ 1'-6"	#6 @ 9"
Ramp Transition (CRCP)	See NSP P4, Table No. 2	See NSP P4, Table No. 1

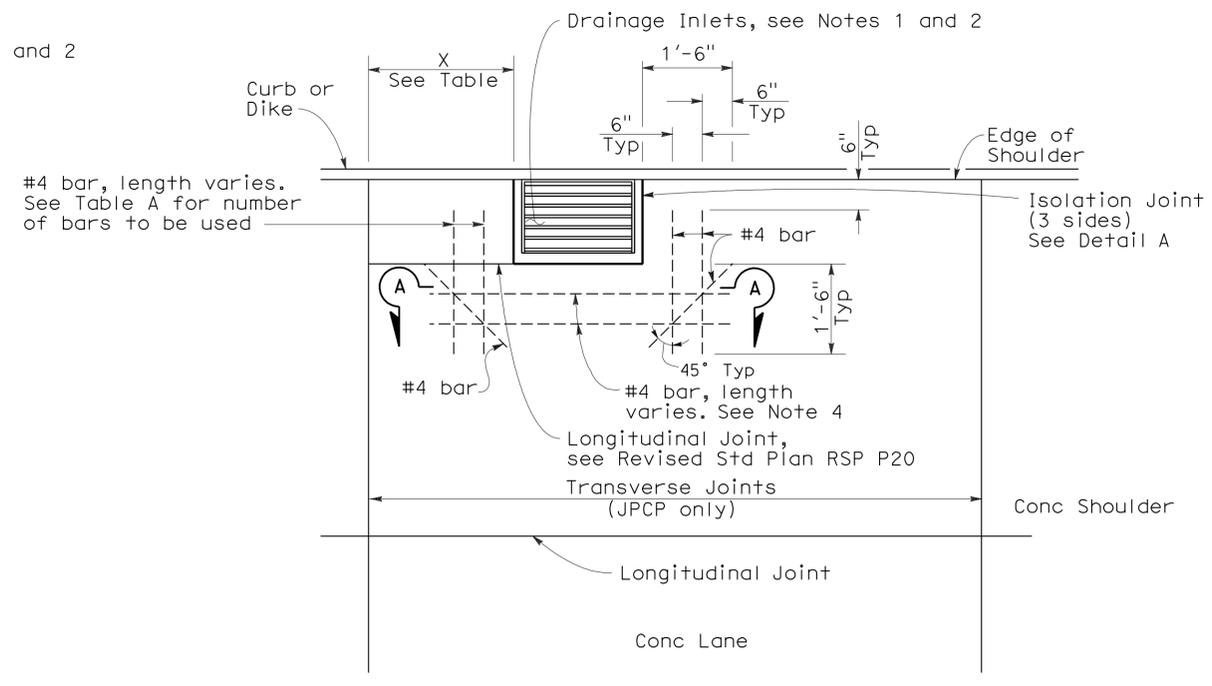
* See Note 3

2006 REVISED STANDARD PLAN RSP P35



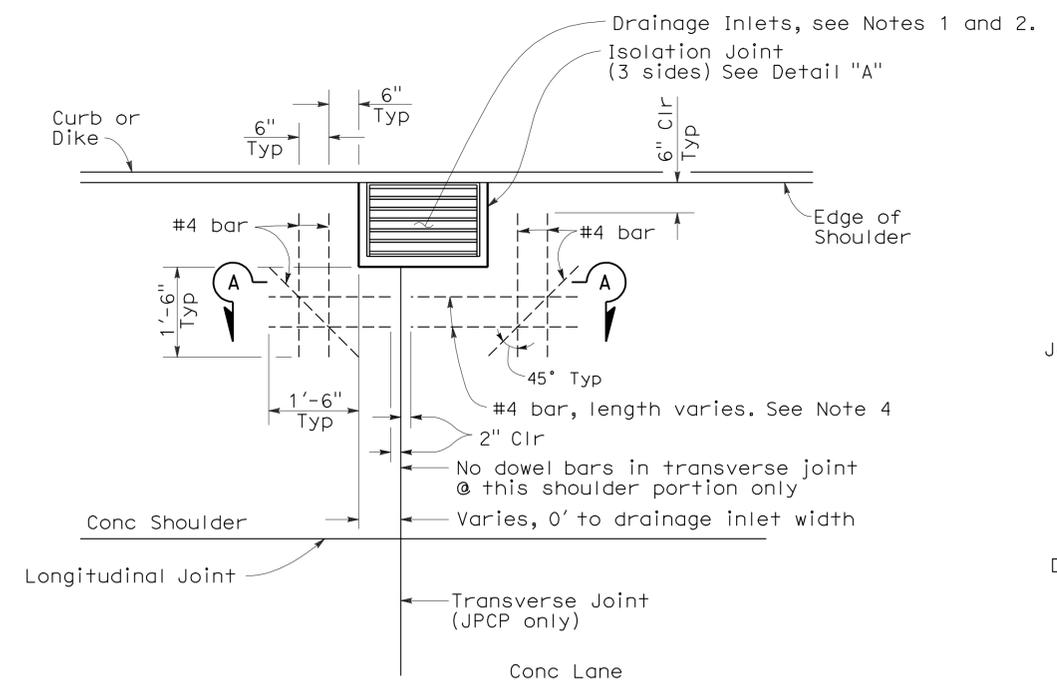
CASE 1

Transverse joint more than 2'-0" clear of drainage inlet wall or no transverse joint



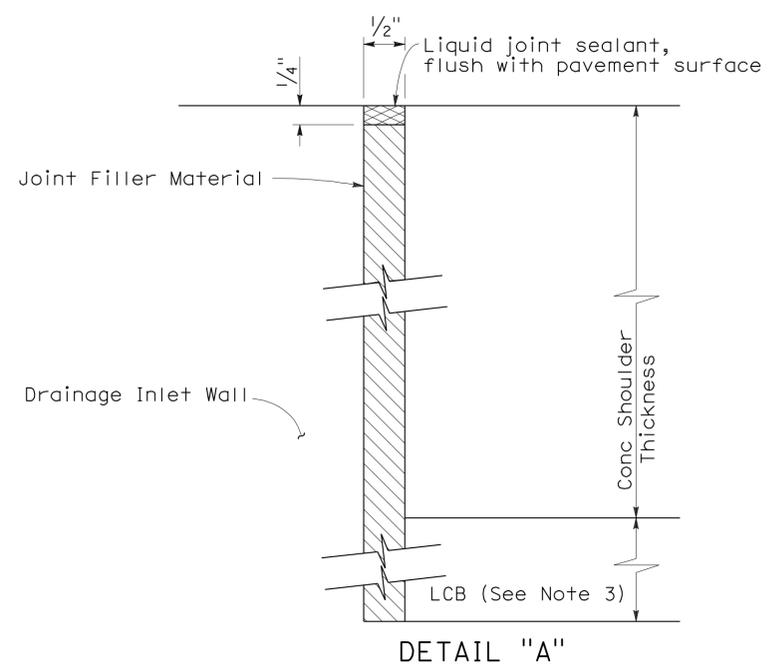
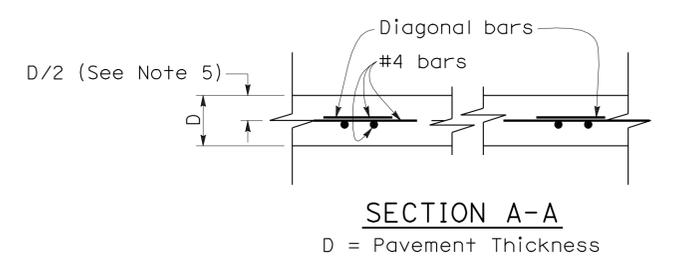
CASE 3

Transverse joint within 2'-0" of drainage inlet wall, or matches drainage inlet wall.



CASE 2

Transverse joint intersects drainage inlet, or matches drainage inlet wall.



NOTES:

1. Refer to Project Plans for location and Type of drainage inlets.
2. Top of inlet shall be flush with shoulder surface.
3. Extend joint filler material to bottom of Lean Concrete Base. Where Lean Concrete Base is not used as base material, the joint filler material shall only extend to the bottom of the new concrete pavement.
4. For Jointed Plain Concrete Pavement only. For Continuously Reinforced Concrete Pavement, terminate pavement steel reinforcement 2" clear from all outside edges of isolation joint.
5. For Jointed Plain Concrete Pavement only. For Continuously Reinforced Concrete Pavement, see New Standard Plan NSP P4.
6. Dowel and tie bars not shown, see Revised Standard Plan RSP P1.

TABLE A

DISTANCE X	BARS REQUIRED
2'-0" to 1'-6"	2
1'-6" to 9"	1 @ X/2
9" or less	None

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**CONCRETE PAVEMENT-
 DRAINAGE INLET
 DETAILS No. 1**
 NO SCALE

RSP P45 DATED MAY 15, 2009 SUPERSEDES STANDARD PLAN P45
 DATED MAY 1, 2006 - PAGE 132 OF THE STANDARD PLANS BOOK DATED MAY 2006.

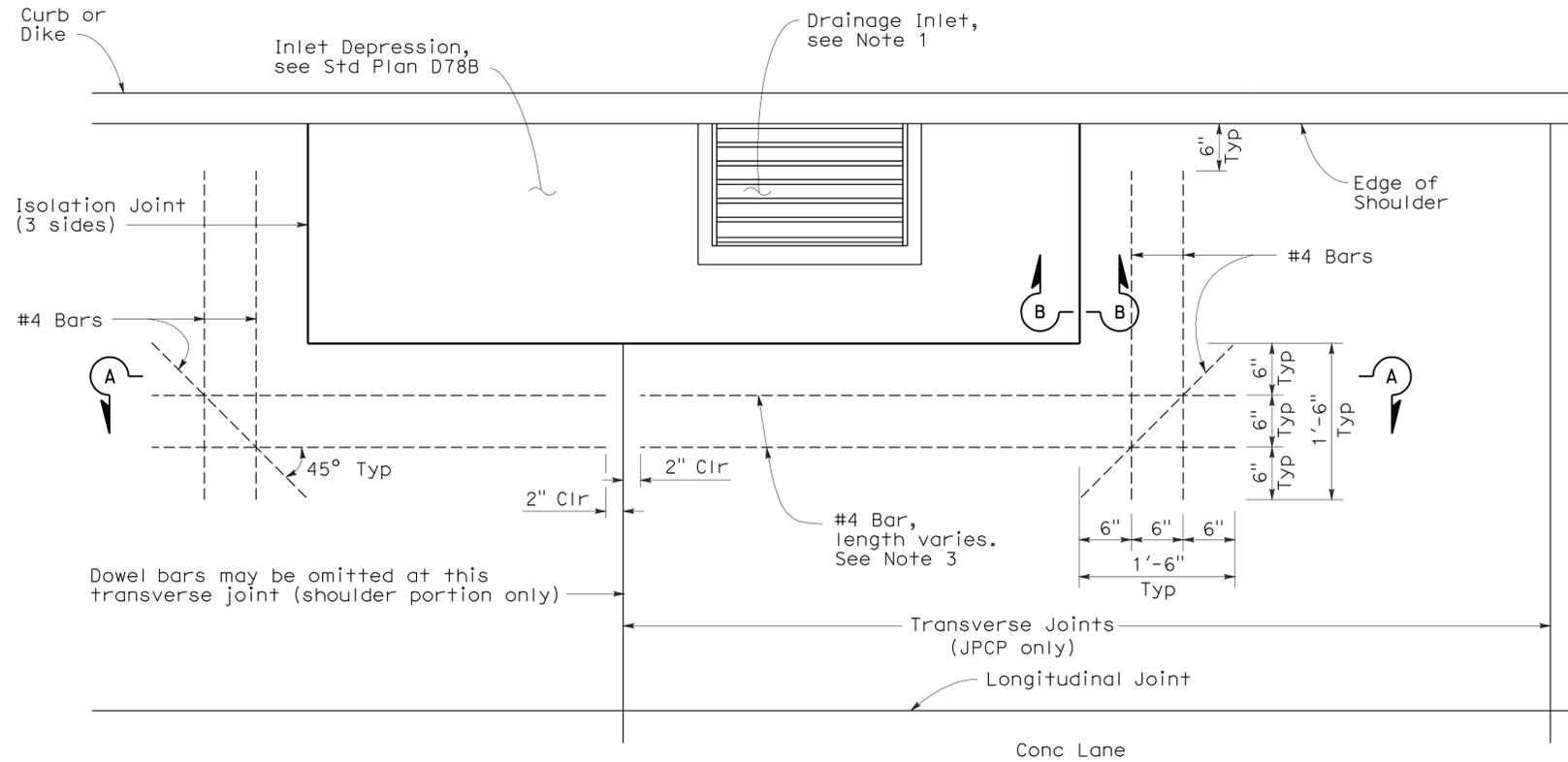
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ	5	25.1/28.6	447	485

William K. Farnbach
 REGISTERED CIVIL ENGINEER
 May 15, 2009
 PLANS APPROVAL DATE

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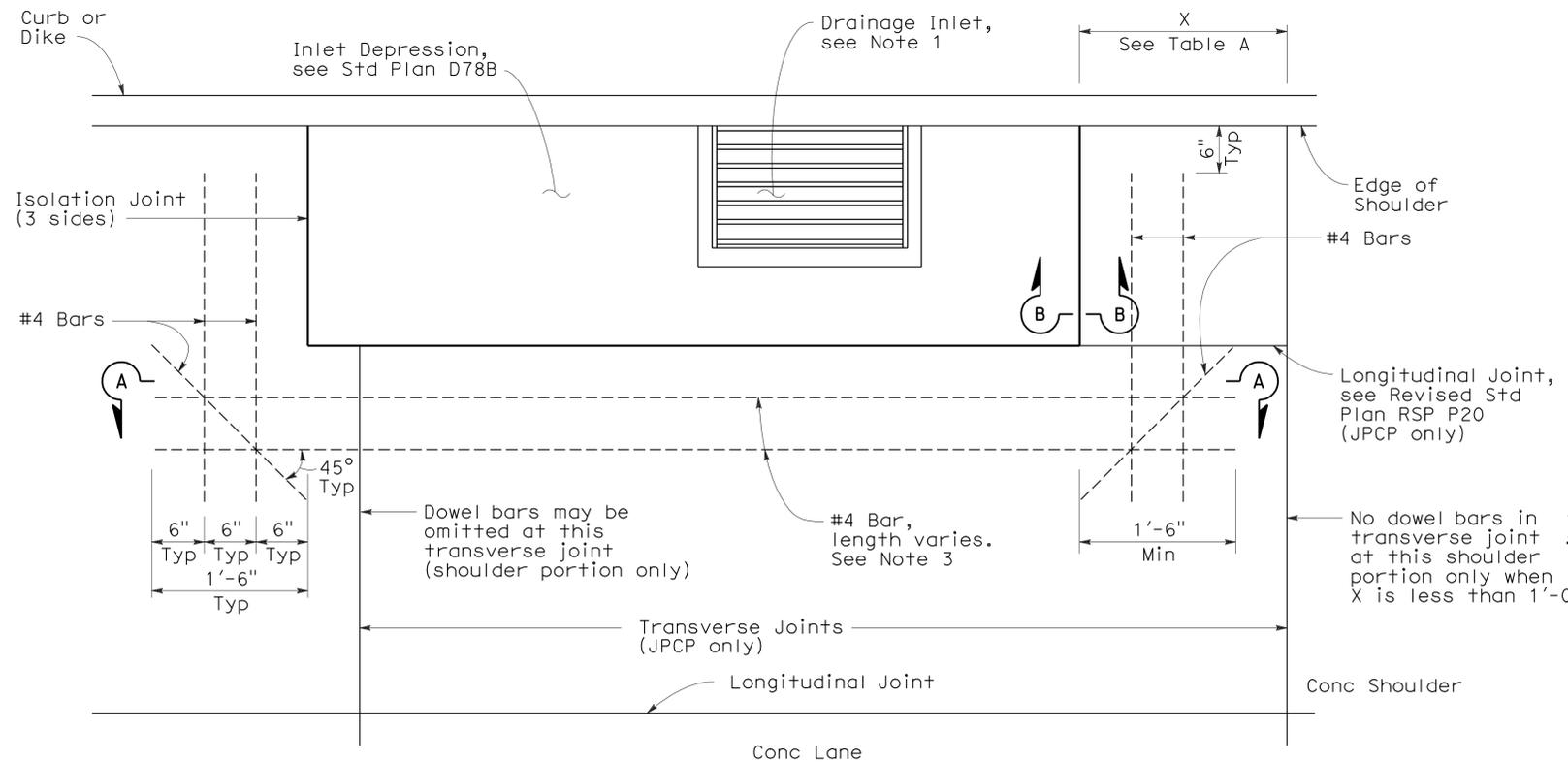
To accompany plans dated 6-4-12

2006 REVISED STANDARD PLAN RSP P46



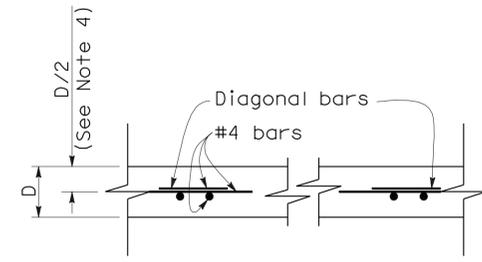
CASE A

Transverse Joint intersects inlet depression or no transverse joints.



CASE B

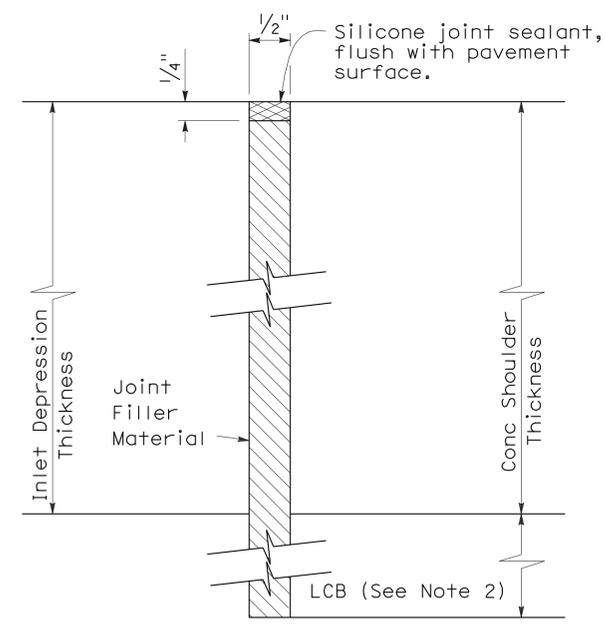
Transverse Joint within 2'-0" of edge of inlet depression.



SECTION A-A
D = Pavement Thickness

TABLE A

DISTANCE X	BARS REQUIRED
2'-0" to 1'-6"	2
1'-6" to 1'-0"	1
1'-0" or less	None



SECTION B-B

NOTES:

1. Refer to Project Plans for location and type of drainage inlets.
2. Extend joint filler material to bottom of Lean Concrete Base. Where Lean Concrete Base is not used as base material, the joint filler material shall only extend to the bottom of the new concrete pavement.
3. For Jointed Plain Concrete Pavement only. For Continuously Reinforced Concrete Pavement, terminate pavement steel reinforcement 2" clear from all outside edges of isolation joint.
4. For Jointed Plain Concrete Pavement only. For Continuously Reinforced Concrete Pavement, see New Standard Plan NSP P4.

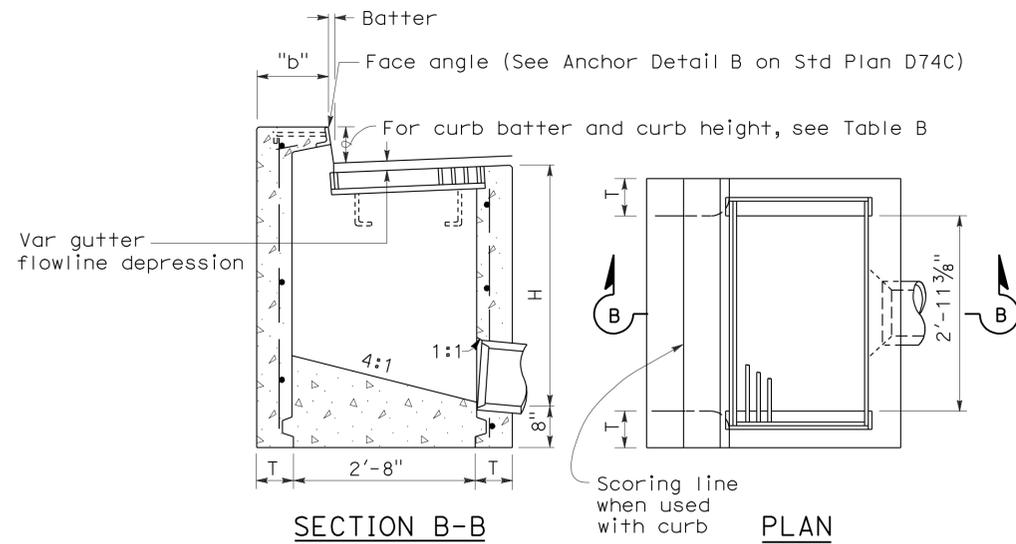
ISOLATION JOINT AROUND INLET DEPRESSION

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**CONCRETE PAVEMENT-
 DRAINAGE INLET
 DETAILS No. 2**
 NO SCALE

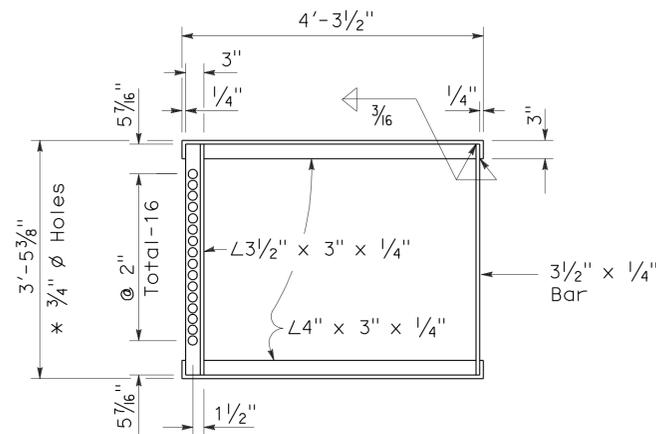
RSP P46 DATED MAY 15, 2009 SUPERSEDES STANDARD PLAN P46
 DATED MAY 1, 2006 - PAGE 133 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP P46

To accompany plans dated 6-4-12

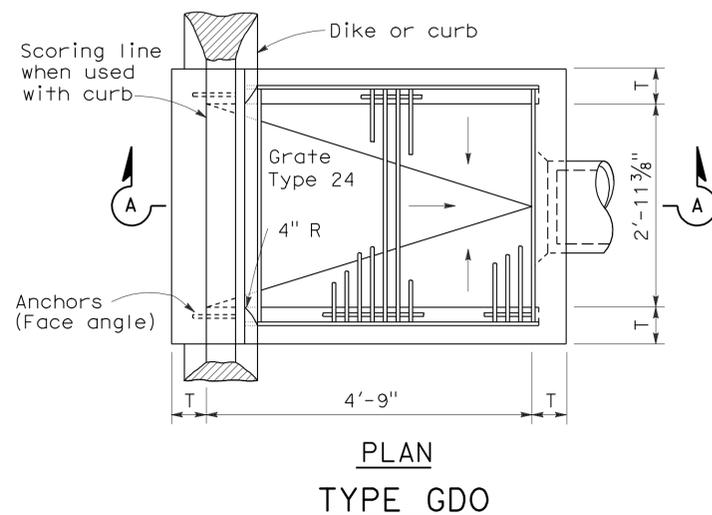


TYPE GO

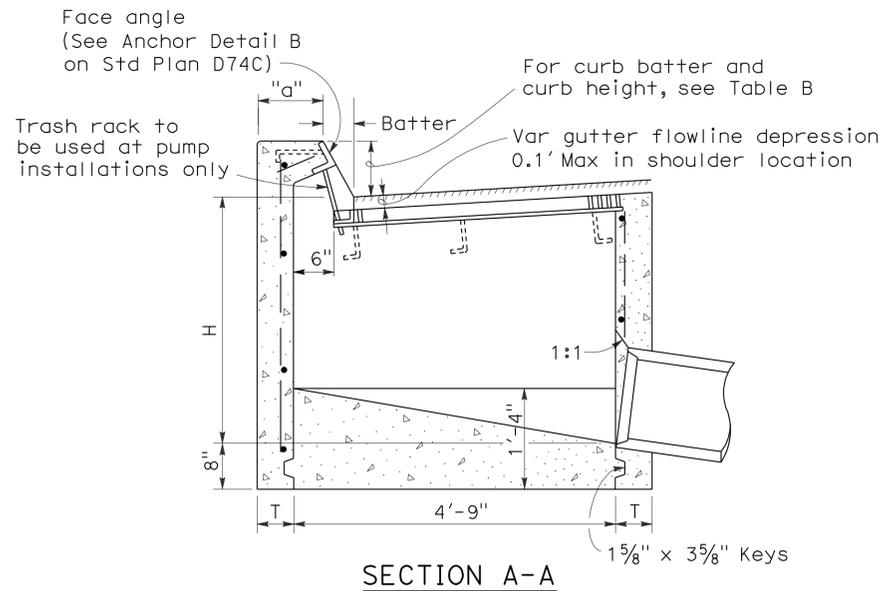


* 3/4" ϕ Holes required only with trash rack

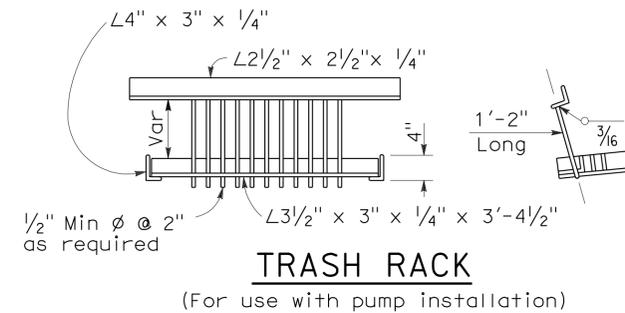
GRATE FRAME FOR TYPE GDO INLET



PLAN
TYPE GDO



SECTION A-A



TRASH RACK

(For use with pump installation)

TABLE A
CONCRETE QUANTITIES

TYPE	H=3'-0" TO 8'-0" (T=6")	H=8'-1" TO 20'-0" (T=8")	
	ADDITIONAL PCC PER FOOT (CY)	H=8'-1" (CY)	ADDITIONAL PCC PER FOOT (CY)
GO	1.24	3.39	0.346
GDO	1.62	4.36	0.446

Table based on 8" floor slab, no deduction for pipe openings, and curb type giving highest quantity of concrete. No deductions or adjustments are to be made to these quantities because of pipe openings, different floor alternatives or different curb type.

TABLE B

CURB TYPE	NORMAL CURB HEIGHT	CURB BATTER	"a" DIMENSION	"b" DIMENSION
A1-6	6"	1 1/2"	T+7 1/2"	T+6 1/2"
A1-8	8"	2"	T+7"	T+6"
B1-6	6"	4"	T+5"	T+4"
Type A Dike	6"	3"	T+6"	T+5"

NOTES:

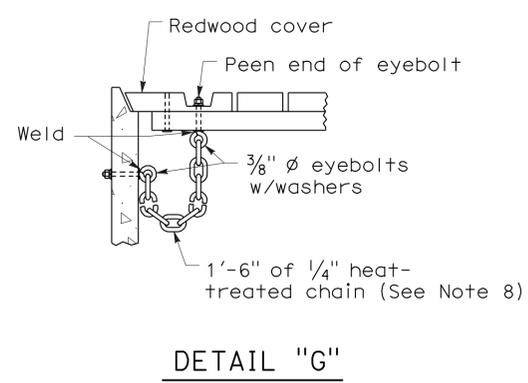
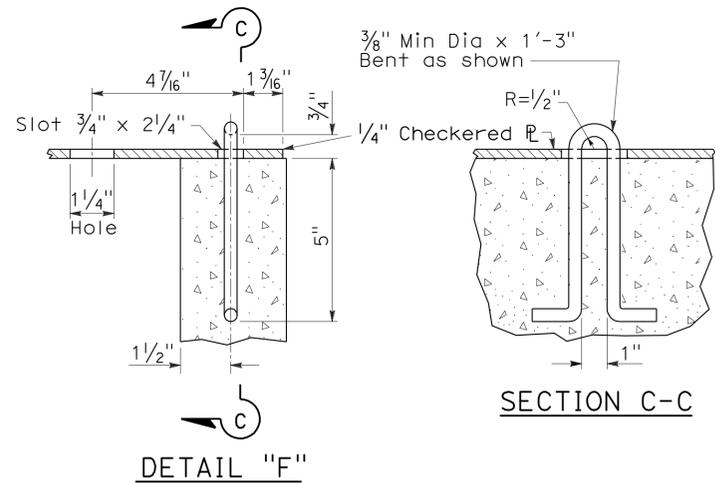
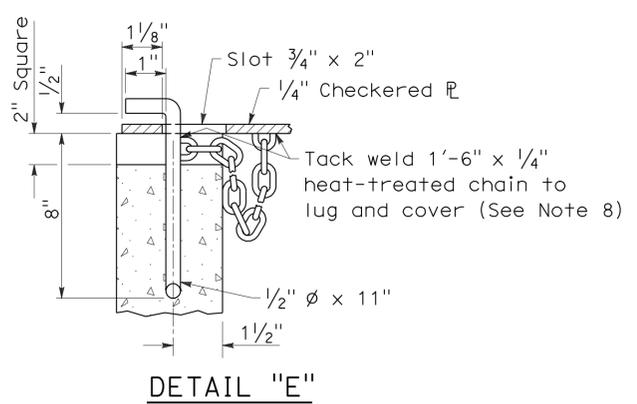
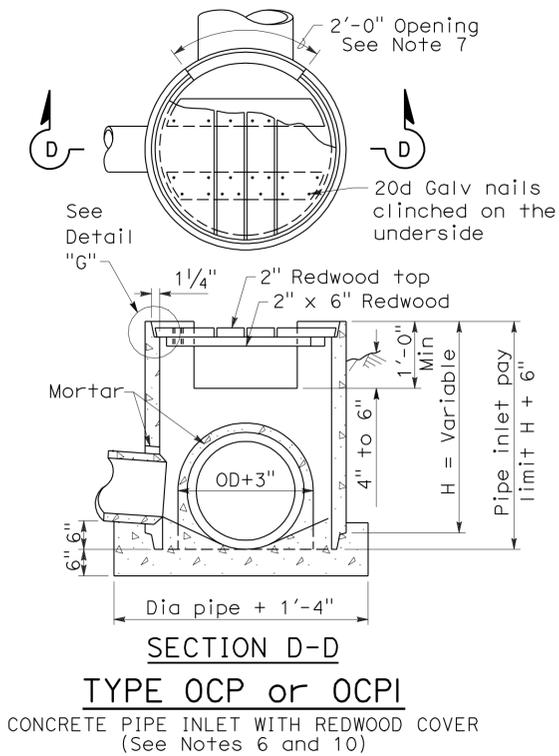
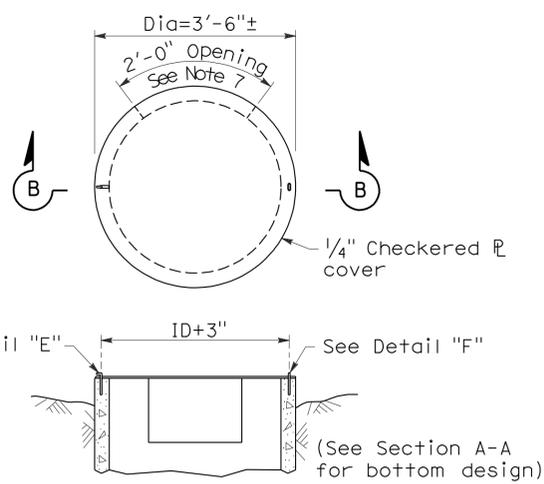
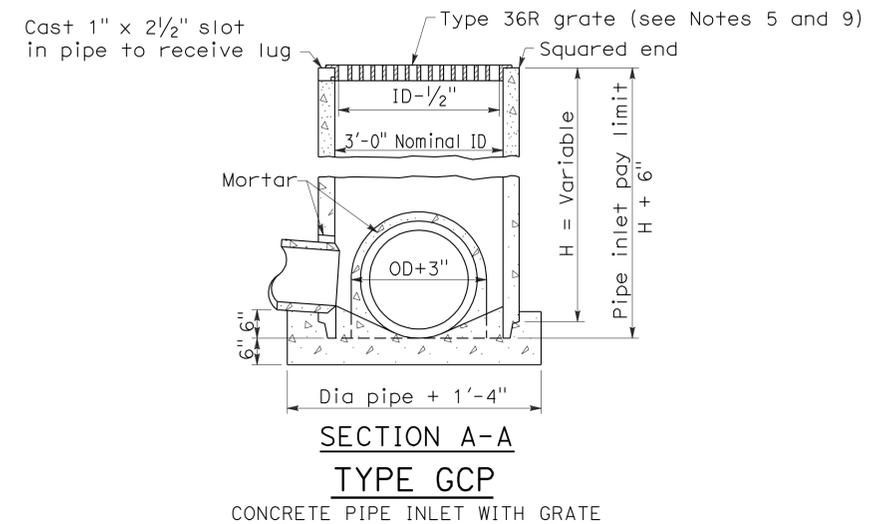
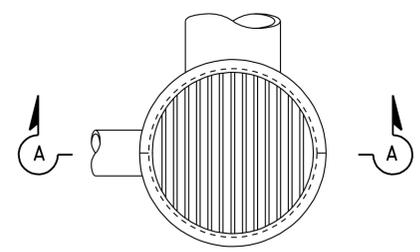
- "H" is the difference in elevation between the outlet pipe flow line and the normal gutter grade line undeepressed.
- For "T" wall thickness, see Table A below.
- Wall reinforcing not required when "H" is 8'-0" or less and the unsupported width or length is 7'-0" or less. Walls exceeding these limits shall be reinforced with #4 @ 18"± centers placed 1/2" clear to inside of box unless otherwise shown.
- Inlet bottom reinforcing not required. See Standard Plan D74C for alternative reinforced bottom.
- Steps - None required where "H" is less than 2'-6". Where "H" is 2'-6" or more, install steps with lowest rung 1'-0" above the floor and highest rung not more than 6" below top of inlet. The distance between steps shall not exceed 1'-0" and shall be uniform throughout the length of the wall. Place steps in the wall without an opening. Step inserts may be substituted for the bar steps. Step Inserts shall comply with State Industrial Safety requirements. See Standard Plan D74C for step details.
- When shown on the project plans, place a 3/4" plain round protection bar horizontally across the length of the opening and bend back 4" into the inlet wall on each side.
- Pipe(s) can be placed in any wall.
- Curb section shall match adjacent curb.
- Basin floors shall have wood trowel finish and shall slope toward the outlet pipe as shown.
- Galvanizing - See Standard Specifications or Special Provisions.
- See Standard Plan D77A and D77B for grate and frame details and weights of miscellaneous iron and Steel.
- See Standard Plan D78A for gutter depression details.
- Full penetration butt welds may be substituted for the fillet welds on all anchors.
- Standard square, hexagon, round or equivalent headed anchors may be substituted for the right angle hooks on the anchors shown on this plan.
- Cast-in-place or precast alternative is optional with contractor. See Standard Specifications.
- Cast-in-place inlets to be formed around all pipes/stubs intersecting the inlet and concrete poured in one continuous operation. Precast inlets shall have mortared pipe connections conforming to details for Type GCP inlets on Standard Plan D75B. See Standard Specifications for mortar composition.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
DRAINAGE INLETS
NO SCALE

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ	5	25.1/28.6	449	485

Raymond Don Tsztso
 REGISTERED CIVIL ENGINEER
 June 6, 2008
 PLANS APPROVAL DATE
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2006 REVISED STANDARD PLAN RSP D75B



NOTES:

- For details of steel pipe inlets, see Standard Plan D75A.
- For details of ladder and steps and when ladder or steps are required, see Standard Plan D75C.
- Inlet pipes shall not protrude into basin.
- Except for inlets used for junction boxes, basin floors shall have minimum slope of 4:1 from all directions toward outlet pipe, and a wood trowel finish.
- See Revised Standard Plan RSP D77A and Standard Plan D77B for Grate and Frame Details and Weights of Miscellaneous Iron and Steel.
- Designation of Type OCPI pipe inlets on plans indicates trash racks are to be furnished and installed on all side openings. See Standard Plan D75C for Trash Rack details.
- More than one side opening may be required. Location and number as ordered by the Engineer. Opening may be cast in pipe.
- Chain to be provided when specified.
- Place pipe so bars of grate will be parallel with main surface flow.
- Redwood covers shall only be placed at locations designated on the plans.

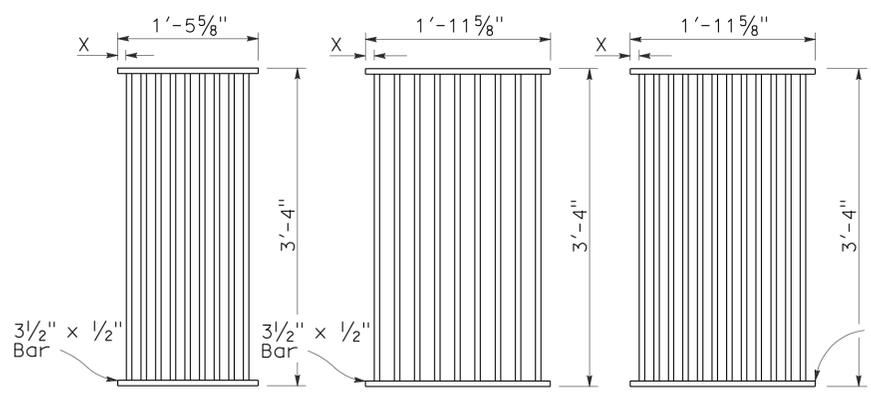
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

CONCRETE PIPE INLETS

NO SCALE

RSP D75B DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN D75B
DATED MAY 1, 2006 - PAGE 153 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP D75B

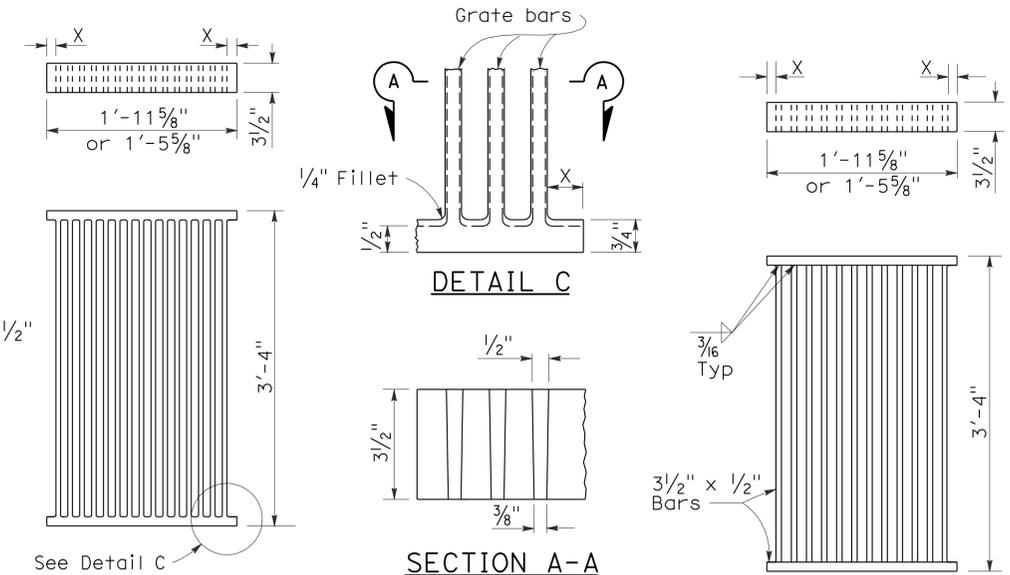


RECTANGULAR GRATE DETAILS
(See table below)

TYPE 18-9
 1 3/8" Clear spacing. Use within the roadbed on highways where bicycles and pedestrians are excluded.

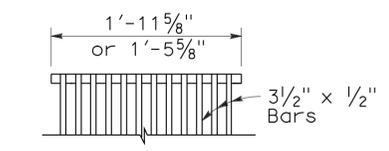
TYPE 24-9
 2" Clear spacing. Use in locations off the roadbed on all types of highways.

TYPE 24-12
 1 3/8" Clear spacing. Use within the roadbed on highways where bicycles and pedestrians are excluded.

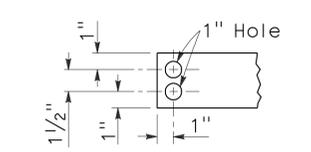


ALTERNATIVE CAST NODULAR IRON GRATE OR CAST STEEL GRATE

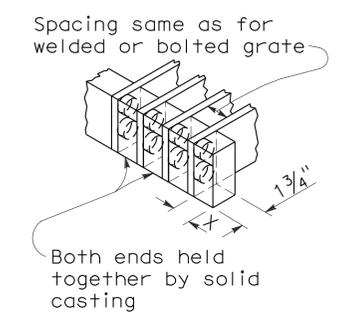
ALTERNATIVE WELDED GRATE



CAST END BLOCK

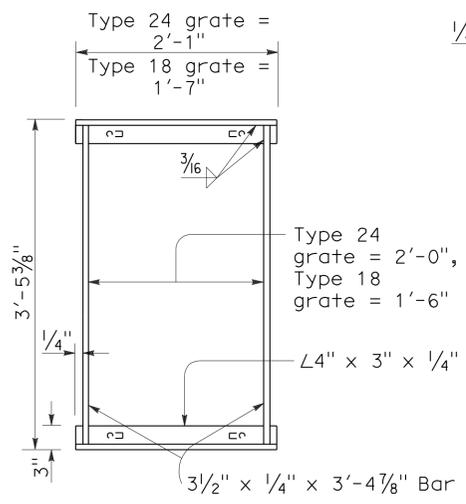


END OF BAR

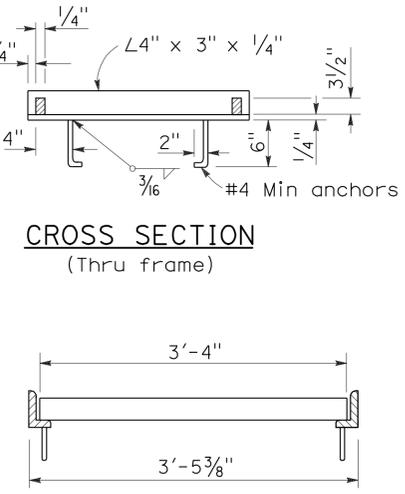


ALTERNATIVE CAST NODULAR IRON OR CAST STEEL END BLOCK GRATE

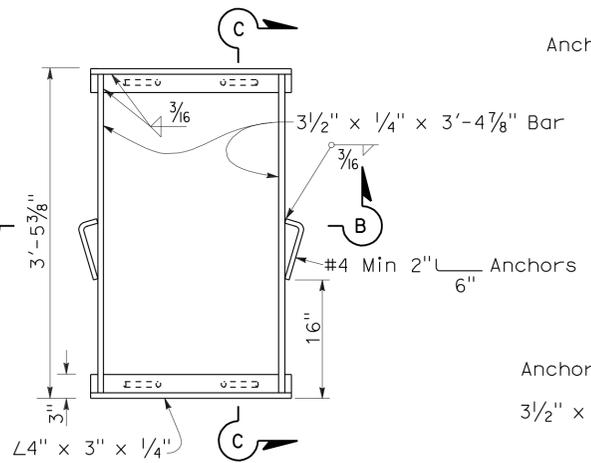
- NOTES:**
1. Grate type numbers refer to approximate width of grate in inches and number of bars, respectively.
 2. Contractor has the option of using cast nodular iron, cast steel, welded, bolted, or cast end block grate.
 3. See Special Provisions for requirements pertaining to galvanizing or asphalt dipping of grates and frames.
 4. Rounded top of bars optional on all grates.
 5. Pipe inlets with a grate shall be placed so that bars parallel direction of principle surface flow.
 6. Full penetration butt welds may be substituted for the fillet welds on all anchors.
 7. Standard square, hexagon, round or equivalent headed anchors may be substituted for the right angle hooks on the anchors shown on this plan.
 8. Grate and frame weights are based on welded grates (weights of face angles, steps, protection bars, etc. are not included).



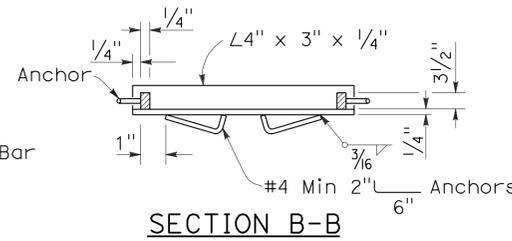
TYPICAL FRAME



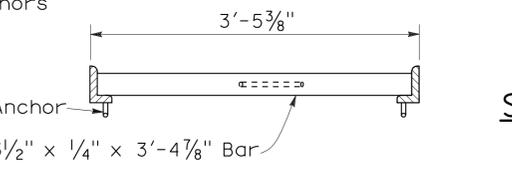
LONGITUDINAL SECTION
(Thru frame and grate)



TYPICAL FRAME



SECTION B-B



SECTION C-C

ALTERNATIVE ANCHOR FOR RECTANGULAR FRAME
(For details not shown, See Rectangular Frame Details)

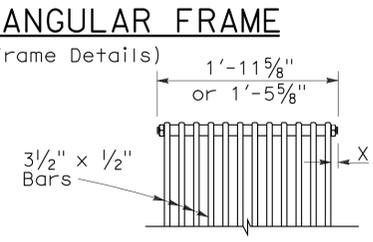
RECTANGULAR FRAME DETAILS
(For all rectangular grates)

GRATE BAR SPACING TABLE

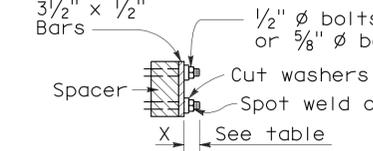
TYPE	NO. OF BARS	CLEAR BAR SPACING	X
18-9	9	1 3/8"	1 1/16"
24-9	9	2"	1 9/16"
24-12	12	1 3/8"	1 1/4"

INLET TYPE	COVER TYPE	WEIGHT LB
OS	PLATE	174
OL-7	PLATE	170
OL-10	PLATE	170
OL-14	PLATE	170
OL-21	PLATE	170
OCPI	PLATE	112
OCPI	REDWOOD	42
OMP	PLATE	177
OMPI	PLATE	177

INLET TYPE	GRATE TYPE	NO. OF GRATES	WEIGHT LB
GDO	24-12	2	634
GOL-7	24-12	1	326
GOL-10	24-12	1	326
G0,G1,G2,G3,G4 (TYPE 24)	24-9	1	263
	24-12	1	326
G4 (TYPE 18),G5,G6	18-9	1	249
GT1	18-9	2	498
GT2	18-9	2	498
GT3	24-12	2	652
GT4	24-12	2	652
TRASH RACK			22

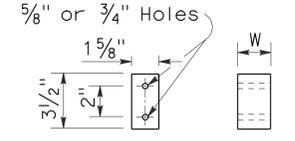


BOLTED END BLOCK

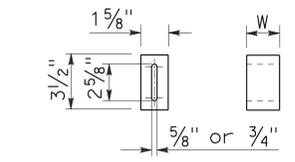


BOLTING DETAIL

ALTERNATIVE BOLTED GRATE



BAR SPACER



ALTERNATIVE SPACER
W = 1 3/8" or 2"

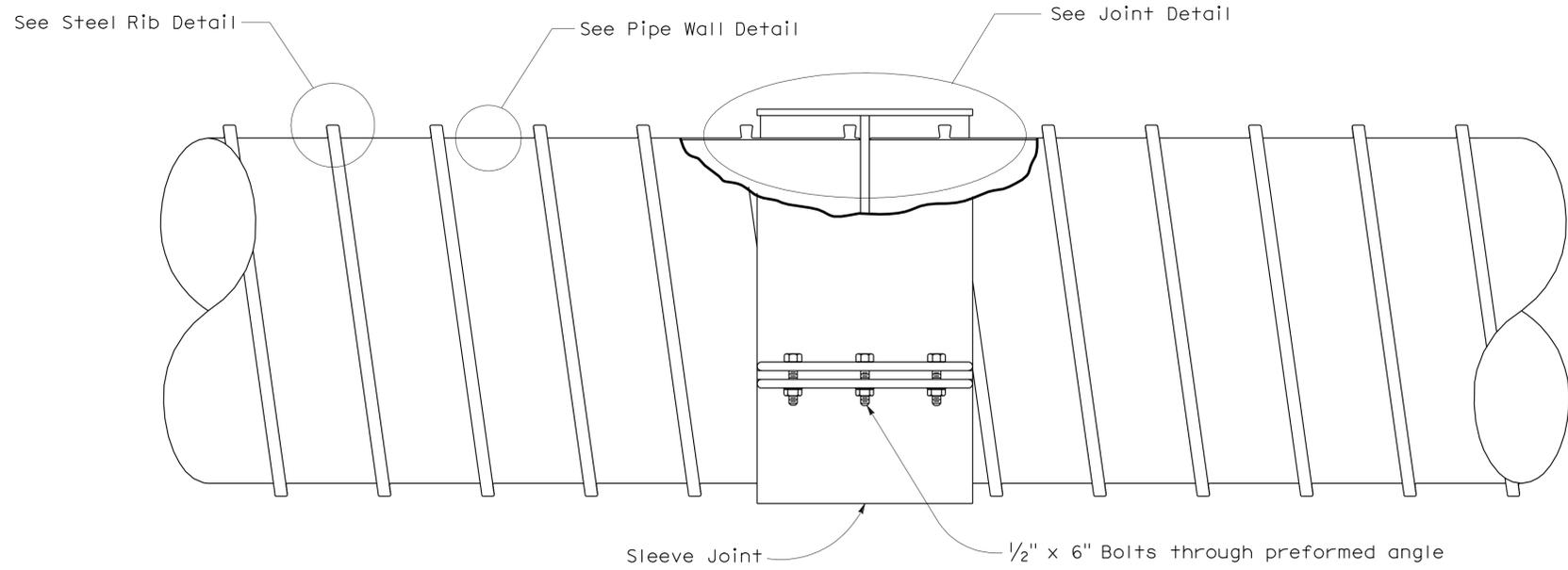
BASIS FOR MISC IRON & STEEL FINAL PAY WEIGHTS FOR DRAINAGE INLETS
(See General Notes, No 8)

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ	5	25.1/28.6	451	485

Raymond Don Tsztou
 REGISTERED CIVIL ENGINEER
 June 6, 2008
 PLANS APPROVAL DATE
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REGISTERED PROFESSIONAL ENGINEER
 Raymond Don Tsztou
 No. C37332
 Exp. 6-30-08
 CIVIL
 STATE OF CALIFORNIA

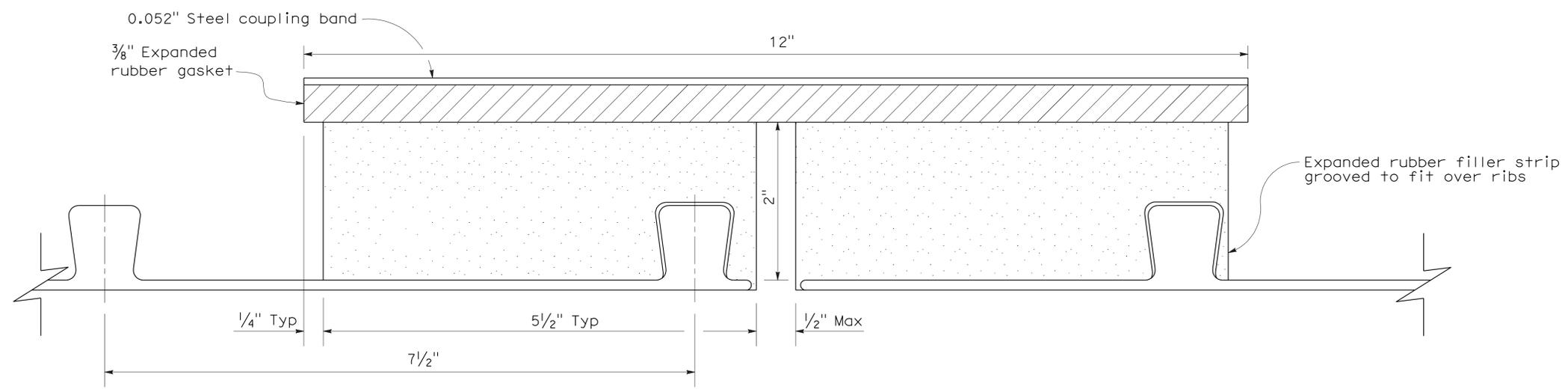
To accompany plans dated 6-4-12



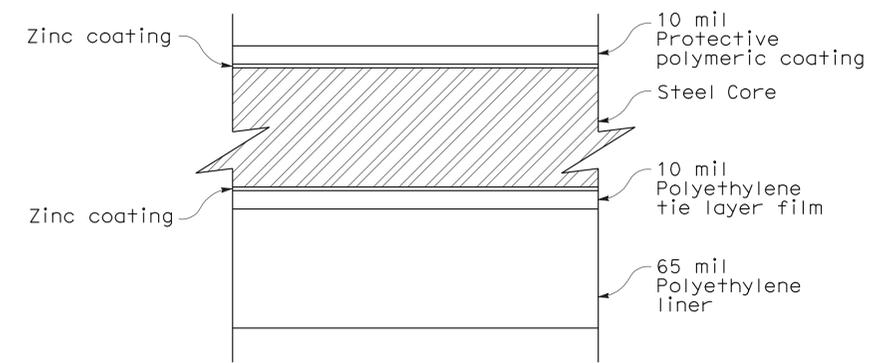
COMPOSITE STEEL SPIRAL RIB PIPE

NOTES:

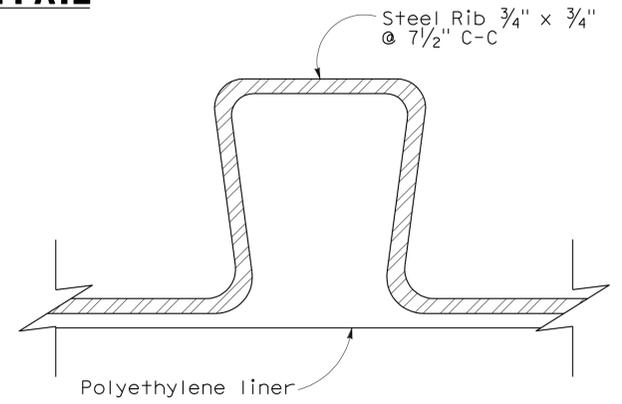
1. Pipe to conform to ASTM A 978.
2. See Standard Plan A62F for backfill details.
3. Protective polymer film to conform to ASTM A 742 and AASHTO M 246.
4. See Standard Plan D97C for Universal Coupling details.
5. Strap joint connection shall consist of 2 separate bolted preformed connectors joined to form one strap when pipe inside diameter is greater than or equal to 60".



JOINT DETAIL



PIPE WALL DETAIL



STEEL RIB DETAIL

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**COMPOSITE STEEL SPIRAL RIB PIPE
 WITH SMOOTH INTERIOR
 STANDARD JOINT**

NO SCALE
 NSP D97J DATED JUNE 6, 2008 SUPPLEMENTS THE
 STANDARD PLANS BOOK DATED MAY 2006.

NEW STANDARD PLAN NSP D97J

2006 NEW STANDARD PLAN NSP D97J

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ	5	25.1/28.6	452	485

Gregory A. Balzer
 LICENSED LANDSCAPE ARCHITECT
 June 5, 2009
 PLANS APPROVAL DATE
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To accompany plans dated 6-4-12

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.

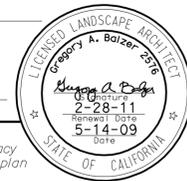
STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**PLANTING AND IRRIGATION
 ABBREVIATIONS**

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
10	SJ	5	25.1/28.6	453	485

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.

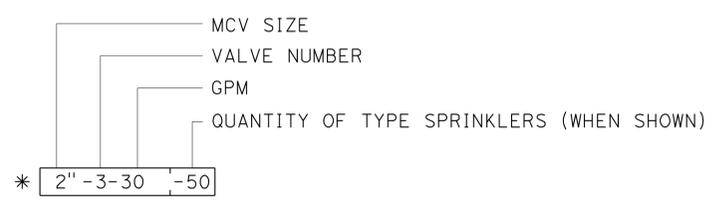
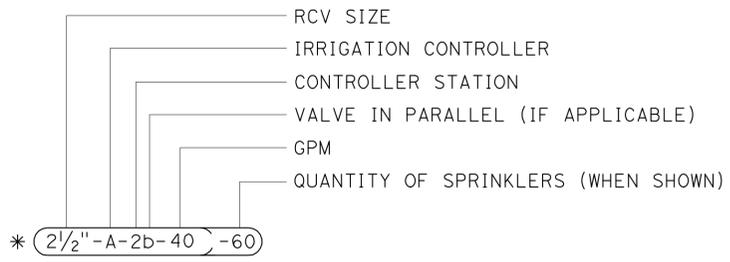


To accompany plans dated 6-4-12

EXISTING	PROPOSED	ITEM DESCRIPTION
		WATER METER (WM)
		BACKFLOW PREVENTER ASSEMBLY (BPA)
		BACKFLOW PREVENTER ASSEMBLY IN ENCLOSURE (BPAE)
		BACKFLOW PREVENTER ENCLOSURE (BPE)
		BOOSTER PUMP (BP)
		TRUCK LOADING STANDPIPE (TLS)
		FLOW SENSOR (FS)
		MASTER IRRIGATION CONTROLLER (MIC)
		AUXILIARY IRRIGATION CONTROLLER (AIC)
		IRRIGATION CONTROLLER (IC)/ IRRIGATION CONTROLLER (IC) (BATTERY) IRRIGATION CONTROLLER (IC) (SOLAR)
		IRRIGATION CONTROLLER(S) IN CONTROLLER ENCLOSURE CABINET (ICC)
		CONTROL AND NEUTRAL CONDUCTORS (CNC)
		SPRINKLER CONTROL CONDUIT (SCC)
		IRRIGATION CROSSOVER
		EXTEND IRRIGATION CROSSOVER
		IRRIGATION SLEEVE
		DUCTILE IRON PIPE (SUPPLY LINE) (MAIN) (DIP)
		GALVANIZED STEEL PIPE (SUPPLY LINE) (MAIN) (GSP)
		GALVANIZED STEEL PIPE (SUPPLY LINE) (LATERAL) (GSP)
		PLASTIC PIPE (PR 200) (SUPPLY LINE) (MAIN)
		PLASTIC PIPE (PR 200) (SUPPLY LINE) (LATERAL)
		PLASTIC PIPE (IRRIGATION LINE)
		REMOTE CONTROL VALVE (RCV) REMOTE CONTROL VALVE (MASTER) (RCVM) REMOTE CONTROL VALVE (MASTER) W/FLOW METER (RCVMF)
		MANUAL CONTROL VALVE (MCV)
		VALVE ASSEMBLY UNIT (VAU)
		WYE STRAINER (WS)
		FILTER ASSEMBLY UNIT (FAU)
		GATE VALVE (GV)
		BALL VALVE (BV)

EXISTING	PROPOSED	ITEM DESCRIPTION
		QUICK COUPLING VALVE (QCV)
		CAM COUPLER ASSEMBLY (CCA)
		PRESSURE REDUCING VALVE (PRV)
		PRESSURE RELIEF VALVE (PRLV)
		FLOW CONTROL VALVE (FCV)
		COMBINATION AIR RELEASE VALVE (CARV)
		CHECK VALVE (CV)
		FLUSH VALVE (FV)
		NOZZLE LINE W/TURNING UNION
		IRRIGATION SYSTEM
		IRRIGATION SYSTEM TO BE REMOVED
		CHAIN LINK GATE
		QUICK COUPLING VALVE W/SPRINKLER PROTECTOR
		SPRINKLER W/SPRINKLER PROTECTOR
		CONNECT TO EXISTING SYSTEM
		CAP
		CAP EXISTING

VALVE CODE



* VALVE CODES FOR EXISTING VALVES ARE SHOWN IN A DASHED ENCLOSURE.

PLANTING AND IRRIGATION SYMBOLS

NO SCALE

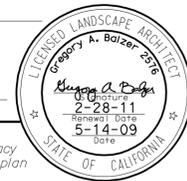
RSP H2 DATED JUNE 5, 2009 SUPERSEDES RSP H2 DATED MARCH 7, 2008 AND STANDARD PLAN H2 DATED MAY 1, 2006 - PAGE 202 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP H2

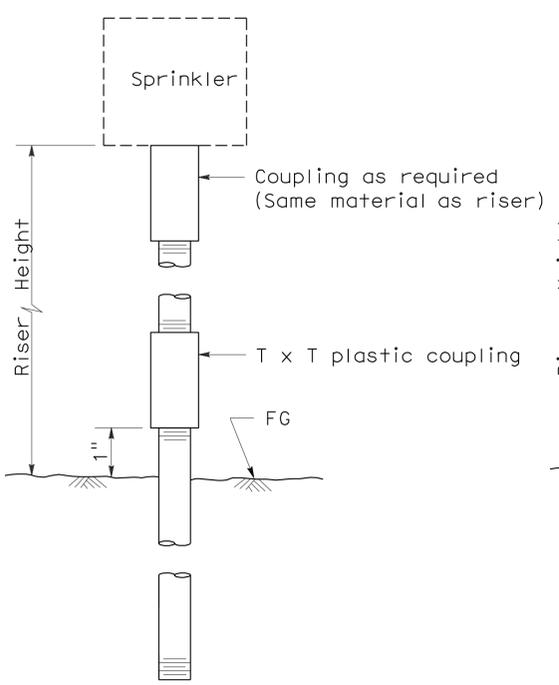
2006 REVISED STANDARD PLAN RSP H2

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ	5	25.1/28.6	454	485

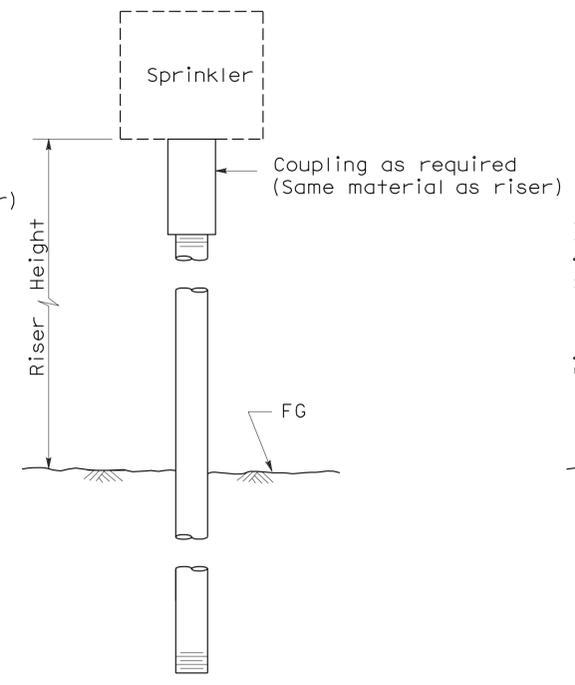
Gregory A. Balzer
 LICENSED LANDSCAPE ARCHITECT
 June 5, 2009
 PLANS APPROVAL DATE
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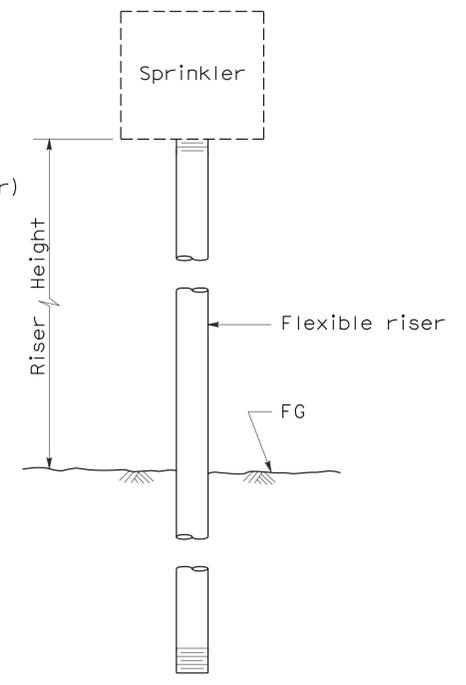
To accompany plans dated 6-4-12



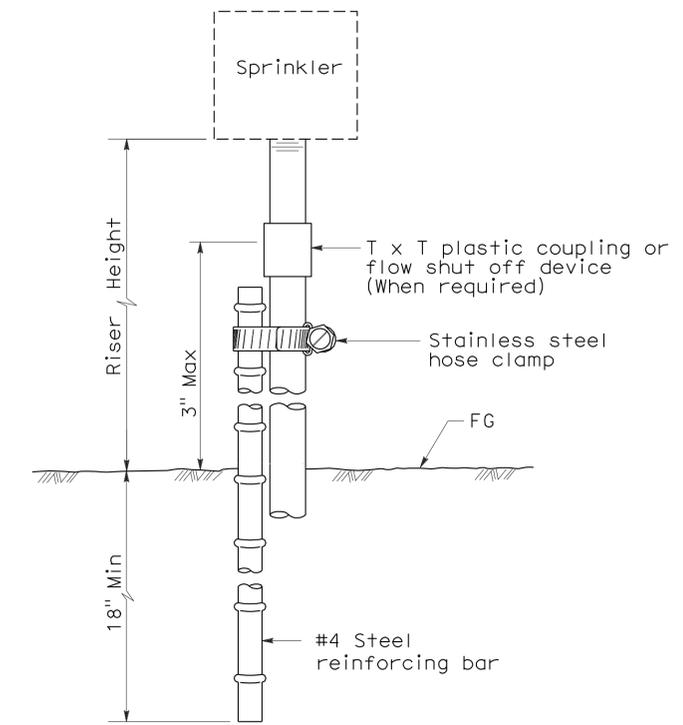
ELEVATION
RISER TYPE I



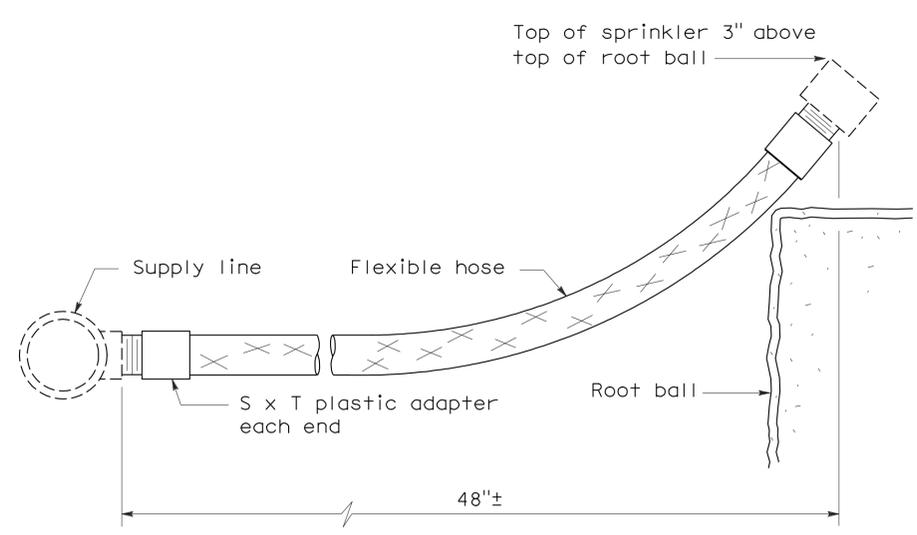
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RISER TYPE II



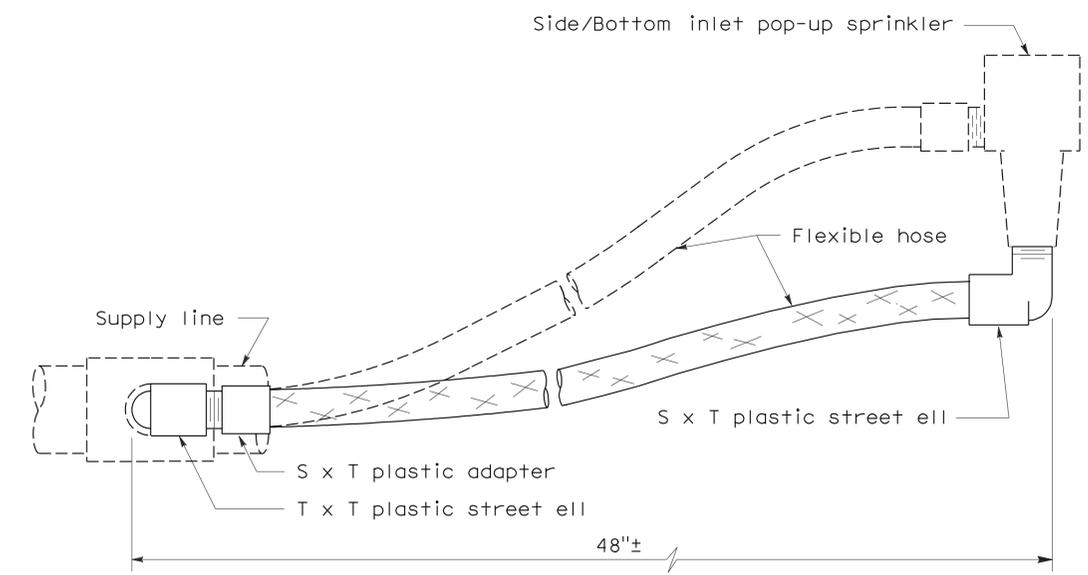
ELEVATION
RISER TYPE III



ELEVATION
RISER TYPE IV



ELEVATION
RISER TYPE V



ELEVATION
RISER TYPE VI

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**PLANTING AND IRRIGATION
DETAILS**
NO SCALE

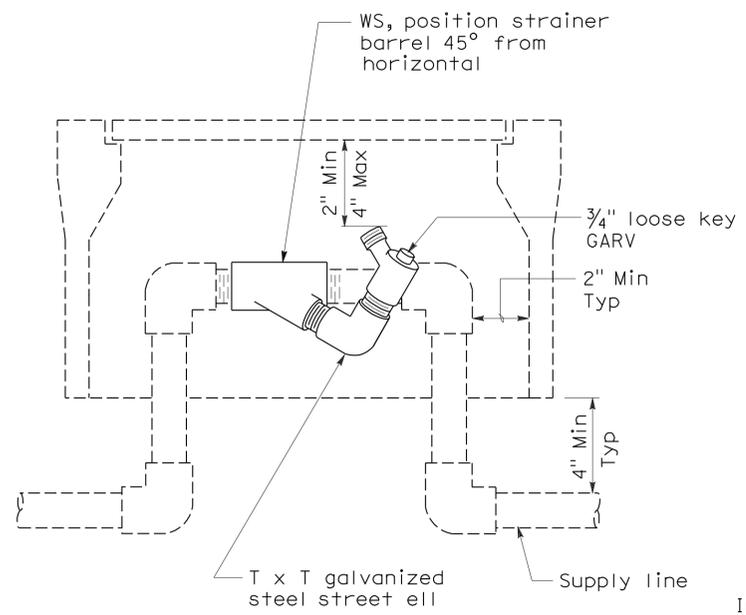
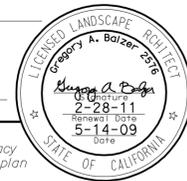
RSP H5 DATED JUNE 5, 2009 SUPERSEDES STANDARD PLAN H5
DATED MAY 1, 2006 - PAGE 205 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP H5

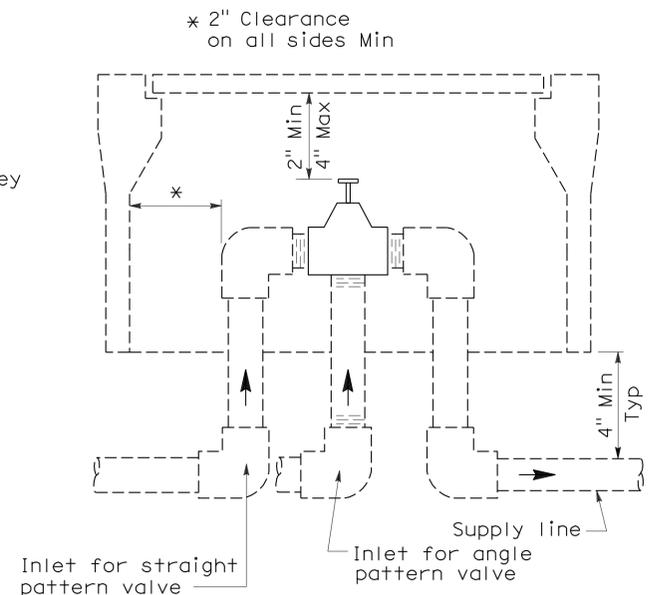
2006 REVISED STANDARD PLAN RSP H5

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ	5	25.1/28.6	455	485

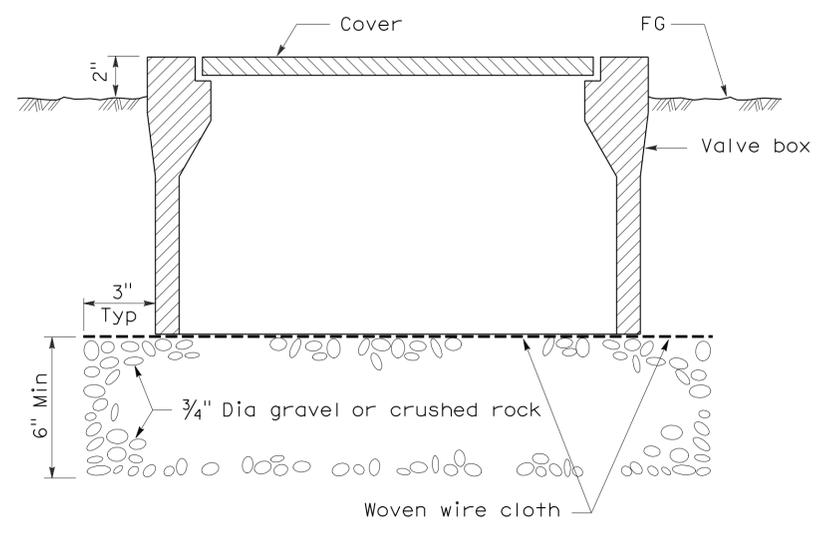
Gregory A. Balzer
 LICENSED LANDSCAPE ARCHITECT
 June 5, 2009
 PLANS APPROVAL DATE
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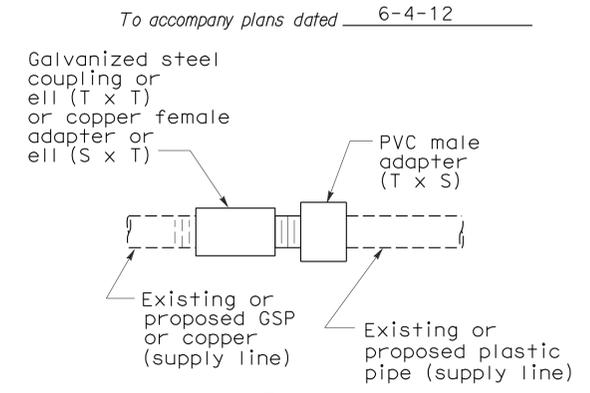
**ELEVATION
WYE STRAINER**



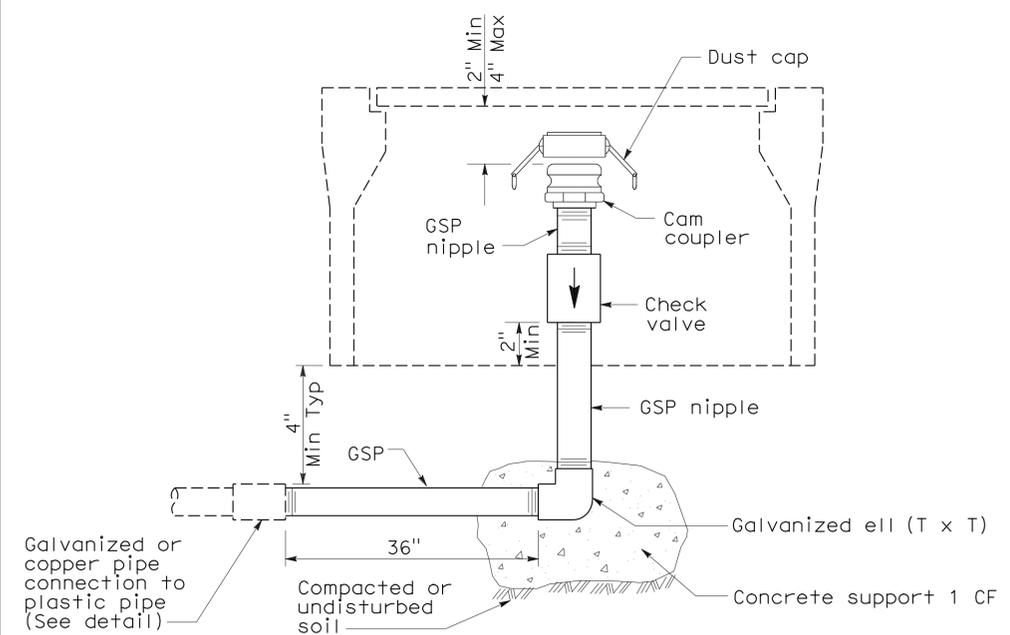
**ELEVATION
VALVE**



**SECTION
VALVE BOX**

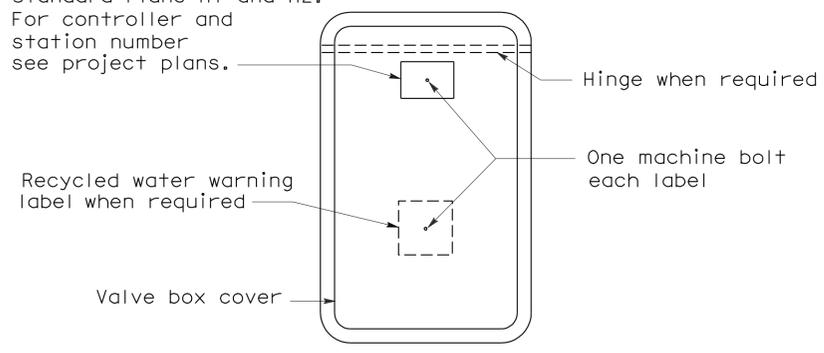


**PLAN
GALVANIZED OR COPPER PIPE
CONNECTION TO PLASTIC PIPE**

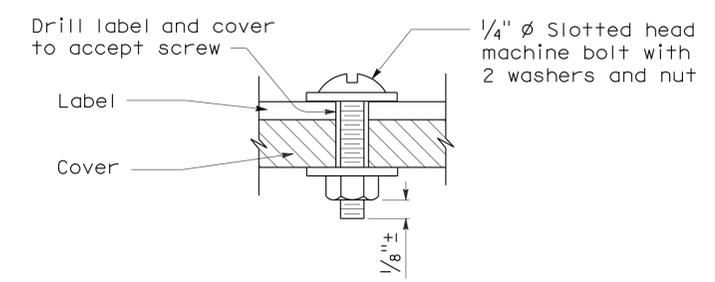


**ELEVATION
CAM COUPLER ASSEMBLY**

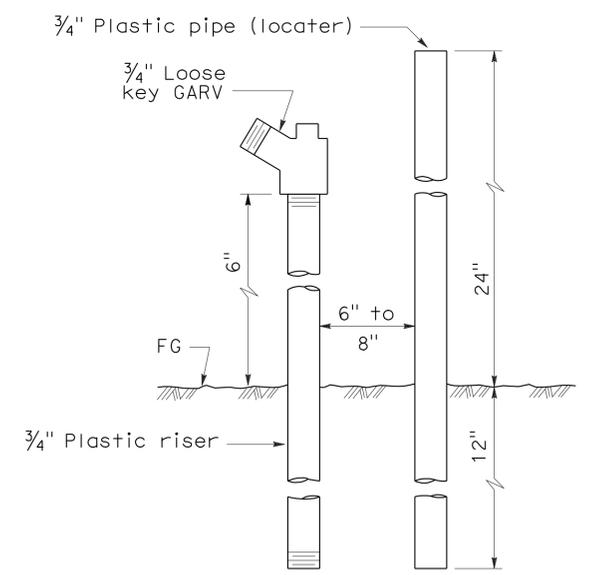
Identification label:
 For abbreviations see Revised Standard Plans H1 and H2.
 For controller and station number see project plans.



PLAN



**SECTION
VALVE BOX IDENTIFICATION**



**ELEVATION
FLUSH VALVE**

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

**PLANTING AND IRRIGATION
DETAILS**

NO SCALE

RSP H7 DATED JUNE 5, 2009 SUPERSEDES STANDARD PLAN H7
 DATED MAY 1, 2006 - PAGE 207 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP H7

2006 REVISED STANDARD PLAN RSP H7

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ	5	25.1/28.6	456	485

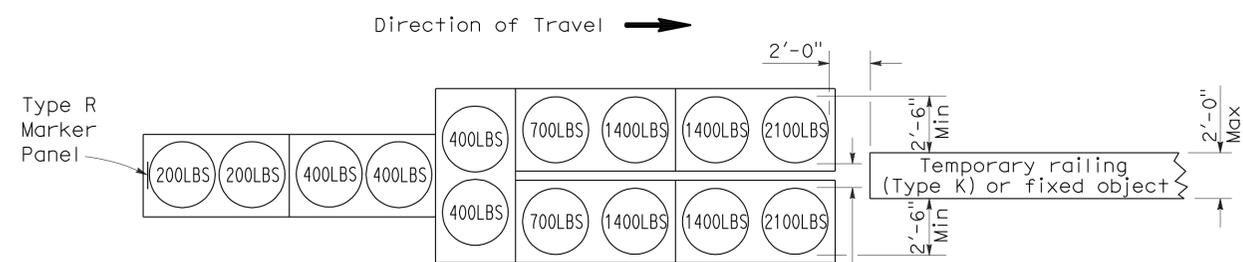
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

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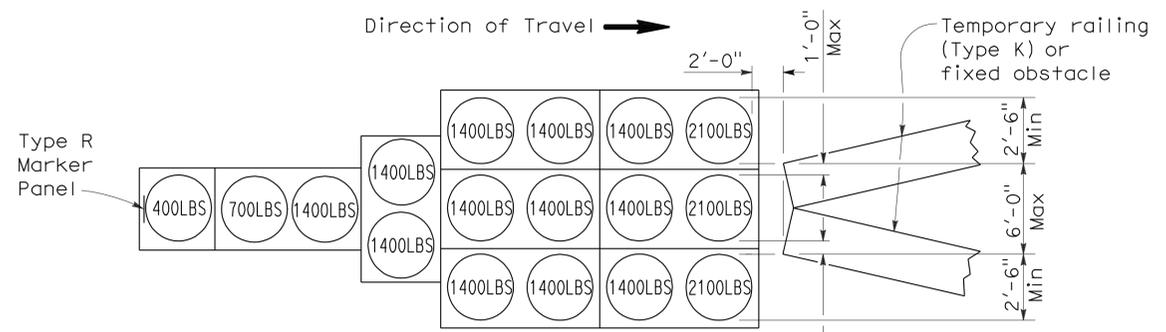
REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
Exp. 6-30-09
CIVIL
STATE OF CALIFORNIA

To accompany plans dated 6-4-12



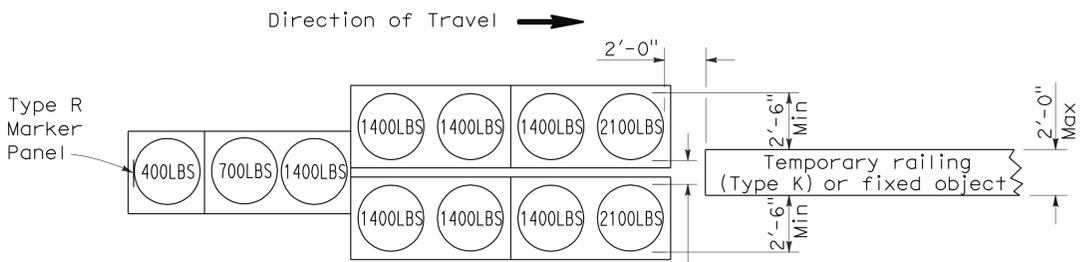
ARRAY 'TU14'

Approach speed 45 mph or more



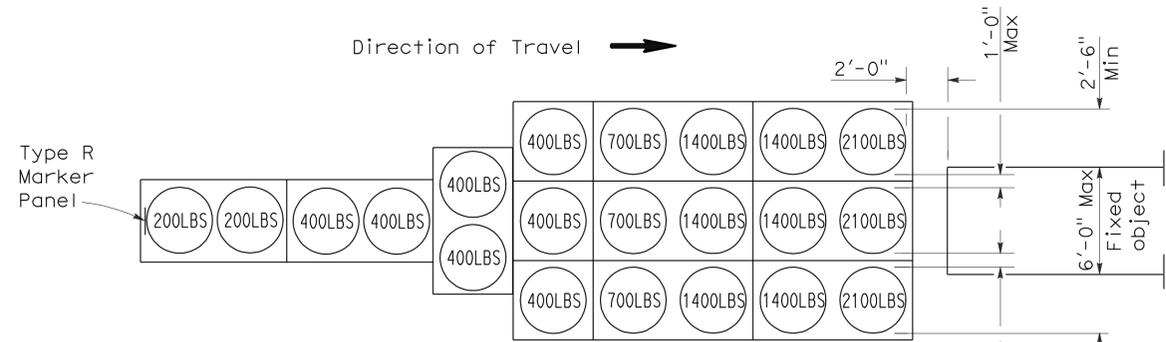
ARRAY 'TU17'

Approach speed less than 45 mph



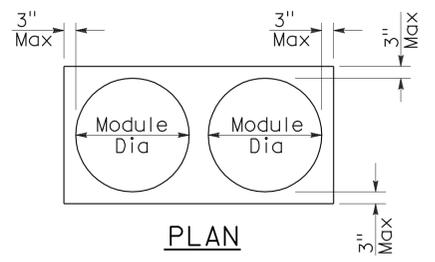
ARRAY 'TU11'

Approach speed less than 45 mph

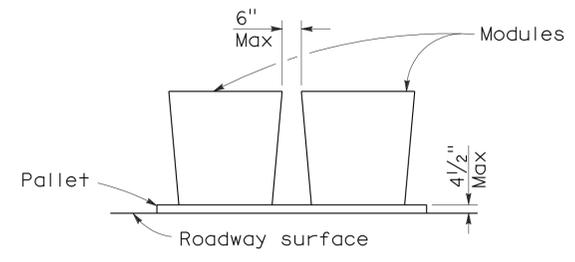


ARRAY 'TU21'

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
10	SJ	5	25.1/28.6	457	485

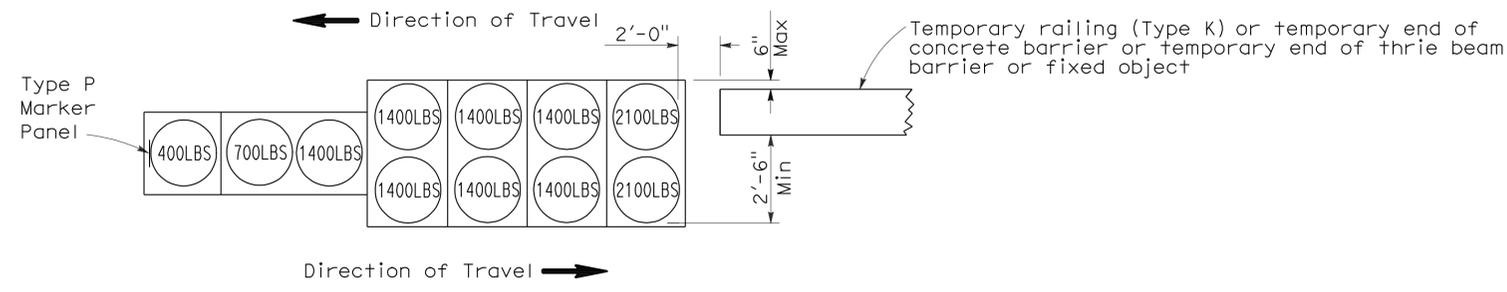
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

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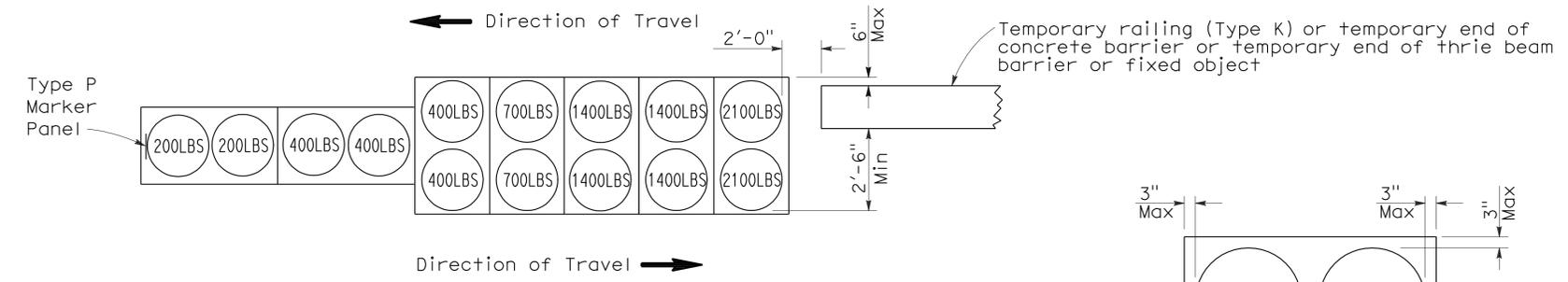


To accompany plans dated 6-4-12



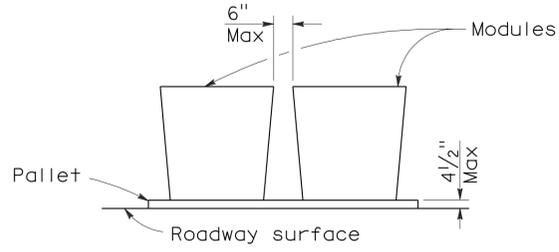
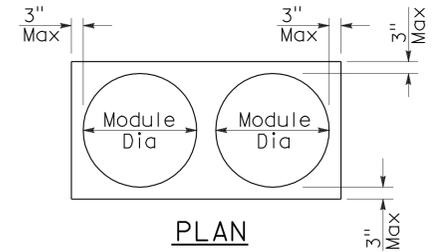
ARRAY 'TB11'

Approach speed less than 45 mph



ARRAY 'TB14'

Approach speed 45 mph or more



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
10	SJ	5	25.1/28.6	458	485

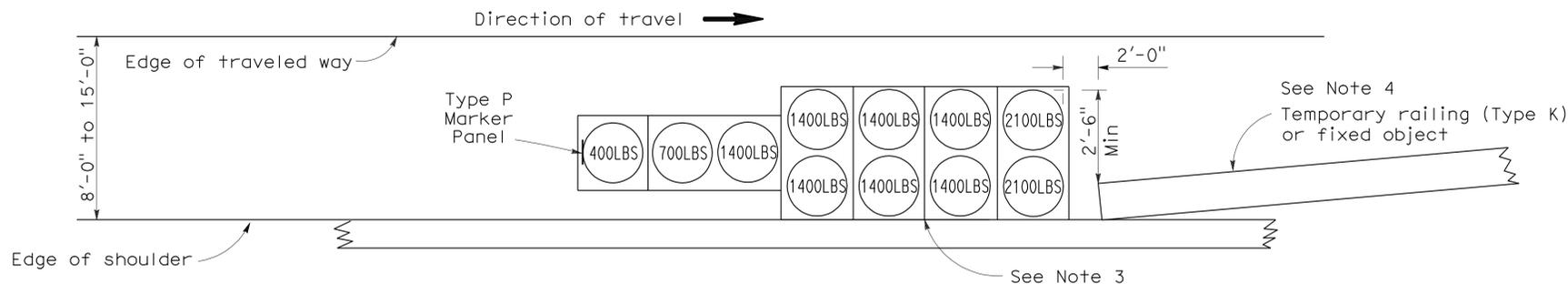
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

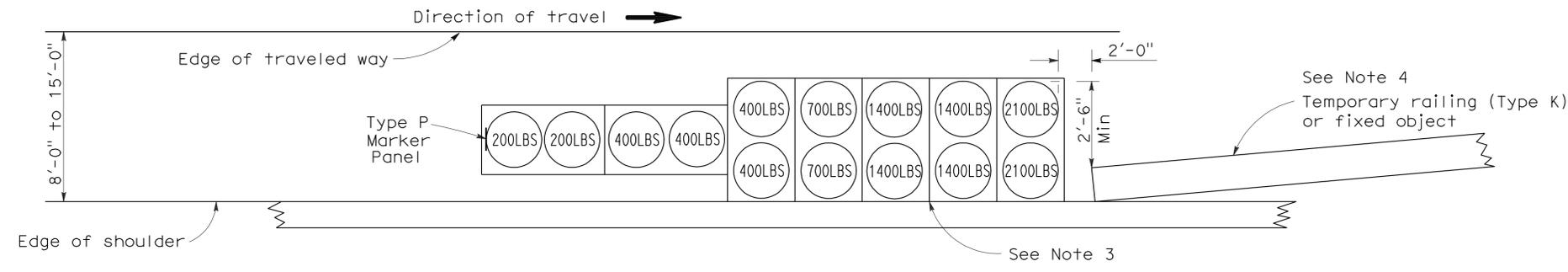
Randell D. Hiatt
REGISTERED PROFESSIONAL ENGINEER
No. C50200
Exp. 6-30-09
CIVIL
STATE OF CALIFORNIA

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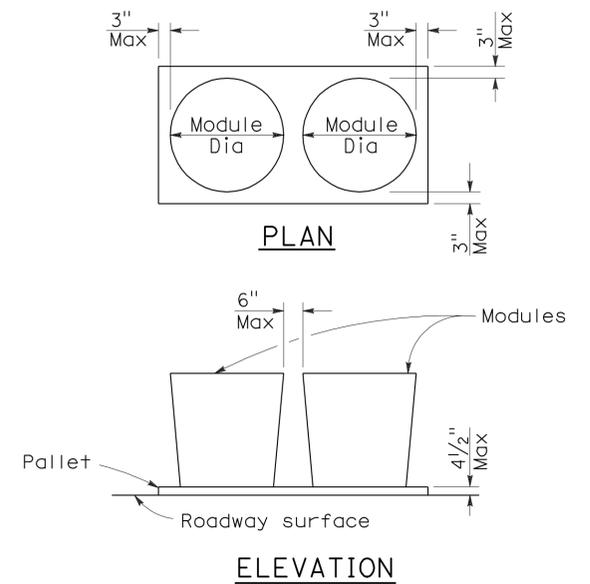
To accompany plans dated 6-4-12



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



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



CRASH CUSHION PALLET DETAIL
See Note 11

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

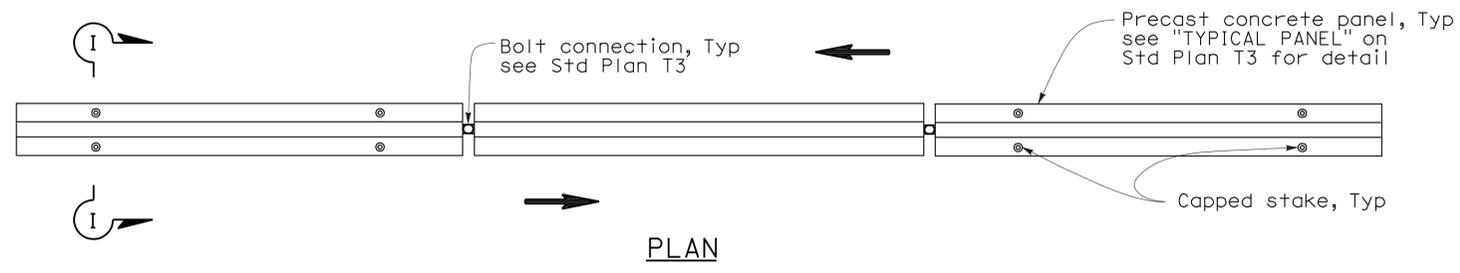
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	5	25.1/28.6	459	485

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

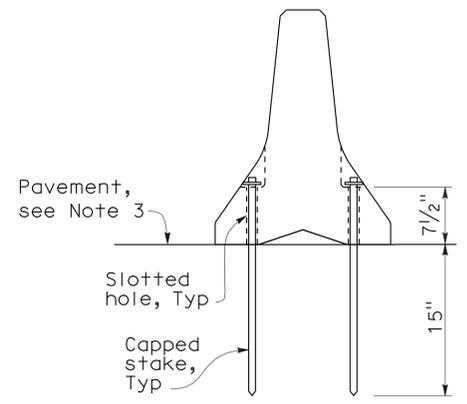
May 20, 2011
PLANS APPROVAL DATE

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To accompany plans dated 6-4-12

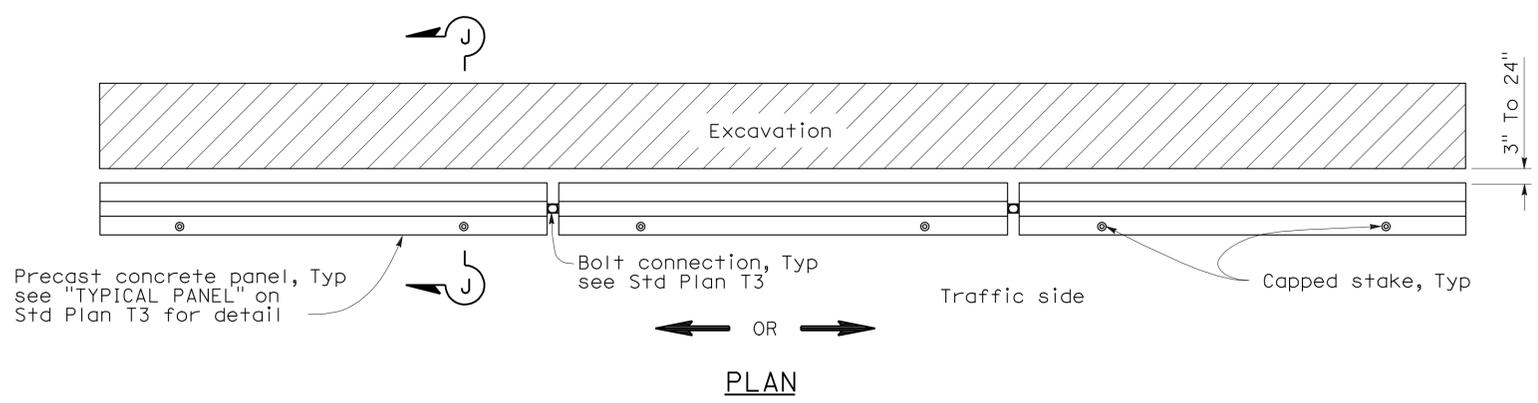


RAILING STAKING CONFIGURATION FOR TWO-WAY TRAFFIC
See Note 1

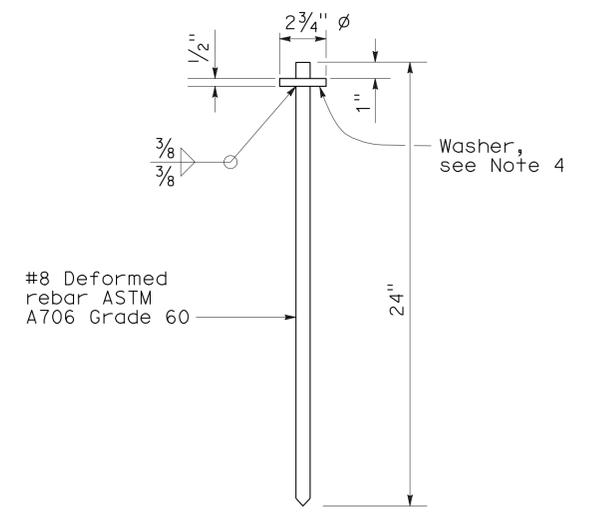
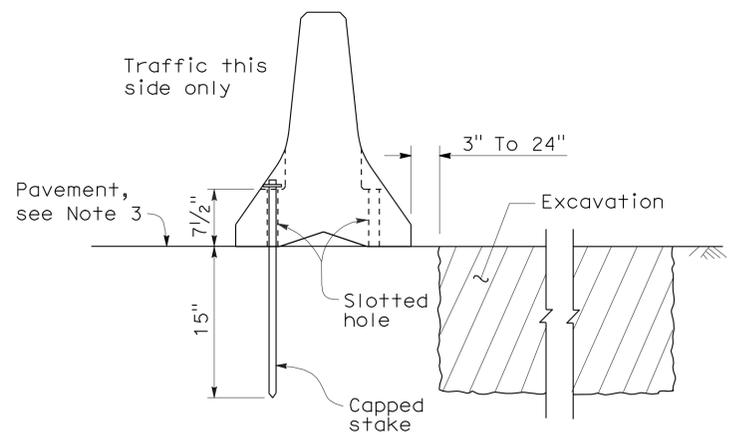


NOTES:

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



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**TEMPORARY RAILING
(TYPE K)**

NO SCALE

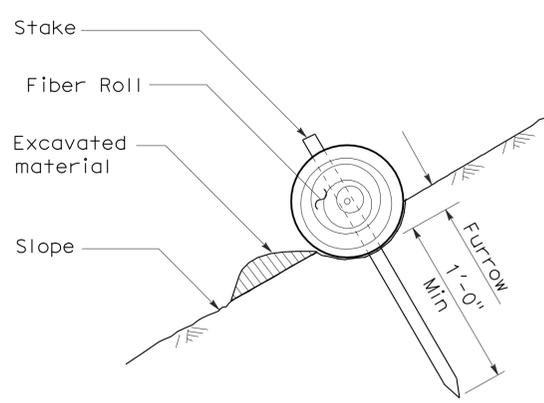
NSP T3A DATED MAY 20, 2011 SUPPLEMENTS
THE STANDARD PLANS BOOK DATED MAY 2006.

2006 NEW STANDARD PLAN NSP T3A

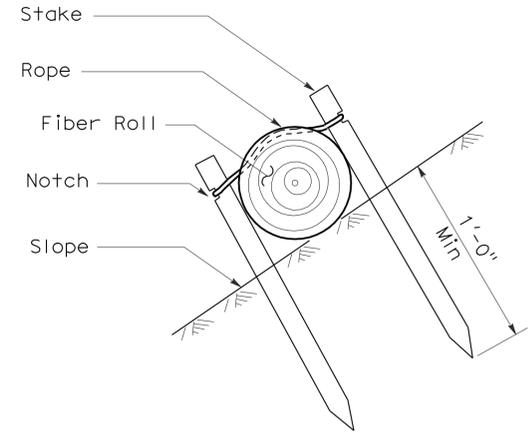
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ	5	25.1/28.6	461	485

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.

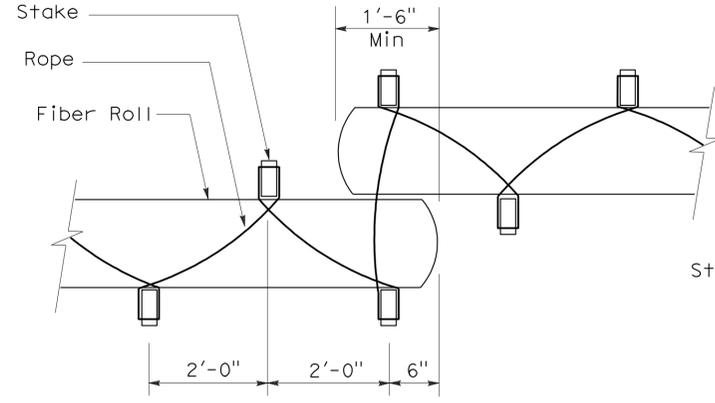
To accompany plans dated 6-4-12



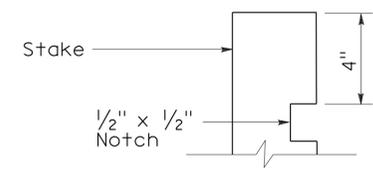
SECTION
TEMPORARY FIBER ROLL (TYPE 1)



SECTION
TEMPORARY FIBER ROLL (TYPE 2)

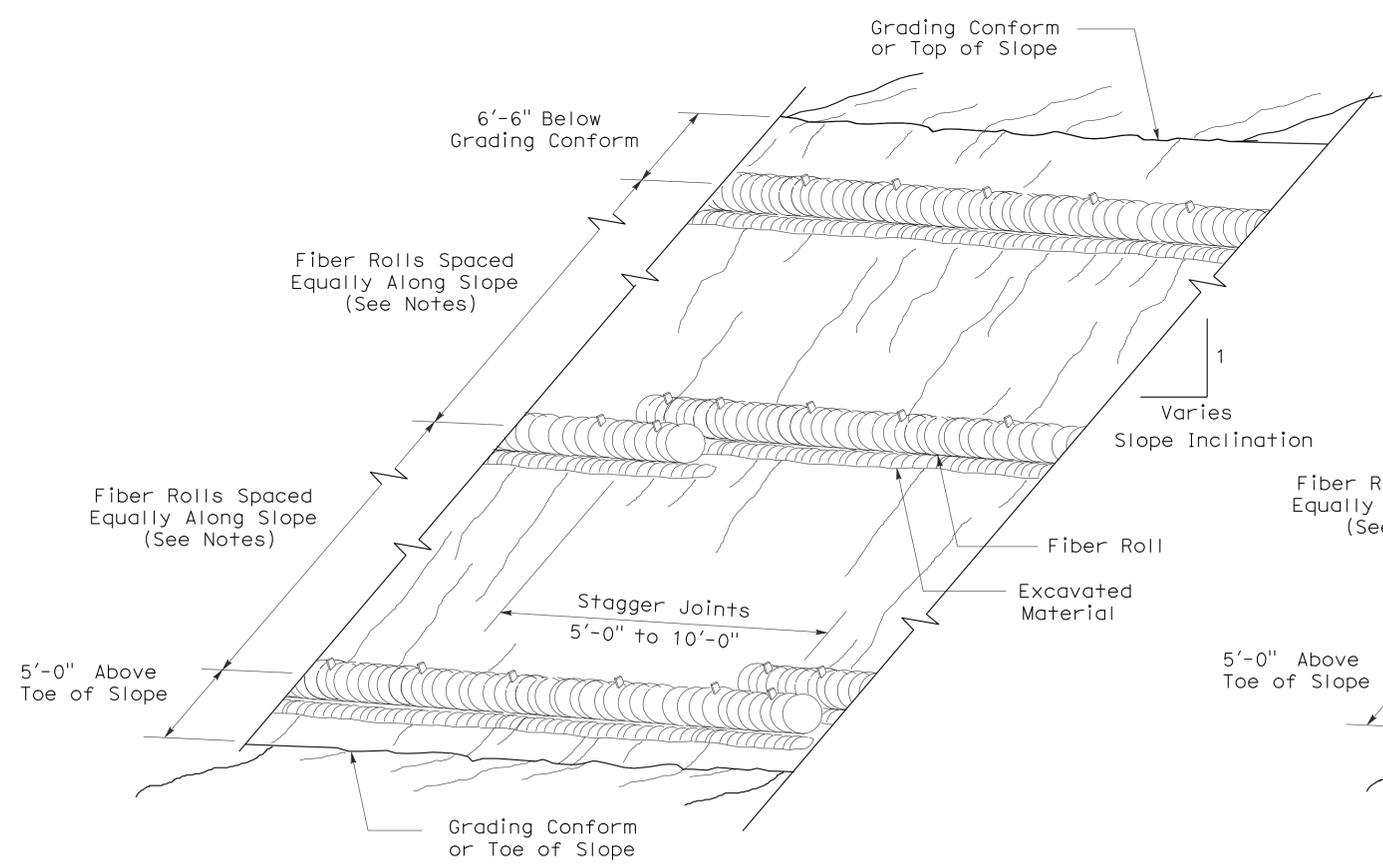


PLAN
TEMPORARY FIBER ROLL (TYPE 2)

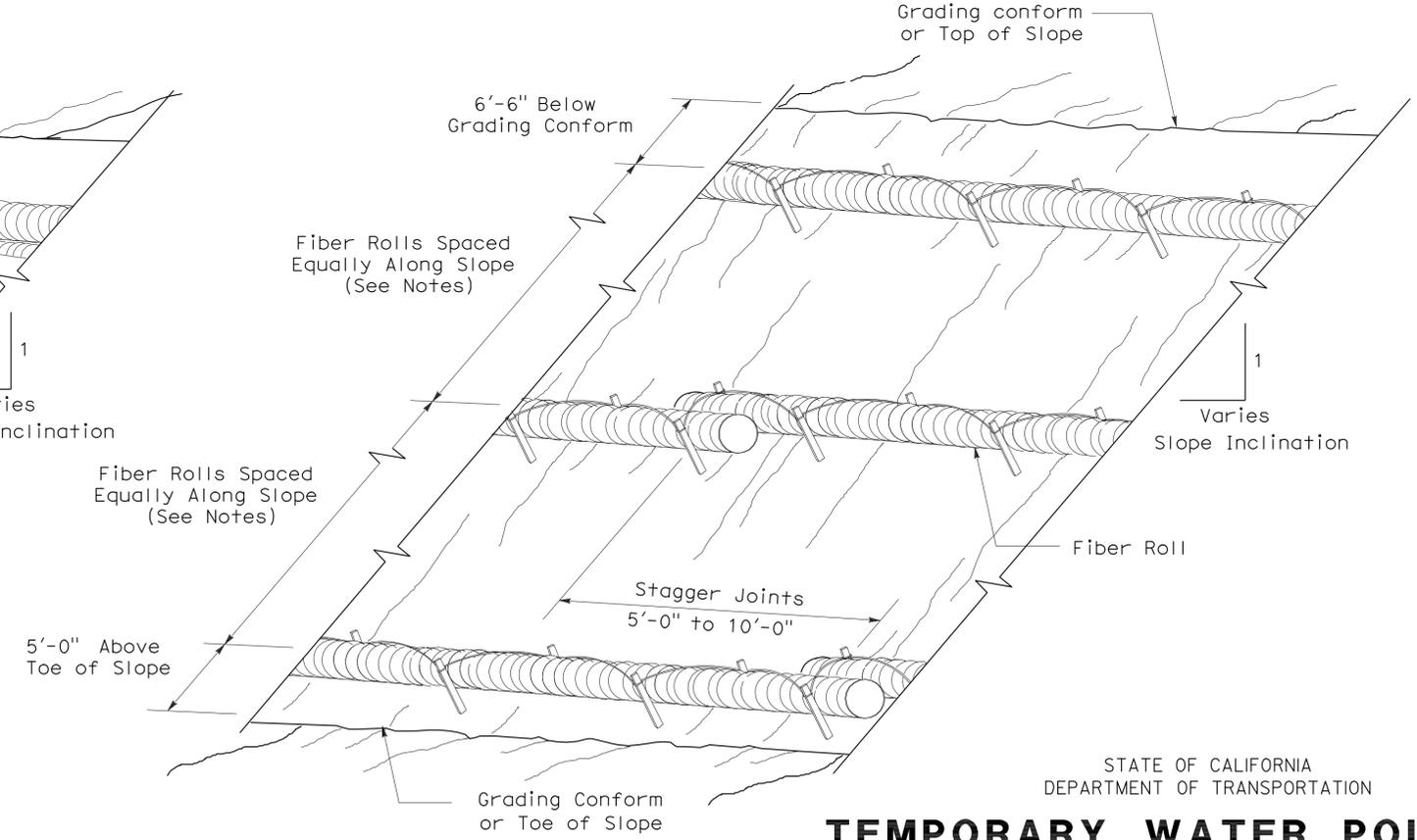


ELEVATION
STAKE NOTCH DETAIL

- 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

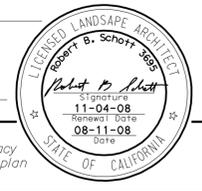
RSP T56 DATED APRIL 3, 2009 SUPERSEDES STANDARD PLAN T56 DATED MAY 1, 2006 - PAGE 232 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP T56

2006 REVISED STANDARD PLAN RSP T56

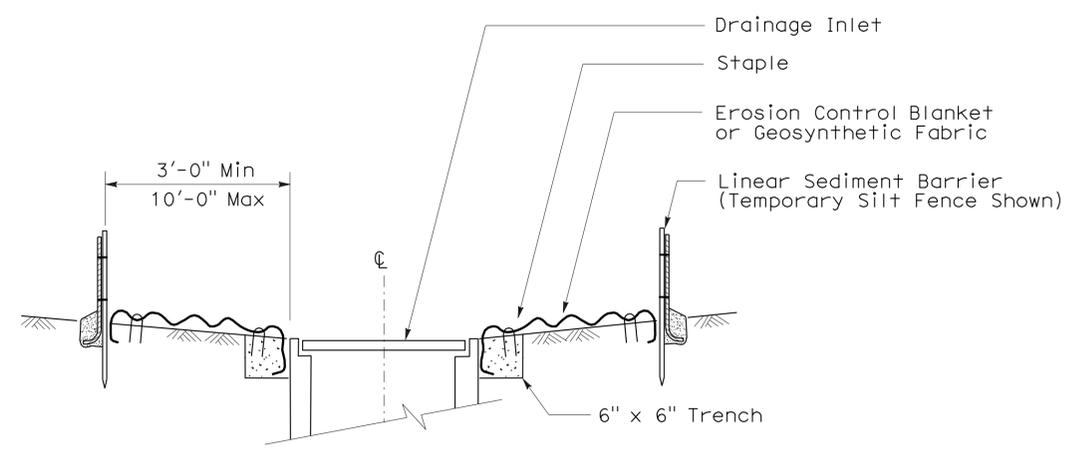
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ	5	25.1/28.6	462	485

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.

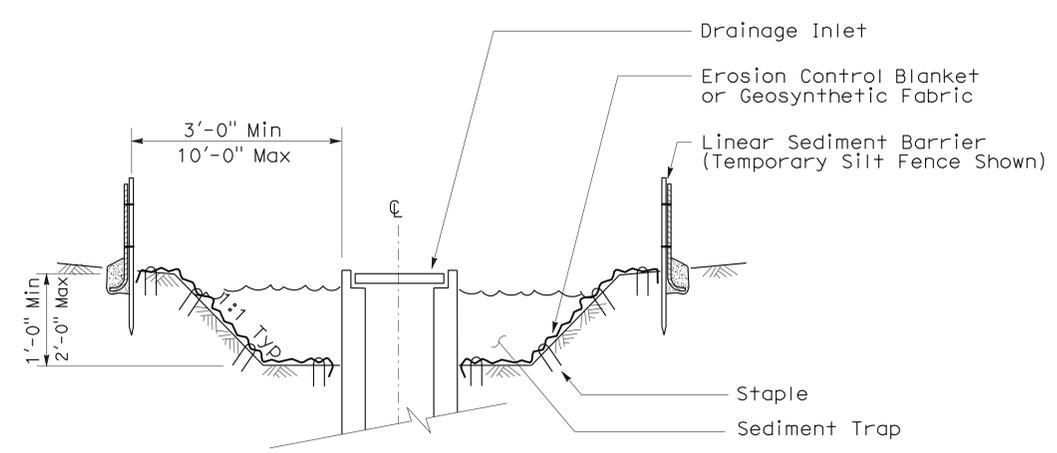


To accompany plans dated 6-4-12

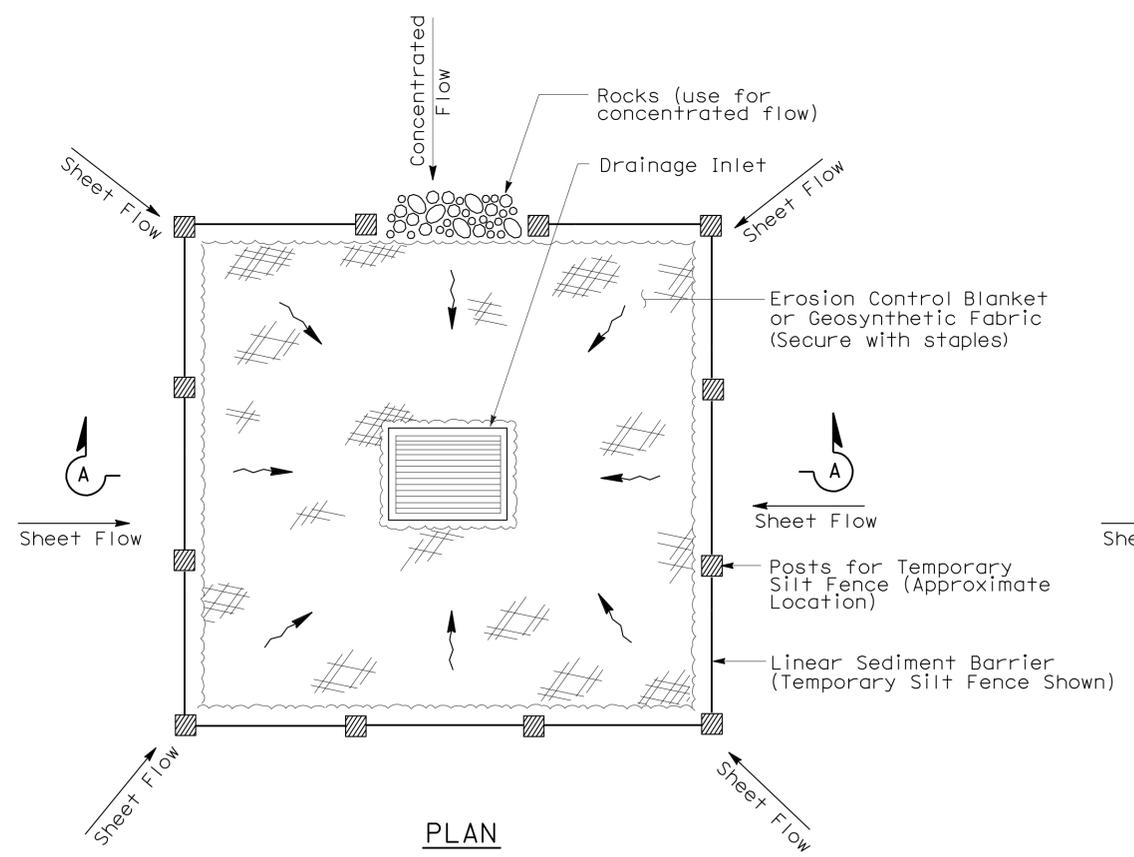
- NOTES:**
1. See Standard Plan T51 for Temporary Silt Fence.
 2. Dimensions may vary to fit field conditions.



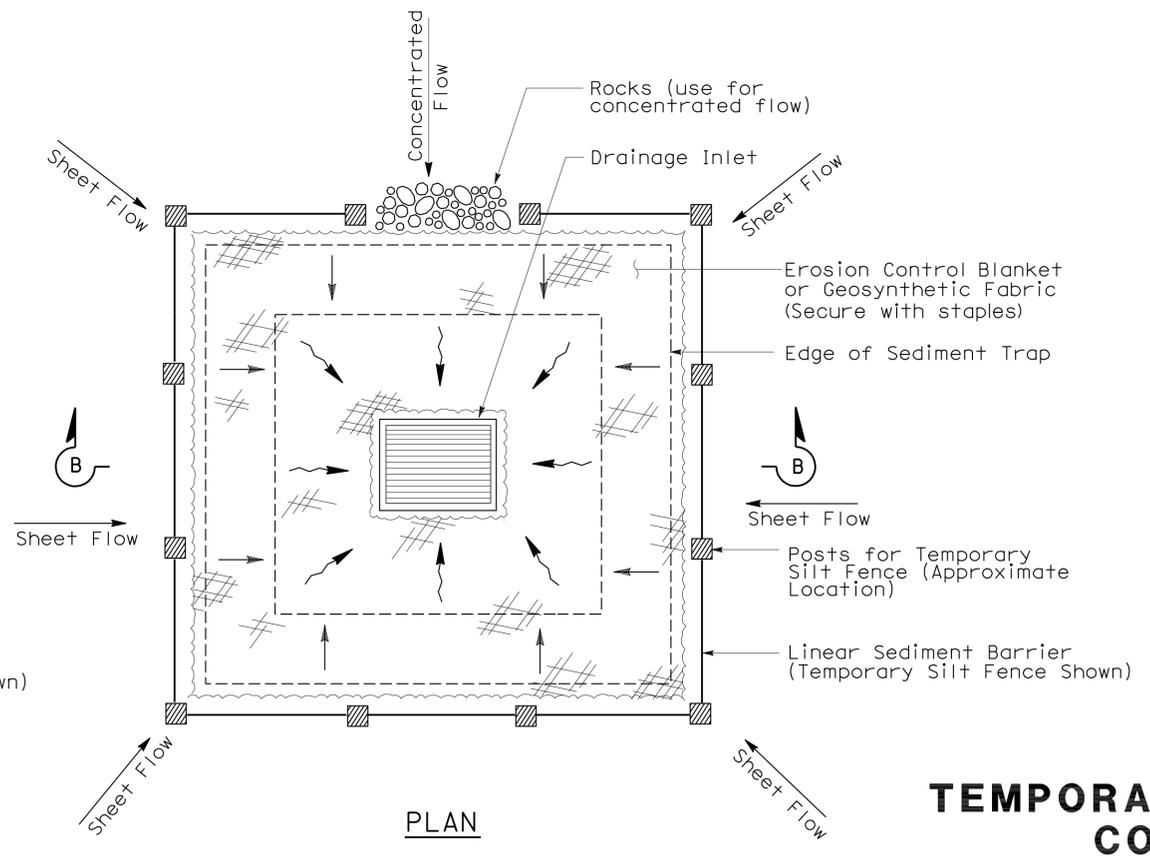
SECTION A-A



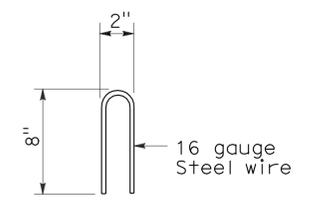
SECTION B-B



TEMPORARY DRAINAGE INLET PROTECTION (TYPE 1)



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



STAPLE DETAIL

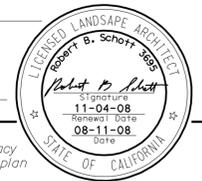
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

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

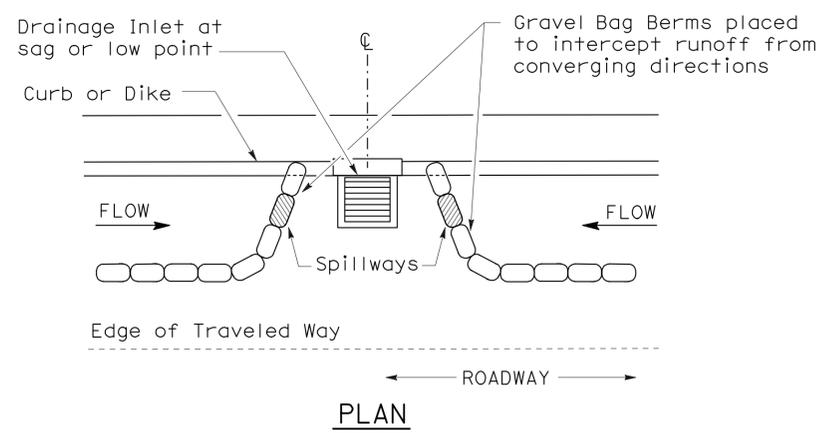


To accompany plans dated 6-4-12

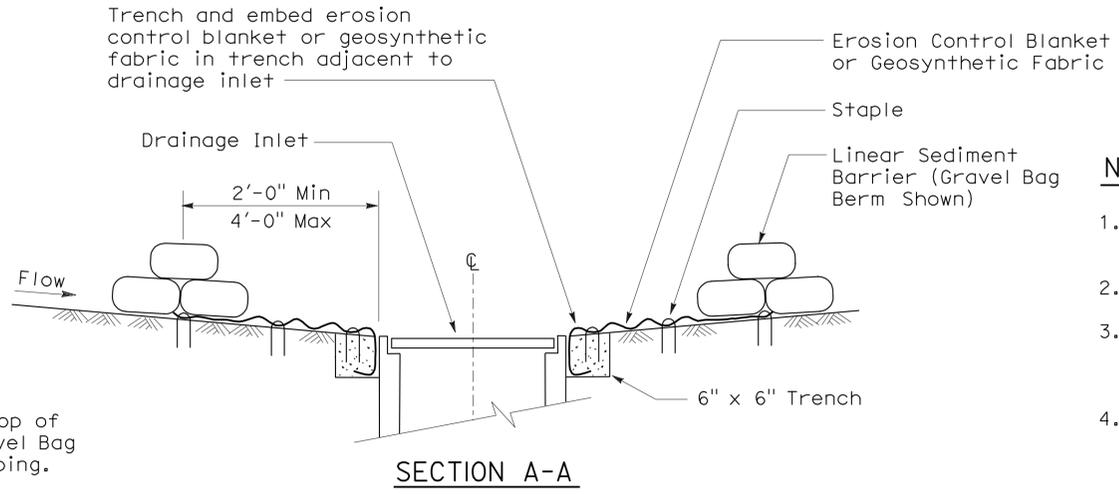
GRAVEL BAG BERM (TYPE 3A) SPACING TABLE

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



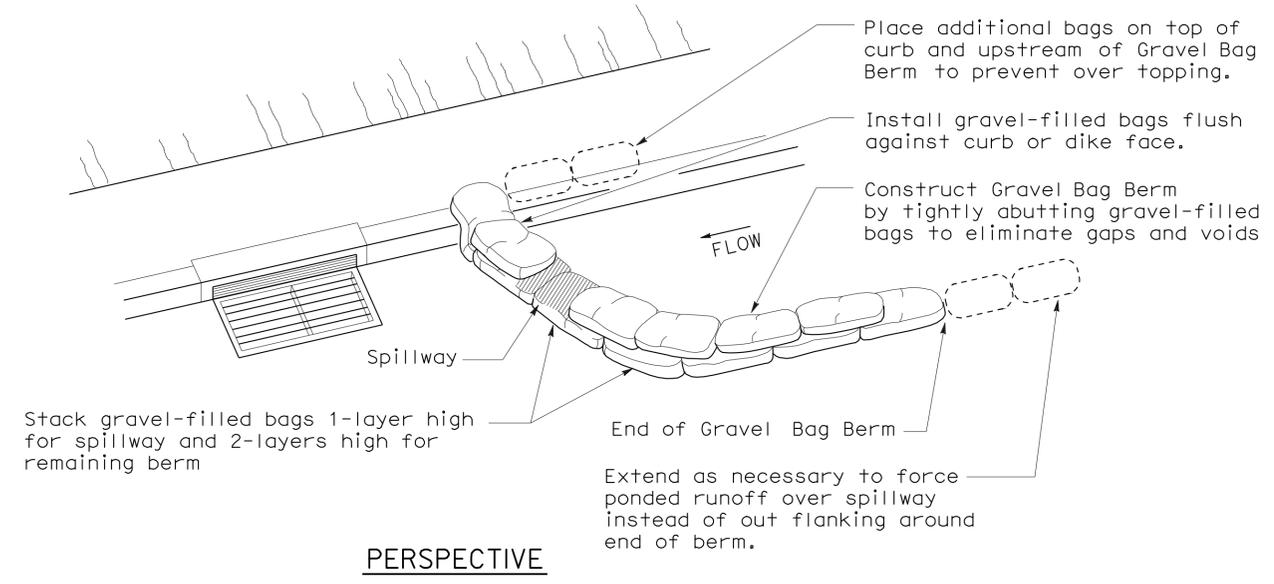
PLAN
CONFIGURATION FOR SAG POINT INLET (GRAVEL BAG BERM)



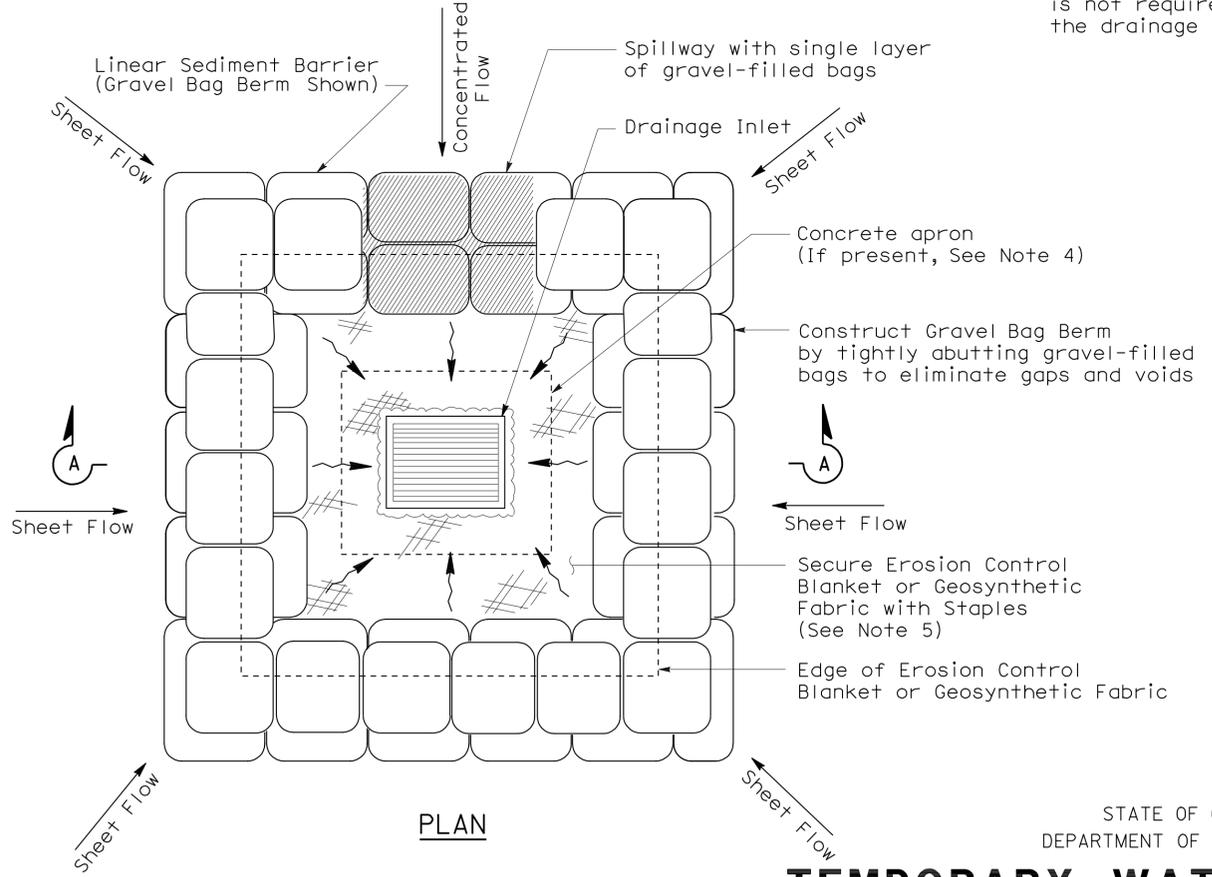
SECTION A-A

NOTES:

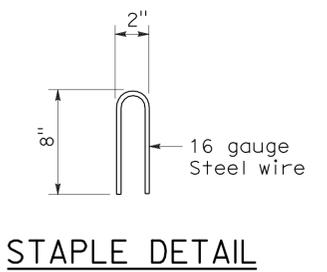
1. Place safety cones adjacent to drainage inlet protection.
2. Dimensions may vary to fit field conditions.
3. Install a minimum of 3 gravel bag berms upstream of each drainage inlet to be protected.
4. Position erosion control blanket or geosynthetic fabric at edge of concrete apron and secure in trench.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



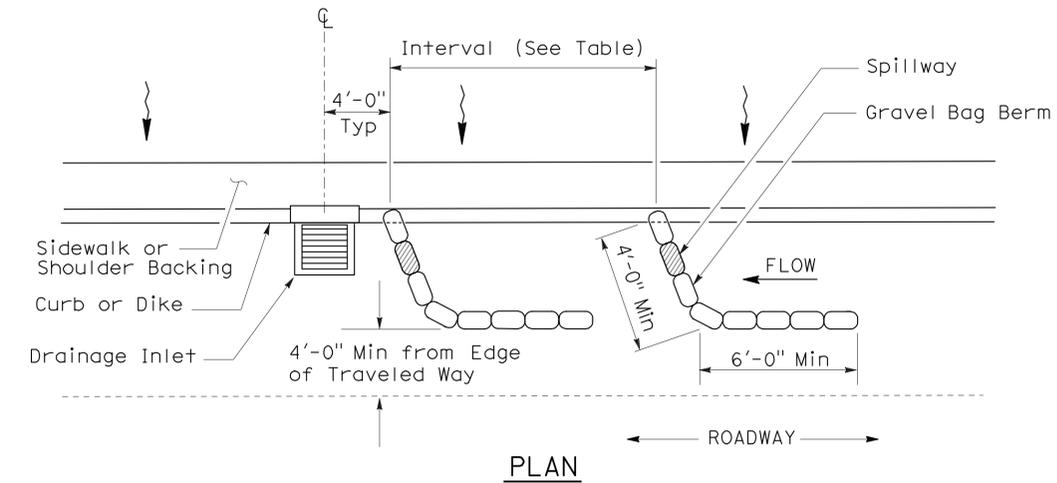
PERSPECTIVE



PLAN
TEMPORARY DRAINAGE INLET PROTECTION (TYPE 3B)



STAPLE DETAIL



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

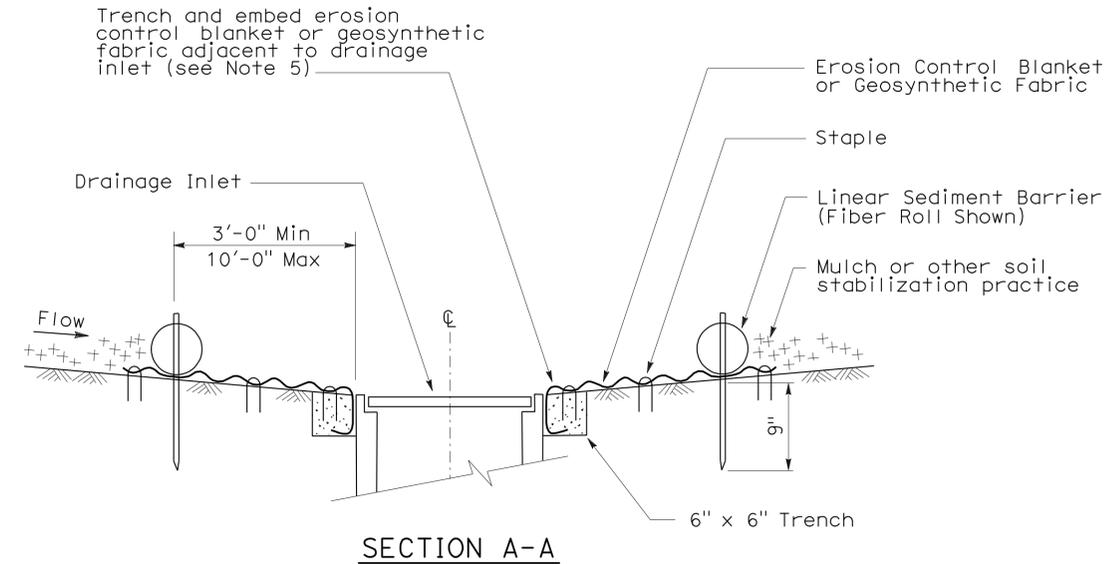
STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY DRAINAGE INLET PROTECTION)

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

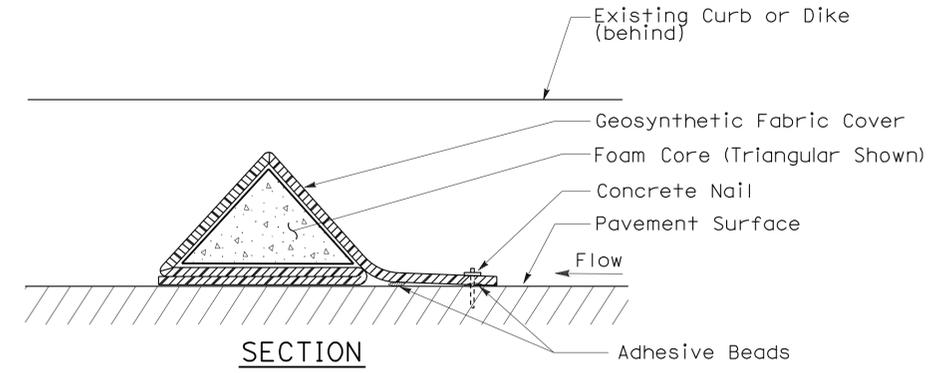
2006 NEW STANDARD PLAN NSP T62

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'



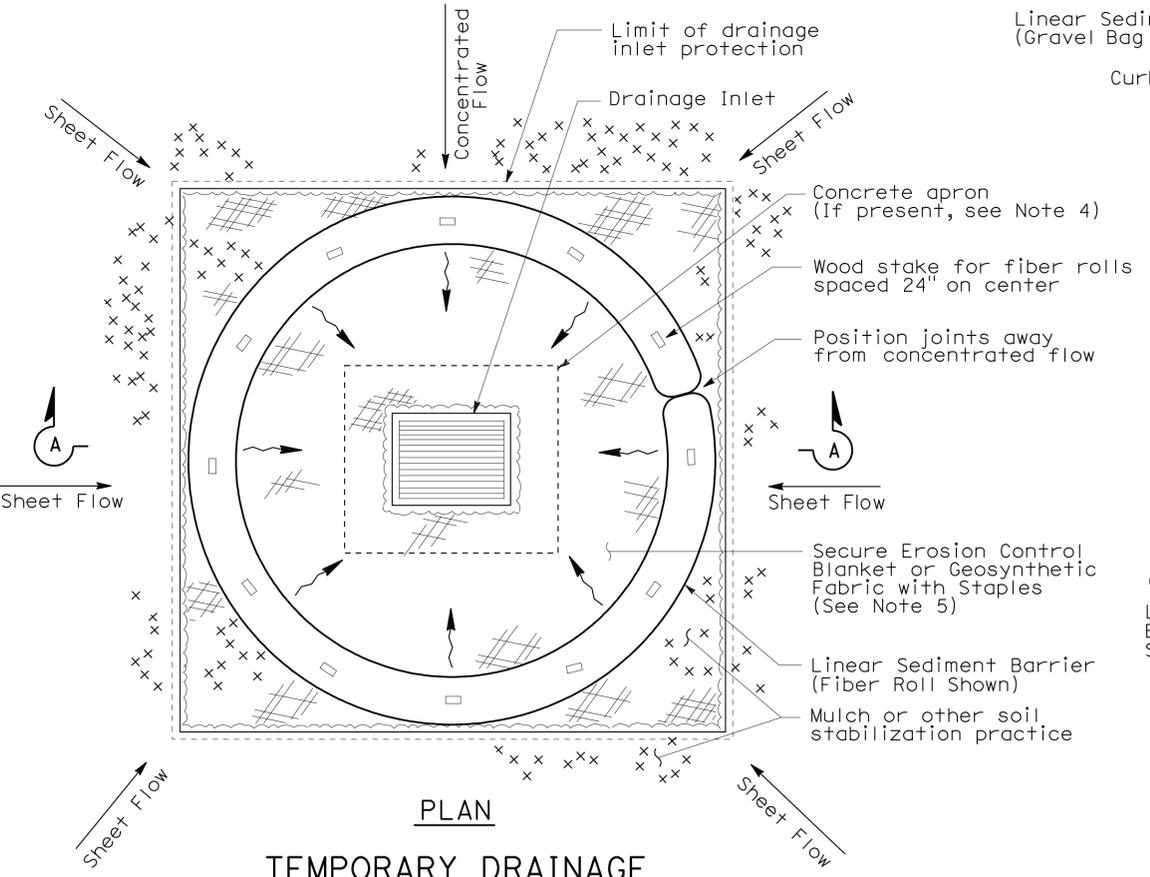
SECTION A-A



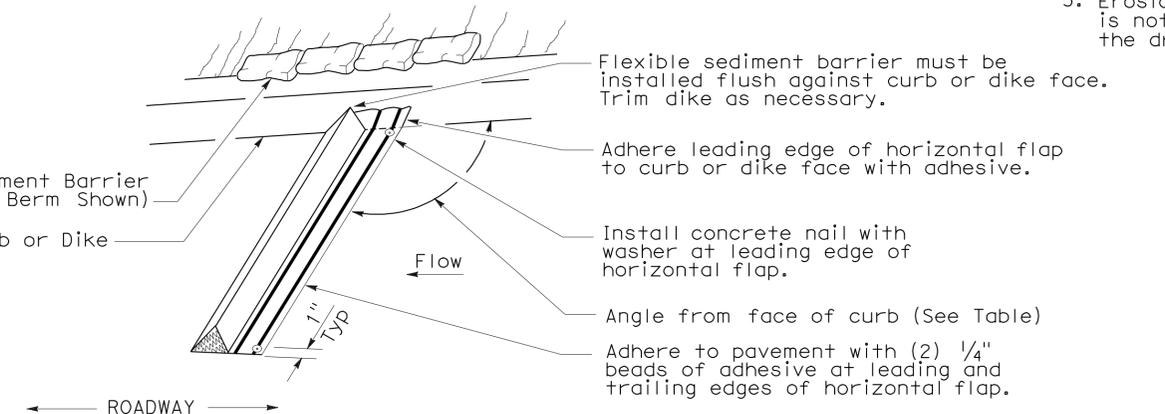
FLEXIBLE SEDIMENT BARRIER DETAIL (FOAM BARRIER SHOWN)

NOTES:

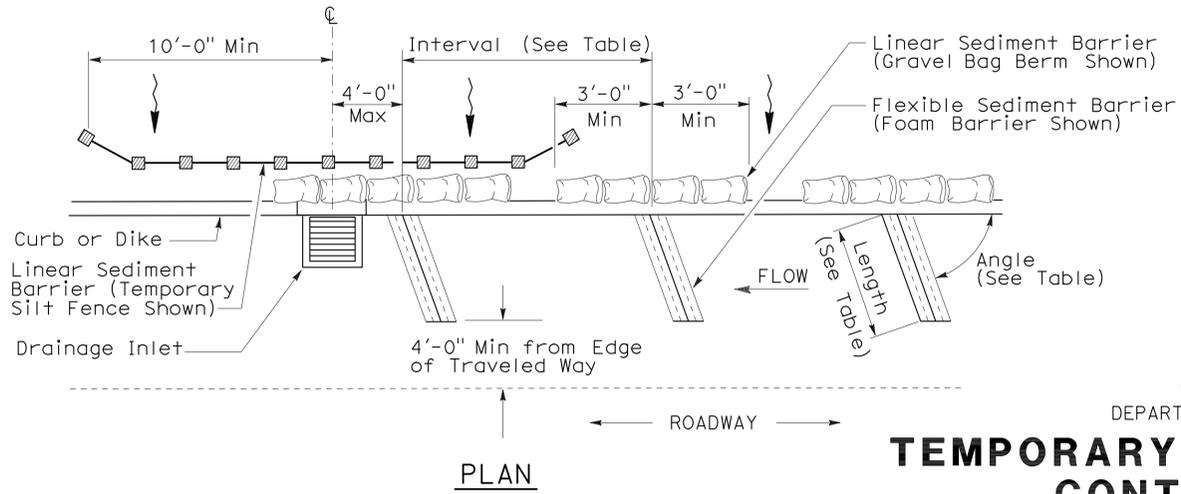
1. See Standard Plan T51 for Temporary Silt Fence.
2. Dimensions may vary to fit field conditions.
3. Install a minimum of 3 flexible sediment barriers upstream of each drainage inlet to be protected.
4. Position erosion control blanket or geosynthetic fabric at edge of concrete apron and secure in trench.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



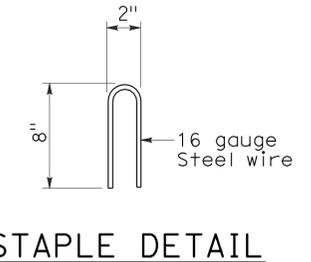
TEMPORARY DRAINAGE INLET PROTECTION (TYPE 4A)



PERSPECTIVE



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

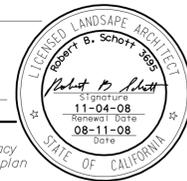


STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION
TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY DRAINAGE INLET PROTECTION)

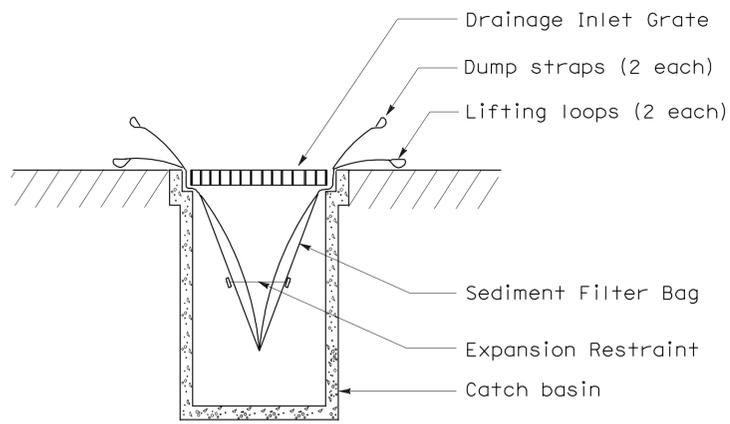
NO SCALE
 NSP T63 DATED AUGUST 15, 2008 SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ	5	25.1/28.6	465	485

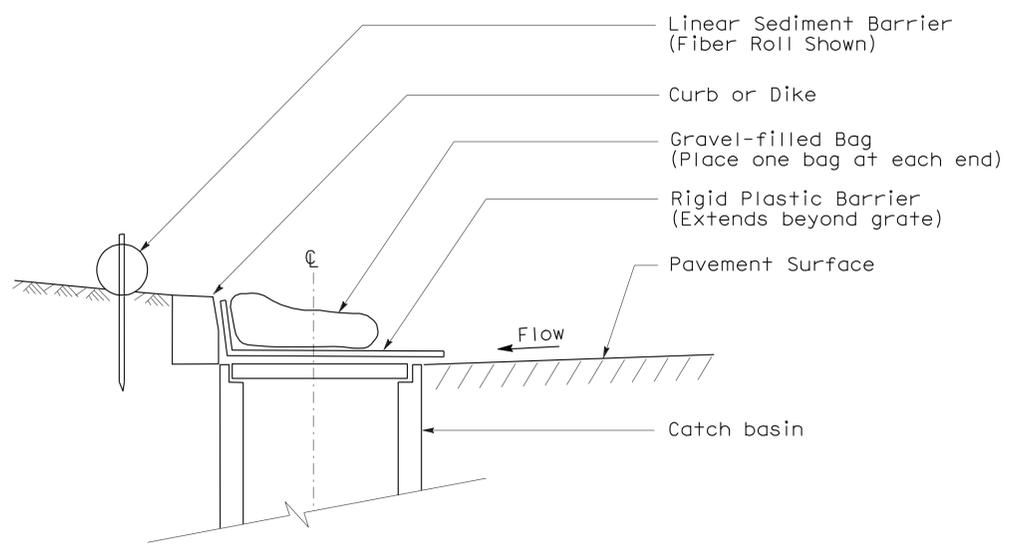
Robert B. Schott
 LICENSED LANDSCAPE ARCHITECT
 August 15, 2008
 PLANS APPROVAL DATE
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.



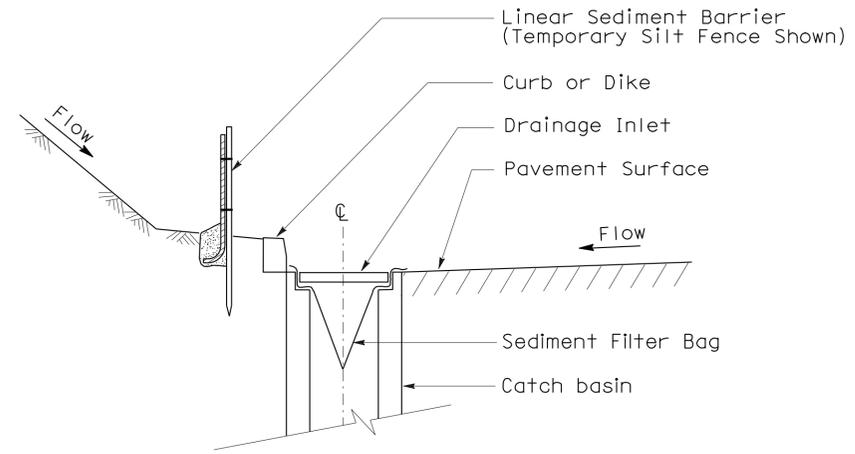
To accompany plans dated 6-4-12



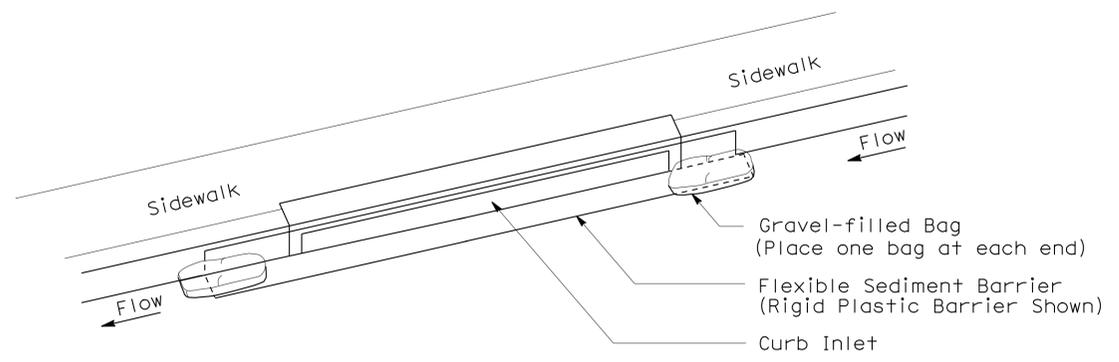
SECTION B-B
SEDIMENT FILTER BAG DETAIL



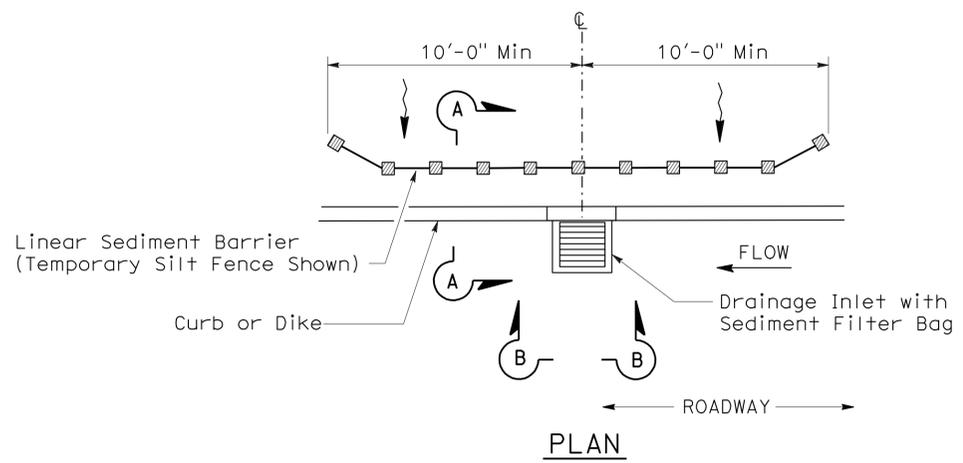
SECTION
TEMPORARY DRAINAGE INLET PROTECTION (TYPE 6A)
(CATCH BASIN WITH GRATE)



SECTION A-A



PERSPECTIVE
TEMPORARY DRAINAGE INLET PROTECTION (TYPE 6B)
(CURB INLET WITHOUT GRATE)



PLAN
TEMPORARY DRAINAGE INLET PROTECTION (TYPE 5)
(SEDIMENT FILTER BAG)

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY DRAINAGE INLET PROTECTION)

NO SCALE

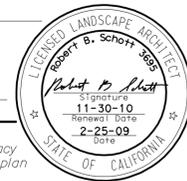
NSP T64 DATED AUGUST 15, 2008 SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

NEW STANDARD PLAN NSP T64

2006 NEW STANDARD PLAN NSP T64

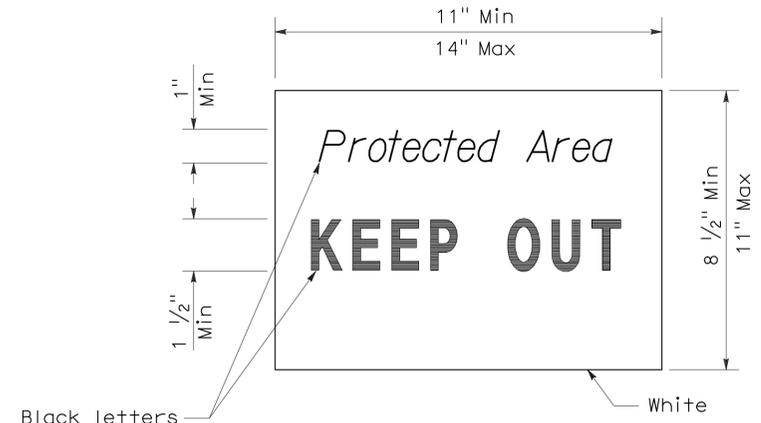
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ	5	25.1/28.6	466	485

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.

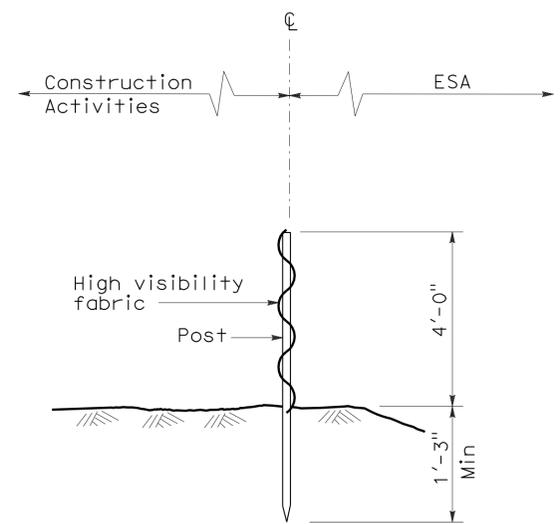


To accompany plans dated 6-4-12

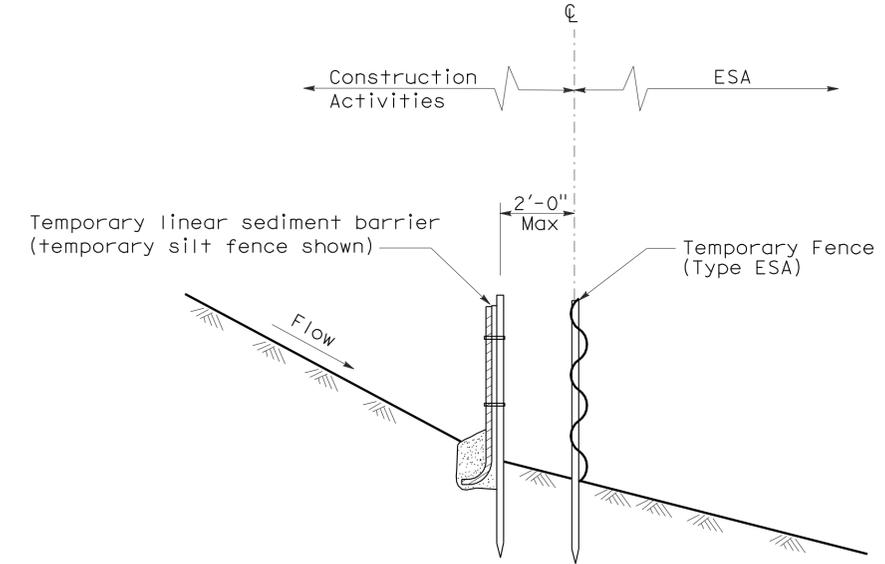
- NOTE:**
1. Temporary silt fence and temporary straw bale barrier shown for reference purposes only.



SIGN DETAIL

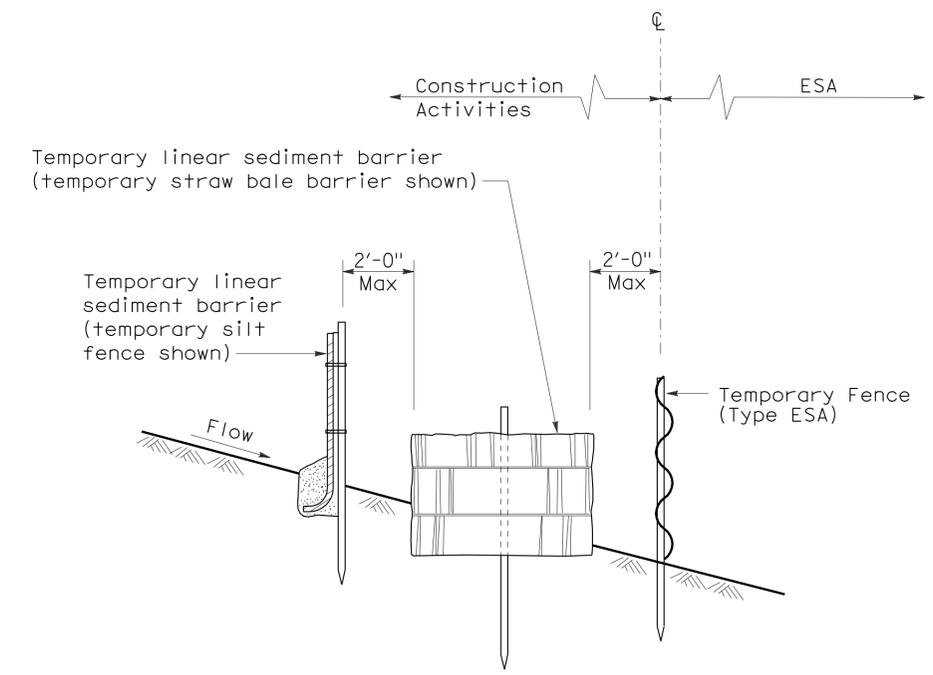


SECTION TEMPORARY FENCE (TYPE ESA)



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

(See Note 1)



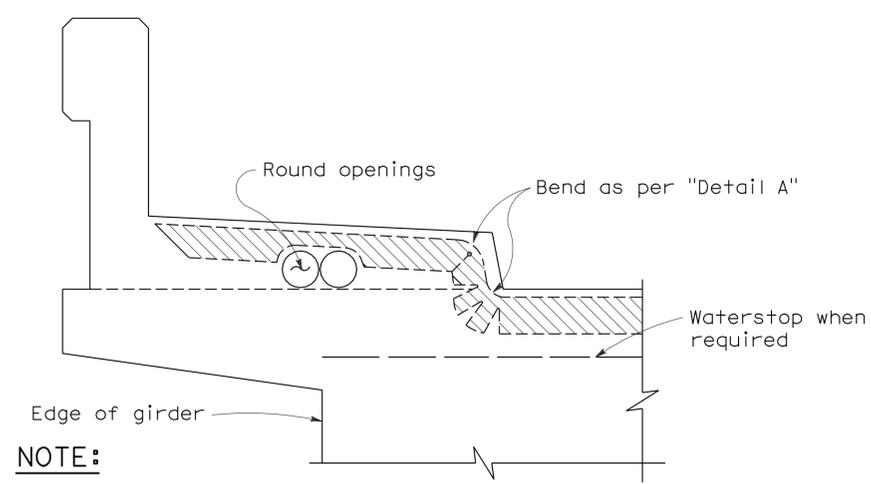
SECTION PLACEMENT DETAIL FOR TEMPORARY SILT FENCE AND TEMPORARY STRAW BALE BARRIER USED WITH TEMPORARY FENCE (TYPE ESA)

(See Note 1)

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

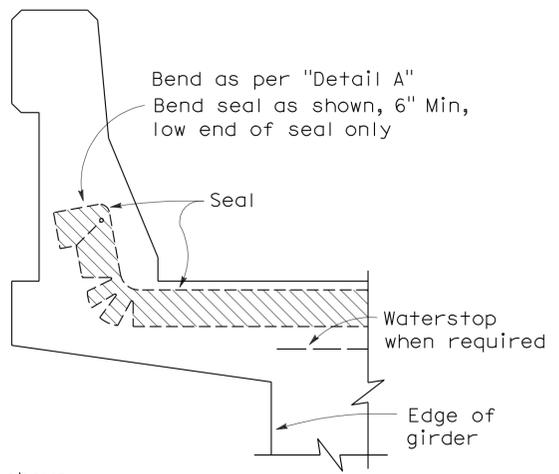
NSP T65 DATED APRIL 3, 2009 SUPPLEMENTS
 THE STANDARD PLANS BOOK DATED MAY 2006.

2006 NEW STANDARD PLAN NSP T65

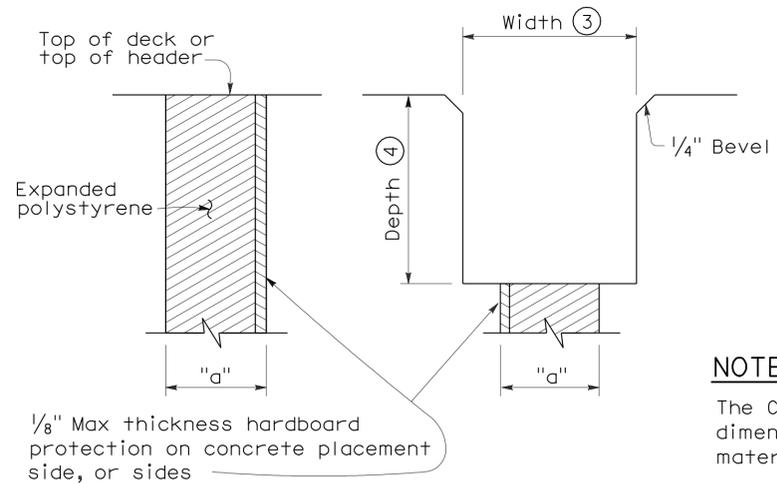


NOTE:
 Type "B" seal shown. Type "A" seals to conform to the general path of seal shown, cuts for bending not required. Bend Type "A" seals 3" up into curb or barrier rail on only the low end of the seal.

CONCRETE BARRIER AND SIDEWALK



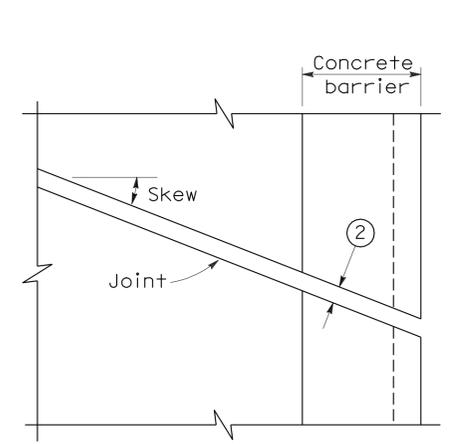
CONCRETE BARRIER



FORMING DETAIL SAWCUT DETAIL

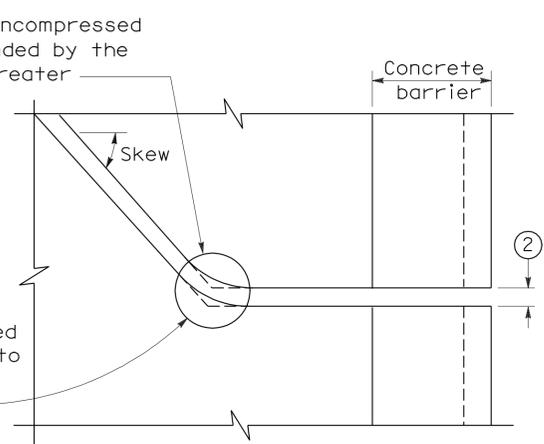
NOTE:
 The Contractor shall verify all controlling field dimensions before ordering or fabricating any material.

JOINT SEALS DETAILS



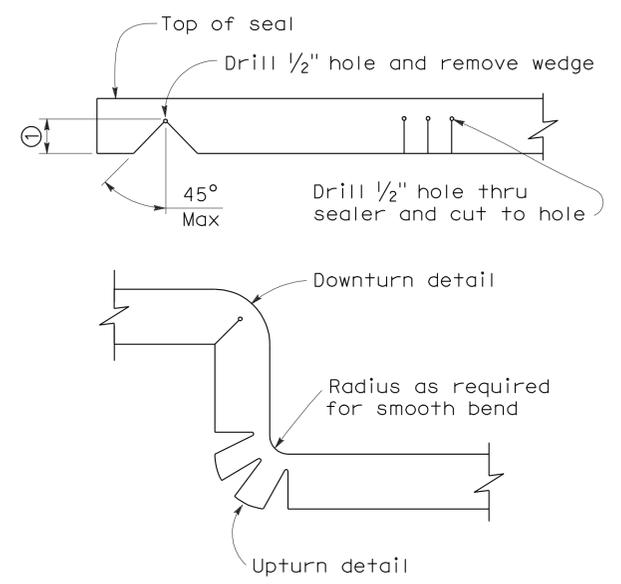
PLAN OF JOINT (SKEW ≤ 20°)

Min ϕ radius to be 4 times uncompressed width of seal or as recommended by the manufacturer, whichever is greater



PLAN OF JOINT (SKEW > 20°)

In lieu of saw cutting, this area may be blocked out and reconstructed to match saw cutting on both sides.



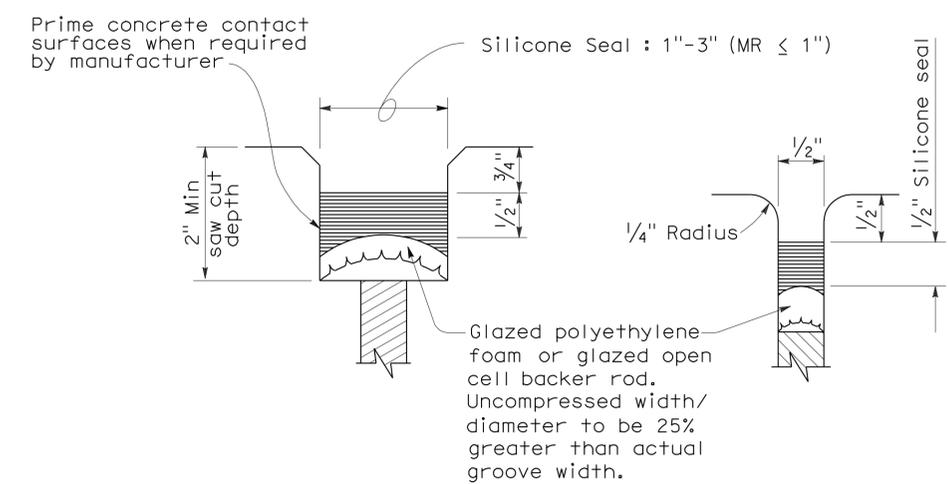
DETAIL A

- NOTES:**
- Make smooth cuts from the bottom of seal to 1 1/2" clear of top leaving at least one complete cell between the top of the cut and top of the seal. When necessary cut back of seal to clear conduit and round openings.
 - Opening in barrier to match width of sawn deck joint.
 - Sawcut groove widths shall be as ordered by the Engineer.
 - Depth of sawcut: Type A - Depth to be 2" minimum.
 Type B - Depth to be equal to or greater than the depth of seal measured along the contact surface, when compressed to minimum width position (W₂) plus dimensions shown.
 - MR (movement rating) as shown on other plan sheets.
 - Other depths must be approved by the Engineer.

DIMENSIONS "a" OF JOINT REQUIRED

Movement Rating (MR) ⑤	Bridge Type	"a" Dimension		
		Deck Concrete Placed		
		Winter	Fall-Spring	Summer
2"	All except CIP/PS	1 1/2"	1 1/4"	3/4"
	CIP/PS	1 1/4"	1"	1/2"
1 1/2"	All except CIP/PS	1 1/4"	1"	1/2"
	CIP/PS	1"	3/4"	1/2"
1"	All except CIP/PS	1"	3/4"	1/2"
	CIP/PS	3/4"	1/2"	1/2"
1/2"	All except CIP/PS	3/4"	3/4"	1/2"
	CIP/PS	1/2"	1/2"	1/2"

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
JOINT SEALS
(MAXIMUM MOVEMENT RATING = 2")
 NO SCALE

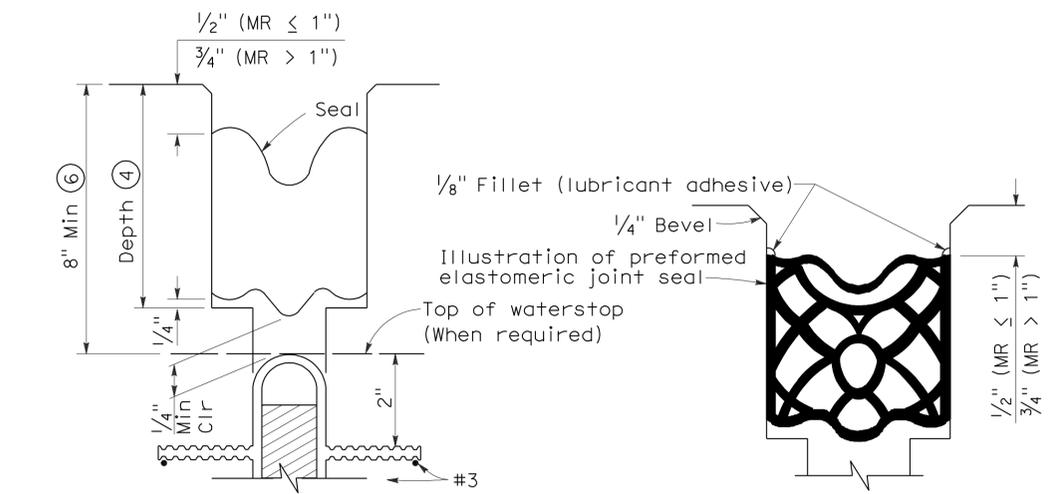


TYPE A SEAL

Movement rating : Silicone = 1" Max

TYPE AL SEAL

Longitudinal joints only



TYPE B JOINT SEAL IN MINIMUM WIDTH POSITION (W₂)

TYPE B SEAL

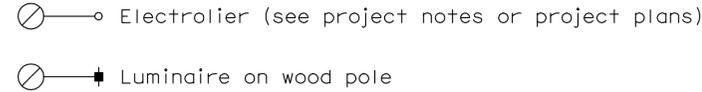
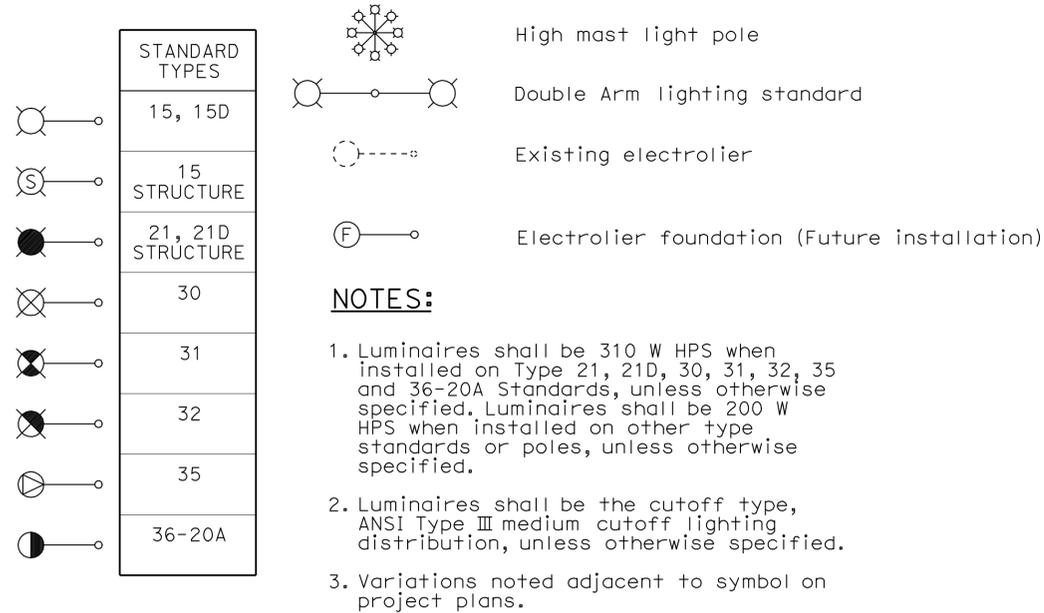
Movement Rating ≤ 2"

RSP B6-21 DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN B6-21 DATED MAY 1, 2006 - PAGE 258 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP B6-21

2006 REVISED STANDARD PLAN RSP B6-21

ELECTROLIERS



STANDARD NOTES:

- AB** Abandon. If applied to conduit, remove conductors.
- BC** Install pull box in existing conduit run.
- BP** Pedestrian barricade, type as indicated on plan.
- 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 wire or rope.
- DH** Detector handhole.
- FA** Foundation to be abandoned.
- IS** Install sign on signal mast arm.
- NS** No slip base on standard.
- PEC** Photoelectric control.
- PEU** Photoelectric unit.
- RC** Equipment or material to be removed and become the property of the Contractor.
- RE** Remove electrolier, fuses and ballast. Tape ends of conductors.
- RL** Relocate equipment.
- RR** Remove and reuse equipment.
- RS** Remove and salvage equipment.
- SC** Splice new to existing conductors.
- SD** Service disconnect.
- SF** Standard to remain for future use. Remove luminaire, pole conductors, fuses and ballast.
- TSP** Telephone service point.

ABBREVIATIONS AND EQUIPMENT DESIGNATIONS

PROPOSED EXISTING

BBS	bbs	Battery backup system
BC	bc	Bolt circle
C	C	Conduit
CCTV	cctv	Closed circuit television
CKT	ckt	Circuit
CMS	cms	Changeable message sign
DLC	dlc	Loop detector lead-in cable
EMS	ems	Extinguishable message sign
EVC	evc	Emergency vehicle cable
EVD	evd	Emergency vehicle detector
FB	fb	Flashing beacon
FBCA	fbca	Flashing beacon control assembly
FBS	fbs	Flashing beacon with slip base
FO	fo	Fiber optic
G	G	Ground (Equipment Grounding Conductor)
GFCI	GFCI	Ground fault circuit interrupt
HAR	har	Highway advisory radio
HEX	hex	Hexagonal
HPS	hps	High pressure sodium
IISNS	iisns	Internally illuminated street name sign
ISL	isl	Induction sign lighting
LED	led	Light emitting diode
LMA	lma	Luminaire mast arm
LPS	lps	Low pressure sodium
LTG	ltg	Lighting
LUM	lum	Luminaire
MAT	mat	Mast arm mounting vehicle signal faces, top attachment
MAS	mas	Mast arm mounting vehicle signal faces, side attachment
MAS-4A	mas-4A	Mast arm mounting vehicle signal faces, top attachment - 4 signal section
MAS-4B	mas-4B	Mast arm mounting vehicle signal faces, side attachment - 4 signal section
MAS-4C	mas-4C	Mast arm mounting vehicle signal faces, side attachment - 4 signal section
MAS-5A	mas-5A	Mast arm mounting vehicle signal faces, top attachment - 5 signal section
MAS-5B	mas-5B	Mast arm mounting vehicle signal faces, side attachment - 5 signal section
MC	mc	Mercury contactor
M/M	m/m	Multiple to multiple transformer
MT	mt	Conduit with pull wire or rope only
MTG	mtg	Mounting
	mv	Mercury vapor lighting fixture
N	N	Neutral (Grounded Conductor)
NC	NC	Normally closed
NO	NO	Normally open
PB	pb	Pull box
PEC	pec	Photoelectric control (Type I, II, III, IV or V as shown)
PED	ped	Pedestrian
PEU	peu	Photoelectric unit
PPB	ppb	Pedestrian push button
RL		Relocated equipment
RM	rm	Ramp metering
SB	sb	Slip base
SIC	sic	Signal interconnect cable
SIG	sig	Signal
SMA	sma	Signal mast arm
SNS	sns	Street name sign
SP	sp	Service point
TDC	tdc	Telephone demarcation cabinet
TMS	tms	Traffic monitoring station
TOS	tos	Traffic Operations System
VEH	veh	Vehicle
XFMR	xfmr	Transformer
COMM	comm	Communication
RWIS	rwis	Roadway weather information system

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ	5	25.1/28.6	468	485

Jeffery G. McRae
REGISTERED ELECTRICAL ENGINEER

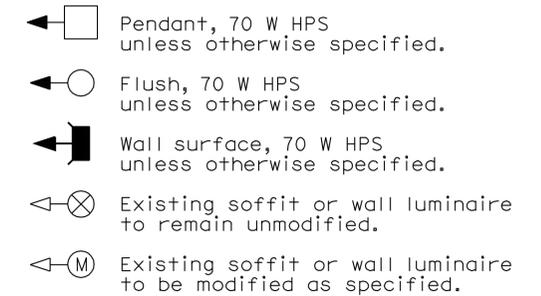
October 5, 2007
PLANS APPROVAL DATE

Jeffery G. McRae
No. E14512
Exp. 6-30-08
ELECTRICAL
STATE OF CALIFORNIA

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To accompany plans dated 6-4-12

SOFFIT AND WALL MOUNTED LUMINAIRES



NOTE:

Arrow indicates "street side" of luminaire.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SYMBOLS AND ABBREVIATIONS)

NO SCALE

RSP ES-1A DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN ES-1A DATED MAY 1, 2006 - PAGE 400 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-1A

2006 REVISED STANDARD PLAN RSP ES-1A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ	5	25.1/28.6	469	485

Jeffery G. McRae
 REGISTERED ELECTRICAL ENGINEER
 No. E14512
 Exp. 6-30-08
 ELECTRICAL
 STATE OF CALIFORNIA

October 5, 2007
 PLANS APPROVAL DATE

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To accompany plans dated 6-4-12

CONDUIT

PROPOSED	EXISTING	
		Lighting Conduit, unless otherwise indicated or noted
		Traffic signal conduit
		Communication conduit
		Telephone conduit
		Fire alarm conduit
		Fiber optic conduit
		Conduit termination
		Conduit riser in/on structure or service pole

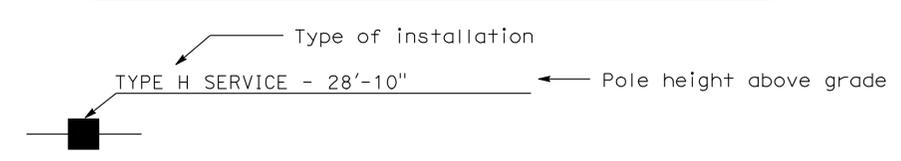
SIGNAL EQUIPMENT

PROPOSED	EXISTING	
		Pedestrian signal face
		Pedestrian push button post
		Pedestrian barricade
		Vehicle signal face (with backplate, 3-Section: red, yellow and green)
		Vehicle signal face with angle visors
		Modifications of basic symbols: "L" indicates all non-arrow sections louvered "LG" indicates louvered green section only "PV" indicates 12" programmed visibility sections "8" indicates all 8" sections (only when specified)
		Type 15TS and Vehicle signal face
		Vehicle signal face with red, yellow and green left arrow sections
		Vehicle signal face with red and yellow sections and up green arrow
		Vehicle signal face (5 Section) with red, yellow and green sections and yellow and green right arrows
		Type 1 Standard and attached vehicle signal faces
		Standard with signal mast arm only and attached vehicle signal faces and internally illuminated street name sign
		Type 33 Standard, Left-turn vehicle signal face and sign
		Standard with luminaire and signal mast arms and attached vehicle signal faces
		Cantilever flashing beacon Type 9 Frame, with a sign unless otherwise specified or indicated
		Type 15-FBS Standard with two vehicle signal face sections with lens, backplate and visor with a sign
		Flashing beacon. One vehicle signal face section with lens, backplate and visor. "R" indicates red indication, "Y" indicates yellow indication
		Controller assembly. Door indicates front of cabinet

SERVICE EQUIPMENT

PROPOSED	EXISTING	
		Overhead lines
		Wood pole "U" indicates utility owned
		Pole guy with anchor
		Utility transformer - ground mounted
		Service equipment enclosure type
		Service equipment enclosure door indicates front of enclosure
		Telephone demarcation cabinet

POLE-MOUNTED SERVICE DESIGNATION



ILLUMINATED OVERHEAD SIGN

PROPOSED	EXISTING	
		Overhead sign - Single post
		Overhead sign - Two post
		Overhead sign - Mounted on structure
		Overhead sign with electrolier

SIGNAL EQUIPMENT Cont

PROPOSED	EXISTING	
		Guard post
		Type 1 Standard with "Meter On" sign
		Emergency Vehicle detector

NOTES:

- All signal sections shall be 12" unless shown otherwise.
- Signal heads shall be provided with backplates unless shown otherwise.
- Signal indication shall be LED.

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
 (SYMBOLS AND ABBREVIATIONS)**
 NO SCALE

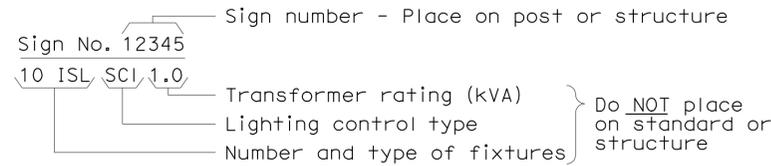
RSP ES-1B DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-1B
 DATED MAY 1, 2006 - PAGE 401 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-1B

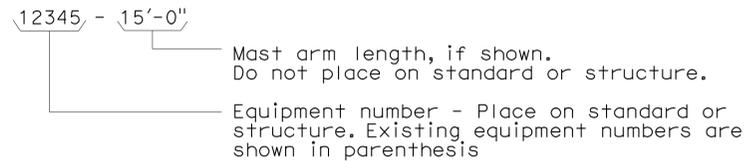
2006 REVISED STANDARD PLAN RSP ES-1B

EQUIPMENT IDENTIFICATION

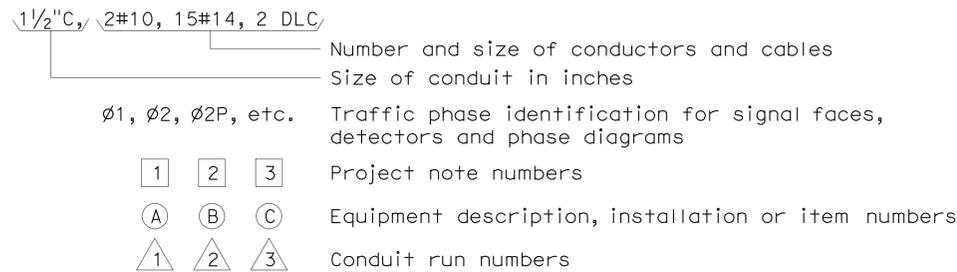
ILLUMINATED SIGN IDENTIFICATION NUMBER:



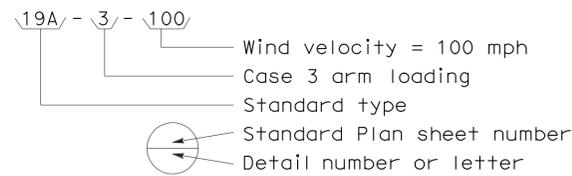
ELECTROLIER OR EQUIPMENT IDENTIFICATION NUMBER:



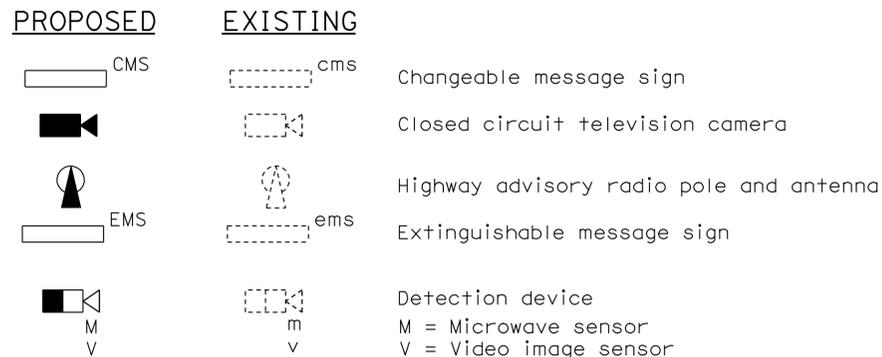
CONDUIT AND CONDUCTOR IDENTIFICATION:



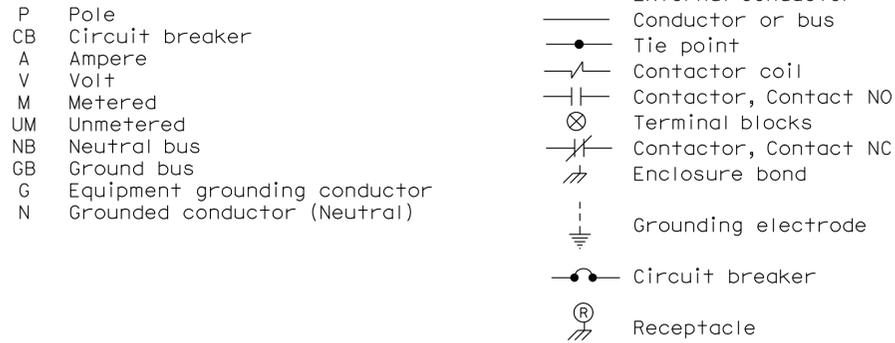
SIGNAL AND LIGHTING STANDARD (TYPICAL DESIGNATION):



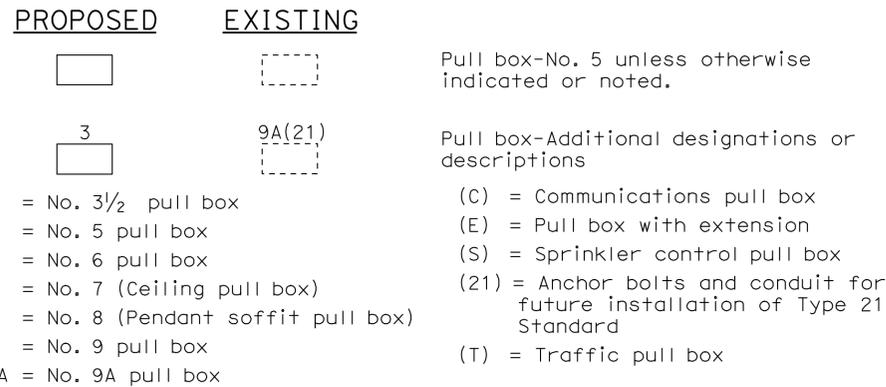
MISCELLANEOUS EQUIPMENT



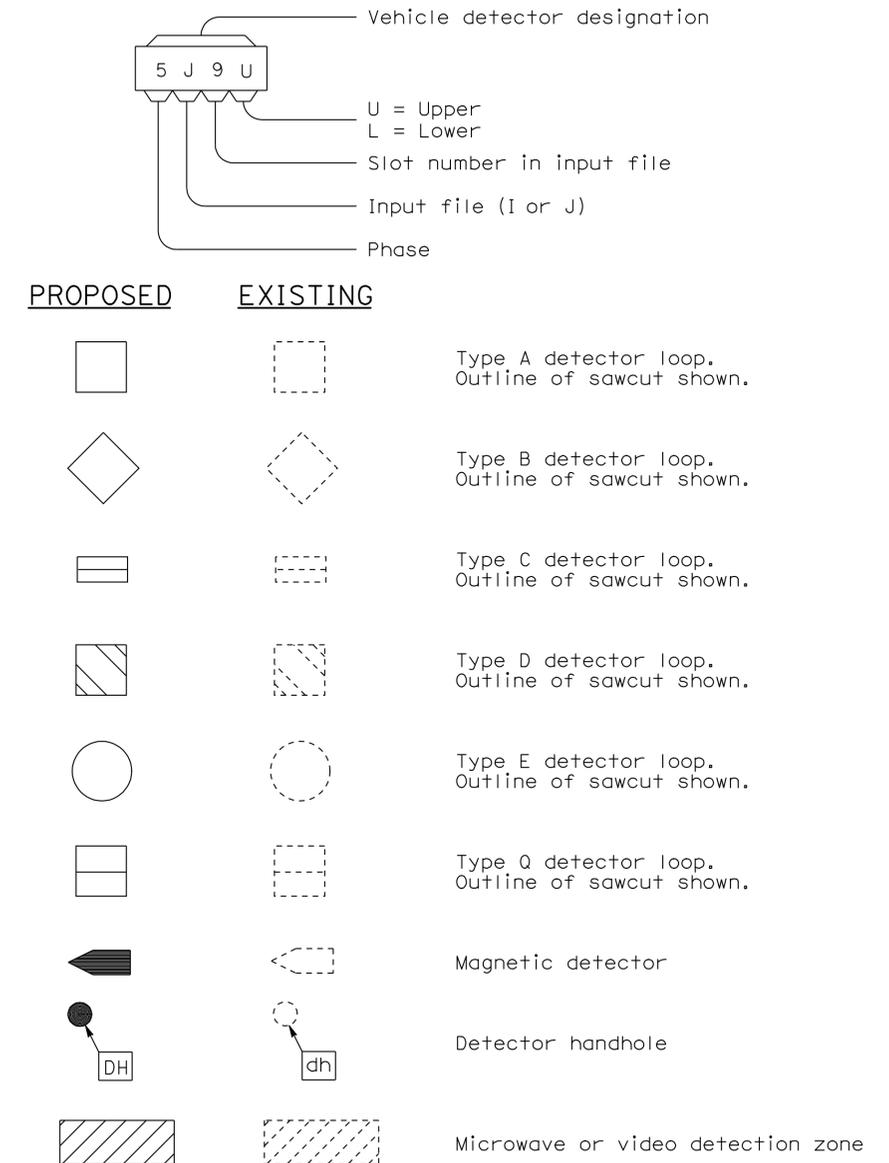
WIRING DIAGRAM LEGEND



PULL BOXES



VEHICLE DETECTORS



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(SYMBOLS AND ABBREVIATIONS)**

NO SCALE

RSP ES-1C DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-1C
DATED MAY 1, 2006 - PAGE 402 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-1C

2006 REVISED STANDARD PLAN RSP ES-1C

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ	5	25.1/28.6	471	485

Jeffery G. McRae
 REGISTERED ELECTRICAL ENGINEER

October 5, 2007
 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
 Jeffery G. McRae
 No. E14512
 Exp. 6-30-08
 ELECTRICAL
 STATE OF CALIFORNIA

To accompany plans dated 6-4-12

NOTES-TYPE III SERVICE EQUIPMENT ENCLOSURES:

1. Service equipment enclosure and metering equipment shall meet the requirements of the service utility. The meter area shall have a sealable, lockable, weathertight cover that can be removed without the use of tools.
2. Service equipment enclosures shall be factory wired and conform to NEMA standards.
3. Dimensions of service equipment enclosures shall meet the requirements of the service utility.
4. The dead front panels on Type III service equipment enclosures shall have a continuous stainless steel or aluminum piano hinge. The panel in front of the breakers shall be secured with a latch or captive screws. No live parts shall be mounted on the dead front panel.
5. The exterior door shall have provisions for padlocking. The padlock hole shall be a minimum diameter of $\frac{1}{16}$ ".
6. Enclosures housing transformers of more than one kVA shall have effective screened ventilation louver of not less than 50 square inches. Screen shall be stainless steel No. 304, with a No. 10 size mesh. Framed screen shall be secured with at least four bolts.
7. Fasteners on the exterior of the enclosure shall be vandal-resistant and shall not be removable from the exterior. Exterior screws, nuts, bolts and washers shall be stainless steel.
8. Landing lugs for incoming service conductors shall be compatible with either copper or aluminum conductors sized to suit the conductors shown on the plan. Landing lugs shall be copper or tin-plated aluminum. Neutral bus shall be rated for 125 A and be suitable for copper or aluminum conductors unless otherwise specified. The terminal shall include but not be limited to:
 - a) Incoming terminals (landing lugs)
 - b) Neutral lugs
 - c) Solid neutral terminal strip
9. At least 6 standard single pole circuit breaker spaces, $\frac{3}{4}$ " nominal, shall be provided for branch circuits. Circuit breaker interiors shall be copper. Interiors of enclosure shall accept plug-in or cable-in/cable-out circuit breakers.
10. Control wiring shall be 600 V, 14 stranded machine tool wire. Where subject to flexing, 19 strand wire shall be used.
11. Main bus shall be rated for 125 A and shall be tin-plated copper.
12. A plastic laminated wiring diagram shall be provided with brass mounting eyelets and attached to the inside of the enclosure and the wiring diagram shall be affixed to the interior with a UL or ETL approved method.

13. An engraved phenolic nameplate on the dead front panel indicating the function of each circuit or device shall be installed with stainless steel rivets or stainless steel screws:
 - a) Adjacent to the breaker or device with character size a minimum of $\frac{1}{8}$ ".
 - b) At the top of the exterior door panel indicating State system number, voltage level and number of phases with character size a minimum of $\frac{3}{16}$ ".
14. The plan shows the approximate location of devices within the enclosure. Components may be rearranged, however, the "working" clearances within the service equipment enclosure shall be maintained.
15. In unpaved areas a raised portland cement concrete pad 2'-0" x 4" x width of foundation shall be constructed in front of new service equipment enclosure installation. Pad shall be set to elevation of foundation.
16. Foundation shall extend 2" minimum beyond edge of service equipment enclosure.
17. Internal bus, where shown, is typical only. Alternative design of proposed service equipment enclosure shall be submitted to the Engineer for approval.
18. Plug-in circuit breakers may be mounted in the vertical or horizontal position. Cable-in/cable-out circuit breakers shall be mounted in the vertical position.
19. Type III-AF and Type III-BF service equipment enclosures shall have the meter viewing windows located on the front side of the service equipment enclosures.
20. Type III-AR and Type III-BR service equipment enclosures shall be similarly constructed as Type III-AF and Type III-BF respectively, except the meter viewing windows shall be located on the back side of the service equipment enclosures.
21. Minimum clearance shall be required for front and back of service equipment enclosure per National Electrical Code, Article 110.26, "Spaces About Electric Equipment (600 Volts, Nominal, or Less)."

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

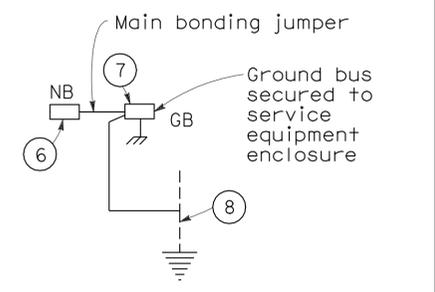
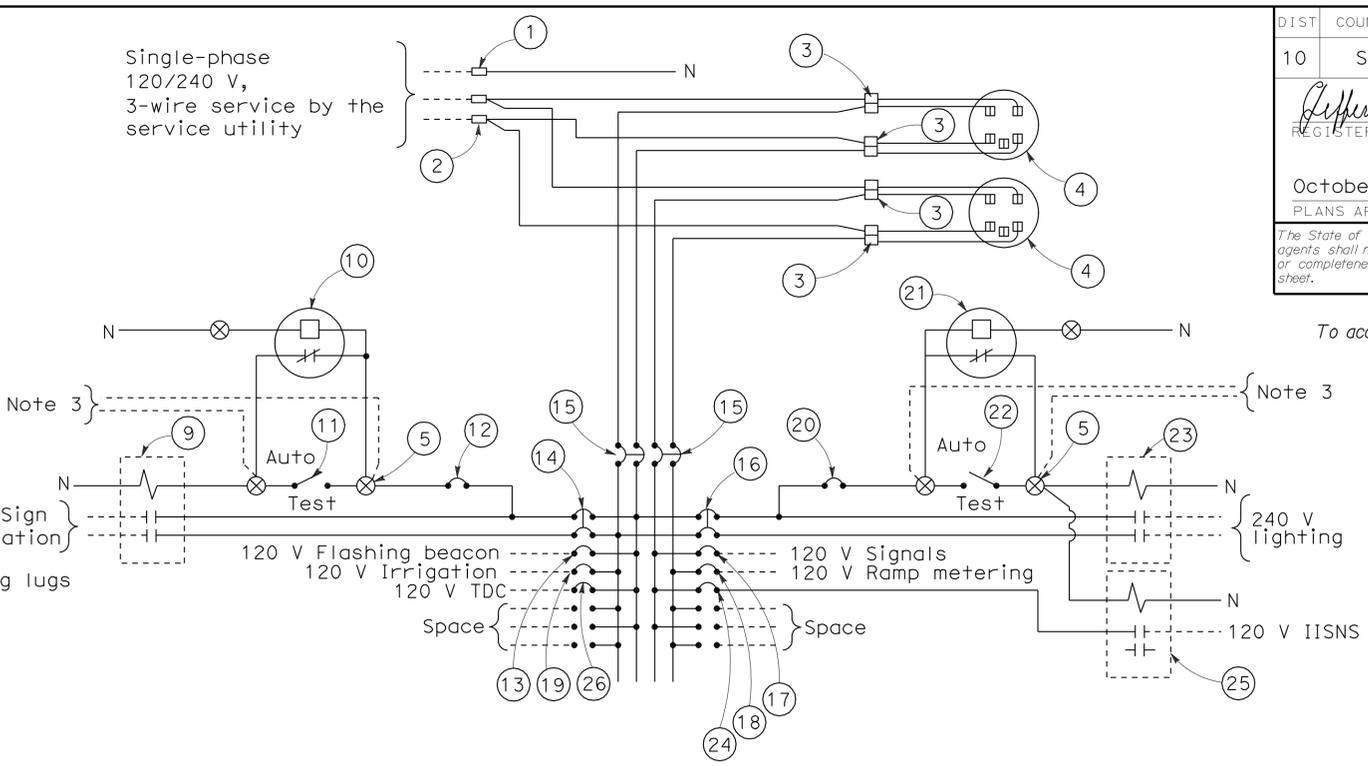
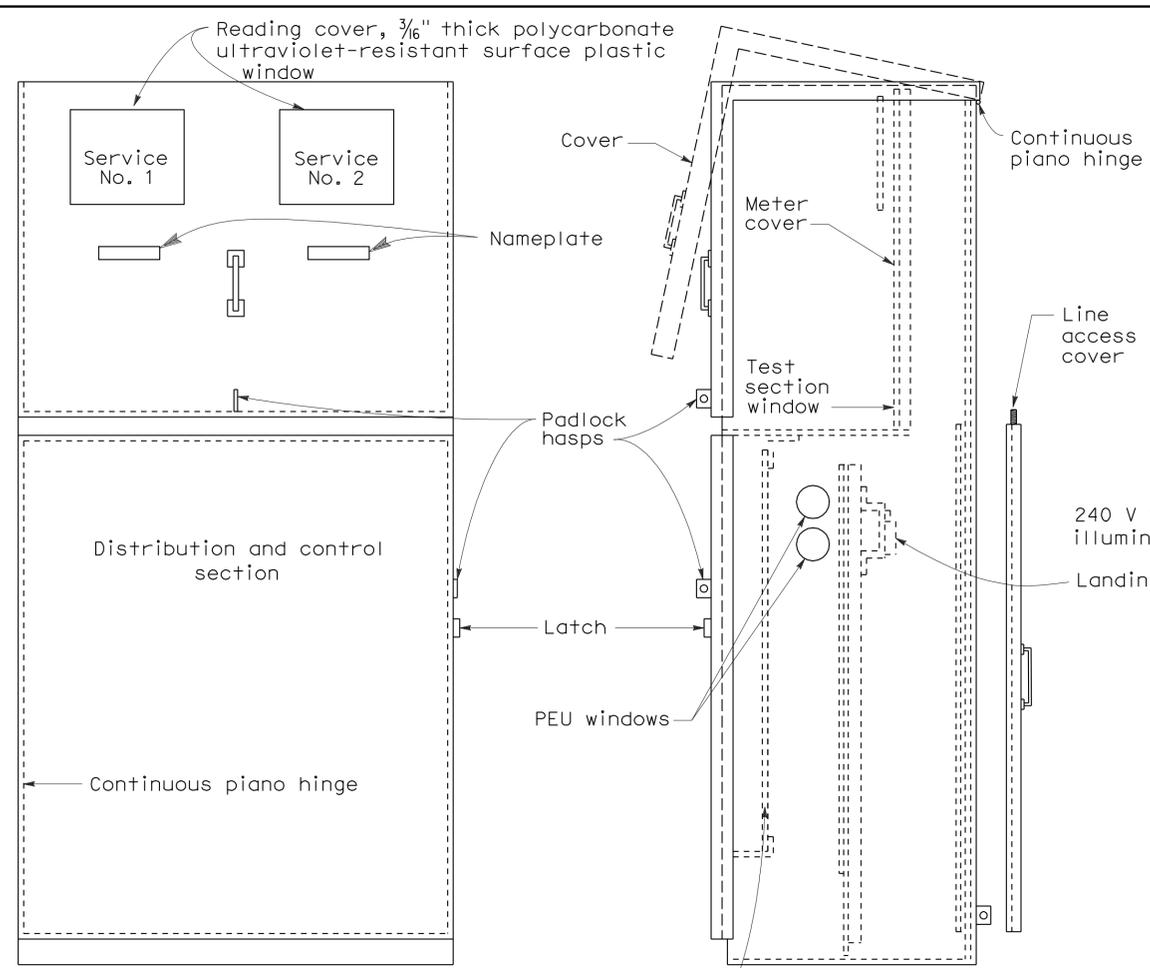
**ELECTRICAL SYSTEMS
 (SERVICE EQUIPMENT NOTES
 TYPE III SERIES)**

NO SCALE

RSP ES-2C DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-2C
 DATED MAY 1, 2006 - PAGE 405 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-2C

2006 REVISED STANDARD PLAN RSP ES-2C



120/240 V SERVICE WIRING DIAGRAM (TYPICAL)

TYPE III-CF SERVICE EQUIPMENT ENCLOSURE WITH PROVISIONS FOR TWO 100 A METERS (TYPICAL)

TYPE III-C SERVICE (120/240 V) EQUIPMENT LEGEND

ITEM No.	COMPONENT	NAME PLATE DESCRIPTION	ITEM No.	COMPONENT	NAME PLATE DESCRIPTION
1	Neutral lug		14	30 A, 240 V, 2P, CB	Sign Illumination
2	Landing lug (Note 6)		15	100 A, 240 V, 2P, CB	Main Breaker
3	Test bypass facility		16	30 A, 240 V, 2P, CB	Lighting
4	Meter socket and support		17	50 A, 120 V, 1P, CB	Signals
5	Terminal blocks		18	30 A, 120 V, 1P, CB	Ramp Metering
6	Neutral bus		19	20 A, 120 V, 1P, CB	Irrigation
7	Ground bus		20	15 A, 120 V, 1P, CB	Lighting Control
8	Grounding electrode		21	Photoelectric unit (Note 7)	
9	30 A, 2PNO, Contactor	Sign Illumination	22	15 A, 1P, Test switch	Lighting Control
10	Photoelectric unit (Note 7)		23	60 A, 2PNO Contactor	Lighting
11	15 A, 1P, Test switch	Sign Illumination Test Switch	24	15 A, 120 V, 1P, CB	IISNS
12	15 A, 120 V, 1P, CB	Sign Illumination Control	25	30 A, 2PNO Contactor	IISNS
13	15 A, 120 V, 1P, CB	Flashing Beacon	26	20 A, 120 V, 1P, CB	Telephone Demarcation Cabinet

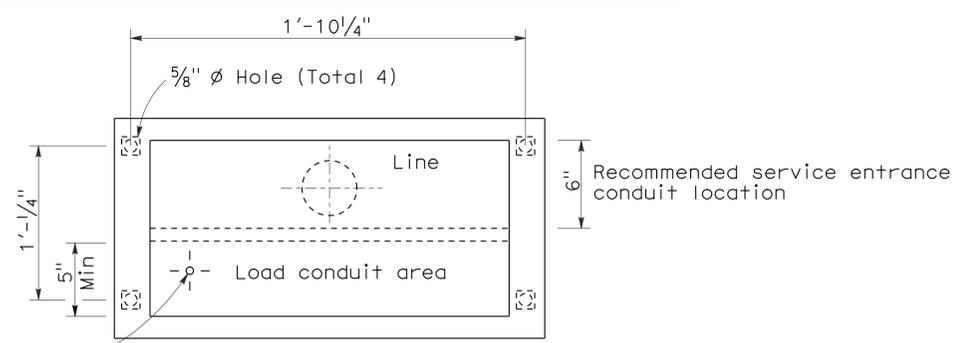
NOTES: (FOR SERVICE EQUIPMENT ENCLOSURE)

- Voltage ratings of service equipment shall conform to the service voltages indicated on the plans.
- Unless otherwise indicated on the plans, service equipment items shall be provided for each service equipment enclosure as shown.
- Connect to remote test switch mounted on lighting standards, sign post or structure when required.
- Items No. 1 and 6 shall be isolated from the service equipment enclosure.
- Meter sockets shall be 5 clip type.
- The landing lug shall be suitable for multiple conductors.
- Type I photoelectric control shall be used unless otherwise indicated on the plans.

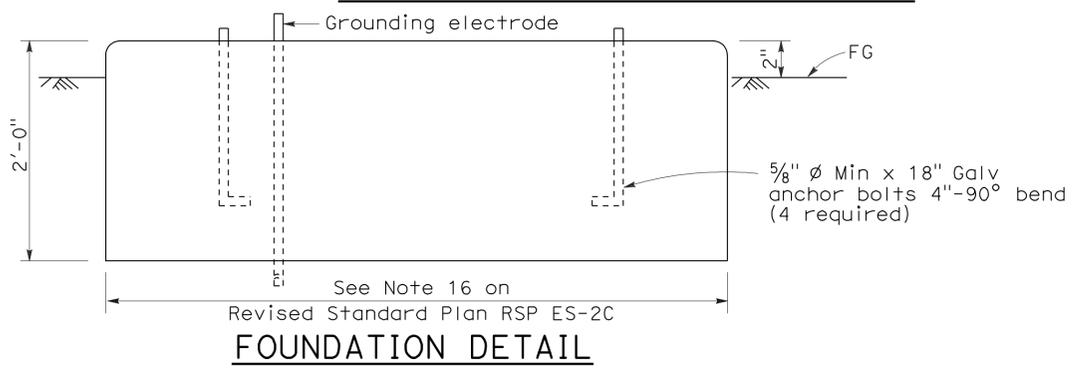
STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
 (SERVICE EQUIPMENT AND
 TYPICAL WIRING DIAGRAM
 TYPE III - C SERIES)**

NO SCALE

RSP ES-2F DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-2F
 DATED MAY 1, 2006 - PAGE 408 OF THE STANDARD PLANS BOOK DATED MAY 2006.



BASE FOR TYPE III-C SERVICE EQUIPMENT ENCLOSURE



FOUNDATION DETAIL

2006 REVISED STANDARD PLAN RSP ES-2F

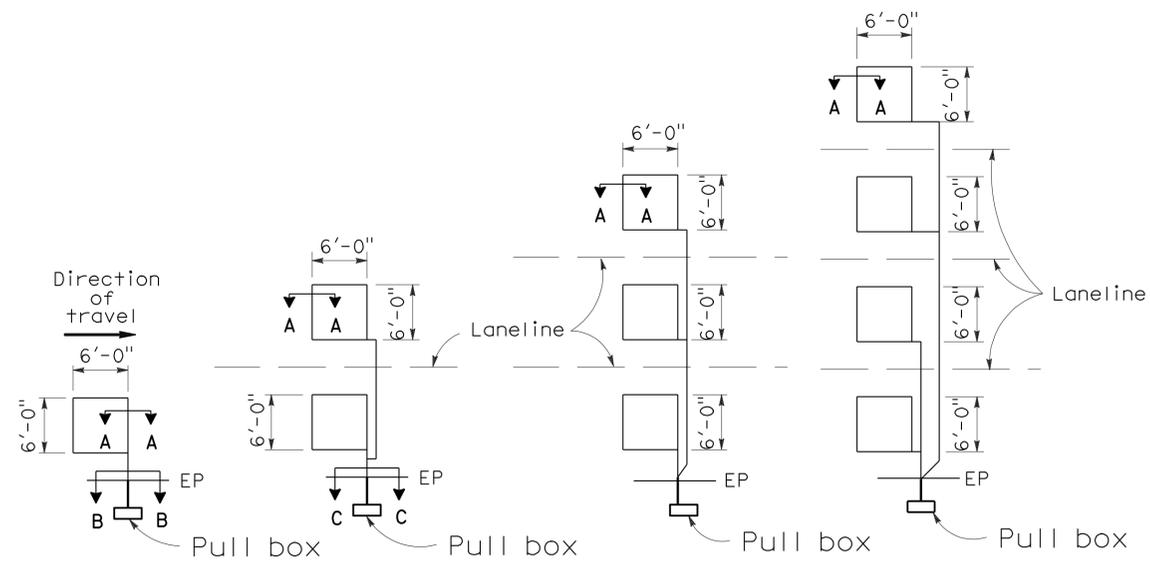
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ	5	25.1/28.6	473	485

Jeffery G. McRae
 REGISTERED ELECTRICAL ENGINEER
 October 5, 2007
 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
Jeffery G. McRae
 No. E14512
 Exp. 6-30-08
 ELECTRICAL
 STATE OF CALIFORNIA

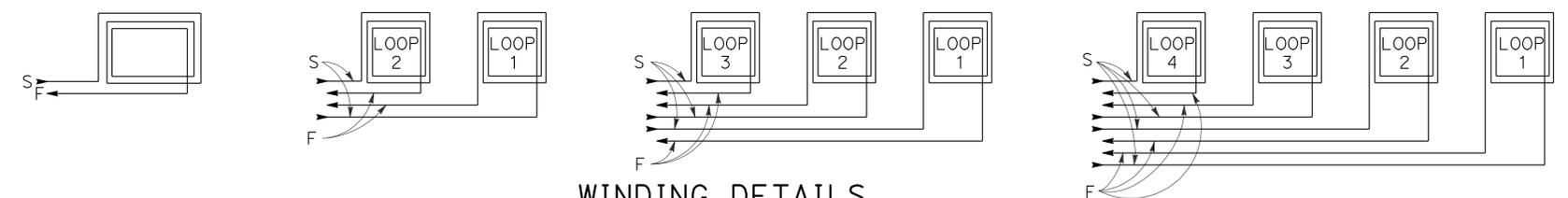
LOOP INSTALLATION PROCEDURE

- Loops shall be centered in lanes.
- Saw slots in pavement for loop conductors as shown in details.
- Distance between side of loop and a lead-in saw cut from adjacent detectors shall be 2'-0" minimum. Distance between lead-in saw cuts shall be 6" minimum.
- Bottom of saw slot shall be smooth with no sharp edges.
- Slots shall be washed until clean, blown out and thoroughly dried before installing loop conductors.
- Adjacent loops on the same sensor unit channel shall be wound in opposite directions.
- Identify and tag loop circuit pairs in the pull box with loop number, start (S) and finish (F) of conductor. Identify and tag lead-in-cable with sensor number and phase.
- Install loop conductor in slot using a 3/16" to 1/4" thick wood paddle. Hold loop conductors with wood paddles (at the bottom of the sawed slot) during sealant placement.
- No more than 2 twisted pairs shall be installed in one sawed slot.
- Allow additional 5'-0" of slack length of conductor for the lead-in run to pull box.
- The additional length of each conductor for each loop shall be twisted together into a pair (6 turns per 3'-4" minimum) before being placed in the slot and conduit leading to pull box.
- Test each loop circuit for continuity, circuit resistance and insulation resistance at the pull box before filling slots.
- Fill slots as shown in details.
- Splice loop conductors to lead-in-cable. Splices shall be soldered.
- End of lead-in-cable and Type 2 loop conductor shall be waterproofed prior to installing in conduit to prevent moisture from entering the cable.
- Lead-in-cable shall not be spliced between the pull box and the controller cabinet terminals.
- Test each loop circuit for continuity, circuit resistance and insulation resistance at the controller cabinet location.
- Where loop conductors are not to be spliced to a lead-in-cable, the ends of the conductors shall be taped and waterproofed with electrical insulating coating.



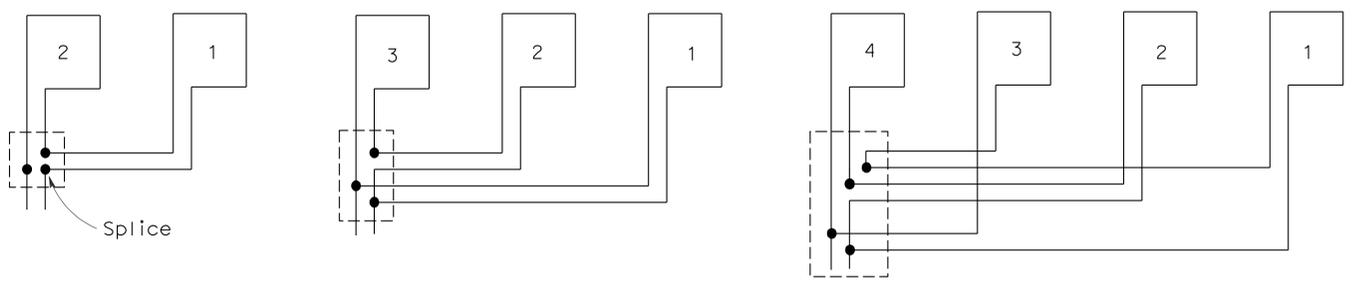
TYPE 1A INSTALLATION TYPE 2A INSTALLATION TYPE 3A INSTALLATION TYPE 4A INSTALLATION
SAWCUT DETAILS
 (Type A loop detector configurations illustrated)

- 1A thru 4A = 1 Type A loop configuration in each lane.
 - 1B thru 4B = 1 Type B loop configuration in each lane.
 - 1C = 1 Type C loop configuration entering lanes as required.
 - 1D thru 4D = 1 Type D loop configuration in each lane.
 - 1E thru 4E = 1 Type E loop configuration in each lane.
 - 1Q thru 4Q = 1 Type Q loop configuration in each lane.
- (Use Type A, B, C, D, E or Q loop detector configurations only when specified or shown on plans)



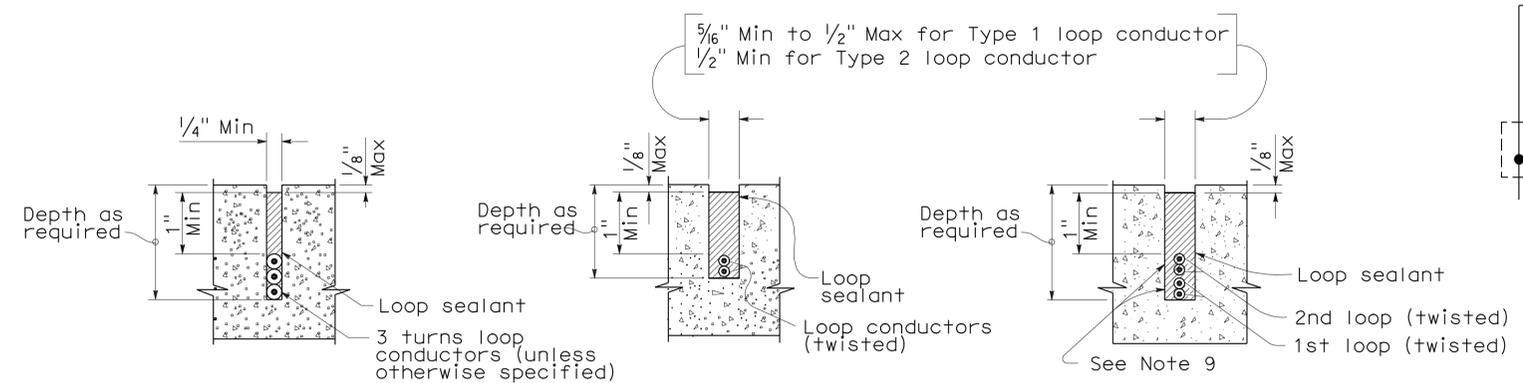
WINDING DETAILS

See Notes 6 and 7



TYPICAL LOOP CONNECTIONS

(Dashed lines represent the pull box)



SECTION A-A SECTION B-B SECTION C-C
SLOT DETAILS - TYPE 1 AND TYPE 2 LOOP CONDUCTOR

ELECTRICAL SYSTEMS (DETECTORS)

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

NO SCALE

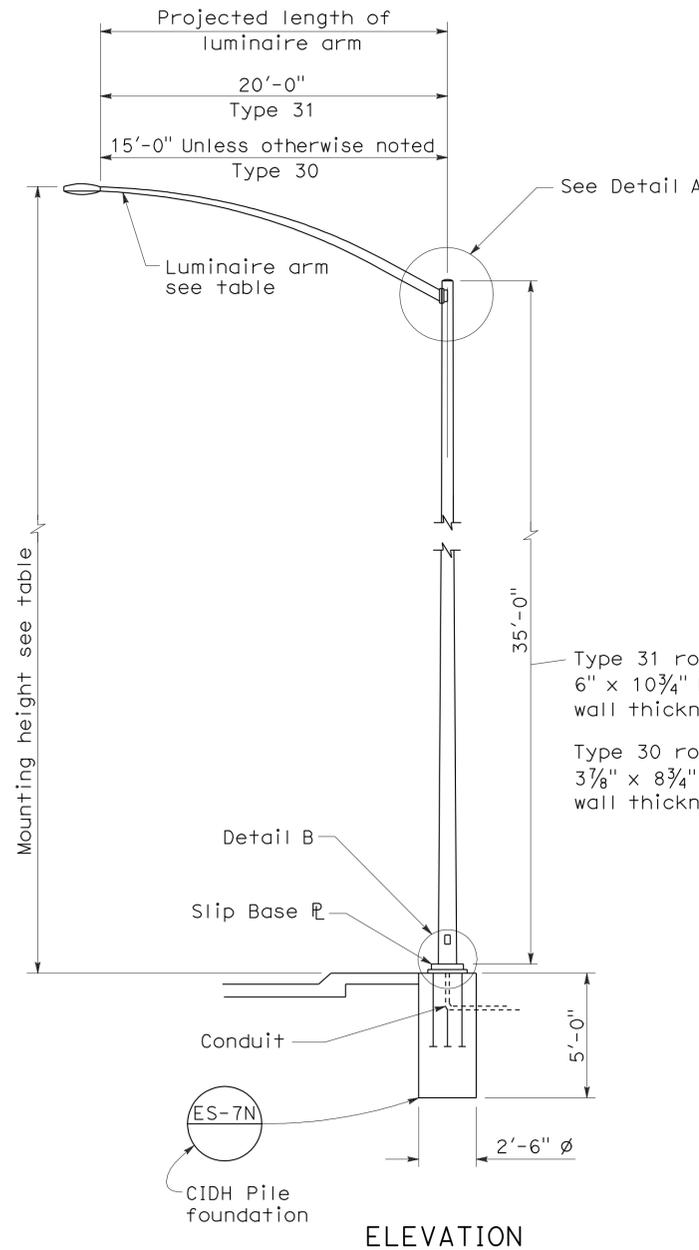
RSP ES-5A DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-5A DATED MAY 1, 2006 - PAGE 423 OF THE STANDARD PLANS BOOK DATED MAY 2006.

2006 REVISED STANDARD PLAN RSP ES-5A

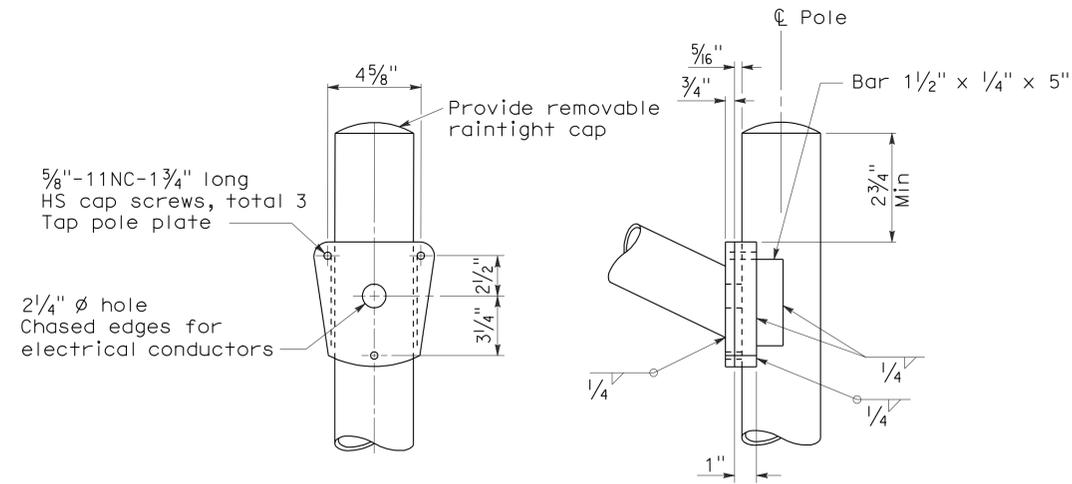
LUMINAIRE ARM DATA

PROJECTED LENGTH	THICKNESS	MINIMUM OD @ POLE	MOUNTING HEIGHT
* 6'-0"	0.1196"	3/4"	36'-9"±
8'-0"		3/2"	37'-3"±
10'-0"		3 3/4"	38'-0"±
12'-0"		3 3/4"	39'-0"±
15'-0"		4 1/4"	39'-6"±
** 20'-0"	0.1793"	5"	37'-0"±

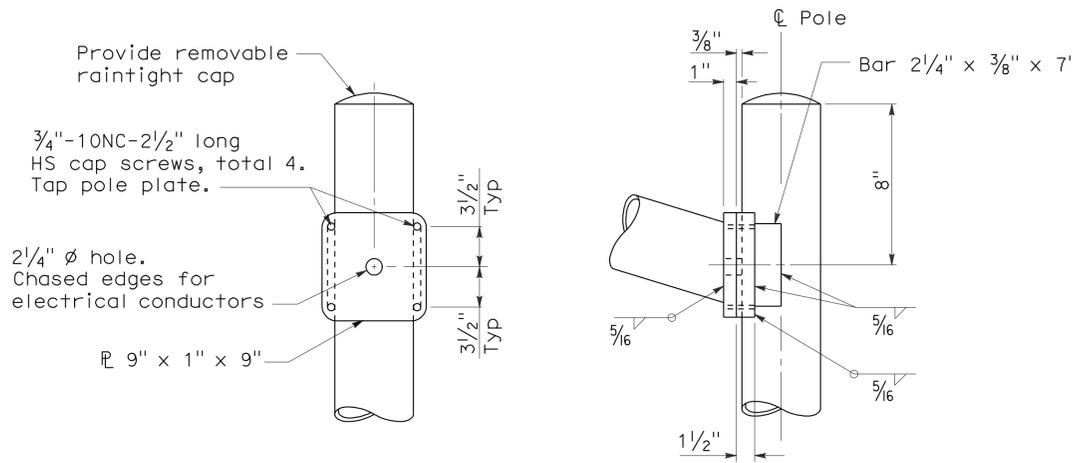
* Type 30 - arm length 6'-0" - 15'-0" maximum
 ** Type 31 - arm lengths 20'-0"



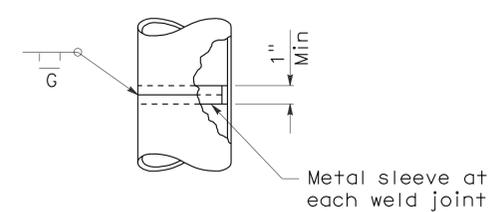
ELEVATION



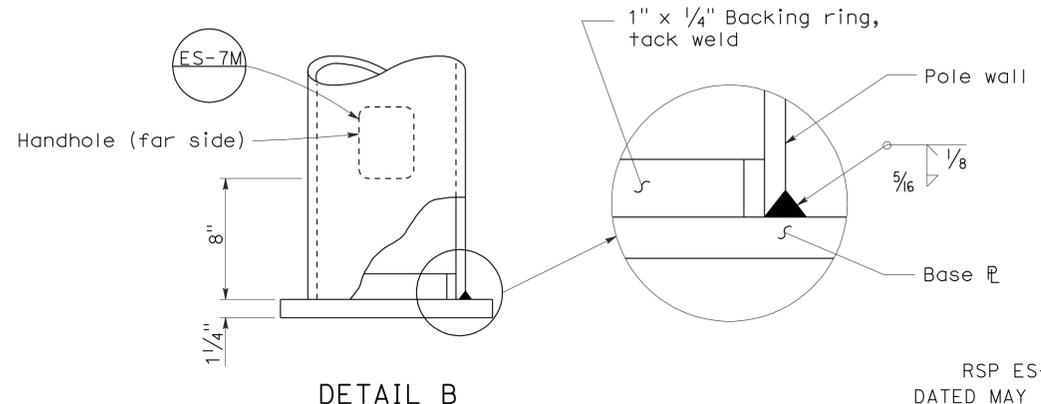
DETAIL A - TYPE 30



DETAIL A - TYPE 31



POLE SPLICE



DETAIL B

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ	5	25.1/28.6	474	485

Stanley P. Johnson
 REGISTERED CIVIL ENGINEER
 No. C57793
 Exp. 03-31-08
 CIVIL
 STATE OF CALIFORNIA

January 18, 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 6-4-12

NOTES:

- Sheet steel shall have a minimum yield of 48,000 psi.
- For slip base details see Standard Plan ES-6F.
- For Type 30 fixed base use Type 15 base plate, and foundation shown on Revised Standard Plan RSP ES-6A. Use 1 1/4" Dia x 3'-6" x 4" anchor bolts.
- For Type 31 fixed base use Type 32 base plate, anchor bolts and foundation on Standard Plan ES-6G.
- Handhole shall be located on downstream side of traffic unless noted otherwise on plans.
- For additional general notes refer to Standard Plan ES-7M.

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
 (LIGHTING STANDARD
 TYPES 30 AND 31)**
 NO SCALE

RSP ES-6E DATED JANUARY 18, 2008 SUPERCEDES STANDARD PLAN ES-6E
 DATED MAY 1, 2006 - PAGE 430 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-6E

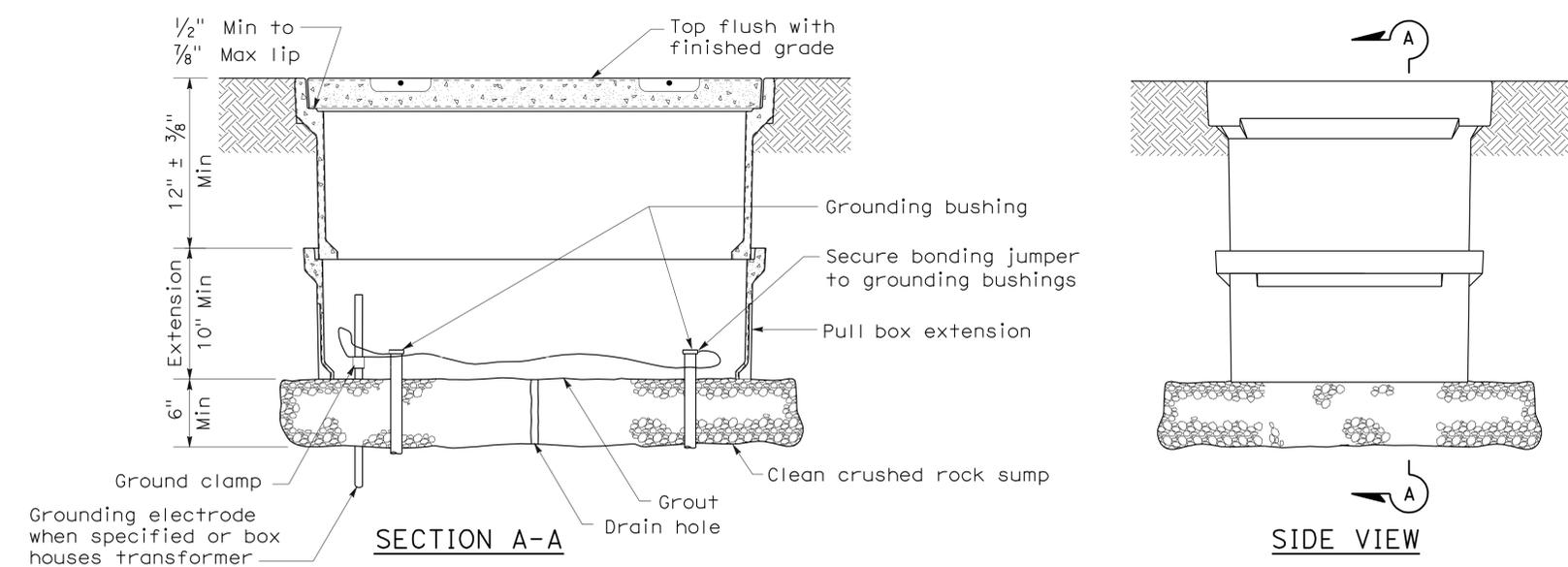
2006 REVISED STANDARD PLAN RSP ES-6E

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ	5	25.1/28.6	475	485

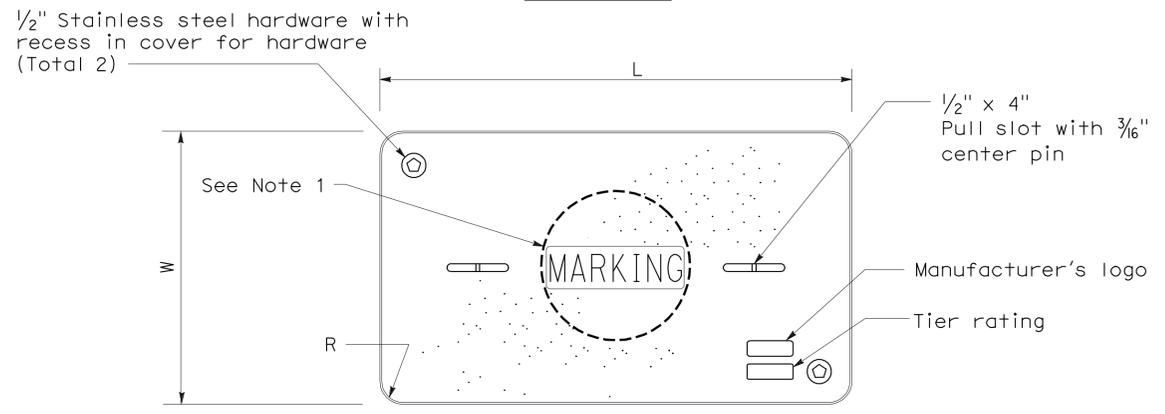
Jeffrey G. McRae
 REGISTERED ELECTRICAL ENGINEER
 January 20, 2012
 PLANS APPROVAL DATE
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REGISTERED PROFESSIONAL ENGINEER
 Jeffrey G. McRae
 No. E14512
 Exp. 6-30-12
 ELECTRICAL
 STATE OF CALIFORNIA

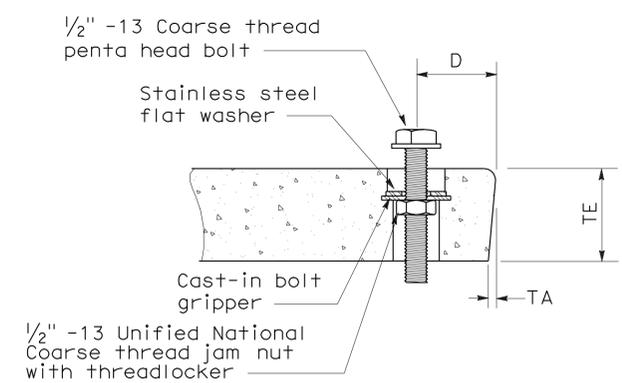
To accompany plans dated 6-4-12



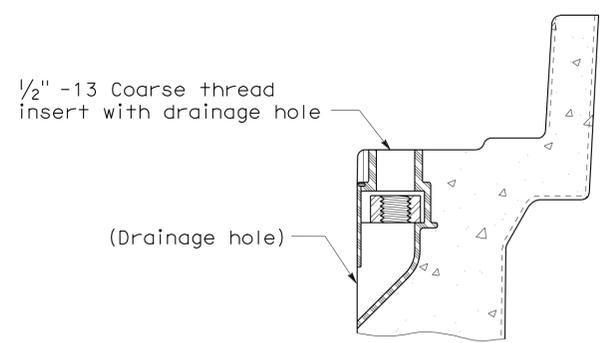
INSTALLATION DETAILS
DETAIL A



COVER TOP VIEW



TYPICAL COVER CAPTIVE BOLT
(Or similar)



TYPICAL THREADED INSERT
(Or similar)

NOTES ON PULL BOXES:

- Pull box covers must be marked as follows: "SERVICE" Service circuits between service point and service disconnect; "SPRINKLER-CONTROL" sprinkler control circuits, 50 V or less; "CALTRANS" on all pull boxes, except pull boxes marked "SPRINKLER-CONTROL"; and "TELEPHONE" Telephone service;
 - No. 3/2 pull box.
 - "SIGNAL" - Traffic signal circuits with or without street or sign lighting circuits.
 - "ST LIGHTING" - Street or sign lighting circuits where voltage is under 600 V.
 - No. 5, 6, 9 or 9A pull box.
 - "TRAFFIC SIGNAL" - Traffic signal circuits with or without street or sign lighting circuits.
 - "STREET LIGHTING" - Street or sign lighting circuits where voltage is under 600 V.
 - "STREET LIGHTING-HIGH VOLTAGE" - Street or sign lighting circuits where voltage is above 600 V.
 - "IRRIGATION" - Circuits to irrigation controller 120 V or more.
 - "RAMP METER" - Ramp meter circuits.
 - "COUNT STATION" - Count or speed monitor circuits.
 - "COMMUNICATIONS" - Communication circuits.
 - "TOS COMMUNICATIONS" - TOS communication line.
 - "TOS POWER" - TOS power.
 - "TDC POWER" - Telephone demarcation cabinet power.
 - "CCTV" - Closed circuit television circuits.
 - "TMS" - Traffic monitoring station circuits.
 - "CMS" - Changeable message sign circuits.
 - "HAR" - Highway advisory radio circuits.
- The nominal dimensions of the opening in which the cover sets must be the same as the cover dimensions (L and W) plus 1/8" or greater.
- Covers and boxes must be interchangeable with California Standard. When interchanged with a standard, the top surfaces must be flush within 1/8". Top outside radius of covers and pull boxes must have a 1/8" radius.
- Pull box extension may be another pull box as long as the bottom edge of the pull box can fit into the cover opening.

DIMENSION TABLE										
PULL BOX	PULL BOX			COVER						
	Minimum Depth Box	Minimum Depth Extension	Maximum Weight	L	W	R	TE	TA	D	Maximum Weight
No. 3/2	12"	N/A	40 lb	1' - 3 3/8"	10 1/8"	1 3/8"	2"	1/8"	1 3/4"	30 lb
No. 5	12"	10"	55 lb	1' - 11 1/4"	1' - 1 3/4"	1 3/8"	2"	1/8"	1 3/4"	60 lb
No. 6	12"	10"	70 lb	2' - 6 1/2"	1' - 5 1/2"	1 3/8"	2"	1/8"	2"	85 lb

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS
(PULL BOX)
NO SCALE

NSP ES-8A DATED JANUARY 20, 2012 SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

2006 NEW STANDARD PLAN NSP ES-8A

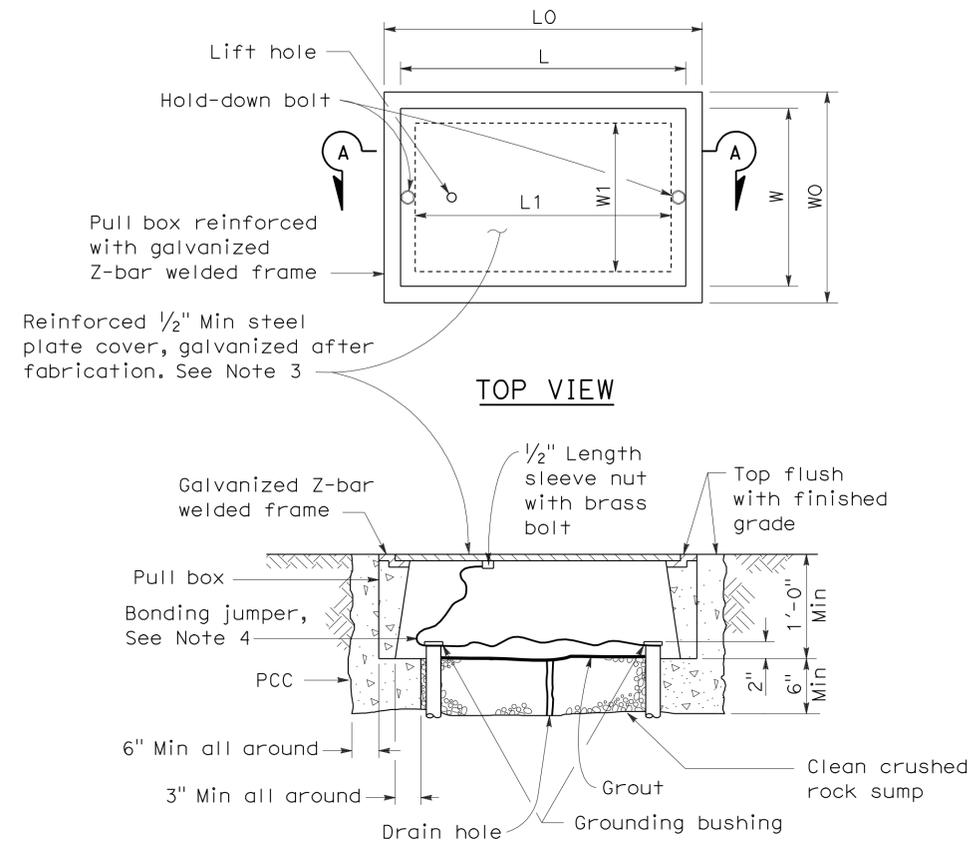
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ	5	25.1/28.6	476	485

Jeffery G. McRae
 REGISTERED ELECTRICAL ENGINEER
 January 20, 2012
 PLANS APPROVAL DATE

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2006 NEW STANDARD PLAN NSP ES-8B

To accompany plans dated 6-4-12



No. 3 1/2(T), No. 5(T) AND No. 6(T) TRAFFIC PULL BOX

NOTES ON PULL BOXES:

- Traffic pull box shall be provided with steel cover and special concrete footing. Steel cover shall have embossed non-skid pattern.
- Steel reinforcing shall be as regularly used in the standard products of the respective manufacturer.
- Pull box covers must be marked as follows: "SERVICE" Service circuits between service point and service disconnect; "SPRINKLER-CONTROL" Sprinkler control circuits, 50 V or less; "CALTRANS" On all pull boxes, except pull boxes marked "SPRINKLER-CONTROL"; and "TELEPHONE" Telephone service.
 - No. 3 1/2(T) pull box.
 - "SIGNAL" - Traffic signal circuits with or without street or sign lighting circuits.
 - "ST LIGHTING" - Street or sign lighting circuits where voltage is under 600 V.
 - No. 5(T) or 6(T) pull box.
 - "TRAFFIC SIGNAL" - Traffic signal circuits with or without street or sign lighting circuits.
 - "STREET LIGHTING" - Street or sign lighting circuits where voltage is under 600 V.
 - "STREET LIGHTING-HIGH VOLTAGE" - Street or sign lighting circuits where voltage is above 600 V.
 - "IRRIGATION" - Circuits to irrigation controller 120 V or more.
 - "RAMP METER" - Ramp meter circuits.
 - "COUNT STATION" - Count or speed monitor circuits.
 - "COMMUNICATION" - Communication circuits.
 - "TOS COMMUNICATIONS" - TOS communications line.
 - "TOS POWER" - TOS power.
 - "TDC POWER" - Telephone demarcation cabinet power.
 - "CCTV" - Closed circuit television circuits.
 - "TMS" - Traffic monitoring station circuits.
 - "CMS" - Changeable message sign circuits.
 - "HAR" - Highway advisory radio circuits.
- Bonding jumper for metal covers shall be 3' long, minimum.
- The nominal dimensions of the opening in which the cover sets must be the same as the cover dimensions except the length and width dimensions shall be 1/8" greater.
- Covers and boxes must be interchangeable with California standard male and female gages. When interchanged with a standard male or female gage, the top surfaces must be flush within 1/8".

PULL BOX	BOX						COVER				
	Minimum * Thickness	Minimum Depth Box and Extension	W0	L0	L1	W1	L **	W **	R	Edge Thickness	Edge Taper
No. 3 1/2(T)	1 1/2"	1'-0"	1'-5" ± 1"	1'-8 7/8" ±	1'-2 1/2" ±	10 5/8" ± 1"	1'-8" ±	1'-1 3/4" ±	0"	1/2"	None
No. 5(T)	1 3/4"	1'-0"	1'-11 1/2" ± 1"	2'-5 1/2" ±	1'-7" ±	1'-1" ± 1"	2'-3" ±	1'-4" ±	0"	1/2"	None
No. 6(T)	2"	1'-0"	2'-6" ± 1"	2'-11 1/2" ±	1'-11 1/2" ±	1'-5" ± 1"	2'-9" ±	1'-8" ±	0"	1/2"	None

* Excluding conduit web ** Top dimension

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
 (TRAFFIC RATED PULL BOX)**
 NO SCALE

NSP ES-8B DATED JANUARY 20, 2012 SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

NEW STANDARD PLAN NSP ES-8B

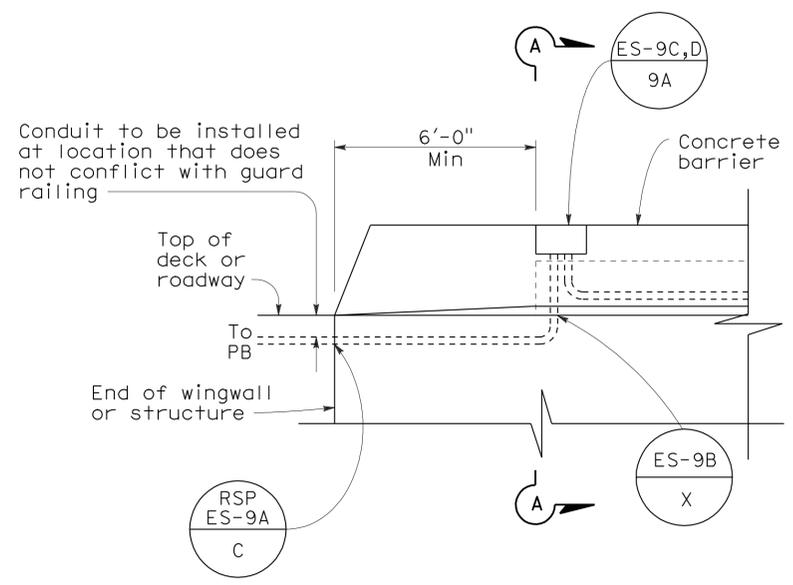
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ	5	25.1/28.6	476A	485

Jeffery G. McRae
 REGISTERED ELECTRICAL ENGINEER
 October 5, 2007
 PLANS APPROVAL DATE
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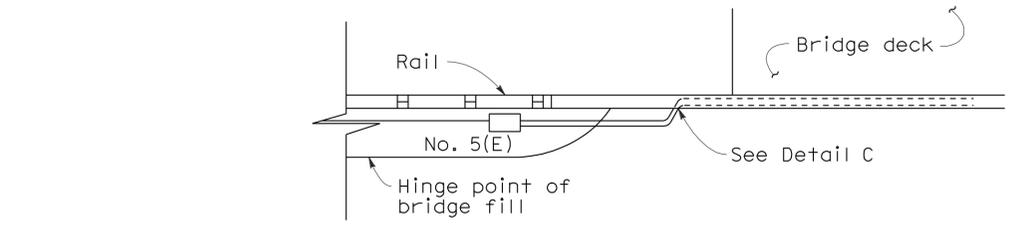
REGISTERED PROFESSIONAL ENGINEER
 Jeffery G. McRae
 No. E14512
 Exp. 6-30-08
 ELECTRICAL
 STATE OF CALIFORNIA

To accompany plans dated 6-4-12

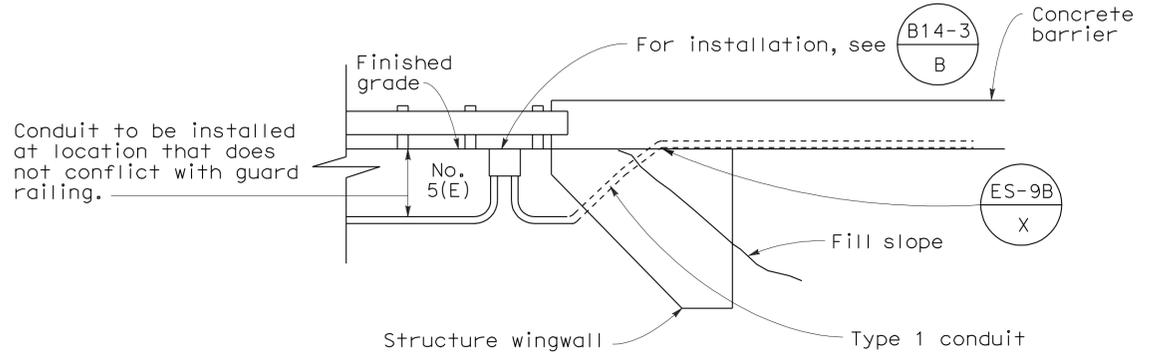
2006 REVISED STANDARD PLAN RSP ES-9A



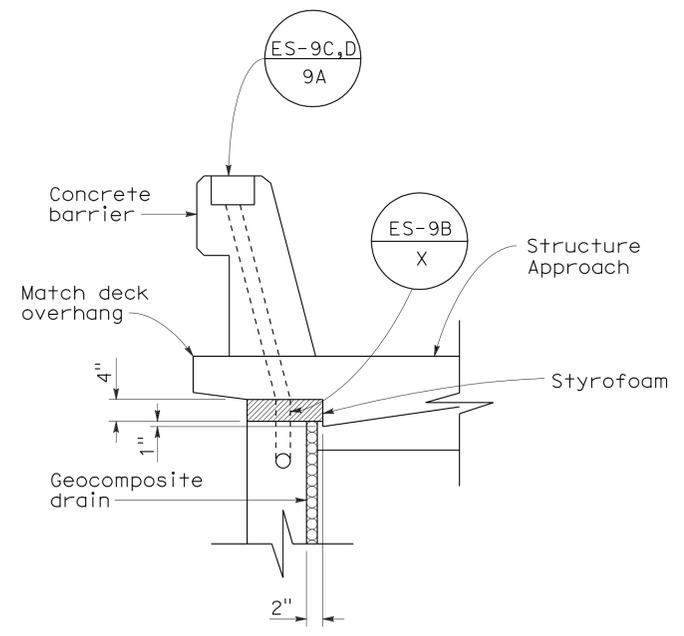
SIDEVIEW



TOP VIEW

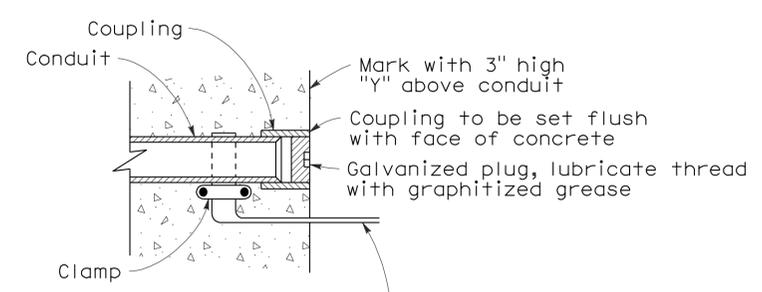


**SIDE VIEW
DETAIL I
CONDUIT TERMINATION**



SECTION A-A

**DETAIL A
CONDUIT TERMINATION**



**DETAIL C
CONDUIT TERMINATION**

Copper bonding strap install only at structure construction joint, extend at least 6" from face of concrete

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS
(ELECTRICAL DETAILS
STRUCTURE INSTALLATIONS)**

NO SCALE

RSP ES-9A DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-9A DATED MAY 1, 2006 - PAGE 454 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-9A

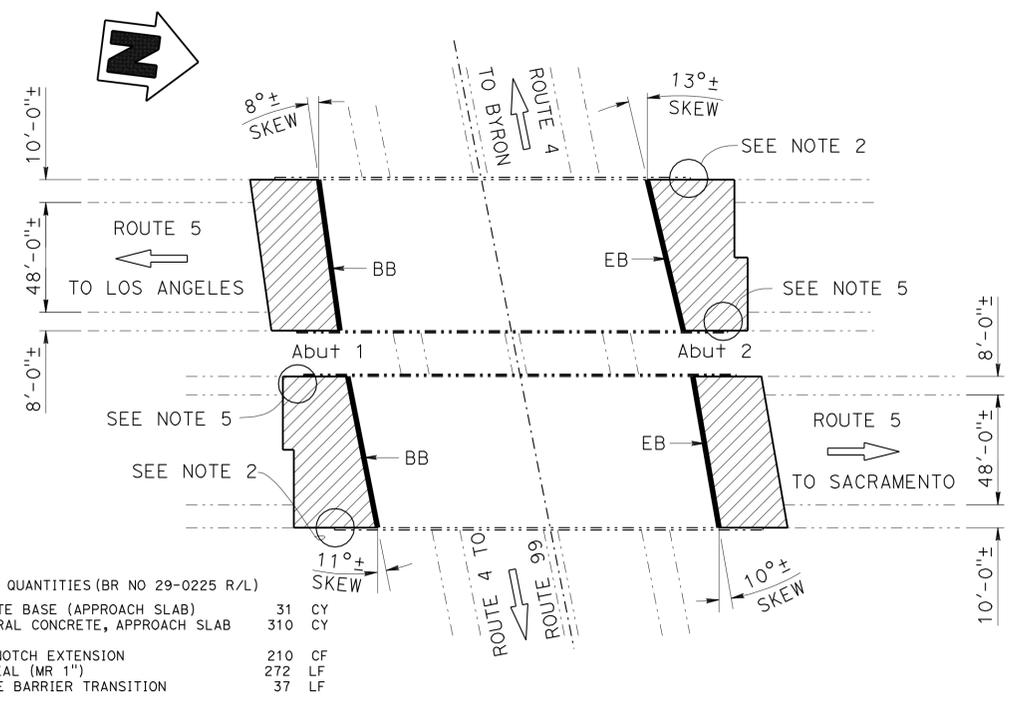
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	5	25.1/28.6	477	485

Greg Thornton 01-09-12
 REGISTERED CIVIL ENGINEER DATE

6-4-12
 PLANS APPROVAL DATE

G.P. Thornton
 No. 78013
 Exp. 09/30/13
 CIVIL
 STATE OF CALIFORNIA

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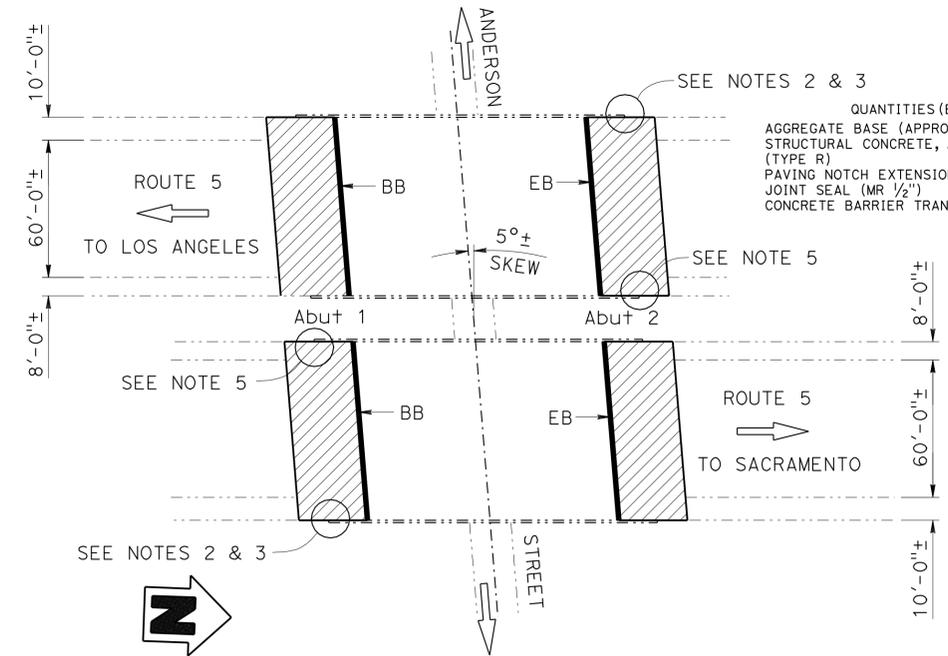


QUANTITIES (BR NO 29-0225 R/L)

AGGREGATE BASE (APPROACH SLAB)	31	CY
STRUCTURAL CONCRETE, APPROACH SLAB (TYPE R)	310	CY
PAVING NOTCH EXTENSION	210	CF
JOINT SEAL (MR 1")	272	LF
CONCRETE BARRIER TRANSITION	37	LF

ROUTE 5/4 SEPARATION (CHARTER WAY UNDERCROSSING)

BR NO. 29-0225R/L, ROUTE 5, SJ, PM 25.35
 1" = 40'



QUANTITIES (BR NO 29-0229 R/L)

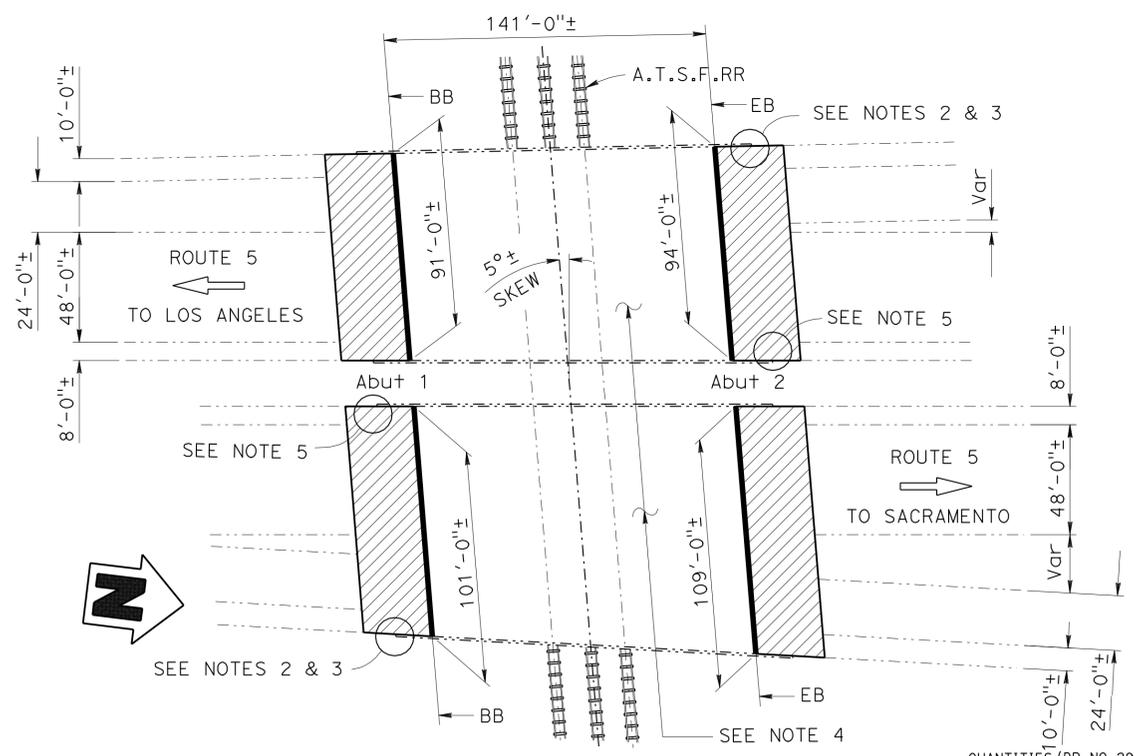
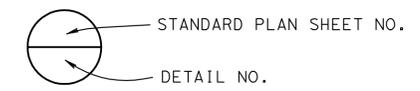
AGGREGATE BASE (APPROACH SLAB)	35	CY
STRUCTURAL CONCRETE, APPROACH SLAB (TYPE R)	347	CY
PAVING NOTCH EXTENSION	237	CF
JOINT SEAL (MR 1/2")	316	LF
CONCRETE BARRIER TRANSITION	37	LF

ANDERSON STREET UNDERCROSSING

BR NO. 29-0229R/L, ROUTE 5, SJ, PM 25.64
 1" = 40'

STANDARD PLANS DATED MAY 2006

- RSP A77J4 METAL BEAM GUARD RAILING TRANSITION RAILING (TYPE WB)
- RSP B6-21 JOINT SEALS (MAXIMUM MOVEMENT RATING = 2")



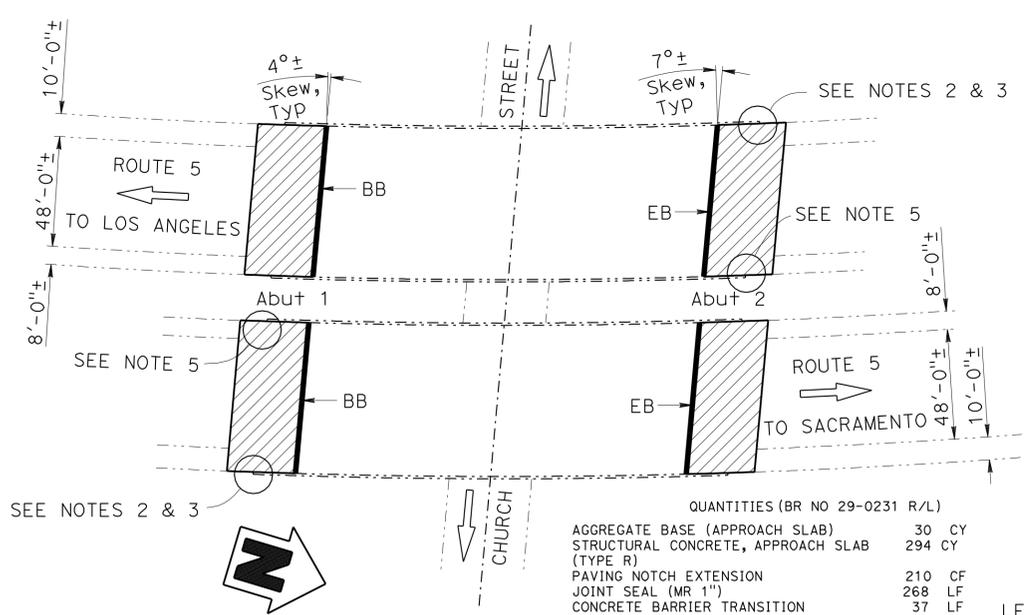
NOTE:
 THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

TAYLOR STREET OVERHEAD

BR NO. 29-0230R/L, RTE 5, SJ, PM 25.78
 1" = 40'

QUANTITIES (BR NO 29-0230 R/L)

PREPARE CONCRETE BRIDGE DECK SURFACE	27,800	SOFT
AGGREGATE BASE (APPROACH SLAB)	44	CY
STRUCTURAL CONCRETE, APPROACH SLAB (TYPE R)	437	CY
PAVING NOTCH EXTENSION	297	CF
JOINT SEAL (MR 1/2")	397	LF
TREAT BRIDGE DECK	27,800	SOFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	309	GAL
CONCRETE BARRIER TRANSITION	37	LF



QUANTITIES (BR NO 29-0231 R/L)

AGGREGATE BASE (APPROACH SLAB)	30	CY
STRUCTURAL CONCRETE, APPROACH SLAB (TYPE R)	294	CY
PAVING NOTCH EXTENSION	210	CF
JOINT SEAL (MR 1")	268	LF
CONCRETE BARRIER TRANSITION	37	LF

CHURCH STREET UNDERCROSSING

BR NO. 29-0231R/L, ROUTE 5, SJ, PM 25.99
 1" = 40'

NOTES:

- All Exist approach slab to be removed. See "ROAD PLANS" for replacement of removed Exist approach slab outside of Structure Approach Type R(30D) limits.
- Remove Exist terminal connector and replace with new concrete barrier transition. For details, see "EXISTING BARRIER RAILING TYPE 9" on "CONCRETE BARRIER TRANSITION DETAILS NO. 1" sheet.
- Existing electrical conduit to be protected during removal of existing terminal connector, see E-sheets for conduit replacement.
- Prepare and treat bridge deck with high molecular weight methacrylate.
- See "EXISTING BARRIER RAILING TYPE 9" on "CONCRETE BARRIER TRANSITION DETAILS NO. 2" sheet.

LEGEND:

- - - - - Indicates Exist structure.
- Indicates location of remove Exist joint seal and place new joint seal. For details, see "MISCELLANEOUS DETAILS" sheet.
- ▨ Indicates place new structure approach type R(30D), with paving notch extension. For details, see "STRUCTURE APPROACH TYPE R(30D)" sheet.

DESIGN ENGINEER <i>Jeff Sims</i>	DESIGN	BY <i>Greg Thornton</i>	CHECKED <i>Mario Guadamuz</i>	LOAD FACTOR DESIGN	BY
	DETAILS	BY <i>Jie Tang</i>	CHECKED <i>Mario Guadamuz</i>	LAYOUT	BY <i>Greg Thornton</i>
	QUANTITIES	BY <i>Greg Thornton</i>	CHECKED <i>Eric Watson</i>	SPECIFICATIONS	BY <i>X</i>

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
 STRUCTURE DESIGN
DESIGN BRANCH 1

BRIDGE NO.	Various
POST MILE	Varies

**ROUTE 5 BRIDGES
 GENERAL PLAN NO. 1**

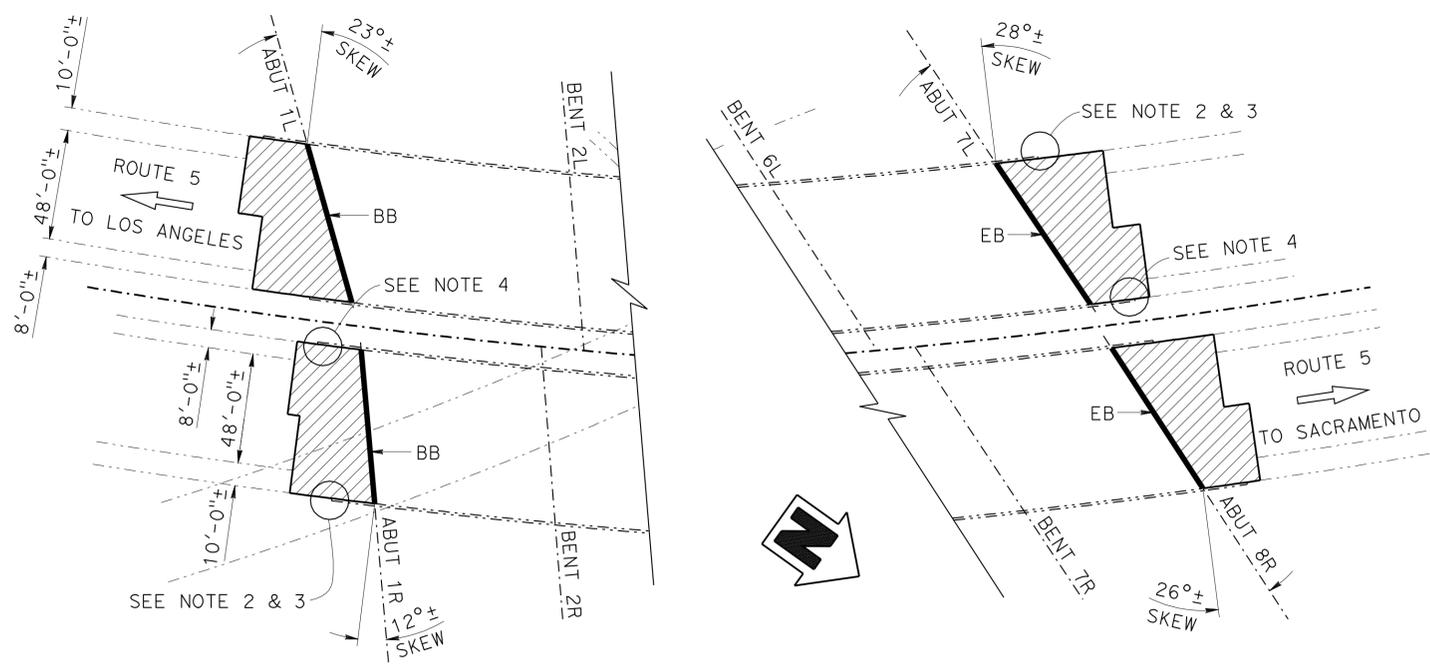
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	5	25.1/28.6	478	485

Greg Thornton 01-09-12
REGISTERED CIVIL ENGINEER DATE

6-4-12
PLANS APPROVAL DATE

G.P. Thornton
No. 78013
Exp. 09/30/13
CIVIL
STATE OF CALIFORNIA

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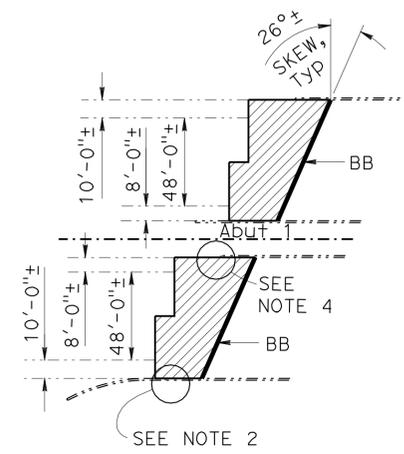
- NOTES:
- All Exist approach slab to be removed, except viaduct ramps "A", "E", "H" and "I" at stockton channel. See "ROAD PLANS" for replacement of removed Exist approach slab outside of Structure Approach Type R(30D) limits.
 - Remove Exist terminal connector and replace with new concrete barrier transition. For details, see "EXISTING BARRIER RAILING TYPE 9-11" on "CONCRETE BARRIER TRANSITION DETAILS NO. 1" sheet.
 - Existing electrical conduit to be protected during removal of existing terminal connector, see E-sheets for conduit replacement.
 - See "EXISTING BARRIER RAILING TYPE 9-11" on "CONCRETE BARRIER TRANSITION DETAILS NO. 3" sheet.

QUANTITIES (BR NO 29-0232 R/L)

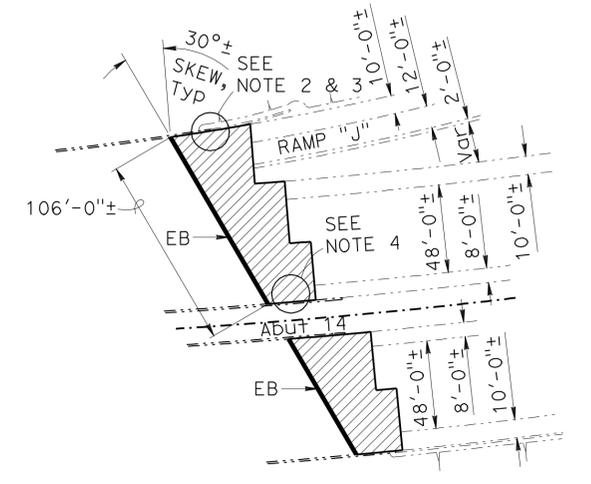
AGGREGATE BASE (APPROACH SLAB)	36	CY
STRUCTURAL CONCRETE, APPROACH SLAB (TYPE R)	360	CY
PAVING NOTCH EXTENSION	220	CF
JOINT SEAL (MR 1/2")	291	LF
CONCRETE BARRIER TRANSITION	37	LF

ROUTE 5/4 SEPARATION
BR NO. 29-0232R/L, ROUTE 5, SJ, PM 26.12
1" = 40'

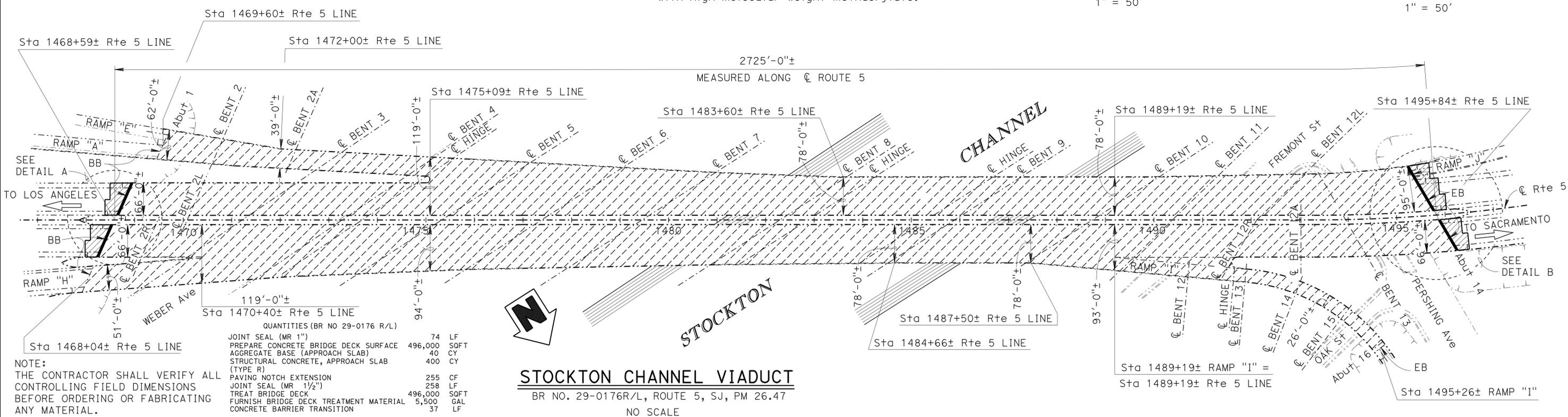
- LEGEND:
- - - - - Indicates Exist structure.
 - Indicates location of remove Exist joint seal and place new joint seal. For details, see "MISCELLANEOUS DETAILS" sheet.
 - ▨ Indicates place new structure approach type R(30D), with paving notch extension. For details, see "STRUCTURE APPROACH TYPE R(30D)" sheet.
 - ▨ Indicates limits of prepare and treat bridge deck with high molecular weight methacrylate.



DETAIL A
1" = 50'



DETAIL B
1" = 50'



QUANTITIES (BR NO 29-0176 R/L)

JOINT SEAL (MR 1")	74	LF
PREPARE CONCRETE BRIDGE DECK SURFACE	496,000	SQFT
AGGREGATE BASE (APPROACH SLAB)	40	CY
STRUCTURAL CONCRETE, APPROACH SLAB (TYPE R)	400	CY
PAVING NOTCH EXTENSION	255	CF
JOINT SEAL (MR 1/2")	258	LF
TREAT BRIDGE DECK	496,000	SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	5,500	GAL
CONCRETE BARRIER TRANSITION	37	LF

STOCKTON CHANNEL VIADUCT
BR NO. 29-0176R/L, ROUTE 5, SJ, PM 26.47
NO SCALE

DESIGN	BY Greg Thornton	CHECKED Mario Guadamuz	LOAD FACTOR DESIGN
DETAILS	BY Jie Tang	CHECKED Mario Guadamuz	LAYOUT BY Greg Thornton
QUANTITIES	BY Greg Thornton	CHECKED Eric Watson	SPECIFICATIONS BY X

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 1

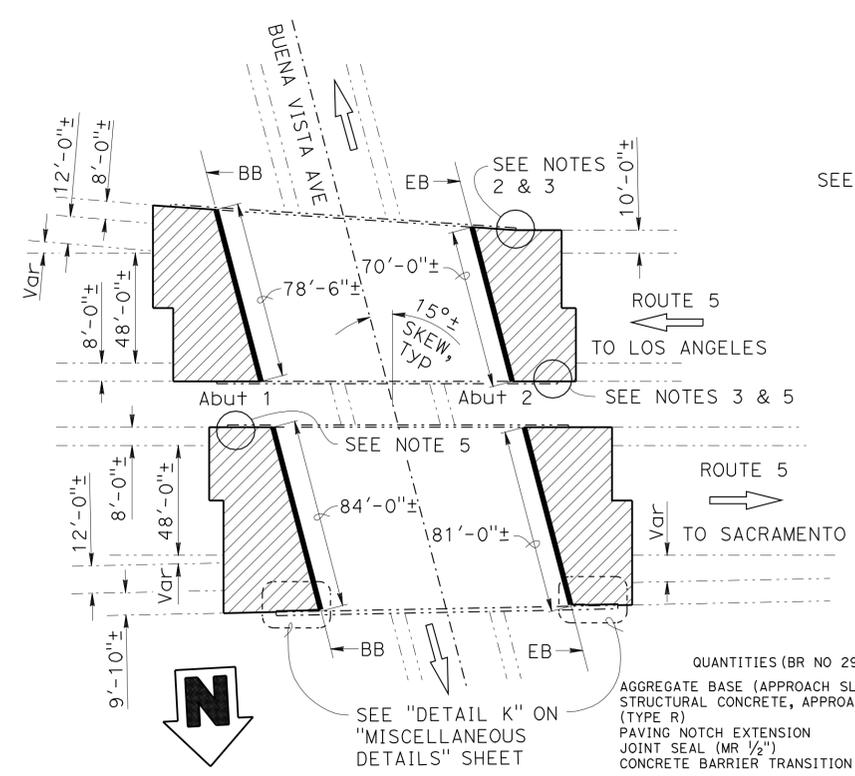
BRIDGE NO. Various
POST MILE Varies

ROUTE 5 BRIDGES
GENERAL PLAN NO. 2

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	5	25.1/28.6	479	485

Greg Thornton 01-09-12
 REGISTERED CIVIL ENGINEER DATE
 6-4-12
 PLANS APPROVAL DATE
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REGISTERED PROFESSIONAL ENGINEER
G.P. Thornton
No. 78013
Exp. 09/30/13
CIVIL
STATE OF CALIFORNIA

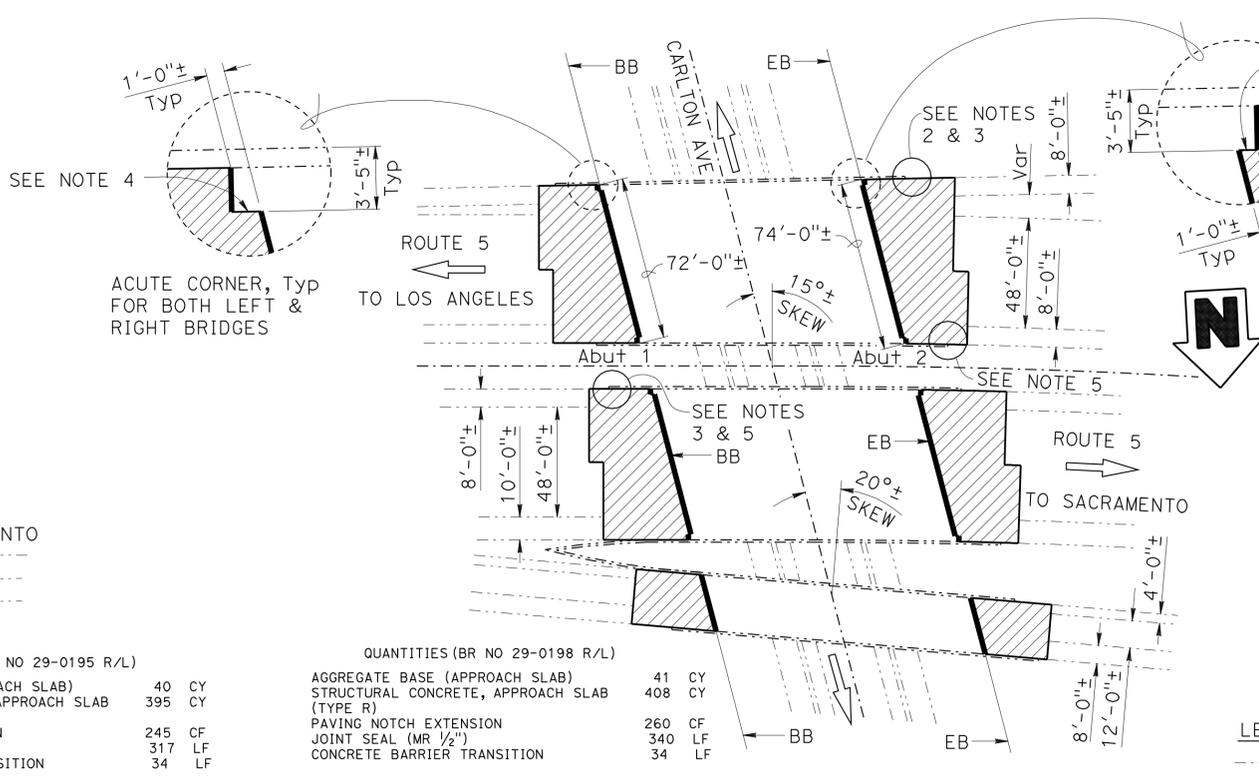


BUENA VISTA AVENUE UNDERCROSSING

BR NO. 29-0195R/L, ROUTE 5, SJ, PM 27.28
 1" = 40'

QUANTITIES (BR NO 29-0195 R/L)

AGGREGATE BASE (APPROACH SLAB)	40	CY
STRUCTURAL CONCRETE, APPROACH SLAB (TYPE R)	395	CY
PAVING NOTCH EXTENSION	245	CF
JOINT SEAL (MR 1/2")	317	LF
CONCRETE BARRIER TRANSITION	34	LF



CARLTON AVENUE UNDERCROSSING

BR NO. 29-0198R/L, 29-0198S, RTE 5, SJ, PM 27.66
 1" = 40'

QUANTITIES (BR NO 29-0198 R/L)

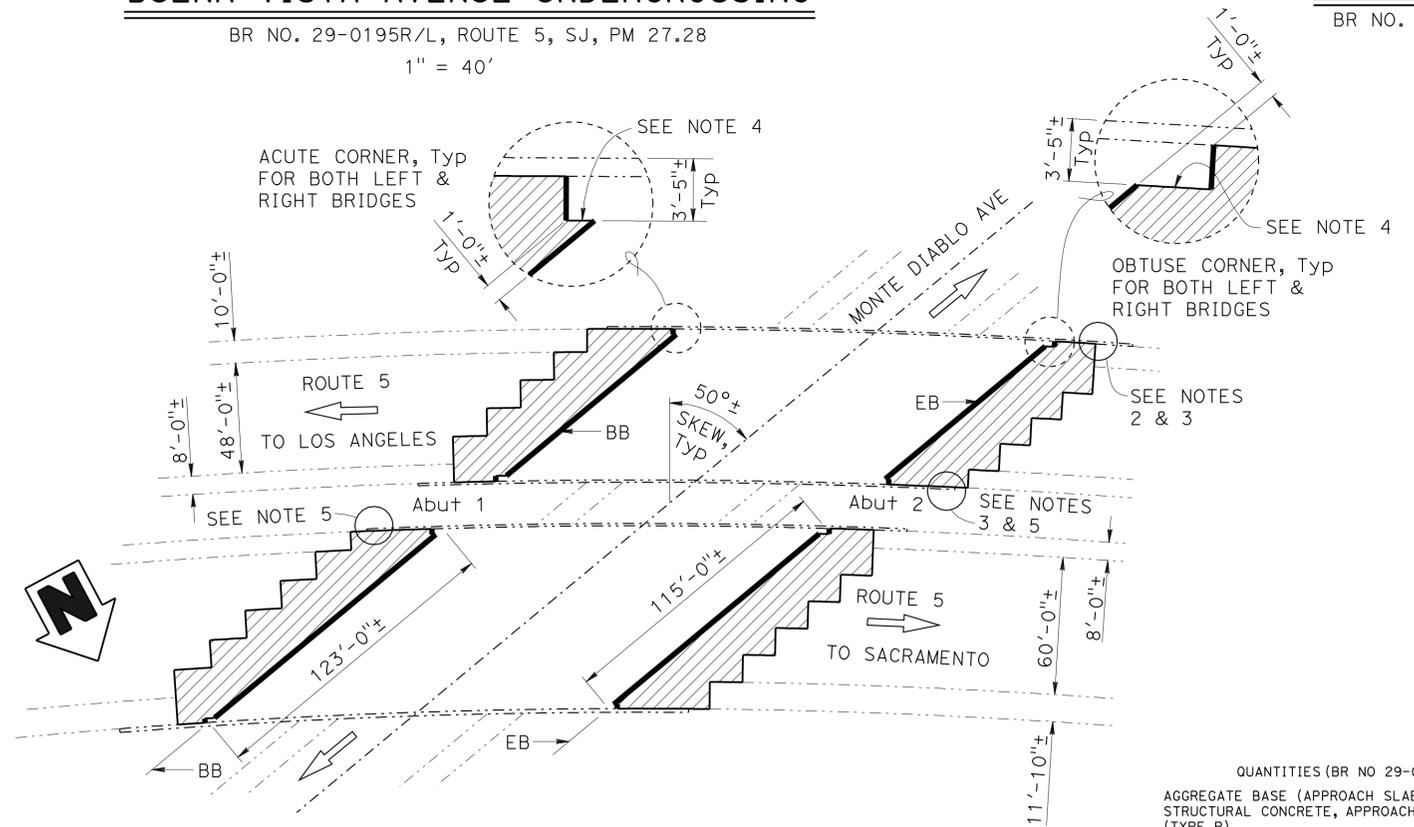
AGGREGATE BASE (APPROACH SLAB)	41	CY
STRUCTURAL CONCRETE, APPROACH SLAB (TYPE R)	408	CY
PAVING NOTCH EXTENSION	260	CF
JOINT SEAL (MR 1/2")	340	LF
CONCRETE BARRIER TRANSITION	34	LF

NOTES:

- All Exist approach slab to be removed. See "ROAD PLANS" for replacement of removed Exist approach slab outside of Structure Approach Type R(30D) limits.
- Remove Exist terminal connector and replace with new concrete barrier transition. For details, see "EXISTING BARRIER RAILING TYPE 9" on "CONCRETE BARRIER TRANSITION DETAILS NO. 1" sheet.
- Existing electrical conduit to be protected during removal of existing terminal connector, see E-sheets for conduit replacement.
- Type AL joint seal RSP (B6-21)
- See "EXISTING BARRIER RAILING TYPE 9" on "CONCRETE BARRIER TRANSITION DETAILS NO. 3" sheet.

LEGEND:

- Indicates Exist structure.
- Indicates location of remove Exist joint seal and place new joint seal. For details, see "MISCELLANEOUS DETAILS" sheet.
- Indicates place new structure approach type R(30D), with paving notch extension. For details, see "STRUCTURE APPROACH TYPE R(30D)" sheet.
- Indicates place new structure approach type R(30S). For details, see "STRUCTURE APPROACH TYPE R(30S)" sheet.

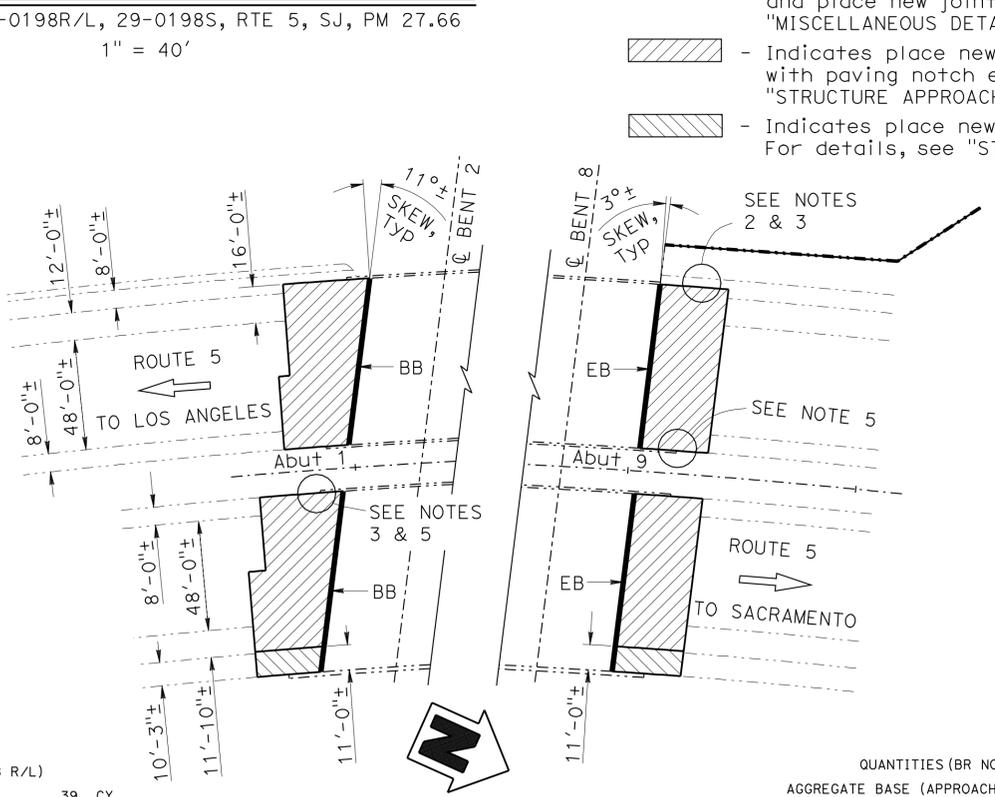


MONTE DIABLO AVENUE UNDERCROSSING

BR NO. 29-0188R/L, ROUTE 5, SJ, PM 27.91
 1" = 40'

QUANTITIES (BR NO 29-0188 R/L)

AGGREGATE BASE (APPROACH SLAB)	39	CY
STRUCTURAL CONCRETE, APPROACH SLAB (TYPE R)	390	CY
PAVING NOTCH EXTENSION	370	CF
JOINT SEAL (MR 1")	477	LF
CONCRETE BARRIER TRANSITION	34	LF



SMITH CANAL BRIDGE

BR NO. 29-0173R/L, RTE 5, SJ, PM 28.27
 1" = 40'

QUANTITIES (BR NO 29-0173 R/L)

AGGREGATE BASE (APPROACH SLAB)	33	CY
STRUCTURAL CONCRETE, APPROACH SLAB (TYPE R)	353	CY
PAVING NOTCH EXTENSION	235	CF
JOINT SEAL (MR 1")	306	LF
CONCRETE BARRIER TRANSITION	34	LF

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

Jeff Sims DESIGN ENGINEER	DESIGN	BY Greg Thornton	CHECKED Mario Guadamuz	LOAD FACTOR DESIGN	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN	BRIDGE NO.	ROUTE 5 BRIDGES GENERAL PLAN NO. 3	
	DETAILS	BY Jie Tang	CHECKED Mario Guadamuz	LAYOUT		BY Greg Thornton	DESIGN BRANCH 1		Various
	QUANTITIES	BY Greg Thornton	CHECKED Eric Watson	SPECIFICATIONS		BY X	PLANS AND SPECS COMPARED X		Varies

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS: 0 1 2 3
 UNIT: 3576 PROJECT NUMBER & PHASE: 1000000128-1 CONTRACT NO.: 10-0M7801
 DISREGARD PRINTS BEARING EARLIER REVISION DATES: 11/95/10 01/09/12 09/24/11 SHEET 3 OF 9

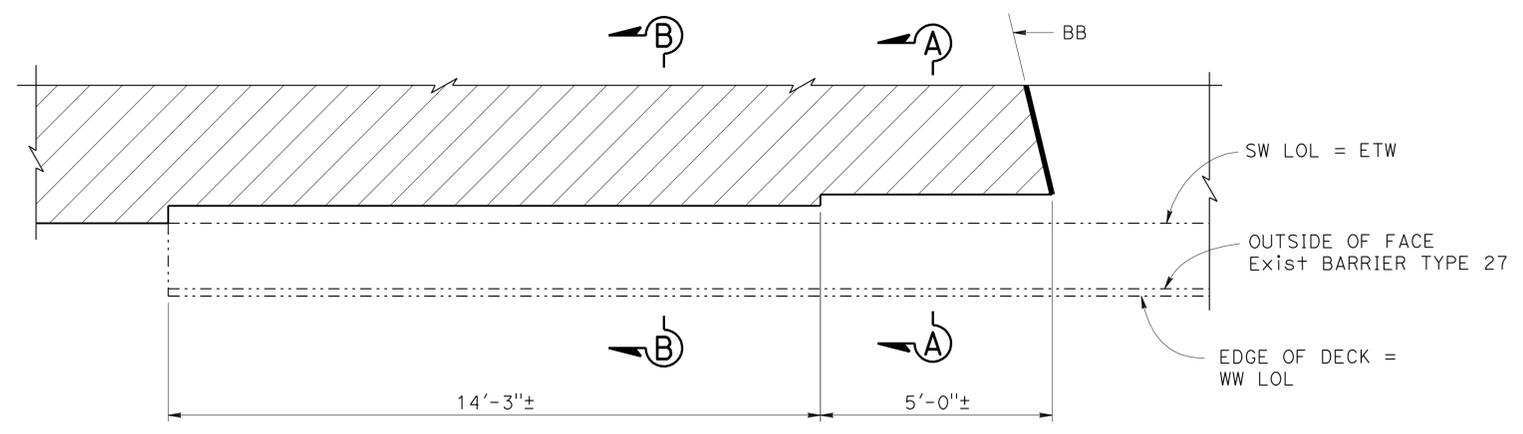
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	5	25.1/28.6	480	485

Greg Thornton 01-09-12
 REGISTERED CIVIL ENGINEER DATE

6-4-12
 PLANS APPROVAL DATE

G.P. Thornton
 No. 78013
 Exp. 09/30/13
 CIVIL
 STATE OF CALIFORNIA

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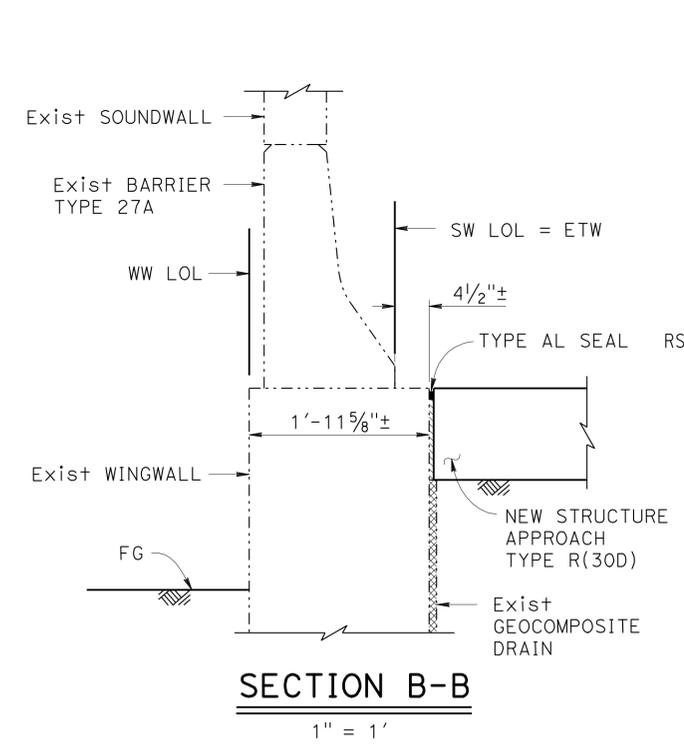
DETAIL K

1/2" = 1'-0"

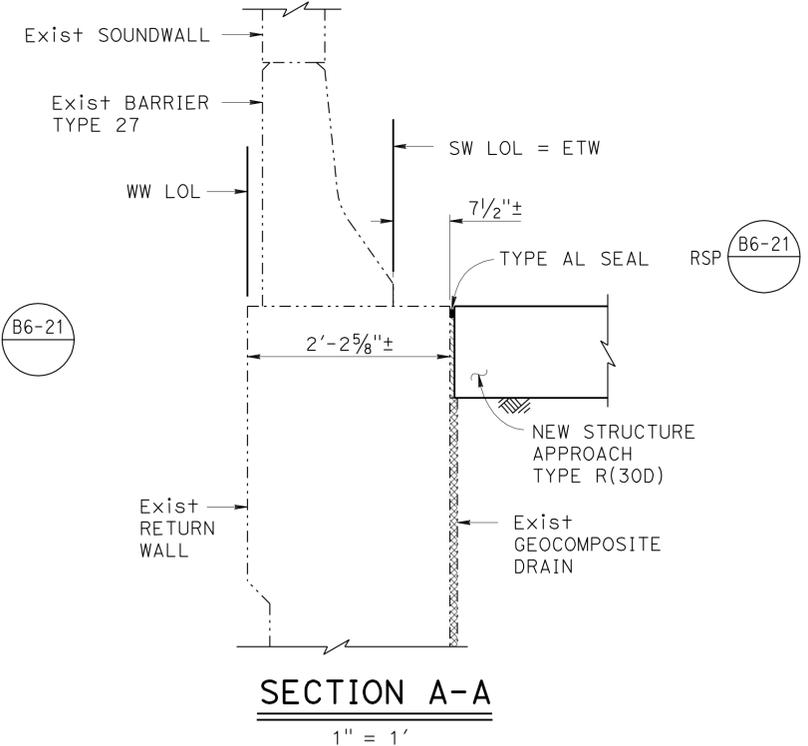
- Legend:**
- - - - - Indicates Exist structure.
 - ▬ Indicates location of remove Exist joint seal and place new joint seal.
 - ▨ Indicates place new structure approach type R(30D), see "STRUCTURE APPROACH TYPE R(30D)" sheet.
 - * - Indicates left wingwall location.
 - ** - Indicates right wingwall location.

Notes:

1. Abutment 1R shown, abutment 2R similar.
2. For locations of "DETAIL K", see "BUENA VISTA AVENUE UNDERCROSSING" on "GENERAL PLAN NO. 3" sheet.



SECTION B-B
1" = 1'



SECTION A-A
1" = 1'

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

JOINT SEAL TABLE RSP (B6-21)

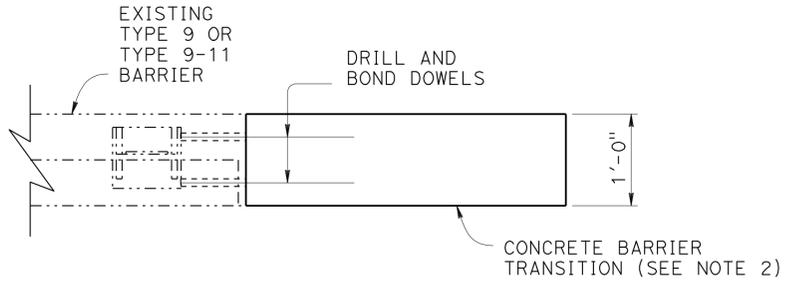
BRIDGE NUMBER	LOCATION	MINIMUM "MR" (inches)	WATERSTOP (Y/N)	APPROX LENGTH (feet)
29-0173L	Abut 1 BB	1	N	74
	Abut 9 EB	1	N	73
29-0173R	Abut 1 BB	1	N	80
	Abut 9 EB	1	N	79
29-0176L	Abut 1 BB	1 1/2	N	74
	Abut 14 EB	1 1/2	N	107
29-0176R	Abut 1 BB	1	N	74
	Abut 14 EB	1 1/2	N	77
29-0188L	Abut 1 BB	1	N	108
	Abut 2 EB	1	N	103
29-0188R	Abut 1 BB	1	N	123
	Abut 2 EB	1	N	115
29-0195L	Abut 1 BB	1/2	N	79
	Abut 2 EB	1/2	N	71
29-0195R	Abut 1 BB	1/2	N	85
	Abut 2 EB	1/2	N	82
29-0198L	Abut 1 BB	1/2	N	73
	Abut 2 EB	1/2	N	75
29-0198R	Abut 1 BB	1/2	N	70
	Abut 2 EB	1/2	N	70
29-0198S	Abut 1 BB	1/2	N	26
	Abut 2 EB	1/2	N	26
29-0225L	Abut 1 BB	1	N	68
	Abut 2 EB	1	N	68
29-0225R	Abut 1 BB	1	N	68
	Abut 2 EB	1	N	68
29-0229L	Abut 1 BB	1/2	N	79
	Abut 2 EB	1/2	N	79
29-0229R	Abut 1 BB	1/2	N	79
	Abut 2 EB	1/2	N	79
29-0230L	Abut 1 BB	1/2	N	92
	Abut 2 EB	1/2	N	95
29-0230R	Abut 1 BB	1/2	N	102
	Abut 2 EB	1/2	N	110
29-0231L	Abut 1 BB	1	N	67
	Abut 2 EB	1	N	67
29-0231R	Abut 1 BB	1	N	67
	Abut 2 EB	1	N	67
29-0232L	Abut 1 BB	1/2	N	73
	Abut 7L EB	1/2	N	76
29-0232R	Abut 1 BB	1/2	N	68
	Abut 8R EB	1/2	N	74

DESIGN BY: Greg Thornton CHECKED: Mario Guadamuz DETAILS BY: Jie Tang CHECKED: Mario Guadamuz QUANTITIES BY: Greg Thornton CHECKED: Eric Watson	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 1	BRIDGE NO.: Various POST MILE: Various	ROUTE 5 BRIDGES MISCELLANEOUS DETAILS
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)		ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3	UNIT: 3576 PROJECT NUMBER & PHASE: 1000000128-1 CONTRACT NO.: 10-0M7801	DISREGARD PRINTS BEARING EARLIER REVISION DATES REVISION DATES: 11/12/10, 01/09/12, 09/14/11, 09/28/11 SHEET 4 OF 9

USERNAME => s124486 DATE PLOTTED => 05-JUN-2012 TIME PLOTTED => 10:07

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	5	25.1/28.6	481	485

01-09-12
 REGISTERED CIVIL ENGINEER DATE
 6-4-12
 PLANS APPROVAL DATE
 G.P. Thornton
 No. 78013
 Exp. 09/30/13
 CIVIL
 STATE OF CALIFORNIA
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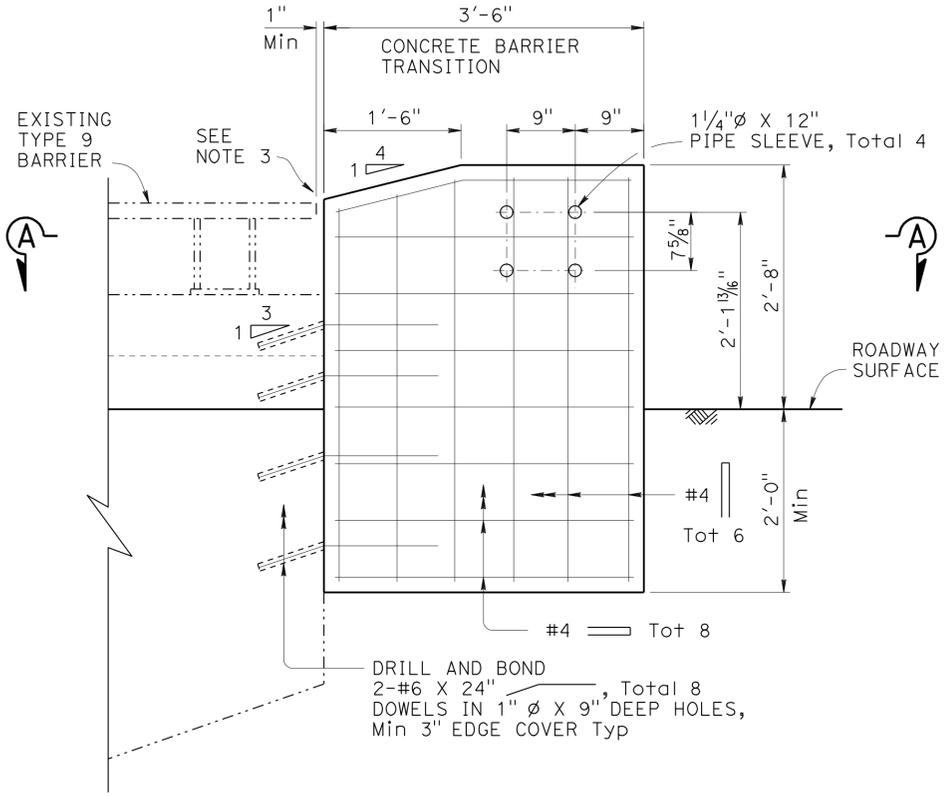


NOTES:

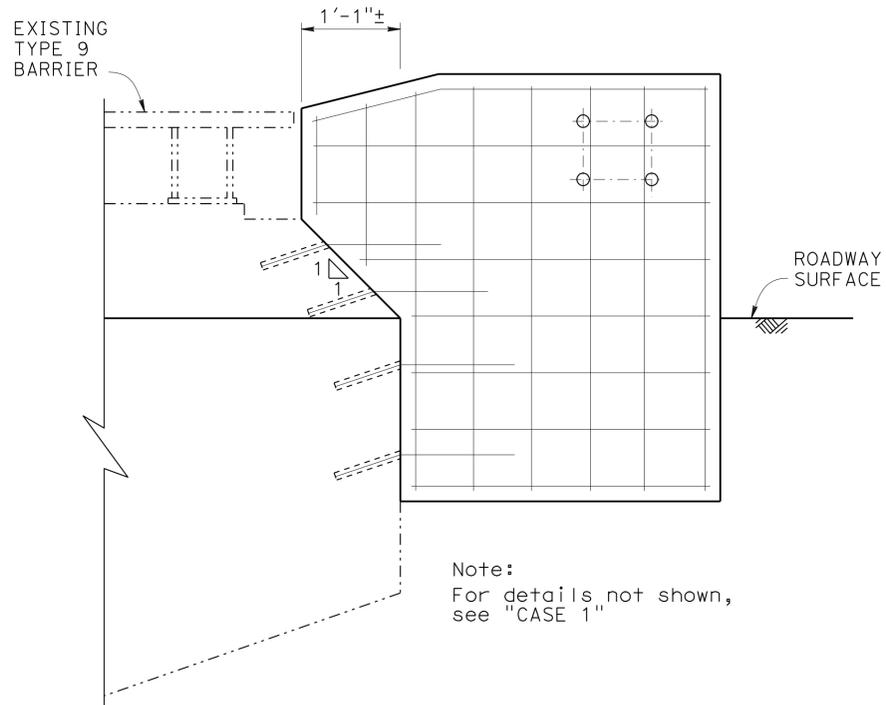
- Existing barrier railing shall be protected during removal of existing terminal connector.
- Removal of existing terminal connector not shown.
- Top of concrete barrier transition to be at or above top of barrier railing.
- Number of total locations for case 1 and case 2 is 12.

LEGEND:

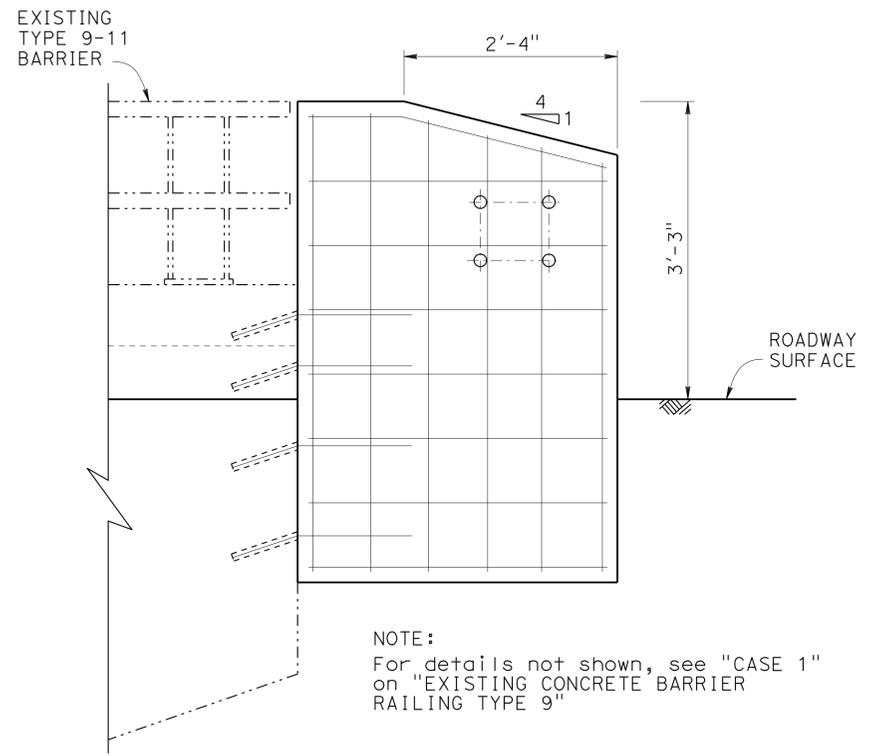
----- Indicates existing structure



CASE 1 (AT ± 11 LOCATIONS)



CASE 2 (AT ± 1 LOCATION)



NOTE:
For details not shown, see "CASE 1" on "EXISTING CONCRETE BARRIER RAILING TYPE 9"

EXISTING CONCRETE BARRIER RAILING TYPE 9-11

EXISTING CONCRETE BARRIER RAILING TYPE 9

ELEVATION RSP A77J4
1" = 1'-0"

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

DESIGN	BY Greg Thornton	CHECKED Mario Guadamuz
DETAILS	BY Jie Tang	CHECKED Mario Guadamuz
QUANTITIES	BY Greg Thornton	CHECKED Eric Watson

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

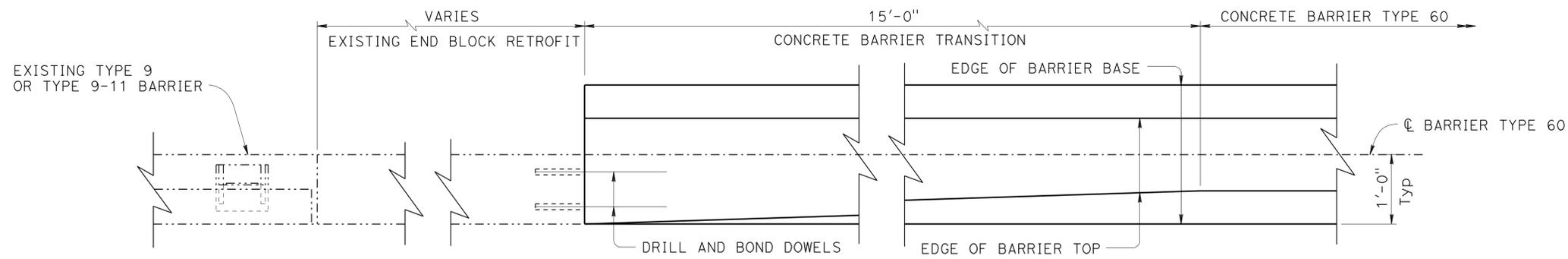
DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 1

BRIDGE NO.	Various
POST MILE	Various

ROUTE 5 BRIDGES
CONCRETE BARRIER TRANSITION DETAILS NO. 1

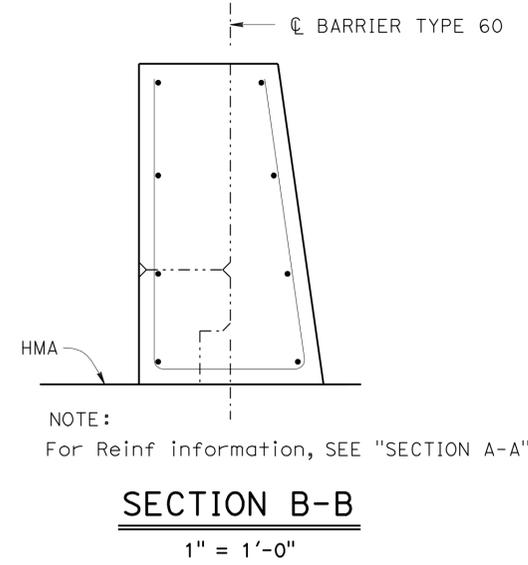
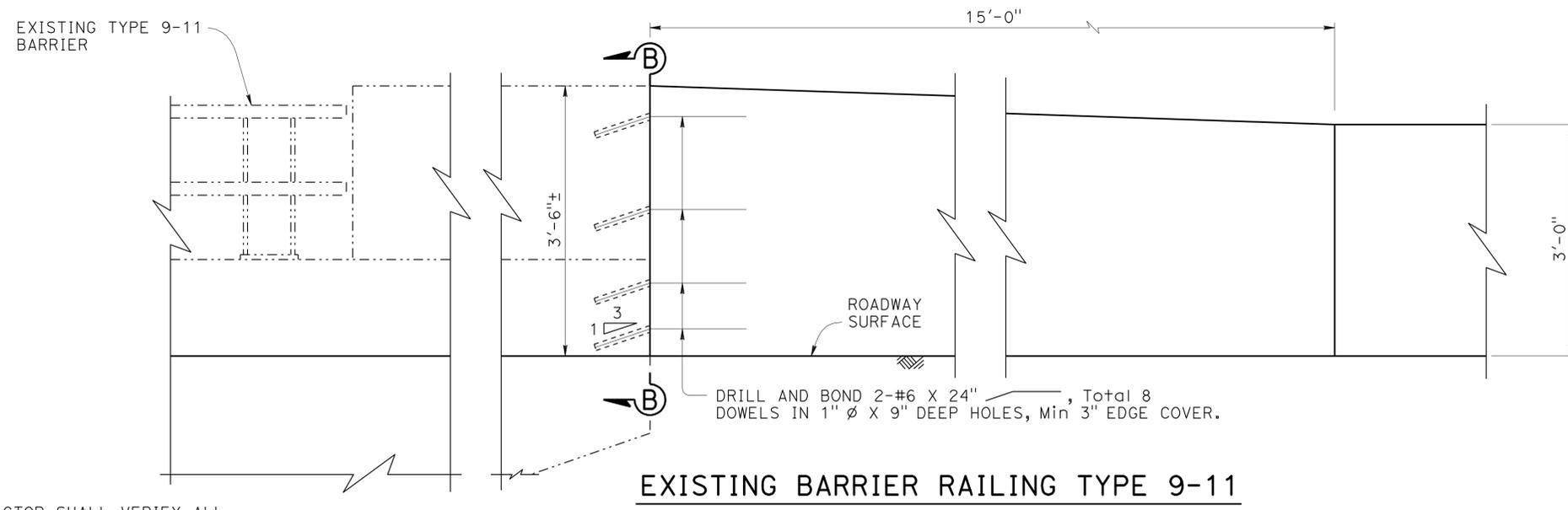
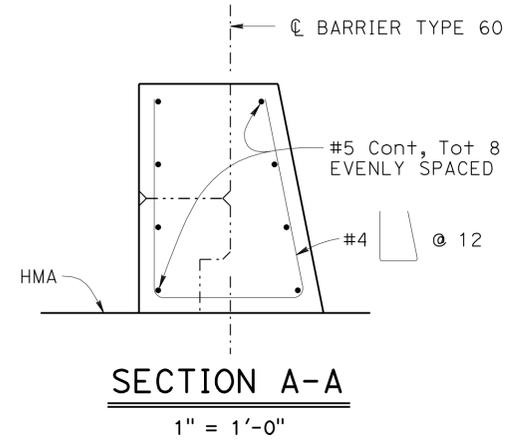
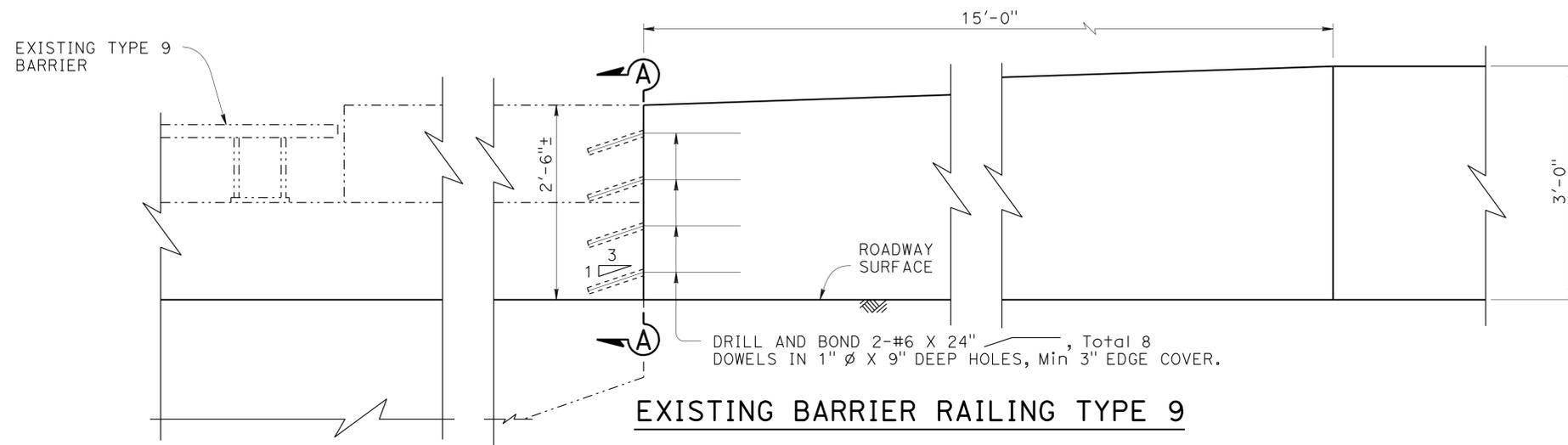
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	5	25.1/28.6	482	485

Greg Thornton 01-09-12
 REGISTERED CIVIL ENGINEER DATE
 6-4-12
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PLAN A76A
1" = 1'-0"

LEGEND:
----- Indicates existing structure



NOTE:
For Reinf information, SEE "SECTION A-A"

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

ELEVATION A76A
1" = 1'-0"

DESIGN	BY Greg Thornton	CHECKED Mario Guadamuz
DETAILS	BY Jie Tang	CHECKED Mario Guadamuz
QUANTITIES	BY Greg Thornton	CHECKED Eric Watson

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

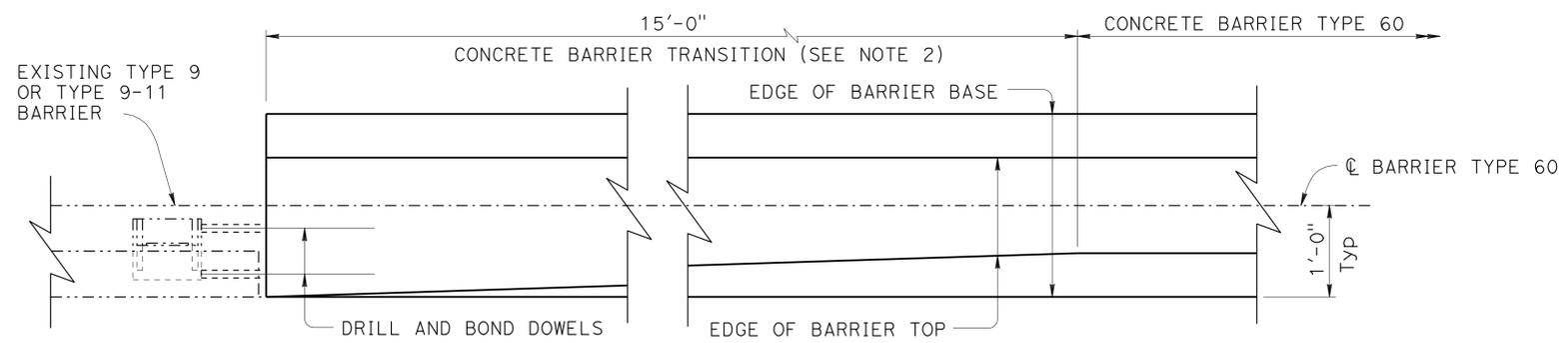
DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 1

BRIDGE NO.	Various
POST MILE	Various

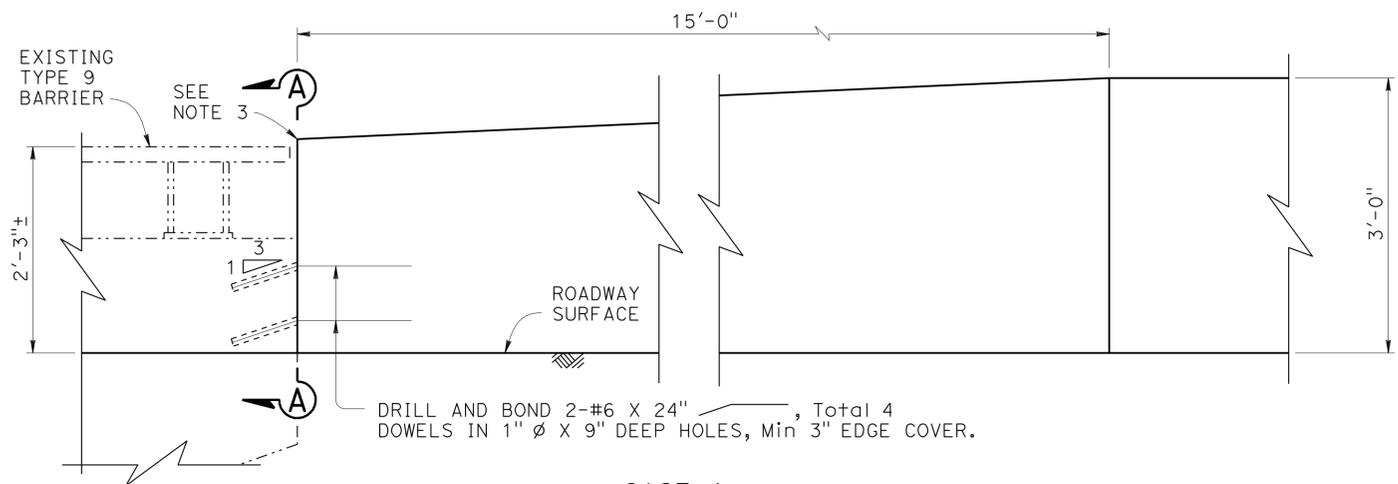
ROUTE 5 BRIDGES
CONCRETE BARRIER TRANSITION DETAILS NO. 2

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
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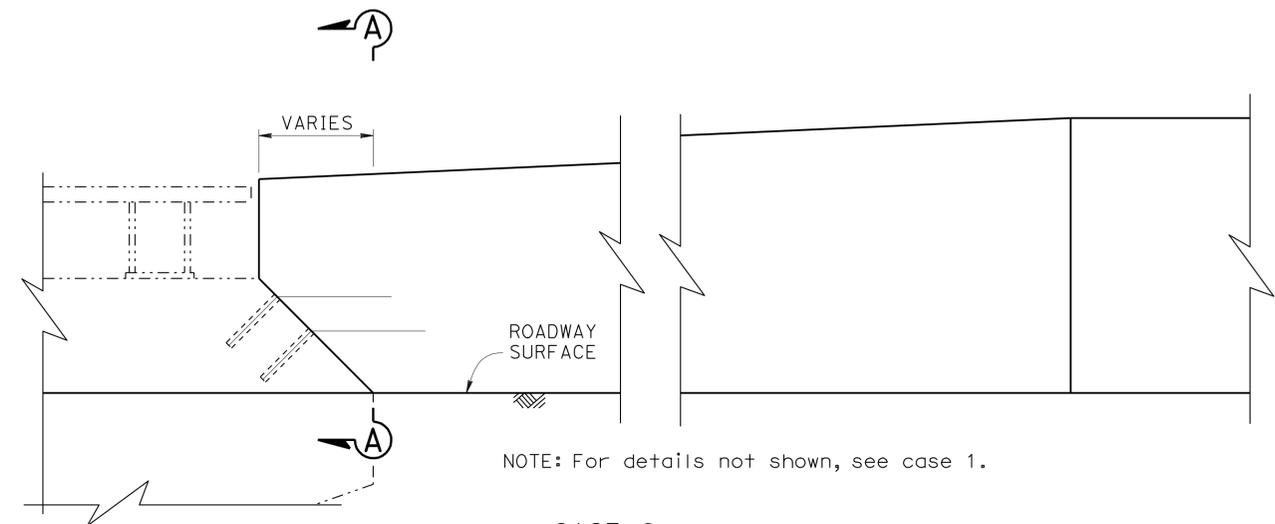
Greg Thornton 01-09-12
 REGISTERED CIVIL ENGINEER DATE
 6-4-12
 PLANS APPROVAL DATE
 G.P. Thornton
 No. 78013
 Exp. 09/30/13
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PLAN
 1" = 1'-0"
 A76A

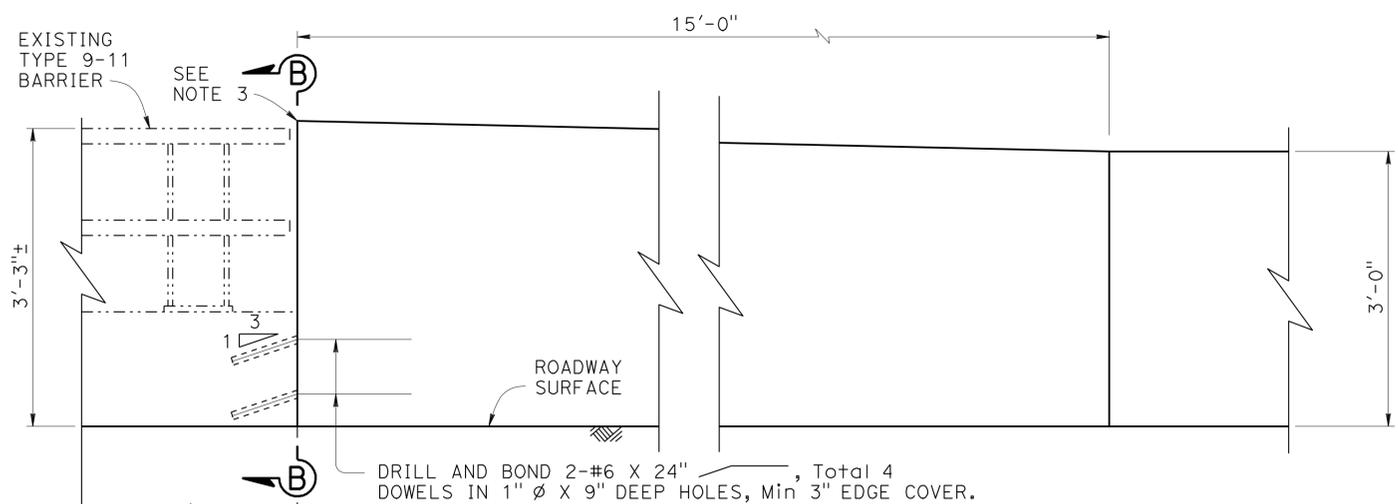


CASE 1



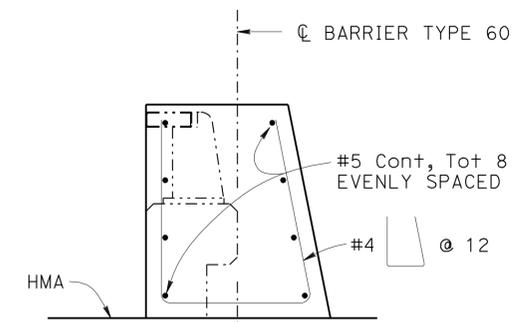
CASE 2

EXISTING BARRIER RAILING TYPE 9

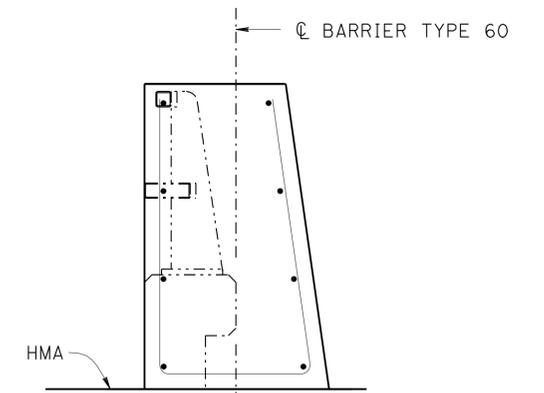


EXISTING BARRIER RAILING TYPE 9-11

ELEVATION
 1" = 1'-0"
 A76A



SECTION A-A
 1" = 1'-0"



SECTION B-B
 1" = 1'-0"

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

- NOTES:
- Existing barrier railing shall be protected during removal of existing terminal connector.
 - Removal of existing terminal connector not shown.
 - Top of concrete barrier transition to be 1" above existing barrier railing.
- LEGEND:
 ----- Indicates existing structure

DESIGN BY Greg Thornton CHECKED Mario Guadamuz DETAILS BY Jie Tang CHECKED Mario Guadamuz QUANTITIES BY Greg Thornton CHECKED Eric Watson	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 1	BRIDGE NO.	ROUTE 5 BRIDGES CONCRETE BARRIER TRANSITION DETAILS NO. 3			
			Various				
			POST MILE		Various		
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)		ORIGINAL SCALE IN INCHES FOR REDUCED PLANS		UNIT: 3576 PROJECT NUMBER & PHASE: 1000000128-1 CONTRACT NO.: 10-0M7801	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES 09/15/11 09/20/11 01-09-12	SHEET 7 OF 9

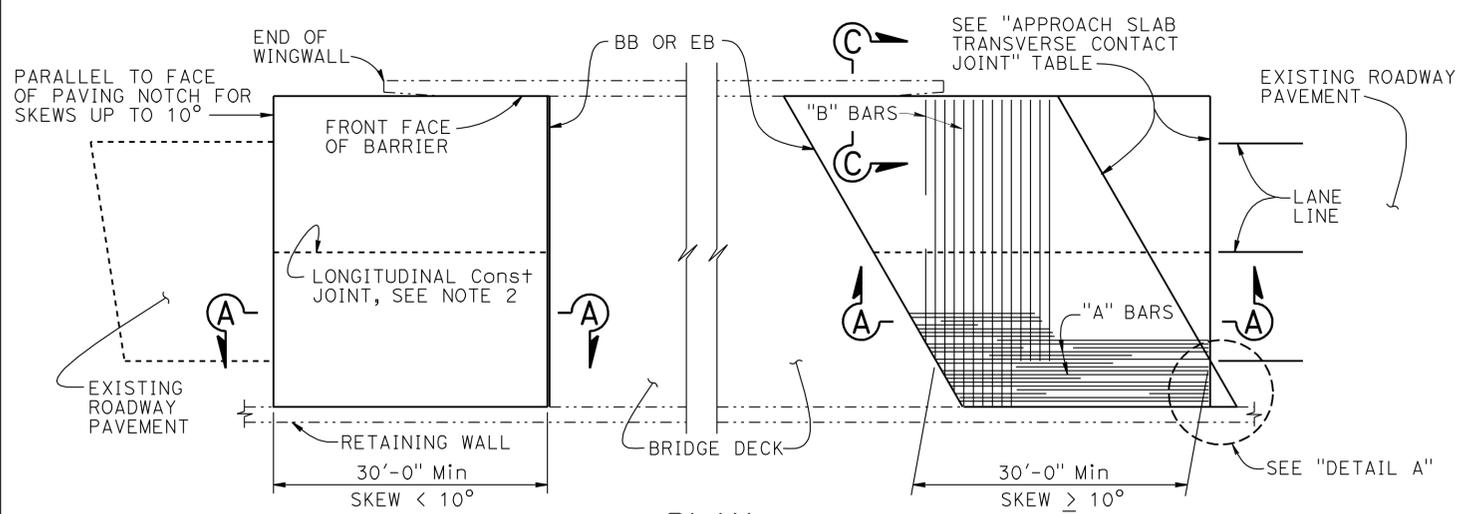
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	5	25.1/28.6	484	485

G.P. Thornton 01-09-12
 REGISTERED CIVIL ENGINEER DATE

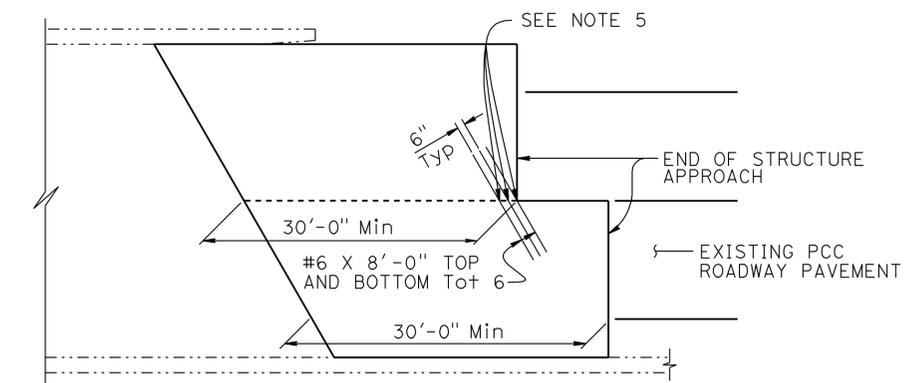
6-4-12
 PLANS APPROVAL DATE

G.P. Thornton
 No. 78013
 Exp. 09/30/13
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 STATE OF CALIFORNIA

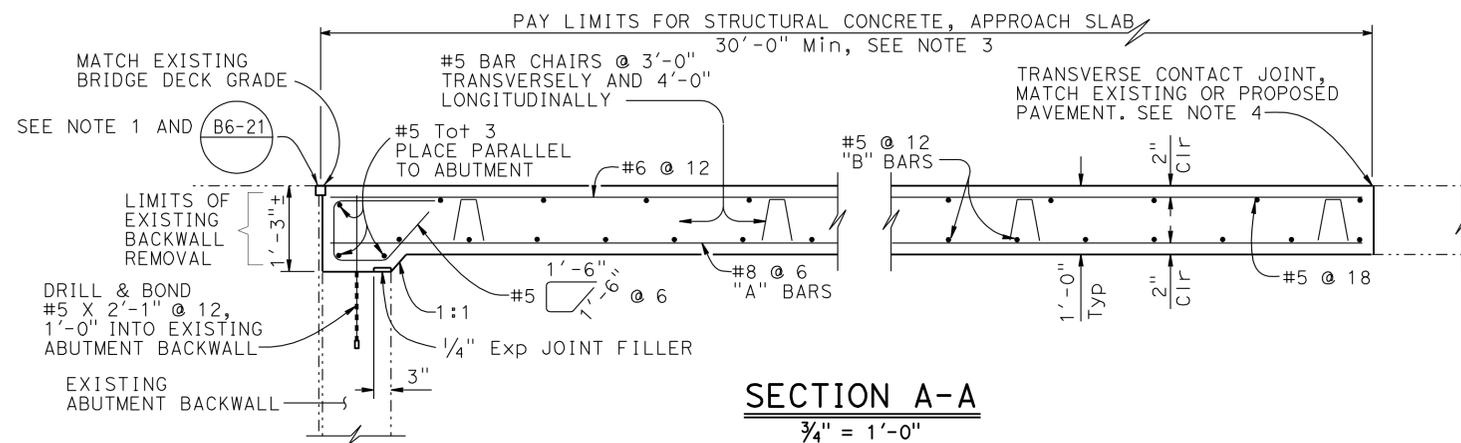
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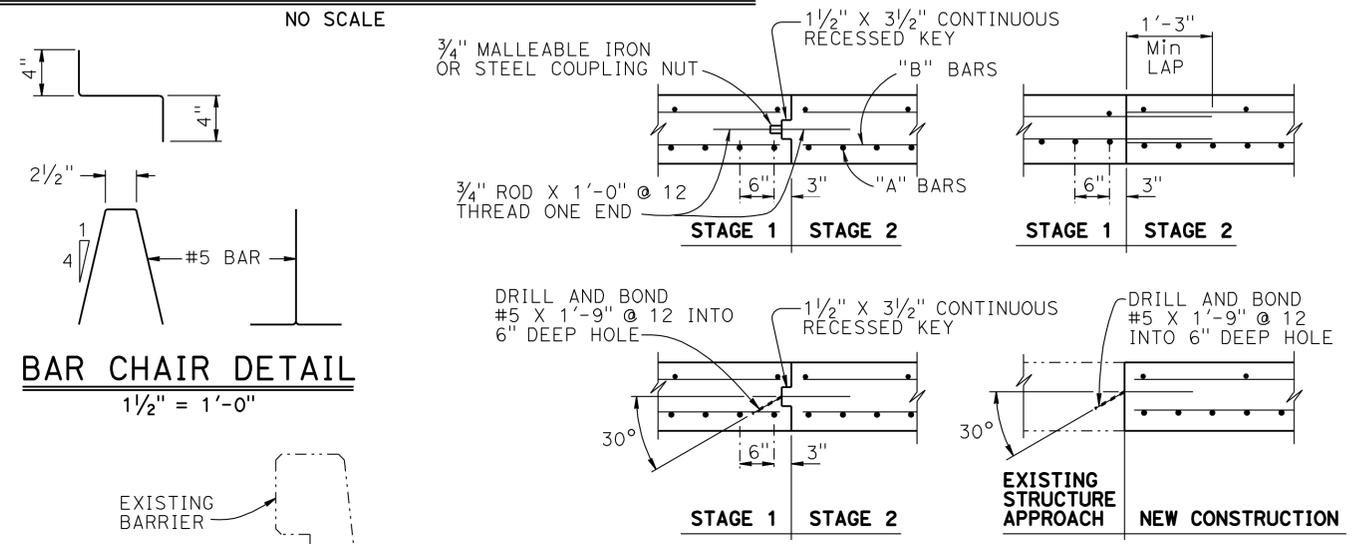
PLAN
 1" = 10'



STRUCTURE APPROACH - END STAGGER DETAIL
 NO SCALE

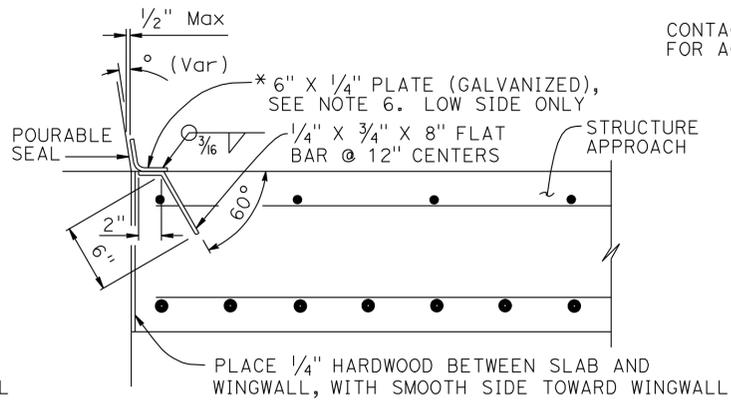
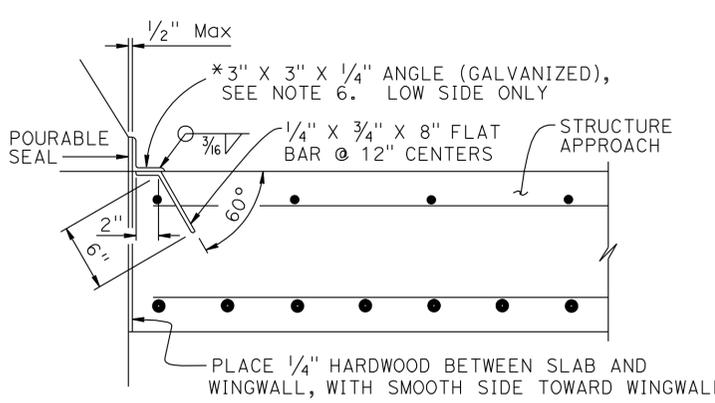


SECTION A-A
 3/4" = 1'-0"

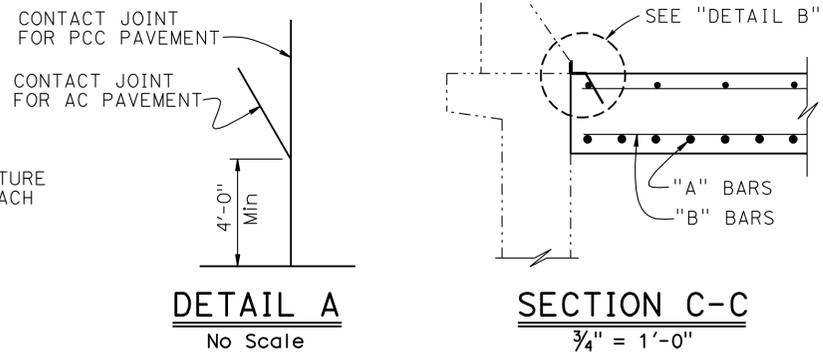


BAR CHAIR DETAIL
 1/2" = 1'-0"

LONGITUDINAL CONSTRUCTION JOINT ALTERNATIVES
 3/4" = 1'-0"



DETAIL B
 1/2" = 1'-0"



DETAIL A
 No Scale

SECTION C-C
 3/4" = 1'-0"

APPROACH SLAB TRANSVERSE CONTACT JOINT		
APPROACH SKEW	WITH AC ROADWAY PAVEMENT	WITH PCC ROADWAY PAVEMENT
< 10°	PARALLEL TO FACE OF PN	PARALLEL TO FACE OF PN
10° - 45°	PARALLEL TO FACE OF PN USE "DETAIL A"	STAGGER LINES 24' TO 36' APART
> 45°	PARALLEL TO FACE OF PN USE "DETAIL A"	STAGGER AT EACH LANE LINE

- NOTES:
- Sealed joint, for MR see Structure Plans. Adjust bar reinforcement to clear a sawcut for sealed joint, when required
 - Longitudinal construction joints, when permitted by Engineer, shall be located on lane lines
 - Transverse contact joint shall be a minimum of 5'-0" from an existing or constructed weakened plane joint
 - For transverse contact joint with new PCC paving, refer to Standard Plan P10
 - Couplers are required for stage construction
 - End angle or plate at beginning of barrier transition, end of wingwall or end of structure approach as applicable

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

REVISED STANDARD DRAWING

FILE NO. **xs3-130**

APPROVAL DATE July 2011

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
 STRUCTURE DESIGN
 DESIGN BRANCH **1**

BRIDGE NO. Various
 POST MILE Varies

ROUTE 5 BRIDGES
 STRUCTURE APPROACH TYPE R(30S)

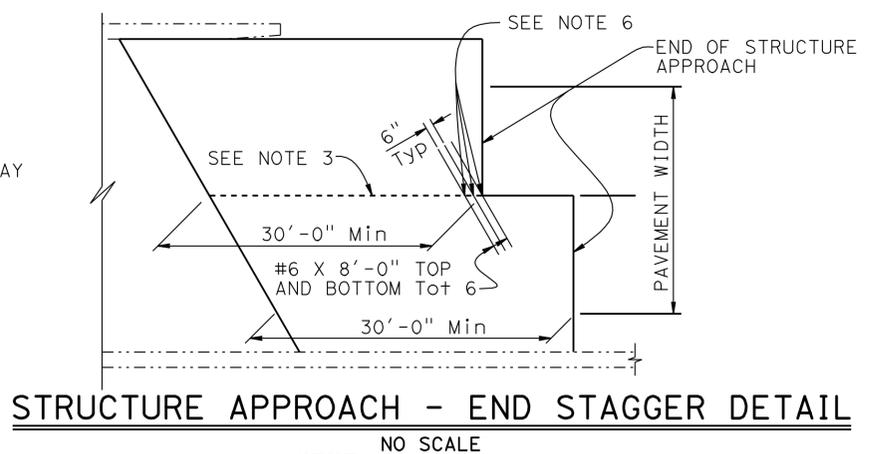
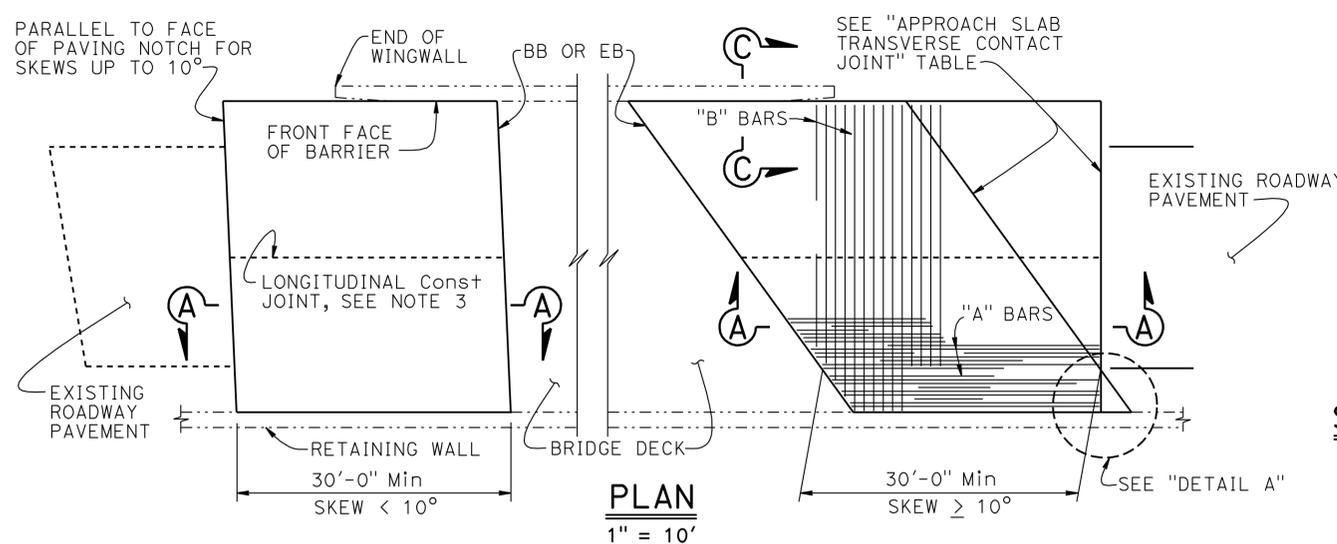
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	5	25.1/28.6	485	485

G.P. Thornton 01-06-12
REGISTERED CIVIL ENGINEER DATE

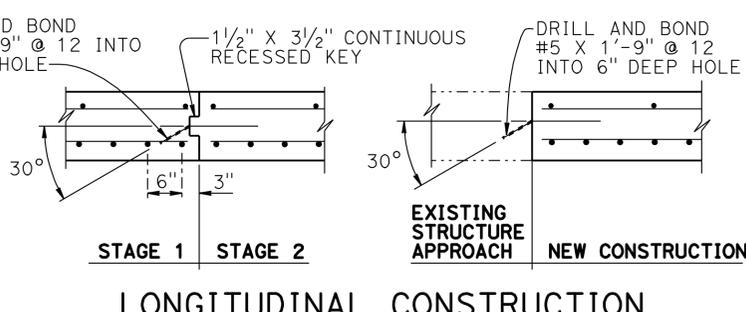
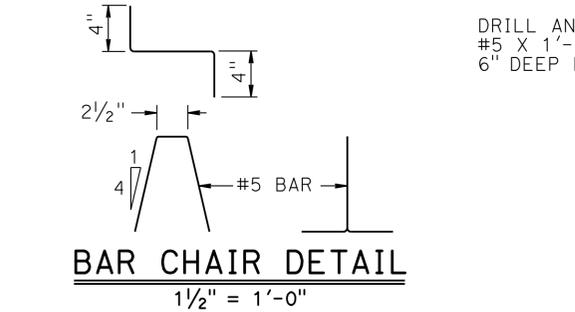
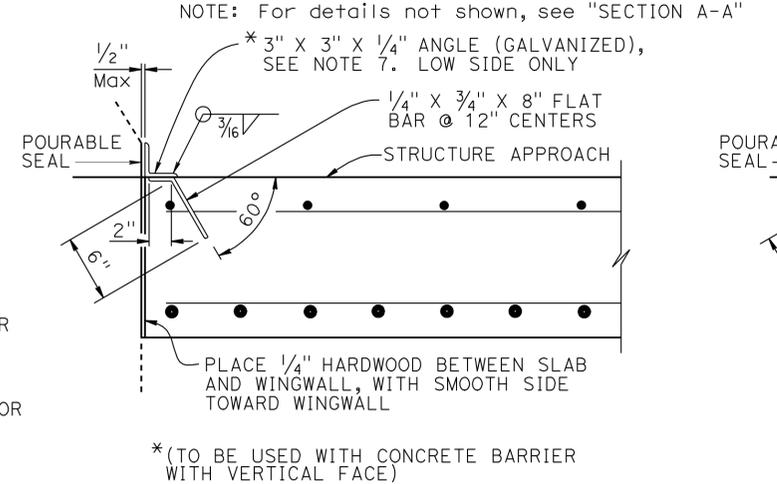
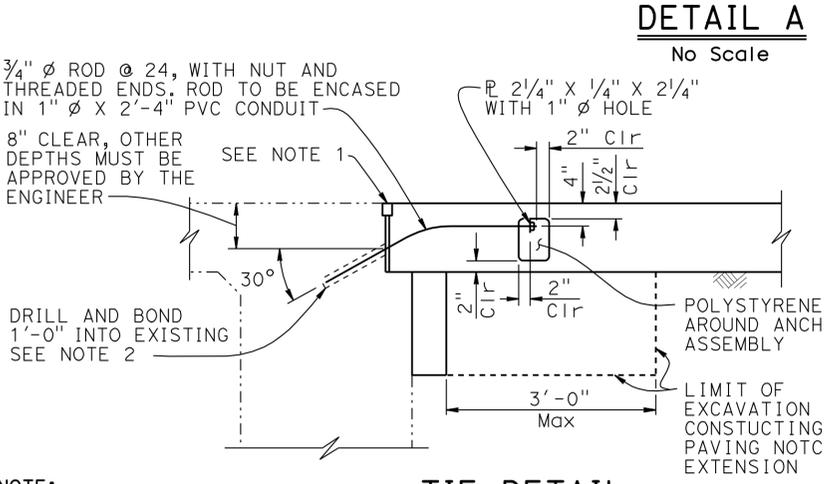
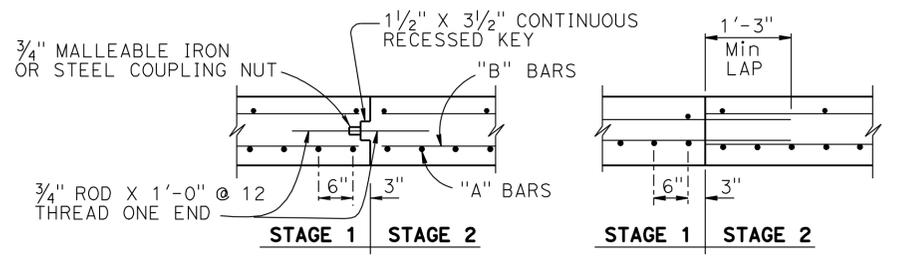
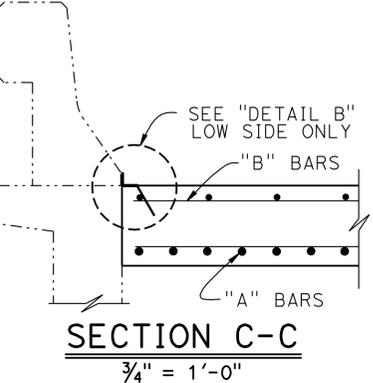
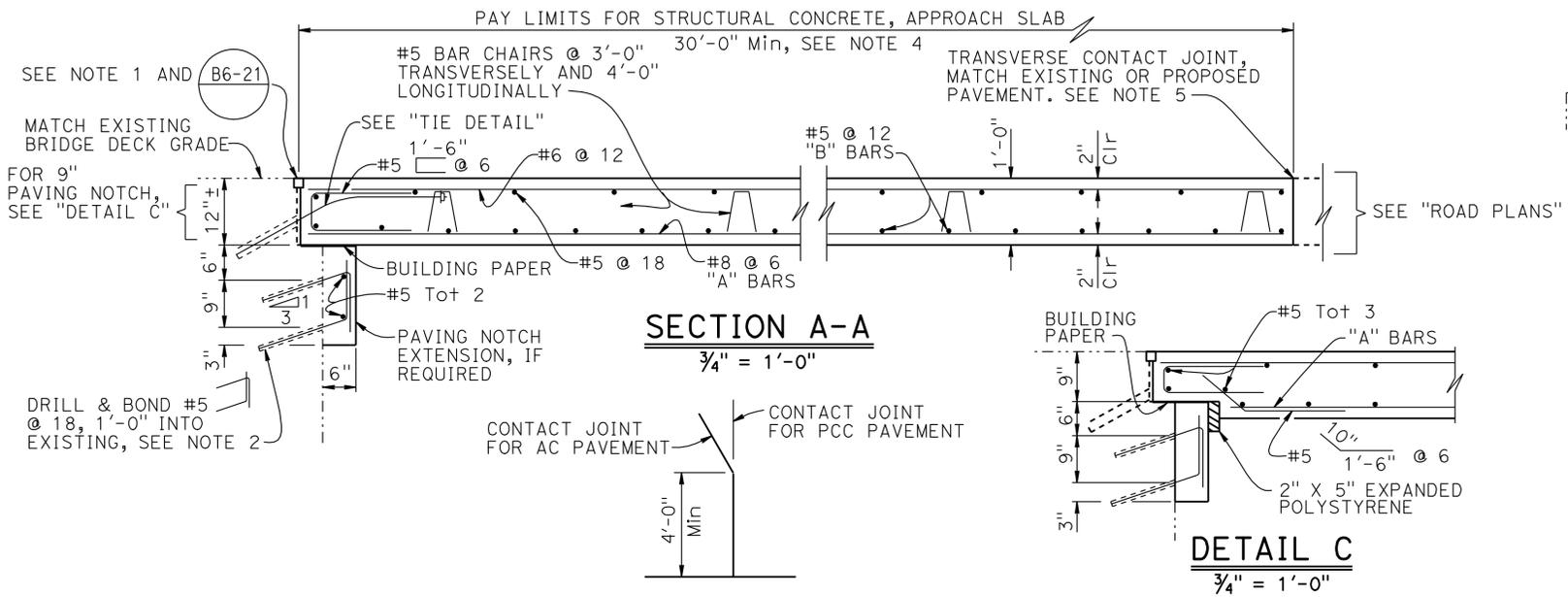
6-4-12
PLANS APPROVAL DATE

G.P. Thornton
No. 78013
Exp. 09/30/13
CIVIL
STATE OF CALIFORNIA

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APPROACH SLAB TRANSVERSE CONTACT JOINT		
APPROACH SKEW	WITH AC ROADWAY PAVEMENT	WITH PCC ROADWAY PAVEMENT
< 10°	PARALLEL TO FACE OF PN	PARALLEL TO FACE OF PAVING NOTCH
10° - 45°	PARALLEL TO FACE OF PN USE "DETAIL A"	STAGGER LINES 24' TO 36' APART
> 45°	PARALLEL TO FACE OF PN USE "DETAIL A"	STAGGER AT EACH LANE LINE



- NOTES:
- For details not shown or noted, see Structure Plans. Adjust bar reinforcement to clear a sawcut for sealed joint, when required
 - Space to avoid existing prestress anchorages and main reinforcement
 - Longitudinal construction joints, when permitted by the Engineer, shall be located on lane lines
 - Transverse contact joint shall be a minimum of 5'-0" from an existing or constructed weakened plane joint
 - For transverse contact joint with new PCC paving, refer to Standard Plan P10
 - Couplers are required for stage construction
 - End angle or plate at beginning of barrier transition, end of wingwall or end of structure approach as applicable

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

REVISED STANDARD DRAWING		STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION		DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 1		BRIDGE NO. Various		ROUTE 5 BRIDGES	
FILE NO. xs3-150	APPROVAL DATE July 2011			PROJECT NUMBER & PHASE: 1000000128-1		POST MILE Varies		STRUCTURE APPROACH TYPE R(30D)	
DS OSD 2147A (ENGLISH STANDARD DRAWING "XS" BORDER REV. (02-02-11))		ORIGINAL SCALE IN INCHES FOR REDUCED PLANS		UNIT: 3576		CONTRACT NO.: 10-0M7801		DISREGARD PRINTS BEARING EARLIER REVISION DATES	
				PROJECT NUMBER & PHASE: 1000000128-1		CONTRACT NO.: 10-0M7801		REVISION DATES	
								SHEET 9 OF 9	